


# Project Completion Report

## The Project for Strengthening the Capacity of the Research Activities of Uzbek-Japan Innovation Center of Youth

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## Table of Contents

**I. Basic Information of the Project ..... 1**

1. Country ..... 1
2. Title of the Project ..... 1
3. Duration of the Project ..... 1
4. Background ..... 1
5. Overall Goal and Project Purpose specified in PDM ..... 2
6. Implementing Agency ..... 2

**II. Results of the Project ..... 3**

1. Results of Project ..... 3
2. Achievements of the Project ..... 16
3. History of PDM Modification (PDMs are attached in ANNEX-5 PDMs) ..... 30
4. Others ..... 31

**III. Results of Joint Review ..... 33**

1. Results of Review based on DAC Evaluation Criteria ..... 33
2. Key Factors Affecting Implementation and Outcome ..... 40
3. Evaluation on the Results of the Project Risk Management ..... 42
4. Lessons Learnt ..... 45
5. Performance ..... 49

**IV. For the Achievement of Overall Goals after the Project Completion ..... 52**

1. Prospects to Achieve Overall Goal ..... 52
2. Plan of Operation and Implementation Structure of the Uzbek side to Achieve Overall Goal ..... 54
3. Recommendation for the Uzbekistan Side ..... 55
4. Monitoring Plan from the end of the Project to Ex-post Evaluation ..... 56

## List of Figures

*Figure- 1 Progress of Input (Summary) ..... 6*
*Figure- 2 Five Main Objectives of UJICY + One (from SPSD-UJICY) ..... 17*
*Figure- 3 Example of Risk Analysis conducted by the Expert ..... 17*
*Figure- 4 Proposed Manpower Allocation by the Expert ..... 19*
*Figure- 5 Dispatch of Short-term Expert by year ..... 23*
*Figure- 6 Outreaching Scientific Events by year ..... 23*
*Figure- 7 Satisfaction with Management System of UJICY ..... 26*
*Figure- 8 Research Project by Laboratory ..... 27*
*Figure- 9 Publication of international papers (only high-impact) by laboratory ..... 27*
*Figure-10 Area of Improvement ..... 28*
*Figure-11 UJICY's Commitment to SDGs ..... 31*
*Figure-12 Trends in Gender Balance of UJICY ..... 32*
*Figure-13 Co-relation of Risk Factors existing at the beginning of the Project ..... 41*
*Figure-14 Positive Spiral Caused by Risk Mitigation ..... 43*
*Figure-15 UJICY Co-Creation Model ..... 51*

## List of Tables

*Table- 1 Details of Input (Japanese side) ..... 3*
*Table- 2 Details of Input (Uzbek side) ..... 5*
*Table- 3 Achievement of Activities ..... 7*
*Table- 4 Changes in Risk Status ..... 45*
*Table- 5 External Fund for Activities ..... 48*

## Annexes

### ANNEX-1: Results of the Project

*Table-1 Results of Long-term Training Program*
*Table-2 Results of Short-term Training Program*
*Table-3 Results of Dispatch of Experts*
*Table-4 Results of Scientific Outreach Activities*
*Table-5 Results of MIRAI Fund*
*Table-6 List of Research Projects*
*Table-7 List of Scientific Publications and Patents*
*Table-8 List of MOU between Other Universities/Institutes*
*Table-9 List of Equipment*

### ANNEX-2: List of Products Produced by the Project

### ANNES-3: PDMs (All version of PDM)

*Attachment-1: Version-1 (Original)*
*Attachment-2: Version-2 (December 20, 2020)*
*Attachment-3: Version-3 (January 11, 2022)*

### ANNEX 4: R/D, M/M, Minutes of JCC (copy) (*)

### ANNEX 5: Monitoring Sheet (copy) (*)

*Remarks: ANNEX 4 and ANNEX 5 are for internal reference only.*

### Separate Volume: Copy of Products Listed in ANNEX-2

*Attachment-1 Strategic Plan for Sustainable Development (SPSD-UJICY)*
*Attachment-2 Charter of UJICY*
*Attachment-3 IP Guideline (Russian)*
*Attachment-4 Guideline of MIRAI Fund*
*Attachment-5 Utilizing Plan of Returned Trainees*
*Attachment-6 Dispatch Plan of Short-term Training*
*Attachment-7 Dispatch Plan of Short-term Experts*
*Attachment-8 UJICY Road Map 2024-2028*
*Attachment-9 Project Baseline Survey Report*
*Attachment-10 Project Endline Survey Report*
*Attachment-11 New Uzbekistan Strategy 2030 (translation)*
*Attachment-12 Analysis of Problems and Proposed Solutions (1st Risk Analysis)*
*Attachment-13 Analysis of Potential Problems of UJICY (2nd Risk Analysis)*

## Abbreviations and Common Terms

| | |
|---|---|
| **BOT** | Board of Trustees, the highest decision-making body of UJICY |
| **C/P** | Uzbek Counterpart of the Project |
| **I$^2$CNER** | International Institute for Carbon Neutral Energy Research (Kyushu University) |
| **JCC** | Joint Coordinating Committee |
| **JICA** | Japan International Cooperation Agency |
| **JOCV** | Japan Overseas Cooperation Volunteers |
| **JOGMEC** | Japan Organization for Metal and Energy Security |
| **JSPS** | Japan Society for the Promotion of Science |
| **JST** | Japan Science and Technology Agency |
| **KCCP** | Knowledge Co-Creation Program, JICA's training program |
| **METI** | Ministry of Economy, Trade and Industry, Japan |
| **MHESI** (*) | Ministry of Higher Education, Science and Innovation, Uzbekistan |
| **MID** (*) | *former* Ministry of Innovative Development, Uzbekistan |
| **MHSSE** (*) | *former* Ministry of Higher and Secondary Specialized Education |
| **NEDO** | New Energy and Industrial Technology Development Organization, Japan |
| **ODA** | Official Development Assistance (from Japan) |
| **PCR** | Project Completion Report, this Report |
| **PD** | Project Director for the Project |
| **PDM** | Project Design Matrix |
| **PM** | Project Manager for the Project |
| **PO** | Plan of Operation, an implementation timetable for the Project |
| **Project** | The Project for Strengthening for the Capacity of Research Activities of UJICY |
| **R/D** | Record of Discussion, the agreement for the Project |
| **SATREPS** | Science and Technology Research Partnership for Sustainable Development |
| **SDGs** | Sustainable Development Goals |
| **T/C** | Technical Cooperation Project of JICA |
| **TSTU** | Tashkent State Technical University, UJICY locates here. |
| **UJICY** | Uzbek-Japan Innovation Center of Youth |

(*) Former Ministry of Higher and Secondary Specialized Education (MHSSE) and former Ministry of Innovative Development (MID) were merged into **Ministry of Higher Education, Science and Innovation (MHESI)** on January 1, 2023. In this report, both names and abbreviations are used based on the timing of the events.

# I. Basic Information of the Project

## *1. Country*

The Republic of Uzbekistan

## *2. Title of the Project*

The Project for Strengthening the Capacity of the Research Activities of Uzbek-Japan Innovation Center of Youth (UJICY)

## *3. Duration of the Project*

January 2019 to March 2024

## *4. Background*

Uzbek-Japan Innovation Center of Youth (hereinafter referred to as “UJICY”) is a national research institute in Uzbekistan, which was established in 2016 by the Presidential Decree No.2602 dated September 19, 2016. Prior to the establishment of UJICY, the Japanese government and Uzbekistan government had agreed to cooperate to create a scientific research center for advanced technologies in the joint communique between late President of the Republic of Uzbekistan, Mr. Islom Karimov and late Prime Minister of Japan, Mr. Shinzo Abe in 2015.

At that time of decision of establishment of UJICY, Uzbekistan was in the middle of shifting to open-economy system and more technology transfer from advanced countries and human resources who would lead the scientific development and innovations were required. UJICY was expected to be a main player for this vital national strategy, however, due to the lack of resources (human, equipment, research network, know-how and research fund), the government of Uzbekistan requested Japanese technical assistance by submitting ODA application in August 2016, and it was approved by the government of Japan in April 2017.

Based on the above background, JICA conducted the Detailed Planning Survey for the Project and concluded Minutes of Meeting (hereinafter referred to as “M/M”) between Ministry of Higer and Secondary Specialized Education (hereinafter referred to as “MHSSE”), the C/P, and Japan International Cooperation Agency (hereinafter referred to as “JICA”) in August 2018.

After series of discussion between the C/P and relevant organizations on the outline of the Project for Strengthening the Capacity of Research Activities of UJICY (hereinafter referred to as “the Project”), JICA concluded Record of Discussion (hereinafter referred to as “R/D”) with MHSSE and UJICY on December 11, 2018.

## *5. Overall Goal and Project Purpose specified in PDM*

### Overall Goal:

The Center (UJICY) conducts frontier research for industrial development of Uzbekistan with stronger linkage with industries and Japanese researchers.

### Project Purpose:

Capacity of researchers at the Uzbek-Japan Innovation Center of Youth to conduct research activities is strengthened.

## *6. Implementing Agency*

Ministry of Higher and Secondary Specialized Education (MHSSE) [1],

Uzbek-Japan Innovation Center of Youth (UJICY), and

Japan International Cooperation Agency (JICA)

**Special Note:**
The project will be extended to September 30, 2024 due to the six-months extension of long-term training program. The modification of R/D is currently undergoing.

[1] At the time of conclusion of R/D in 2018. Currently, Ministry of Higher Education, Science and Innovation (MHESI)

# II. Results of the Project

## *1. Results of Project*

1-1 Input by the Japanese side (Planned and Actual)

Total Input amount by the Japanese side: **259.15 million JPY**

*Table- 1 Details of Input (Japanese side)*

| Input | Achievement |
|---|---|
| a) **Long-term Training**<br><br>*(For details Table-1 "Results of Long-term Training Program" of ANNEX-1)* | 1) Eighteen (18) researchers were nominated as candidates for Long-term Training Program and seventeen (17) trainees were dispatched to Japan [2].<br><br>2) **Fifteen (15) trainees completed the Program** although two (2) were terminated in the mid of Program.[3]<br><br>3) The breakdown of the Program completers;<br>Master Program with Degree: 12<br>Doctor Program with Degree: 2[4]<br>Doctor Program without Degree: 1 [5]<br><br>Initial Plan: 456 MM<br>Revised : **510 MM** *(revised in August 2021)*[6]<br>Actual: **510 MM (100.00%)** |
| b) **Short-term Training**<br><br>*(For details, Table-2 "Results of Short-term Training Program" of ANNEX-1)* | 1) **Twenty-four (24) researchers** were dispatched to Short-term training program in Japan/Uzbekistan (10 days – 6 months) for joint research activities or development of administrative capacity.<br><br>2) Short-term Training in Japan was suspended during COVID-19 pandemic, from 2020 to earlier 2022<br><br>Initial Plan: 36 MM<br>Revised: 15 MM [7] *(revised in 2023 April)*<br>Actual: **16.8 MM (112%)** |

[2] Due to COVID-19 pandemic, one (1) candidate gave up studying abroad after 6 months stand-by at home country.
[3] Failure at enrollment examination and unfit to life in Japan.
[4] One (1) trainee in Yokohama National University will complete the doctor program in September 2024.
[5] "Coursework Completed without Degree". Currently the trainee is preparing Ph.D. thesis with supervision of a Japanese supervisor.
[6] Upward revision due to increase of dispatched trainees and applying more precise recalculation of input.
[7] Downward revision due to suspension of travel during COVID-19 and tight receiving capacity of JICA center after the pandemic.

| | |
|---|---|
| c) **Japanese experts**<br>*(1) Long-term Expert*<br><br>*(For details, Table-3.A "Results of Dispatch of Long-term Expert" of ANNEX-1)* | 1) **One (1) long term resident expert was dispatched** as Project Management Expert to UJICY from August 2019 till the end of March 2024.<br><br>Plan: **56MM** (4 years 8 months)<br>Actual: **56 MM (100.00%)** |
| *(2) Short-term Expert*<br><br>*(For details, Table-3.B "Results of Dispatch of Short-term Expert" of ANNEX-1)* | 1) **Nine (9) Japanese experts were dispatched** under the Project budget (45 Man-Day).<br><br>2) Utilizing external fund [8], **sixteen (16) experts were invited from Japan** to UJICY's activities such as scientific consultation and seminars.<br><br>Plan : **75 MD**<br>Actual : **125MD (166.67%)**<br>*With the Project 45MD (60.00%)*<br>*With external funds: 80MD* |
| d) **Cost for Seminar and Conference**<br><br>*(For details, refer to Table-4 "Results of Scientific Outreach Events", ANNEX-1)* | 1) During project period, UJICY conducted **forty (40) seminars/workshops and seven (7) conferences**, in offline/online/hybrid style, as scientific outreach activities.<br><br>2) The Project covered a part of cost of the above events, such as audio-visual equipment for webinars and printing materials for conferences.<br><br>Actual Input: **JPY 3,613,900** [9] for forty-seven (47) outreach events |
| e) **Research Fund**<br><br>*(For details, refer to Table-5 "List of MIRAI Fund Projects" and Table-6 "List of Equipment", ANNEX-1)* | 1) For three years, from 2020 to 2022, **nine (9) projects were granted the fund**, and completed by March 2024, and **JPY 9,343,059** (USD 109,015) has been disbursed for procurement of necessary minor research equipment and tools.<br><br>Planned Input: **120,000 USD**<br>Actual input: **109,015 USD (90.84%)** |
| f) **Operational Expenses for the Project**<br>(Utilized Overseas activities cost allocated to the project) | Total Amount : **25.86 million JPY**<br>Used for hiring local assistant, travel, communication, printing, procurement of goods, MIRAI Fund, and other miscellaneous expenses necessary for operation of the Project. |

[8] Other funds than budget of this Project such as JST, JSPS, JICA and university`s own fund.

[9] Not including travel expenses for short-term experts dispatched from Japan

1-2 Input by the Uzbek side (Planned and Actual)

*Table- 2 Details of Input (Uzbek side)*

<table>
<tr><th>Input</th><th>Achievement</th></tr>
<tr><td>a) Allocation of Staff</td><td>1) The employee quota was regulated by presidential decrees. Initially it was 23 staff but increased by the new Presidential Decree PP-4550 in December 2019 up to 35 staff.<br><br>2) Breakdown of the cumulative employment for the Project period is shown as below:<br><br>a) Monthly Average (MM)<table><tr><th>Full time</th><th>Part time (*)</th><th>Total</th></tr><tr><td>24.1</td><td>4.5</td><td>28.6</td></tr></table>(*) Part time (MM)= Full time x 50%<br>b) Percentage by Category<table><tr><td>Researcher</td><td>Administrator</td><td>Services</td></tr><tr><td>45.2%</td><td>25.1%</td><td>29.7%</td></tr></table><br>3) The reason of not achieving the plan is mainly less attractiveness of job at UJICY due to low wages set by the government.<br><br>Plan: 2,061 MM [10]<br>Actual: 1,801 MM (87.38%)</td></tr>
<tr><td>b) Office space for experts</td><td>1) A room for the resident expert from Japan was prepared with necessary furniture in August 2019.<br><br>Plan : 1 room in UJICY<br>Actual : 1 room (100%)</td></tr>
<tr><td>c) Basic equipment for laboratories<br><br>(For details, Table-9 “List of Equipment” of ANNEX-1)</td><td>1) The new Presidential Decree No. PP-4550 allocated the budget of USD 1 million for the basic equipment of UJICY. The equipment was selected in accordance with the advices from Japanese universities.<br><br>2) By June 2023, all equipment was delivered and installed at UJICY, the value of which is USD 938,310. The difference from plan and actual is because of loss of foreign currency exchange at procurement.<br><br>Plan : 1,000,000 USD<br>Actual : 938,810 USD (93.88%)</td></tr>
</table>

[10] *23 employees x 12 months(2019) + 35 employees x 51 months(rest of project period) = 2,061 MM in accordance with the Presidential Decree PP-4550.*

| | |
|---|---|
| d) **Maintenance cost for equipment**<br><br>*(For details, Table-5 "List of MIRAI Fund Projects" and Table-6 "List of Equipment" of ANNEX-1)* | 1) No maintenance cost for equipment has been paid since all procured equipment is still under warranty period.<br><br>2) Maintenance cost shall be covered by the competitive research fund awarded to UJICY since there is no government budget has been allocated. |
| e) **Running expenses for the Project** | 1) Running expenses have been paid in kind such as facility (meeting room, auditorium, copy machine), utilities (water & electricity and services (cleaning, security, network) provided by the budget allocated to UJICY by MHESI. The budget amount is not disclosed. |

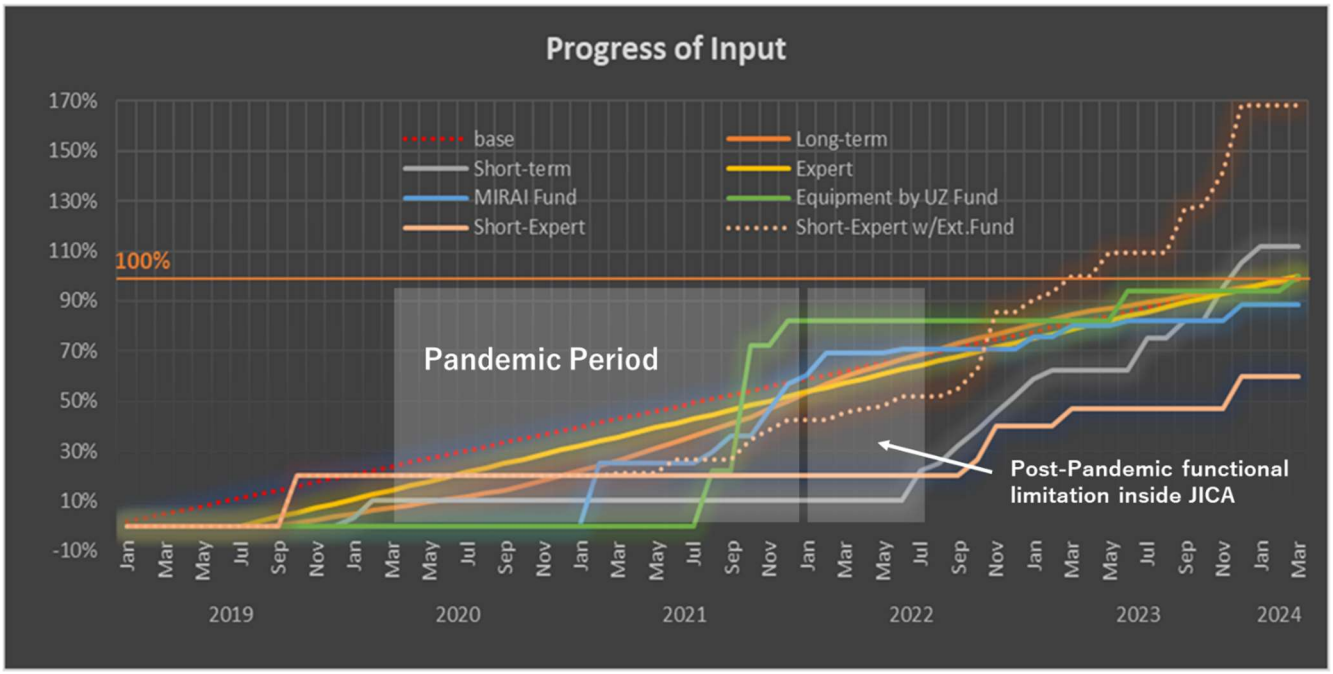



*Figure- 1 Progress of Input (Summary)*

1-3 Activities (Planned and Actual)

*Table- 3 Achievement of Activities*

| PDM Item No. | Activities | Achievement |
|---|---|---|
| **1-1** | **Development of long-term & middle-term strategies** | **Status:** ***Completed.***<br><br>1) In accordance with the contents of two (2) Presidential Decrees for UJICY as well as purpose, output and activities specified in PDM, UJICY's long & mid-term strategic plan, **"Strategic Plan for Sustainable Development of UJICY (SPSD-UJICY)"** *(Attachment-1. of ANNEX-2)* was produced, and the strategic plan was approved on January 25, 2020 by BOT.<br><br>2) Progress of SPSD-UJICY was monitored by the Expert, and reported to PD, PM and BOT periodically with Monitoring Sheets and at BOT / JCC meetings.<br><br>3) As the exit strategy of the Project, ODA application for Phase-II for the Project was sent to Japanese government in July 2023. This Phase-II will cover the second half of SPSD-UJICY. |
| **1-2** | **UJICY specifies the priority research areas corresponding to the social problems**<br><br>*(Newly added activities upon the revision of PDM (rev.3) )* | **Status:** ***Completed.***<br><br>1) At the inception, UJICY set fifteen (15) priority research targets, mainly in mining and mineral resources, energy, material science, chemistry and mechanical/ electrical engineering.<br><br>2) UJICY has been conducting close exchanges of opinion with ministries and major state-owned enterprises, and in 2022, added new strategic research areas, such as advanced mining technology, hydrogen energy and environmental technology, in compliance with social requirement.<br><br>3) As the abovementioned strategical vital researches, the following research projects are going on; |

| | | |
|---|---|---|
| | | a) Hydrogen Energy: joint research with Kyushu University under SATREPS since 2023;<br>b) Mining Technology: opening the Satellite Laboratory of Akita University at UJICY and promoting joint activities since 2023;<br>c) Air Pollution Monitoring & Control: joint project with Keio University under KAKENHI of JSPS; |
| **1-3** | **Definition of responsibilities of UJICY's respective divisions and related organizations in accordance with the priority research areas.**<br><br>*(Amended upon the revision of PDM (rev.3))* | **Status:** ***Completed.***<br><br>1) The structure of UJICY was regulated in Attachment-1 of Presidential Decree PP-4550. The Charter of UJICY [11] was also drafted and officially registered on January 31, 2020.<br><br>2) The Charter of UJICY was modified in 2021 and approved by the concerned ministries.<br><br>3) The 3rd BOT meeting dated April 11, 2022 decided to open Material Science Lab and Environment Lab newly but there is no progress. |
| **1-4** | **Development of a human resource plan of UJICY** | **Status:** ***Completed.***<br><br>1) Based on the Structure defined in the Presidential Decree PP-4550, Human Resource Plan of UJICY was specified in Section 2.4, Chapter-II of SPSD-UJICY [12] and approved by BOT on January 25, 2020.<br><br>2) For improvement of quality of administrative staff, salary scale for administrative staff was increased to the same level as Academy of Science in Presidential Decree PP25 dated January 15, 2022.<br><br>3) The allocation of human resource was monitored every month. |

[11] Attachment-2, ANNEX-2

[12] P.27-30 SPSD-UJICY (Attachment-1, ANNEX-2)

| | | |
|---|---|---|
| **1-5** | **Development of a guideline of activities of industrial linkage** | **Status:** ***Completed.***<br><br>1) The Project Conducted the following sub-activities in order to develop a guideline for academia-industrial collaborations:<br><br>a) Periodical dialogues with industrial companies in Uzbekistan;<br>b) Assistance for Japanese companies which seek business opportunities in Uzbekistan (collaboration with JICA local office and other T/C):<br>c) Established Protection of Intellectual Properties (IPs) Guideline [13] and conducted several lectures for staff by the legal specialist (2021-2022);<br>d) Conducting training course (KCCP) for promotion of academia-industrial collaboration (2023, NOASTEC);<br>e) Dispatch a JOCV who has ample experience in banking sector in Japan for business incubation (2023-) ;<br><br>2) As the accumulation of experiences acquired through the above activities, the Project developed "UJICY Co-Creation Model" as a template for promoting academia-industrial collaboration between Japan and Uzbekistan. This model was introduced in 3rd JCC in 2023.<br><br>3) As actual practice of the model, **thirteen (13) joint research projects with companies were initiated** in Uzbekistan. *(For details, refer to Table-6B "List of Contract Research Projects", ANNEX-1)* |

[13] Attachment-3, ANNEX-2

| | | |
|---|---|---|
| **1-6** | **Participation of Center's management members to short-term training in Japan/ Uzbekistan;**<br><br>*(See also Table-2 "Results of Short-term Training Program", ANNEX-1 "Result of the Project")* | **Status:** ***Completed.***<br><br>1) The following training course were held;<br>a) *"Innovative Approach for Techno-Scientific Research Institute Management"* (KCCP) in 2020 and 2023 by Teikyo University, Japan.<br>b) *"Research Planning for SATREPS"* (KCCP) in 2022 by Kyushu University, Japan.<br>c) *"UJC Project Management Course for UJICY"* in 2022 by Uzbek-Japan Center, Uzbekistan.<br><br>Plan : **4.0 MM** (4 participants)<br>Actual **:** **4.8 MM** (16 participants)<br>**(120%)** |
| **1-7** | **UJICY establishes and operates research fund;**<br><br>*(See also Table-5 "List of MIRAI Fund Projects" of ANNEX-1)* | **Status:** ***Completed.***<br><br>1) UJICY and JICA established **"MIRAI Fund of Japan for UJICY**" in October 2020 and have utilized this in accordance with the Guideline for Operation [14].<br><br>2) Nine (9) research projects were conducted with MIRAI Fund, and produce **50 publications in journals / conference** as the output from the Fund.<br><br>Plan : **USD 120,000**<br>Actual : **USD 109,015 (90.85%)**<br>***(JPY 9.34 million)*** |
| **2-0** | **Selection of candidate for long-term training** | **Status:** ***Completed.***<br><br>1) The following number of candidates were selected:<br>(candidate)<br>1st Group (2019) 6<br>2nd Group (2020) 7<br>3rd Group (2021) 5<br><br>Plan : **n/a**<br>Actual : **18 Candidates** |

[14] Attachment-4, ANNEX-2

<table>
<tr>
<td>2-1</td>
<td>Applying and taking exam for long-term training</td>
<td><u>Status:</u> Completed.<br><br>1) 1st Group: Six (6) trainees passed exam.<br><br>2) 2nd Group: Seven (7) trainees passed exam but one (1) trainee was withdrawn from the program after approval from the university due to uncertain traveling situation to Japan.<br><br>3) 3rd Group: Five (5) trainees passed exam.<br><br>Plan : n/a<br>Actual : 18 Trainees accepted</td>
</tr>
<tr>
<td>2-2</td>
<td>Dispatching researchers to Japan under long-term training<br><br>(See also Table-1 “Results of Long-term Training Program of ANNEX-1)</td>
<td><u>Status:</u> Completed.<br><br>1) Six (6) trainees of 1st group were dispatched to Japan, and two (2) doctor [15] program trainees and four (4) master program trainees have successfully completed programs with degrees.<br><br>2) Six (6) trainees of 2nd group were dispatched to Japan, and three (3) master and one (1) doctor[16] program trainees completed the program with degree. However, a trainee failed enrollment exam and another trainee terminated the program due to misconducts in the university.<br><br>3) Five (5) master program trainees of 3rd group were dispatched to Japan and all of them successfully completed programs with decrees.<br><br>Table: No.of success trainees
<table>
<tr><th></th><th>Master</th><th>Doctor</th><th>Drop out</th></tr>
<tr><td>1st Group</td><td>4</td><td>2</td><td></td></tr>
<tr><td>2nd Group</td><td>3</td><td>1</td><td>2</td></tr>
<tr><td>3rd Group</td><td>5</td><td>0</td><td></td></tr>
<tr><td>S. Total</td><td>12</td><td>3</td><td>2</td></tr>
<tr><td></td><td colspan="2">15</td><td></td></tr>
</table>
<br><u>Successfully Completed: 15 Trainees</u></td>
</tr>
</table>

[15] One (1) trainee who studied at Tsukuba University completed Ph.D course without degree. Currently, the trainee preparing necessary papers for acquiring Ph.D. degree.

[16] One (1) trainee in Yokohama National University will complete the doctor program in September 2024.

| | | |
|---|---|---|
| **2-3** | **UJICY develops the utilization plan of research outcome of the long-term trainees after the researchers obtain the degrees in Japanese universities**<br><br>(Newly added upon the revision of PDM (rev.3)) | **Status:** ***Completed.***<br><br>1) UJICY has established the utilization plan of the returned trainees from Japan (*Attachment-5 of ANNEX-2*).<br><br>2) At the 3rd JCC meeting (2023 April), MHESI committed to extend its support and assistance to the returned trainees.<br><br>3) Currently **four (4) returned trainees** are working at UJICY and showing remarkable performance. For instance, **one (1) PhD holder** is currently working as Head of Air Pollution Lab of Institute of Environment Protection Technology and has become the key-person to expand UJICY's network. (*For details, Table-1 "Results of Long-term Training Program of ANNEX-1)*<br><br>4) The limited posts and quota of employees (see 1-2 a) ) are major obstacles in receiving returned trainees, and UJICY and MHESI have been working to solve this problem by opening 2 new labs and increasing quota. |
| **2-4** | **Dispatching Center's researchers to Japan under short-term training**<br><br>*(See also Table-2 "Results of Short-term Training Program of ANNEX-1)* | **Status:** ***Completed.***<br><br>1) After two years' postponement of the program due to the pandemic of COVID-19, UJICY and JICA rescheduled the implementation plan of short-term training [17] in accordance with the receiving capacity of JICA Centers.<br><br>Initial Plan: 36 MM<br>Revised: 15 MM *(revised in 2023 April)*<br>Actual: **16.8 MM (112%)** |
| **2-5** | **Japanese universities conducting seminar, lectures and any collaborative activities in Uzbekistan as short-term expert** | **Status:** ***Completed.***<br><br>1) All dispatches of short-term expert under this Project have been suspended since 2020. During this period, UJICY conducted numbers of |

[17] Attachment-6 of ANNEX-2

| | | |
|---|---|---|
| | | seminars and workshops of Japanese professors through online or inviting professor who came to Uzbekistan in different missions.<br><br>2) After the pandemic, the dispatch plan of short-term experts was revised by UJICY and JICA [18] .<br><br>*See also Table-3.B "Results of Dispatch of Short-term Expert" of ANNEX-1.*<br><br>Plan : **75MM**<br>Actual : **Total 125 MM (166.67%)**<br>(a) Project budget : **45MM**<br>(b) External fund : **80MM** |
| **2-6** | **Center conducting seminars**<br><br>*(See also Table-4 "Results of Scientific Outreach Events" of ANNEX-1)* | **Status:** ***Completed.***<br><br>1) UJICY conducted **fifty-three (53) scientific outreach events** throughout the Project and approximately 2,000 people participated in these events<br><br>A. by category (no of events)<br>a) Symposium : **8**<br>b) Seminar/Webinar: **23**<br>c) Lecture : **17**<br>d) Others : **2**<br><br>2) **74% of the events** have been conducted with external budget or free.<br><br>B. Source of fund<br>a) Under the Project Budget : **13 events (25%)**<br>b) External Budget : **40 events (75%)** |
| **3-1** | **Development of plan for collaborative research with Japanese universities** | **Status:** ***Completed.***<br><br>1) In 2021, UJICY set its Vision to be a "**Hub**" of research network in the Central Asia region and to be a "**Bridge**" between Japan and Uzbekistan. In order to achieve the goal of the Vision, UJICY has been actively establishing relations with universities and scientific institutes, and concluded **twenty (20) comprehensive cooperation** |

[18] Attachment-7 of ANNEX-2

| | | |
|---|---|---|
| | | **agreements (MOU)** with domestic/ international partners.<br><br>2) With Japan, **ten (10) MOUs/LOI** have been concluded with universities and research institutes.<br><br>*(See also Table-8 "List of MOUs with Other Universities / Institutes" of ANNEX-1)*<br><br>3) Based on the network, UJICY is conducting **six (6) joint projects** with foreign universities with grant. One of the most prominent case is SATREPS for Hydrogen Technology with Kyushu University and other Uzbek institutes, which was awarded in 2023, for 5 years 500 million JPY.<br><br>4) UJICY is also executing commercial research projects with industrial companies.<br><br>*(For details, see Table-6 "List of Research Projects" of ANNEX-1)*<br><br>No. of signed MOU: **20 MOUs**<br>No. of Research Projects: **22 projects** with value of **USD 4,676,600** |
| **3-2** | **Development of a list of necessary equipment**<br><br>*(See also Table-9 "List of Equipment" of ANNEX-1)* | **Status:** ***Completed.***<br><br>1) UJICY prepared the list of fundamental experimental equipment to be procured by Uzbekistan governmental budget in 2020 with having advices from Japanese universities.<br><br>2) For SATREPS in 2023, UJICY is developing a new list of equipment to be procured with coordination with Kyushu University. |

**SUMMARY:** All activities specified in PDM have been completed with satisfactory level in comparing with the initial plan set in PO. Although some activities had been suspended due to the pandemic of COVID-19, by taking alternative solutions such as webinars and seeking available external funds, the negative impact could be minimized.

## 1-4 PO with Actual Progress

**Project Monitoring Sheet II (Revision of Plan of Operation)**

**Version 10 PCR**
**Dated March 31, 2024**

**Project Title: The Project for Strengthening the Capacity of Research Activities of Uzbek-Japan Innovation Center of Youth**

| Inputs | Plan / Actual | MM / % | 2019 | 2020 | 2021 | 2022 | 2023 | 2024 | Remarks | Monitoring: Issue | Monitoring: Solution |
|---|---|---|---|---|---|---|---|---|---|---|---|
| **Expert** | | | | | | | | | | | |
| Project Manager/Cordinator [Long-term] | Plan | 56 | | | | | | | | Completed. | |
| | Actual | 100.00% | | | | | | | | | |
| Short-term Experts | Plan | 75 (MD) | | | | | | | | Completed with rescheduling | |
| | Actual | 60.00% | | | | | | | | | |
| **Training in Japan** | | | | | | | | | | | |
| Long-term Training: Baseline 14 Reseachers Revised : 17 Researchers | Plan | 510 | | | | | | | | Completed. | |
| | Actual | 98.80% | | | | | | | | | |
| Short-term Training: Baseline 36 man-months Reseachers Revised 18.5 man-month Researchers | Plan | 15 | | | | | | | | Completed with rescheduling | |
| | Actual | 112.00% | | | | | | | | | |
| **Research Fund** | | | | | | | | | | | |
| Mirai Fund: US$30,000/year x 4 Years | Plan | $120,000 | | | | | | | Newly Established in 2020 | Completed. | |
| | Actual | 90.84% | | | | | | | | | |

| Sub-Activities | Actual | 2019 | 2020 | 2021 | 2022 | 2023 | 2024 | JP | UZ | Achievements | Issue & Countermeasures |
|---|---|---|---|---|---|---|---|---|---|---|---|
| **Output 1: Research management system of the Center is established.** | | | | | | | | | | | |
| 1-1 The Center develops long-term (10- year) and medium-term (5 -year) strategies of the Center. | Plan | | | | | | | Baseline Plan is modified due to sequence of works | | Completed. | |
| | Actual | 100% | | | | | | | | | |
| 1-3 The Center defines responsibilities of the Center's respective divisions and related organizations in | Plan | | | | | | | Baseline Plan is modified due tochange of organization | | Completed | |
| | Actual | 100% | | | | | | | | | |
| 1-4 The Center develops a human resource plan of the Center. | Plan | | | | | | | Baseline Plan is modified due to sequence of works | | Completed | |
| | Actual | 100% | | | | | | | | | |
| 1-5 The Center develops a guideline of activities of industrial linkage. | Plan | | | | | | | Baseline Plan is modified due to sequence of works | | Completed | |
| | Actual | 100% | | | | | | | | | |
| 1-6 The management members of the Center join in short-term training in Japan/Uzbekistan. | Plan | 4 | | | | | | Baseline Plan is modified due to reality of execution | | Completed | |
| | Actual | 120% | | | | | | | | | |
| 1-6 Design of MIRAI Fund shceme and implementation | Plan | | | | | | | Newly Established in 2020 | | Completed | |
| | Actual | 90.84% | | | | | | | | | |
| **Output 2:Sustainable research network is established between Japanese researchers and young Uzbekistan researchers.** | | | | | | | | | | | |
| 2-0. The Center selects candidates for scholarship (Long-term training). | Plan | | | | | | | | | Completed | |
| | Actual | 100% | | | | | | | | | |
| 2-1. The candidates apply and take examinations for scholarship (Long-term training). | Plan | | | | | | | | | Completed | |
| | Actual | 100% | | | | | | | | | |
| 2-2 The Center sends researchers to Japanese universities for long-term training. | Plan | 510 | | | | | | | *(See Appendix-3)* | Completed | |
| | Actual | 98.80% | | | | | | | | | |
| 2-3 The Center sends researchers to Japan for short-term training. | Plan | 15 | | | | | | | Baseline Plan is modified due to actual requirement *(See Appendix-1)* | Completed | |
| | Actual | 112.00% | | | | | | | | | |
| 2-5 Short-term experts from Japanese Universities provide lectures and conduct collaborative activities with Uzbekistan researchers to strengthen the capacity of research activities of the Center. | Plan | 75 (MD) | | | | | | | *(See Appendix-2)* | Completed | |
| | Actual | 60.00% | | | | | | | | | |
| 2-5 The Center conducts seminars and coferences in Japan/Uzbekistan | Plan | | | | | | | | Baseline Plan is modified due to actual requirement | Completed | |
| | Actual | 50 events | | | | | | | | | |
| **Output 3: Plans of collaborative research with Japanese universities are developed.** | | | | | | | | | | | |
| 3-1 The Center develops research plans to conduct collaborative research with Japanese universities. | Plan | | | | | | | Baseline Plan is modified due to sequence of works | | Completed | |
| | Actual | 100% | | | | | | | | | |
| 3-2. The Center develops a list of necessary equipment for the research activities of the Center. | Plan | | | | | | | | | Completed | |
| | Actual | 100% | | | | | | | | | |
| **Duration / Phasing** | Plan | 63 | | | | | | | | | |
| | Actual | 100.00% | | | | | | | | | |

| Monitoring Plan | Plan / Actual | 2019 | 2020 | 2021 | 2022 | 2023 | 2024 | Remarks | Monitoring: Issue | Monitoring: Solution |
|---|---|---|---|---|---|---|---|---|---|---|
| **Monitoring** | | | | | | | | | | |
| Joint Coordinating Committee | Plan | | | | | | | Baseline Plan is modified due to reality of execution | Completed | |
| | Actual | | | | | | | | | |
| Submission of Monitoring Sheet | Plan | | | | | | | Baseline Plan is modified due to reality of execution | Completed | |
| | Actual | | | | | | | | | |
| Monitoring Mission from Japan | Plan | | | | | | | Baseline Plan is modified due to reality of execution | Completed | |
| | Actual | | | | | | | | | |
| Joint Monitoring | Plan | | | | | | | | | |
| | Actual | | | | | | | | | |
| **Reports/Documents** | | | | | | | | | | |
| Project Monitoring Sheet | Plan | | | | | | | Baseline Plan is modified due to reality of execution | Completed | |
| | Actual | | | | | | | | | |
| Project Completion Report | Plan | | | | | | | | Completed | |
| | Actual | | | | | | | | | |

## 2. Achievements of the Project

2-1 Baseline Survey and Endline Survey

PDM requires to conduct Baseline Survey and Endline Survey:

1) The Project conducted *"**Project Baseline Survey**"* in September 2019 to collect start-point parameters for measuring the progress and effect objectively. The method of the survey and results were reported to JICA as shown in Attachment-9 of ANNEX-2.

2) The Project also conducted *"**Project Endline Survey**"* in January 2024 to measure end-point parameters for evaluation of the achievement of the Project objective manners. The method of the survey and results were reported to JICA as shown in Attachment-10 of ANNEX-2.

2-2 Outputs and indicators

***Output-1 Research management system of UJICY is established.***

| Objectively Verifiable Indicators in PDM (Means of Verification) | Achievement |
|---|---|
| *1-1 A long-term strategy is approved by the Board of Trustees of the Center. (Monitoring Sheet)* | **Achieved. (High)** The strategy was prepared and approved by BOT on January 25, 2020. |
| *1-2 A medium-term strategy is approved by the Board of Trustees of the Center. (Monitoring Sheet)* | **Achieved. (High)** The strategy was prepared and approved by BOT on January 25, 2020. |
| *1-3 Defined responsibilities of the Center's respective divisions and related organizations are approved by the Board of Trustees of the Center. (Monitoring Sheet)* | **Achieved. (High)** UJICY's Charter was revised in 2020 March, in accordance with the new Presidential Decree and the strategies mentioned in 1-1 and 1-2 above, and officially registered at the concerned ministry after approval of BOT. The charter. |
| *1-4 A human resource plan is approved by the Board of Trustees of the Center. (Monitoring Sheet)* | **Achieved. (High)** BOT approved Human Resource Plan as a part of the strategy mentioned in 1-1 and 1-2 above. |
| *1-5 The Center implements research activities in accordance with the strategies and the plan: (Monitoring Sheet and Endline Survey)* | **Achieved. (Very High) 31 research projects (value of USD 4,785,000)** have been conducted or are on-going with grant at the endline of the Project. (see also Attachment-10 of ANNEX-2 Project Endline Survey) |
| *1-6 UJICY establishes and operates research fund: (Monitoring Sheet)* | **Achieved. (High)** MIRAI Fund was established and number of research projects have been in operation under this Fund. |

1-1 Long-term strategy is approved by BOT

1) The long-term & medium-term strategy of UJICY was established as **"Strategic Plan for Sustainable Development of UJICY (SPSD-UJICY)"** *(Attachment1 of ANNEX-2)* and was approved at 1st BOT meeting held on January 25, 2020.

2) The purpose of the long-term strategy is to define directions of the UJICY's activities while maintaining consistency with two (2) important Presidential Decrees (laws) regarding the establishment of UJICY and extending its activities.

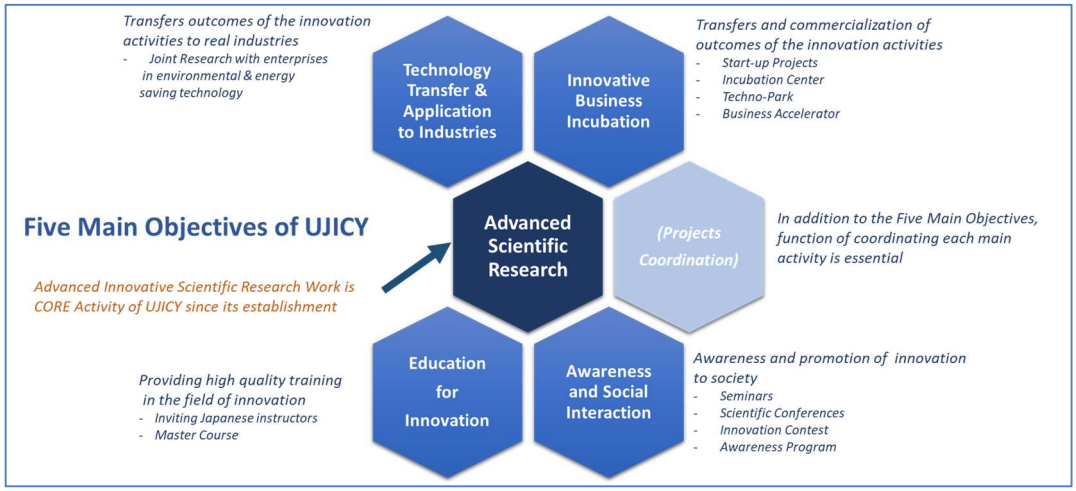



*Figure- 2 Five Main Objectives of UJICY + One (from SPSD-UJICY)*

3) Baseline Survey and Risk Analysis had been conducted to make the strategy more practical and feasible. The risk analysis has been conducted several times and the mitigation plans were proposed to BOT and JCC members periodically. The results of risk analysis have been included in Monitoring Sheets throughout the project period.

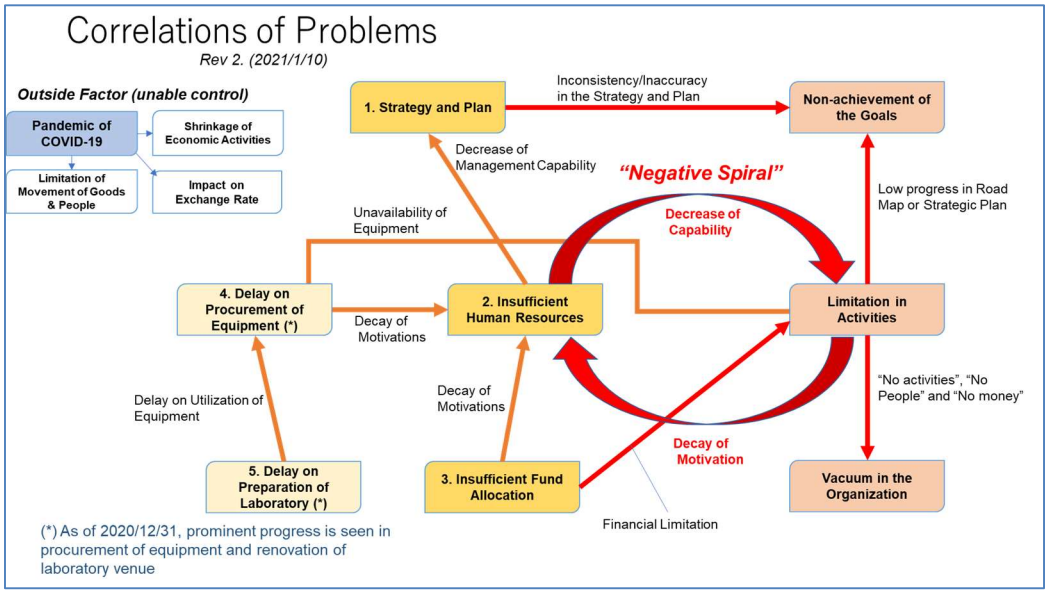



*Figure- 3 Example of Risk Analysis conducted by the Expert*

4) As the exit strategy of this Project, ODA application for Phase-II of the Project was submitted to Japanese government in July 2023. The Phase-II needs to maintain integration with SPSD-UJICY.

1-2 Medium-term strategy is approved by BOT

1) SPSD-UJICY consists of two (2) medium -term road maps: RM-1 (2020-2024) and RM-2 (2025-2029). The term of RM-1 and this Project is overwrapped, and therefore the control of PM-1 has been done as the part of project management of the Project .

2) The period covered in RM-2 matches with the Phase-II of this Project. Since several critical points for sustainable development of UJICY have been found during the execution of the Project, RM-2 shall be modified in accordance with the project design of Phase-II.

3) The progress off SPSD-UJICY was monitored by the Expert, and reported to PD, PM and BOT periodically with Monitoring Sheets and at BOT / JCC meetings.

4) To conduct planning and project control by UJICY management staff is essential for sustainable development of UJICY, and this is the main justification of implementing Phase-II.

1-3 Definition of responsibilities of the Center's respective divisions and related organizations are approved by the Board of Trustees of the Center.

1) UJICY is planning to open new laboratories and to modify its structure [19]. Accordingly, it will be necessary to modify the current Charter.

1-4 Human resource plan is approved by BOT

1) Modification of human resource plan is currently considered by UJICY in accordance with the change of its structure (see 1-3 above).

2) Shortage of qualified administrators due to low salary of UJICY has been critical issue from the start. To mitigate this problem, UJICY has been explaining this issue to the responsible ministries through BOT as well as JCC. The salary for administrative staff was revised by the law [20] and increased to some extent. However, the salary level is still lower than the private sector, and there still continues the issue of shortage of qualified

[19] To open Environment lab and Material Science lab was proposed at 3rd BOT meeting held on April 11, 2022 and approved together with hiring 6 senior and 6 junior researchers additionally. However, it needs modification of the relevant law, and there is no progress on this issue.

[20] Presidential Decree PP55 dated January 15, 2022. Salary level is increased to the same level of staff of Academy of Science.

administrators.

3) The following (Figure-4) is a proposed organization structure enabling efficient operation of the institutions which was presented to BOT and JCC. But it has not been realized since the change of structure as well as opening new labs requires the change of the law (Presidential Decree). This is the issue to be followed-up.

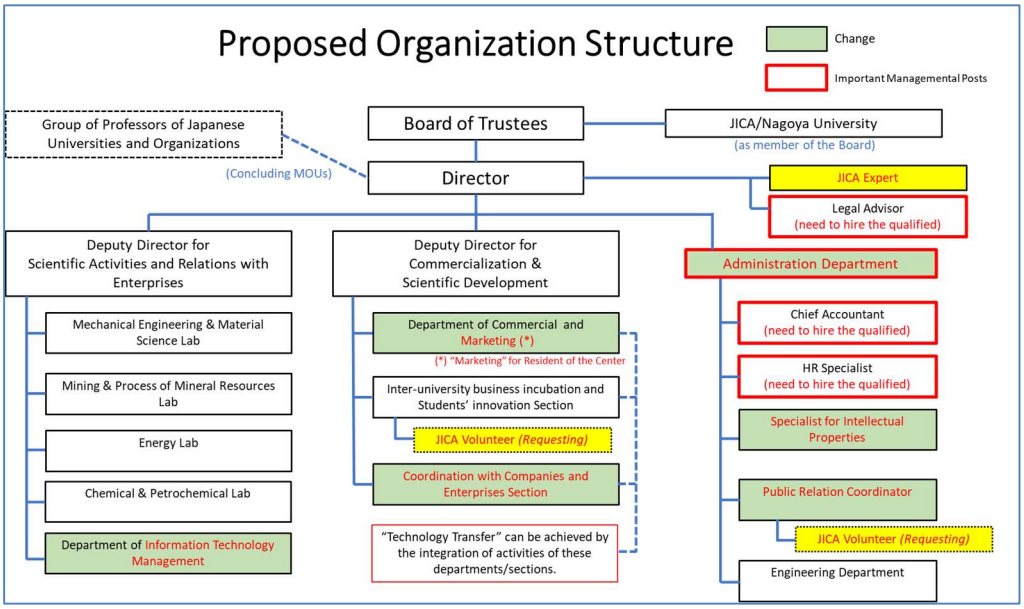



*Figure- 4 Proposed Manpower Allocation by the Expert*

1-5 The Center implements research activities in accordance with the strategies and the plan.

1) At the establishment in 2016, UJICY had set 15 prioritized research areas (*Table-4*), however, these areas are biased to certain category (material) and has become out of date due to changes of the government policy and economic situation in Uzbekistan.

2) At 3rd JCC meeting dated April 3, 2023, UJICY decided to choose three (3) strategic research areas; Hydrogen, Smart Mining and Environment. In accordance with this new strategic direction, there have already been joint projects with Japanese universities as follows:

a) Hydrogen: Joint research on hydrogen generation with Kyushu University and International Institute for Carbon Neutral Energy Research ($I^2$CNER) under SATREPS;

b) Smart Mining: Opened Akita University Satellite Lab in UJICY and started exchange of researchers for potential joint research on mining technology at sites in Uzbekistan;

c) Environment: Joint research on monitoring PM2.5 in Uzbekistan with Keio University.

Table-4 15 Prioritized Area of Research (2018)

| No. | Research Area | Category |
|---|---|---|
| 1 | Study of forms of rare and rare earth metals in the sulfide ore deposit with the further development of technology of extracting and producing ultrapure materials. | Mining |
| 2 | Development of energy-efficient technologies for coke less production of iron in steel production. | Material (Steel) |
| 3 | Geological and Mineralogical study of the processes of manganese ore enrichment. | Mining |
| 4 | Study of structure formation in the process of producing high-quality steels and alloys. | Material (Steel) |
| 5 | Research of technology of complex recycling of large waste (ash and slag) in thermal power station. | Environment |
| 6 | Study of improving the technology of polysilicon. | Chemical, Material |
| 7 | Design and creation of printed circuit boards for electronic circuits, micro-programming, design of electronic devices. | Electrical, Energy |
| 8 | Research and development for synthesis of thin film heterostructures on the asis of: (CdTe) and its alloys | Material |
| 9 | Study of the technology of the new composite materials based on basalt fiber. | Material |
| 10 | Preparation and study of new functional nano composite coating. | Material |
| 11 | Study of non-woven materials modifies with nanoparticles of metals and pharmaceuticals, with a view to the further development of technology for medical materials and hygienic products. | Material |
| 12 | Study of extraction of aromatic hydrocarbons from pyrolysis distillates. | Chemical |
| 13 | Study of technological features produce immune stimulator and antiviral drugs of plant origin. | Chemical, Medical |
| 14 | Research thermolability composition and properties of natural food products, depending on the processing technology. | Chemical |
| 15 | Study of new sorption and photocatalytical materials for water and air purification. | Material, Environment |

1-6 UJICY establishes and operates research fund:

1) “MIRAI Fund of Japan for UJICY”, a research fund, was established under the Project in October 2020 in order to promote research activities and support young researcher in UJICY.

2) The guideline of MIRAI Fund was prepared and the fund were distributed to the selected research project in accordance with the guideline. The application for MIRAI fund was accepted at the beginning of fiscal year, and the applicants need to submit, research plan, procurement plan, team formation and timetable. Each application was evaluated by UJICY’s deputy director for research activities, JICA expert and an expert in Human Development Department of JICA Headquarter.

3) The annual budget for MIRAI Fund is USD 30,000 (or JPY 3 million) and the maximum allocation to each research project is USD15,000 (therefore 2 projects can be selected yearly). In 2021, the budget for MIRAI Fund was doubled to USD 60,000 (or JPY 6 million) due to the additional budget from JICA.

4) MIRAI Fund granted USD 109,015 (JPY 9,343,059) to 9 research projects, and as a result, 50 journal/conference publication were achieved.

(For details, also refer to Table-5 “List of MIRAI Fund Projects” and Table-6 “List of Equipment”, ANNEX-1)

**Summary on Output 1:**

- All indicators for Output 1 are satisfied and targets are achieved.
- Update of the current strategy may be required to conform with the latest requirement from government, industry, and society.
- It is essential to keep consistency between the UJICY’s strategy (RM-2) and the direction of Phase-II, which will start from 2024.
- It is necessary to promote capacity of management of UJICY to plan, monitor, and execute the strategy by themselves.

***Output-2 Sustainable research network is established between Japanese researchers and young Uzbekistan researchers.***

| Objectively Verifiable Indicators in PDM (Means of Verification) | Achievement |
|---|---|
| *2-1 70% of the researchers who study at Japanese universities obtain higher degrees within the pre-determined timeframe.*<br>*(Monitoring Sheet and Endline Survey)* | **Achieved. (Mid) 77.78%** of trainees completed with higher degree within the Project period. |
| *2-2 Number of collaborative activities with Japanese universities increases.*<br>*(Baseline Survey and Endline Survey)* | **Increased and achieved. (High)**<br>**25 Japanese short-term experts** (125 Man-Date) were dispatched to UJICY and **50 scientific outreaching events** (seminars, lectures, symposium etc.) were conducted during the Project, although there was no collaborative activity at Baseline Survey. |
| *2-3 At least three MOUs are signed between the Center and Japanese universities.*<br>*(Endline Survey)* | **Achieved. (High) 10 MOUs with Japanese Universities/ Institutes** were concluded during the Project period. |

2-1 70% of the researchers who study at Japanese universities obtain higher degrees within the pre-determined timeframe. *(see also Attachment-10 of ANNEX-2 Project Endline Survey)*

1) There is a trainee who couldn't acquire Ph.D. degree within the Project period;

**Mr. Shukur** (Tsukuba Univ. 2019-23) graduated without degree. He has privilege of 3 years grace period for submission of doctor thesis, therefore, he is now continuing his study at UJICY and preparing the thesis.

2-2 Number of collaborative activities with Japanese universities increases. (see also Attachment-9 Project Baseline Survey and Attachment-10 Project Endline Survey of ANNEX-2)

1) As described in section c) (2) of Table-1, "1.1 Input by Japanese side", the number of short-term experts dispatched under the budget of the Project (6 experts) is smaller than the one under the external funds (9 experts).

2) Low achievement of dispatch of experts under the budget of the Project (60%) is mainly because of two-years long travel restriction enforced by the government of Japan during COVID-19 pandemic period. However, since the Project actively sought opportunities to invite Japanese experts with funds other than the Project budget, the overall number of experts has exceeded the planned number (166.67%).

*For details, refer to Table-3 "Results of Dispatch of Short-term Experts", ANNEX-1.*

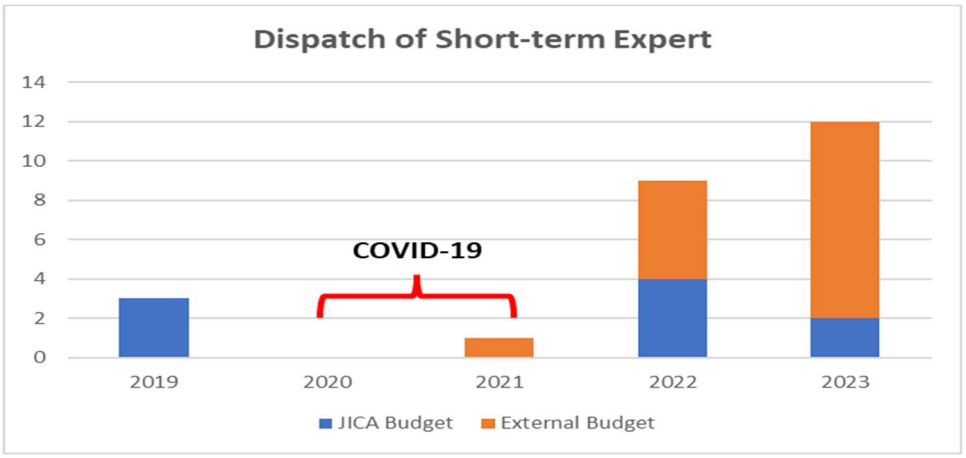



*Figure- 5 Dispatch of Short-term Expert by year*

3) Execution of scientific outreach events were held very actively in collaboration with Japanese experts and scientists. Even under the situation of restriction of travel, the Project conducted number of Webinars and kept collaborative activities.

*For details, refer to Table-4 "Results of Scientific Outreach Events", ANNEX-1*

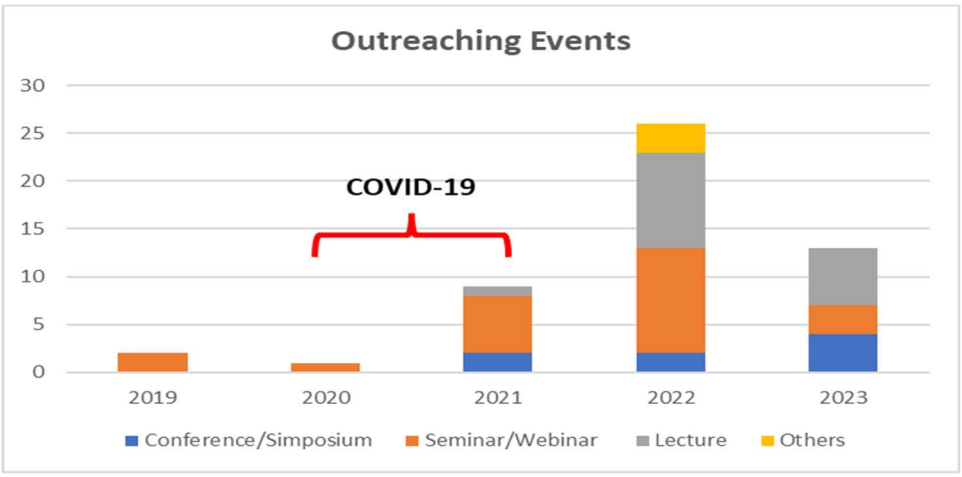



*Figure- 6 Outreaching Scientific Events by year*

2-3 There are three MOUs signed between the Center and Japanese universities. *(see also Attachment-10 of ANNEX-2: Project Endline Survey)*

1) The resources of UJICY (manpower, knowledge, equipment, finance etc.) has been especially limited at the beginning of the Project in 2019 that establishment of collaborative relations was the most essential task. The Project developed connection with new universities in Japan in accordance with the focus areas of technology in Uzbekistan.

2) As a result, UJICY concluded 21 MOUs with international/domestic universities and scientific institutes, including 10 MOUs and a LOI with Japanese universities and institutes. *For details, refer to Table-8 "List of MOU with other Universities/Institutes", ANNEX-1*

**Summary on Output 2:**

- All indicators for Output 2 are satisfied and targets are achieved.
- Although there was negative effect caused by the pandemic of COVID-19, the Project could overcome with flexible countermeasures and achieved the results exceeded initial goals.
- Effective utilization of returned trainees from Japan is highly important task. *(see also item 2-3 of Table-3 Achievement of Activities*)

***Output: 3. Plan of collaborative research with Japanese universities are developed.***

| Objectively Verifiable Indicators in PDM (Means of Verification) | Achievement |
|---|---|
| *3-1 Research plans to conduct collaborative research with Japanese universities shall be reported to the Board of Trustees of the Center. (Monitoring Sheet)* | **Achieved (High).** The collaborative activities with Japanese universities are always reported to not only the BOT, but also governmental organizations, such as Presidential Office, MHESI and other concerned ministries, which have higher authority than BOT. |
| *3-2 A list of necessary equipment is approved by the Board of Trustees of the Center. (Monitoring Sheet)* | **Achieved (High).** The list of equipment which was procured by the budget of Uzbekistan side is based on approval from BOT and other higher governmental organization such as MHSSE and MID (currently MHESI). |

3-1 Research plans to conduct collaborative research with Japanese universities shall be reported to the Board of Trustees of the Center.

1) Board of Trustee (BOT) meeting has not been held since 2022 May since the frequent ministerial restructuring. However, since BOT does not intervene research activities of UJICY in general, there has been no problem in carrying out research activities. Furthermore, because of government policy which focuses on taking stronger control of educational institutes, the Presidential Office have started making direct instructions to UJICY.

3-2 A list of necessary equipment is approved by the Board of Trustees of the Center.

1) Now the list of equipment to be procured under SATREPS is under preparation with Kyushu University, however, BOT is not functional now and will not intervene in selecting equipment under Japanese sponsored-project.

**Summary on Output 3:**

- All indicators for Output 3 are satisfied and targets are achieved.
- Current situation that BOT is not functioning needs to be improved as soon as possible since UJICY cannot make important decisions without BOT in accordance with the laws and Charter of UJICY.

2-3 Project Purpose and indicators

***Project Purpose:*** ***Capacity of researchers at the Uzbek-Japan Innovation Center of Youth to conduct research activities is strengthened.***

| Objectively Verifiable Indicators in PDM (Means of Verification) | Achievement |
|---|---|
| *1. 80% of the researchers are satisfied with the research management system of the Center.*<br>*(Endline survey)* | **Achieved (High).**<br>**87%** of the researchers are satisfied with the research management system of UJICY. |
| *2. Number of research projects increased.*<br>*(Baseline and Endline surveys)* | **Increased and achieved. (Very High)**<br>Only 2 projects were running at the baseline survey, and **31 research projects (value of USD 4,785,000)** have been conducted or are on-going with grant at the endline of the Project |
| *3. Number of papers published at journals and conferences per year researcher increases.*<br>*(Baseline and Endline surveys)* | **Increased and achieved. (High)**<br>Numbers of publications has been increased from 0.98 paper/year/ researcher at the baseline to **4.37 paper/year/researcher** at the endline of the Project |
| *4. 80% of the researchers assess that their research capacity was strengthened.*<br>*(Endline survey)* | **Achieved (High).**<br>**100% of researcher** assess their improvement of research capacity through the Project. |

80% of the researchers are satisfied with the research management system of the Center

1) According to Endline Survey, there were both positive and negative comments about UJICY's management system. Positive comments pointed out UJICY's greater scientific potential in comparison with other institutes, with comments such as "UJICY is one of the most advanced scientific research institutes, and an organization with high scientific potential and modern technical base. It has ability to implement several international projects and developments in the future", and "UJICY is a small but unique research center, small number of researchers can do their experimental researches freely. Comparing to other research institutes, UJICY is more effective and can be extended".

   On the other hand, there were also many comments requesting more improvement, such as new equipment, opening new labs as well as for additional researchers. These points are consistent with the problems recognized by management.

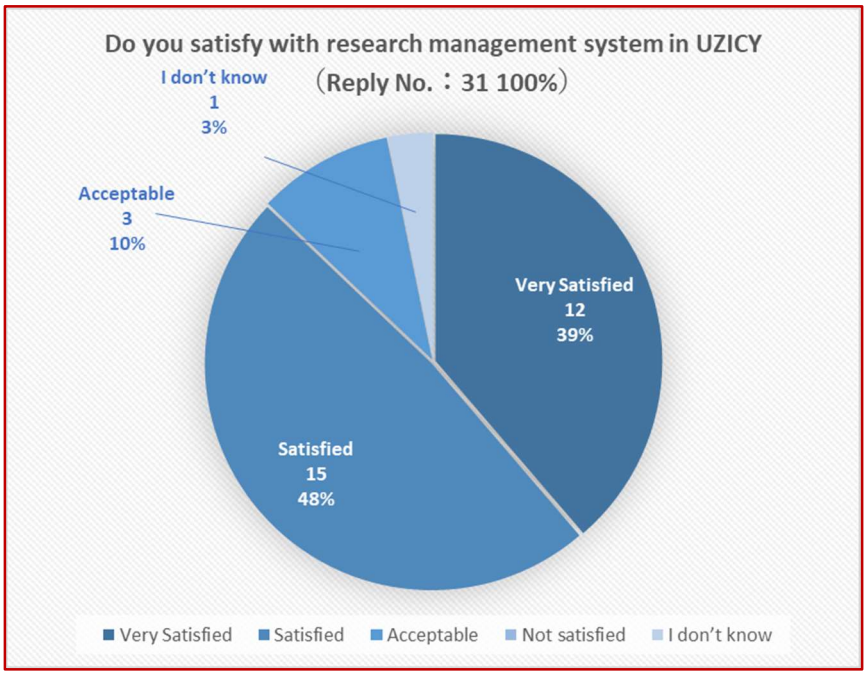



*Figure- 7 Satisfaction with Management System of UJICY*

(From Project Endline Survey Report)

Number of research projects increased

1) The result of survey shows very satisfactory figure in this target. However, the variation between laboratories can be seen *(see Figure-8 below).*

   While Chemistry Lab are most actively and constantly conducting research projects, Energy Lab acquires a few relatively big grant projects. Mechanical Lab and Mining Lab are not involved the competitive/commercial research so far due to the lack of experience. In order to solve this issue, UJICY has started to share know-how of applying to competitive research fund

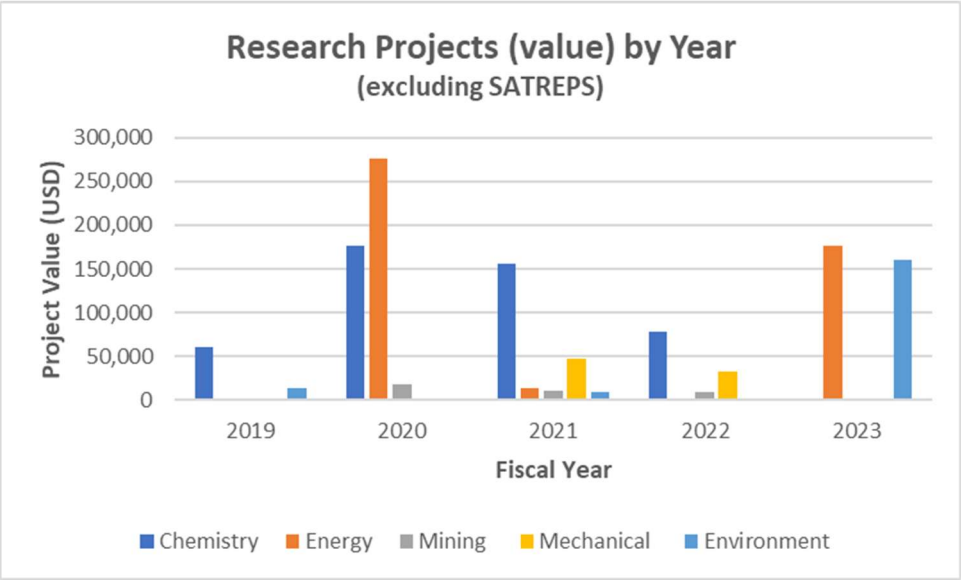



*Figure- 8 Research Project by Laboratory*

2) Award of SATREPS is a prominent achievement of UJICY, not only for research activities but also increasing prestige of UJICY as the first-class research institute.

Number of papers published at journals and conferences per year per researcher increased

1) The number of publications on high-impact international journal (*see Figure-9 below*) are increasing after 2020 because of installation of equipment purchased by Uzbekistan side and starting of MIRAI Fund.

2) It is worth to mention that the publications in Mining Lab in 2023 are made by trainees who studied and are studying at Kyushu University.

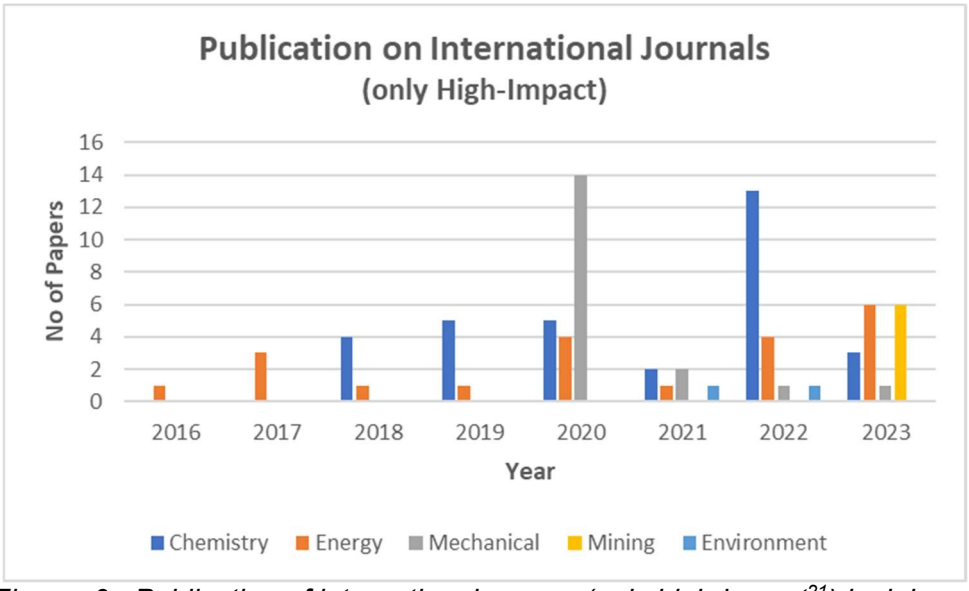



*Figure- 9 Publication of international papers (only high-impact[21]) by laboratory*

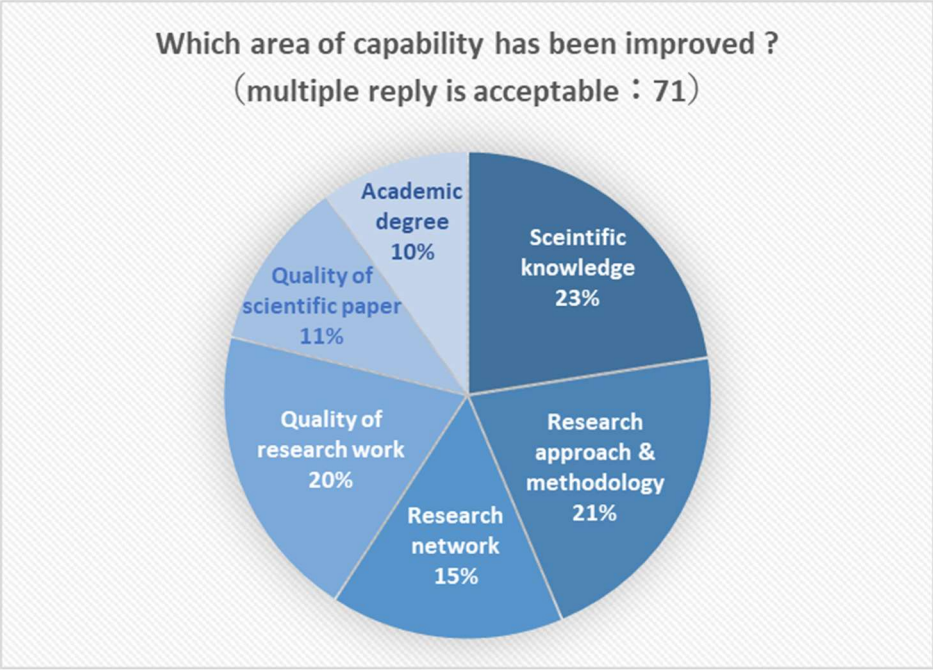
[21] Academic journals are measured using an index called journal impact factor, which is frequently used as a proxy for the relative importance of the journal within its field. Based on this index, only journals with high impact factor was taken into consideration in this Figure.

3) It shall be carefully monitored the fact that ratio of mid/low impact paper against high impact paper is increasing. This is because young researchers can conduct more research works and consequently produce more scientific papers due to improvement of research environment of UJICY but their skill and knowledge are still insufficient to produce high quality paper. Improving the quality of paper is another challenge for UJICY in order to maintain international standards of research activities and to acquire more external research fund and commercial contracts.

80% of the researchers assess that their research capacity was strengthened

1) It is encouraging result that 100% of the researchers felt improvement of their research capacity. The following graph (*Figure-10*) indicates which kind of capacity has been improved.

2) Scientific Knowledge", "Research Methodology", "Quality of Research" are the main areas of improvement and "Research Network" is the following. This graph suggests that the Project has contributed to the improvement of the researcher's capacity in a well-balanced way.




(From Project Endline Survey Report)

*Figure-10 Area of Improvement*

Summary on Project Purpose:

- All indicators for Project Purpose are satisfied and targets are achieved.

- Through this Project, the "**quantitative**" parameters (number of research projects, number of papers) show prominent achievement in strengthening the capacity of research activities. Therefore, the next challenge is to bring up **"quality"** of output. This target has already been involved in Phase-II design.
- It is also essential to strengthen the management capacity in order to maintain and improve the scientific momentum achieved by this Project.

## *3. History of PDM Modification (PDMs are attached in ANNEX-5 PDMs)*

In this Project, there are only minor modifications on PDM and there is no modification which may give major impact on the Project Purpose. Current PDM is version-3.

1) 1st modification:
   a) Add 1-6 in Objectively Verifiable Indicator and Means of Verification in Output
   b) add text regarding newly established research fund (MIRAI Fund) in Objectively verifiable Indicators, Mean of Verification, and Input.

   **Approved as Version 2 at 1st JCC Meeting on December 25, 2020.**

2) 2nd modification:
   a) specify values of Objectively Verifiable Indicators which remained as "XX"
   b) replace all "the Science Council" with "the Board of Trustees" in accordance with conformity with the reality;
   c) add Activity 1-2 *"The Center specifies the priority research areas corresponding to the social problems."* , and change numbering accordingly;
   d) add words "in accordance with the priority research areas" in Activity 1-3 in order to keep consistency with newly added activity 1-2;
   e) Add Activity 2-3 "*The Center develops the utilization plan of research outcome of the long-term trainings after the researchers obtain the degrees in Japanese Universities*" in conform with the return of trainees to UJICY.

   **Approved as Version 3 at 2nd JCC Meeting on January 11, 2022.**

## 4. Others

### 4-1 Results of Environmental and Social Consideration

Since its inception, UJICY has been contributing to the society of Uzbekistan as well as global environment through its research, educational/awareness activities and direct interactions with the local society in accordance with the concept of SDGs. No serious negative environmental and social impact occurred or is expected to occur in this Project.

### 4-2 Results of Consideration on Gender/Peace Building/Poverty Reduction, Disability, Disease infection, Social System, Human Wellbeing, Human Right, and Gender Equality

As mentioned in the above 4.1, UJICY complies with SDGs and the issues related to Gender, Peace Building and Poverty Reduction are always considered carefully.




*Figure-11 UJICY's Commitment to SDGs*

1) Gender:

This Project provides equal opportunities for both genders in employment, long/short-term training in Japan and daily research activities and administrative works. Both genders compete and cooperate to achieve notable results research results and to acquire high-impact evaluation on their papers from international scientific journals. Current gender balance of senior researchers in UJICY is Male / Female : 40% / 60%.

UJICY also organizes events and opportunities for women's empowerment such as Scientific Breakfast for Female Scientist (May 2022) and Seminar on Women working internationally (Jul 2023).

The following Figure-12 indicates the trends in gender balance in senior researchers.

The female-dominated trend was maintained throughout the project, but this trend has been a bit equalized at the Endline as 40% / 60% because of the return of male trainees from Japan with degree.

OBJ

*Figure-12 Trends in Gender Balance of UJICY*

2) Peace Building:

The area of research at UJICY and utilization of these outputs are limited to peaceful purposes and non-weapon related industries.

3) Poverty Reduction:

UJICY's activity to support business start-up and matching between academia and industry contribute greatly to increasing business opportunities for people who have ideas but do not have ample fund to start business. This business start-up function also supports small-medium size enterprises (SMEs) in this country and is expected to improve employment opportunities for young generations.

# III. Results of Joint Review

## *1. Results of Review based on DAC Evaluation Criteria*

(Rating scales (High, Relatively high, Moderate, Relatively low, Low) were applied to evaluate each criterion.)

1-1 Relevance (Rating: High)

| Key Perspectives | | Confirmation |
|---|---|---|
| 1 | Consistency with Development Policy | The Project has been implemented in consistency with the national development policy and strategy in Uzbekistan. |
| 2 | Consistency with Development Needs | The Project has been maintaining conformity with the needs from society and target group. |
| 3 | Appropriateness of project plan and approach | The Project was appropriately designed and implemented to respond to the needs and issues. |

1. The government of Uzbekistan announced its National Development Strategy [22] in February 2017, which included the promotion of science, technology and innovation, and the enhancement of universities and research institutes. In the same year, the Innovative Development Strategy [23] was launched. In 2018, the Ministry of Innovative Development (MID) was newly established and promoted social implementation of technology by applying innovation with receiving assistance from United Nations agencies (UNDP) etc.

   UJICY, which was established in this context, was naturally expected to implement activities that align with these strategies. Therefore, this Project, which aims to develop scientific and technological human resources in UJICY and transfer technology through joint researches using networks with Japanese universities, is highly consistent with the strategies and policies of the Uzbekistan government. *(see also Figure-2 "Five Main Objectives of UJICY + One")*

2. Additionally, during the Project implementation period, there were changes in circumstances surrounding UJICY, such as MID being absorbed into MHESI and the change of key ministerial personnel. Whenever that change happened, UJICY has responded quickly to changes in the circumstances, and has always carried out its mission keeping in mind the needs of the Project's target groups, who are young human resources in both academia and industry.

3. In 2023, UJICY was ranked as 11th best scientific institute (out of 118 institutes) in

[22] "Uzbekistan's Development Strategy 2017-2021" Presidential Decree UP-4947 dated February 7, 2017

[23] "Strategy of innovative development of the Republic of Uzbekistan for 2019-2021" Presidential Decree UP-5544 dated September 21, 2018

Uzbekistan. This shows that the design, plans, and implementation of this Project are to be highly evaluated and recognized as having contributed to the achievement of this ranking. In September 2023, the government of Uzbekistan announced a new national development strategy, "New Uzbekistan Strategy 2030" [24] (*see Attachment-11 of ANNEX-2*) as a new growth strategy. This strategic aim is *"increasing the share of young researchers, supporting their scientific researches*". This is the same as the concept of the Project Purpose of this Project, and UJICY will be expected to continue to be a key player in science sector under this new strategy.

As a conclusion, the Project has been planned and implemented in consistency with the national policy and needs of society.

1-2 Coherence (Rating: High)

| Key Perspectives | | Confirmation |
|---|---|---|
| 1 | Collaboration with JICA's other projects | The Project proactively explored for opportunities to collaborate and did collaborate with other JICA projects and activities. |
| 2 | Collaboration with other projects | The Project was very proactive in co-creation with other projects than JICA and sought the possibility of adding value. |
| 3 | Consistency with global frameworks | The Project has been implemented in consistency with global frameworks (SDGs). |

1. Although collaboration with other JICA projects was not planned at the planning stage, due to the nature of an Innovation Center as a scientific research center, UJICY proactively sought the opportunities of collaboration with other JICA projects after setting new vision to become a co-creation hub for academia-industrial collaboration. The Project keeps close communication with JICA as well as Embassy of Japan to confirm conformity with their policy. The followings are the examples of collaboration with other projects under the initiative of the Project.

    a) Particularly in the energy field, UJICY collaborated with a technical cooperation (T/C) project related to energy-saving technology, and conducted a pilot test of the performance of inverter air conditioner using the facility of UJICY. The results have led to requests from other energy-related project of the Ministry of Energy in the field of hydrogen energy, which has led to the realization of the SATREPS project in 2023.

[24] "New Uzbekistan Strategy 2030" Presidential Decree UP-158 dated September 11, 2023

b) UJICY has been cooperating with another T/C project related to sericulture technology. UJICY made prototypes of sericulture tools using 3D printers. Innovative approaches and technology have been introduced to the traditional sericulture industry in Uzbekistan through collaboration of two JICA T/C projects.

c) UJICY is also extended support by providing its network and information to Japanese private companies which visited Uzbekistan under JICA's Public-Private Partnership Program. UJICY's involvement as an entity from academic sector has provided the Japanese companies with new approach from different angles. One example is a company with advanced image processing technology for precise measuring, which could be used for road maintenance. When this company visited Uzbekistan, UJICY suggested that this technology could be used for preservation of archeological buildings which are important tourism resource of Uzbekistan, and introduced the company to the national committee of culture and heritage[25].

d) UJICY collaborated with JICA's symposium for anti-seismic technology by dispatching experts and providing the venue. As the result of this collaboration, UJICY has helped expand networks with the Ministry of Emergency and the Ministry of Pre-school and School Education regarding early alarm system of earthquake, which is a highly prioritized issue of Uzbek government..

e) UJICY is receiving two (2) JOCVs for Marketing and Public Relations. They are working alongside activities of the Project and have made contributions, and through this work they are also learning about international cooperation. The collaboration between T/C project and JOCV is a unique initiative.

In most cases, such collaborations were proposed by UJICY proactively with suggestion by the Expert, and such value-adding approach of UJICY has been highly appreciated by other projects.

2. The Project has been proactive for collaboration with other entities than JICA, such as Ministry of Economy, Trade and Industry, Japan (MITI, for business mission), Japan Organization for Metal and Energy Security (JOGMEC, for natural resources), New Energy and Industrial Technology Development Organization (NEDO, for new energy), Japan Society for the Promotion of Science (JSPS, for core-to-core project), and RIKEN. Through JSPS, and in collaboration with Akita University, UJICY became one of the core institutes in the Central Asia, and held an international conference on carbon-neutrality with Akita University inviting researchers from Kazakhstan, Mongolia, Kyrgyz, Tajikistan, and Uzbekistan. This collaboration established new regional scientific network.

[25] see also section 5.3 of **5. Performance**

3. As mentioned in the clause 4.2 of II. Results of Project - Others, all activities of the Project are carefully considering the conformity with SDGs targets. (see 4.2 of II.4 above)

1-3 Effectiveness (Rating: High)

| Key Perspectives | | Confirmation |
|---|---|---|
| 1 | Degree of the achievement of the project purpose | The outputs of this Project effectively contribute to the achievement of Project Purpose more than initial plan. |

1. All objectively verifiable indicators of Project Purpose have been fulfilled (*see 2.3 Project Purpose and Indicators*).
2. There were no changes on Project Purpose and there was no logical contradiction with other contents in the PDM.
3. The following indicators are showing remarkable progress:
   a) Increase of Research Projects: **15 times increase from the baseline** (from 2 to 31). This was achieved by the joint efforts of this Project, the support from Uzbekistan side and the hard work of the researchers and staff of UJICY.

      The most visible contribution was the installment of research equipment valued at USD 1 million by the Uzbek government. However, hardware (equipment) alone could not initiate research projects nor achieve sustainable institutional activities, and software (system, network, and fund) provided by this Project has played inevitable role to strengthen research network with domestic/foreign scientists, and consequently, the combination of hardware and software has contributed greatly to the promotion of development of the research capacity of UJICY.

      Furthermore, MIRAI Fund directly contributed to activation of research activities of young researchers by supplying necessary financial support. The researchers' effort to get competitive research funds from outside organizations also contributed greatly.

   b) The increment of research projects directly connected to the increase of number of scientific publications. The number of publication per year, per researcher **increased 6 time from the pre-project period** (from 0.98 to 3.47).

   c) **Scientific outreach activities** done by Japanese experts such as seminar and conference marked remarkable achievement, **1.67 times more than the initial plan**, although input from the Project was limited due to COVID-19. This achievement is because of invitation of experts with external fund or free-of-charge and application of webinar-style. This is a good practice of changing the negative situation into the positive results.

As conclusion, each Output of the Project is effectively contributed to the achievement of Project Purpose.

1-4 Efficiency (Rating: High)

| Key Perspectives | | Confirmation |
|---|---|---|
| 1 | Project Cost | Planned: 353.16 million JPY<br>Actual: 258.00 million JPY<br>**Actual/Planned Ratio: 73.05%** |
| 2 | Project Period | Planned: the first half of 2019 – March 2024<br>Actual: January: 2019 – March 2024 (PDM Ver.3) **As Scheduled**. |
| 3 | Causal Relationship | The volume and kind of Input set at the project design seemed to be appropriate but could not be executed mainly due to the pandemic of COVID-19. |

1. The Project suffered from the restriction of movement of human and goods during the period of pandemic of COVID-19 (2020-2022). his restriction affected the execution of training programs in Japan as well as dispatch of Japanese expert to Uzbekistan., which is the main reason of the relatively low ratio of budget consumption. However, the Project applied alternative approaches, such as online activities, utilization of local resources and external funds, and achieved all planned targets while achieving the same or larger effects than the plan, as explained in the section of *1-3 Effectiveness* in this evaluation.
2. Efficiency Formula: $\frac{Actual\ Cost}{Planned\ Cost} \cdot \frac{Actual\ Period}{Planned\ Period} \cdot 100$

   0.7305 *(cost factor) x 1.0 (time factor) x 100 =* ***73.05 % (High)*** [26]
3. As described the above, the Project achieved the planned targets with lower cost and without delay of schedule. As conclusion, the efficiency of the Project is high.

[26] Evaluation Criteria of Efficiency : High: < 100%, Relatively High: 100-125%, Moderate: 125-150%, Low: >150%
(Source: "Table: Six DAC Evaluation Criteria and JICA's Key Perspectives for Ex-post Evaluation", JICA

1-5 Impact (Rating: High)

| Key Perspectives | | Confirmation |
|---|---|---|
| 1 | Prospects to achieve the overall goal | Overall Goal can be achieved. For details, refer to IV. 1. Prospects to Achieve Overall Goal |
| 2 | Causal relationship | Overall Goal and Project Purpose maintain good integrity. |
| 3 | Ripple effect | The Project's results shall contribute not only to "Industrial Development" but also to " Development of Society" since the range of activities of UJICY has been expanded during execution of the Project. |

1. The Overall Goal can be achieved by accumulation of the result of strengthened capacity of researchers, which Project Purpose aims. Judging from the positive outcomes confirmed at the endline of the Project, there is no logical contradiction in causal relations between Overall Goal and Project Purpose.
2. Throughout the implementation of the Project, UJICY's pursuit of innovation expanded horizon of its activities and has contributed to removing the border between science and society. Therefore, the effects of this Project are expected to extend not only to industrial development but also to social development.
3. UJICY's concerns about gender equality, poverty reduction, and equal education has been reflected to its activities, rippled effects other than Overall Goal is expected.

1-6 Sustainability (Rating: Relatively High)

| Key Perspectives | | Confirmation |
|---|---|---|
| 1 | Policy and System | The government of Uzbekistan placed the development of education and science as the top agenda of national development plan - New Uzbekistan Strategy 2030, and the Presidential Office has intention to make UJICY the most advanced research and development (R&D) center in the republic. |
| 2 | Institutional and Organizational aspect of the implementing agency | The risks related to secure qualified human resources remains due to several issues (establishment of new laboratory, increase of staff and researchers and increase of salary level) are pending at this moment. (*see 3. Evaluation on the Results of the Project Risk Management)* |
| 3 | Technical Aspect of the implementing agency | UJICY has accumulated enough technical knowledge and facility through the Project. |
| 4 | Financial Aspect | UJICY is the national scientific institution regulated by the laws. Therefore, the operation expenditure of UJICY will be continuously paid by the government. On the other hand, expenditure for research activities shall be secured from domestic/international competitive research funds and business contracts. |
| 5 | Social and Environmental Aspect | Anticipated negative impacts on the environment and society to be caused by the Project is minimal. There is high possibility of positive impact on the environment and society as the result of scientific research to be conducted by UJICY. |
| 6 | Preventative Measures to risk | Risk control measures are explained in the following section; *"2. Key Factors Affecting Implementation and Outcome" and "3. Evaluation on the Results of the Project Risk Management"* |

1. The recommendation letter to the President from his advisors dated October 3, 2023 mentioned that "All necessary measures will be taken to turn the center into the most advanced research and development (R&D) center in the republic, serving the industry and training scientific personnel", and have circulated to MHESI.

   As described in the section of "1-1 Relevance" in this evaluation, UJICY's policy and activities keep consistency with the government policy.

2. As described in "*3. Evaluation on the Results of the Project Risk Management"* in more details, the risks related to securing qualified human resources remained although some mitigation actions have been taken with assistance from the government. The concerns in human resources have been shared with the government through BOT meetings and JCC meetings several times, and accordingly the C/P's sense of ownership is maintained high.
3. Further enhancement of UJICY's research activities especially by young researchers is expected to be realize through international joint research such as SATREPS-Hydrogen.
4. More stable financial backbone is required. For this purpose, more competitive research fund should be acquired and more business contracts with companies is necessary. The Phase-II of this Project aims to the promotion of academia-industrial collaboration, and this attempt is expected to contribute to both sustainable development and financial self-standing of UJICY.

## *2. Key Factors Affecting Implementation and Outcome*

2.1 History of Risk Analysis

The Project has encountered critical factors which were not predicted at the project designing mission conducted in 2018. They were mostly Risk Factors. The Project Expert has been conducting Risk Analysis periodically, proposed solution (mitigation) actions, and monitored the results. The results were reported or presented to the C/P at BOT meeting and JCC meeting. The following the major Risk Survey & Analysis reports issued during the Project period:

- 1st Risk Analysis Report for root cause of problems (October 2019) presented at BOT Meeting December, 2019 (*Attachment-12 of ANNEX-2*)
- 2nd Risk Analysis Report (December 2020) presented at 1st JCC Meeting December 2020 (*Attachment-13 of ANNEX-2*)
- Monitoring and Update risk factors every 6 months and reported on Monitoring Sheet Ver2 -Ver.9

2.2 Risk factors

Through the Risk Analysis, the following factors were recognized as risk factors affecting implementation and outcome of the Project:

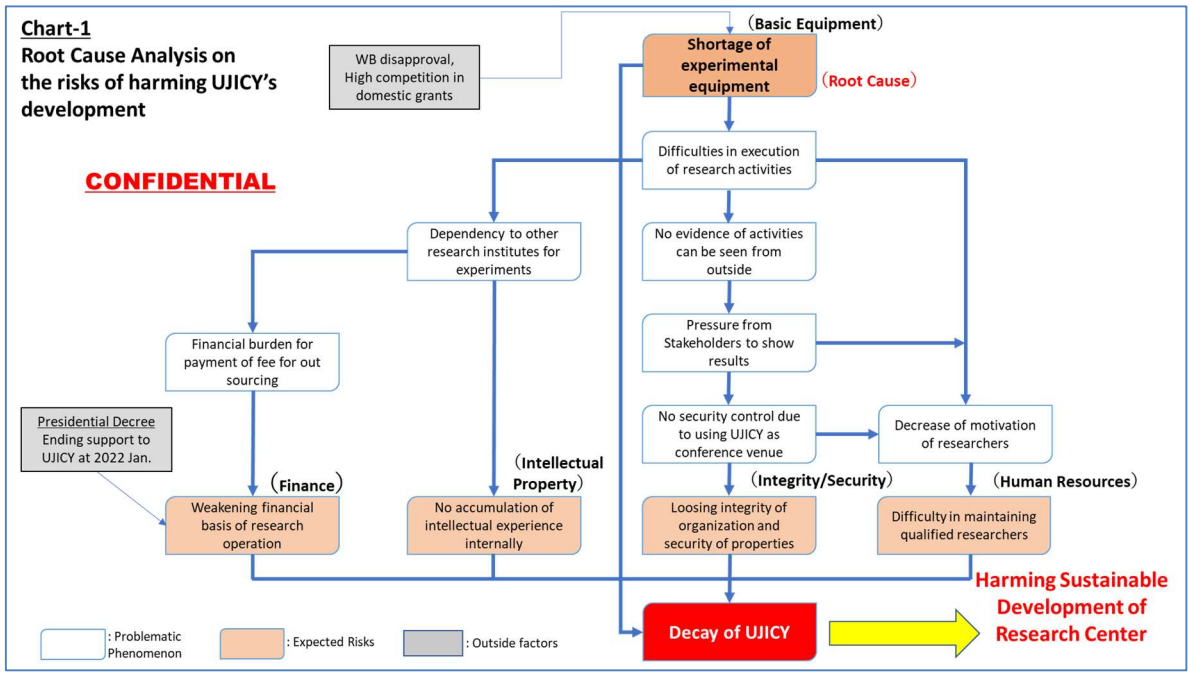



*Figure-13 Co-relation of Risk Factors existing at the beginning of the Project*

*(Source: from 1st Risk Analysis Report in2019)*

a) **Shortage of Equipment**: Regarding experimental equipment, there was a misunderstanding between Japan and Uzbekistan from the project design stage about who would provide it, therefore this project started with this risk as an issue.

Without equipment, research could not be carried out, and as a result, qualified researches could not keep, and consequently no scientific knowledges would not be accumulated. Therefore, this risk was a "root cause" of other risks existed in UJICY. After falling the abovementioned negative loop, the worst scenario was that UJICY would become hollow.

A major turning point was the Uzbek president's visit to Japan at the end of 2019, at which time the Uzbek government allocated a budget of 100 million yen for equipment, and signs of a resolution to this problem seemed to appear. However, after that, UJICY kept suffering from delays in budget measures, contract deficiencies, delay of construction of lab and the impact COVID-19 on transportation of equipment.

b) **Human Resources**: It has been essential task for UJICY to maintain human resource quantitatively and qualitatively in both research and administrative divisions but it is very difficult because of the root causes of this risk; low salary level and employment ceiling set by the government (initially 23, and then increased to 35). Especially shortage of post for researcher becomes an obstacle for receiving the returned trainees from Japan and may be the factor reducing the effectiveness of the Project.

c) **Shortage of Finance**: UJICY has been allocated minimal fixed cost of its operation and not expenses for research works and miscellaneous expenditures. Accordingly, the researchers cannot buy chemicals and consumables except acquire funds from outside. This risk made activity level of UJICY very low at the early stage before MIRAI Fund has introduced.

d) **Lack of Consistency in Supervision**: There were three (3) entities for supervising UJICY at the early stage of the Project: MHSSE, MID, and TSTU. Each of them gave instructions to UJICY without any coordination or consistency between them, and accordingly the management of UJICY was confused and suffered unnecessary work load and delay on approval procedure.

As the Project proceeding, the following new risk factors appeared:

e) **Lack of Project Management Skill**:

As the strong instruction from the government, UJICY has been promoting the commercial test services for enterprises in order to earn the profit. However, since there is no qualified commercial, financial, and legal staff in UJICY, there were many troubles in the contracts. As for researchers, their research plans were, in most case, lack of project management; time (schedule) control, cost control and monitoring of progress, etc. As the results, delay of the deadline and cost overrun were happened.

f) **External Risk Factors**: In 2020, the pandemic of COVID-19 broke out, and almost 2 years, the movement of human and goods were restricted and related activities of the Project, such as training in Japan, inviting foreign experts and procurement of equipment, suffered tremendous damages and delays. Another outside risk that affected the Project is Russian's invasion to Ukraine. The sanction imposed on Russia, also affected the supply chain to the CIS countries. This affected and continues to affect the maintenance of equipment or procurement of goods to be used for research works.

The above Risk Factors are all cross-related and caused unfavorable effects in the output of the Project. The Risk Factors have been monitored and the countermeasures described in the following section have been applied.

## *3. Evaluation on the Results of the Project Risk Management*

### 3.1 Mitigation of Risks

The Risk Factors recognized during the Project period were controlled or resolved with mitigation actions taken by UJICY. The following describes the situation of risks as of the end of Project as well as the mitigations applied.

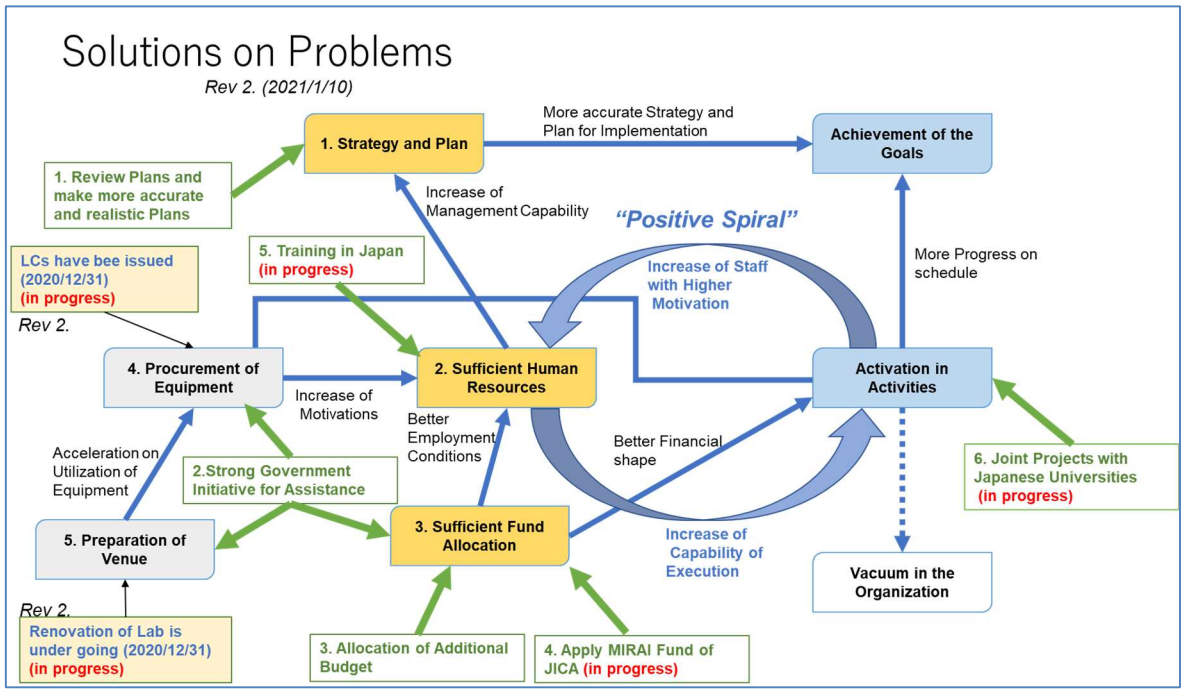



*Figure-14 Positive Spiral Caused by Risk Mitigation*

*(Source: from 2nd Risk Analysis Report in2020-21)*

a) **Equipment:** After considerable delay, the planned procurement of experimental equipment was partially completed in 2021, and fully completed in 2023. Since the lack of equipment was the root for other risks, the progress of mitigating this risk had positive effects such as activation of research works, publication of scientific papers, and commercial contacts. Accordingly, it can be said that Equipment Risk has been mitigated.

b) **Human Resources:** After the negotiation with the government, revision of salary scale for administrative staff was approved to increase salary of UJICY staff to the same level as Academy of Science in Presidential Decree PP25 dated January 15, 2022. It had some positive effects, but it is not enough to attract sufficient number of well-qualified people.

At the 3rd BOT meeting in 2022, i) opening 2 new laboratories, ii) increasing the quota of researchers at lab up to double, iii) providing favorable allowance to the returned trainees with degree from Japan, were approved and instructions from the Cabinet of Minister were made to each relevant Ministry. However, due to the restructuring of the government, only iii) allowance to the returned trainees was realized and other issues are pending at this moment.

As mention in the Project has established the utilization plan of the returned trainees from Japan (see also Table-3 (2-3) in this report). However, if the government of Uzbekistan will not take proper solution timely, this factor becomes main concerned risk

of the Project. Therefore, Risk on Human Resources is still not mitigated and remains as a main risk factor.

c) **Finance**: MIRAI Fund started from 2020 was an effective mitigation against financial risk. Consequently, UJICY's research activities have increased and the number of publications (see Table-7 of ANNEX-1) grew. Promoting research through MIRAI fund also led to increase of research grant opportunities from domestic/international organization.

As for commercial contracts with enterprises, UJICY has been promoting service contracts with state-owned companies and concluded more than 10 projects. However, because of problematic contractual conditions, the projects did not sufficiently contribute to UJICY's financial strength. At the earlier stage of the project, since profits from these projects was not reserved for the future expenditure or indirect cost paid to the projects, there was not enough money for repairs and maintenances, as well as for purchasing consumables. To resolve this problem, currently 15% of the contract amount is reserved for covering indirect cost.

As mentioned in 2.2 e) of Clause 2 above, these contractual problems come from the staff's lack of knowledge about commercial norm and legal affairs, intellectual property rights, and project management (cost estimation) are recognized as "Project Management Risk" as described below.

d) **Consistency of Supervision**: The confusion in the chain of commands and reporting responsibility was solved by merger of MHSSE and MID and establishment of Ministry of Higher Education, Science, and Innovations (MHESI) in December 2022, as a part of nationwide integration and restructuring of administrative agencies in Uzbekistan. Since the unification of the chain of command, TSTU, which belongs to MHESI, does not directly interrupt the activities of UJICY.

e) **Project Management**: UJICY conducted a project management course for researchers and administration staff in Tashkent, inviting Japanese expert under the support of Uzbek Japan Center in July 2022, and another short-term training course in Japan in July 2023 for knowledge building on academia-industrial collaboration projects and three (3) trainees who are in-charge of marketing and business development in UJICY participated. However more systematic training in this area is highly required and accordingly, the building of capacity of project management is one of the key subjects of Phase-II of the Project.

f) **Other Risks**: During the period of the pandemic of COVID-19, the Project continued its activities in alternative ways, such as remote seminar (webinar) and lectures by local experts as well as concluding MOU with Japanese universities. As a result, more expert

activities were carried out than originally planned. The risk related to the pandemic of COVID-19 was resolved along with the end of the pandemic.

Due to the conflict between Ukraine and Russia, disturbances in supply chain in the Central Asia region continues and remains as a risk. However, the impact on the project has been minimal so far.

*Table- 4 Changes in Risk Status*

| Risk | 2019 | 2020 | 2021 | 2022 | 2023 | Endline |
|---|---|---|---|---|---|---|
| Shortage of Equipment | Critical | Critical | High | Mid | Improving | Mitigated |
| Shortage of Qualified Human Resource | High | High | Mid | Mid | Mid | Mid |
| Returned Trainees Utilization | | | | Observed, High | Mid | Mid |
| Insufficient Financial Sources | High | High | High | Mid | Mid | Improving |
| Insufficient Project Management Skill | | | Observed, Mid | Improving | Improving | Improving |
| Organizational Limitation enforced by Laws | High | High | High | Mid | Mid | Mid |
| Pandemic of COVID-19 | | Observed, Critical | High | Improving | Mitigated | Mitigated |
| Unstable Logistic caused by Ukraine Crisis | | | | Observed, Critical | Mid | Mid |

## 4. Lessons Learnt

Since the lessons learnt through the Project are mainly brought from Good-Practices which are described in the section III. 5. Performance, please refer to this section for details.

### 4.1 Create a new Vision and Institutional Identity for C/P

**Lesson Learnt:** *Create clear and common visons and institutional identity will help the improvement of organizational integrity as well as enabling to obtain positive impression from the public. If a project is facing stagnation of activities or losing integrity of the counterpart, just changing existing logo, some positive effect may be expected:*

**VISION of 1aaUJICY**

**UJICY** will be
a **"BRIDGE"** to link Uzbekistan and Japan,
a **"HUB"** for interaction between academy and industry,
a **"CATALYST"** to promote high-standard international project, and
a **"VOICE"** of Science toward the society to realize better life for the people.

Its nature, the ordinal C/P (UJICY and MHESI) are not familiar with PDM and terms used in ODA, and accordingly it prevents the C/P from actively involving to the Project.

The above vision has been established based on PDM but with clearer and more passionate way. This vision is gradually shared by UJICY's staff, and by explaining the results of the project in light of this vision, each person can feel own accomplishment.

Furthermore, the Project created new Logo and Motto (institutional identity) together with the C/P and used them on every event and presentation material to broadcast UJICY`s proactive image to the public.

*Example of usage of new institutional identity (from a presentation made by UJICY)*




**UJICY's Motto:**
***DO: Actions with responsibility and personal commitment for common goal.***
***INSPIRE: Stimulation of innovation and new ideas through team work.***
***LEAD: Expression of strong leadership and promote others' "DO".***

## 4.2 Add value to the project through activities beyond the PDM

**Lesson Learnt:** *Beyond PDM, the new horizon is opening in front of us. The activities beyond PDM may have great potential of acquiring more results than expected at the planning and contribute to the achievement of Overall Goal. It may be essential as a qualification of Expert to possess creativity and flexibility to take advantages from the given circumstances and environment:*

For the Project, PDM is a primary guideline of implementation to be followed, but on the other hand, PDM may limit creativity and flexibility of project implementers such as PD, PM and the experts, and consequently, reduce or lose the possibility of achieving greater results.

This Project has carried out many activities that are not listed in the PDM initially;

*a) MIRAI Fund (research-aid fund, later added to PDM)*
*b) Interdisciplinary (non-scientific) activities (see section 5.1, **5. Performance**)*
*c) Social awareness activities (Ene-KIDS.UZ program, see section, **5. Performance**)*

Conducting such non-PDM activities have improved the quality of the Project and brought unexpectedly great results by adding new values, and as a result, contributing to increase the possibility of achieving the Overall Goal.

### 4.3 Seek opportunities to utilize external resources

**Lesson Learnt:** *(1) The planned input is not guaranteed to be provided as planned. The flexibility and greediness in finding new resources other than the given by the project will be a great driving force to accomplish higher targets; (2) The difficulty, realizing Outside Conditions or unexpected negative events against the project, can be turned into the chance to add new values to the project or to achieve further results:*

Implementing the Project, the given Input (resources) by JICA or C/P is sometimes insufficient to achieve the goals, or it was not supplied as planned. Therefore, in such cases, the Project had to seek other inputs externally. The pandemic of COVID-19 and following aftermath in 2020-22 were the case of such situations.

(Human Resources) During the period, the Project could not get planned input such as dispatch of short-term experts from Japan, training programs in Japan and procurement of equipment due to restriction of international movement of human and goods[27]. Under such difficult time, the Project started new scientific outreach events called "*UJICY Innovative Seminar Series*", inviting any scientists or experts, internationally and domestically, who arrived Tashkent by their own budget or using other organizations` fund then JICA. As a result, the Project has achieved dispatch of experts more than expected (167% man-day base) although the Input from JICA could achieved only 60% of the plan.[28]

(Financial Resources) Learning from this experience, the Project has more eagerly sought the possibility to utilize fund from external organization such as JST, JSPS and other foreign development organizations, and this UJICY's trial matched JICA's financial policy of post-pandemic. The most prominent achievement of UJICY in this direction is obtaining SATREPS on joint research project on hydrogen energy with Kyushu University in 2023. The amount from external projects, as a result, are exceeding the total budget of the Project itself.

[27] see III. 2. 2.2 Risk Factor, f) Other Risks
[28] see II. 1. 1.1 c) Japanese Expert

The following Table shows the external fund that UJICY has acquired or is applying.

*Table- 5 External Fund for Activities*

| | Name of Fund/ Organization | Current Status |
|---|---|---|
| **A. For Research** | | |
| 1 | SATREPS / JST+JICA | **Acquired.** JPY 500 million for 5 years; |
| 2 | KAKENHI / JSPS | **Acquired.** (Prof.Okuda, Keio) JPY 21 million for 3 years; |
| 3 | Innovation Fund / MHESI-Uzbekistan | **Acquired.** USD257,000 for 4 projects so far and keep applying. |
| 4 | International Fund / UN, WB, IDB etc. | **Acquired.** USD 410,000 for 3 projects. To be applied with foreign research partners. High competition. |
| 5 | Private Research Fund / Private Fund | To be applied with Japanese professors. |
| **B. For Capacity Development** | | |
| 1 | (SATREPS / JST+JICA) | (The same as above A.1) |
| 2 | Self-management of Energy and Resources (KCCP) / JICA | **Acquired.** Full-scholarship, 1 researcher has been sent to Ph.D program in Kyushu Univ. |
| 3 | Shigen-no-Kizuna (KIZUNA) / JICA | Full-scholarship. It is limited to the area of natural resources |
| 4 | KCCP / JICA (other than T/C) | Mainly short-term training. Need ODA Application beforehand. |
| 5 | KOKUHI / MEXT | Full-Scholarship. High competition. |
| 6 | Other Japanese governmental bodies | Shot-term training. JOGMEC, JST-Sakura Program etc. |
| 7 | Other Private Scholarships | Asahi Grass Foundation etc. |

### 4.4 Tailor-made Training Course for PM, PD and Expert

**Lesson Learnt:** *It is essential for smooth implementation of the project to alignment of level of understanding the goal and purpose of the project between Japanese side and the C/P side. It is very effective to execute tailor-made management training course specially focused on the subjects related to Project Purpose and Overall Goal in PDM. This training course contributed greatly to increase the sense of project ownership of the C/P.*

In most cases, the Japanese side has deeper knowledge about the project than C/P side. To fill this gap, the short-term management training in Japan for PM and PD was quite effective in this Project. The Project designed a training course titled *"Innovative Approach for Techno-Scientific Research Institute Management"* for JCC members and executed twice in 2020 and 2023 under cooperation with Prof. Toshiaki Ueda. Teikyo University. Since the curriculum of the course are directly related to key elements of the Project, all participants could improve the level of understanding and the sense of ownership of the Project. Timing of is execution of this course shall be at the early stage of the project, the mid-point of the project to reconfirm the route to be taken, or at the timing of change of PM and/or PD. The execution of the course at the end of the Project was very effective to make the C/P understood the concept of succession project (Phase-II).

# *5. Performance*

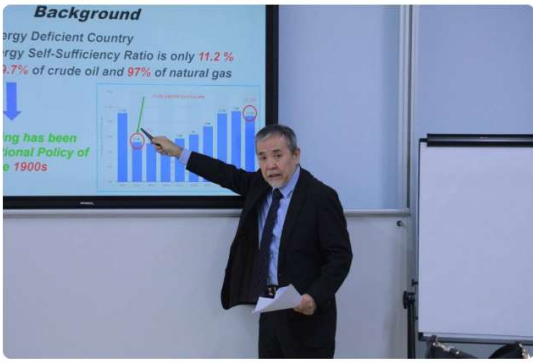
## 5.1 Promotion of interdisciplinary approach

The wave of diversification is also spreading to scientific research institutes, and cutting-edge technology research is no longer possible without an interdisciplinary perspective. Complying with such circumstances, this Project conducted seminars, not only on the theme of pure science and technology, but also on interdisciplinary themes such as economics, social science, and art and culture, to think and discuss about the role that science can play; i.e. *how renewable energy technology can reduce poverty and eliminate social unfairness?* or *can Geographical Information System (GIS) contribute to the industrial development of the regional area?* etc. UJICY, as an innovation center, is a unique scientific institute practicing such interdisciplinary approach comparing with other universities and institutes which still stuck in traditional approach.

Scientific outreach activities for development of society and industry

Although activities for social development and awareness are not covered by PDM, the Project saw this area was important as responsibility of UJICY in accordance with its Vision (see section *4.1 of 4. Lessons Learnt*). UJICY conducted numbers of seminars related to female scientist and carrier development (gender), recurrent and inclusive education (social welfare) from view point of science.

As successful example of such activities, the Project conducted a sub-project; energy and water saving education program for school children called "**Ene-KIDS.UZ**".










This program was introduced to Ministry of Energy and Ministry of Pre-School and School Education in 2022 at an energy saving symposium in Tashkent, and approved by Prime Minister as a national project in 2023. Currently the pilot implementation to 10 schools in Uzbekistan was completed and under the evaluation for nation-wide implementation.

The ripple effect of this program to the society is huge and UJICY could sent its strong commitment of participation to the national strategic issues to both the government and the society. These effects will help greatly achievement of Overall Goal of the Project.




As further ripple effects, other ministries in Uzbekistan such as Ministry of Ecology (reducing carbon dioxide) and Ministry of Water Resources (water saving) have shown their interests to this program, and at the overseas, Ministry of Energy of the United Arab Emirate is implementing this program as the name of "TAQA KIDS" (means Energy Kids in Arabic) leasing from the practice of UJICY.

## 5.2 Co-creation and Innovation between Academia and Industry

The Project led UJICY to make co-creative relations with various sectors of industry in order to realize innovation. Therefore, UJICY has been closely communicated with number of Japanese private companies which have only-one technology and are seeking business opportunities in Uzbekistan. For instance, when a Japanese company, which has cutting-edge image processing technology and wants to develop business related to make road maintenance ledger for the municipality, visited UJICY and asked advice, UJICY found the possibility that the technology could be applied to preservation of cultural heritages that are the main source of tourism in Uzbekistan. And the Project set up meetings between the company and management of Agency of Culture and Heritage in Uzbekistan. In this case UJICY acted as "catalyst" to create a seed of innovation, and JICA expert plays the role of an "alchemist" who creates new value from different ingredients – industry and academia.

However, for the effect from industry-academia collaboration and contribution to both industrial and social development to continue even after the Project ends, there is need to further change the mindset of each researcher and staff in UJICY to explore opportunities for collaboration and cooperation outside of the academia as well.

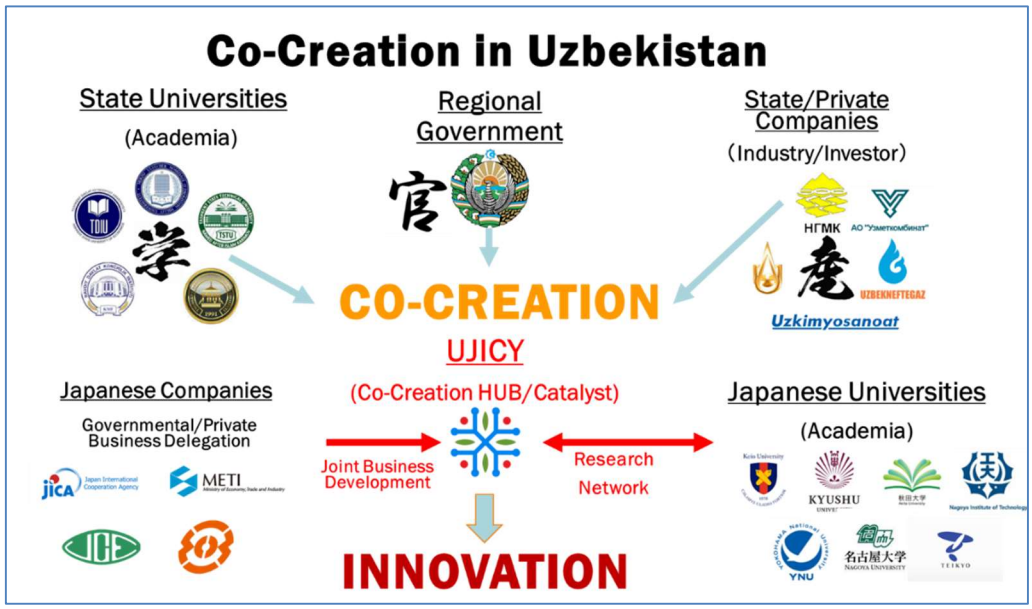



*Figure-15 UJICY Co-Creation Model*

### 5.3 Utilization of JOCVs as "Evangelists" of UJICY's Vision

Having advice from the Project (Expert), UJICY requested JICA to dispatch two (2) JOCVs in the fields of marketing and community development in order to fill vacant function of the organization[29]. JOCV is basically under direct supervision of Director of UJICY and independent from the Project, however, this Project has utilized JOCV as a "evangelist" of the vision of UJCY and for enhancing the activities of the Project. For instance, the marketing JOCV who has experience in banking sector for more than 40 years had a lecture at UJICY Innovation Seminar Series, which is one of the activities of the Project, and the community development JOCV played very important role for implementation of the energy saving education program as an instructor. These collaborations will enrich the activities of JOCVs and increase the value of the Project through grass-root approach.







Example of activities JOCVs under the Project

[29] Refer to Figure-4 in Section II. 2. 1-4

# IV. For the Achievement of Overall Goals after the Project Completion

## *1. Prospects to Achieve Overall Goal*

***Overall Goal.*** ***JICY conducts frontier research for industrial development of Uzbekistan with strong linkage with industries and Japanese researchers.***

| Objectively Verifiable Indicators in PDM (Means of Verification) | Prospects of Achievement |
|---|---|
| *1. Number of frontier research conducted with industry increases. (Monitoring Sheet)* | **Achievable.** UJICY has already close contact with industrial companies and executed small scare research works. |
| *2. Number of frontier research conducted with Japanese researchers increases. (Monitoring Sheet)* | **Achievable, partially achieved.** UJICY has already started joint researches with Japanese universities in cutting edge area of science. Phase-II of the Project will continue to establish further frontier research project with Japanese universities. |
| *3. Number of patents applied by the researchers of the Center increases. (Monitoring Sheet)* | **Achievable, partially achieved.** UJICY has already applied **six (6) patents,** and further research outcome has possibility of acquiring patents. |

1. Number of frontier research conducted with industry increases.

UJICY has already conducted research works with several state-owned companies (see Table-6.B, ANNEX-1). However, the level of the research is still basic and conventional. The reason is that most of companies are reluctant to allocate ample budget for R/D and conservative against frontier technologies which have not been proven commercially.

To break through this situation, the development of Uzbek economy and expansion of market are essential. The state-owned companies monopolized the market for long years without competition. Therefore, the recent government initiative to promote privatization of state-owned companies will give such companies the mind of competition, differentiation from competitors, and motivation for technical improvement.

One positive example is that Navoi Uranium, a company divided from Navoi Mining and Metallurgy Combinate. This state-own natural resources development company, is approaching UJICY for technical cooperation, and there is possibility for future cooperation.

2. Number of frontier research conducted with Japanese researchers increases.

1) Hydrogen Energy Development on SATREPS

In May 2023, a joint research project on hydrogen energy development between UJICY and Kyushu University was selected as SATREPS program. The project titled *"Development of innovative technologies for efficient generation of green/blue hydrogen for realization of carbon-neutral society in Uzbekistan with consideration of its industrial and environmental characteristics*" will conduct frontier researches in 4 areas of hydrogen producing technologies for 5 years from 2004. Since utilization of hydrogen as next generation of source of energy has been set as National Energy Strategy, this research is highly expected as one of the achievements of Overall Goal of this Project.

2) PM 2.5 Monitoring Project in Uzbekistan

UJICY, Scientific Institute of Environmental Technology (Uzbekistan), and Keio University are preparing a joint research project for monitoring PM2.5 in Uzbekistan and creating monitoring network, by using JSPS "KAKENHI". The air pollution caused by emission from thermal plants has become big social issue in Uzbekistan, therefore, this research is expected as one of the achievements of Overall Goal.

3) Archeological study of historical relics in Uzbekistan using advanced analytical equipment

Archeological heritage and remains are important academic subjects as well as source of tourism industry which is one of the important sources of finance in Uzbekistan. UJICY is planning to conduct analysis of relics from historical remains at molecular level by using UJICY's advanced equipment, jointly Nara National Research Institute for Cultural Properties. This is a challenging interdisciplinary project contributing to the development of industry of Uzbekistan in comply with Overall Goal.

3. Number of patents applied by the researchers of the Center increases.

1) UJICY has already **registered six (6) patents** in Uzbekistan. The number of patents is expected to increase as progress of ongoing/future researches. (see *Table-7.e "List of Scientific Publications and Patents" of ANNEX-1)*

As overall evaluation of UJICY, it is worth to mention here that **UJICY is ranked at the 11$^{th}$ best scientific institute in Uzbekistan** out of 118 institutes. This rating is evidence that UJICY is steadily developing and being highly evaluated from the counterpart country.

## *2. Plan of Operation and Implementation Structure of the Uzbek side to Achieve Overall Goal*

1) National Development Strategy: “Uzbekistan 2030 Strategy”

This new strategy was issued on September 11, 2023 as the Presidential Decree No.UP-158. This strategy aims to building the free and prosperous strong New Uzbekistan, to provide each and every citizen with all opportunities for development of their potential, to upbring healthy, educated and spiritual generation, to establish a strong economy that becomes an important link in the global production chain, as well as to guarantee enforcement of equity, rule of law, safety and stability.

In higher education section, six (6) strategic targets are set, and the following targets may be closely related to the policy and activities of UJICY:

a) Enriching fundamental researches with new areas, based on the modern requirements, including subsidy of 3 trillion sum (3.67 billion JPY) ;

b) Enhancing applied researches in the most rapidly developing economic sectors, introducing the cluster system [30] including subsidy of 4 trillion sum (4.9 billion JPY);

c) Increasing the share of young researchers, supporting their scientific researches;

d) Broadly implementing innovative activities in all areas; supporting scientific researches and innovative initiatives;

Since these targets have conformity with UJICY’s activities, if the government takes necessary actions for achievement of the targets timely and steadily, and if UJICY can demonstrate its capability as a promotor, it will be an opportunity for a big leap for UJICY.

2) UJICY Road Map for Scientific Projects to be Implemented (2024-2029) [31]

Having strong instruction from Presidential Office in the end of 2023, UJICY established the captioned Road Map for 5 years activities with having strong instruction from Presidential Office. In this Road Map, 46 research projects were listed, and the progress is monitored by administrator of Presidential Office periodically.

Both the above government’s strategy and UJICY’s action plan (Road Map) will be implemented with consistency, the possibility of achievement of Overall Goal of the Project may be increased.

However, on the other hand, the post of Minister of MHESI, UJICY’s supervising authority,

[30] Cluster system here means Academia (University/Scientific Institute) – Industrial Collaboration

[31] Attachment-8 of ANNEX-2

has been empty since October 2023 (as of January 2024), and the chairman of Board of Trustee (BOT) is also empty for long time. The lack of top decision-making function may affect negatively for implementation of UJICY's activities and implementation of the national strategy.

## *3. Recommendation for the Uzbekistan Side*

Re-activate Board of Trustees

As mentioned in the above, it is necessary to resolve the situation where the BOT meeting cannot be held due to the absence of the Chairman. There are many important pending issues which needs the power of BOT; such as opening new laboratory, increasing research staff, more collaborative relations with state-owned companies (they are the member of BOT), etc. JICA Uzbekistan Office, as a member of BOT, inquired and requested actions in this regard, no prominent response has not been made by Uzbekistan side. It is strongly recommended to take necessary action for nomination of new chairman of the Board and open BOT meeting as soon as possible.

Secure and maintain the resources for sustainable development

For achievement of the Overall Goal and sustainable development of UJICY, it is vital to secure essential resources; qualified human resources (both scientific and administrative), financial sources and top-class research environment (management system, equipment etc.).

a) Human resources: shortage of posts and low-level of salary are current obstacles for maintaining necessary human resource both quantitively and qualitatively. The lack of qualified human resources will limit the activities of UJICY and be a serious bottleneck for sustainable development and conducting frontier researches continuously. As recommendation from this Project, the same level of the salary as private sector for administration staff who will be in charge of planning and management of UJICY is necessary for maintain qualified human resources. For increase of post of researchers, UJICY has already proposed to open 2 new laboratory (environment lab and material science lab) and double the number of researcher quota from current 3 to 6.

b) Financial sources: The stable finance arrangement is highly essential. For research, currently joint-research with Japanese universities are funded by Japanese side only. MHESI's support for providing UJICY with the Innovation Fund for such joint research projects with Japanese partners. As recommendation from this Project, increasing the number of accepted projects under the Innovation Fund will be much more effective than increasing the amount of fund to be awarded to each project.

c) Research Environment: There is no budget for maintenance of precision research

equipment, mainly procured by the government of Uzbekistan, and due to the lack of maintenance and shortage of spare parts, some equipment is out of service and researcher cannot continue their research works. Since such research equipment is important source for earning profit through service contracts, the allocation of additional budget for maintenance of equipment is economical in long range, and will contribute to the increase of quality of researches. As recommendation from this Project, it will be essential to create a system to charge usage fees of each equipment and pool it for future needs for maintenance. And if a researcher is awarded research fund or acquire service contract from companies, certain percentage (15-25%) shall be saved as indirect cost of the project execution, and the saved money shall be used for the maintenance of equipment and covered manpower cost for administration staff. This practice is common in research institutes in the western developed countries.

## *4. Monitoring Plan from the end of the Project to Ex-post Evaluation*

1) Implementation of Phase-II

The post-implementation monitoring shall be done through Phase-II of this Project, ODA application of which was submitted from Uzbek government to Japanese government and is waiting the project detail design mission of JICA (as of January 2024). The Project Purpose of Phase-II is *"Capacity of research and institutional management of the Center is strengthened in well-balanced manner, and as its consequence, the Center becomes a self-sustaining scientific institute to lead the academia in Uzbekistan".*

In Phase-II, Overall Goal may be modified without change the main concept but more clearly mentioned the role of UJICY: *The Center plays a role of "hub" to promote academic and academia-industry linkage between Japan and Uzbekistan, and conducts innovative researches and social implementation of science and technologies for development of Uzbekistan.*

Though the implementation of Phase-II, it is expected that UJICY will become more resilient and sustainable scientific research institute and innovation center representing Uzbekistan as well as the Central Aisa.

2) Horizontal linkage with other ODA projects and JICA activities in Uzbekistan and the Central Aisa region.

Because of UJICY's characteristic as Innovation Center, its activities are not limited to the scientific research but also related to non-scientific areas such as business, culture, economy etc. And Overall Target of the Project cannot be achieved without taking more dynamic, innovative, and interdisciplinary approach.

At the same time, under the current JICA's circumstances of limitation of project budget, higher performance from limited input resources is necessary. The sharing of resources and knowledge with other ODA projects is a practical manner to solve this problem. In the implementation of this Project, UJICY has been trying to collaborate with other ODA projects and JICA activities, but the results were not satisfactory because of lack of information or due to the nature of other ongoing projects at that time. Therefore, for the post-project stage, JICA Office and departments shall utilize the function of UJICY as much as possible and extend UJICY's horizon by continuous monitoring and frequent contact. As a result, UJICY may be able to expand its activities and linkage with various sector of the country at the ex-post evaluation.

3) Promotion of Utilization of External Fund.

Although UJICY has already utilized other research funds and scholarship program then JICA T/C (see Table-5 above), Further JICA's support by providing necessary information and assisting communication with Japanese side will be helpful and promote the self-financing of UJICY.

(End of Report)

# ANNEX 1: Results of the Project

Table-1 Results of Long-term Training Program

Table-2 Results of Short-term Training Program

Table-3 Results of Dispatch of Experts

Table-4 Results of Scientific Outreach Events

Table-5 Results of MIRAI Fund

Table-6 List of Research Projects

Table-7 List of Scientific Publications and Patents

Table-8 List of MOU between Other Universities/Institutes

Table-9 List of Equipment

## Table-1 Results of Long-term Training Program

| | Name of Trainee | University/Program | Supervisor | Term (From/to) | Subject | Current Status |
|---|---|---|---|---|---|---|
| 1 | Mr. Alimov Zikrilla | Keio / Doctor | Prof.Tomoaki Okuda | 2019/Sep-2023/Feb | Aerosol and particle monitoring system | Head of Air Pollution Lab, Institute of Ecology Technology |
| 2 | Mr. Gofrov Shukur | Tsukuba/ Graduation without degree | A.Prof. Takeaki Sakurai | 2019/Sep-2023/Mar **(Completion without degree)** | Semiconductor Technology | Junior Researcher of Energy Lab of UJICY. Preparing Ph.D. Thesis under Japanese supervisor |
| 3 | Ms. Strijevdkaya Anna | Tokyo Institute of Technology/ Master | Prof. Masahiro Miyauchi | 2019/Sep-2022/Mar | Production of Photocatalyst | Ph.D. Student at Wien University |
| 4 | Mr. Nigmatov Otabek | Teikyo / Master | Prof. Toshiaki Ueda | 2019/Oct-2022/Mar | Combustion Mechanism of Methan Hydrate | Ph.D. Student of UJICY under supervision of Dr. Oksana (Head of Energy Lab) |
| 5 | Mr. Islomov Sunnatullo | Kyushu / Master | A.Prof. Takashi Sasaoka | 2019/Sep-2022/Mar | Mechanical System of Coal Mine | Working at Government Sector |
| 6 | Mr.Karimov Farrukhbek | Keio / Master | Prof. Toshihiko Sugiura | 2019/Oct-2022/Mar | Non-Distractive Test using Ultrasonic | Working at Private Sector (Japan) |
| 7 | Mr. Allaev Sherzod | Yokohama National / Doctor | Prof. Mamoru Kikukoto | 2020/Oct- 2024/Dec **(extended study period)** | Soil Mechanical Engineering | Program completion with Ph.D degree in September 2024. (Program was extended) |
| 8 | Mr. Tashpulatov Javokhir | Kyushu / Master | A.Prof. Takashi Sasaoka | 2020/Oct-2023/Mar | Mechanical System of Coal Mine | Junior Researcher of Mining Lab of UJICY |
| 9 | Mr.Daniyarov Berdakh | Kyushu / Master | A.Prof. Hajime Miki | 2020/Oct-2023/Mar | Mineral selection by floatation | Junior Researcher of Chemical Lab of UJICY |
| 10 | Mr. Ergashev Ubaydullabek | Nagoya / Master | A.Prof. Tomio Mitsuwa | 2020/Oct-2023/Mar | Simulation of traffic behaviors | Working at Tashkent University of Transportation |
| 11 | Ms.Raimjonova Umidakhon | Tsukuba / Master | A.Prof. Takeaki Sakurai | 2021/Oct-2024/Mar (expected) | Semiconductor Technology | Under preparation Master thesis |
| 12 | Mr.Akbarshokh Ulmaszoda | Kyushu / Master | A.Prof. Hajime Miki | 2021/Oct-2024/Mar (expected) | Mineral selection by floatation | Under preparation Master thesis |
| 13 | Mr. Narmatov Axror | Kyushu / Master | A.Prof. Takashi Sasaoka | 2021/Oct-2024/Mar (expected) | Mechanical System of Coal Mine | Under preparation Master thesis |
| 14 | Mr. Khakimov Bilolidin | Yokohama National / Master | Prof. Shinji Tanaka | 2021/Oct-2024/Mar (expected) | Urban Transportation System | Under preparation Master thesis |
| 15 | Mr. Yusupov Fayzullakhuja | Nagoya Institute of Technology / Master | Prof. Takaharu Takeshita | 2021/Oct-2024/Mar (expected) | Power Electronics Engineering | Under preparation Master thesis |

(Uncompleted Trainees)

| | Name of Trainee | University/Program | Supervisor | Term (From/to) | Subject | Reason of Incompletion |
|---|---|---|---|---|---|---|
| 1 | Ms. Sayfulina Elvina | Akita / Master | Prof. Hikaru Fujii | 2021/Apr-2021/Jun | Petroleum Engineering | Due to suspension of program under COVID-19. |
| 2 | Mr. Boborahimov Azamat | Tsukuba-NIMS/ Master | Prof. Satoshi Ishii | 2020/Apr-2021/Mar | Chemistry | Failed at Enrollment Examination |
| 3 | Mr. O`raqov Eldor | Shibaura Institute of Technology / Master | A.Prof. Kazuhisa Ito | 2020/Oct-2023/Mar | Remote Monitoring System for Crop | Terminated by unfit of life in Japan |

*Total No of Trainees:* ***18****, Completed or to be completed with Degree within Project Period:* ***14***

**Total Input: 510 MM** **Completion Ratio 77.78 %** ← to be used for evaluation of the Project

(Trainees studies under External Fund)

| | Name of Trainee | University/Program | Supervisor | Term (From/to) | Subject | Name of Fund/Program |
|---|---|---|---|---|---|---|
| 1 | Mr. Kunafiev Rishad | Kyushu-I2CNER/ Doctor | Prof. Hiroshige Matsumoto | 2023/Apr-2026/Sep (planned) | Hydrogen Generation Technology | Program for Development of Hydrogen Energy Human Resources (JICA) |

**Total Input (by March 2024) : 12 MM**

## Table-2 Results of Short-term Training Program

| | Name of Trainee | Training Place /Supervisor | Name of Program | Term / Duration / Input (MM) | Type of Program |
|---|---|---|---|---|---|
| 1 | 1) Dr. Khaltursunov Erkin, Director,UJICY<br>2) Mr. Ismailov Bakhramjon, Head of Department for Development of Scientific Research and Innovation, MHSSE<br>3) Mr. Otajonov Shukhrat, Head of Department of Science, MID<br>4) Dr. Nimatov Sherzod, Vice Rector, TSTU<br>(4 participants) | Teikyo University, Keio University, Shin-Kawasaki K2 Campus, Ministers Cabinet, IHI (private company), Tokyo Cosmopolitan Gove't, Kyoto Institute of Industrial Technology Institute, Shimadzu Corp. | Innovative Approach for Techno-Scientific Research Institute Management | 2020-Feb / 12 days / **1.5 MM** (Total of 4 people) | **Management** |
| 2 | Dr. Kadirova Zukhra,<br>Deputy Director, UJICY | Kyushu University / Dr.Yuichi Sugai | Research Planning of Hydrogen Energy Development for SATREPS | 2022-July / 1 month / **1.0MM** | **Management** |
| 3 | Dr. Ismailova Okusana<br>Head of Energy Lab, UJICY | Tsukuba University / Dr.Toshiaki Hattori | Terahertz spectroscopy of aqueous solutions of acids and alcohols | 2022-Aug to 2023-Feb / 6 months / **6.0MM** | **Research** |
| 4 | 1) Dr.Nargiza Amilova, Director, UJICY<br>2) Mr. Behzod, Tukhtamuratov Deputy Director, UJICY<br>3) Mr. Muradjon Cobirov, Head of Commercial, UJICY<br>4) Dr. Alibek Jumaniyazov, Jr. Researcher, UJICY<br>5) Mr.Mansur Xusnitdinov, Jr. Researcher, UJICY<br>6) Mr. Davlabek Djuraev, Chief Accountant, UJICY<br>7) Mr.Farouq, Economist, UJICY | Uzbek-Japan Center / Mr.Akifumi Nakanishi | UJC Project Management Courses for UJICY (custom made) | 2022-July / 3 days / **0.8MM** | **Management** |

| | | | | | |
|---|---|---|---|---|---|
| 5 | 1) Mr. Alibek Jumaniyazov, Jr. Researcher, UJICY<br>2) Mr.Mansur Xusnitdinov, Jr. Researcher, UJICY<br>3) Mr. Faizullah Gulomov, Jr.Researcher, UJICY | NOASTEC Foundation, Hokkaido University | Strengthening capacity for Academia-Industrial Collaboration of UJICY | 2023-July / 3 weeks / **2.0 MM** (Total of 3 people) | **Academia-Industrial Collaboration Promotion** |
| 6 | Mr. Otabek Nigmatov,<br>Ph.D. Student of UJICY | Teikyo University / Dr.Toshihisa Ueda | Strengthening capacity of research of UJICY with Teikyo University | 2023-September/ 1 month /<br>**1.0 MM** | **Research** |
| 7 | Dr. Zikrilla Alimov, Head of Air Pollution Lab, National Institute of Environmental Technology (Ex UJICY) | Keio University / Dr.Tomoaki Okuda | Strengthening capacity of research of UJICY with Keio University | 2023-November/ 1 month /<br>**1.0 MM** | **Research** |
| 8 | Dr. Sohib Matkarimov, Head of Mining and Mineral Resource Lab | Akita University / Dr. Atsushi Shibayama | Strengthening capacity of research of UJICY with Keio University | 2023-November/ 1 month /<br>**1.0 MM** | **Research** |
| 9 | 1) Mr. Saidmurad Niyazbekov, Director,UJICY<br>2) Mr. Farhod Jumaev, Head of Department for Development of Scientific Research and Innovation, MHESI<br>5) Dr. Sardor Danaev, Vice Rector for Innovation, TSTU<br>6) Mr. Behzod, Tukhtamuratov Deputy Director for Commercial, UJICY<br>(4 participants) | Teikyo University, The University of Tokyo, Kinki University, National Institute of Advanced Industrial Science and Technology (AIST), Tokyo Metropolitan Government, JGC, etc. | Innovative Approach for Techno-Scientific Research Institute Management | 2023-Dec / 12 days /<br>**1.5 MM** (Total of 4 people) | **Management** |
| 10 | Mr. Shukur Go'furov<br>Jr. Researcher, UJICY | Tsukuba University / Dr. Takeaki Sakurai | Strengthening capacity of research of UJICY with Tsukuba University | 2024-January/ 1 month /<br>**1.0 MM** | **Research** |

*Total No of Program: 10, Number of Trained Researchers/Staff: 24* **Total Input : 16.8 MM**

**Table-3 Results of Dispatch of Experts**

A. Long-term Expert

| | Name of Expert | Title | Term (From/to) | Input (MM) | Mission / Activities |
|---|---|---|---|---|---|
| 1 | Mr. Yukinori Yanagida | Project Management Expert, JICA | 2019/Aug – 2024/March | **56.0 MM** | Management and implementation of JICA Project |

*Total No of Long-term Expert: 1,* **Total Input : 56.0 MM**

B-1. Short-term Experts under JICA Project budget

| | Name of Expert | Title | Term (From/to) | Input (MD) | Activities |
|---|---|---|---|---|---|
| 1 | Dr. Toshihisa Ueda | Professor (Mechanical), Keio University | 2019/September (5 days) | **5.0 MD** | Conducting a technical seminar and research instruction for UJICY |
| 2 | Dr. Takashi Sasaoka | Associate Professor (Mining), Kyushu University | 2019/September (5 days) | **5.0 MD** | Conducting a technical seminar and research instruction for UJICY |
| 3 | Dr. Masahiro Miyauchi | Professor (Material Science), Tokyo Institute of Technology | 2019/September (5 days) | **5.0 MD** | Conducting a technical seminar and research instruction for UJICY |
| 4 | Dr. Toshihisa Ueda | Professor (Mechanical), Teikyo University | 2022/November (5 days) | **5.0 MD** | Conducting a technical seminar and research instruction for UJICY |
| 5 | Dr. Mamoru Kikumoto | Professor (Civil Engineering), Yokohama National University | 2022/December (5days) | **5.0 MD** | Participating UJICY's International Conference, conducting a technical seminar and research instruction for UJICY |
| 6 | Dr. Jumpei Kuwabara | Associate Professor (Chemistry), Tsukuba University | 2022/December (5days) | **5.0 MD** | Participating UJICY's International Conference, conducting a technical seminar and research instruction for UJICY |
| 7 | Dr. Tokoaki Okuda | Professor (Envitonment), Keio University | 2023/Mar (5 days) | **5.0 MD** | Conducting a technical seminar, inspection of joint research environment and discussion on the joint research project with UJICY |

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|---|---|---|---|---|---|
| 8 | Dr. Akira Hosoda | Professor (Civil Engineering), Yokohama National University | 2023/Dec (5 days) | **5.0 MD** | Participating UJICY's International Conference, conducting a technical seminar and research instruction for UJICY |
| 9 | Dr. Hajime Miki | Associate Professor (Mineral Processing), Kyushu University | 2023/Dec (5 days) | **5.0 MD** | Participating UJICY's International Conference, conducting a technical seminar and research instruction for UJICY |

*Total No of Short-term Expert (B-1) : 9,* **Total Input : 45.0 MD (a)**

## B-2. Short-term Experts under External Fund

| | Name of Expert | Title | Term (From/to) | Input (MD) | External Fund | Activities |
|---|---|---|---|---|---|---|
| 1 | Dr. Yuichi Sugai | Professor (Petroleum), Kyushu University | 2022/February (5 days) | **5.0 MD** | JICA (Energy Group) | Basic research for the joint research project on Hydrogen (SATREPS) |
| 2 | Dr. Hiroshige Matsumoto | Professor (Proton), Kyushu University (I2CNER) | 2022/June (5 days) | **5.0 MD** | JICA (Energy Group) | Participating in UJICY's symposium for hydrogen energy, and Basic research for the joint research project on Hydrogen (SATREPS) |
| 3 | Dr. Tosihinori Matsumoto | Associate Professor (Perovskite solar cell), Kyushu University (I2CNER) | 2022/June (5 days) | **5.0 MD** | JICA (Energy Group) | Participating in UJICY's symposium for hydrogen energy, and Basic research for the joint research project on Hydrogen (SATREPS) |
| 4 | Dr. Hikaru Fujii | Professor (Petroleum) and Dean of International Resource Dept, Akita University | 2022/August (5 days) | **5.0 MD** | Akita University | Seeking collaboration with UJICY and discussion with UJICY's researchers |
| 5 | Dr. Atsushi Shibayama | Professor (Mineral Processing), Akita University | 2022/September (5 days) | **5.0 MD** | JSPS | Lecture for UJICY's innovation seminar, discussion on core-to-core program of JSPS |
| 6 | Dr. Atsushi Shibayama | Professor (Mineral Processing), Akita University | 2023/February (5 days) | **5.0 MD** | JSPS | Discussion on a joint international workshop with UJICY |

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|---|---|---|---|---|---|---|
| 7 | Dr. Yasushi Watanabe | Professor (Geology), Akita University | 2023/May (5 days) | **5.0 MD** | Akita University | Conducting a lecture for University of Geological Science under coordination of UJICY. |
| 8 | Dr. Yuichi Sugai | Professor (Petroleum), Kyushu University | 2023/September (5 days) | **5.0 MD** | JST/JICA (SATREPS) | Project design investigation mission for SATREPS, concluding M/M with UJICY |
| 9 | Dr. Keiko Sasaki | Professor (Photocatalysis), Kyushu University | 2023/September (5 days) | **5.0 MD** | JST/JICA (SATREPS) | Project design investigation mission for SATREPS, concluding M/M with UJICY |
| 10 | Dr. Hajime Miki | Associate Professor (Mineral Processing), Kyushu University | 2023/September (5 days) | **5.0 MD** | JST/JICA (SATREPS) | Project design investigation mission for SATREPS, concluding M/M with UJICY |
| 11 | Dr. Atsushi Shibayama | Professor (Mineral Processing), Akita University | 2023/September (5 days) | **5.0 MD** | JSPS | Execution of the international workshop for carbon neutral in the Central Asia with UJICY |
| 12 | Dr. Hajime Ikeda | Assistant Professor (Mineral Processing), Akita University | 2023/September (5 days) | **5.0 MD** | JSPS | Execution of the international workshop for carbon neutral in the Central Asia with UJICY |
| 13 | Dr. Hiroshige Matsumoto | Professor (Proton), Kyushu University (I2CNER) | 2023/November (5 days) | **5.0 MD** | JST/JICA (SATREPS) | Discussion and inspection for establishment of research plan of SATREPS |
| 14 | Dr. Tosihinori Matsumoto | Associate Professor (Perovskite solar cell), Kyushu University (I2CNER) | 2023/November (5 days) | **5.0 MD** | JST/JICA (SATREPS) | Discussion and inspection for establishment of research plan of SATREPS |
| 15 | Dr. Yuichi Sugai | Professor (Petroleum), Kyushu University | 2023/December (5 days) | **5.0 MD** | JST/JICA (SATREPS) | Discussion and inspection for establishment of research plan of SATREPS |
| 16 | Dr. Atsushi Shibayama | Professor (Mineral Processing), Akita University | 2024/February (5 days) | **5.0 MD** | JSPS / Akita Univ. | Discussion of Cooperation Agreement with Tashkent State Technical University / Conducting Seminar for Mining Industry |

*Total No of Short-term Expert (B-2) : 16,* **Total Input : 80.0 MD (b)**

**Ground Total of Input of Short-term Expert (a)+(b) : 125 MD**

## Table-4 Results of Scientific Outreach Events

(*) …… Event executed under the title of "30th Anniversary of Diplomatic Relations between Uzbekistan and Japan" of Ministry of Foreign Affairs of Japan

…… Executed using the budget of this T/C Project. Others were executed with external funds or free of charge.

### A. Conference/Symposium (8 events, 700 participants)

| | Date | Name of Event | Type | Key Lecturer / Expert | Fund Source | Co-organizer | Participant |
|---|---|---|---|---|---|---|---|
| 1 | 2021/10/01 | Uzbek - Japan Symposium for Future Hydrogen Technologies and Utilization | Symposium (Hybrid) | Dr.Yoshihiro Hisaeda (Vice President-Kyushu Univ)<br>Dr.Petros Sofronis (Director, I2CNER)<br>Dr.Hiroshige Matsumoto (Professor,I2CNER)<br>Dr.Miho Yamauchi (Professor,I2CNER)<br>Dr.Sigenori Fujikawa (Professor,I2CNER)<br>Dr.Yuichi Sugai (Professor,Kyushu) | None | Kyushu University, International Institute of Carbon Neutral Energy Research (I2CNER) | 60 |
| 2 | 2021/11/29 | 1st Uzbekistan-Japan International Conference for Green Chemistry | Conference (Hybrid) | Dr.Yuichi Sugai (Professor, Kyushu)<br>Dr.Tommohiro Okuda (Professor, Keio)<br>Dr.Toshishisa Ueda (Professor, Teikyo)<br>Dr.Masahiro Miyauchi (Professor, TIT)<br>Dr.Takeaki Sakurai (Professor, Tsukuba)<br>Dr.Takashi Sasaoka (A.Professor Kyushu)<br>Dr.Hajime Miki (A.Professor, Kyushu) | Project Budget (Printing expenses) | JICA, MHSSE, NUU, TSTU | 80 |
| 3 | 2022/06/07 | 2nd Uzbek - Japan Symposium for Future Hydrogen Technologies and Utilization - Energy from Sky and Earth | Symposium (Hybrid) | Dr.Hiroshige Matsumoto (Professor,I2CNER)<br>Dr.Yuichi Sugai (Professor,Kyushu)<br>Dr.Toshinori Matsushima (A.Professor,I2CNER) | JICA (Other) | Ministry of Energy | 60 |
| 4 | 2022/11/17 - 18 | 2nd UJICY International Conference – Earth, Environment, Energy & Engineering (4E) (*) | Conference (Hybrid) | Dr.Mamoru Kikumoto (Professor, Yokohama National)<br>Dr.Jumpei Kuwabara (A.Professor, Tsukuba)<br>Dr.Hiroyuki Kosukegawa (Engineer, Akita) (online participation)<br>Dr.Tomohiro Okuda (Professor, Keio)<br>Dr.Toshishisa Ueda (Professor, Teikyo)<br>Dr.Masahiro Miyauchi (Professor, TIT)<br>Dr.Hideki Shimada (Professor, Kyushu)<br>Dr.Hajime Wagata (A.Professor, Meiji) | Project Budget (Short-Expert), Akita Univ | MHSSE, TSTU, NUU | 200 |

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|---|---|---|---|---|---|---|---|
| | | | | Dr.Kenichi Katsumata (Professor, Tokyo Science) | | | |
| 5 | 2023/09/25 | International Workshop in Uzbekistan – Resource Sustainability toward the Carbon Neutrality | Conference | Dr.Atsushi Shibayama (Professor, Akita)<br>Dr.Hajime Ikeda (A.Professor, Akita)<br>Other professors from Kazakhstan, Kirgiz, Tajikistan, Mongol and Uzbekistan | JSPS (Core-2-Core) | Akita Univ. | 80 |
| 6 | 2023/12/04 | Anti-Earthquake Technology Symposium | Symposium | Dr.Akira Hosoda (Professor, Yokohama National)<br>Mr.Kazuo Sasaki (Chief Representative, Challenge Co., Ltd) | None | JICA | 60 |
| 7 | 2023/12/05 | 3rd UJICY International Conference – Earth, Environment, Energy & Engineering (4E) | Conference (Hybrid) | Dr.Akira Hosoda (Professor, Yokohama National)<br>Dr.Hajime Miki (A.Professor, Kyushu)<br>Dr.Yuichi Sugai (Professor, Kyushu)<br>Dr.Toshinori Matsushima (A.Professor, Kyushu)<br>Mr.Kazuo Sasaki (Chief Representative, Challenge Co., Ltd)<br>Mr.Yuichi Nishizono (Teikoku Co., Ltd) | Project Budget (2 Short-Expert, Printing ex\p) | MHESI<br>TSTU, NUU,JICA | 80 |
| 8 | 2023/02/26 | Uzbekistan-Japan Joint Technical Seminar on Dam Management | Conference | 1. Seismic countermeasure for dam<br>2. Monitoring & communication system<br>3. Safety measurement for rockfill dam<br>4. Sedimentation measures for dam reservoirs<br>5. Safe release of water from dams | Ministry of Land, Infrastructure, Transport and Tourism (MLIT) of Japan | Ministry of Water Resources (MWR) of Uzbekistan, TSTU and private companies | 60 |

## B. Seminar/Webinar (23 events, 620 participants)

| | Date | Name of Event | Type | Key Lecturer / Expert | Fund Source | Co-organizer | Participant |
|---|---|---|---|---|---|---|---|
| 1 | 2019/09/05 | UJICY Innovation Seminar Series - Japanese Advanced Research Direction (1) | Seminar | Dr.Toshihisa Ueda (Keio)<br>Dr.Takashi Sasaoka (Kyushu) | Project Budget (Short-Expert) | - | 30 |
| 2 | 2019/09/12 | UJICY Innovation Seminar Series - Japanese Advanced Research Direction (2) | Seminar | Dr.Masahiro Miyauchi (Tokyo Inst Technology) | Project Budget (Short-Expert) | - | 30 |

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|---|---|---|---|---|---|---|---|
| 3 | 2021/03/26 | UJICY Innovation Seminar Series – Value Engineering | Seminar | Dr.Kiyoshisa Nishiyama (Tashkent State Technical University)<br>Mr.Yukinori Yanagida, JICA Expert | None | Tashkent State University of Economy (TSUE) | 50 |
| 4 | 2021/06/16 | UJICY Innovation Seminar Series – “Triz” as innovative approach | Webinar | Dr.Manabu Sawaguchi (Ritsumeikan)<br>Dr.Kiyoshisa Nishiyama (Tashkent State Technical University, TSTU) | None | TSTU/MHSSE | 15 |
| 5 | 2021/06/23 | UJICY Innovation Seminar Series – Practice of Triz | Webinar | Dr.Manabu Sawaguchi (Ritsumeikan)<br>Dr.Kiyoshisa Nishiyama (TSTU) | None | TSTU/MHSSE | 15 |
| 6 | 2021/11/25-26 | UJICY Innovation Seminar Series – Change your problem into innovation | Workshop | Dr.Manabu Sawaguchi (Ritsumeikan)<br>Dr.Kiyoshisa Nishiyama (Tashkent State Technical University, TSTU) | TSTU | TSTU/MHSSE | 15 |
| 7 | 2021/12/17 | UJICY Innovation Seminar Series – Challenge of Physics in 21st Century | Seminar (Hybrid) | Dr.Katsuhiro Nakamura (Professor, National University of Uzbekistan) | None | National University of Uzbekistan | 40 |
| 8 | 2022/03/03 | UJICY Innovation Seminar Series – Let’s talk about reginal industrial development (*) | Seminar | Dr.Chie Sato (President, Biztech Inc) | JICA (other) | TSUE | 15 |
| 9 | 2022/03/17 | UJICY Innovation Seminar Series – Application of Triz to your research project (*) | Seminar | Dr.Kiyoshisa Nishiyama (Tashkent State Technical University, TSTU) | None | TSTU | 30 |
| 10 | 2022/04/05 | UJICY Innovation Seminar Series – Risk Management in Innovation (*) | Seminar | Dr.Suguru Miyazaki (Chief Representative JICA Uzbekistan Office) | None | TSUE, JICA | 60 |
| 11 | 2022/05/19 | UJICY Innovation Seminar Series – How to get your research paper published | Webinar | Ms.Joy Quek, Deputy Director, World Scientific Publishing Co., Ltd | None | World Scientific | 30 |
| 12 | 2022/09/08 | UJICY Innovation Seminar Series – Utilization of GIS for historical data of the Central Asia (*) | Seminar | Dr.Akira Ueda (Researcher, Institute of Developing Economy, JETRO) | JETRO | TSUE | 15 |
| 13 | 2022/09/13 | UJICY Innovation Seminar Series – Mineral Processing and Metallurgy | Seminar | Dr.Atsushi Shibayama (Professor, Akita) | JSPS (Core-2-Core) | University of Geological Science | 25 |
| 14 | 2022/10/26 | UJICY Innovation Seminar Series – T-Rex in Uzbekistan (*) | Seminar | Dr.Kohei Tanaka (Professor,Tsukuba) | JSPS (Kakenhi) | University of Geological Science | 20 |
| 15 | 2022/11/03 | UJICY Innovation Seminar Series – Combustion Technology | Seminar | Dr.Toshihisa Ueda (Professor Teikyo) | Project Budget (Short-Expert) | MID | 40 |
| 16 | 2023/01/16 | Uzbek-Japan Scientific Workshop for Technologies for Open Pit Mining (*) | Webinar | Dr.Mamoru Kikumoto (Professor, Yokohama National)<br>Dr.Hideki Shimada (Professor,Kyushu)<br>Dr.Koji Sasaoka (A.Professor,Kyushu)<br>Dr.Akihiri Hamanaka (A.Professor,Kyushu) | None | Yokohama National University, Kyushu University | 30 |

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|---|---|---|---|---|---|---|---|
| 17 | 2023/02/10 | UJICY Innovation Seminar Series – Quantum Computational Machine for Everyone (*) | Seminar | Dr.Yutaka Shikano (Visting Scholar, Institute for Quantum Studies, Chapman University, USA, A.Professor, Gumma) | JSPS (Kakenhi) | New Uzbekistan University | 20 |
| 18 | 2023/02/13 | UJICY Business Dialogue for METI Mission from Japan (*) | Seminar | (Dialogue between Japanese businessmen and Uzbek academic and industrial personnel | METI | METI, Hokkaido Government, TSTU | 20 |
| 19 | 2023/03/10 | UJICY Innovation Seminar Series – Women's Presence - Unleashing Potential & Driving the Change (*) | Seminar | Dr. Huajing Yang, (Candidate at University of Zurick, Switzerland)<br>Dr.Nargiza Amirova (Director UJICY) | None | TSTU | 15 |
| 20 | 2023/03/14 | UJICY Innovation Seminar Series- Monitoring of Aerosol in Uzbekistan and effect to health (*) | Seminar | Dr.Tomohiro Okuda (Professor, Keio) | Project Budget (Short-Expert) | Institute of Environment Protection Technology | 50 |
| 21 | 2023/05/03 | UJICY Innovation Seminar Series- Element of magnetism and Bose-Einstein condensation | Seminar | Dr. Masaki Oshikawa (Professor, Tokyo) | JSPS (Kakenhi) | New Uzbekistan University | 20 |
| 22 | 2023/05/16 | UJICY Innovation Seminar Series- Can we understand the macroscopic thermalization phenomena from the microscopic quantum theory? | Seminar | Dr.Naoto Shiraishi (A.Professor, Tokyo) | JSPS (Kakenhi) | Institute of Semiconductor Physics | 20 |
| 23 | 2024/02/13 | UJICY Innovation Seminar Series- Troubleshooting dialogue for mining industry | Seminar | Dr.Atsushi Shibayama (Professor, Akita) | Akita Univ | NGMK, AGMK | 15 |

## C. Lecture (20 events, 840 audiences)

| | Date | Name of Event | Type | Key Lecturer / Expert | Fund Source | Co-organizer | Participant |
|---|---|---|---|---|---|---|---|
| 1 | 2021/11/26 | Invited Lecture – Future of hydrogen for mining sector | Lecture | Dr.Yuichi Sugai (Professor, Kyushu) | JICA (other) | Navoi University for Mining and Technology | 40 |
| 2 | 2022/05/19 | Invited Lecture – Achievement of Innovation with Co-Creation | Lecture | Mr.Yukinori Yanagida (JICA Expert) | Project Budget (Travel Cost) | Termez State University | 60 |
| 3 | 2022/05/21 | Invited Lecture – Achievement of Innovation with Co-Creation | Lecture | Mr.Yukinori Yanagida (JICA Expert) | Project Budget (Travel Cost) | Termez Institute of Technology | 50 |
| 4 | 2022/05/23 | Invited Lecture – Co-creation for changing social paradigm (*) | Online Lecture | Dr.Nargiza Amirova (Director, UJICY)<br>Dr.Chie Sato (Visiting Professor of University of Tokyo)<br>Mr.Yukinori Yanagida (JICA Expert) | None | The University of Tokyo | 15 |

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|---|---|---|---|---|---|---|---|
| 5 | 2022/05/26 | Invited Lecture – Achievement of Innovation with Co-Creation | Lecture | Mr.Yukinori Yanagida (JICA Expert) | Project Budget (Travel Cost) | Samarkand State University | 50 |
| 6 | 2022/10/20 | Invited Lecture at Inno Week – Energy Conservation Education | Lecture | Mr.Yukinori Yanagida (JICA Expert) | None | MID | 40 |
| 7 | 2022/10/26 | UJICY Innovation Seminar Series – T-Rex in Uzbekistan (*) | Seminar | Dr.Kohei Tanaka (Professor,Tsukuba) | JSPS (Kakenhi) | University of Geological Science | 20 |
| 8 | 2022/11/03 | UJICY Innovation Seminar Series – Combustion Technology | Seminar | Dr.Toshihisa Ueda (Professor Teikyo) | Project Budget (Short-Expert) | MID | 40 |
| 9 | 2022/11/18 | Invited Lecture – Urban Innovation at Yokihama | Lecture | Dr.Mamoru Kikumoto (Professor, Yokohama National) | Project Budget (Short-Expert) | Tashkent University of Architecture & Civil Engineering | 30 |
| 10 | 2022/11/18 | Invited Lecture – Chemical Innovation | Lecture | Dr.Jumpei Kuwabara (A.Professor, Tsukuba) | Project Budget (Short-Expert) | National University of Uzbekistan | 20 |
| 11 | 2022/12/05 | Invited Lecture – How have Japanese been viewing Uzbekistan (*) | Lecture (Hybrid) | Mr.Yukinori Yanagida (JICA Expert) | None | World Economy & Diplomat University, The University of Tokyo | 30 |
| 12 | 2023/05/05-07 | Invited Lecture – Geological Characteristic in the Central Asia | Lecture | Dr.Yasushi Watanabe (Professor, Akita) | Akita Univ | University of Geological Science | 75 |
| 13 | 2023/10/18 | Invited Lecture- INNO WEEK 2023 – Hydrogen Generation in Uzbekistan under SATREPS | Lecture (Hybrid) | Dr.Yuichi Sugai (Professor, Kyushu)<br>Mr.Yukinori Yanagida (JICA Expert) | None | MHESI | 40 |
| 14 | 2023/10/27 | Invited Lecture – Co-Creation with industry | Lecture | Mr.Yukinori Yanagida (JICA Expert) | None | Institute of Semiconductor Physics | 60 |
| 15 | 2023/10/30 | Invited Lecture – Collaboration with Industry for Higher Educational Sector | Lecture | Mr.Yukinori Yanagida (JICA Expert) | None | MHESI- Center of Re-education | 30 |
| 16 | 2023/11/13 | Invited Lecture – Lab Based Education and Scientific Education in Japan | Lecture | Mr.Yukinori Yanagida (JICA Expert) | None | Ministry of Pre-School and School Education (MPSSE) | 50 |
| 17 | 2024/01/13 | Energy Saving Education – Pilot Implementation at Model School (STEP-1) | Lecture & Demo | Mr.Yukinori Yanagida (JICA Expert) | None | MPSSE, MOE | 50 |
| 18 | 2024/01/27 | Energy Saving Education – Pilot Implementation at Model School (STEP-2) | Lecture & Demo | Mr.Yukinori Yanagida (JICA Expert) & Ms. Ruka Kohama (JICA JOCV) | None | MPSSE, MOE | 40 |
| 19 | 2024/02/05 | Invited Lecture – Value of Company | Lecture | Mr.Kenichi Yanaba (JICA JOCV) | None | Banking Academy | 50 |

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| 20 | 2024/02/24 | Energy Saving Education – Pilot Implementation at Model School (STEP-3) | Lecture & Demo | Mr.Yukinori Yanagida (JICA Expert) | None | MPSSE, MOE | 50 |

D. Others (2 events, 55 participants)

| | Date | Name of Event | Type | Key Lecturer / Expert | Fund Source | Co-organizer | Participant |
|---|---|---|---|---|---|---|---|
| 1 | 2023/09/04-10 | Project Design Mission of SATREPS (Hydrogen Generation) | Joint Research | Dr.Yuichi Sugai (Professor, Kyushu)<br>Dr.Keiko Sasaki (Professor, Kyushu)<br>Dr.Hajime Miki (A.Professor, Kyushu) | JST/JICA (SATREPS) | Ministry of Energy, MHESI, National Scientific Institute for Renewable Energy Sources | 40 |
| 2 | 2023/11/23-27 | Joint Research Project Mission – Research Plan for Hydrogen Generation | Joint Research | Dr.Hiroshige Matsumoto (Professor,I2CNER)<br>Dr.Toshinori Matsushima (A.Professor,I2CNER) | JST (SATREPS) | National Scientific Institute for Renewable Energy Sources | 15 |

**Total 53 outreach events were conducted, 2,205 participants (approximately)**

## Table-5 Results of MIRAI Fund (Status as of December 31, 2023)

| | Project Outline | Project Leader | Outside Collaborator | Procurement Status/Amount | Status of Project and Outputs |
|---|---|---|---|---|---|
| 1 | **Project ID:** 20-01-DA<br>**Project Title:** Preparation of new green and sustainable advanced materials and scale-up pilot study of new sorbants and photocatalysts based on utilzation of metallurgical wastes<br>**Start Year:** 2020 4Q | **Shahlo Daminova**<br>(Doctor of Science),<br>Head of Chemical & Petrochemical Lab | Prof. Miyauchi, Tokyo Institute of Technology | **Completed.**<br>**JPY 1,531,666**<br>**(USD 14,742)** | **To be completed by March 2024**<br><br>**Six (6) journal publications** on the research subject have been done.<br>**Two (2) Patents and four (4) Journal /Conference Publication** are expected as further output of the project. |
| 2 | **Project ID:** 20-02-IS<br>**Project Title:** Study of the structire and spectral features of strong H-bonds in ethanol solutions of dimethylformamide, gasoline, hexane and cyclohexane: experiment and theory<br>**Start Year:** 2020 4Q | **Oksana Ismailova**<br>(Ph.D)<br>Head of Power Lab | Prof. Hattori, Tsukuba University | **Completed.**<br>**JPY 1,616,070**<br>**(USD 15,555)** | **To be completed by March 2024**<br><br>**Seven (7) journal and two (2) conference publications** on the research subject have been done. |
| 3 | **Project ID:** 21-01-AZ<br>**Project Title:** Comprehensive studying of the impact of particulate matter emissions on human health in Central Asia using modern methods and development of recommendations for improving air monitoring systems in Uzbekistan<br>**Start Year:** 2021 2Q | **Zikrilla Alimov**<br>(Ph.D. Student at Keio University) | Prof.Okuda, Keio University | **Completed.**<br>**JPY 1,039,173**<br>**(USD 9,249)** | **To be completed by March 2024**<br><br>**Three (3) journal** and **Four (4) conference publications** on the research subject have been done.<br>With Prof.Okuda, **JSPS (KAKENHI) project has been approved**, and one paper to be submitted to peer-review journal at the end of the project. |
| 4 | **Project ID:** 21-02-HM<br>**Project Title:** Transition metals oxides as visible-light-active photocatalysts: From electronic properties to surface acidity<br>**Start Year:** 2021 2Q | **Mirabbos Hojamberdiev**<br>(Ph.D) | A.Prof. Wagata, Meiji University | **Completed.**<br>**JPY 1,693,420**<br>**(USD 15,116)** | **To be completed by March 2024**<br><br>**Two (2) journal** and two (**2) conference publications** on the research subject have been done.<br>1 Patent and 2 Journal/Conference Publication are expected as further output of the project |
| 5 | **Project ID:** 21-03-NR<br>**Project Title:** Design of universal low-cost Ultrasonic-Assisted Spin-Coating (UASC) cell to enhance thin-film coating process<br>**Start Year:** 2021 2Q | **Rafael Nusretov**<br>(Researcher) | A.Prof. Sakurai, Tsukuba University | **Completed.**<br>**JPY 1,487,788**<br>**(USD 13,324)** | **Completed in 2023**<br><br>**Two (2) conference publications** on the research subject have been done.<br>The prototype spin-coating machine has been developed. |

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| 6 | **Project ID:** 21-04-KR<br>**Project Title:** Wastewater reclamation for electrochemical water splitting<br>**Start Year:** 2021 2Q | **Rishad Kunafiev**<br>(Ph.D. Student of UJICY)<br>Junior Researcher at Chemistry Lab | None | **Completed**<br>**JPY 784,873**<br>**(USD 6,509)** | **Delayed and research plan shall be re-designed** due to the reason mentioned below;<br><br>Since UJICY has set Hydrogen as the strategic research area, the Project Leader has assigned to this task and dispatched to Kyushu University since April 2023. Therefore, his research direction will be changed although the procured equipment can be used in the new research. |
| 7 | **Project ID:** 21-05-MA<br>**Project Title:** Comparative analysis of results of quantum mechanical calculations and experimental results of investigation of new cells in silicon doped with various impurities.<br>**Start Year:** 2021 2Q | **Abdulaziz Mavlyanov**<br>(Ph.D, Certified Engineer)<br>Head of Mining and Mineral Resources Lab | None | **Completed.**<br>**JPY 1,190,069**<br>**(USD 10,376)** | **Delayed** and expected to be completed **by December 2024.**<br><br>**Thirteen (13) papers** jointly published on domestic/ international journals.<br>The Project leader has moved to National Institute for Semiconductor Physics from UJICY in 2022, then the research has been continued with collaboration with UJICY. |
| 8 | **Project ID:** 22-01-SA<br>**Project Title:** Development of novel nano phase-separated catalytic materials for addressing current environmental challenges by electrochemical CO2 conversion<br>**Start Year:** 2022 2Q | **Anna Strijevskaya**<br>(Master Degree Holder)<br>Junior Researcher at Power Lab | Prof. Miyauchi, Tokyo Institute of Technology | **Completed after 2 years delay.**<br>**JPY 1,253,838**<br>**(USD 8,740)** | **Delayed due to the delay of procurement of equipment in Japan**. The expected completion will be **the end of 2024**.<br><br>**One (1) paper** has been published in the journal of **the American Chemistry Society** in 2023. |
| 9 | **Project ID:** 22-02-MS<br>**Project Title:** The technology of complex separation of heavy and rare-earth metals from copper-processing plant wastes<br>**Start Year:** 2022 2Q | **Sohibjon Matkarimov**<br>(Ph.D.)<br>Head of Mining & Mineral Resources<br>Lab | Prof. Shibayama, Akita University | **Completed.**<br>**JPY 1,351,023**<br>**(USD 9,879)** | **To be completed by March 2024** although the additional equipment is required for further outcome.<br><br>**Four (4) journal publications** on the research subject have been done.<br>Scheme of processing wastes CPP with eco-friendly technology shall be investigated. |
| 10 | **Project ID:** Common Expenses | | | **Completed**<br>**JPY 659,370**<br>**(USD 5,525)** | As the common tools and consumables for all project, 3D printer and argon gas were purchased. |

**JPY 9,343,059** (USD 109,015) has been disbursed for **9 selected projects** and **50 journal/conference** publication have been produced.

## Table-6 List of Research Projects

### A. Grant Projects

| | Project Name | Project Leader | Period | Fund Source | Amount | Foreign Partner |
|---|---|---|---|---|---|---|
| 1 | Solid-phase polymer sorbents impregnated with N,O,P,S-organic reagents for the complex extraction of valuable components from hydrometallurgical processing waste of the Navoi Mining Company (PZ-20170929194) | Daminova Sh. | 2018-2020 | MID | UZS 409 mil (USD 50,000) | |
| 2 | Regularities and structural features in modeling of nano porous activated carbons with specified properties for the targeted production of sorption materials (MU-FZ-20171025328) | Alimov Z.B. | 2019-2020 | MID | UZS 107 mil (USD 13,000) | |
| 3 | Visible-light-active noble metal loaded bismuth oxyiodide nanosheets for environmental remediation and energy conversion” | Khojamberdiev M.I. | 2019-2020 | The World Academy of Sciences (TWAS) COMSTECH Joint Research Grant, Italy | USD 10,000 | Berlin Technical University |
| 4 | Efficient N-4 macrocycles for the clean energy production (UZB-Ind-2021-91) | Khojamberdiev M.I. | 2020-2023 | MID / Ministry of Science and Technology of India | UZS 1,350 mil (USD 140,000) | North Eastern Hill University, India |
| 5 | Synthesize and characterization of the emerging multi-functional properties of Sulvanite compounds from Theory and Experiment.( UZB-Ind-2021-91) | Ismailova OB. | 2020-2023 | MID / Ministry of Science and Technology of India | UZS 2,500 mil (USD 260,000) | Vijayanagara Sri Krishnadevaraya University, India |
| 6 | Development of technology for increasing the corrosion resistance of castings made from germanium-silicon based alloys (A L-512102310 2022) | Tursunbaev S.A. | 2022-2023 | MID | UZS 200 mil (USD 18,000) | |
| 7 | Building of health impact assessment system for characteristic particulate matter in the Central Asian region | Alimov Z.B. | 2023-2027 | JSPS (KAKENHI) | JPY 21 mil (USD 160,000) | Keio University, Japan |

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| 8 | Synthesis of semiconductor nanoparticles in reverse micelle(F3 20200929314) | Ismailova OB. | 2024-2028 | MID | UZS 2,177 mil (USD 176,000) | Tsukuba University, Japan |
| 9 | Development of Innovative Technologies for Efficient Generation of Green/Blue Hydrogen for Realization of Carbon-neutral Society with Consideration of Industrial and Environmental Characteristics in the Region | Kadirova. Z.Ch. | 2024-2029 | SATREPS JTS/JICA | JPY 500 mil (USD 3,544,000) | Kyushu University, I2CNER |

**Total nine (9) Projects with value of USD 4,371,000(*)**

(*) Original currency amounts are converted into USD at the rate of January 1 of the first year of the Project.

.. Projects which had been running at Baseline Survey in September 2019.

## B. Contracted Research Projects

| | Project Name | Project Leader | Period | Partner | Amount |
|---|---|---|---|---|---|
| 1 | Development and implementation of effective methods for cleaning the tanks of the neutralization circuit of the BIOX workshop from gypsum deposits (No. 1-2020PZ dd 06/16/2020) | Daminova Sh. | 2020-2021 | Navoi Mining & Metallurgy Combinate | UZS 200 mil (USD 21,000) |
| 2 | Universal controller in a housing with optosensors for seeder and planting machines | Azizov M.K. | 2021 | JSC " Agregatny Zavod " (Power Hydraulics Plant) | UZS 101 mil (USD 10,000) |
| 3 | Development of a frequency converter device from 0.37 kW to 7.5 kW for three-phase asynchronous motors | Mavlyanov A.Sh. | 2021-2022 | Almalyk Mining & Metallurgy Combinate | UZS 230 mil USD 22,000 |
| 4 | Development and implementation of highly effective import-substituting inhibitors against hydrogen sulfide corrosion | Kadirova. Z.Ch. | 2021-2023 | Bukhara Oil Refinery | UZS 1,350 mil (USD 129,000) |
| 5 | Analysis of mineralogical samples of the clay fraction (Meshety site - 162 Ave., Shark site (3-29) - 54 Ave., Karakata-Aksai site (18-51) - 111 Ave.) | Daminova Sh.Sh. | 2021 | SE "Urangeology" | UZS 54 mil (USD 5,000) |
| 6 | Monitoring of demonstration experiment of the high efficiency air conditioning in Uzbekistan | Mavlyanov A.Sh. | 2021-2023 | Pacific Consultants Co., Ltd. Japan | USD 15,000 |
| 7 | Development of a new combined technology for re-processing tires based on the analysis of scientific and technical information, studying the physical and technical properties of processed products | Kadirova. Z.Ch | 2022-2023 | Almalyk Mining & Metallurgy Combinate | UZS 300 mil (USD 28,000) |

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| 8 | Cleaning the filtrate from cyanides and dissolved salts, bringing the chemical composition of the filtrate to the chemical composition of process water | Daminova Sh.Sh. | 2022-2023 | Navoi Mining & Metallurgy Combinate | UZS 450 mil (USD 41,000) |
| 9 | Development of technology for producing wheels (ramp) PKO-4940.0з,04,04 using modern casting methods | Turakhodzhaev N.D. | 2022 | JSC “Uzmetkombinat” | UZS 40 mil (USD 4,000) |
| 10 | Development of technology for producing lifting gates using modern casting methods | Turakhodzhaev N.D. | 2022 | JSC “Uzmetkombinat” | UZS 70 mil (USD 6,000) |
| 11 | Development of technology for producing a shaft using modern casting methods | Turakhodzhaev N.D. | 2022 | JSC “Uzmetkombinat” | UZS 250 mil (USD 23,000) |
| 12 | Determination of the composition, components and additives of polymer materials, rubbers and products made from them | Daminova Sh.Sh. | 2022 | “Birinchi Rezinotexnika Zavodi” (Tire plant) | UZS 11 mil (USD 1,000) |
| 13 | Joint Research of development of silk industry in Uzbekistan | INNO GROUP | 2023 | JICA | USD 600 |

**Total thirteen (13) Projects with value of USD 305,600**(*)

(*) Original currency amounts are converted into USD at the rate of January 1 of the first year of the Project.

## Grand Total: 22 research projects with value of USD 4,676,600

## Table-7 List of Scientific Publications and Patents (2016-2024)

(*) Impact factor H/High M/Medium L/Low

## a. On International Journals

| | Title | Journal/Conference | Author | Year | Impact(*) |
|---|---|---|---|---|---|
| 1 | Features of self-aggregation of C60 molecules in toluene prepared by different methods. | Physics Letters A 2016 380 (24), pp.2081-2084. doi.org/10.1016/j.physleta.2016.04.030 (impact factor=2.08) | Makhmanov U., **Ismailova O.** Kokhkharov A. Zakhidov E. Bakhramov S.. | 2016 | H |
| 2 | Effect of laser annealing of a C60–ZnO heterogeneous system on its structural and photoluminescent characteristics | Applied Solar Energy 2017 (impact factor=0.5) 53(4), pp. 291-296 | Zakhidov, E.A., Zakhidova, M.A., Kokhkharov, A.M., **Nusretov, R.A.,** | 2017 | H |
| 3 | Raman spectroscopy of the interface between a thin nanostructured ZnO film and fullerene C60. 2017 | Optics and Spectroscopy 2017 (impact factor 0.8) 122(4), pp. 607-614 | Zakhidov, E.A., Zakhidova, M.A., Kokhkharov, A.M **Nusretov, R.A.**., | 2017 | H |
| 4 | Heteromolecular structure formation in aqueous solutions of ethanol, tetrahydrofuran and dimethylformamide. | International Journal of Chemical, Molecular, Nuclear, Materials and Metallurgical Engineering Vol:11, No:4, 2017. | **Sh. Gofurov, O. Ismailova,** U. Makhmanov, A. Kokhkharov. | 2017 | H |
| 5 | Control of Charge Transfer in C60-ZnO Composite Under the Influence of UV Laser Radiation by the Methods of Raman Spectroscopy and Photoluminescence. | Journal of Applied Spectroscopy, (2018). 85(1). | Zakhidov, E. A., Zakhidova, M. A., Kokhkharov, A. M., Nematov, S. Q., **Nusretov, R. A**., & Kuvondikov, V. O. | 2018 | H |
| 6 | Reduced graphene oxide-modified Bi2WO6/BiOI composite for the effective photocatalytic removal of organic pollutants and molecular modeling of adsorption | Journal of Molecular Liquids.-Vol. 268.- P. 715-727. (WoS Elsevier IF=4.513) | **ZC Kadirova, M Hojamberdiev,** V Gonçalves, K Yubuta, N Matsushita, K. Teshima, M. Hasegawa, K. Okada | 2018 | H |
| 7 | Tuning the morphological structure, light absorption, and photocatalytic activity of Bi2WO6 and Bi2WO6-BiOCl through cerium doping | Arabian Journal of Chemistry.-2018/7/29.-14c. (WoS Elsevier IF=2.969) | **M Hojamberdiev, Z Kadirova,** E Zahedi, N Matsushita, M Hasegawa, | 2018 | H |
| 8 | Ligand-immobilized spent alumina catalyst for effective removal of heavy metal ions from model contaminated water | Journal of Environmental Chemical Engineering. – 2018. – V. 6. – N. 4. – P. 4623-4633. (WoS Elsevier IF= 4.44) | **Hojamberdiev M Daminova S. S Kadirova Z.** C., , Hasegawa M. | 2018 | H |
| 9 | Control of Charge Transfer in C60–ZnO Composite Under the Influence of UV Laser Radiation by the Methods of Raman Spectroscopy and Photoluminescence. | Journal of Applied Spectroscopy, 2018, 85(1), 73-78. (WoS Elsevier IF= 0.611) | Zakhidov, E. A. Zakhidova, M. A., Kokhkharov, A. M., **Nusretov, R. A.**, & Kuvondikov, V. O. | 2018 | H |
| 10 | Amorphous Fe2O3 nanoparticles embedded into hypercrosslinked porous polymeric matrix for designing an easily separable and recyclable photocatalytic system | Applied surface Science, –V. 466. –P. 837-846 in press (WoS Elsevier IF= 4.439) | **M. Hojamberdiev, S. S. Daminova, Z. C. Kadirova,** K. Yubuta, | 2019 | H |
| 11 | Synergistic effect of g-C3N4, Ni(OH)2 and halloysite in nanocomposite photocatalyst on efficient photocatalytic hydrogen generation | Renewable Energy 138 (2019): 434-444. (WoS Elsevier IF= 4.90) | **M. Hojamberdiev, Z. Kadirova,** K. Kawashima K.Yubuta K. Teshima | 2019 | H |
| 12 | Structural and Optical Characteristics of Aqueous Solutions of Acetic Acid | Applied Spectroscopy. First Published February 20, 2019 (WoS Elsevier IF= 2.014) | **O. B. Ismailova Sh. Gofurov,** U. Makhmanov, A. Kokhkharov | 2019 | H |
| 13 | Synergistic effect of g-C3N4, Ni(OH)2 and halloysite in nanocomposite photocatalyst on efficient photocatalytic hydrogen generation | Renewable Energy. -2019. –V.138. –P. 434-444 (WoS Elsevier IF=4.981) | **ZC Kadirova, M Hojamberdiev**, Kenta Kawashima Kunio Yubuta ,Katsuya Teshima | 2019 | H |
| 14 | ZnS-containing industrial waste: Antibacterial activity and effects of | Journal of Alloys and Compounds 791 (2019): 971-982. (WoS Elsevier IF=3.779) | **M Hojamberdiev,** C Piccirillo, | 2019 | H |

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| | thermal treatment temperature and atmosphere on photocatalytic activity | | Y Cai, **Z Kadirova,** K. Yubuta | | |
| 15 | Exploring flux-grown transition metal oxynitride perovskites for photocatalytic water oxidation: A minireview. | Energy Reports, (2019) 5, 1196-1208. | **Hojamberdiev,M.**, & Kawashima, K. | 2019 | H |
| 16 | Alkyl substituents of P, S, N-containing organic ligands influencing the uptake of Au3+ and Pt2+ ions over a hydrophobic hypercrosslinked polymeric sorbent. | (2020). Polyhedron, 184, 114568. | **Daminova, S. S. Kadirova, Z. C.,** Sharipov, K. T., Talipov, S. A., **Hojamberdiev, M.** | 2020 | H |
| 17 | Ab initio investigation of ultrasmall silicon nanocrystal doping by phosphorous. | International Journal of Modern Physics (2020) B, 34(30), 2050284. | Makhkamov, S. Umarova, F. Normurodov, A. **Ismailova, O.** | 2020 | H |
| 18 | Concurrently improving uniform elongation and strength of ultrafine-grained Al–2Li alloy | Materials Science and Engineering A, 2020, 792,139848 | Wang, Y., Zhang, S., **Turakhodjaev, N.,** | 2020 | H |
| 19 | High-strength, ductility and modulus Al–Li/B4C composite with near nanostructure produced by accumulative roll bonding | Journal of Alloys and Compounds, 2020, 834, 155105. | Wang, Y., Zhong, F., Wu, R. **Turakhodjaev N**. Li, X., Zhang, M. | 2020 | H |
| 20 | The transformation of LPSO type in Mg-4Y-2Er-2Zn-0.6Zr and its response to the mechanical properties and damping capacities | Journal of Magnesium and Alloys, 2020, 8(3), P. 793–798. | Wang, D., Wu, H., Wu, R., ...Hou, L., **Nodir, T**. | 2020 | H |
| 21 | Improving uniform elongation and strength of ultrafine-grained Al–2Li alloy. | Materials Science and Engineering A, 2020, 792, 139848. | Wang, Y., Zhang, S., Wu, R., ...Liu, M., **Turakhodjaev N.**, Mardonakulov, S. | 2020 | H |
| 22 | Microstructure and mechanical properties of ultra-lightweight Mg-Li-Al/Al-Li composite produced by accumulative roll bonding at ambient temperature... | Materials Science and Engineering A, 2020, 787, 139494 | Wang, Y., Liao, Y., Wu, R., **Turakhodjaev N.**, Zhang, M., Mardonakulov, S | 2020 | H |
| 23 | Features of Self-Organization of Sodium Dodecyl-Sulfate in Water-Ethanol solutions: Theory and Vibrational Spectroscopy. Journal of Molecular Liquids. | J.Molecular Liquids 2020. . Volume 298, 15 January 2020, 112053 | I.Plastinin, S.Burikov, **Sh.Gofurov, O . Ismailova,** Yu.Mirgorod, T.Dolenko | 2020 | H |
| 24 | Maximizing the zinc ions removal by organic ligand-stabilized conjugate polysterene macronet material." . | Microchemical Journal 153 (2020): 104523 (WoS Elsevier IF= 3.206) | Khasan TSharipov, **Shahlo Daminova, Zukhra Kadirova, Erkin Khaltursunov, Mirabbos Hojamberdiev** | 2020 | H |
| 25 | Alkyl substituents of P, S, N-containing organic ligands influencing the uptake of Au3+ and Pt2+ ions over a hydrophobic hypercrosslinked polymeric sorbent. | (2020). Polyhedron, 184, 114568. | **Daminova,S.S. Kadirova,Z.C.,** Sharipov,K.T., Talipov,S.A.,& **Hojamberdiev, M.** | 2020 | H |
| 26 | Concurrently improving uniform elongation and strength of ultrafine-grained Al-2Li alloy. | Materials Science and Engineering: A 792 (2020): 139848 | Wang,Y. Zhang, S., Wu, R. , **Turakhodjaev,N.** Zhang, J., Liu, M., Mardonakulov , S. | 2020 | H |
| 27 | High-strength, ductility and modulus Al–Li/B4C composite with near nanostructure produced by accumulative roll bonding | Journal of Alloys and Compounds, 2020, 834, 155105. | Wang, Y., Zhong, F., Wu, R., **Turakhodjaev N.**, Li, X., Zhang, M. | 2020 | H |
| 28 | The transformation of LPSO type in Mg-4Y-2Er-2Zn-0.6Zr and its response to the mechanical properties and damping capacities | Journal of Magnesium and Alloys, 2020, 8(3), P. 793–798. | Wang, D., Wu, H., Wu, R., ...Hou, L., **Nodir, T**. | 2020 | H |
| 29 | Improving uniform elongation and strength of ultrafine-grained Al–2Li alloy. | Materials Science and Engineering A, 2020, 792, 139848. | Wang, Y., Zhang, S., Wu, R., **Turakhodjaev N.,** | 2020 | H |
| 30 | Ab initio investigation of ultrasmall silicon nanocrystal doping by phosphorous. | International Journal of Modern Physics (2020) B, 34(30), 2050284. | Makhkamov, S., Umarova, F., Normurodov, A.,., & **Ismailova, O.** | 2020 | H |
| 31 | Microstructure and mechanical properties of ultra-lightweight Mg-Li- | Materials Science and Engineering A, 2020, 787, 139494 | Wang, Y., Liao, Y., Wu, R., | 2020 | H |

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|---|---|---|---|---|---|
| | Al/Al-Li composite produced by accumulative roll bonding at ambient temperature. | | **Turakhodjaev N.,** Zhang, M., Mardonakulov, S | | |
| 32 | Features of Self-Organization of Sodium Dodecyl-Sulfate in Water-Ethanol solutions: Theory and Vibrational Spectroscopy. Journal of Molecular Liquids. | J.Molecular Liquids 2020. Volume 298, 15 January 2020, 112053 | I.Plastinin, S.Burikov, **Sh.Gofurov, O . Ismailova,** Yu.Mirgorod, T.Dolenko | 2020 | H |
| 33 | Maximizing the zinc ions removal by organic ligand-stabilized conjugate polysterene macronet material. | Microchemical Journal 153 (2020): 104523 (WoS Elsevier IF= 3.206) | Khasan Sharipov, **Shahlo.Daminova Zukhra Kadirova**, Botakoz Esbergenova, **Erkin Khaltursunov, Mirabbos Hojamberdiev** | 2020 | H |
| 34 | Foreword: Perspectives of TWAS young affiliates from the global south on solving world's energy issues. | (2020). Energy Reports, 6(4), 1-1. | Vargas, R., Cabrerizo, F. M., & **Hojamberdiev, M.** | 2020 | H |
| 35 | Ways to increase the strength of shaftgear teeth working in a highly abrasive grinding environment. | Journal of Critical Reviews, 2020, 7(7), P. 904–907. | **Nodir,** T., Shukhrat, C., Nargiza, S., Kulmukhammad,C. | 2020 | H |
| 36 | Studying the scientific and technological bases for the processing of dumping copper and aluminum slags. | Journal of Critical Reviews, 2020, 7(11), стр. 441–444. | **Nodir, T.,** Sherzod, T., Ruslan, Z., Sarvar, T., | 2020 | H |
| 37 | Ways to increase the strength of the surface of the parts. | Journal of Critical Reviews, 2020, 7(11), стр. 380–386. | **Nodir, T.,** Shukhrat, C., Jamaliddin,K., Jaloliddin, E., | 2020 | H |
| 38 | Analysis of technological solutions for reducing the copper concentration in slags from oxygen-flare smelting of copper sulfide concentrates. | Journal of Critical Reviews, 2020, 7(5), стр. 449–452. | **Turakhodjaev, N.,** Tursunbaev, S., Tashbulatov, S., Kuchkorova, M | 2020 | H |
| 39 | Coarsening kinetics and strengthening mechanisms of core-shell nanoscale precipitates in Al-Li-Yb-Er-Sc-Zr alloy | Journal of Materials Science and Technology (2021) 61, c. 197-203 | Wang, Y., Zhang, S., Wu, R., **Turakhodjaev, N**., Hou, L., Zhang, J., Betsofen, S. | 2021 | H |
| 40 | Unraveling the photo-electrochemical behavior of Ni-modified ZnO and TiO2 thin films fabricated by RF magnetron sputtering. | Journal of Electroanalytical Chemistry, 882, 115009. (2021). | **Hojamberdiev, M**., Vargas, R., Bhati, V. S., Torres, D., **Kadirova, Z. C**., & Kumar, M. | 2021 | H |
| 41 | Terahertz spectroscopy of aqueous solution of acetic acid. | Journal of Applied Spectroscopy. 2021. Vol.88, No.4, pp 536-540. Terahertz Spectroscopy of Aqueous Solutions of Acetic Acid \| SpringerLink | **Dilbar Bozorova, Shukur Gofurov**, Kokhkharov A. M & **Oksana** B. Ismailova. | 2021 | H |
| 42 | Calculation of the heat exchange process for geometric parameters | (2021).International Journal of Mechatronics and Applied Mechanics, (9), 90-95. | **Turakhodjaev, N.,** Akramov, M., Turakhujaeva, S., Tursunbaev, S., Turakhujaeva, A., & Kamalov, J. | 2021 | H |
| 43 | Bioinspired precious-metal-free N4 macrocycle as an electrocatalyst for the hydrogen evolution reaction. | (2021). ACS Applied Energy Materials, 4(10), 10826-10834. | Hadimane, S., Aralekallu, S., CP, K. P., **Hojamberdiev, M**., & Sannegowda, L. K. | 2021 | H |
| 44 | Development of A Low-cost Simultaneous Low Volume Air Sampler Controlled with Sonic Venturi. | Asian Journal of Atmospheric Environment (AJAE), 2021 15(1). | **Alimov, Z.B**., Kusakari, H. and Okuda, T., | 2021 | H |
| 45 | Elucidating the crystal structure-dependent Cd2+-uptake property of benzimidazolium ionic liquid immobilized into macroporous polystyrene | Journal of Environmental Chemical Engineering. -2022. IF= 7.968 | **Kadirova Z.C.,** Sharipov K.T., Sanaqulov S.Q., Rakhmonova D.S., Miyauchi M., Sugai Y., Czech B., **Hojamberdiev M**. | 2022 | H |

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|---|---|---|---|---|---|
| 46 | Detoxifying SARS-CoV-2 antiviral drugs from model and real wastewaters by industrial waste-derived multiphase photocatalysts. | Journal of hazardous materials. -2022. -V. 429. -P.128300. | **Hojamberdiev M.**, Wasilewska A., Yubuta K., Wagata H., **Daminova Sh.S., Kadirova Z.C**. | 2022 | H |
| 47 | Crystal structure and void analysis of tris (2-amino-1-methylbenzimidazolium) hexakis (nitrato-κ2O, O′) lanthanate (III). | Acta Crystallographica Section E: Crystallographic Communications. -2022. -V.78. -N6. | Ruzieva B., **Kunafiev R., Kadirova Z., Daminova S.** | 2022 | H |
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| 151 | INFLUENCE OF ALLOYING ELEMENTS ON ALUMINUM ALLOYS | International Journal of Advance Scientific Research | Turakhodjaev N., | 2023 | M |

**Total 151 publications at international journals**
**High Impact : 79 Mid Impact : 72**

Publication on International Journals (by year)

| Year | No. of Publications | High-Impact | Mid-Impact |
|---|---|---|---|
| 2016 | 1 | 1 | |
| 2017 | 3 | 3 | |
| 2018 | 5 | 5 | |
| 2019 | 6 | 6 | |
| 2020 | 36 | 23 | 13 |
| 2021 | 9 | 6 | 3 |
| 2022 | 56 | 19 | 37 |
| 2023 | 33 | 14 | 19 |
| 2024 | 2 | 2 | |
| **TOTAL** | **151** | **79** | **72** |

Average Annual Publication Number -.

Before 2019: 3 publication/year After 2019(Project): 28.4 publication/year

## b. On Domestic Journal (only number)

| Year | No. of Publications |
|---|---|
| 2018 | 15 |
| 2019 | 15 |
| 2020 | 6 |
| 2021 | 7 |
| 2022 | 13 |
| 2023 | 19 |
| **TOTAL** | **75** |

## c. Books

| | Title | Book | Author | Year |
|---|---|---|---|---|
| 1 | Химия и технология платиновых металлов | Монография. Ташкент “Университет”. -2018. -311с. | Daminova. Sh. Kadirova Z. | 2018 |
| 2 | Фотоэлектрические измерения кремния, легированного марганцем и серой | Монография, LAMBERT ACADEMIC PUBLISHING, 52 с., 2018 | Mabliyanov A. | 2018 |
| 3 | Оптимизации размещения амбулаторно-поликлинической сети. | Монография, LAMBERT ACADEMIC PUBLISHING, 2019, 91 с., | Khaltyrsnov E. | 2018 |
| 4 | Оптимизация размещения инновационной аптечной сети "Универфарма" | Монография, LAMBERT ACADEMIC PUBLISHING, 2019, 91 с | Khaltyrsnov E | 2019 |
| 5 | Quantum-Chemical Calculations of Pure and Phosphorous Doped Ultra-small Silicon Nanocrystals. | In Advanced Nanomaterials for Detection of CBRN (pp. 111-121). Springer Netherlands. (2020). | Ismailova O. | 2020 |
| 6 | Закономерности сорбции цветных и благородных металлов с P,S,O,N-содержащими твердыми экстрагентами и их структурная особенность | Монография. Ташкент “Фан ва тараккиёт”. -2021. -147 с | Daminova Sh. | 2021 |

| | | | | |
|---|---|---|---|---|
| 7 | The Excess Refractive Indices of Some Organic and Inorganic Components | Advanced Materials and Nano Systems: Theory and Experiment (part-1) (2022): 108. | Bozorova D. Gofurov Sh. Ismailova O. | 2022 |
| 8 | Нодир металлар кимёси ва технологияси | O‘quv qo‘llanma. 2022 yil Toshkent: Fan nashriyoti. | Daminova Sh. | 2022 |
| 9 | Нодир металлар кимёси ва технологияси | Darslik, 2022 yil. Toshkent: Fan nashriyoti. | Daminova. Sh. Kadirova Z. | 2022 |
| 10 | Bionoorganik kimyo | O‘quv qo‘llanma. 2023 yil Toshkent: Fan nashriyoti. | Daminova Sh. | 2023 |
| 11 | Практикум по бионеорганической химии | Учебное пособие, 2023 г. Toshkent: Fan nashriyoti. | Daminova. Sh. Kadirova Z. | 2023 |
| 12 | Вредные вещества. Их классификация и общие требования безопасности. | Под общей редакцией доктора технических наук, профессора К. Санакулова. Ташкент, «SAHHOF», 2023. 780 стр | Daminova. Sh. Kadirova Z. | 2023 |

## d. Conference Papers (Abstracts, low-impact papers are excluded)

| Year | International Conference | Domestic Conference |
|---|---|---|
| 2018 | 17 | All low-impact |
| 2019 | 10 | |
| 2020 | 3 | |
| 2021 | 5 | |
| 2022 | 0 | |
| 2023 | 0 | |
| **TOTAL** | **35** | **0** |

## e. Patents

| | Name of Technology | Patent No. | Applicants |
|---|---|---|---|
| 1 | Modeling of the process of neutralization of alkaline acidic waste water | Certificate of official registration of the program created for electronic computing machines No. DGU 14226 dated 17.01.2022. | Kadirova Z. Ch., Nusretov R.A., Ashurov O.T., Narbadalov Sh.I. |
| 2 | A method for separating rhenium from solutions | Utility model patent No. FAP 01876 03/29/2022. | Pardayev O. T., Daminova Sh.Sh., Kadirova Z.Ch., Sharafutdinov U.Z., Sharipov X.T. |
| 3 | The method of obtaining impregnated sorbent | Patent for the invention No. IAP 07076. Registered in the State Register of Inventions of the Republic of Uzbekistan on 22.08.2022 | Daminova Sh.Sh., Kadirova Z.Ch., Xujamberdiyev M.I., Sharipov X.T., Koldarov A.R., Ziyatov D.A. |
| 4 | Method for determination of gold in impregnated solid extractants | Patent for the invention No. IAP 20200445 Registered in the State Register of Inventions of the Republic of Uzbekistan on 22.08.2022 | Daminova Sh.Sh., Ruziyeva B.Yu., Kadirova Z.Ch., Xujamberdiyev M.I., Sharipov X.T. |
| 5 | A method of cleaning wastewater from dye compounds | Utility model patent No. FAP 01794 13.01.2022. | Kadirova Z. Ch., Xujamberdiyev M.I.,Kadirova Sh.A.Daminova Sh.Sh.,Raxmonova D.S.Parpiyev N.A. |
| 6 | Algorithm for studying the distribution of the light field near a dielectric nanoobject | Certificate of official registration of the program created for electronic computing machines No. DGU 08161 dated 10.03.2020. | Юсупов Д.Б., Сапаев У.К., Исмаилова О.Б. |

## Table-8 List of MOU with other Universities / Institutes

| | Partner | Country | Form | Year | Target | Language |
|---|---|---|---|---|---|---|
| 1 | Center of Advanced Technologies under the Ministry of Innovative Development | Uzbekistan | MOU | 2020 Mar | Strategic Cooperation | Eng-Rus |
| 2 | Institute of Bioorganic Chemistry of Academy of Science | Uzbekistan | MOU | 2020 May | Sharing Equipment | Eng-Rus |
| 3 | Uzbek-Japan Center for Human Resource Development (UJC) | Japan/Uzbekistan | MOU | 2020 June | General Collaboration | Rus |
| 4 | Yokohama National University | Japan | MOU | 2020 Nov | Academic Cooperation and Human Exchange | Eng |
| | Tashkent Institute of Architecture and Civil Engineering | Uzbekistan | | | | |
| 5 | Akita University, Faculty of International Resource Science | Japan | MOU | 2020 Nov | Academic Cooperation and Human Exchange | Eng |
| 6 | Kyushu University, Department of Earth Resources Engineering, Faculty of Engineering | Japan | MOU | 2020 Nov | Academic Cooperation and Human Exchange | Eng |
| 7 | Nagoya Institute of Technology | Japan | LOI | 2021 Jun | Academic Cooperation and Human Exchange | Eng |
| | Tashkent State University of Technology | Uzbekistan | | | | |
| 8 | Teikyo University | Japan | MOU | 2021 Jul | Academic Cooperation and Human Exchange | Eng |
| | National University of Uzbekistan | Uzbekistan | | | | |
| 9 | Tashkent State University of Economy | Uzbekistan | MOU | 2021 Jul | Development of Scientific Research & improvement of cooperation | Uzbek |
| 10 | National Research Institute of Renewable Energy Sources under the Ministry of Energy | Uzbekistan | MOU | 2021 Sep | Strategic Cooperation | Eng-Rus |
| 11 | Akita University, Faculty of International Resource Science | Japan | MOU | 2021 Dec | Academic Cooperation and Human Exchange | Eng |
| | University of Geological Sciences of Uzbekistan | Uzbekistan | | | | |
| 12 | Kyushu University, Faculty of Engineering. School/Graduate School of Engineering | Japan | MOU | 2022 Jan | Academic Cooperation | Eng |
| | Navoiy State University of Mining and Technology | Uzbekistan | | | | |
| 13 | Kyushu University | Japan | MOU | 2022 Feb | Academic Cooperation | Eng |
| | National University of Uzbekistan | Uzbekistan | | | | |
| 14 | National University of Uzbekistan | Uzbekistan | MOU | 2022 Apr | Strategic Cooperation | Uzbek |
| 15 | Institute of Technology and Innovation Management of Kulob | Tajikistan | MOU | 2023 Feb | Strategic Cooperation | Rus |
| 16 | Akita University, Faculty of International Resource Science | Japan | MOU | 2023 Apr | Opening Satellite Lab of Akita Univ. at UJICY | Eng |
| 17 | National Scientific Research Institute on Semiconductors and Microelectronics under the National University of Uzbekistan | Uzbekistan | MOU | 2023 May | Strategic Cooperation | Eng-Rus |
| 18 | New Uzbekistan University | Uzbekistan | MOU | 2023 Jun | Strategic Cooperation | Eng-Uzbek |
| 19 | Japan International Cooperation Agency | Japan | MOU | 2023 Aug | Research Cooperation on Silk Project | Eng |

| | | | | | | |
|---|---|---|---|---|---|---|
| 20 | Research Institute of Environment and Nature Conservation Technologies | Uzbekistan | MOU | 2023 Oct | Comprehensive Research Cooperation | Uzbek-Eng |
| 21 | Nara National Research Institute for Culture Properties under National Institute for Cultural Heritage of Japan | Japan | MOU | 2024 Jan | Comprehensive Research Cooperation | Eng |
| | Samarkand Institute of Archaeology | Uzbekistan | | | | |

Total **21 MOUs** including **11 MOUs with Japanese universities/institutes** have been concluded.

## MOUs under Negotiation (As of March 2024)

| | Partner | Country | Form | Year | Target | Language |
|---|---|---|---|---|---|---|
| 1 | Nagaoka University of Technology | Japan | MOU | 2024 | Academic Cooperation and Human Exchange | |
| | Tashkent State University of Technology | Uzbekistan | | | | |
| 2 | Akita University | Japan | MOU | 2024 | Strategic Cooperation for DDP(*) | |
| | Tashkent State University of Technology | Uzbekistan | | | | |
| 3 | Kyushu University | Japan | MOU | 2024 | Strategic Cooperation for DDP(*) | |
| | Tashkent State University of Technology | Uzbekistan | | | | |

(*) Double Degree Program

## Table-9 List of Equipment

## a. Procured by Uzbek Government

| | Equipment / Model | |
|---|---|---|
| 1 | **SEM-EDX**<br><br>**Model:**<br>**JOEL JSM-IT200LA**<br>**(Japan)** |  |
| 2 | **High pressure reactor**<br><br>**Model:**<br>**Parr Instruments 4744** |  |
| 3 | **Differential thermal analyzer**<br><br>**Model:**<br>**Thermoscientific TA Instruments STD 650**<br>**(USA)** |  |
| 4 | **Probe Raman Spectrometer**<br><br>**Model:**<br>**HORIBA MacroRam**<br>**(Japan/France)** |  |
| 5 | **CHNS/O- analyzer**<br><br>**Model:**<br>**Thermoscientific Flash Smart**<br>**(USA/Italy)** |  |
| 6 | **Planetary mill**<br><br>**Model:**<br>**Fritsch PULVERISETTE 6**<br>**(Germany)** |  |

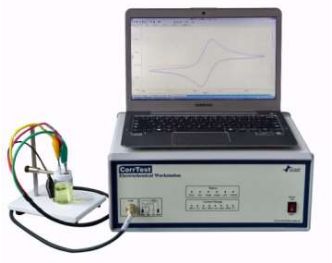
| | | |
|---|---|---|
| 7 | **Rotor evaporator**<br><br>**Model:**<br>**Hei-VAP Ultimate Control UNIVERSITY RESEARCH**<br>**(Germany)** |  |
| 8 | **BET Surface area analyzer**<br><br>**Model:**<br>**Micrometritics Gemini VII 2390t**<br>**(USA)** |  |
| 9 | **Gas chromatograph/ Mass-spectrometer**<br><br>**Model:**<br>**GC1310 combined TSQ 9000**<br>**(USA)** |  |
| 10 | **Spectrofluorometer**<br><br>**Model:**<br>**HORIBA Duetta**<br>**(Japan/Canada)** |  |
| 11 | **ICPOES Spectrometer**<br><br>**Model:**<br>**Thermoscientific iCAP Pro**<br>**(USA)**<br><br>**USD 89,700** |  |
| 12 | **Mashing Center (CNC)**<br><br>**Model:**<br>**KAAST Delta Center V10L ( Germany )** |  |

**Total Amount of Equipment : USD 938,810**

## b. Procured by MIRAI Fund (Japan) (Minor tools/equipment are not included)

| | Equipment / Model | |
|---|---|---|
| 1 | **Ultrasonic Bath**<br><br>**Model:**<br>**ISOLAB 621.05.006 - ultrasonic bath-sterilizer - 6 l (Turkey)** |  |
| 2 | **Heating Magnetic stirrer**<br><br>**Model:**<br>**HEIDROF Magnetic stirrer Hei-Tec with temperature sensor Pt 1000 (Germany)** |  |
| 3 | **Magnetic stirrer**<br><br>**Model:**<br>**ISOLAB 613.03.001 - magnetic stirrer - without "heating plate" - led display (Turkey)** |  |
| 4 | **Heating Magnetic stirrer**<br><br>**Model:**<br>**ISOLAB 613.06.001 (Turkey)** |  |
| 5 | **Water Bath**<br><br>**Model:**<br>**MEMMERT Bath water WB 14 (wnb14) (Germany)** |  |
| 6 | **Analytical balance**<br><br>**Model:**<br>**ENTRIS224I-1S analytical balance Sartorius (Germany)** |  |

| | | |
|---|---|---|
| 7 | **Binocular microscope**<br><br>**Model:**<br>**BA 210 E Motic (China)** |  |
| 8 | **Centrifuge clinical**<br><br>**Medel:**<br>**ISOLAB 603.05.001 - centrifuge - clinical - 4.500 rpm - LCD display (Turkey)** |  |
| 9 | **Cooling Incubator**<br><br>**Model:**<br>**Pol-eco apparatura**<br>**ST 1 COMF - cooling incubator (Poland)** |  |
| 10 | **Membrane vacuum pump - 30 л/мин**<br><br>**Model:**<br>**ISOLAB 622.12.001 (Turkey)** |  |
| 11 | **Drying oven**<br><br>**Model:**<br>**LN 115 STD Dry Oven Pol-eco appatature (Poland)** |  |
| 12 | **Muffle furnace**<br><br>**Model:**<br>**SNOL 8,2/1100 (Lithuania)** |  |

| | | |
|---|---|---|
| 13 | **Analytical balance**<br><br>**Model:**<br>**BCE224I-1S Analytical balance Sartorius (Germany)** |  |
| 14 | **Precision balance**<br><br>**Model:**<br>**BCE1202-1S Precision Balance Sartorius (Germany)** |  |
| 15 | **Computer server**<br><br>**Model:**<br>**Fujitsu (Japan/Germany)** |  |
| 16 | **Potentiometric titrator**<br><br>**Model:**<br>**SI Analytics TitroLine 7000 (Germany)** |  |
| 17 | **Single channel potentiostate**<br><br>**Model:**<br>**CS150 Corrtest (China)** |  |
| 18 | **Desktop universal milling machine**<br><br>**Model:**<br>**JET JUM-X2 (China)**<br>**JPW Tools AG (Switzerland)** |  |

| | | |
|---|---|---|
| 19 | **Sharpening machine (grindstone)**<br><br>**Model:**<br>**JET JBG-150( China ) JPW Tools AG** |  |
| 20 | **Table drilling machine**<br><br>**Model:**<br>**JET JDP-10BM( China ) JPW Tools AG** |  |
| 21 | **Bench lathe for metal**<br><br>**Model:**<br>**JET BD-8VS( China ) JPW Tools AG** |  |
| 22 | **Milling and drilling machine**<br><br>**Model:**<br>**JET JMD-2S DRO( China ) JPW Tools AG** |  |
| 23 | **Tubular Furnace**<br><br>**Model:**<br>**AS ONE TMF 300N tubular furnace 1-7555-21** |  |

**Total Amount of Equipment : USD 109,015**

## c. Procured by Competitive Research Fund

| | Equipment / Model | |
|---|---|---|
| 1 | **FTIR spectrometer**<br><br>**Model:**<br>**Perkin Elmer Spectrum Two**<br>**(USA)** |  |
| 2 | **UV-Vis Spectrometer**<br><br>**Model:**<br>**Analytic Jena**<br>**Specord 50**<br>**(Germany)** |  |
| 3 | **pH meter**<br><br>**Model:**<br>**Five Easy pH Meter, F20 Standard Kit Mettler Toledo**<br>**(Switzerland)** |  |
| 4 | **Conductivity meter**<br><br>**Model:**<br>**Mettler Toledo**<br>**Five Easy pH Meter, F20 Standard Kit (Switzerland)** |  |
| 5 | **IR moisture analyser**<br><br>**Model:**<br>**MA-35 Sartorius**<br>**(Germany)** |  |
| 6 | **NanoVolt/MicroOhm meter**<br><br>**Model:**<br>**Keysight (Agilent) 34420A Micro-Ohm Meter**<br>**(USA)** |  |

| | | |
|---|---|---|
| 7 | **Binocular microscope with digital camera**<br><br>**Model:**<br>**DN-300M Ningbo Yongxin Optics Co.**<br>**(China)** |  |
| 8 | **Digital Handheld Refractometer**<br><br>**Model:**<br>**KRUSS Optronic (Germany)** |  |

# ANNEX 2: List of Products Produced by the Project (Report, Manual, Handbook, etc.)

| Attachment No | Report/Manual/Guideline |
|---|---|
| 1 | Strategic Plan for Sustainable Development (SPSD-UJICY) |
| 2 | Charter of UJICY |
| 3 | IP Guideline (Russian) |
| 4 | Guideline of MIRAI Fund |
| 5 | Utilizing Plan of Returned Trainees (Japanese) |
| 6 | Dispatch Plan of Short-term Training |
| 7 | Dispatch Plan of Short-term Experts |
| 8 | UJICY Road Map 2024-2028 (English translation) |
| 9 | Project Baseline Survey Report |
| 10 | Project Endline Survey Report |
| 11 | New Uzbekistan Strategy 2030 (English translation) |
| 12 | Analysis of Problems and Proposed Solutions (1st Risk Analysis) |
| 13 | Analysis of Potential Problems of UJICY (2nd Risk Analysis) |

Copy of the above products are attached in **Separate Volume**.

# ANNEX 3: PDM (All version)

| | |
|---|---|
| Attachment-1 | Version 1 (Original) |
| Attachment-2 | Version 2 (December 20, 2020) |
| Attachment-3 | Version 3 (January 11,  2022) |

**Project Design Matrix (PDM)**

Project Title: The Project for Strengthening the Capacity of Research Activities of Uzbek-Japan Innovation Center of Youth

Duration: Five years (April 2019 to March 2024)

Target Group：Researchers/prospective researchers of Uzbek-Japan Innovation Center of Youth

| Narrative Summary | Objectively Verifiable Indicators | Means of Verification | Important Assumptions |
|---|---|---|---|
| (Overall Goal)<br>The Center conducts frontier research for industrial development of Uzbekistan with stronger linkage with industries and Japanese researchers. | 1. Number of frontier research conducted with industries increases.<br>2. Number of frontier research conducted with Japanese researchers increases.<br>3. Number of patents applied by the researchers of the Center increases. | 1, 2 and 3. Monitoring report of the Center | |
| (Project Purpose)<br>Capacity of researchers at the Uzbek-Japan Innovation Center of Youth to conduct research activities is strengthened. | 1. XX% of the researchers are satisfied with the research management system of the Center.<br>2. Number of research projects increases.<br>3. Number of papers published at journals and conferences per year per researcher increases.<br>4. XX% of the researchers assess that their research capacity was strengthened. | 1. Endline survey<br>2. Baseline and Endline surveys<br>3. Baseline and Endline surveys<br>4. Endline survey | |
| （Outputs）<br>1. Research management system of the Center is established. | 1-1. A long-term strategy is approved by the Scientific Council of the Center.<br>1-2. A medium-term strategy is approved by the Scientific Council of the Center.<br>1-3. Defined responsibilities of the Center's respective divisions and related organizations are approved by the Scientific Council of the Center.<br>1-4. A human resource plan is approved by the Scientific Council of the Center.<br>1-5. The Center implements research activities in accordance with the strategies and the plan. | 1-1. Monitoring report<br>1-2. Monitoring report<br>1-3. Monitoring report<br>1-4. Monitoring report<br>1-5. Monitoring report and Endline survey | ・Those who studied and obtained degrees in Japan continue working in the Center. |

| | | | |
|---|---|---|---|
| 2. Sustainable research network is established between Japanese researchers and young Uzbekistan researchers. | 2-1. XX% of the researchers who study at Japanese universities obtain higher degrees within the pre-determined timeframe.<br>2-2. Number of collaborative activities with Japanese universities increases.<br>2-3. At least three MOUs are signed between the Center and Japanese universities. | 2-1. Monitoring report and Endline survey<br>2-2. Baseline and Endline surveys<br>2-3. Endline survey | |
| 3. Plans of collaborative research with Japanese universities are developed. | 3-1. Research plans to conduct collaborative research with Japanese universities are approved by the Scientific Council of the Center.<br>3-2. A list of necessary equipment is approved by the Scientific Council of the Center. | 3-1. Monitoring report<br>3-2. Monitoring report | |
| （Activities）<br>1-1 The Center develops long-term (10- year) and medium-term (5 -year) strategies of the Center.<br>1-2 The Center defines responsibilities of the Center's respective divisions and related organizations.<br>1-3 The Center develops a human resource plan of the Center.<br>1-4 The Center develops a guideline of activities of industrial linkage.<br>1-5 The management members of the Center join in short-term training in Japan/Uzbekistan.<br><br>2-0 The Center selects candidates for scholarship (Long-term training).<br>2-1 The candidates apply and take examinations for scholarship (Long-term training).<br>2-2 The Center sends researchers to Japanese universities for long-term training.<br>2-3 The Center sends researchers to Japan for short-term training.<br>2-4 Short-term experts from Japanese Universities provide lectures and conduct collaborative activities with Uzbekistan researchers to strengthen the capacity of research activities of the Center.<br>2-5 The Center conducts seminars and conferences in Japan/Uzbekistan. | Inputs<br><u>1. JICA</u><br>a) Long-term training<br>b) Short-term training<br>c) Japanese experts<br>d) Cost for conducting seminars and conferences<br><br><u>2. Uzbekistan</u><br>a) Necessary administrative and academic staff for implementation of the Project<br>b) Office space for experts<br>c) Basic equipment for laboratories<br>d) Maintenance costs of facilities and equipment<br>e) Running expenses for the implementation of the Project | |

| | | |
|---|---|---|
| 3-1 The Center develops research plans to conduct collaborative research with Japanese universities.<br>3-2 The Center develops a list of necessary equipment for the research activities of the Center. | | **Preconditions** |

Note: “The Center” refers to Uzbek-Japan Innovation Center of Youth.

Attachment-3

**Project Design Matrix (PDM)**

Project Title: The Project for Strengthening the Capacity of Research Activities of Uzbek-Japan Innovation Center of Youth

Duration: Five years (April 2019 to March 2024)

Target Group：Researchers/prospective researchers of Uzbek-Japan Innovation Center of Youth

| Narrative Summary | Objectively Verifiable Indicators | Means of Verification | Important Assumptions |
|---|---|---|---|
| (Overall Goal)<br>The Center conducts frontier research for industrial development of Uzbekistan with stronger linkage with industries and Japanese researchers. | 1. Number of frontier research conducted with industries increases.<br>2. Number of frontier research conducted with Japanese researchers increases.<br>3. Number of patents applied by the researchers of the Center increases. | 1, 2 and 3. Monitoring report of the Center | |
| (Project Purpose)<br>Capacity of researchers at the Uzbek-Japan Innovation Center of Youth to conduct research activities is strengthened. | 1. XX% of the researchers are satisfied with the research management system of the Center.<br>2. Number of research projects increases.<br>3. Number of papers published at journals and conferences per year per researcher increases.<br>4. XX% of the researchers assess that their research capacity was strengthened. | 1. Endline survey<br>2. Baseline and Endline surveys<br>3. Baseline and Endline surveys<br>4. Endline survey | |
| （Outputs）<br>1. Research management system of the Center is established. | 1-1. A long-term strategy is approved by the Scientific Council of the Center.<br>1-2. A medium-term strategy is approved by the Scientific Council of the Center.<br>1-3. Defined responsibilities of the Center's respective divisions and related organizations are approved by the Scientific Council of the Center.<br>1-4. A human resource plan is approved by the Scientific Council of the Center.<br>1-5. The Center implements research activities in accordance with the strategies and the plan.<br>1-6. UJICY establishes and operates research fund. | 1-1. Monitoring report<br>1-2. Monitoring report<br>1-3. Monitoring report<br>1-4. Monitoring report<br>1-5. Monitoring report and Endline survey<br>1-6. Monitoring report | ・Those who studied and obtained degrees in Japan continue working in the Center. |

| | | | |
|---|---|---|---|
| 2. Sustainable research network is established between Japanese researchers and young Uzbekistan researchers. | 2-1. XX% of the researchers who study at Japanese universities obtain higher degrees within the pre-determined timeframe.<br>2-2. Number of collaborative activities with Japanese universities increases.<br>2-3. At least three MOUs are signed between the Center and Japanese universities. | 2-1. Monitoring report and Endline survey<br>2-2. Baseline and Endline surveys<br>2-3. Endline survey | |
| 3. Plans of collaborative research with Japanese universities are developed. | 3-1. Research plans to conduct collaborative research with Japanese universities are approved by the Scientific Council of the Center.<br>3-2. A list of necessary equipment is approved by the Scientific Council of the Center. | 3-1. Monitoring report<br>3-2. Monitoring report | |
| (Activities)<br>1-1 The Center develops long-term (10- year) and medium-term (5 -year) strategies of the Center.<br>1-2 The Center defines responsibilities of the Center's respective divisions and related organizations.<br>1-3 The Center develops a human resource plan of the Center.<br>1-4 The Center develops a guideline of activities of industrial linkage.<br>1-5 The management members of the Center join in short-term training in Japan/Uzbekistan.<br><br>2-0 The Center selects candidates for scholarship (Long-term training).<br>2-1 The candidates apply and take examinations for scholarship (Long-term training).<br>2-2 The Center sends researchers to Japanese universities for long-term training.<br>2-3 The Center sends researchers to Japan for short-term training.<br>2-4 Short-term experts from Japanese Universities provide lectures and conduct collaborative activities with Uzbekistan researchers to strengthen the capacity of research activities of the Center.<br>2-5 The Center conducts seminars and conferences in Japan/Uzbekistan. | Inputs<br>1. JICA<br>a) Long-term training<br>b) Short-term training<br>c) Japanese experts<br>d) Cost for conducting seminars and conferences<br>e) Research fund<br><br>2. Uzbekistan<br>a) Necessary administrative and academic staff for implementation of the Project<br>b) Office space for experts<br>c) Basic equipment for laboratories<br>d) Maintenance costs of facilities and equipment<br>e) Running expenses for the implementation of the Project | |

| | | |
|---|---|---|
| 3-1 The Center develops research plans to conduct collaborative research with Japanese universities.<br>3-2 The Center develops a list of necessary equipment for the research activities of the Center. | | **Preconditions** |

Note: “The Center” refers to Uzbek-Japan Innovation Center of Youth.

**Attachment-2**

**Project Design Matrix (PDM 3rd Ver.)**

Project Title: The Project for Strengthening the Capacity of Research Activities of Uzbek-Japan Innovation Center of Youth

Duration: Five years (April 2019 to March 2024)

Target Group：Researchers/prospective researchers of Uzbek-Japan Innovation Center of Youth

| Narrative Summary | Objectively Verifiable Indicators | Means of Verification | Important Assumptions |
|---|---|---|---|
| (Overall Goal)<br>The Center conducts frontier research for industrial development of Uzbekistan with stronger linkage with industries and Japanese researchers. | 1. Number of frontier research conducted with industries increases.<br>2. Number of frontier research conducted with Japanese researchers increases.<br>3. Number of patents applied by the researchers of the Center increases. | 1, 2 and 3. Monitoring report of the Center | |
| (Project Purpose)<br>Capacity of researchers at the Uzbek-Japan Innovation Center of Youth to conduct research activities is strengthened. | 1. 80% of the researchers are satisfied with the research management system of the Center.<br>2. Number of research projects increases.<br>3. Number of papers published at journals and conferences per year per researcher increases.<br>4. 80% of the researchers assess that their research capacity was strengthened. | 1. Endline survey<br>2. Baseline and Endline surveys<br>3. Baseline and Endline surveys<br>4. Endline survey | |
| （Outputs）<br>1. Research management system of the Center is established. | 1-1. A long-term strategy is approved by the Board of Trustees of the Center.<br>1-2. A medium-term strategy is approved by the Board of Trustees of the Center.<br>1-3. Defined responsibilities of the Center's respective divisions and related organizations are approved by the Board of Trustees of the Center.<br>1-4. A human resource plan is approved by the Board of Trustees of the Center.<br>1-5. The Center implements research activities in accordance with the strategies and the plan.<br>1-6. UJICY establishes and operates research fund. | 1-1. Monitoring report<br>1-2. Monitoring report<br>1-3. Monitoring report<br>1-4. Monitoring report<br>1-5. Monitoring report and Endline survey<br>1-6. Monitoring report | ・Those who studied and obtained degrees in Japan continue working in the Center. |

| | | | |
|---|---|---|---|
| 2. Sustainable research network is established between Japanese researchers and young Uzbekistan researchers. | 2-1. 70% of the researchers who study at Japanese universities obtain higher degrees within the pre-determined timeframe.<br>2-2. Number of collaborative activities with Japanese universities increases.<br>2-3. At least three MOUs are signed between the Center and Japanese universities. | 2-1. Monitoring report and Endline survey<br>2-2. Baseline and Endline surveys<br>2-3. Endline survey | |
| 3. Plans of collaborative research with Japanese universities are developed. | 3-1. Research plans to conduct collaborative research with Japanese universities shall be reported to the Board of Trustees of the Center.<br>3-2. A list of necessary equipment is approved by the Board of Trustees of the Center. | 3-1. Monitoring report<br>3-2. Monitoring report | |
| （Activities）<br>1-1 The Center develops long-term (10- year) and medium-term (5 -year) strategies of the Center.<br>1-2 The Center specifies the priority research areas corresponding to the social problems.<br>1-3 The Center defines responsibilities of the Center's respective divisions and related organizations in accordance with the priority research areas.<br>1-4 The Center develops a human resource plan of the Center.<br>1-5 The Center develops a guideline of activities of industrial linkage.<br>1-6 The management members of the Center join in short-term training in Japan/Uzbekistan.<br><br>2-0 The Center selects candidates for scholarship (Long-term training).<br>2-1 The candidates apply and take examinations for scholarship (Long-term training).<br>2-2 The Center sends researchers to Japanese universities for long-term training.<br>2-3 The Center develops the utilization plan of research outcome of the long-term trainings after the researchers obtain the degrees in Japanese Universities.<br>2-4 The Center sends researchers to Japan for short-term training. | Inputs<br>1. JICA<br>a) Long-term training<br>b) Short-term training<br>c) Japanese experts<br>d) Cost for conducting seminars and conferences<br>e) Research fund<br><br>2. Uzbekistan<br>a) Necessary administrative and academic staff for implementation of the Project<br>b) Office space for experts<br>c) Basic equipment for laboratories<br>d) Maintenance costs of facilities and equipment<br>e) Running expenses for the implementation of the Project | |

| | | |
|---|---|---|
| 2-5 Short-term experts from Japanese Universities provide lectures and conduct collaborative activities with Uzbekistan researchers to strengthen the capacity of research activities of the Center.<br>2-6 The Center conducts seminars and conferences in Japan/Uzbekistan.<br><br>3-1 The Center develops research plans to conduct collaborative research with Japanese universities.<br>3-2 The Center develops a list of necessary equipment for the research activities of the Center. | | **Preconditions** |

Note: "The Center" refers to Uzbek-Japan Innovation Center of Youth.

*Uzbek-Japan Innovation Center of Youth (UJICY)*
*Узбекско-Японский Молодежный Центр Инноваций*

# **S**trategic **P**lan for **S**ustainable **D**evelopment *(SPSD-UJICY)*

# **С**тратегический **П**лан по **У**стойчивому **Р**азвитию *(СПУР «UJICY»)*

January, 2020 / Январь, 2020

Rev. 0.1 (2020/01/15)

# Table of Contents:

**PREFACE:** ....4
1. Background ....4
1.1 Dawn of UJICY ....4
1.2 JICA's Involvement ....4
1.3 Government Initiatives ....5
2. Presidential Decrees ....5
2.1 Original Decree ....5
2.2 New Decree ....6
3. Outline of SPSD-UJICY ....7
**CHAPTER-I**: Long-term Strategic Plan ....10
1. Purpose of Long-Term Strategic Plan ....10
2. Philosophy ....11
3. Vision ....12
4. Baseline - Analysis of Current Situations ....13
4.1 Risk Assessment ....13
4.2 Baseline Survey ....15
5. Mid-Term Targets ....15
6. Activities ....17
7. Input of Resources ....20
7.1 Finance ....20
7.2 Human Resources ....21
7.3 Material ....22
8. High Level Work Breakdown and Time Table for Long-Term ....22
**CHAPTER-II:** Mid-term Strategic Plan ....24
1. Outline of Mid-term Strategic Plan ....24
2. Road Map -1 (RM-1) for 2020-2024 ....25
2.1 Summary of RM-1 ....25
2.2 Outputs from RM-1 and Verification of Achievement ....25
2.3 Road Map-1 ....27

2.4 Human Resources Allocation Plan ..... 27
2.5 Transition from RM-1 to RM-2 ..... 30
3. Provisional Road Map for 2025-2029 (RM-2) ..... 31
3.1 Summary of RM-2 ..... 31
3.2 Provisional Outputs from RM-2 and Verification of Achievement ..... 31
3.3 Work Breakdown and Implementation Time Table ..... 32

**APPENDIX:**

APPENDIX-1: Baseline Survey as of December 31, 2019
APPENDIX-2: High-Level WBS for Long-term Strategic Plan
APPENDIX-3: Low-Level Time Table for RM-1 (2020-2024)
APPENDIX-4: Manpower Allocation Plan
APPENDIX-5: Job Descriptions Sheetn(Sample)

# PREFACE:

## 1. Background

### 1.1 Dawn of UJICY

Uzbek-Japan Innovation Center of Youth (UJICY, hereinafter referred to as "Center") was established by the Presidential Decree No.PP-2602 for "Establishment of Uzbek-Japan Innovation Center of Youth under Tashkent State University of Technology named after Islom Karimov" dated September 19, 2016, in accordance with the Memorandum of Cooperation for establishment of the Center between the government of Republic of Uzbekistan and the government of Japan dated October 25, 2016. Under this Presidential Decree, Uzbekistan side has prepared venue of the Center at Tashkent State University of Technology (hereinafter referred to as "TSUT") and hired necessary staff and researchers.

At the initial stage of establishment of the Center, Japanese universities, such as Nagoya University, Tsukuba University, Keio University, Tokyo Institute of Technology and Toyohashi University of Technology, made grate contribution for making cornerstone of the Center by making advises to Uzbekistan side, conducting joint scientific events and lectures in Uzbekistan and receiving researchers from Uzbekistan.

### 1.2 JICA's Involvement

The above efforts and achievement were gradually taken over by the governmental initiatives, and after series of serious discussions, Ministry of Higher and Secondary Specialized Ministry (hereinafter referred to as "MHSSE") and Japan International Cooperation Agency (hereinafter referred to as "JICA") agreed on the joint project called "The Project for Strengthening the Capacity of Research Activities of Uzbek-Japan Innovation Center of Youth (hereinafter referred to "JICA Project")" on December 11, 2018. Under the JICA Project, one Japanese expert for project management has been dispatched to the Center resident-basis, six (6) researchers have been selected and sent to Japanese universities for seeking master and/or doctorate degree, and several professors from Japanese universities were invited and made special lectures for students and researchers in Uzbekistan. In addition to the above, the Center has been seeking and discussing with Japanese researchers for initiation of joint research at the Center.

### 1.3 Government Initiatives

For the purpose of further improvement of activities of the Center and creation of the most favorable conditions for effective implementation of its results of scientific research and innovative activities to the industry and society of Uzbekistan, the government of Uzbekistan issued the new Presidential Decree No. PP-4550 dated December 13, 2019. The new Decree is based on strong governmental initiative to promote activities of the Center and cooperation with Japan, and includes strengthening of organization of the Center, securing financial base of the Center, procurement of necessary basic research equipment, commitment for safety and protection of intellectual properties and promotion of incubation.

## 2. Presidential Decrees

The objects and direction of Center have been clearly determined in the original Presidential Decree No.PP-2602 in 2016 and the new Presidential Decree No. PP04550 in 2019.

### 2.1 Original Decree

In the original decree, PP-2602, the following objectives of the Center were defined as *"basic tasks and direction for operation"* in its Article 2:

- *development of the innovation activity of the young specialists and the students with implementation of their scientific and technical ideas into industrial samples, equipment, technological processes and solutions;*
- *creation of the modern high-technological production facilities with the minimal impact to the environment, which have high parameters of energy saving and resolving the tasks of import substitution;*
- *performing the maximally favorable conditions for performing by the young scholars the research and development activity, ensuring the high level of quality of the performed by them research works.*
- conducting joint pilot and applied scientific studies on corresponding scientific directions of the operation of the Center on the basis of the orders, submitted from national and foreign organizations, scientific and educational establishments.

The above tasks are summarized as objectives of the Center as:

- *high-quality techno-scientific researches* and
- *transfer and application of results of the researches to real industry*.

In addition, the directions for operation are also defined in the Decree as

- *"development of young human resources in scientific fields"* and
- *"achievement of sustainable development by low-impact to environment and high energy efficiency"*.

The above directions for operation shall be taken as **"Philosophy"** of the Center in this Strategic as described in Section-2 of Chapter-I.

## 2.2 New Decree

In the New Decree, PP-4450, the following objectives are defined as *"assignment of additional responsibility* of the Center" in Article 3:

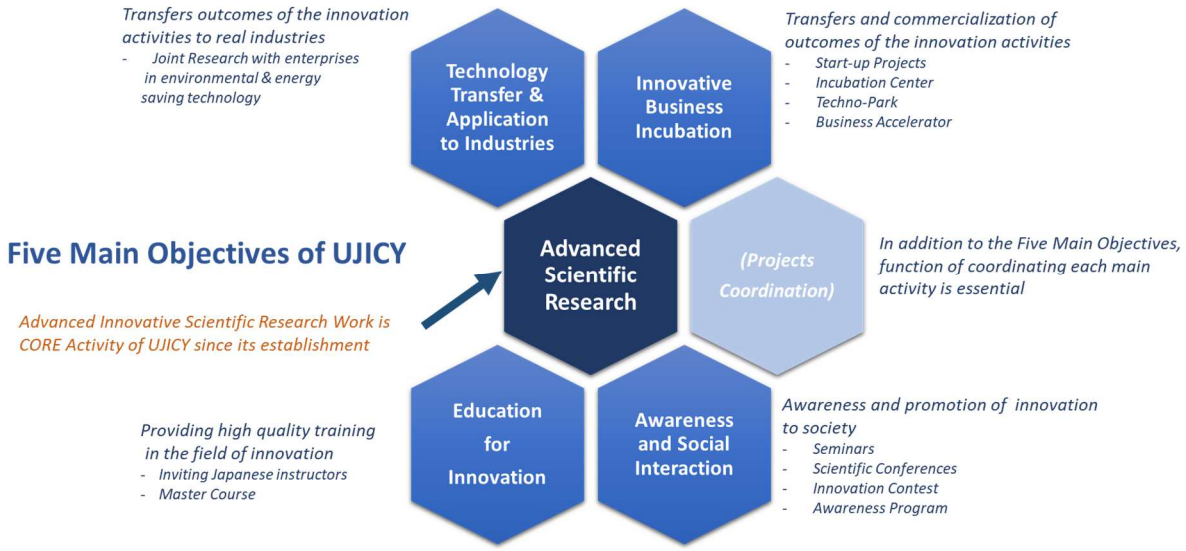
- *Conducting of transfers and commercialization of outcomes of the innovation activities, implementation of start-up projects, attracting young people, scholars and lecturers to development of solutions of the scientific and practical problems of different sector of the economy and enterprises through provision of practical support and their full and thorough introduction at the industrial level;*
- *Conducting close interaction with innovation centers, centers of technological transfers, technical parks, laboratories of high technologies, start-ups and business accelerators, Academy of youth;*
- *Conducting master-classes, trainings and courses on improvement of qualification in the field of innovations, as well as scientific and practical conferences, seminars and contests on scientific and innovation topics of current interest with participation of companies, organizations, scholars and specialists that are acknowledged at the national and international levels.*

The above new responsibilities are summarized as three (3) objectives of the Center as:

- *business incubation of innovative technologies,*
- *education and capacity building in innovation fields* and
- *social interaction through seminars, conferences and other awareness events for innovation.*

And the words stressed in the above Article, "innovation" and "innovative", are both definitely an important direction of our operation, **"Philosophy"**.

Figure-1: Five Main Objectives of the Center *(Extract Essence from Decrees)*




These five (5) objectives extracted from the original and new Presidential Decrees are shown in Figure-1, and can be crystalized as the ultimate goal for the Center as well **"Vision"** of the Center as described in Section-3 of Chapter-I.

## 3. Outline of SPSD-UJICY

This Strategic Plan for Sustainable Development for UJICY (hereinafter referred to as "SPSD-UJICY" or "Strategic Plan") is the plan for materializing the vison praised in the original Presidential Decree No. PP-2602 and the new Presidential Decree No. PP-4550 as addendum, and aiming to being a guideline of future activities of the Center.

The Strategic Plan consists of "Long-Term Strategic Plan" and "Mid-Term Strategic Plan". The former covers coming 10 years and shows the vison (ultimate goal) and direction that the Center shall aim, and the latter covers coming 5 years and shows road map to achieve the vision specified in the Long-Term Strategy Plan. The Mid-Term Strategic Plan shall be prepared each 5 years.

In addition to the above two strategic plans, the Center shall prepare "Annual Action Plan" and execute it. Annual Action Plan is more detailed breakdown of the Mid-Term Strategic Plan and the performance of the Center shall be monitored in accordance with this Action Plan annually and the results of achievement shall be reported to the both governments. The schematic chart of the structure of SPSD-UJICY is shown as Figure-2 below.

Figure-2: Structure of Strategic Plan for Sustainable Development for UJICY




This SDSP-UJICY has been prepared as a part of JICA Project's task for establishing proper research management system.

# CHAPTER-I

## LONG-TERM STRATEGY PLAN

# **CHAPTER-I**: Long-term Strategic Plan

## 1. Purpose of Long-Term Strategic Plan

Long-Term Strategic Plan defines directions of the Center's activities and the guideline of taking actions. The direction of this Strategic Plan shall have conformity with the directions indicated in the two (2) Presidential Decrees regarding the Center as well as the national policy titled *"Strategy of Actions in Five Priority Areas for the Development of Uzbekistan" established by the government of Uzbekistan in 2017.*

The following terms are used frequently in Long-Term Strategic Plan;

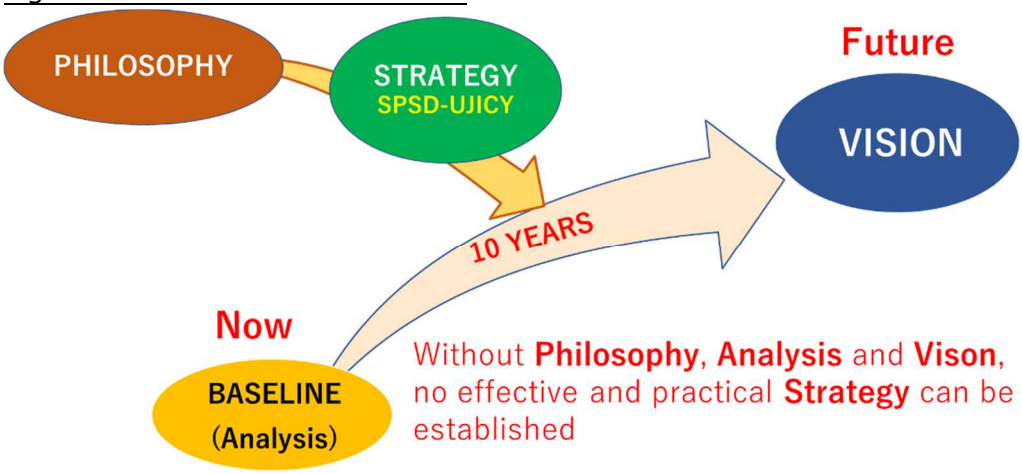
**"Vison"**: an ultimate goal of the Center to be reached after 10 years. It is not necessary to set specific and detailed goal but it should be made with easy words for understood by everybody. Long-term Strategic Plan is a plan to make such goal come true.

**"Philosophy"**: a guideline of the actions of the Center and its staff, showing how we should be and *act for achieving Vison.* The Philosophy is also a back-born of the Center so that it should not be changed easily and should be reflected to the Code (Charter) of the Center in the future.

**"Baseline":** an analysis on the current situation of the Center in order to know our current position, weakness and strongness. The Center's achievement shall be measured by comparing Vision with Baseline, and the amount of changes is level of achievement through SPSD-UJICY.

These three factors, "Philosohy", "Vison" and "Analysis (Baseline)" are essential factors; without them, any strategy cannot work properly.

Figure-3: "How to achieve Vision"



## 2. Philosophy

**"Philosophy"** of the Center, as directions of operation or guiding concept of actions for the Center, has been hinted in two Presidential Decrees as mentioned in Section 2 of Preface, such as;

- *"development of young human resources in scientific fields"*
- *"achievement of sustainable development of society by low-impact to environment and high energy efficiency technology"*
- *Do "innovation" and Be "Innovative"*

And in addition to the above, because of a unique character of this Center which has been established mutual relations with Japanese universities and institutes, "collaboration with Japan" is also an important "Philosophy" of this Center. The relations with Japan differentiate the Center from any other research center in the region, and absorbing and transplanting Japanese advanced scientific resources and experiences through collaboration activities will be the strong advantage for the Center.

Accordingly, the "Philosophy" of the Center shall be defined as the following four main pillars:

**"PHILOSOPHY" for UJICY**

**"Innovative Mind"**

*All researchers and staff of UJICY shall always have and act with "Innovative Mind", and make effort to spread "Innovative Mind" nation-wide.*

*"Innovative Mind" is:*

- *a life style always to find better results and solutions without stopping and satisfying the present situation,*
- *a continuous exercise of logical planning, practical execution, careful check and swift improvement of the results,*
- *a little courage to challenge new things and not to fear making fault.*

**"For Young Generation"**

*All activities of UJICY shall for the next generations' future. The knowledge and wisdom of the old shall be transferred to the young.*

*Opportunities for exploration of the future is for the young, and by the young leadership and initiatives. UJICY shall train and incubate such fresh creative power through its activities.*

**"UJICY-PHILOSOPHY" (continued)**

**"For Sustainable Development of Society of Uzbekistan"**

*Activities of UJICY shall always contribute to sustainable development of the society of Uzbekistan by innovative and creative solution. Impact to environment, recycling of resources, high energy-efficiency shall always be considered and to be criteria for selecting solutions.*

**"Collaboration with Japan"**

*UJICY will;*

- *learn, absorb and accumulate advanced techno-scientific and managemental knowledge and experience of Japan through collaboration with Japanese universities, research institutes and industrial firms.*
- *improve such knowledge for adopting into societies industries and markets in Uzbekistan.*

## 3. Vision

**"Vision"** is an ultimate goal that the Center aims to achieve within the period covered by this Strategic Plan, for 10 years, by the end of 2029.

Five (5) objectives, which have been extracted from the new Presidential Decree (see Figure-1 of Preface 2), are converted into the following **"Vision"** of the Center:

**"UJICY-VISION"**

| *UJICY-VISION* | *Objectives* |
|---|---|
| ***First:*** ***UJICY will be a leading research institute in the Central Asia region with international standard.*** | **Advanced Scientific Research** |
| ***Second:*** ***UJICY will be a hub of science & technology and industrial development in Uzbekistan.*** | **Technology Transfer to Industry** |
| ***Third:*** ***UJICY will create new values from science & technology by supporting business incubators and entrepreneurs.*** | **Innovative Business Incubation** |
| ***Forth:*** ***UJICY will be an active platform of Innovative education.*** | **Education** |
| ***Fifth:*** ***UJICY will spread "Innovative Mind" throughout the nation and generations for better life of all.*** | **Awareness & Social Interaction** |

These objectives can be understood as functions of the Center to achieve Vison, and actions for each objective shall be designed with real allocation of resources (fund, human and equipment and material etc.). Project Leader or Section Head shall be assigned to each objective as a responsible person for managing implementation. Therefore, Operation of the Center is a kind of “a project” which has 5 sub-projects.

# 4. Baseline - Analysis of Current Situations

Analyzing current situation of the Center and setting up “Baseline” as a basis or standard for evaluation, assessment, or comparison in the future is important.

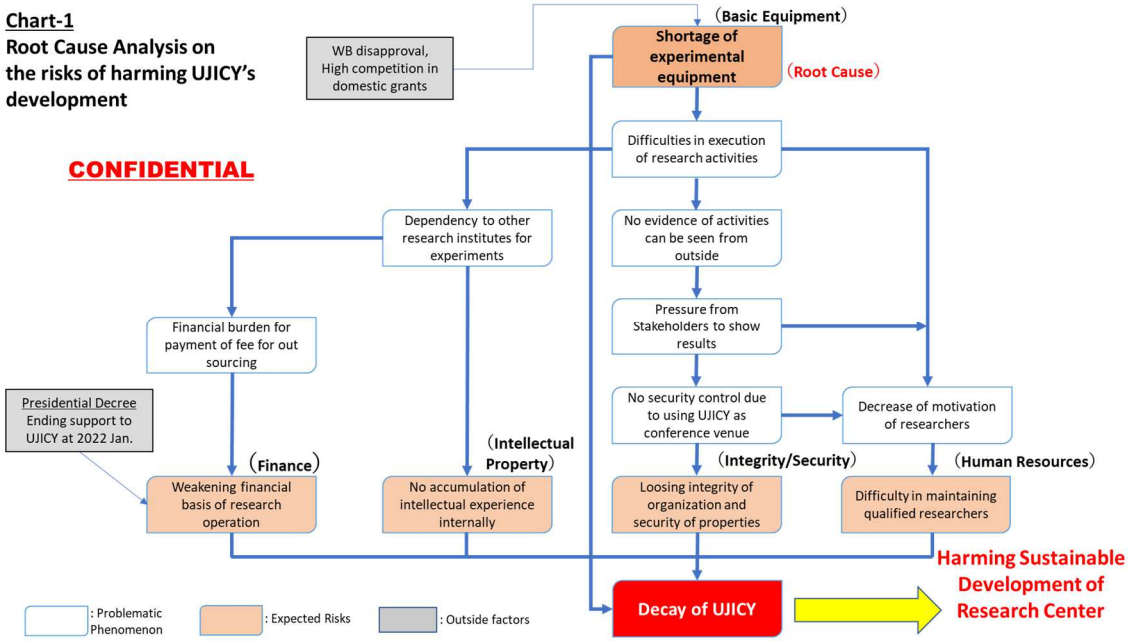
Baseline has two (2) aspects; internal and external. Internal aspect is representing the situation of the Center, such as shape of organization, number of staff, on-going research projects, submitted papers, activities with Japanese universities, problems and obstacles etc. On the other hand, external aspect is indicating the environment surrounding the Center, such as economy, demographics, political decision, trend of domestic/international market, etc., and mostly, they are beyond the control of the Center. Reports issued by international organizations, such as World Bank, European Bank for Reconstruction and Development, are used as data source.
In order to identify the baseline of the Center as of December 2019, the Center conducted a Risk Analysis in October 2019 with JICA, and Baseline Survey in December 2019 upon issuance of the new Presidential Decree.

## 4.1 Risk Assessment

Risk Assessment of UJICY was conducted by JICA in October 2019 since the Center was dead-locked by several fundamental problems and in need of seeking way out. Figure-4 in next page is the summary of the report of Risk Assessment and showing the problems and future’s risks.

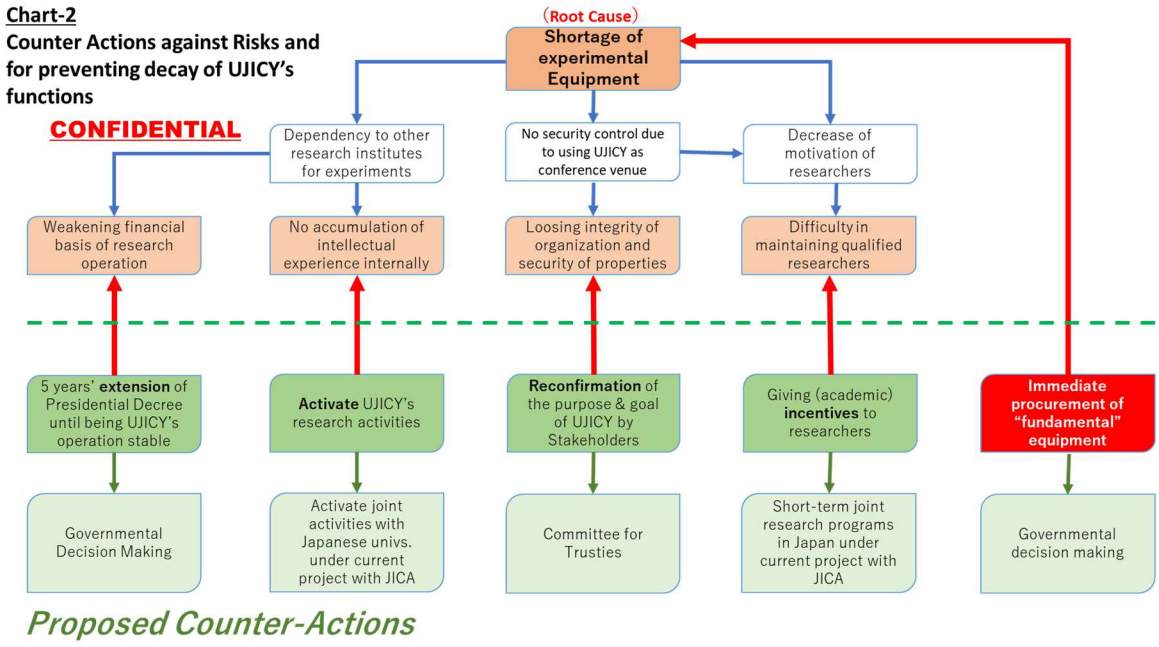
Through this assessment, current problems and difficulties in securing financial base, protection of intellectual property, week integrity of organization, security and maintenance of human resources were highlighted as potential risks, and especially, the lack of experimental equipment is identified as the “Root Cause” of all problems and future risks. These results have reported to the government of Uzbekistan as well as JICA of Japan.

Figure-4 Root Cause Analysis




The Assessment also proposed several options of solutions as showing Figure-5;

Figure-5 Counteractions against Risks



This Risk Analysis was shared with relevant ministries and cabinet of ministers in Uzbekistan, so that it was quite useful and meaningful for cultivating the same basis of understanding on the problems the Center faced.

### 4.2 Baseline Survey

The Baseline-Survey was conducted in December 2019 for the purpose of preparing this Strategic Plan. The survey has been conducted from view-points of "internal" and "external" aspects. The results of survey are described in APPENDIX-1 "Baseline of UJICY as of December 31, 2019".

## 5. Mid-Term Targets

In the Section 3 of this Chapter, **Vision** of the Center has been identified as ultimate goal to be achieved in 10 years. In order to make more realistic implementation plan and take more practical actions for realizing the Vision, the ten years' project period shall be divided into two (2) individual five years' period. Strategic Plan corresponding to each five (5) years period will be **Mid-Term Strategic Plan**, which is described in Chapter II.

(1) *The first five-years (RM-1):* is for creating a solid foundation for stable operations as a research center, and to focus on preparation of infrastructure of the Center, such as organization, management system & procedures, basic equipment and facility, capacity building of human resources etc. As for activities, in order to achieve the maximum results in this five-years, the resources of the Center as well as inputs from the government shall be concentrated into the most important areas and subjects inside Uzbekistan, which shall be identified in "Target Complex Science and Technology Program" approved by Cabinet of Ministers (ref: President Decree(PP) Article 8). Inception of new function of business incubation and social interaction are also prioritized activities in this period.
During the first five-years, technical assistance from Japanese government, universities, research institutes and other technology promotion organization is essential. The JICA-Project (Strengthening capacity of research activities of UJICY) is the key project of such technical assistance from Japan, therefore, integration between this Strategic Plan and the JICA-Project will be essential task for the management of the Center.

(2) *The second five-years (RM-2)*: is for expansion and diversification of activities of the Center for further growth. Based on solid foundation of the Center, all

activities shall be expanded from “domestic” to “regional” or “international”, and from “basic” to “advanced” or “applied”. Scientific collaboration with international organizations and business incubation and technology transfer to real industry are vitalized further. At the same time, however, qualities of activities shall be also seriously persuaded in this period.

Each target mentioned in the above two is to be the targets of each Mid-Term Strategic Plan, and the details are to be specified in Chapter-II.

**“UJICY’s MID-TERM TARGETS”**

**RM-1: First 5-Years (2020-2024)**

**“SOLID FOUNDATION FOR STABLE OPERATIONS”**

- *Preparation of infrastructure as research & innovation center, such as functionable organization, management system & procedures, basic equipment & facility, capacity building of human resources for scientific research, innovative activities and business incubation.*
- *Concentration of resources to domestic activities with using support and network with Japanese counterparts.*
- *Integration with JICA-Project (2019-2024) for capacity building.*

**RM-2: Second 5-Years (2025-2029)**

**“EXPANSION & DIVERSIFICATION FOR FURTHER GROWTH”**

- *Expansion and diversification of its activities to more needed area of industries.*
- *Stretching its network wider in various areas, as a hub of innovative researches, by issuing high-impact technical reports constantly, hosting international conference, and fostering collaborative relations with enterprises through their R&D projects.*
- *Paving the way for the next generations by creating mechanism for transferring the knowledge and wisdom to the young.*
- *Promotion of young leadership in scientific researches, industrial applications of technologies and creation of markets with Innovative Mind.*

## 6. Activities

Under Vison and Targets determined in the previous sections, Activities of the Center shall be identified for achieving Targets. Fig-6 below is showing key activity items under each 5 objectives. Each activity shall be broken down into lower and implementation levels "works" to be done under the responsibility of assigned personnel or team. The implementation timetable, assignment of responsible person and estimation of necessary input shall be designed based on this works in Mid-term Strategy Plan (Chapter-II).

Figure-6: Activities and Executing Timing (High Level)

| Ref | Work Item | Execution Timing |
|---|---|---|
| **1.** | **Advanced Scientific Research** | |
| 1.1 | Establishment of Research Plan:<br>- to identify vital areas of research in conformity with national needs and requirements. It shall be reviewed at 2024. | 2020, 2024 |
| 1.2 | Arrangement of Research Infrastructures:<br>- to select basic equipment, procure and install them<br>- to recruit necessary humans resources for the Center | 2020 |
| 1.3 | Capacity Building for Research Human Resources:<br>- to dispatch selected researchers/students to long-term/short-term training programs conducted by Japanese universities<br>- to invite Japanese scientist for lecture, seminar and workshop for domestic scientists and students | 2020-2024/<br>2025-2029 |
| 1.4 | Execution of (Joint) Research Projects:<br>- to conduct research projects awarded from MID as well as joint research projects with Japanese Universities<br>- to conduct commercial base researches and joint R/D with domestic enterprises | 2020-2024/<br>2025-2029 |
| 1.5 | Exploring Relations with Japanese Universities and Scientific Institutes:<br>- to conclude research cooperation MOU with Japanese universities and institutions various areas through JICA's technical assistance program. | 2020-2024 |
| 1.6 | Exchange of Scientific and Technological Personnel:<br>- to strengthen academic connections with domestic and international, especially Japanese, universities through, exchange of personnel, joint research and other interactive activities. | 2020-2024/<br>2025-2029 |
| 1.7 | Update and Upgrade Equipment:<br>- to upgrade equipment of the Center for applied research and more sophisticated purposes. | 2024(4Q)-2026 |

| | | |
|---|---|---|
| 1.8 | Promote Tie-up with International Scientific Institutes:<br>- to establish more close relations with International universities and institutes by concluding MOU for comprehensive cooperation | 2025-2029 |
| 1.9 | Evaluation & Feedback:<br>- to make periodical monitoring of performance and evaluation, then enable timely feedback and remediation | 2024(4Q) and 2029(4Q) |
| **2.** | **Technology Transfer & Application to Industries** | |
| 2.1 | Establishment of Relations with Domestic Enterprises:<br>- to discus on area of cooperation and conclude NDA or MOU<br>- to form joint working team (or task force) | 2020 |
| 2.2 | Sharing Information and Exchange of Personnel:<br>- to exchange necessary information<br>- to exchange personnel of each party | 2020(4Q)-2024/ 2025-2029 |
| 2.3 | Execution of Contract-base Research Projects:<br>- to conclude research contracts with enterprises and execute commercial research | 2020(4Q)-2024/ 2025-2029 |
| 2.4 | Execution of Joint R&D Projects:<br>- to initiate discuss on area of joint R&D with enterprises, conclude NDA or MOU, form research team and conduct R&D | 2024-2029 |
| 2.5 | Evaluation & Feedback:<br>- to make periodical monitoring of performance and evaluation, then enable timely feedback and remediation | 2024(4Q) and 2029(4Q) |
| **3.** | **Innovative Business Incubation** | |
| 3.1 | Planning of Start-up Program Operation:<br>- to plan basic operational concept and seek collaboration with existing Start-up Program | 2020 |
| 3.2 | Set-up Business Incubation/Start-Up Infrastructure:<br>- to prepare facility for Start-up Program (if necessary)<br>- to employ necessary staff | 2020 |
| 3.3 | Establishment of Rules & Regulations for Start-up Services<br>- to draft up rules & regulations and get approval | 2020 |
| 3.4 | Capacity Building for Business Start-Up Specialists:<br>- to conduct initial training for new staff<br>- to conduct capacity maintenance training | 2020(2Q)-2024/ 2025-2029 |
| 3.5 | Execution of Start-up Activities:<br>- to announce to the public, make screening of applicant<br>- to provide services and consultation<br>- to evaluate the Start-up incubators<br>- to create link with other international incubation centers | 2020(4Q)-2024/ 2025-2029 |
| 3.6 | Expansion Phase of incubation activities:<br>- to open branches of Start-up center in the country | 2025-2029 |
| 3.7 | Collaboration with Techno Park & Innovation Center:<br>- to inspect existing techno park/innovation center | 2021-2029 |

| | | |
|---|---|---|
| | - to conduct feasibility study<br>- to prepare action plan and approval<br>- to initiate techno park project (out of this Project) | |
| 3.8 | Evaluation & Feedback:<br>to make periodical monitoring of performance and evaluation, then enable timely feedback and remediation | 2024(4Q) and 2029(4Q) |
| **4.** | **Education** | |
| 4.1 | Master Course and Retraining Course for Scientist:<br>- to conduct feasibility study<br>- to create curriculum<br>- to recruit professors and staff and collect students<br>- to execute curriculum | 2023-2029 |
| 4.2 | Innovative Education at School:<br>- to conduct research at school<br>- to design curriculum<br>- to execute pilot class<br>- to training teacher and approval from Ministry<br>- to start curriculum at school | 2022-2029 |
| 4.3 | Evaluation & Feedback:<br>to make periodical monitoring of performance and evaluation, then enable timely feedback and remediation | 2024(4Q) and 2029(4Q) |
| **5.** | **Social Interaction and Awareness** | |
| 5.1 | Planning of Social Interaction and Awareness:<br>- to make action plan | 2020 |
| 5.2 | Awareness Program:<br>- to plan public awareness<br>to execute program | 2021-2024/ 2025-2029 |
| 5.3 | Seminars:<br>- to plan seminar schedule annually<br>- to appoint lecturers<br>- to execute seminars | 2020(4Q)-2024/ 2025-2029 |
| 5.4 | Conference:<br>- to plan and preparation of conference<br>- to execute | 2021-2024/ 2025-2029 |
| 5.5 | Innovation Events:<br>- to plan events<br>- to preparation and find sponsors<br>- to conduct publication and execution of event | 2020(4Q)-2024/2025-2029 |
| 5.6 | Evaluation & Feedback:<br>to make periodical monitoring of performance and evaluation, then enable timely feedback and remediation | 2024(4Q) and 2029(4Q) |

The breakdown of activities is called “Work Breakdown Structure (WBS)” and it is very popular project management tool. The level (depth) of breakdown will be depending on how much tasks are involved and the deepest breakdown of activities is the same as a work to be assign in a person or a team and correspond to a single result (deliverable).

# 7. Input of Resources

In order to implement the Activities mentioned in the above section smoothly and effectively, timely planned input of resources is essential. The Resources are represented by “Finance”, “Human Resources” and “Material”.

## 7.1 Finance

Article-5 and Article-11 of the Original Presidential Decree No. PP-2602 stipulated the sources of financing of the operation of the Center are:

1) *the funds of the State Budget of the Republic of Uzbekistan for the current maintenance, related to maintenance of the Center and execution of the tasks assigned from 2017,*
2) *grants on the results of the competitions, conducted by the Committee on Coordination of the Development of the Science and Technology under the Cabinet and MHSSE,*
3) *proceeds from the economic activity and conducting the researches on the contractual basis,*
4) *grants of the International Financial and other organizations, foreign governmental organizations, other sources, not prohibited by the legislation;*

The government also allocated funds for conducting the reconstruction of the building of the Center with additional construction of the new laboratory building, and equipping them with the necessary furniture, office equipment and inventory (Article-9).

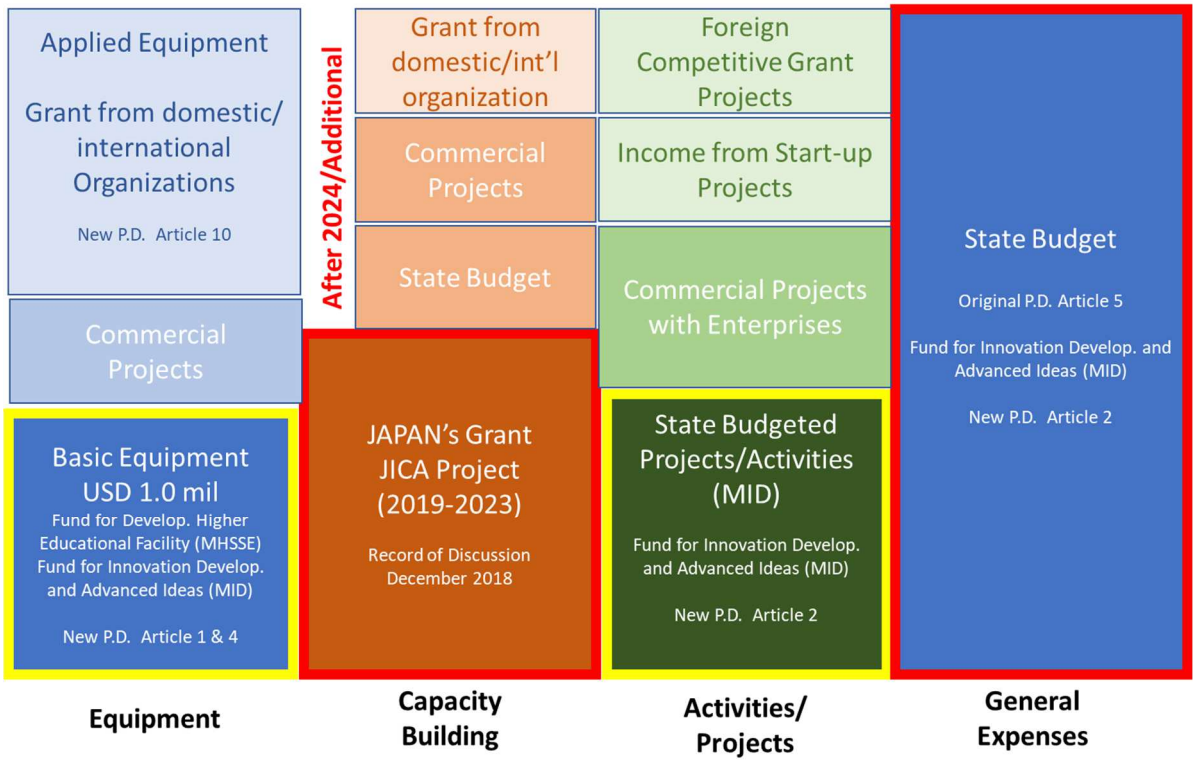
The New Decree, in addition to the above, stipulated sources of fund more specifically as follows:

5) Article-1: *funds of the* ***Foundation for development of higher educational facilities*** *of the MHSSE and* ***extra budgetary funds*** *of the TSUT for procurement of scientific equipment and inventory for the needs of the Center and implementation of innovation projects utilizing;*
6) Article-2: *funds of* ***Foundation of innovation development and advanced ideas*** *under the Ministry of Innovative Development (herein after referred to as “MID”) for fundamental, practical and innovation projects of the Center*

7) Article-4: *USD 500 thousand each from* ***Foundation for development of higher educational facilities*** *of the MHSSE and* ***Foundation of innovation development and advanced ideas*** *under the MID for expenses related to procurement and installment of the equipment, raw materials, component and spare parts for the Center;*

8) In addition to the above fund allocation by Uzbekistan side, Japanese JICA is funding the expenses of the JICA Project for capacity building of the Center for 5 years since 2019.

Figure-8 Financial Input Prospect (defined in Presidential Decrees)




As shown in the above Figure-8, currently, general expenses and program cost for capacity building of researchers are covered by state budget and grant through JICA Project (indicated with red-colored border), and cost for procurement of basic experimental equipment as well as expenses for innovative activities will be covered by MID and MHSSE as stated in the new Presidential Degree (indicated by yellow-colored border). However, other financial sources are yet guaranteed, therefore, Board of Trustees shall put a priority on this issue always for securing stable financial input to the Center.

## 7.2 Human Resources

In accordance with Appendix 1 of new Presidential Decree, "Organization Structure", the Center can hire up to 35 staff, including researchers, experts

and office staff. Director of the Center is eligible for attracting additional scientific staff in order to conduct scientific and research and development works at the expense of extra budgetary funds of the Center. This human resource will be allocated to research projects, start-up program and other tasks to be accomplished under the Vision of the Center. Human Resource Allocation Plan will be the part of Mid-Term Strategic Plan (Road Map) discussed in Chapter-II.

### 7.3 Material

The new Presidential Decree, in Article-4, has approved to procure long-waited basic experimental equipment with using funds of MHSSE and MID. The timely supply of equipment and material is essential for conducting activities at the Center as scheduled and achieving its target or realizing the Vision. Project Manager or Director of the Center shall always concern the material balance in accordance with the progress of each research and innovative activities.

## 8. High Level Work Breakdown and Time Table for Long-Term

Taking the information regarding activities (Section-6) and input of resources (Section-7) into account, a time table of high-level for the coming 10 years is drawn as shown in APPENDIX-2. Since this time table is high-level and intentionally being away from details, it shows the order of execution and priority of each action in order to provide ministries concerned as well as Board of Trustees with general over-viewed ideas of the long-term strategy and implementation. This high-level time table shall be broken down into more detailed time table in Med-Term Strategic Plan to be elaborated in Chapter II.

# CHAPTER-II

## MID-TERM STRATEGIC PLAN

# **CHAPTER-II:** Mid-term Strategic Plan

## 1. Outline of Mid-term Strategic Plan

For realistic implementation and identification of practical actions for materializing the Vision of the Center, which was defined in the previous Chapter in conformity with the directions shown in the two Presidential Decrees regarding the Center (No. PP-2602 of 2016 and No. PP-4550 of 2019), SPSD-UJICY consists of two Mid-term Strategic Plans, the one of which covers years from 2020 to 2024, and the other covers years from 2025 to 2029, as shown in Figire-9.

Figure-9: Structure of SPSD-UJICY




The both Mid-term Strategic Plans have individual Targets as specified in Section-5 of Chapter-I (Book-1), and in order to achieve them, more specific works, timeline, required input (resources) and correlation between each works shall be described, therefore, Mid-term Strategic Plan has function as an "Action Plan" for the targeted 5-years as well as a "Road Map" for achieving the specified target.

Since in the Republic of Uzbekistan the term of "Road Map" is used more frequently rather than "Mid-term Strategic Plan", hereafter in this Chapter, the term of **"Road Map"** is used instead of Mid-term Strategic Plan, and the Road Map for the year of 2020-2024 shall be referred to as "**Road Map-1"** or "**RM-1**" as abbreviation, likewise **"Road Map-2"** or **"RM-2"** for the year 2025-2029.

# 2. Road Map -1 (RM-1) for 2020-2024

## 2.1 Summary of RM-1

Road Map-1 is an Action Plan for "creating Solid Foundation for Stable Operations" *(Section-5 of Chapter-I)* in order to achieving Vision of UJICY described in Long-term Strategic Plan *(Section 3 of Chapter-I)* in the five (5) main objectives defined in the Presidential Decrees *(Preface, Book-I)*. Since RM-1 is the start points of Lon-term Strategic Plan, it includes relatively essential common managemental tasks, such as planning, arrangement of infrastructures and human resources, establishment of rules & regulations, are included.

## 2.2 Outputs from RM-1 and Verification of Achievement

As practical targets of RM-1, the outputs shown in Figure-10 shall be accomplished by the end of 2024.

Figure-10: Outputs and Verification Measures of RM-1 (2020-2024)

| OBJECTIVES | OUTPUTS | Verification Measures |
|---|---|---|
| 1. Advanced Scientific Research | 1-1 Research Directions on the vital areas and subjects in Industry is identified;<br>1-2 Research infrastructure (basic equipment, human resources etc) is arranged;<br>1-3 Capacity building for researchers is executed;<br>1-4 Research projects with Japanese university is planned and conducted;<br>1-5 Relations with international universities and research institutes are strengthened;<br>1-6 Exchange of Scientific and technological personnel is activated;<br>1-7 Future upgrade of equipment is planned. | 1-1 Approval of research plan at Board of Trustees (BoT);<br>1-2 Completion of planned procurement and recruitment;<br>1-3 No of trained researchers;<br>1-4 No of joint research projects conducted with Japan;<br>1-5 No of collaborative MOU with universities and institutes;<br>1-6 No of researchers/ students exchanged;<br>1-7 Proposal of advanced equipment. |
| 2. Technology Transfer & Application to Industries | 2-1 Flamework of collaboration with enterprises is established;<br>2-2 Sharing information and exchange of human resources between the Center and enterprises is activated; | 2-1 MOU with enterprises;<br>2-2 No of exchanged staff and kind of information shared; |

| | | |
|---|---|---|
| | 2-3 Joint research activities with enterprises at Contract base are conducted;<br>2-4 Scheme of joint R&D projects with enterprises are proposed. | 2-3 No of research contracts;<br>2-4 Joint proposal on R&D with enterprises |
| 3. Innovative Business Incubation | 3-1 Plan for start-up activities are established;<br>3-2 Infrastructure (facility and human resources) for start-up activities is arranged;<br>3-3 Rules & regulations for start-up services are established;<br>3-4 Capacity building for start-up activities staff is conducted;<br>3-5 Start-up activities with collaboration with other research centers are implemented;<br>3-6 Linkage with Japanese incubation centers or entrepreneurs are promoted for know-how transfer;<br>3-7 Study on development of relations with techno park and other innovation center is conducted. | 3-1 Approval of plan at BoT;<br>3-2 Completion of facility set-up and recruitment;<br>3-3 Approval of rules & regulation at BoT;<br>3-4 No of staff trained;<br>3-5 No of participants to Start-up activities;<br>3-6 No of know-how sharing activities with Japan;<br>3-7 Approval on study at BoT. |
| 4. Education for Innovation | 4-1 Feasibility study for master course and retraining program is conducted;<br>4-2 Pilot test of innovation curriculum at school is conducted. | 4-1 Approval on study at BoT;<br>4-2 No of pilot schools and students |
| 1. Awareness and Social Interaction | 5-1 Plan for social interaction and awareness is established;<br>5-2 Awareness programs are conducted;<br>5-3 Seminars inviting Japanese experts is held;<br>5-4 Conference is planned and executed;<br>5-5 Events for innovation and technology are held. | 5-1 Approval on the plan at BoT;<br>5-2 No of programs executed;<br>5-3 No of seminars held;<br>5-4 No of conference held and participants;<br>5-5 No of events and participants. |
| 0. Common Management | 0-1 Long-term and mid-term strategic plan is established;<br>0-2 Management system and procedures are established;<br>0-3 Capacity building for staff of the Center is conducted; | 0-1 Approval of Strategic Plan at BoT;<br>0-2 Approval of procedures at BoT;<br>0-3 No of staff trained; |

| | | |
|---|---|---|
| | 0-4 Progress of the RM-1 is monitored, evaluated, feedbacked and reported. | 0-4 Approval on Annual Reports at BoT. |

It is essential to measure the progress and achievement of Outputs under the objectively verifiable criteria on each Output. If exact target number can be set on the criteria; i.e. "10 joint project conducted", "5 researchers studied in Japanese universities", the achievement will be assessed more quantitatively. The criteria are shown in the right column of the above Figure-10.

## 2.3 Road Map-1

### *2.3.1 Work Breakdown and Implementation Time Table*

The detailed work breakdown and implementation time table to achieve Outputs of PM-1 is attached in APPENDIX-3

### *2.3.2 Important Assumptions*

Important assumptions for implement RM-1 and achieving its target is:

(1) the government policy of Uzbekistan on UJICY will not be changed and not diversify from the concept of Presidential Decrees regarding the Center;

(2) The government of Uzbekistan shall continue input of necessary resources, such as manpower, financial arrangement and consideration on smooth implementation of activities;

If the above assumptions may be altered, implementation of RM-1 will be difficult or impossible without major modification on its timeline, work items as well as allocation of resources.

## 2.4 Human Resources Allocation Plan

Human resources, manpower, is one of the most critical input factor for achieving punctual implementation of tasks under RM-1 as well as RM-2.

### *2.4.1 Organization*

The organization of the Center is defined in the apprendix-1 of Presidential Decree No.PP-4550 dated December 13, 2019, however to execution of activities in accordance with RM-1, it will be necessary to re-organize the structure of the Center and create new divisions

(departments) and to assign necessary staff there. The following figure-11 is the list of departments and corresponding objectives of the Center;

Figure-11: List of department of the Center and its function

| Department / Laboratories | Objectives in Charge | No. Staff |
|---|---|---|
| **1. Management / Administration** | | **9** |
| Director | Management | 1 |
| Accounting | 0.Common Management | 2 |
| Administration **(New)** | | 1 |
| Security **(New)** | | 1 |
| Human Resource | | 1 |
| Legal | | 1 |
| Technical Expert | | 2 |
| **2. Science Activities and Companies & enterprises Cooperation** | | **16** |
| Deputy Director In-Charge | Management | 1 |
| Mechanical Engineering & Material Lab | 1. Advanced Scientific Researches<br>2. Technology Transfer and Application to Industry | 3 |
| Mining and Mineral Resources Lab | | 3 |
| Power Engineering Lab | | 3 |
| Chemistry and Petrochemical Lab | | 3 |
| Technical Management | | 3 |
| **3. Commercialization of Science Development** | | **8** |
| Deputy Director In-Charge | Management | 1 |
| Commercialization | 2. Technology Transfer and Application to Industry | 3 |
| Technology Transfer & Marketing | | 2 |
| Innovative Business Incubation for Students of Higher Education Institutions | 3. Innovative Business Incubations | 2 |
| **4.Education and Social Interactions (NEW)** | | **4** |
| Deputy Director in Charge | Management | vacant |
| Education & Re-Training of Scientist **(New)** (from 2011) | 4. Education for Innovation | 2 |
| Public and International Relations **(New)** (from 2020) | 5. Social Interactions and Awareness | 3 |

As indicated with "(New)" in the above list, the following functions (Departments or sections) seems to be essential:

1) Administration Officer: to coordinate administration works in the Center in general such as control of correspondence, arrangement of procurement of supply, consumables, stationery etc., maintaining

communication and internet facility and contract of house keepers. The technical expert shall belong to Administration Officer.

2) Security Officer: to control security of the Center, especially in/out of personnel, to maintain security system and to secure the intellectual properties in the Center from illegal access from outside. In addition to the above, Security Officer shall be responsible for prevention of accidents in the labs and injury of the staff. Presidential Decree requires the Center to achieve security of the international standards.
3) Education and Re-Training Specialist: to plan, arrange and implement educational activities specified in the Presidential Decree, such as conducting master course and re-training of high qualified scientists. Education Specialists are responsible of the entire activities categorized under the objective of "4. Education for Innovation". Since the timing of start of the activities related to this objective, the actual assignment of specialists shall be in 2021 or later.
4) Public and International Relations Officer: to plan, arrange and implement any activities related to social and international relations and activities, such as innovation awareness program and events, holding seminar with Japanese universities and institutes, holding or participating conferences. The Public Relations Officer is also responsible any publication of articles and news to media.

(Recommendation)
The above 3) Education Specialists and 4) Public Relations Officers shall be managed under a new department of "Education and Social Interactions", and for the time being until the activities are on track, Deputy Director in Charge of this Department is vacant and Director of the Center shall control directly.

### 2.4.2 Job Descriptions of Each Position

Job description of each key position (only research function) has been defined in the current Code of the Center. However, due to change of the organization structure by the new Decree, description on new position shall be added. Sample form of Job Descriptions is attached as APPENDIX-5, and the Human Resource Department of the Center shall prepare the Job Description for each of its employee. Job Description shall be used for recruitment of new staff and researcher.

### 2.4.3 Manpower Allocation

The staff and scientist of the Center shall be allocated to each work defined in work breakdown in 2.3.1 in accordance with the required man-month to achieve the work.

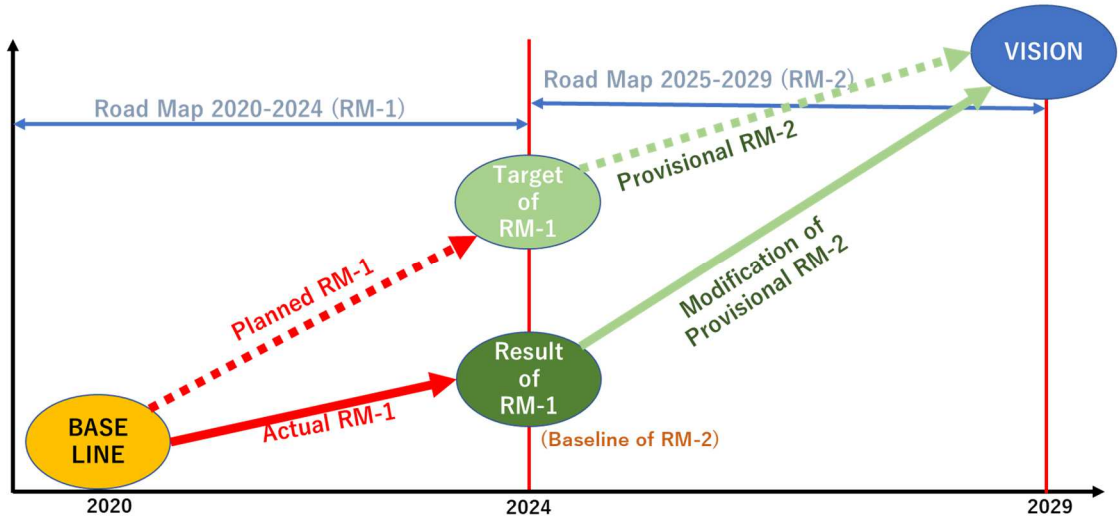
The allocation plan of supervisor level is attached as APPENDIX-4. As soon as the completion of recruitment of necessary staff, this plan shall be modified in lower level – each in-charge level.

## 2.5 Transition from RM-1 to RM-2

At the last year of RM-1, 2024, the performance of all activities and achievement of Outputs of RM-1 shall be evaluated in accordance with indexes shown in Verification Measures in Figure-10 above.

The provisional Road Map for 2025-2029 (RM-2) shall be modified as more practical one in accordance with the results of above evaluation. Some additional Outputs may be added or some provisionally planned Outputs may be cancelled. However, the Vision of the Center shall not be changed unless any changes in 2.3.2 Important Assumptions. Schematic plan of the transition from RM-1 to RM-2 are described in Figure-12.

Figure-12: Transition from RM-1 to RM-2



# 3. Provisional Road Map for 2025-2029 (RM-2)

## 3.1 Summary of RM-2

Road Map-2 is an Action Plan for "expansion and diversification of activities of the Center" *(Section-5 of Chapter-I)* in order to achieving Vision of UJICY described in Long-term Strategic Plan *(Section 3 of Chapter-I).*

Based on solid foundation of the Center achieved through RM-1, all activities shall be expanded from "domestic" to "regional" or "international", and from "basic" to "advanced" or "applied". Not only the growth of size and area, increase of quality and reliability of technologies shall be also essential target in this period.

## 3.2 Provisional Outputs from RM-2 and Verification of Achievement

As practical targets of RM-2, the provisional outputs are shown in Figure-13. These Outputs shall be reviewed and reconstructed at the end of 2024 together with Timetable of implementation.

Figure-13: Outputs and Verification Measures of RM-2 (2025-2029)

| OBJECTIVES | OUTPUTS | Verification Measures |
|---|---|---|
| 1. Advanced Scientific Research | 1-1 Capacity building for researchers is executed;<br>1-2 Research projects with Japanese and international universities are planned and conducted;<br>1-3 Relations with international universities and research institutes are strengthened;<br>1-4 Exchange of Scientific and technological personnel is activated;<br>1-5 Upgrade and modification of equipment are executed. | 1-1 No of trained researchers;<br>1-2 No of joint research projects conducted with Japanese and other foreign institutes;<br>1-3 No of collaborative MOU with universities and institutes;<br>1-4 No of researchers/ students exchanged;<br>1-5 Procurement List of advanced equipment. |
| 2. Technology Transfer & Application to Industries | 2-1 Sharing information and exchange of human resources between the Center and enterprises is activated;<br>2-2 Joint research activities with enterprises at Contract base are conducted; | 2-1 No of exchanged staff and kind of information shared;<br>2-2 No of research contracts; |

| | | |
|---|---|---|
| | 2-3 Joint R&D projects with enterprises are conducted. | 2-3 No of Joint R&D with enterprises |
| 3. Innovative Business Incubation | 3-1 Capacity building for start-up activities staff is conducted;<br>3-2 Start-up activities are conducted;<br>3-3 Branches of start-up center are established throughout the nation<br>3-4 Linkage with International incubation centers or entrepreneurs are promoted for know-how transfer;<br>3-5 Initiation of relations with techno park and other innovation center is conducted. | 3-1 No of staff trained;<br>3-2 No of participants to Start-up activities;<br>3-3 No of branches and participants;<br>3-4 No of know-how sharing activities internationally;<br>3-5 No of MOU with Techno Park/Innovation Centers. |
| 4. Education for Innovation | 4-1 Master course and retraining program is conducted;<br>4-2 Innovation curriculum at school is conducted. | 4-1 No of students;<br>4-2 No of schools and students |
| 5. Awareness and Social Interaction | 5-1 Awareness programs are conducted;<br>5-2 Seminars inviting Japanese experts are conducted;<br>5-3 Scientific conferences are conducted;<br>5-4 Events for innovation and technology are conducted. | 5-1 No of programs executed;<br>5-2 No of seminars held;<br>5-3 No of conference held and participants;<br>5-4 No of events and participants. |
| 0. Common Management | 0-1 Capacity building for staff of the Center is conducted;<br>0-2 Progress of the RM-2 is monitored, evaluated, feedbacked and reported.<br>0-3 ISO certificate is acquired.<br>0-4 Grants from International organizations are promoted. | 0-1 No of staff trained;<br>0-2 Approval on Annual Reports at BoT.<br>0-3 ISO Centrificate<br>0-4 Amount of Grants |

## 3.3 Work Breakdown and Implementation Time Table

High-level Provisional Work Breakdown and Time Table for RM-2 are described in APPENDIX-2. More detailed (Low-level) Work Breakdown and Time Table shall be prepared at the last year of RM-1 (2024) with taking the performance and achievement of RM-1 into account.

## APPENDIX-1 BASELINE

### A. INTERNAL FACTOR

| Baseline Item | | Value / Situations |
|---|---|---|
| ***A. Infrastructure*** | | |
| | 1. Venue of Center: | Located at the building of Tashkent State University of Technology. 1st and 2nd floors are operational, the 3rd floors and above are still under construction. |
| | 2. Equipment: | Poor equipped. USD 10,000 (UZS 94 million) of equipment was procured through project of Ministry of Innovative Development (MID) and acquired USD 14,000 equipment from Italian scientific foundation. |
| | 3. Furniture: | Equipped only office furniture and PCs, but not as research facility |
| ***B. Manpower*** | | |
| | 1. No. of Staff allowed by the Decree: | 23 |
| | 2. No. of Current Staff<br>1) Permanent Employees:<br>2) Part-time Employees: | <br>13<br>12 |
| | 3. No. of Researchers: | 18. (PhD/DSc: 7, Master: 2) |
| ***C. Activities*** | | |
| | 1. No. of Research Project:<br>a) Cumulative<br>b) In 2019 | |
| | 2. No. of Scientific Papers:<br>a) Cumulative<br>b) In 2019 | |
| | 3. Joint Activities with Japan<br>a) Joint Research in 2019<br>b) Seminar by Japanese scholars<br>c) Receiving Resident Expert | <br>0<br>4 seminars in 2019<br>1 from August 2019 |
| ***D. Capacity Building*** | | |
| | Capacity Building (with JICA)<br>1. Study Visits to Japan since inception:<br>2. Long-term Training in Japan | <br><br><br>6 persons (2 Ph.D, 4 Master) in 2019 |

B. EXTERNAL FACTORS:

**Government Policy:**

In February 2017, the Government of Uzbekistan published "Strategy of Actions in Five Priority Areas for the Development of Uzbekistan, 2017-2021" (the 'Development Strategy') for 2017-2021, which aims to opening and transformation of the country's system. The five areas in the Development Strategy are;

1) Improving the democratic governmental system
2) Reforming judicial system
3) Economic development and liberalization
4) Development of society
5) Stabilization of security and foreign policy

"The reform process has begun from a low base but progress has been significant. Change has been particularly marked in areas such as the rule of law and judicial independence. There has also been considerable progress in making the government administration more transparent and accountable. While the Uzbek authorities have demonstrated a strong commitment to reform, further steps in strengthening democratic institutions, in expanding the space in which civil society can operate"

*(Source: European Bank for Reconstruction & Development: EBRD "Uzbekistan Country Strategy 2018-2023" in 2018)*

**Demography:**

Population: 32.96 Million (2018)
Population Increase Ratio: 1.7%
Population Structure:

SOURCE: WORD BANK

**Economy (2018):**

GDP: 50.50 billion USD
- Agriculture: 29% (of GDP)
- Industries: 28% (of GDP)
- Export of Service & Goods: 29% (of GDP)
- Import of Service & Goods: 39% (of GDP)

GDP Growth: 5.1 % * 5.5% (EBRD 2019 FORECAST)

GDI (Atlas Method): 66.51 billion USD

GDI per Capita: 2,020 USD *(Souse: World Bank)*

Economic policy was reoriented to forge a competitive, market-led, private sector economy. Simultaneously, a series of social and political reforms have focused on reorienting the public sector to be responsive, citizen-centric, and centered on delivering high-quality public services for all citizens.

Commencing with an impressive series of measures to liberalize the foreign exchange market in 2017, the Government has enacted a series of structural reforms aimed at removing price controls, liberalizing the visa regime, easing trading restrictions and regulations to improve the business climate, and overhauling the tax system.

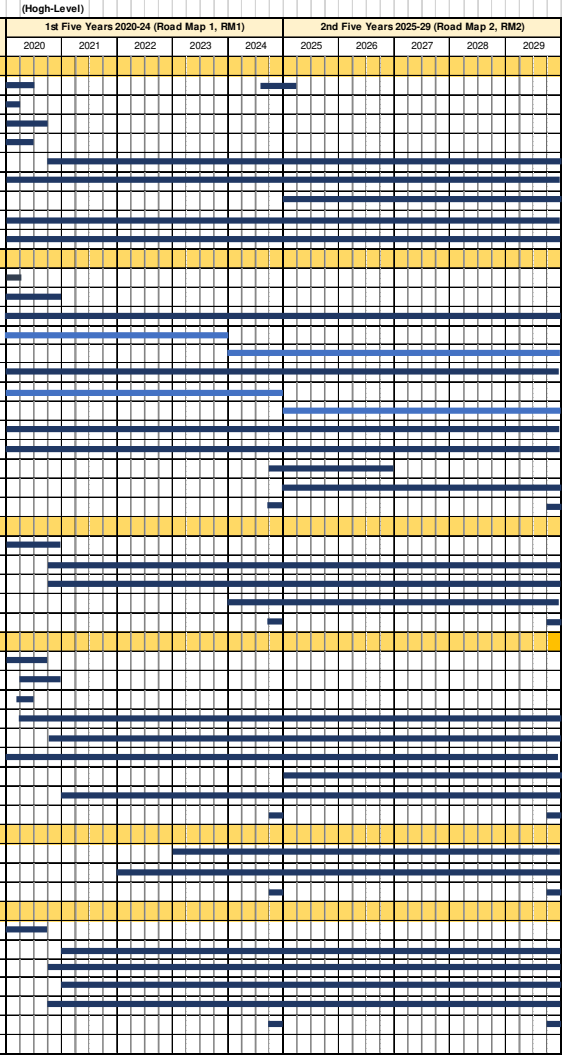
The Government's vision is to transform Uzbekistan into an industrialized, upper-middle-income country by 2030. Achieving this vision will require a sustained reform effort to further increase the efficiency of resource allocation in the

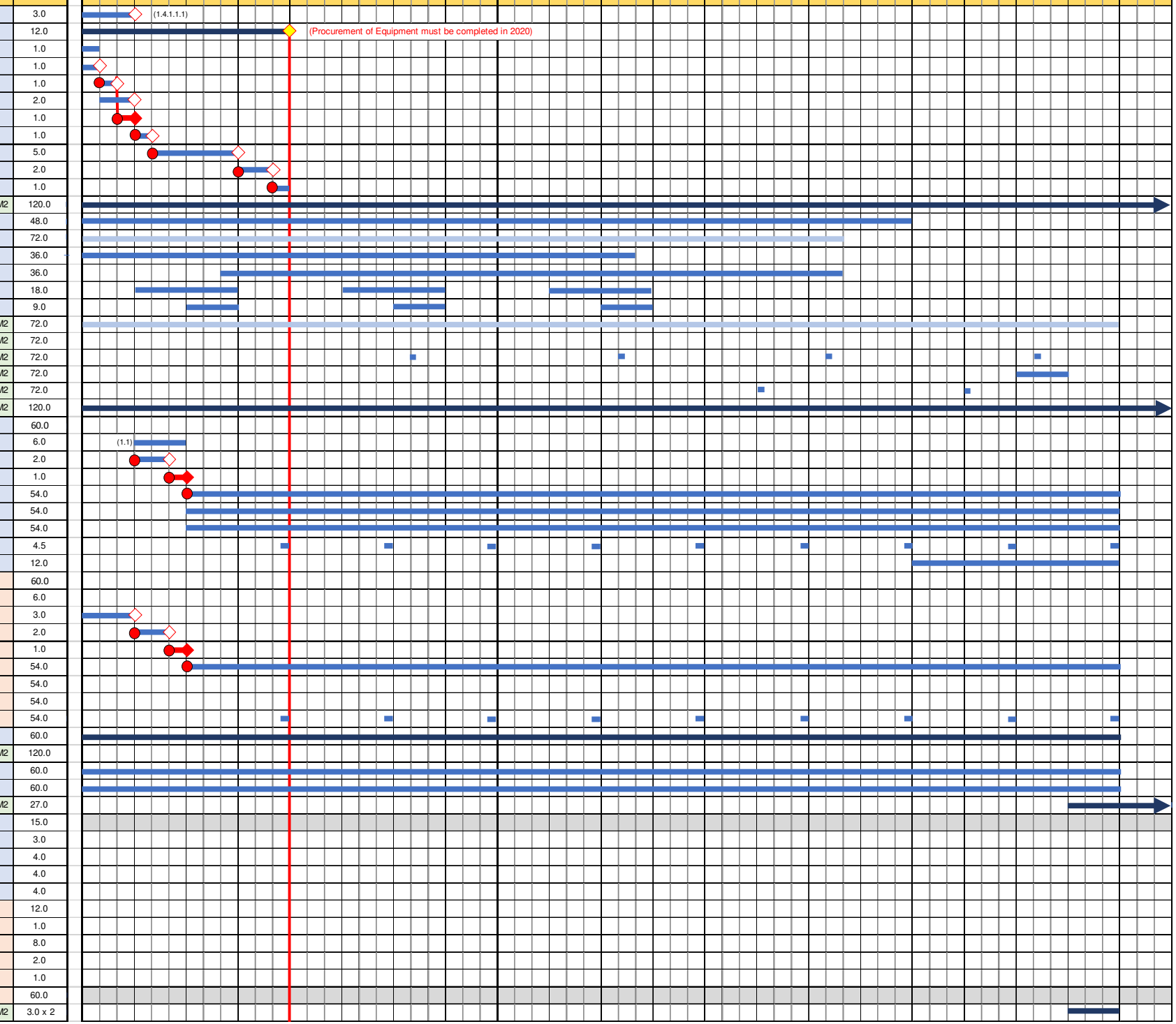
| |
|---|
| economy and take advantage of new, high-potential sources of economic growth and job creation.<br>In support of this vision, the Government has recently announced plans to modernize the agriculture sector, reduce its ownership of state-owned assets and enterprises, and address constraints in the financial markets.<br>*(Source: European Bank for Reconstruction & Development: EBRD "Uzbekistan Country Strategy 2018-2023" in 2018)* |
| **Education:**<br>Higher Education Enrollment: 10.08% (2018)<br>Male: 11.82% Female: 8.25%<br>*(Source: UNESCO Website)* |

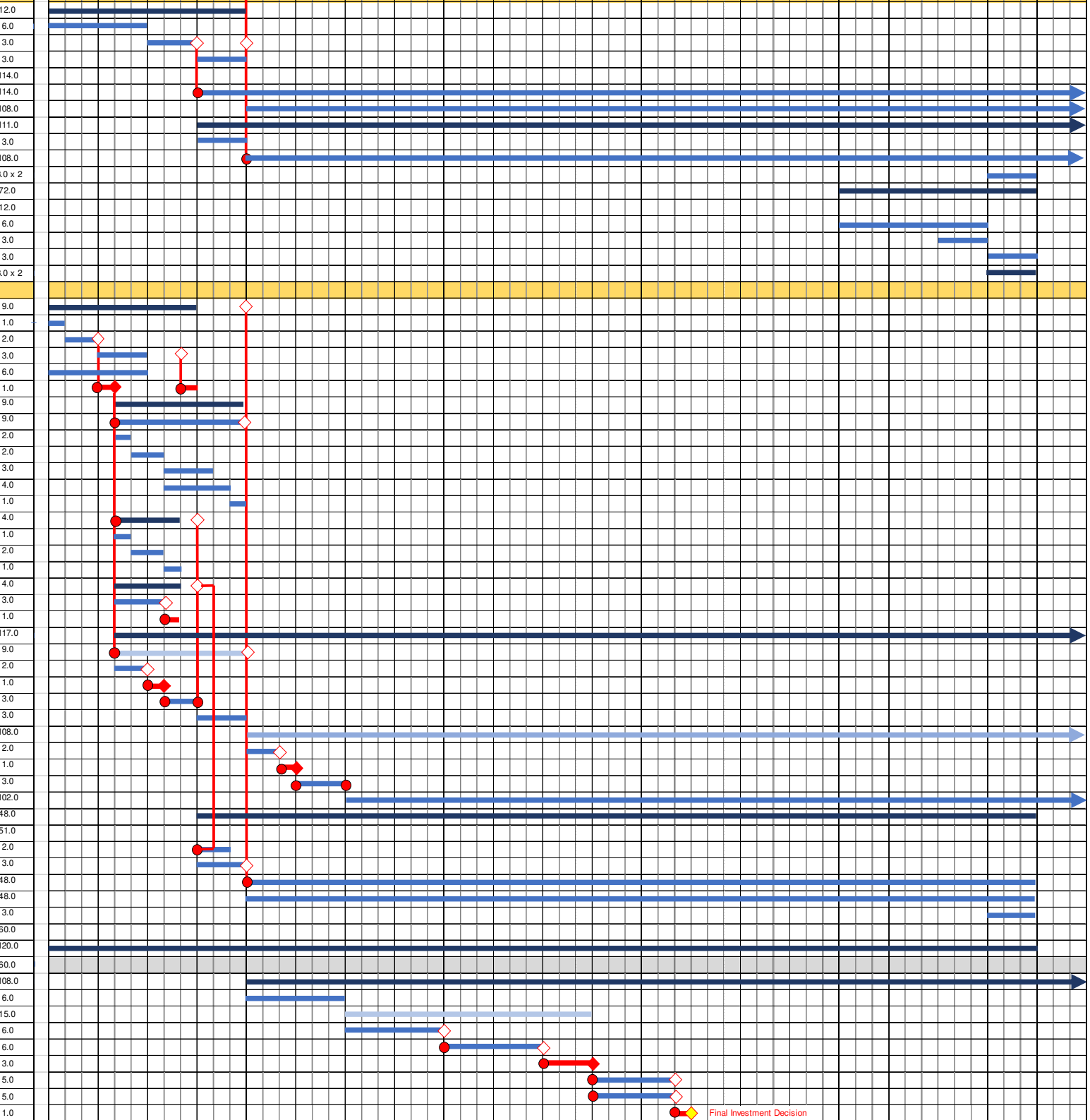
## APPENDIX-2: High-Level Work Breakdown and Time Table for Long-Term Strategic Plan

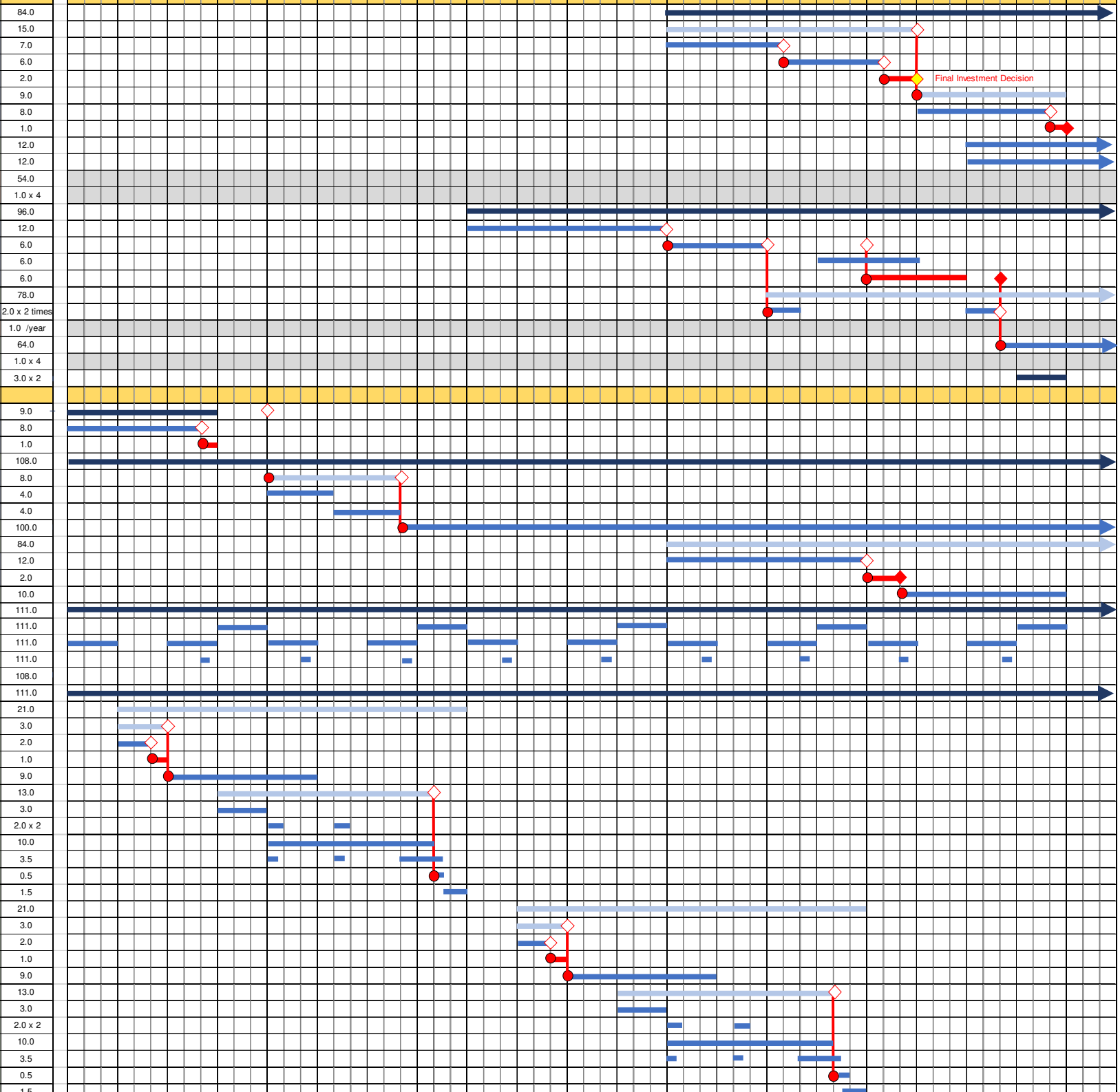
**Work Breakdown Structure** (Hogh-Level)

| Break Down Level & Work Description (0 1 2 3 4 5) | Execution Timing | Mid Term | Duration (Months) |
|---|---|---|---|
| **0. COMMON MANAGEMENT** | | | |
| 0.1 Establishment of Strategic Plan | 2020, 2024(3Q | RM1/ RM2 | 10.0 |
| 0.2 Establishment of Performance Evaluation Criteria | 2020 | RM1 | 3.0 |
| 0.3 Establishment of Management System and Procedure | 2020 | RM1 | 9.0 |
| 0.4 Reconstruction of Laboratories | 2020 | RM1 | 6.0 |
| 0.5 Capacity Building for Center Staff | 2020(4Q)-2029 | RM1/ RM2 | 111.0 |
| 0.6 Management & Follow-up | 2020-2029 | RM1/ RM2 | 120.0 |
| 0.7 Acquiring International Certificate (ISO) | 2025-2029 | RM1/ RM2 | 60.0 |
| 0.8 Promotion of International Relations | 2025-2029 | RM1/ RM2 | 120.0 |
| 0.9 Acquire grant project of International Funds & Organizations | 2020-2029 | RM1/ RM2 | 120.0 |
| **1. ADVANCED SCIENTIFIC RESEARCH** | | | |
| 1.1 Identification of Targeting Directions and Area of Research (Government Policy) | 2020(1Q) | RM1 | 3.0 |
| 1.2 Equipment Procurement | 2020 | RM1 | 12.0 |
| 1.3 Capacity Building for Research Human Resources | 2020-2029 | RM1/ RM2 | 120.0 |
| 1.3.1 Capacity Building under JICA Project | 2020-2023 | RM1 | 48.0 |
| 1.3.2 Capacity Building under Uzbekistan Initiative and budget | 2024-2029 | RM1/ RM2 | 72.0 |
| 1.4 Execution of (Joint) Research Projects | 2020-2029 | RM1/ RM2 | 120.0 |
| 1.4.1 Phase-1 (RM-1, 2020-2024) | 2020-2024 | RM1 | 60.0 |
| 1.4.2 Phase-2 (RM-2, 2025-2029) | 2025-2029 | RM2 | 60.0 |
| 1.5 Strengthening Relations with International/Domestic Universities, and Scientific Institutes | 2020-2024 | RM1/ RM2 | 120.0 |
| 1.6 Exchange of Scientific and Technological Personnel | 2020-2029 | RM1/ RM2 | 120.0 |
| 1.7 Update & Upgrade of Equipment | 2024(4Q)-2026 | RM1/ RM2 | 27.0 |
| 1.8 Promote Tie-up with International Research Institutes | 2025-2029 | RM2 | 60.0 |
| 1.9 Evaluation | 2024, 2029 | RM1/ RM2 | 3.0 x 2 |
| **2. TECHNOLOGY TRANSFER** | | | |
| 2.1 Establishment of Relations with Domestic Enterprises | 2020 | RM1 | 12.0 |
| 2.2 Sharing Information and Exchange of Human Resources | 2020(4Q)-2029 | RM1/ RM2 | 114.0 |
| 2.3 Execution of Contract-base Research Projects | 2020(4Q)-2029 | RM1/ RM2 | 111.0 |
| 2.4 Execution of Joint R&D Projects | 2024-2029 | RM1/ RM2 | 72.0 |
| 2.5 Evaluation | 2024, 2029 | RM1/ RM2 | 3.0 x 2 |
| **3. INNOVATIVE BUSINESS INCUBATION** | | | |
| 3.1 Planning of Start-up Activities | 2020 | RM1 | 9.0 |
| 3.2 Set-up Infrastracture for Start-up Activities | 2020 | RM1 | 9.0 |
| 3.3 Establishment of Rules & Regulations of Start-up Services | 2020 | RM1 | 4.0 |
| 3.4 Capacity Building for Staff of Start-up Activities | 2020(2Q)-2029 | RM1/ RM2 | 117.0 |
| 3.5 Execution of Start-up Activities | 2020(4Q)-2029 | RM1/ RM2 | 48.0 |
| 3.6 Create links with Japanese Incubation Centers or Entrepreneur | 2020-2029 | RM1/ RM2 | 120.0 |
| 3.7 Expansion Phase of Start-up Activities | 2025-2029 | RM2 | 60.0 |
| 3.8 Collaboration with Techno Park and Innovation Center | 2021-2029 | RM1/ RM2 | 108.0 |
| 3.9 Evaluation & Feedback | 2024, 2029 | RM1/ RM2 | 3.0 x 2 |
| **4. EDUCATION (to create new department for Educational Activities)** | | | |
| 4.1 Master Course and Retraining Course for Experts | 2023-2029 | RM1/ RM2 | 84.0 |
| 4.2 Innovative Education at Schools | 2022-2029 | RM1/ RM2 | 96.0 |
| 4.3 Evaluation & Feedback | 2024, 2029 | RM1/ RM2 | 3.0 x 2 |
| **5. SOCIAL INTERACTION AND AWARENESS (to create Public Relations Dept)** | | | |
| 5.1 Planning of Social Interaction | 2020 | RM1 | 9.0 |
| 5.2 Awareness Program | 2021-2029 | RM1/ RM2 | 108.0 |
| 5.3 Seminars | 2020(4Q)-2029 | RM1/ RM2 | 111.0 |
| 5.4 Conference | 2021-2029 | RM1/ RM2 | 108.0 |
| 5.5 Innovation Event (incl Innovation Contest) | 2020(4Q)-2029 | RM1/ RM2 | 111.0 |
| 5.6 Evaluation & Feedback | 2024, 2029 | RM1/ RM2 | 3.0 x 2 |




3.0
(1.4.1.1.1)
12.0
(Procurement of Equipment must be completed in 2020)
1.0
1.0
1.0
2.0
1.0
1.0
5.0
2.0
1.0
M2 120.0
48.0
72.0
36.0
36.0
18.0
9.0
M2 72.0
M2 72.0
M2 72.0
M2 72.0
M2 72.0
M2 120.0
60.0
6.0
(1.1)
2.0
1.0
54.0
54.0
54.0
4.5
12.0
60.0
6.0
3.0
2.0
1.0
54.0
54.0
54.0
54.0
60.0
M2 120.0
60.0
60.0
M2 27.0
15.0
3.0
4.0
4.0
4.0
12.0
1.0
8.0
2.0
1.0
60.0
M2 3.0 x 2


12.0
6.0
3.0
3.0
114.0
114.0
108.0
111.0
3.0
108.0
3.0 x 2
72.0
12.0
6.0
3.0
3.0
3.0 x 2
9.0
1.0
2.0
3.0
6.0
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9.0
9.0
2.0
2.0
3.0
4.0
1.0
4.0
1.0
2.0
1.0
4.0
3.0
1.0
117.0
9.0
2.0
1.0
3.0
3.0
108.0
2.0
1.0
3.0
102.0
48.0
51.0
2.0
3.0
48.0
48.0
3.0
60.0
120.0
60.0
108.0
6.0
15.0
6.0
6.0
3.0
5.0
5.0
1.0
Final Investment Decision


84.0
15.0
7.0
6.0
2.0
9.0
8.0
1.0
12.0
12.0
54.0
1.0 x 4
96.0
12.0
6.0
6.0
6.0
78.0
2.0 x 2 times
1.0 /year
64.0
1.0 x 4
3.0 x 2
9.0
8.0
1.0
108.0
8.0
4.0
4.0
100.0
84.0
12.0
2.0
10.0
111.0
111.0
111.0
111.0
108.0
111.0
21.0
3.0
2.0
1.0
9.0
13.0
3.0
2.0 x 2
10.0
3.5
0.5
1.5
21.0
3.0
2.0
1.0
9.0
13.0
3.0
2.0 x 2
10.0
3.5
0.5
Final Investment Decision

# APPENDIX-4: Manpower Allocation Plan

## (1) List of Staff (as of January 2020)

| CODE | Department / Position | Name | Acdemi | Sex | MD |
|---|---|---|---|---|---|
| **MG** | **Management** | | | | |
| DRCT | Director of Center | Khaltursunov Erkin | PhD | M | 1.0 |
| DDRS | Deputy Director for Science and Promotion with companies and enterprises | Kadyrova Zukhra Chingizovna | DSc | F | 1.0 |
| DDRC | Deputy Director for Commercialization of Scientific Research | Baimanov Mamaraim Khabievich | | M | 1.0 |
| EXPT | Expert for Project Management seconded by JICA | Yukinori Yanagida | | M | 1.0 |
| CSHR | Chief Specialist in Human Resources and Social Affairs | Hikmathozhaeva Manzura A. | | F | 0.5 |
| MGLG | Manager, Legal Department | (Vacant) | | | 1.0 |
| CLMG | Clerk for Director | Mirkhaitova Mukhayyo | | F | 1.0 |
| **ME** | **Laboratory of Mechanical Engineering and Materials Science** | | | | |
| HLME | Head of laboratory-ME | Turakhodjaev Nodir Djahangirovich | DSc | M | 0.5 |
| JRME1 | Juniro Researcher-ME(1) | Nusretov Rafael Aydinovich | PhD | M | 1.0 |
| LAME1 | Laboratory Assistant-ME (1) | Tashpulatov Javohir | | M | 0.5 |
| LAME2 | Laboratory Assistant-ME (2) | Tokhtamurodov Bekhzod | | M | 0.5 |
| **MM** | **Laboratory of Mining and Deep Processing of Mineral Resources** | | | | |
| HLMM | Head of laboratory-MM | Mavlyanov A bdulaziz Shavkatovich | PhD | M | 1.0 |
| JRMM1 | Junior Researcher-MM (1) | Azizov Muzaffar K. | | M | 0.5 |
| LAMM1 | Laboratory Assistant-MM (1) | Nematov Bobur | | M | 0.5 |
| LAMM2 | Laboratory Assistant-MM (2) | Yusupov Sarvar | | M | 0.5 |
| **PE** | **Laboratory of Power Engineering** | | | | |
| HLPE | Head of laboratory-PE | Ismailova Oksana Bakhtiyarovna. | PhD | F | 1.0 |
| JRPE1 | Junior Researcher-PE (1) | Esbergenova Botakoz | MD | F | 1.0 |
| LAPE1 | Laboratory Assistant-PE (1) | Khudaiberdiev Muzaffar | | | 0.5 |
| LAPE2 | Laboratory Assistant-PE (2) | Chavandozov Shahzod Sh. | | | 0.5 |
| **CP** | **Laboratory of Chemistry and Petrochemical** | | | | |
| HLCP | Head of laboratory-CP | Daminova Shakhlo Sharipovna | DSc | F | 1.0 |
| JRCP1 | Junior Researcher-CP (1) | Ruzibaeva Madina M. | MD | F | 1.0 |
| LACP1 | Laboratory Assistant-CP (1) | Urakov Eldor Erkinovich | | M | 0.5 |
| LACP2 | Laboratory Assistant-CP (2) | Khakimboeva Dildora | | F | 0.5 |
| **TM** | **Department of Technology Management** | | | | |
| HDTM | Head of Department | Turakhuzhayeva Shirin Nodirovna | | F | 1.0 |
| ENTM1 | Engineer(1) | (Vacant) | | | |
| ENTM2 | Engineer(2) | Igamberdiev Bakhrom | | M | 0.5 |
| **AC** | **Accounting Department** | | | | |
| CAAC | Chief Accountant | Yakubova Malika | | F | 1.0 |
| MAAC | Material Accountant | (Vacant) | | | 1.0 |
| **CM** | **Commercialization Department** | | | | |
| HICM | Head of Innovation Technology | (Vacant) | | | 1.0 |
| PICM | Patent and Invention Engineer | (Vacant) | | | 1.0 |
| APCM | Appraiser | (Vacant) | | | 1.0 |
| **TT** | **Department of Technology Transfer and Marketing** | | | | |
| MGTT | Manager (for the development and implementation of new projects) | (Vacant) | | | 1.0 |
| ENTT | Engineer for new equipment and technology | (Vacant) | | | 1.0 |
| **BI** | **Department of Entrepreneur and Business Incubation** | | | | |
| MGBI | Innovation Manager (for the development and implementation of new projects) | (Vacant) | | | 1.0 |
| MSBI | Marketing Specicalist | (Vacant) | | | 1.0 |
| **OT** | **Operational and Technical Department** | | | | |
| HDOT | Head of Department | (Vacant) | | | 1.0 |
| PSOT | Prcurement Specialist | Turgunhodjaev Davron | | | 1.0 |

## (2) Manpower Allocation Plan (Supervisor Level only)

**Work Breakdown Structure**

| Break Down Level & Work Description (0 1 2 3 4 5) | Execution Timing | In Charge | Input (MM) | Mid Term | Duration (Months) |
|---|---|---|---|---|---|
| **1. ADVANCED SCIENTIFIC RESEARCH** | | DDRS | | | |
| 1.1 Identification of Targeting Directions and Area of Research (Government Policy) | 2020(1Q) | LHs | | RM1 | 3.0 |
| 1.2 Equipment Procurement | 2020 | DDRS, *PSOT* | | RM1 | 12.0 |
| 1.3 Capacity Building for Research Human Resources | 2020-2029 | LHs, *CSHR, EXPT* | | RM1/ RM2 | 120.0 |
| 1.4 Execution of (Joint) Research Projects | 2020-2029 | LHs | | RM1/ RM2 | 120.0 |
| 1.5 Strengthening Relations with International/Domestic Universities, and Scientific Institutes | 2020-2024 | DDRS | | RM1/ RM2 | 120.0 |
| 1.6 Exchange of Scientific and Technological Personnel | 2020-2029 | DDRS, *LHs* | | RM1/ RM2 | 120.0 |
| 1.7 Update & Upgrade of Equipment | 2024(4Q)-2026 | DDRS, *PSOT* | | RM1/ RM2 | 27.0 |
| 1.8 Promote Tie-up with International Research Institutes | 2025-2029 | DDRS | | RM2 | 60.0 |
| 1.9 Evaluation | 2024, 2029 | DRCT | | RM1/ RM2 | 3.0 x 2 |
| **2. TECHNOLOGY TRANSFER** | | DDRC/DDRS | | | |
| 2.1 Establishment of Relations with Domestic Enterprises | 2020 | MGTT | | RM1 | 12.0 |
| 2.2 Sharing Information and Exchange of Human Resources | 2020(4Q)-2029 | MGTT | | RM1/ RM2 | 114.0 |
| 2.3 Execution of Contract-base Research Projects | 2020(4Q)-2029 | MGTT | | RM1/ RM2 | 111.0 |
| 2.4 Execution of Joint R&D Projects | 2024-2029 | MGTT | | RM1/ RM2 | 72.0 |
| 2.5 Evaluation | 2024, 2029 | DRCT | | RM1/ RM2 | 3.0 x 2 |
| **3. INNOVATIVE BUSINESS INCUBATION** | | DDRC | | | |
| 3.1 Planning of Start-up Activities | 2020 | MGBI | | RM1 | 9.0 |
| 3.2 Set-up Infrastracture for Start-up Activities | 2020 | MGBI | | RM1 | 9.0 |
| 3.3 Establishment of Rules & Regulations of Start-up Services | 2020 | MGBI,MGLG | | RM1 | 4.0 |
| 3.4 Capacity Building for Staff of Start-up Activities | 2020(2Q)-2029 | MGBI | | RM1/ RM2 | 117.0 |
| 3.5 Execution of Start-up Activities | 2020(4Q)-2029 | MGBI | | RM1/ RM2 | 48.0 |
| 3.6 Create links with Japanese Incubation Centers or Entrepreneur | 2020-2029 | MGBI | | RM1/ RM2 | 120.0 |
| 3.7 Expansion Phase of Start-up Activities | 2025-2029 | MGBI | | RM2 | 60.0 |
| 3.8 Collaboration with Techno Park and Innovation Center | 2021-2029 | MGTT | | RM1/ RM2 | 108.0 |
| 3.9 Evaluation & Feedback | 2024, 2029 | DRCT | | RM1/ RM2 | 3.0 x 2 |
| **4. EDUCATION (to create new department for Educational Activities)** | | DRCT | | | |
| 4.1 Master Course and Retraining Course for Experts | 2023-2029 | Education Dept (new) | | RM1/ RM2 | 84.0 |
| 4.2 Innovative Education at Schools | 2022-2029 | Education Dept (new) | | RM1/ RM2 | 96.0 |
| 4.3 Evaluation & Feedback | 2024, 2029 | DRCT | | RM1/ RM2 | 3.0 x 2 |
| **5. SOCIAL INTERACTION AND AWARENESS (to create Public Relations Dept)** | | DRCT | | | |
| 5.1 Planning of Social Interaction | 2020 | Public Relations (new) | | RM1 | 9.0 |
| 5.2 Awareness Program | 2021-2029 | Public Relations (new) | | RM1/ RM2 | 108.0 |
| 5.3 Seminars | 2020(4Q)-2029 | Public Relations (new) | | RM1/ RM2 | 111.0 |
| 5.4 Conference | 2021-2029 | Public Relations (new) | | RM1/ RM2 | 108.0 |
| 5.5 Innovation Event (incl Innovation Contest) | 2020(4Q)-2029 | Public Relations (new) | | RM1/ RM2 | 111.0 |
| 5.6 Evaluation & Feedback | 2024, 2029 | DRCT | | RM1/ RM2 | 3.0 x 2 |
| | | | | | |

APPENDIX-5: Sample Form of Job Description

| | | | | | |
|---|---|---|---|---|---|
| Ref. No | | Job Title | | | |
| Department | | | Type of Work | Full / Part time | |
| Supervisor | | | | | |
| Subordinates | 1 | | 2 | | 3 |
| Roll and Responsibility: | | | | | |
| Required Qualification and Education: | | | | | |
| Required Skills (if any): | | | | | |

# O’zbekiston-Yaponiya Yoshlar Innovathiya Markazi Davlat Korxonasining Ustabi

# Uzbek-Japan Innovation Center of Youth State Enterprise’s Charter

| I. UMUMIY QOIDALAR | I. GENERAL PROVISIONS |
|---|---|
| 1. Ушбу Устав Ўзбекистон Республикаси қонунлари, Республика Президентининг 2016 йил 19 сентябрдаги ПҚ-2602-сонли **“Ислом Каримов номидаги Тошкент давлат техника университети ҳузурида Ўзбекистон-Япония ёшлар инновация марказини ташкил этиш тўғрисида”**ги, 2017 йил 25 декабрдаги ПҚ-2744-сонли **“Ўзбекистон Республикасининг Биринчи Президенти Ислом Абдуғаниевич Каримовнинг хотирасини абадийлаштириш тўғрисида”ги** ва 2019 йил 13 декабрдаги ПҚ-4550-сонли **“Ислом Каримов номидаги Тошкент давлат техника университети ҳузуридаги Ўзбекистон-Япония ёшлар инновация маркази фаолиятини янада такомиллаштириш чора-тадбирлари тўғрисида”**ги Қарорлари асосида ишлаб чиқилди ва “Ўзбекистон-Япония ёшлар инновация маркази” давлат корхонасининг (кейинги ўринларда “Марказ” деб юритилади) мавқеи, мақсади, вазифалари, тузилиши ва иқтисодий фаолиятини белгилаб беради. | 1. This Regulations was adopted by the President Decree of the Republic of Uzbekistan PP-2602 on September 19, 2016 “On the establishment of the Uzbek-Japan Innovation Center of Youth under the Tashkent State Technical University named after Islam Karimov”, PP-2744 of December 25, 2017 "On the perpetuation of the memory of the first president of the Republic of Uzbekistan Islam Abduganievich Karimov" and PP-4550 of December 13, 2019 "On measures for further improvement of the activities of the Uzbek-Japan Innovation Center of Youth under the Tashkent State Technical University named after Islam Karimov", and it defines the status, purpose, objectives, structure and economic activity of the Uzbek-Japanese Youth Innovation Center state enterprise (hereinafter referred to as “the Center”). |
| 2. Марказ давлат корхонаси шаклидаги илмий-тадқиқот ва таълим муассасаси бўлиб, унинг фаолияти Ўзбекистон Республикасининг қонунларига мувофиқ эгалик қилиш, фойдаланиш ва бошқариш ҳуқуқи билан берилган давлат тасарруфидаги, шунингдек фаолиятидан келган даромадлар ҳисобидан орттирилган мулк асосида ташкил қилинади. | 2. The Center is a research and educational institution in the form of a state-owned enterprise, its activity is carried out on the basis of the property of the state, given to it by the right of possession, use and management according to the legislation of the Republic of Uzbekistan, and also at the expense of incomes from activity. |
| 3. Марказ ўз фаолиятини Ўзбекистон Республикасининг Конституцияси ва қонунлари, Ўзбекистон Республикаси | 3. The Center carries out its activities on the basis of the Constitution and laws of the Republic of Uzbekistan, decisions, decree |

| | |
|---|---|
| Президентининг қарорлари, фармон ва фармойишлари, Ўзбекистон Республикаси Вазирлар Маҳкамасининг қарорлари, Кадрлар тайёрлаш миллий дастури, Ўзбекистон Республикаси Олий ва ўрта махсус таълим вазирлигининг буйруқлари, шунингдек мазкур Низом асосида олиб боради. | and orders of the President of the Republic of Uzbekistan, decisions of the Cabinet of Ministers, National Program for personal training, orders of the Ministry of Higher and Secondary Special Education and Ministry of Innovative Development of the Republic of Uzbekistan, as well as abovementioned Regulation. |
| 4. Марказнинг расмий номи:<br>Ўзбек тилида – “O‘zbekiston-Yaponiya yoshlar innovatsiya markazi” davlat korxonasi;<br>Рус тилида – государственное предприятие “Узбекско-Японский молодежный центр инноваций”;<br>Инглиз тилида – State enterprise “Uzbek-Japan Innovation Center of Youth”;<br>Инглиз тилида аббревиатураси – “UJICY”. | 4. Official name of the Center:<br>In Uzbek-<br>*“O‘zbekiston-Yaponiya yoshlar innovatsiya markazi” davlat korxonasi;*<br><br>In Russian-<br>*государственное предприятие “Узбекско-Японский молодежный центр инноваций”;*<br><br>In English-<br>*State Enterprise “Uzbek-Japan Innovation Center of Youth”; Abbreviation in English - "UJICY".* |
| 5. Марказнинг жойлашган манзили: 100095, Тошкент шаҳар, Олмазор тумани Талабалар шахарчаси, 2-Б – уй. | 5. The address of the center: 100095, Tashkent city, Olmazor district, Universitet street, 2-B. |
| 6. Марказ тижоратчи ташкилот шаклидаги юридик шахс бўлиб, ажратилган мулк, мустақил балансга, Ўзбекистон Республикаси Молия вазирлигининг Ғазначилигида шахсий ғазначилик ҳисобварағига, банк ҳисобварағи, шу жумладан валюта ҳисобварақларига, шунингдек Ўзбекистон Республикасининг Давлат герби тасвирланган муҳрга эга бўлади. | 6. The Center is a legal entity in the form of a commercial organization with separate property, independent balance, personal treasury account at the Treasury of the Ministry of Finance of the Republic of Uzbekistan, bank accounts, including currency accounts, as well as a seal with the State Emblem of the Republic of Uzbekistan. |
| **II.МАРКАЗНИНГ МАҚСАДИ, ҲУҚУҚЛАРИ ВА ФАОЛИЯТИНИНГ АСОСИЙ ВАЗИФАЛАРИ** | **II. CENTER’S PURPOSE, RIGHTS AND MAIN TASKS OF ACTIVITIES** |
| 7. Марказ мақсади Ўзбекистон Республикаси Президентининг 2016 йил 19 сентябрдаги **“Ислом Каримов номидаги Тошкент Давлат Техника университети ҳузурида Ўзбекистон-Япония ёшлар инновация марказини ташкил этиш тўғрисида”ги** ПҚ-2602-сонли ҳамда 2019 йил 13 декабрдаги ПҚ-4550- | 7. The purpose of the Center is, in accordance with Decrees of the President of Republic of Uzbekistan No. PP-2602 dated September 19, 2016, “**On Establishment of Uzbek-Japan Innovation Center of Youth under the Tashkent State Technical University named after Islam Karimov”**, and No. PP-4550 dated December 13, 2019, **"** |

| | |
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| сонли **“Ислом Каримов номидаги Тошкент давлат техника университети ҳузуридаги Ўзбекистон-Япония ёшлар инновация маркази фаолиятини янада такомиллаштириш чора-тадбирлари тўғрисида”**ги Қарорларига асосан Республикамизнинг ёш олимлари ва талабалари жаҳон амалиёти ва халқаро андозаларга мувофиқ илмий тадқиқотлар олиб бориш, инновацион фаолият натижаларининг трансфери ва тижоратлаштирилиши, стартап лойиҳаларни амалга оширишнинг замонавий, илғор усул ва технологияларини эгаллашлари учун қулай шарт-шароитлар яратиш, республика иқтисодиётининг базавий тармоқлари учун Япония илмий ва таълим муассасаларининг олимлари ҳамда етакчи мутахассислари иштирокида юқори малакали мутахассисларни сифатли тайёрлашдан иборат. | **On measures for further improvement of activity of Uzbek-Japan Innovation Center of Youth under the Tashkent State Technical University named after Islam Karimov",** mainly to promote innovative activities throughout the Republic for sustainable development of its society through making available young scientists and students of our republic conducting scientific researches with the world practices and international standards, transfer and commercialization of the results of innovation activities, implementation of start-up projects, creating favorable conditions for possession of advanced methods and technologies for basic networks of economy of the republic, improve public awareness on innovation technologies and its applications as well as way of innovative thinking, qualitive training for high qualitr specialist with participation of scientist and leading specialists of Japanese scientific and educational institutes. |
| 8. Қуйидагилар Марказнинг асосий вазифалари ҳисобланади:<br>- ёш мутахассислар ва талабаларнинг инновацион фаолиятини ривожлантириш ҳамда уларнинг илмий ва техникавий ғояларини саноат намуналари, ускуналар, технологик жараёнлар ва ечимларда мужассамлаштириш;<br>энергияни юқори даражада тежаш ва импорт ўрнини босиш вазифасини ҳал этиш хусусиятига эга бўлган, атроф муҳитга минимал таъсир ўтказадиган замонавий юқори технологияли ишлаб чиқаришларни яратиш;<br>ёш олимларнинг илмий тадқиқот фаолиятини амалга оширишлари учун максимал даражада қулай шарт-шароитларни шакллантириш, улар томонидан ўтказиладиган тадқиқот ишларининг юқори даражада сифатли бўлишини таъминлаш;<br>маҳаллий ва хорижий ташкилотлардан, илмий ва таълим муассасаларидан келиб тушадиган буюртмалар асосида Марказ фаолиятининг тегишли илмий йўналишлари бўйича қўшма | 8. The followings are accounted as the main tasks of the Center:<br>- development of innovative activities of young specialists and students and embodying their scientific and technological ideas into industrial designs, equipment, technological processes and solutions;<br>- creation of modern high-tech productions with high-level energy saving to solve import substitution problems with minimal environmental impact;<br>- creation of the most favorable conditions for young scientists to carry out their research activities, to ensure the high quality of research works conducted by them;<br>- carrying out joint experimental and practical scientific researches on relevant scientific directions of activity of the Center in accordance with orders from local and foreign organizations and scientific and educational institutions; |

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| экспериментал ва амалий илмий тадқиқотлар олиб бориш;<br>инновацион фаолият натижаларининг трансфери ва тижоратлаштирилиши, стартап лойиҳаларни амалга ошириш, саноат даражасида уларни тўлақонли жорий этишда амалий ёрдам кўрсатиш йўли билан ёшлар, олимлар ва ўқитувчиларни иқтисодиёт соҳалари ва корхоналарнинг илмий-техник муаммоларини ҳал этишга жалб қилиш;<br>инновация ва технология трансфери марказлари, технопарклар, юқори технологияли лабораториялар, инновация лабораториялар, стартап ва бизнес акселераторлар, Ёшлар академияси билан яқиндан ўзаро ҳамкорлик қилиш;<br>халқаро ва маҳаллий даражада эътироф этилган компаниялар, ташкилотлар, олимлар ва мутахассислар иштирокида инновациялар соҳасида маҳорат дарслари, тренинглар ва малака ошириш курслари, шунингдек, долзарб илмий-инновацион йўналишлар бўйича илмий-амалий конференциялар ва семинарлар, танловлар ўтказиш. | - Involvement of young people, scientists and teachers in solution of scientific and technical problems of economic sectors and enterprises by means of transfer and commercialization of results of innovative activity, implementation of start-up projects, their full implementation at the industrial level;<br>- close cooperation with centers of innovation and technology transfer, technology parks, high-tech laboratories, innovation laboratories, start-ups and business accelerators, Youth Academy;<br>- carrying out workshops, trainings and refresher courses in the field of innovation with internationally acclaimed companies, organizations, scientists and specialists, as well as conferences and seminars, competitions on topical scientific and innovative areas;<br>- carrying out activities for improvement of public awareness on innovation technologies and its applications as well as way of innovative thinking in order to increasing potential of innovative human resources and understanding in the society. |
| 9. Марказ ўзига юкланган вазифаларни бажариш учун қуйидаги йўналишларда фаолият олиб боради:<br>конкурс асосида танлаб олинган Республикамиз ёш олимлари ва талабаларига Япония илмий ва таълим муассасаларининг олимлари ҳамда етакчи мутахассислари томонидан маъруза ўқишлари, семинар ва амалий дарслар олиб боришлари орқали машинасозлик ва материалшунослик, электроника ва нанотехнология, энергетика ва муқобил энергия манбалари, тоғ-кон металлургия иши ва табиий ресурслардан фойдаланиш ва уларни қайта ишлаш, кимё ва нефт кимёси, хамда қишлоқ ва сув хўжалиги, | 9. The Center conducts activity in the following directions in order to execute tasks imposed itself:<br>- carrying out lectures, seminars and practical classes for young scientists and students of the republic, selected the basis of on competition, by scientists and leading specialists of Japanese scientific and educational institutions, in the fields of machinery and materials, electronics and nanotechnology, energy and alternative energy sources, mining and metallurgy, and their use of natural resources and their recycle, chemical and petrochemical, agriculture and water management, environmental protection, economic-ecological sectors, |

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| атроф муҳит муҳофазаси, иқтисодий-экология соҳаларида амалий илмий изланишлар олиб бориш ва юқори технологияли инновацион ишланмаларни ишлаб чиқиш; | and carrying out applied research and development of high-tech innovative developments; |
| Давлат бюджетининг жорий таъминот учун ажратиладиган маблағлари, Ўзбекистон Республикаси Инновацион ривожланиш вазирлиги томонидан ўтказиладиган танловларнинг натижалари бўйича ажратиладиган грантлар, хўжалик фаолиятидан ва шартнома асосида ўтказиладиган тадқиқотлардан тушадиган маблағлар, шунингдек халқаро молия ва бошқа ташкилотларнинг, чет эл ҳукумат ташкилотларининг грантлари, қонун ҳужжатларида тақиқланмаган бошқа манбалар асосида ёш олимларни ва талабаларни жалб қилган ҳолда амалий ва фундаментал изланишлар олиб бориш ҳамда ишланмалар ишлаб чиқиш ишларини бажариш; | - Funds allocated for the current supply of the state budget, grants allocated for the results of competitions held by the Ministry of innovation development of the Republic of Uzbekistan, funds received from economic activity and contract-based research, as well as grants from international finance and other organizations, foreign government organizations, young scientists and students on the basis of other sources not prohibited; |
| Ўзбекистон ва хориж бозорларида ички ривожланган технологияларини жорий этиш учун шароит яратиш, шунингдек Республика корхоналарини рақобатбардошлигини яхшилашга қаратилган хориж технологиялари алмашинувини қўллаб-қувватлаш; | - creating conditions for introducing technologies internally developed to Uzbekistan and foreign markets, as well as supporting the exchange of foreign technologies aimed at improving the competitiveness of the Republic's enterprises; |
| янги технологияларни жорий этишга, экологик соф маҳсулот ишлаб чиқаришга, лаборатория хизматлари ва илмий тадқиқотлар соҳасида халқаро алмашинувни енгиллаштиришга қаратилган ва янги технологияларни тадбиқ этишга асосланган ишлаб-чиқариш корхоналарини ташкил этишни қўллаб-қувватлаш; | - support for the establishment of manufacturing enterprises focused on the introduction of new technologies, production of ecologically pure products, laboratory services and scientific researches in the field of facilitating international exchange, and based on implementation of new technologies; |
| Япония илмий ва таълим муассасаларининг олимлари ҳамда етакчи мутахассислари билан ҳамкорликда юқори малакали илмий ва илмий-педагогик кадрлар тайёрлаш ишларини олиб бориш; | - carrying out training of highly qualified scientific and scientific- education personnel in cooperation with scientists and leading specialists of scientific and educational institutions of Japan; |
| фан ва техниканинг илғор йўналишлари бўйича Япония илмий ва таълим муассасаларининг олимлари ҳамда етакчи мутахассислари томонидан Ўзбекистон илмий ва таълим муассасаларининг олимлари, ёш | - organizing open lectures and seminars by scientists and leading specialists of Japanese scientific and educational institutions in the areas of advance science and technology for scientists in scientific and educational institutions of |

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| мутахассислари, ўқитувчилари ҳамда талабалари ва бошқа манфаатдор шахслар билан очиқ маъруза ва семинарлар ташкил этиш;<br>Ўзбекистон олий таълим муассасалари мутахассислик кафедралари профессор-ўқитувчилари, шунингдек юқори технологиялар билан ишловчи корхоналар мутахассисларининг малака ошириши ва қайта тайёрланишига кўмак бериш. | Uzbekistan, young specialists, teachers and students and other interested people;<br>- assistance in retraining and retraining of professors and teachers of specialties of higher educational institutions of Uzbekistan, as well as specialists of high technology enterprise.<br>- carrying out public awareness programs and projects to introducing innovation technologies and its applications as well as way of innovative thinking to schools and communities.<br>- not limited to the above mentioned activities, within the framework of laws and relevant Presidential Decrees, the Center can execute its scientific and innovative activities to achieve the purpose of the Center. |
| 10. Марказ ўзига юклатилган вазифаларни бажариши жараёнида республикамизнинг илмий ва таълим муассасалари билан яқиндан ҳамкорлик қилади. | 10. The Center closely cooperates with scientific and educational institutions of the Republic in the process of carrying out its tasks. |
| 11. Марказ Ўзбекистон Республикаси қонунлари доирасида қуйидаги ҳуқуқларга эга:<br>машинасозлик ва материалшунослик, электроника ва нанотехнология, энергетика ва муқобил энергия манбалари, тоғ-кон металлургия иши ва табиий ресурслардан фойдаланиш ва уларни қайта ишлаш, кимё ва нефт кимёси, қишлоқ ва сув хўжалиги, атроф муҳит муҳофазаси, иқтисодий-экология соҳалари бўйича танлаб олинган талабалар ва ёш олимлар, хорижий олимлар билан хамкорликда илмий-тадқиқот ишларини олиб бориш;<br>Марказнинг асосий йўналишлари бўйича жаҳон стандартларига жавоб берадиган олий маълумотли кадрларни қайта тайёрлаш ва малака оширишини таъминлаш;<br>Марказнинг асосий илмий фаолият йўналишлари бўйича фундаментал ва амалий изланишлар олиб бориш, | 11. The Center has the following rights under the laws of the Republic of Uzbekistan:<br>- to carry out scientific-research works in cooperation with selected students, young scientists and foreign scientists in the fields of Mechanical Engineering and Materials Science, Electronics and nanotechnology, energy and alternative energy sources, Mining Metallurgy and the use and processing of Natural Resources, chemistry and petrochemistry, agriculture and water management, environmental protection, economic-environmental science;<br>- to provide retraining and advanced training to higher educated personnel on main directions of the Center with the international;<br>- to carry out fundamental and applied researches in the main directions of scientific activity of the Center, and |

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| инновацион ишланмалар ишлаб чиқиш ва хизмат кўрсатиш, шунингдек консалтинг хизматларини кўрсатиш; | development and service of innovative developments as well as consulting services; |
| ёшлар, олимлар ва ўқитувчиларни жалб қилиш орқали иқтисодиёт соҳалари ва корхоналарнинг илмий-техник муаммоларини ҳал этиш; | - to attract young people, scientists and teachers in solving scientific and technical problems of economic sectors and enterprises; |
| инновацион фаолият натижалари трансфери ва тижоратлаштириш, стартап лойиҳаларни амалга ошириш, саноат даражасида уларни тўлақонли жорий этишда амалий ёрдам кўрсатиш; | - to do practical assistance in transfer and commercialization of results of innovative activity, implementation of start-up projects, and their full implementation at the industrial level; |
| ҳомийлардан келиб тушган пул маблағлари ҳисобидан ўзининг моддий-техник базасини яхшилаш ва уни ривожлантириш, жумладан, Марказнинг фаолияти доирасидаги эҳтиёжларидан келиб чиқиб мақсадли йўналтириш; | - to improve and develop of its material and technical base at the expense of sponsors' funds, including targeted activity of the Center in accordance with its needs |
| Марказ пул маблағлари ҳисобидан ходимларни моддий рағбатлантириш; | - to give monetary incentives to employees at the expense of the Center; |
| нашриётчилик (монография, дарслик, ўқув ва ўқув методик қўлланмалар нашр қилиш), реклама нашриётчилиги, шунингдек, интернет тизимида Марказнинг веб сайтини очиш ва маълумотларни мунтазам равишда янгилаб бориш фаолиятини олиб бориш; | - to publish activities (publishing monographs, textbooks, educational and teaching manuals), advertising publishing, as well as opening the Center's website in the Internet and regular updating of the information; |
| Марказда таълим олган ўқувчи ва тингловчиларга белгиланган намунадаги гувоҳнома (сертификат) бериш; | - to issue standard certificates (certificates) to students and audiences trained at the Center; |
| Марказ фаолиятининг асосий йўналишлари бўйича илмий-амалий анжуман, симпозиум ва семинарлар ташкил қилиш; | - to organize scientific-applied conferences, symposiums and seminars on the main activities of the Center; |
| Марказ томонидан ўзининг илмий тадқиқотлик, педагогик ва инновацион фаолияти натижасида эришган интеллектуал мулк объектларига эгалик қилиш ва ундан қонун доирасида фойдаланиш; | - to own the intellectual property acquired through result of the Center’s scientific research, pedagogical and innovative activity and use it under the laws; |
| ижтимоий ривожлантириш, моддий рағбатлантириш, заҳира ва бошқа жамғармаларни шакллантириш; | - to do social development, financial incentives, the formation of reserves and other funds; |
| Марказ маблағи ҳисобидан белгиланган тартибда ходимларнинг ойлик меҳнат ҳақларига устамалар белгилаш ва уларни ижтимоий рағбатлантириш; | - to establish allowances and social stimulation of employees' salaries at the expense of the Center; |
| Марказ фаолиятининг йўналишларига доир масалаларини ҳал | - for the purpose of solving the issues related to the direction of the Center’s |

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| қилиш мақсадида вазирлик, идора ва хўжалик бирлашмаларидан мутахассислар ва техник воситаларни жалб қилиш;<br>Марказ ўз ходимларига Жамоавий фойдаланиш марказлари лаборатория қурилмаларидан, илмий ва олий таълим муассасалари ва бошқа илмий лабораториялардан қонунчиликда белгиланган тартибда текин фойдаланиш имкониятини яратиш;<br>ўзига юклатилган вазифаларни амалга ошириш мақсадида тегишли вазирлик, идора, хўжалик бирлашмалари, илмий ва инновация марказлари, технопарклар, лабораториялар, стартап ва бизнес акселераторлар, ёш олимлар жамоалари ҳамда бошқа маҳаллий ва хорижий давлатлар илмий ва таълим муассасалари, ташкилотлар билан ҳамкорлик ўрнатиш, қонунчиликда белгиланган тартибда улардан маълумот ва ҳужжатлар олиш;<br>таълимнинг илғор стандартларини ва Марказнинг фаолиятига мос келувчи қоида ва меъёрларини жорий қилиш ва уларга амал қилиш. | activities, to involve specialists and technical facilities from the ministries, agencies and economic associations;<br>- to provide the Center's employees with free access to laboratory equipment of the Public Use Centers, scientific and higher educational institutions and other research laboratories in the manner prescribed by law ;<br>- to cooperate with relevant ministries, departments, economic associations, scientific and innovation centers, technology parks, laboratories, start-ups and business accessories, young scientists and other national and foreign scientific and educational institutions, organizations in order to carry out its tasks; receive information and documents from them;<br>- to implement the advanced educational standards and rules and norms, corresponding to the activities of the Center;<br>- to maintain the Center's security of material and intellectual properties from illegal access from outside, and to control entrance and exit of people from/to the designated secured area of the Center; |
| **III. МАРКАЗ ФАОЛИЯТИНИ БОШҚАРИШ** | **III. MANAGEMENT OF CENTER'S ACTIVITY** |
| 12. Марказ Ўзбекистон Республикаси Инновацион ривожланиш вазирлигининг таклифига асосан Олий ва ўрта махсус таълим вазирининг буйруғи билан лавозимга тайинланадиган ва лавозимдан озод этиладиган ҳамда кейинчалик Марказ Васийлик кенгаши томонидан тасдиқланадиган директор томонидан бошқарилади. | 12. According to the proposal of the Ministry of innovative development of the Republic of Uzbekistan, the center is managed by the director appointed and dismissed by the order of the Minister of Higher and secondary special education and subsequently approved by the Board of Trustees of the Center. |
| 13. Директор марказнинг раҳбари ҳисобланади ва Марказ фаолиятини ташкил этади, Васийлар кенгаши раиси | 13. The director is the head of the center and organizes the activities of the Center, appoints his place in coordination with the chairman of the Board of Trustees. |

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| билан келишган ҳолда ўзининг ўринбосарларини тайинлайди. | |
| 14. **Марказ директори**:<br>Марказ фаолиятининг асосий йўналишлари бўйича вазифаларни бажаришга қаратилган тадбирларни ишлаб чиқади ва амалга оширади;<br>вазифаларни бўлимлар бўйича тақсимлайди. Марказ лабораториялари томонидан илмий техник ишларни бажарилиши тартибини белгилайди;<br>Марказнинг илмий-техник ва инновацион давлат дастурлари бўйича лойиҳаларни тайёрлашни ташкил этади;<br>халқаро илмий фондлар ва хорижий давлатлар илмий ташкилот ва университетлари грантларини олиш бўйича илмий лойиҳаларини тақдим этади;<br>илмий иш олиб бориш ва илмий техник, консалтинг ва бошқа хизматлар кўрсатиш бўйича шартномалар тузади;<br>Марказ ходимлари, таълим олаётган тингловчи ва амалий илмий тадқиқот ҳамда инновацион ишланма бажарувчилари аттестациясини ўтказади;<br>Марказ фаолиятига доир ҳисоботларни тайёрлайди;<br>Марказнинг молиявий-хўжалик ва илмий-педагогик фаолияти тўғрисидаги маълумотларни ҳар йиллик аудит ва белгиланган бухгалтерлик ҳисоботларини тақдим этади;<br>Марказнинг илмий-техник кенгашини шакллантиради ва унинг таркиби ва йўриқномасини тасдиқлайди;<br>Марказ номидан ишончномасиз фаолият юритади, Марказ манфаатларида Республика ва чет эл ташкилотлари, муассасалари, идора ва бошқармалари олдида иш олиб боради;<br>Марказ номидан иш берувчи сифатида меҳнат қонунчилиги талаблари асосида иш олиб боради;<br>ходимлар тайёрлаш ва уларни ўқитиш, малакасини ошириш бўйича чора-тадбирларни амалга оширади;<br>Марказнинг хўжалик фаолияти ва ички тартиб қоидалари бўйича низомлар, | 14. **Director of the Center**:<br>- develops and carries out activities aimed at performing tasks in the main directions of the center's activities;<br>- distributes tasks by departments. Determines the order of implementation of scientific technical work by the laboratories of the center;<br>- organizes the preparation of projects on scientific-technical and innovative state programs of the center;<br>- provides scientific projects on obtaining grants from international scientific foundations and scientific organizations and universities of foreign countries;<br>- contracts for scientific work and provision of scientific technical, consulting and other services;<br>- the center attests to employees, listeners studying and performing practical scientific research and innovative works;<br>- Prepares reports on the activities of the center;<br>- Provides information on financial-economic and scientific-pedagogical activity of the center with annual audit and established accounting reports;<br>- Formation of the scientific and technical Council of the center and its composition and certificate;<br>- Operates without a power of attorney on behalf of the center, works in the interests of the Center in front of Republican and foreign organizations, institutions, offices and departments;<br>- Works on behalf of the center as an employer on the basis of the requirements of labor legislation;<br>- carries out measures to train employees and train them, improve their skills;<br>- Approves regulations, procedures and other documents on the rules of economic activity and internal order of the center;<br>- The center makes proposals on making additions and changes to the Charter; |

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| тартиб ва бошқа ҳужжатларни тасдиқлайди;<br>Марказ Уставига қўшимчалар ва ўзгартиришлар киритиш юзасидан таклифлар беради;<br>илмий-тадқиқотлар ва конструкторлик ишларини амалга ошириш учун Марказнинг бюджетдан ташқари маблағлари ҳисобидан шартнома асосида илмий ходимларни қўшимча жалб этади;<br>Марказга юклатилган вазифаларни амалга ошириш мақсадида зарур бўлган бошқа вазифаларни амалга оширади. | - in order to carry out research and design work, the center will attract extra-budgetary funds from the account of scientific staff on a contractual basis;<br>- Carries out other tasks necessary for the purpose of carrying out the tasks assigned to the center. |
| 15. Марказ ходимларининг ойлик меҳнат ҳақи директор томонидан белгиланган тартибда тасдиқланади. | 15. The following tables show the monthly salary of the staff of the Center by the Director of the order is confirmed. |
| 16. Директор ўз ҳуқуқ ва вазифаларини бажаришда Марказ манфаатлари доирасида ҳаракат қилиши, бюджет ва бюджетдан ташқари фондлар, ойлик меҳнат ҳақи, меҳнат ҳуқуқий муносабатлари талаб этган бошқа тўланмаларни, ишлаб чиқариш фаолияти билан бевосита боғлиқ пул воситаларига доир вазифаларни вақтида амалга оширишга, Марказга етказилган зарар туфайли вужудга келган камомадни, шу жумладан, берилган давлат мулкига зарар етказилган ҳолатларини ўз вақтида бартараф этишга жавобгардир. | 16. The Director shall act in the interests of the Center in the exercise of his rights and duties, the timely implementation of duties related to the production activity, the budget and extra-budgetary funds, salaries and other payments required by labor relations.<br>- timely elimination of the deficit, including cases of damage to state property transferred. |
| 17. Илмий ишлар ҳамда компания ва корхоналар билан ҳамкорлик директор ўринбосариВасийлар кенгаши раиси билан келишган ҳолда Марказ директори томонидан тайинланади. Илмий ишлар ҳамда компания ва корхоналар билан ҳамкорлик бўйича директор ўринбосари мавжуд вазифалар тақсимотига кўра институт илмий ва илмий-ёрдамчи бўлимларининг илмий ҳамда илмий-ташкилий ишлари учун жавоб беради.<br>Илмий ишлар ҳамда компания ва корхоналар билан ҳамкорлик ишлари бўйича директор ўринбосари, директор йўғида унинг вазифасини бажаради. Директор ўринбосарининг ҳуқуқлари, | 17. **The Deputy Director of Science and Cooperation with Companies and Enterprises** is appointed by the Director of the Center in consultation with the Chairman of the Board of Trustees. The Deputy Director for Scientific Affairs and Cooperation with Companies and Enterprises is responsible for the scientific and organizational work of the scientific and research support units of the Institute according to the existing duties.<br>Deputy Director for Scientific Affairs and Cooperation with Companies and Enterprises take the Director's work on his absence. The rights, duties and responsibilities of the Deputy Director are |

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| вазифалари ва мажбуриятлари лавозим йўриқномасида белгиланади ҳамда директор томонидан тасдиқланади. | defined in the job description and approved by the Director. |
| 18. **Илмий ишланмаларни тижоратлаштириш бўйича директор ўринбосари** Васийлар кенгаши раиси билан келишган ҳолда Марказ директори томонидан тайинланади. Илмий ишланмаларни тижоратлаштириш бўйича директор ўринбосари молия ва иқтисодиёт билан боғлиқ масалаларни ҳал этиш, давлат гранти ва ҳамкорлик маблағларини жалб этиш, ишлаб чиқариш корхоналари билан хўжалик шартномалари орқали ҳамкорликни йўлга қўйиш, хўжалик ва молиявий фаолият билан боғлиқ бўлимларнинг иш режаларини тасдиқлаш каби вазифаларни бажаради. Директор ўринбосарининг ҳуқуқлари, вазифалари ва мажбуриятлари лавозим йўриқномасида белгиланади ҳамда директор томонидан тасдиқланади. | 18. **Deputy Director for Commercialization of Scientific Research** shall be appointed by the Director of the Center in consultation with the Chairman of the Board of Trustees. The Deputy Director for Commercialization of Scientific Research is responsible for financial and economic issues, attracting state grants and partnership funds, establishing business cooperation agreements with manufacturing companies, and approving work plans for economic and financial departments. The rights, duties and responsibilities of the Deputy Director are defined in the job description and approved by the Director. |
| 19. **Лаборатория мудири** директор томонидан фан докторлари ва юқори малакага эга бўлган фан номзодлари шунингдек тегишли мутахассислик бўйича хорижий мамлакатларнинг фалсафа доктори (Ph.D) илмий даражасига ва унга тенглаштирилган бошқа илмий даражаларига эга бўлган номзодлар орасидан лавозимга тайинланади.<br>Лаборатория мудири:<br>- мазкур таркибий бўлимнинг бутун фаолияти, унинг иш йўналиши, илмий ва амалий тадқиқот ишлари дастурининг бажарилиши, тадқиқотларнинг сифатли ва ўз муддатида бажарилиши, меҳнатни муҳофаза қилиш ва техника хавфсизлиги қоидаларига риоя этилиши учун жавоб беради;<br>- давлат грантлари топшириқлари бўйича ходимлар ишига кўмаклашади ва илмий ишда бевосита иштирок этади;<br>- тадқиқотларнинг чет элларда ривожланиш даражасини ўрганади, тадқиқотларнинг муайян соҳасида | 19. The head of the laboratory is appointed by the director among the highly qualified doctors and candidates of sciences as well as the appropriate expertise to foreign countries a degree of doctor of philosophy (Ph.D) and its equivalent in other academic levels among the candidates for the position.<br>Head of laboratory:<br>- be responsible for all activities of this subdivision, its direction of work, implementation of scientific and practical research programs, qualitative and timely performance of researches, observance of labor protection and safety regulations;<br>- assist the work of the staff on state grants and participates in scientific work;<br>- studies the development of research abroad, develops proposals for international scientific cooperation in a specific area of research and ensures the implementation of international cooperation plans. |

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| халқаро илмий хамкорлик тўғрисида таклифлар ишлаб чиқади ва халқаро хамкорлик режаларининг бажарилишини таъминлайди. | |
| 20. **Илмий ходимлар:**<br>Бош ва етакчи илмий ходимлар давлат буюртмалари топшириқлари бўйича тадқиқотларга илмий раҳбарлик қилади ҳамда гуруҳда банд бўлган ходимлар фаолиятини бошқаради ёки илмий-техникавий дастурлардаги айрим вазифаларни бажарувчи масъул шахсдир.<br>Катта илмий ходим давлат буюртмалари бўйича алоҳида мавзуларни, шунингдек, мавзунинг бир қисми (бўлаги, босқичи) бўлган ишланмаларни тадқиқ этишда ходимлар гуруҳига илмий раҳбарлик қилади ёки энг мураккаб ва маъсулиятли ишларнинг ижрочиси сифатида илмий тадқиқотлар ва ишланмалар олиб боради.<br>Кичик илмий ходим тасдиқланган услубларга мувофиқ мавзунинг алоҳида қисмлари бўйича маъсул бажарувчи шахс раҳбарлигида илмий тадқиқотлар олиб боради. | 20. **Research staff**:<br>The head and the leading scientific personnel conduct research on the assignments of state orders, and the employees employed in the group are either heads of activity or are responsible for carrying out certain tasks in scientific and technical programs.<br>Senior Research Fellow on state orders separately subjects, as well as part of the subject (section, stage) in the study of the work done by the staff to the group of scientific leadership or the most complex and responsible work as a performer conducts scientific research and development.<br>Junior researcher conducts research under the guidance of a responsible person on individual parts of the subject in accordance with the approved methods. |
| **IV.ИЛМИЙ КЕНГАШ** | **IV.SCIENTIFIC COUNCIL** |
| 21. Илмий кенгаш Марказ директори қошидаги илмий ва илмий-ташкилий маслаҳатчи органдир.<br>Илмий кенгаш таркибига илмий-тадқиқот йўналишларини таъминловчи илмий ходимлар, докторантлар, магистлар, илмий ходим – изланувчилар ва мустақил изланувчилар киради. Илмий кенгаш таркибига тегишли вазирликлар раҳбарлари ва масъул ходимлари, ЎзР Фанлар Академиясининг илмий-тадқиқот институтлари ва бошқа олий ўқув юртлари етакчи олимлари, тармоқ илмий-текшириш институтларининг илмий ходимлари, ишлаб чиқариш корхоналар раҳбарлари ва етакчи мутахассислари ҳам кириши мумкин. Илмий кенгаш шахсий таркиби ва котиби Марказ директори томонидан тасдиқланади. | 21. The Scientific Council is a scientific and scientific-organizational advisory body under the director of the Center.<br>The Scientific Council consists of researchers, doctoral students, masters, researchers and independent researchers providing research directions. The Scientific Council can include the heads and senior officials of relevant ministries, leading scientists of research institutes and other universities of the Academy of Sciences of the Republic of Uzbekistan, research workers of industry research institutes, heads and leading specialists of industrial enterprises. Staff and secretary of the Scientific Council are approved by the Director of the Center. According to the |

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| Лавозимга кўра Марказ директори илмий кенгаш раиси ҳисобланади. | position, the Director of the Center is the Chairman of the Scientific Council. |
| **V.ВАСИЙЛИК КЕНГАШИ** | **V. BOARD OF TRUSTEES** |
| 22. Васийлик кенгаши Марказ фаолиятини назорат қилувчи орган ҳисобланади. Инновацион ривожланиш вазирлиги билан келишган ҳолда Марказ фаолиятининг мақсади, асосий йўналиш ва вазифаларини белгилайди, инновацион, педагогик ва илмий фаолият ва моддий-техник таъминотини назорат қилади ҳамда мувофиқлаштиради.<br>Шу мақсадда, Васийлик кенгаши:<br>Марказ Уставини тасдиқлайди, унга ўзгартириш ва қўшимчалар киритади;<br>Марказнинг асосий мақсад ва вазифаларини амалга оширишда ёрдам кўрсатади;<br>Марказ лабораторияларида олиб бориладиган илмий изланишлар тематикасини ва инновацион ишланмаларнинг бирламчи йўналишларини аниқлашда иштирок этади;<br>Марказ томонидан амалга ошириладиган тажрибавий ва амалий илмий изланишлар, инновацион ишланмаларнинг амалга оширилиши учун буюртма олишини таъминлайди ва бу буюртмаларнинг бажарилишини назорат қилади;<br>Марказда ишлаш учун танлов асосида қабул қилинадиган Япония илмий ва таълим муассасалари талабларига жавоб берадиган ёш олимлар ва истиқболли илмий кадрларни танлаб олишда иштирок етади;<br>Марказнинг моддий техник ва молиявий таъминот ишларига кўмаклашади, моддий-техник базасини ривожлантиради, ходимлар таркибини юқори малакали олим, ўқитувчи ва мутахассислар билан мустаҳкамлайди;<br>илғор технологияларни татбиқ этишдан манфаатдор бўлган тадбиркорлик фаолияти субъектларининг маблағларини жалб этиш ҳисобига шакллантириладиган Марказни ривожлантириш жамғармасини тузишни ташкил этади; | 22. The Board of Trustees is the body that oversees the Center's activities. After agreement with the Ministry of innovation development, it determines the purpose, main directions and functions of the Center's activities, controls and coordinates innovation, pedagogical and scientific activities and material and Technical Supply.<br>To this end, the Trustee Board shall:<br>- Approve the Charter of the Center, make changes and additions to it;<br>- Assists in the implementation of the main goals and objectives of the Center;<br>- The scientific research conducted in the laboratories of the Center to identify priority areas of innovative work;<br>- Experimental and applied research carried out by the Center ensures receipt of applications for implementation of innovative developments and monitors the execution of these orders;<br>- Participates in the selection of young scientists and promising research staff who meet the requirements of Japanese scientific and educational institutions, which are selected on a competitive basis;<br>- Assists in logistics and financial support of the Center, develops logistical base, strengthens the staff with highly qualified scientists, teachers and specialists;<br>- organizes the development of the Center for Development of the Center, formed at the expense of attracting the funds of business entities interested in the introduction of advanced technologies;<br>- The Center controls the target used of money and its property. |

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| Марказ пул маблағлари, унинг мулкидан мақсадли фойдаланишини назорат қилади.<br>Япония илмий ва таълим муассасаларидан таклиф қилинган профессор ва ўқитувчиларига иш ҳақи ҳамда бошқа тўловлар миқдори Марказнинг Васийлик кенгаши томонидан Япония илмий ва олий таълим муассасалари ставкалари даражасида тасдиқланади ҳамда эркин айирбошланадиган валютада тўланади. | Salaries and other fees paid to professors and teachers from Japan's academic and educational institutions are approved by the Center's Board of Trustees at the rates of Japanese academic and higher education institutions and paid in freely convertible currency. |
| 23. Васийлик кенгаши, зарур ҳолларда, Марказ тузилмасига ходимларнинг тасдиқланган умумий сони доирасида ўзгартишлар киритиш ҳуқуқига эга. | 23. The Board of Trustees has the right, if necessary, to make changes to the structure of the Center within the approved total number of employees. |
| (New Article) | 24. The Board of Trustees shall have its meetings at least twice a year. |
| **VI. ХАЛҚАРО ҲАМКОРЛИК** | **VI. INTERNATIONAL COOPERATION** |
| 24. Марказ ўз фаолиятини Япония илмий ва таълим муассасалари билан ҳамкорликда амалга оширади.<br>Марказнинг чет эллик ходимлари таркибини япон томони белгилайди. | 25. The Center carries out its activities in cooperation with Japanese scientific and educational institutions. Its foreign staff is determined by the Japanese side. |
| 25. Марказ Япония илмий ва таълим муассасаларининг таълим соҳасидаги талаблари (илмий тадқиқотлар олиб боришни назарда тутувчи чуқурлаштирилган дастур асосида мутахассисларнинг юқори технологик инновацион ишланмаларда иштирок этиши) ҳамда Марказнинг асосий йўналишлари бўйича ёшлар таркибидан юқори малакали илмий ходимларни илмий даражалари бўйича танлаб олишни амалга оширади. | 26. The Center carries out the selection of highly qualified scientific staff from the youth of the Center based on the requirements of Japanese scientific and educational institutes (the participation of specialists in advanced technological innovations based on advanced research programs) and Center’s main direction. |
| 26. Марказ Япон томони тавсияси ва таклифига биноан, шунингдек улар билан келишилган ҳолда бошқа хориж давлатлари илмий ва таълим муассасалари ҳамда бошқа ташкилотлари билан ҳамкорлик қилади. | 27. The brand cooperates with scientific and educational institutions and other organizations of foreign countries on the recommendation and proposal of the Japanese side, as well as upon agreement with them. |

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| 27. Министерству инвестиций и внешней торговли Республики Узбекистан принять меры по привлечению грантов, средств технического и иного внешрего безвозмездного содействия международных финансовых институтов и организаций для оснащения Центра современным научно-исследовательским лабораторным оборудованием, в том числе необходимой лабораторной мебелью и приборами. | 28. Ministry of investments and foreign trade of the Republic of Uzbekistan shall take measures to attract grant funds, technical assistance and other external gratuitous assistance of international financial institutions in order to provide the Center with modern scientific and research laboratory equipment, including necessary laboratory devices and furniture |
| **VII.МАРКАЗ ФАОЛИЯТИНИ МОЛИЯЛАШТИРИШ МАНБАЛАРИ** | **VII.FINANCE SOURCES OF CENTER'S ACTIVITY** |
| 28. Ўзбекистон Республикаси Давлат бюджетининг жорий таъминот учун ажратиладиган маблағлари, Ўзбекистон Республикаси Инновацион ривожланиш вазирлиги ҳамда Олий ва ўрта махсус таълим вазирлиги томонидан ўтказиладиган танловларнинг натижалари бўйича ажратиладиган грантлар, хўжалик фаолиятидан ва шартнома асосида ўтказиладиган тадқиқотлардан тушадиган маблағлар, шунингдек халқаро молия ва бошқа ташкилотларнинг, чет эл ҳукумат ташкилотларининг грантлари, қонун ҳужжатларида тақиқланмаган бошқа манбалар Марказ фаолиятини молиялаштириш манбалари ҳисобланади.<br>Марказнинг фундаментал, амалий ва инновацион лойиҳаларини молиялаштириш манбаи Ўзбекистон Республикаси Инновацион ривожланиш вазирлиги ҳузуридаги Инновацион ривожланиш ва новаторлик ғоялари жамғармаси маблағлари ва қонун ҳужжатларида тақиқланмаган бошқа манбалар ҳисобланади. | 29. Current state budget funds, grants from the Ministry of Innovative Development and Ministry of Higher and Secondary Special Education of the Republic of Uzbekistan, grants from economic and contractual research, as well as international financial and other organizations, foreign governments the form of grants, and other sources not prohibited by the legislation are sources of financing the activities of the Center.<br>The source of financing of fundamental, applied and innovative projects is the Fund of Innovative Development and Innovation Ideas under the Ministry of Innovation Development of the Republic of Uzbekistan and other sources not prohibited by the legislation. |
| 29. Марказ илғор технологияларни татбиқ этишдан манфаатдор бўлган тадбиркорлик фаолияти субъектларининг маблағларини жалб этиш ҳисобига шакллантириладиган Марказни ривожлантириш жамғармасига эга бўлади. | 30. The Center will have the Center Development Fund, which will be formed at the expense of attracting the funds of business entities interested in the introduction of advanced technologies. |

| VIII. МАРКАЗ БИНОСИ ВА МУЛКИ | VIII.CENTRER'S BUILDING AND PROPERTY |
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| 30. Марказ Тошкент шаҳар, Университет кўчаси, 2 («Б» блоки) манзилида жойлашган ТДТУ биносида жойлашган.<br>Марказ ўз фаолиятини олиб бориши учун зарур бўлган мебель, компьютерлар, ташкилий техника ва инвентарлар билан жиҳозланади. Илмий-лаборатория ускуналари ва приборларига, шунингдек автотранспорт воситаларига эга. Уларнинг барчаси Марказ мулки бўлиб ҳисобланади. | 31. The center is located in the building of the Tashkent State Technical University, 2, University Street, (B block). The center is equipped with furniture, computers, office equipment and inventory necessary for its activities. Pulse equipment and instrument, as well as the right automobiles. All of them are the property of the Center. |
| 31. Давлат мулки бўлган ва Марказга бириктириб қўйилган мол-мулк тўла хўжалик юритиш ҳуқуқи асосида унга тегишлидир.<br>Марказ ўз мол-мулки билан тўла хўжалик юритиш ҳуқуқини амалга оширар экан, мазкур мулкка эгалик қилади, ундан фойдаланади ва тасарруф этади, унга нисбатан ўз хоҳиши билан қонунга зид келмайдиган ҳар қандай ҳаракатларни амалга оширади. | 32. Property owned by the state and attached to the Center belongs to it on the basis of the right of full economic management.<br>The Center owns, uses and disposes of this property while exercising the right of full economic management of its property, and undertakes any actions in relation to it at its discretion. |
| 32. Марказ фаолиятидан келган даромадлар ҳисобидан орттирилган мол-мулклар ҳам унинг мулки ҳисобланиб, мазкур мулкка эгалик қилади, ундан фойдаланади ва тасарруф этади, унга нисбатан ўз хоҳиши билан қонунга зид келмайдиган ҳар қандай ҳаракатларни амалга оширади. | 33. The property gained from the income of the Center is also its property, which owns, uses and disposes of it, and undertakes any actions that do not contradict the law. |
| 33. Марказ мулки ходимлар ўртасида тақсимланиши мумкин эмас. | 34. The property of the Center may not be distributed among employees. |
| **IX. МАРКАЗ ДАРОМАДИНИ ТАҚСИМЛАШ** | **IX. DISTLIBUTION OF CENTER'S INCOME** |
| 34. Бюджет ва бюджетдан ташқари фондларга барча солиқлар ва бошқа мажбурий тўловлар тўланганидан кейин Марказда қоладиган фойда унинг ихтиёрида қолади ҳамда ундан Марказ эҳтиёжлари учун тегишли тартибда фойдаланилади. | 35. After payment of all taxes and other obligatory payments to the budget and extra-budgetary funds, the profit remaining in the Center remains at his disposal and is used in accordance with the needs of the Center. |
| 35. Марказ фойда ҳисобидан Уставда назарда тутилган тартибда ва | 36. The center can organize reserve funds and other funds from the profit account in |

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| Васийлик кенгаши томонидан тасдиқланган миқдорларда заҳира фонди ва бошқа фондларни ташкил этиши мумкин. | accordance with the procedure provided for in the amounts approved by the charter and the Board of Trustees |
| **X. ҲИСОБОТ БЕРИШ ТАРТИБИ** | **X. REPORTING PROCEDURE** |
| 31. Марказ қонунларда ўрнатилган тартибда барча турдаги ҳисоботларни олиб боради ва тегишли тартибда тақдим этади. | 37. The Center maintains and submits all types of reports in the manner prescribed by law. |
| 32. Ҳисобот даври тугаганидан кейин Марказ ваколатли органларга молиявий ҳисобот ва рўйхат, қонунчиликда белгиланган бошқа ҳужжатларни тақдим этади, ҳамда ҳужжатларнинг сақланишига ва уларни белгиланган тартибда сақлаш учун топширилишига жавобгар. | 38. At the end of the reporting period, the Center shall submit to the competent authorities financial statements and lists, and other statutory documents prescribed by law, and shall be responsible for safekeeping and depositing such documents. |
| 33. Марказнинг хўжалик юритувчи субъект сифатидаги фаолияти устидан назорат Васийлик кенгаши ва бошқа ваколатли органлар томонидан қонунчиликда белгиланган тартибда амалга оширилади. | 39. Control over the Center as an economic entity is carried out by the Board of Trustees and other authorized bodies in the manner prescribed by law. |
| 34. Марказ директори йил якуни бўйича Марказ фаолияти натижалари тўғрисида Васийлик кенгашига ҳисобот беради. | 40. The Director of the Center will report to the Board of Trustees on the results of the year. |
| **XI. МАРКАЗНИНГ ЖАВОБГАРЛИГИ** | **XI. CENTER'S RESPONSIBILITY** |
| 35. Марказ ўз мажбуриятлари бўйича унга тегишли мулк асосида жавоб беради. | 41. The Center is responsible for its obligations based on the property belonging to it. |
| 36. Марказ ўз муассисларининг мажбуриятлари бўйича жавобгар эмас. | 42. The Center is not responsible for the obligations of its founders. |
| **XII. МАРКАЗНИ ҚАЙТА ТУЗИШ ВА ТУГАТИШ** | **XII. CENTER'S REORGANIZATION AND TERMINATION** |
| 37. Марказ Ўзбекистон Республикаси Президенти қарори билан қайта тузилиши ёки тугатилиши мумкин. | 43. The Center may be reorganized or liquidated by the decision of the President of the Republic of Uzbekistan. |
| 38. Марказ фаолияти Ўзбекистон Республикаси қонунларида белгиланган тартибда ҳам тугатилиши мумкин. | 44. The activity of the Center may be terminated in the manner prescribed by the legislation of the Republic of Uzbekistan. |

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## Введение

На протяжении всей истории человечества жизнь человека и уровень его благосостояние постоянно менялись в зависимости от научного развития общества и технического прогресса, видов и качества используемых им вещей, технических средств.

В современных условиях рост экономическое развитие каждой страны зависит от научно-технического прогресса. В свою очередь научно-технический прогресс невозможен без развития науки, расширения сферы научных знаний и разработок. Таким образом, состояние науки в обществе и государстве отражают уровень их интеллектуального развития.

В Республике Узбекистан это признано на законодательном уровне, показателем которого стало принятие Закона «О науке и научной деятельности» от 29.10.2019г. №ЗРУ-576, ст.4 которого определяет, что основными направлениями сферы науки и научной деятельности являются:

**достижение конкурентоспособности и эффективности национальной экономики посредством развития науки и научной деятельности**;

определение приоритетных направлений развития науки и технологий и целевое направление ресурсов;

разработка государственных научных программ, поддержка обоснованных инициатив и проектов;

поддержка государственно-частного партнерства в сфере науки и научной деятельности;

**формирование среды устремленности к науке и ее привлекательности, привлечение молодежи к научной деятельности,** подготовка молодых талантов;

**охрана прав на объекты интеллектуальной собственности**;

разумное повышение финансирования сферы науки и научной деятельности;

обеспечение тесной интеграции науки, образования и производства, повышение заинтересованности в ней;

обеспечение тесной интеграции сферы науки и научной деятельности с информационным пространством;

развитие международного сотрудничества в сфере науки и научной деятельности.

В развитие данного Закона был принят еще один: Закон Республики Узбекистан «Об инновационной деятельности» от 24.07.2020г. №ЗРУ-630, ст.3 которого вводит следующие понятия:

- инновационная деятельность — деятельность **по созданию новых разработок**, а также обеспечению их передачи и реализации в сферу производства;

- инновация — введенная в гражданский оборот или используемая для собственных нужд **новая разработка**, применение которой на практике обеспечивает достижение значительного социально-экономического эффекта;

- **новая разработка — результат интеллектуальной деятельности (новая или усовершенствованная технология, услуга и организационно-**

**техническое решение** производственного, административного, коммерческого или иного характера), **обладающий признаками новизны по сравнению с существующими аналогами, практической применимости** и способности обеспечить достижение значительного социально-экономического эффекта при его использовании на практике.

Следует отметить, что анализ понятия «новая разработка» очевидно свидетельствует об его идентичности понятию «изобретение», рассматриваемого в рамках настоящей работы.

В этой связи, задачей каждого цивилизованного государства является создание необходимых для условий для развития науки в целях обеспечения дальнейшего научно-технического прогресса, в том числе формирование законодательной базы об интеллектуальной собственности с целью стимулирования создания, использования, активного введения в гражданский оборот и правовой охраны научных разработок, их авторов и правообладателей.

Данная работа представляет собой Руководство (Guidlines) с изложением краткой характеристики регламентируемого законодательством Республики Узбекистан понятия интеллектуальной собственности и объектов интеллектуальной собственности. При этом основная задача данного Руководства сводилась к освещению вопросов, связанных с правовой охраной, патентованием и использованием разновидности объектов интеллектуальной собственности: изобретения и полезные модели.

Выбор данной тематики предопределен тем, что именно данные объекты могут быть созданы в процессе научной деятельности, осуществляемой Узбекско-Японским молодежным инновационным центром (UJICY), по инициативе которого данное Руководство было разработано.

## Глава 1. Понятие интеллектуальной собственности

1.1. Законодательство Республики Узбекистан не содержит определение понятия интеллектуальной собственности.

Понятие интеллектуальной собственности по законодательству РУз раскрывается через определение перечня объектов интеллектуальной собственности.

Согласно ст.1031 ГК РУз к **объектам интеллектуальной собственности** относятся**:**

1) результаты интеллектуальной деятельности:
произведения науки, литературы и искусства;
исполнения, фонограммы, передачи организаций эфирного или кабельного вещания;
программы для электронных вычислительных машин (далее — ЭВМ) и базы данных;
изобретения, полезные модели, промышленные образцы;
селекционные достижения;
нераскрытая информация, в том числе секреты производства (ноу-хау);

2) средства индивидуализации участников гражданского оборота, товаров, работ и услуг:
фирменные наименования;
товарные знаки (знаки обслуживания);
наименования мест происхождения товаров;

3) другие результаты интеллектуальной деятельности и средства индивидуализации участников гражданского оборота, товаров, работ и услуг в **случаях, предусмотренных настоящим Кодексом или иными законами**.

Объекты, не упомянутые в первых двух группах объектов ИС, равно как и новые объекты результатов интеллектуальной собственности и средств индивидуализации могут быть отнесены к числу охраняемых объектов только путем **принятия закона о внесении изменений и дополнений в ГК или отдельного закона.**

В качестве примера, можно привести **топологии интегральных микросхем**, правовое регулирование которых осуществляется Законом РУз «О правовой охране топологии интегральных микросхем» **от 12.05.2001г. №218-II**.

Таким образом, отличительным признаком объектов ИС, предусмотренных ст.1031 ГК РУз, от других результатов интеллектуальной деятельности и средств индивидуализации является предоставление им правовой охраны. Объекты, не включенные в вышеуказанный перечень, не пользуются правовой охраной.

В соответствии со ст.1032 ГК правовая охрана объектов интеллектуальной собственности возникает в силу:

- **факта их создания** (произведения науки, литературы и искусства; исполнения, фонограммы, передачи организаций эфирного или кабельного вещания; программы для электронных вычислительных машин (далее — ЭВМ) и базы данных);

- либо **вследствие предоставления правовой охраны** уполномоченным государственным органом в случаях и в порядке, предусмотренных настоящим Кодексом или другими законами (изобретения, полезные модели, промышленные образцы; селекционные достижения; товарные знаки (знаки обслуживания); наименования мест происхождения товаров).

Специфику имеют условия предоставления правовой охраны фирменным наименованиям и нераскрытой информации, которые определяются законом.

В соответствии с наименованием главы 62 ГК РУз и ст.1 Закона РУз «Об изобретениях, полезных моделях и промышленных образцах» от 29.08.2002г. №397-II изобретения, полезные модели, промышленные образцы объединены одним общим названием **«промышленная собственность»**, являющейся разновидностью объектов интеллектуальной собственности.

При этом из ч.1 ст.97 ГК РУз следует, что **средства индивидуализации** (фирменное наименование, товарный знак, знак обслуживания и т.п.) **приравнены к результатам интеллектуальной собственности**.

1.2. Согласно ст.97 ГК РУз на объективно выраженные результаты интеллектуальной деятельности и приравненные к ним средства индивидуализации признается **исключительное право** гражданина или юридического лица. Использование результатов интеллектуальной деятельности и средств индивидуализации, которые являются объектом исключительных прав, может осуществляться третьими лицами только с разрешения правообладателя.

Заслуживает внимание тот факт, что ст.97 ГК помещена в главу 8, именуемой «нематериальные блага».

Таким образом, **интеллектуальной собственностью по законодательству Республики Узбекистан являются результаты интеллектуальной деятельности и приравненные к ним средства индивидуализации, являющиеся нематериальными активами**. На объекты интеллектуальной собственности возникает не право собственности, а исключительные права, принадлежащие правообладателю. При этом отчуждаемыми (предметом сделок) являются не сами объекты, а права на объекты.

1.3. На международном уровне определение и перечень объектов интеллектуальной собственности регламентируется Конвенцией учреждающей Всемирную организацию интеллектуальной собственности (Стокгольм, 14.07.1967г., вступила в силу в 1970г. ВОИС является межправительственной

организацией. Республика Узбекистан применяет Конвенцию с 25.12.1991г., о чем было заявлено 05.05.1993г.

Согласно п.viii ст.2 Конвенции ВОИС «интеллектуальная собственность» включает **права, относящиеся к:**

литературным, художественным и научным произведениям,

исполнительской деятельности артистов, звукозаписи, радио и телевизионным передачам,

изобретениям во всех областях человеческой деятельности,

**научным открытиям**,

промышленным образцам,

товарным знакам, знакам обслуживания, фирменным наименованиям и **коммерческим обозначениям**,

**защите против недобросовестной конкуренции**,

а также все другие права, относящиеся к интеллектуальной деятельности в производственной, научной, литературной и художественной областях.

Сравнительный анализ ст.2 Конвенции ВОИС и ст.1031 ГК РУз показывает, что:

- Республика Узбекистан предоставляет правовую охрану **полезным моделям и селекционным достижениям**, а также **наименования мест происхождения товара** и **ноу-хау**, которые прямо не упомянуты в Конвенции ВОИС;
- Конвенция ВОИС относит к объектам интеллектуальной собственности **научные открытия**, которые не включены в перечень охраняемых объектов ИС в РУз;
- Конвенция ВОИС предусматривает в качестве объекта **коммерческие обозначения**, которые законодательством РУз не предусмотрены;
- права, относящиеся к защите против недобросовестной конкуренции, Конвенция ВОИС также относит к объектам интеллектуальной собственности. Между тем Республика Узбекистан данные права не относит к объектам интеллектуальной собственности, и они составляют предмет отдельного правового регулирования в соответствии с Законом РУз «О конкуренции» от 06.01.2012г. №ЗРУ-319.

Таким образом, имеются отличия между Конвенцией ВОИС и законодательством РУз.

В научной литературе имеется точка зрения о том, что Стокгольмская конвенция (Конвенция ВОИС) не имела целью определить понятийный аппарат и обеспечить его повторение в законодательстве стран-участниц. Ее цель – создание международной организации – Всемирной организации интеллектуальной собственности, определение задач, принципов деятельности организации. В противном случае могут быть выявлены расхождения в терминологии Конвенции с другими международными договорами, например,

Соглашением ТРИПС [1] , которое дает иное понимание интеллектуальной собственности и прав на нее.[2]

По состоянию на 01.12.2021г. Республика Узбекистан не является членом ВТО и соответственно не является участником Соглашения ТРИПС[3].

1.4. Краткое изложение каждого объекта интеллектуальной собственности:

| п/н | Наименование объекта | Понятие | Особенности правовой охраны |
|---|---|---|---|
| 1. | Объекты авторского права: произведения науки, литературы и искусства | К объектам авторского права относятся (ст.1042 ГК РУз):<br>- литературные произведения (литературно-художественные, научные, учебные, публицистические и т. п.);<br>- драматические и сценарные произведения;<br>- музыкальные произведения с текстом и без текста;<br>- музыкально-драматические произведения;<br>- хореографические произведения и пантомимы;<br>-аудиовизуальные произведения;<br>- произведения живописи, скульптуры, графики, дизайна и другие произведения изобразительного искусства;<br>- произведения декоративно-прикладного и сценографического искусства;<br>- произведения архитектуры, градостроительства и садово-паркового искусства;<br>- фотографические произведения и произведения, полученные способами, аналогичными фотографии;<br>- географические, геологические и другие карты, планы, эскизы и произведения, относящиеся к географии, топографии и другим наукам;<br>- программы для электронно-вычислительных машин (ЭВМ) всех видов, включая прикладные программы и операционные системы;<br>-другие произведения, отвечающие требованиям, установленным ст.1041 Кодекса (см.примечание). | Авторское право на произведение науки, литературы и искусства возникает **в силу факта его создания**.<br>Для возникновения и осуществления авторского права не требуется регистрации произведения или соблюдения каких-либо иных формальностей (ст.10 Закона РУз «Об авторском праве и смежных правах» от 20.07.2006г. №3РУ-42).<br><br>Авторское право распространяется на форму выражения, а не на идеи, принципы, методы, процессы, системы, способы или концепции как таковые (ч.3 ст.1041 ГК РУз). |
| 2. | Программа для ЭВМ, база данных (разновидность объектов авторского права), регулируемых отдельным **Законом РУз «О правовой охране программ для электронных** | Программа для ЭВМ – совокупность данных и команд, выраженных в объективной форме и предназначенных для функционирования ЭВМ, сетей ЭВМ и других компьютерных средств с целью получения определенного результата (ст1 Закона) | Авторское право на программы ЭВМ и базы данных **возникает в силу их создания** (ст4 Закона).<br>Допускается на добровольной основе их регистрация в **Агентстве по интеллектуальной** |

[1] Соглашение ТРИПС – сокращенное наименование Соглашения по торговым аспектам прав интеллектуальной собственности, документ, участниками которого являются государства-члены ВТО. Текст Соглашения на сайте ВОИС (wipolex.wipo.int)

[2] Право интеллектуальной собственности. Учебник. Том 1. Общие положения. Под общей редакцией Л.А.Новоселовой. М.Статут-2017г. С.45.

[3] Соглашение ТРИПС относит к объектам интеллектуальной собственности географические указания, не предусмотренные законодательством Республики Узбекистан и Конвенцией ВОИС.

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| | **вычислительных машин и баз данных» от 06.05.1994г. №1060-XII** | База данных – совокупность данных (например: статей, расчетов), выраженных в объективной форме и систематизированных таким образом, чтобы эти данные могли быть найдены и обработаны с помощью ЭВМ | **собственности** (ст.9 Закона) |
| 3. | Объекты смежных прав: исполнения,<br>фонограммы,<br>передачи организаций эфирного или кабельного вещания; | Понятия приведены в ст.3 Закона РУз «Об авторском праве и смежных правах» от 20.07.2006г. №3РУ-42:<br>Исполнение – представление произведения (в том числе произведения народного творчества), фонограммы, исполнения, постановки посредством игры, декламации, пения, танца, в живом исполнении или с помощью технических средств;<br>Фонограмма – любая исключительно звуковая запись какого-либо исполнения, иных звуков, за исключением звуковой записи, включенной в аудиовизуальное произведение;<br>Передача в эфир – сообщение произведений или объектов смежных прав для всеобщего сведения посредством их передачи по радио или телевидению, в том числе через спутники (за исключением кабельного телевидения) | Для возникновения и осуществления смежных прав не требуется регистрации объекта смежных прав или соблюдения каких-либо иных формальностей (ст.45 Закона РУз «Об авторском праве и смежных правах» от 20.07.2006г. №3РУ-42) |
| 4. | изобретения, полезные модели, промышленные образцы (общее название объекты промышленной собственности) | В качестве изобретения и полезной модели признается техническое решение в любой области, относящейся к продукту или способу (ст.6, 7 Закона РУз «Об изобретениях, полезных моделях и промышленных образцах» от 29.08.2002г. №397-II).<br>Условия патентоспособности изобретения: новизна, изобретательский уровень и промышленная применимость.<br>Условия патентоспособности полезных моделей новизна и промышленная применимость<br>Отличия между изобретением и полезной моделью в том, что в условиях патентоспособности для полезных моделей не предусмотрен изобретательский уровень.<br>Подробнее в следующих главах Руководства.<br>К промышленным образцам относится художественно-конструкторское решение изделия, определяющее его внешний вид (ст.8 Закона РУз «Об изобретениях, полезных моделях и промышленных образцах» от 29.08.2002г. №397-II) | Права на объекты промышленной собственности удостоверяются **патентом**, **т.е. требуется их госрегистрация**.<br>**Патент выдается Агентством по интеллектуальной собственности** (ст.1082 ГК РУз, ч.1 ст.5 Закона РУз «Об изобретениях, полезных моделях и промышленных образцах» от 29.08.2002г. №397-II) |
| 5. | Селекционные достижения (новый сорт растений, новая порода животных) | Понятия приведены в ст.2 Закона РУз «О селекционных достижениях» от 29.08.2002г. №395-II:<br>- порода – группа животных (в том числе птиц, насекомых, тутового шелкопряда) или их гибридов, которая определяется генетически обусловленными биологическими и морфологическими свойствами и признаками, причем некоторые из них специфичны для данной группы и отличает ее от других | Охрана предоставляется путем выдачи патента, т.е. требуется госрегистрация.<br>**Патент выдается Агентством по интеллектуальной собственности** (ст.1091 ГК РУз, ст.4 Закона РУз «О селекционных достижениях» от |

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| | | групп животных.<br>Охраняемые объектами породы являются породная группа, внутрипородный (зональный) тип, заводской тип, заводская линия, семейство, партеноклоны, линии, гибриды;<br><br>Сорт – группа растений, которая определяется признаками, стойко передаваемыми по наследству характеризующими данный генотип или комбинацию генотипов, и отличается от других групп растений такого же ботанического таксона одним или несколькими признаками.<br>Охраняемыми объектами являются клон, линия, гибрид первого поколения, популяция. | 29.08.2002г. №395-II). |
| 6. | нераскрытая информация, в том числе секреты производства (ноу-хау); | Лицо, правомерно обладающее **технической, организационной или коммерческой информацией, в том числе секретами производства (ноу-хау)**, неизвестной третьим лицам (нераскрытая информация), имеет право на защиту этой информации от незаконного использования, если соблюдены условия, установленные ст.98 ГК (ст.1095 ГК).<br><br>Согласно ст.98 ГК РУз гражданским законодательством защищается **информация, составляющая служебную и коммерческую тайну**, в случае, когда:<br>- информация имеет действительную или потенциальную коммерческую ценность в силу неизвестности ее третьим лицам,<br>- к ней нет свободного доступа на законном основании<br>- обладатель информации принимает меры к охране ее конфиденциальности.<br><br>Дополнением к регулированию данного объекта служит **Закон РУз «О коммерческой тайне» от 11.09.2014г. №ЗРУ-374**, согласно ст.3 которого:<br>**коммерческая тайна** — информация, имеющая коммерческую ценность в научно-технической, технологической, производственной, финансово-экономической и других сферах в силу неизвестности ее третьим лицам, к которой нет свободного доступа на законном основании и собственник этой информации принимает меры по защите ее конфиденциальности;<br>**конфиденциальность коммерческой тайны** — состояние коммерческой тайны, при котором обеспечена ее безопасность от утечки, разглашения и несанкционированного доступа; | Право на защиту нераскрытой информации от незаконного использования:<br>- возникает независимо от выполнения в отношении этой информации каких-либо формальностей (ее регистрации, получения свидетельств и т. п.);<br>- действует до тех пор, пока сохраняются условия, предусмотренные ст.98 ГК РУз. |
| 7. | фирменные наименования | Фирменным наименованием является индивидуальное название юридического | Правовая охрана фирменного наименования |

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| | | лица — коммерческой организации (далее — юридическое лицо), исключительное право на которое возникает в момент его государственной регистрации.<br>Юридическое лицо наряду с полным фирменным наименованием может иметь и сокращенное фирменное наименование (ст.3 Закона РУз «О фирменных наименованиях» от 18.09.2006г. №3РУ-51). | предоставляется **с момента государственной регистрации юридического лица,** а в отношении фирменного наименования иностранного юридического лица — с **даты начала осуществления иностранным юридическим лицом деятельности** в качестве участника гражданского оборота **на территории Республики Узбекистан** (ст.5 Закона РУз «О фирменных наименованиях» от 18.09.2006г. №3РУ-51). |
| 8. | товарные знаки (знаки обслуживания) | Товарный знак и знак обслуживания (далее — товарный знак) — это зарегистрированное в установленном порядке обозначение, служащее для отличия товаров и услуг (далее — товаров) одних юридических и физических лиц от однородных товаров других юридических и физических лиц.<br>В качестве товарных знаков могут быть зарегистрированы изобразительные, словесные, объемные и другие обозначения или их комбинации в любом цвете или цветовом сочетании (ст.3 Закона РУз «О товарных знаках, знаках обслуживания и наименованиях мест происхождения товаров» от 30.08.2001г. №267-II).<br><br>Товарные знаки могут быть индивидуальными и коллективными.<br><br>Индивидуальным знаком является товарный знак, принадлежащий отдельному юридическому или физическому лицу.<br><br>Коллективным знаком является товарный знак объединения юридических и (или) физических лиц, предназначенный для обозначения выпускаемых и (или) реализуемых ими товаров, обладающих едиными качественными или иными общими характеристиками. | Правовая охрана товарного знака предоставляется на основании его регистрации.<br>**Регистрацию осуществляет Агентство по интеллектуальной собственности.**<br>Свидетельство на товарный знак удостоверяет факт регистрации заявленного в качестве товарного знака обозначения, приоритет товарного знака и исключительное право владельца на товарный знак в отношении товаров, указанных в свидетельстве (ст.4, 20 Закона РУз «О товарных знаках, знаках обслуживания и наименованиях мест происхождения товаров» от 30.08.2001г. №267-II). |
| 9. | наименования мест происхождения товаров; | Наименованием места происхождения товара признается название страны, населенного пункта, местности или другого географического объекта (далее — географический объект), используемое для обозначения товара, особые свойства которого исключительно или главным образом определяются характерными для | Правовая охрана предоставляется на основании его регистрации.<br>**Регистрацию осуществляет Агентство по интеллектуальной собственности.**<br>Свидетельство на |

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| | | данного географического объекта природными условиями или иными факторами либо сочетанием природных условий и этих факторов (ст.5 Закона РУз «О товарных знаках, знаках обслуживания и наименованиях мест происхождения товаров» от 30.08.2001г. №267-II). | удостоверяет факт регистрации заявленного в качестве наименования места происхождения товара обозначения и право владельца свидетельства на его использование в отношении вида товара, указанного в свидетельстве.<br>(ст.6, 20 Закона РУз «О товарных знаках, знаках обслуживания и наименованиях мест происхождения товаров» от 30.08.2001г. №267-II). |
| 10. | Топологии интегральных микросхем | Понятия приведены в **Законе РУз «О правовой охране топологии интегральных микросхем» от 12.05.2001г. №218-II (ст.2):**<br>**интегральная микросхема** — микроэлектронное изделие в окончательной или промежуточной форме, предназначенное для выполнения электронной функции, в котором элементы, по меньшей мере один из которых является активным, и некоторые или все взаимосвязи нераздельно сформированы в объеме и (или) на поверхности материала, на основе которого изготовлено это изделие;<br>**топология интегральной микросхемы** — зафиксированное на материальном носителе пространственно-геометрическое расположение совокупности элементов интегральной микросхемы и связей между ними; | Объектом правовой охраны топологий интегральных микросхем является оригинальная топология интегральной микросхемы (далее — топология), **зарегистрированная** в порядке, установленном настоящим Законом.<br>Правовая охрана не распространяется на идеи, способы, системы, технологию или закодированную информацию, которые могут быть воплощены в топологии.<br>**Регистрация осуществляется Агентством по интеллектуальной собственности** и подтверждается выданным **свидетельством (ст.3, 13** Закона РУз «О правовой охране топологии интегральных микросхем» от 12.05.2001г. №218-II) |

## Глава 2. Источники правового регулирования отношений в области правовой охраны объектов промышленной собственности

Правовое регулирование отношений в области правовой охраны и использования промышленной собственности в РУз осуществляется следующими нормативно-правовыми актами:

1) ГК РУз (глава 62). Данная глава содержит всего 9 статей (ст.1082-1090) и определяет общие условия правового регулирования изобретений;

2) Закон РУз «Об изобретениях, полезных моделях и промышленных образцах» от 29.08.2002г. №397-II (далее – Закон).

3) иными актами законодательства. К ним относятся подзаконные нормативно-правовые акты. В частности:

3.1. регулирующие правила патентования:

- Правил составления, подачи и рассмотрения заявки на выдачу патента Республики Узбекистан на изобретение (рег. № 1329 от 22.03.2004 г., далее - Правила);
- Правил составления, подачи и рассмотрения заявки на выдачу патента Республики Узбекистан на полезную модель (рег. № 1343 от 29.04.2004 г.);
- Правил составления, подачи и рассмотрения заявки на выдачу патента Республики Узбекистан на промышленный образец (рег. № 1361 от 20.05.2004 г.);
- Правила продления действия патента Республики Узбекистан на полезную модель, промышленный образец и изобретение, относящееся к лекарственному средству или пестициду (рег. № 1678 от 05.05.2007 г.);
- Правила восстановления действия патента на объект промышленной собственности (рег.№1937 от 07.04.2009г.);
- Правила регистрации договоров о передаче права на изобретение, полезную модель, промышленный образец, селекционное достижение, товарный знак, знак обслуживания и лицензионных договоров на их использование, договоров о полной или частичной передаче права на топологию интегральной микросхемы, полной или частичной уступке всех имущественных прав и передаче имущественных прав на программу для электронных вычислительных машин, базу данных (рег.№1481 от 17.06.2005г.)

3.2. НПА, регулирующие положение субъектов правоотношений (уполномоченного государственного органа, представителей – патентных поверенных):

- Постановление Президента РУз от 01.07.2019г. №ПП-4380 «О мерах по организации деятельности Агентства по интеллектуальной собственности при Министерстве юстиции»;
- Положение об АИС, утвержденное ПКМ РУз от 20.07.2019г. №609;
- Положение об Апелляционном совете Министерства юстиции РУз от 09.10.2019г. №856;
- Положение о патентных поверенных, утвержденное ПКМ РУз от 01.07.2003г. №298;

- Правила аттестации и регистрации кандидатов в патентное представительство и аттестации патентных представителей (рег.№3203 от 13.12.2019г.).

Следует отметить, что пунктом 7 «Дорожной карты» по укреплению охраны интеллектуальной собственности и внедрению современных информационно-коммуникационных технологий (приложение №1 к Постановлению Президента РУз от 28.01.2021г. №ПП-4965 «О мерах по совершенствованию системы охраны объектов интеллектуальной собственности» **предусмотрена разработка Кодекса интеллектуальной собственности РУз** (срок разработки декабрь 2022г., разработчики Агентство по интеллектуальной собственности и Министерство инновационного развития).

Важнейшими источниками правового регулирования охраны промышленной собственности являются международные договора, участником которых является Республика Узбекистан.

Закон **«О международных договорах Республики Узбекистан»** от 06.02.2019г. №ЗРУ-518 определяет значение международных договоров в правовой системе РУз:

1) международные договоры Республики Узбекистан наряду с общепризнанными принципами и нормами международного права **являются составной частью правовой системы Республики Узбекистан (ст.3)**;

2) если международным договором Республики Узбекистан установлены **иные правила**, чем те, которые предусмотрены законодательством Республики Узбекистан, то **применяются правила международного договора Республики Узбекистан (ч.3 ст.2)**.

Принцип преимущественной силы правил международного договора над нормами национального законодательства РУз также установлен ч.2 ст.2 Закона от 29.08.2002г. №397-II.

Республика Узбекистан является участником следующих международных договоров в сфере охраны промышленной собственности:

1) Парижской конвенции по охране промышленной собственности от 20 марта 1883 года, пересмотренная в Брюсселе 14 декабря 1900 г., в Вашингтоне 2 июня 1911 г., в Гааге 6 ноября 1925 г., в Лондоне 2 июня 1934 г., в Лиссабоне 31 октября 1958 г. и в Стокгольме 14 июля 1967 г. и измененная 2 октября 1979 г.

По состоянию на 05.11.2021г. участниками Парижской Конвенции являются 178 государств.

РУз является участником Парижской Конвенции с 25.12.1991г.

2) Вашингтонский Договор о патентной кооперации (Patent Cooperation Treaty – PCT), подписанный в Вашингтоне 19 июня 1970 г., пересмотренный 28 сентября 1979 г., измененный 3 февраля 1984 г. и 3 октября 2001 г.

По состоянию на 05.11.2021г. участниками Вашингтонского договора являются 153 государства

РУз является участником Вашингтонского договора с 25.12.1991г.

3) Договор о патентном праве (Patent Law Treaty – PLT), одобренной 01.06.2000г. на Дипломатической конференции в Женеве.

По состоянию на 05.11.2021г. участниками Вашингтонского договора являются 43 государства

РУз является участником PLT с 19.07.2006г. в соответствии с Законом РУз «О присоединении РУз к Договору о патентном праве, принятому на Дипломатической конференции 01.06.2000г. в Женеве» от 15.03.2006г. №ЗРУ-25.

4) Страсбургское соглашение о Международной патентной классификации 1971г. (с изменениями от 28.09.1979г.).

По состоянию на 05.11.2021г. участниками Страсбургского соглашения являются 64 государства.

РУз является участником с 12.10.2002г. в соответствии с Постановлением Олий Мажлиса РУз «О присоединении РУз к Страсбурскому соглашению о международной патентной классификации от 30.08.2001г. №276-II.

Важным аспектом является членство Республики Узбекистан во Всемирной организации интеллектуальной собственности (ВОИС, WIPO), в состав которого входят 193 государства

## Глава 3. Понятие изобретения, условия патентоспособности изобретения

3.1. Раскрытие понятия изобретения.

Закон указывает, что **в качестве изобретения признается техническое решение** в любой области, относящееся к продукту или способу (ч.8 ст.6 Закона).

Закон и Правила используют понятие «сущность изобретения».

Важнейшие положения, определяющие сущность изобретения, содержатся в п.29 Правил, предусматривающих:

- сущность изобретения выражается **совокупностью существенных признаков**, достаточной для достижения обеспечиваемого изобретением **технического результата**;
- признаки относятся к существенным, если они влияют на достигаемый **технический результат**, т.е. находятся в причинно-следственной связи с указанным результатом;
- в разделе описания «сущность изобретения» подробно раскрывается **задача, на решение которой направлено заявляемое изобретение**, с указанием технического результата, который может быть получен при осуществлении изобретения;
- технический результат представляет собой **характеристику технического эффекта**, свойства, явления и т. п., которые могут быть получены при осуществлении (изготовлении) или использовании средства, воплощающего изобретение.

Таким образом, изобретением является техническое решение задачи с целью достижения технического результата.

В этой связи, следует констатировать, что ключевое значение имеет именно технический результат, без достижения которого изобретения не имеет смысла.

Технический результат может выражаться, в частности:

- в снижении (повышении) коэффициента трения;
- в предотвращении заклинивания;
- снижении вибрации;
- в улучшении кровоснабжения органа;
- локализации действия лекарственного препарата, снижении его токсичности;
- в устранении дефектов структуры литья;
- в улучшении контакта рабочего органа со средой;
- в уменьшении искажения формы сигнала;
- в снижении просачивания жидкости;
- в улучшении смачиваемости;
- в предотвращении растрескивания,
- повышении иммуногенности вакцины (п.29 Правил).

В научной литературе отмечается, что «**изобретение – это идея**, которая дает ответ на вопрос, **как решить конкретную техническую проблему** в практической деятельности человека, **т.е.:**

**- что и как надо сделать, чтобы решить проблему**,

- какие технические средства применить и в какой последовательности, комбинации и т.п.[4]

Деятельность изобретателя, как правило включает два этапа. На первом этапе обладающий техническими знаниями изобретатель находит техническую проблему, которую надо решить для того, чтобы удовлетворить общественную потребность. В этом состоит первый результат его деятельности. Второй этап состоит в поиске и нахождении решения выявленной технической проблемы техническими средствами.

По своей правовой природе изобретение является **техническим решением технической проблемы, предусматривающим применение технических средств**. При создании или использовании продукта, способа, в котором воплощено изобретение, проявляется технический результат (явление, свойство).[5]

3.2. Техническое решение может относиться к:

1) продукту (в частности, устройству, веществу, штамму микроорганизма, культуре клеток растений или животных);

2) способу (процессу осуществления действий над материальным объектом с помощью материальных средств).

3.2.1. К продукту в качестве изобретения относятся, в частности:

- устройство,

К устройствам относятся конструкции, изделия, являющиеся конструктивными элементами или совокупностью конструктивных элементов и находящиеся в функционально-конструктивном единстве.

К устройствам относятся машины, приборы, аппараты, оборудование, инструмент, крепежные изделия, детали машин, средства связи, строительные конструкции и т. п.

- вещество,

К веществам относятся:

химические соединения, к которым также условно отнесены высокомолекулярные соединения и продукты генной инженерии: рекомбинантные нуклеиновые кислоты, векторы и т. п.;

композиции (составы, смеси, сплавы, растворы и др.);

продукты ядерного превращения.

- штамм микроорганизма, культура клеток растений или животных.

К штаммам микроорганизма, культурам (линиям) клеток растений или животных, относятся:

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[4] Право интеллектуальной собственности. Том 4. Патентное право. Учебник. Под общей редакцией Л.А.Новоселовой. М.Статут-2019г. С.107.

[5] Там же. С.108-109.

штаммы бактерий, вирусов, бактериофагов, микроводорослей, микроскопических грибов и т. п.;

культуры (линии) клеток растений или животных, в том числе клоны клеток;

консорциумы микроорганизмов, культуры (линии) клеток растений или животных;

генетические конструкции, к которым относятся, в частности, плазмиды, векторы, стабильно трансформированные клетки микроорганизмов, растений и животных, трансгенные растения и животные.

3.2.2. Разновидностью изобретений является **разработка применения уже существующего устройства, способа, вещества, штамма по новому назначению**.

3.2.3. К способу относится процесс выполнения взаимосвязанных действий над материальным объектом с помощью материальных средств.

Согласно п.31 Правил для характеристики способов используются, в частности, следующие признаки:

наличие действия или совокупности действий;

**порядок выполнения таких действий во времени** (последовательно, одновременно, в различных сочетаниях и т. п.);

**условия осуществления действий**, режим, использование веществ (исходного сырья, реагентов, катализаторов и т.д.), устройств (приспособлений, инструментов, оборудования и т.д.), штаммов микроорганизмов, линии клеток растений и/или животных.

Для изобретения, относящегося к способу, в примерах указываются:

- **последовательность действий (приемов, операций) над материальным объектом**,

- **условия проведения действий**, конкретные режимы (температура, давление и т.п.), используемые при этом устройства, вещества и штаммы, если это необходимо.

Если способ характеризуется использованием средств (устройств, веществ и штаммов), известных до даты приоритета изобретения, достаточно эти средства раскрыть таким образом, чтобы можно было осуществить изобретение. При использовании неизвестных средств, приводят их характеристику и в случае необходимости прилагают графическое изображение.

**При использовании в способе новых веществ раскрывается способ их получения (п.47 Правил)**.

Конкретные примеры описания способа приведены в п.48, 49:

- для изобретения, относящегося к способу получения группы (ряда) химических соединений, описываемых общей структурной формулой, приводится пример получения этим способом соединения группы (ряда), а если группа (ряд) включает соединения с разными по химической природе радикалами, приводят такое количество примеров, которое достаточно для подтверждения возможности получения соединений с этими разными радикалами. Для получения соединений, входящих в группу (ряд), приводятся структурные формулы, подтвержденные известными методами, и физико-

химические характеристики. В описании указываются также сведения о назначении или биологически активных свойствах новых соединений.

Для изобретений, относящихся к способам получения химических соединений с не установленной структурой или смесей не установленного состава и/или структуры, указываются данные, необходимые для отличия данного соединения от других. Приводятся сведения об исходных реагентах для получения соединений или смесей, а также данные, подтверждающие возможность реализации указанного заявителем назначения этих соединений или смесей, в частности, сведения о свойствах, обуславливающих такое назначение.

- для изобретения, относящегося к способу лечения, диагностики или профилактики заболевания людей или животных, приводятся сведения о выявленных факторах, влияющих на этиопатогенез заболевания или обусловливающих наличие связи между этиопатогенезом и используемыми диагностическими показателями, а в случае отсутствия таких сведений — достоверные данные, подтверждающие пригодность способа для лечения, диагностики или профилактики указанного состояния или заболевания (полученные, в частности, в эксперименте на адекватных моделях или иным путем).

3.2.4. Важное правило содержится в ч.2 ст.30 Закона.

Данное нормой предусмотрено, что **действие патента, выданного на способ получения продукта, распространяется и на продукт, непосредственно полученный этим способом**.

3.3. Закон не ограничивает область технических решений, признаваемых изобретениями, оно может быть реализовано в любой области, т.е. в промышленности, сельском хозяйстве и т.д.

3.4. Закон определяет три условия патентоспособности изобретений:

1) Новизна;
2) Изобретательский уровень;
3) Промышленная применимость.

3.4.1. Новизна

Изобретение является новым, если оно не известно из **уровня техники**.

Уровень техники включает любые сведения, ставшие общедоступными **в мире** до даты приоритета изобретения.

Закон устанавливает, что уровень техники определяется по сведениям, известным **во всем мире**, т.е. не ограничивается сведениями, доступными только в Республике Узбекистан.

Данный подход законодателя является правильным и соответствует международной практике.

Согласно п.219 Правил изобретение не признается соответствующим условию новизны, если в уровне техники выявлено средство, которому присущи признаки, идентичные всем признакам, содержащимся в предложенной заявителем формуле изобретения, включая характеристики назначения.

Если заявленное изобретение относится к применению устройства, способа, вещества, штамма по новому назначению, то оно **не признается соответствующим условию новизны при обнаружении источника информации, из которого известно применение того же устройства, способа, вещества**, штамма **с указанной заявителем предназначенностью**.

Критерий новизны призван исключить их охраняемых изобретений технические решения, повторяющие (дублирующие) ранее известные.

Причем закон расширяет круг решений, влияющих на определение новизны, к числу которых относятся не только изобретения, которые были зарегистрированы в установленном порядке, но и решения, по которым на рассмотрении уполномоченного органа находятся неотозванные заявки на выдачу патента, поданные с более ранним приоритетом.

3.4.2. Изобретательский уровень

Изобретение имеет изобретательский уровень, если оно явным образом не следует из уровня техники.

Уровень техники включает любые сведения, ставшие общедоступными в мире до даты приоритета изобретения.

Согласно п.225 Правил проверка изобретательского уровня проводится в отношении изобретения, охарактеризованного в независимом пункте формулы, и включает:

определение **наиболее близкого аналога**;

выявление признаков, которыми отличается заявленное изобретение от наиболее близкого аналога (**отличительных признаков**);

**выявление из уровня техники** решений, имеющих признаки, **совпадающие с отличительными признаками** рассматриваемого изобретения.

Следует отметить, что **в отношении изобретения, для которого установлено несоответствие условию новизны, проверка изобретательского уровня не проводится** (п.224 Правил).

Не признаются соответствующими условию изобретательского уровня изобретения, основанные, в частности:

на дополнении известного средства какой-либо известной частью (частями), присоединяемой (присоединяемыми) к нему по известным правилам, для достижения технического результата, в отношении которого установлено влияние именно таких дополнений;

на замене какой-либо части (частей) известного средства другой известной частью для достижения технического результата, в отношении которого установлено влияние именно такой замены;

на исключении какой-либо части средства (элемента, действия) с одновременным исключением обусловленной ее наличием функции и достижением при этом обычного для такого исключения результата (упрощение конструкции, уменьшение массы, габаритов, материалоемкости, повышение надежности, сокращение продолжительности процесса и пр.);

на изменении количества однотипных элементов, действий для усиления технического результата, обусловленного наличием в средстве именно таких элементов, действий;

на выполнении известного средства или его части (частей) из известного материала для достижения технического результата, обусловленного известными свойствами этого материала;

на создании средства, состоящего из известных частей, выбор которых и связь между которыми осуществлены на основании известных правил, рекомендаций и достигаемый при этом технический результат обусловлен только известными свойствами частей этого средства и связей между ними;

на применении известного устройства, способа, вещества, штамма по новому назначению, если новое назначение обусловлено его известными свойствами, структурой, выполнением и известно, что именно такие свойства, структура, выполнение необходимы для реализации этого назначения.

Не могут быть признаны соответствующими изобретательскому уровню также изобретения, основанные **на изменении количественного признака (признаков)**, представлении таких признаков во взаимосвязи либо изменении ее вида, если известен факт влияния каждого из них на технический результат, и новые значения этих признаков или их взаимосвязь могли быть получены исходя из известных зависимостей, закономерностей.

Известность влияния отличительных признаков заявленного изобретения на технический результат может быть подтверждена как одним, так и несколькими источниками информации.

Если из уровня техники выявлены решения, которым присущи признаки, совпадающие с отличительными признаками изобретения, то подтверждение известности их влияния на технический результат не требуется:

- если в отношении таких признаков он не определен заявителем,
- в случае, когда установлено, что указанный технический результат заявителем не достигается.

3.4.3. Промышленная применимость

Изобретение является промышленно применимым, если оно **может быть использовано** в промышленности, сельском хозяйстве, здравоохранении и других отраслях.

Согласно п.212 Правил в отношении изобретения, для которого **установлено несоответствие условию промышленной применимости, проверка новизны и изобретательского уровня не проводится**.

3.5. Проверка патентоспособности

Проверка патентоспособности изобретения осуществляется при проведении экспертизы заявки по существу (п.174 Правил).

Объем правовой охраны изобретения определяется формулой.

В этой связи, для проверки патентоспособности заявленного изобретения принимается формула, в отношении которой проводится проверка, указанная:

- в первоначальных материалах заявки;
- или в дополнительных материалах, принятых во внимание при рассмотрении заявки.

3.6. Перечень результатов интеллектуальной деятельности, не признаваемых изобретениями (ч.9 ст.6 Закона, п.3 Правил).

Не признаются изобретениями:

- научные теории и математические методы;
- методы организации и управления;
- условные обозначения, расписания, правила;
- правила и методы выполнения умственных операций;
- алгоритмы и программы для электронных вычислительных машин;
- проекты и схемы планировки зданий, сооружений, территорий;

решения, касающиеся только внешнего вида изделий, направленные на удовлетворение эстетических потребностей;

топологии интегральных микросхем;

сорта растений и породы животных;

В данный перечень не включены открытия.

Согласно п.170 Правил заявленное предложение не признается патентоспособным изобретением в случае, если оно в целом в том виде, как охарактеризовано в независимом пункте формулы, подпадает под перечень предложений, приведенных в п.3 Правил.

Если заявленный объект охарактеризован в многозвенной формуле и содержание зависимого пункта обусловливает противоречие этого объекта общественным интересам, принципам гуманности и морали, такой объект также не признается патентоспособным изобретением.

## Глава 4. Понятие полезной модели, условия патентоспособности полезной модели

4.1. Раскрытие понятия полезной модели.

Закон (ч.6 ст.7 Закона) указывает, что **в качестве полезной модели признается техническое решение** в любой области, относящееся:

- к продукту (в частности, устройству, веществу, штамму микроорганизма, культуре клеток растений или животных);
- способу (процессу осуществления действий над материальным объектом с помощью материальных средств).

Сравнительный анализ показывает, что приведенное определение идентично определению изобретения, предусмотренное ч.8 ст.6 Закона.

Следует отметить, что ч.6 ст.7 Закона действует в редакции Закона от 14.09.2017г. №ЗРУ-446.

До 14.09.2017г. ч.6 ст.7 гласила, что к полезным моделям относится **конструктивное выполнение устройств**.

Таким образом, **законодатель расширил круг технических решений, которые могут быть запатентованы в качестве полезных моделей**.

Вопросы патентования полезных моделей регулируются также **Правилами составления, подачи и рассмотрения заявки на полезную модель (рег.МинЮстиции РУз №1343 от 29.04.2004г**.).

Закон и Правила используют формулировку сущность полезной модели.

Согласно п.27 Правил сущность полезной модели выражается совокупностью существенных признаков, достаточной для достижения обеспечиваемого полезной моделью технического результата.

Признаки относятся к существенным, если они влияют на достигаемый технический результат, т.е. находятся в причинно-следственной связи с указанным результатом.

Технический результат представляет собой характеристику технического эффекта, свойства, явления и т. п., которые могут быть получены при осуществлении (изготовлении) или использовании средства, воплощающего полезную модель.

Таким образом, изобретение и полезная модель имеют сходные признаки, определяющие их сущность.

В научной литературе отмечается, что «**понятием полезная модель обычно охватываются такие технические новшества**, которые по своим внешним признакам очень напоминают патентоспособные изобретения, однако **являются менее значительными с точки зрения их вклада в уровень техники.** Законодательство тех стран, которые предусматривают особую охрану подобных объектов, устанавливает, как правило, **более упрощенный**

**порядок выдачи на нах охранных документов, сокращенный срок их действия, менее значительные пошлины и т.п.».**[6]

4.2. По Закону **отличия между изобретением и полезной модели проводятся по признакам патентоспособности**.

В отличии от изобретений к полезным установлены два условия патентоспособности:

1) Новизна;

Полезная модель является новой, если совокупность ее существенных признаков не известна из уровня техники.

Уровень техники включает все ставшие общедоступными в Республике Узбекистан сведения о средствах того же назначения, что и заявленная полезная модель, а также сведения об их применении.

Согласно п.184 Правил полезная модель не признается соответствующей условию новизны, если в уровне техники выявлено средство, которому присущи признаки, идентичные всем признакам, содержащимся в предложенной заявителем формуле полезной модели, включая характеристики назначения.

2) Промышленная применимость.

Полезная модель является промышленно применимой, если она может быть практически использована.

Согласно п.176 Правил если установлено, что на дату приоритета полезной модели соблюдены все указанные требования, полезная модель, охарактеризованная в данном независимом пункте формулы, признается соответствующим условию промышленной применимости.

При несоблюдении хотя бы одного из указанных требований делается вывод о несоответствии полезной модели условию промышленной применимости.

В этом случае заявителю может быть направлен запрос с изложением соответствующих доводов, с предложением высказать свое мнение относительно этих доводов и откорректировать формулу полезной модели (если, по мнению экспертизы, материалы заявки допускают такую корректировку, в результате которой указанный вывод может быть изменен).

Из анализа приведенных признаков следует, что **по полезным моделям не предусмотрено условие изобретательского уровня**.

Закон устанавливает, что уровень техники определяется по сведениям, известным **во всем мире**, т.е. не ограничивается сведениями, доступными только в Республике Узбекистан.

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[6] Право интеллектуальной собственности в РФ. Учебник. 2-е издание. А.П.Сергеев. М.Проспект-2004г. С.430.

Данный подход законодателя является правильным и соответствует международной практике.

Изобретение является промышленно применимым, если оно **может быть использовано** в промышленности, сельском хозяйстве, здравоохранении и других отраслях.

Проверка патентоспособности изобретения осуществляется при проведении экспертизы заявки (п.139 Правил).

Объем правовой охраны полезной модели определяется формулой.

В этой связи, для проверки патентоспособности заявленного изобретения принимается формула, в отношении которой проводится проверка, указанная:

- в первоначальных материалах заявки;
- или в дополнительных материалах, принятых во внимание при рассмотрении заявки.

4.3. Перечень результатов интеллектуальной деятельности, не признаваемых полезными моделями (ч.7 ст.7, ч.9 ст.6 Закона, п.3 Правил).

Не признаются изобретениями:

- научные теории и математические методы;
- методы организации и управления;
- условные обозначения, расписания, правила;
- правила и методы выполнения умственных операций;
- алгоритмы и программы для электронных вычислительных машин;
- проекты и схемы планировки зданий, сооружений, территорий;

решения, касающиеся только внешнего вида изделий, направленные на удовлетворение эстетических потребностей;

топологии интегральных микросхем;

сорта растений и породы животных;

В данный перечень не включены открытия.

## Глава 4. Подача заявки на выдачу патента на изобретение

4.1. Процедура патентования (получения патента на изобретение) начинается с подачи заявки на изобретение.

Согласно ч.2 ст.15 Закона заявка на изобретение должна содержать:

1) заявление о выдаче патента с указанием автора (соавторов) изобретения и лица, на имя которого испрашивается патент, а также их местожительство или местонахождение;

2) описание изобретения, раскрывающее с полнотой, достаточной для его осуществления;

3) формулу изобретения, выражающую его сущность и полностью соответствующую описанию;

4) чертежи и иные материалы, если они необходимы для понимания сущности изобретения;

5) реферат изобретения.

4.1.1. Язык документов

Правила устанавливают требования на каком языке должны быть составлены вышеуказанные документы:

- заявление о выдаче патента представляется **на узбекском или русском языке**. Наименование заявителя, название изобретения представляются на узбекском и русском языках.

- прочие документы заявки, прилагаемые к заявлению, т.е. описание, формула, чертежи и реферат, представляются **на узбекском, русском или других языках**.

**Если документы заявки представлены на другом языке, то к заявке прилагается их перевод на узбекский или русский язык**.

Допускается представление перевода в течение двух месяцев с даты подачи заявки в Агентство.

4.1.2. Количество экземпляров.

Документы заявки, составленные на узбекском или русском языке, представляются **в трех экземплярах**: 2 экземпляра на бумажном носителе, в качестве третьего может быть представлен экземпляр в электронном виде на машиночитаемом носителе информации.

**Те же документы, если они составлены на другом языке, представляются в одном экземпляре, а перевод их на узбекский или русский язык — в трех экземплярах**: 2 экземпляра на бумажном носителе, третий может быть представлен в электроном виде.

4.2. Заявление о выдаче патента.

Правилами утверждена форма заявления.

Заявитель должен подать заявление по утвержденной форме.

При этом требуется, чтобы иностранные имена и наименования предприятий указываются в узбекской и русской транслитерации.

4.3. Описание изобретения

Описание изобретения **должно раскрывать изобретение с полнотой, достаточной для его осуществления**.

Не допускается замена раздела описания отсылкой к источнику, в котором содержатся необходимые сведения (литературному источнику, описанию в ранее поданной заявке, описанию к охранному документу и т. п.).

4.3.1. Название изобретения

**Описание начинается с указания названия изобретения** (а в случае установления рубрики действующей редакции МПК, к которой относится заявляемое изобретение, индекс этой рубрики приводится перед названием)

Название изобретения должно быть **точным и кратким, соответствовать сущности изобретения, определять род объекта, к которому оно относится, и характеризовать назначение объекта** (выполняемую им функцию или указывать на его принадлежность к той или иной области техники).

Название излагается в единственном числе. Исключение составляют:
названия, которые не употребляются в единственном числе;
название изобретений, относящихся к химическим соединениям, охватываемым общей структурной формулой.

Название изобретения может быть:
- терминологическим;

Терминологическое название представляет собой понятие, содержание которого однозначно и характеризует известную специалистам в данной области техники совокупность существенных признаков объекта, независимо от того, перечислены они или нет.
- описательным.

Описательное название дает представление только о назначении объекта и выполняемой им функции в одной или разных областях техники, но не дает возможности однозначно судить о необходимой совокупности существенных признаков, характеризующих заявляемое изобретение.

Название группы изобретений, относящихся к объектам, один из которых предназначен для получения (изготовления), осуществления или использования другого, содержит полное название одного изобретения и сокращенное — другого. Название группы изобретений, относящихся к объектам, один из которых предназначен для использования в другом, содержит полные названия изобретений, входящих в группу. Название группы изобретений, относящихся к вариантам, содержит название одного изобретения группы, дополненное указываемым в скобках словом «варианты».

Употребление символов иных алфавитов, специальных знаков в названии изобретения не допускается.

В названии изобретения не должны использоваться личные имена, фамильярные наименования, аббревиатуры, рекламные, фирменные наименования, товарные знаки и знаки обслуживания, наименования мест

происхождения товара и географические наименования, слова «и т. д.», и аналогичные, которые не служат целям идентификации изобретения.

4.3.2. Согласно п.25 Правил описание содержит следующие разделы:

1) область техники, к которой относится изобретение;

Указывается область применения изобретения. Если таких областей несколько, то указываются преимущественные.

2) уровень техники;

Приводятся сведения об известных заявителю **аналогах изобретения с выделением из них аналога, наиболее близкого к изобретению по совокупности признаков**.

В качестве аналога изобретения указывается средство того же назначения, известное из сведений, ставших **общедоступными до даты приоритета изобретения, характеризуемое совокупностью признаков, сходной с совокупностью существенных признаков изобретения**.

При описании каждого из аналогов приводятся библиографические данные источника информации, в котором он раскрыт, признаки аналога с указанием тех из них, которые совпадают с существенными признаками заявляемого изобретения, а также указываются известные заявителю причины, препятствующие получению требуемого технического результата.

Если изобретение относится к применению известного ранее устройства, способа, вещества, штамма по новому назначению, то к его аналогам относят известные устройства, способы, вещества, штаммы этого же назначения.

При описании **группы изобретений сведения об аналогах (в том числе и наиболее близком)** приводятся **для каждого изобретения в отдельности**.

3) раскрытие изобретения;

Этому посвящен раздел «сущность изобретения».

В данном разделе подробно **раскрывается задача, на решение которой направлено заявляемое изобретение**, **с указанием технического результата**, который может быть получен при осуществлении изобретения.

Сущность изобретения **выражается совокупностью существенных признаков**, достаточной для достижения обеспечиваемого изобретением технического результата.

**Признаки относятся к существенным, если они влияют на достигаемый технический результат**, т. е. находятся в причинно-следственной связи с указанным результатом.

Приводятся:

- все существенные признаки, характеризующие изобретение,
- выделяются признаки, отличительные от наиболее близкого аналога,
- при этом указывается совокупность признаков, обеспечивающая получение технического результата во всех случаях, на которые распространяется испрашиваемый объем правовой охраны,
- признаки, характеризующие изобретение лишь в частных случаях, в конкретных формах выполнения или при особых условиях его использования.

Не допускается замена характеристики признака отсылкой к источнику информации, в котором раскрыт этот признак.

**Технический результат представляет собой характеристику технического эффекта, свойства, явления и т. п., которые могут быть получены при осуществлении (изготовлении) или использовании средства, воплощающего изобретение**.

Если изобретение обеспечивает получение нескольких технических результатов (в том числе в конкретных формах его выполнения или при особых условиях его использования), то рекомендуется их указать.

Технический результат может выражаться, в частности, в снижении (повышении) коэффициента трения; в предотвращении заклинивания; снижении вибрации; в улучшении кровоснабжения органа; локализации действия лекарственного препарата, снижении его токсичности; в устранении дефектов структуры литья; в улучшении контакта рабочего органа со средой; в уменьшении искажения формы сигнала; в снижении просачивания жидкости; в улучшении смачиваемости; в предотвращении растрескивания, повышении иммуногенности вакцины.

**Для группы изобретений указанные сведения, в том числе и о техническом результате, приводятся для каждого изобретения в отдельности**.

При описании штамма микроорганизма, культуры клеток растений и животных дополнительно указываются признаки, которыми он отличается от исходных или близкородственных штаммов.

При описании изобретения, относящегося к применению известного устройства, способа, вещества, штамма по новому назначению, приводится характеристика этого известного объекта и библиографические данные источника информации, в котором он описан, указывается его известное и новое назначение.

4) краткое описание перечня фигур чертежей и иных материалов, если они содержатся в заявке;

В разделе описания «Перечень фигур чертежей» кроме перечня фигур приводится краткое указание на то, что изображено на каждой из них.

Если представлены иные материалы, поясняющие сущность изобретения, приводится краткое пояснение их содержания.

5) сведения, подтверждающие возможность осуществления изобретения;

В разделе описания «Сведения, подтверждающие возможность осуществления изобретения» **показывается возможность осуществления изобретения с реализацией указанного заявителем назначения**.

Возможность осуществления изобретения, сущность которого характеризуется с использованием признака, выраженного общим понятием, в частности, представленного на уровне функционального обобщения, подтверждается либо описанием непосредственно в материалах заявки средства для реализации такого признака или методов его получения, либо указанием на известность такого средства или методов его получения.

В данном разделе описания приводятся также сведения, подтверждающие возможность получения при осуществлении изобретения того технического результата, который указан в разделе «Сущность изобретения» при характеристике решаемой задачи. При использовании для характеристики изобретения количественных признаков, выраженных в виде интервала

значений, показывается возможность получения технического результата в этом интервале.

4.4. Формула изобретения

Формула изобретения **предназначается для определения объема правовой охраны**, предоставляемой патентом.

Формула изобретения должна выражать **сущность изобретения, т.е. содержать совокупность его существенных признаков**, достаточную для достижения указанного заявителем технического результата.

Признаки изобретения выражаются в формуле изобретения таким образом, чтобы обеспечить возможность их идентифицирования, т. е. однозначного понимания специалистом на основании известного уровня техники их смыслового содержания.

Формула должна быть полностью основана на описании и чертежах, т.е. **характеризовать изобретение понятиями, содержащимися в его описании** и представленными на чертежах.

4.4.1. Формула изобретения

Формула изобретения может быть:
- однозвенной;
- многозвенной и включать соответственно один или несколько пунктов.

Однозвенная формула изобретения применяется для характеристики одного изобретения совокупностью признаков, не имеющей развития или уточнения применительно к частным случаям его выполнения или использования.

Многозвенная формула изобретения применяется для характеристики:

- **одного изобретения** с развитием и/или уточнением совокупности его признаков применительно к частным случаям выполнения или использования изобретения;
Многозвенная формула, характеризующая одно изобретение, имеет **один независимый пункт и следующий** (следующие) **за ним зависимый** (зависимые) **пункт** (пункты).

- группы изобретений.
Многозвенная формула, характеризующая группу изобретений, имеет **несколько независимых пунктов, каждый из которых характеризует одно из изобретений группы**. При этом каждое изобретение группы может быть охарактеризовано с привлечением **зависимых пунктов, подчиненных соответствующему независимому**.

Пункты многозвенной формулы нумеруются арабскими цифрами последовательно, начиная с единицы, в порядке их изложения.

При изложении формулы, характеризующей группу изобретений, соблюдаются следующие правила:

независимые пункты, характеризующие отдельные изобретения, как правило, не содержат ссылок на другие пункты формулы (такая ссылка допустима лишь в случае, когда она позволяет изложить данный независимый пункт без полного повторения в нем содержания другого пункта);

**зависимые пункты группируются вместе с тем независимым пунктом, которому они подчинены**, включая случаи, когда для характеристики разных изобретений группы привлекаются зависимые пункты одного и того же содержания.

4.4.2. Пункт формулы состоит, как правило, из:
- **ограничительной части**, включающей существенные признаки изобретения, совпадающие с признаками наиболее близкого аналога, в том числе родовое понятие, отражающее назначение, с которого начинается изложение формулы,
- **отличительной части**, включающей признаки, которые отличают изобретение от наиболее близкого аналога.

При составлении пункта формулы с разделением на ограничительную и отличительную части после изложения ограничительной части вводится словосочетание «отличающийся тем, что», непосредственно после которого излагается отличительная часть.

Формула изобретения составляется **без разделения пункта на ограничительную и отличительную части**, в частности, если она характеризует:

химическое соединение;

штамм микроорганизма, линию клеток растений и животных;

применение ранее известного устройства, способа, вещества, штамма по новому назначению;

изобретение, не имеющее аналогов.

4.5. Чертежи и иные материалы

Материалы, поясняющие сущность изобретения, могут быть оформлены в виде графических изображений (чертежей, схем, графиков, эпюр, рисунков, осциллограмм и т. д.) и таблиц.

Чертежи, схемы и рисунки представляются на отдельных (отдельном) листах (листе), в правом верхнем углу которых (которого) приводится название изобретения.

Рисунки представляются в том случае, когда невозможно проиллюстрировать изобретение чертежами или схемами.

Фотографии представляются как дополнение к графическим изображениям.

В исключительных случаях, например для иллюстрации этапов выполнения хирургических операций, фотографии могут быть представлены как основной вид поясняющих материалов.

4.6. Реферат

Реферат изобретения служит для целей информации об изобретении и **представляет собой сокращенное изложение содержания описания**

**изобретения**, включающее название, характеристику области техники, к которой относится изобретение, и/или области применения, если это не ясно из названия, характеристику сущности с указанием достигаемого технического результата.

Реферат изобретения может содержать дополнительные сведения, в частности, указание на наличие и количество зависимых пунктов формулы, графических изображений, таблиц.

Рекомендуемый объем текста реферата изобретения — до 1000 печатных знаков.

Сущность изобретения в реферате изобретения характеризуется **путем свободного изложения формулы**, предпочтительно такого, при котором сохраняются все существенные признаки каждого независимого пункта.

При необходимости в реферат изобретения включается чертеж или химическая формула.

Чертеж, включаемый в реферат изобретения, представляется на отдельном листе в таком же количестве экземпляров, как и текст реферата, в том числе и в случае, когда он идентичен одной из фигур чертежей, иллюстрирующих описание.

4.7. Уплата патентных пошлин

К заявке на выдачу патента прилагается документ, подтверждающий уплату патентной пошлины в установленном размере, или документ, подтверждающий основания для освобождения от уплаты патентной пошлины либо для уменьшения ее размера.

Размеры патентных пошлин установлены Законом РУз «О государственной пошлине» от 06.01.2020г. №ЗРУ-600.

Причем размера патентных пошлин, подлежащих уплате резидентами и нерезидентами, отличаются.

Согласно подп.а) п.10 Приложения к данному Закону (Ставки государственных пошлин) за подачу заявки на выдачу патента, проведение формальной экспертизы и публикацию сведений:
- на одно изобретение: резиденты уплачивают 1 БРВ, а нерезиденты 17 БРВ;
- на группу изобретений, за каждое изобретение свыше одного: резиденты уплачивают 50 % БРВ, нерезиденты 8,5 БРВ.

По состоянию на 01.12.2021г. размер БРВ составляет 270.000 сум.
4.8. К заявке, подаваемой через патентного поверенного либо через иное доверенное лицо, прилагается доверенность, выданная заявителем, либо надлежащим образом оформленная копия доверенности.

Согласно ч.4 ст.14 Закона - Заявка на выдачу патента может быть подана лично, через патентного поверенного или доверенное лицо.

Однако, ч.3 ст.35 Закона содержит требование о том, что **физические лица, постоянно проживающие за пределами Республики Узбекистан**, или **иностранные юридические лица** должны вести дела по патентованию объектов промышленной собственности и осуществлять юридически значимые действия, связанные с ними, только **через патентных поверенных, зарегистрированных в Агентстве**.

Таким образом, **нерезиденты, как физические, так и юридические лица, могут подавать заявку на патент только через патентных поверенных**. Полномочия патентных поверенных оформляются доверенностью.

Пункт 118 Правил предписывает оформление доверенности патентному поверенному и доверенному лицу и регламентирует:

1) форму доверенности;
2) язык, на котором изложен текст доверенности.

Доверенность на представительство перед Агентством, **оформляемая в Республике Узбекистан**, составляется в простой письменной форме (ч.2 п.118 Правил).

Если доверенность оформляется за пределами Республики Узбекистан, то в соответствии со ст.28 Консульского Устава РУз, утвержденного Законом РУз №ЗРУ-517 от 17.01.2019г., она должна быть оформлена:
- в порядке консульской легализации
- с проставлением апостиля

Консульская легализация документов и актов иностранного государства заключается в установлении и засвидетельствовании подлинности подписей на документах и актах, полномочий лица, подписавшего документ или акт, подлинности печати или штампа, которым скреплены представленные на легализацию документ и акт, и соответствия их законодательству государства пребывания консульского учреждения. Консульская легализация документов и актов подтверждает их правомочность в международном общении.

Учреждения и организации Республики Узбекистан принимают к рассмотрению документы и акты, исходящие от учреждений и организаций иностранного государства, лишь при наличии консульской легализации, если иное не предусмотрено законодательством Республики Узбекистан или международным договором, участниками которого являются Республика Узбекистан и государство, от учреждений и организаций которого исходят эти документы и акты.

**Легализация документа не требуется, если на нем или на листе, скрепляемом с этим документом, проставлен апостиль**.

Консульское должностное лицо обязано принимать документы с апостилем, если он проставлен уполномоченным органом иностранного государства, в отношениях Республики Узбекистан с которым применима

Конвенция, отменяющая требование легализации иностранных официальных документов.

Дата вступления в силу для Республики Узбекистан Конвенции, отменяющей требование легализации иностранных официальных документов (Гаага, 5 октября 1961 года) - 15 апреля 2012 года.

**Текст доверенности в обязательном порядке должен быть изложен на узбекском или русском языке**.

Допустимо одновременное оформление на двух языках: языке страны выдачи доверенности и на узбекском или русском языке.

Если доверенность представлена не на узбекском или русском языке, к ней прилагается **перевод** на узбекский или русский язык.

Физические лица, постоянно проживающие в Республике Узбекистан, но временно находящиеся за ее пределами, могут вести дела по патентованию объектов промышленной собственности и осуществлять юридически значимые действия, связанные с ними, **без патентного поверенного** при указании адреса для переписки в пределах Республики Узбекистан.

4.9. К заявке с испрашиванием конвенционного приоритета (далее — конвенционная заявка) прилагается заверенная **копия первой заявки, поданной заявителем в другом государстве участнике Парижской конвенции** (далее — первая заявка), и перевод этой заявки на узбекский или русский язык, которые представляются не позднее трех месяцев с даты поступления конвенционной заявки в Агентство.

Согласно ч.2 ст.18 Закона для установления конвенционного приоритета заявка на изобретение в Республике Узбекистан должна быть подана в течение двенадцати месяцев по дате подачи первой заявки в другом государстве — участнике Парижской Конвенции по охране промышленной собственности (конвенционный приоритет).

Двенадцатимесячный срок быть продлен Агентством, но не более чем на два месяца. В этом случае к заявке прилагаются:

документ об уплате патентной пошлины в установленном размере за продление срока испрашивания конвенционного приоритета;

документ с указанием не зависящих от заявителя обстоятельств, воспрепятствовавших подаче заявки в указанный двенадцатимесячный срок, и подтверждением наличия этих обстоятельств, если нет оснований полагать, что они известны Агентству.

Заявитель, желающий воспользоваться правом конвенционного приоритета, обязан указать на это при подаче заявки и (или) представить необходимые материалы не позднее трех месяцев с даты подачи заявки в Агентство;

4.10. К заявке, относящейся к новому штамму микроорганизма, линии клеток растений или животных, их получению или использованию, прилагается документ о депонировании штамма в официально уполномоченной на это коллекции-депозитарии.

4.11. Заявление подписывается заявителем. От имени юридического лица заявление подписывается руководителем предприятия, организации или лицом, уполномоченным руководителем, с указанием его должности. **Подпись скрепляется печатью**.

При подаче заявки через патентного поверенного или доверенное лицо, заявление подписывается заявителем или патентным поверенным либо доверенным лицом.

**Подписи расшифровываются с указанием фамилий и инициалов подписывающего лица**.

Наличие подписи заявителя, лица или патентного поверенного либо доверенного лица обязательно на каждом дополнительном листе.

Заполнение последней графы заявления «Подпись» с указанием даты подписания обязательно во всех случаях.

4.12. требования единства изобретения

4.12.1. При подаче заявки необходимо учитывать **требования единства изобретения,** т.е. заявка должна относиться к одному изобретению или группе изобретений, **связанных между собой настолько, что они образуют единый изобретательский замысел**.

**Единство изобретения** признается соблюденным, если:

в формуле изобретения охарактеризовано одно изобретение;

в формуле изобретения охарактеризована группа изобретений:

**относящихся к объектам одного вида** (несколько устройств, несколько видов и т. д.), **одинакового назначения, обеспечивающих получение одного и того же технического результата принципиально одним и тем же путем** (варианты);

одно из которых предназначено для получения (изготовления) другого (например, устройство или вещество и способ получения (изготовления) устройства или вещества в целом или их части);

одно из которых предназначено для осуществления другого (например, способ и устройство для осуществления способа в целом или одного из его действий);

одно из которых предназначено для использования другого (в другом) (например, способ и вещество, предназначенное для использования в способе; способ или устройство и его часть; применение устройства или вещества по новому назначению и способ с их использованием в соответствии с этим назначением; применение устройства или вещества по новому назначению и устройство или композиция, составной частью которых они являются).

Согласно ч.4 ст.20 Закона указаны последствия подачи заявки, поданной с нарушением требований единства.

В этом случае заявителю предлагается в трехмесячный срок с даты отправления ему соответствующего **запроса** сообщить:

**- какой из этих объектов должен рассматриваться,**

**- уточнить соответственно документы заявки**.

**Другие объекты, вошедшие в материалы первоначальной заявки, могут быть выделены в отдельные заявки**.

Если заявитель не сообщит, какой из этих объектов необходимо рассматривать, и не представит уточненных материалов, проводится государственная экспертиза объекта, **указанного первым в формуле** изобретения, полезной модели или в описании промышленного образца.

4.12.2. Выделенная заявка.

Согласно п.132 Правил заявка, в которой нарушено единство изобретения, может быть разделена заявителем по его просьбе на две или несколько заявок (далее — выделенная отдельная заявка).

Выделенные отдельные заявки сохраняют дату подачи первоначальной заявки и приоритет заявляемого изобретения, а при наличии права на установление более раннего приоритета первоначальной заявки — дату этого приоритета (п.133).

4.13. Регистрация заявки

Поступившие в Агентство материалы заявки регистрируются как заявка на изобретение **с указанием даты их поступления**, если эти документы содержат, как минимум:
- заявление о выдаче патента на узбекском и русском языке;
- документ, подтверждающий уплату патентной пошлины, в установленном размере или документ, подтверждающий основания для освобождения от уплаты патентной пошлины либо для уменьшения ее размера.

Заявке присваивается регистрационный номер Агентства.

О факте поступления документов заявки заявитель уведомляется с сообщением ему регистрационного номера и даты поступления.

На данном этапе АИС вправе произвести возврат материалов заявки (п.157 Правил).

Основанием для этого служит нарушение требований о языке, т.е. представление документов заявки **на ином языке, чем узбекский или русский**, и в материалах заявки имеется ходатайство о досрочном начале формальной экспертизы. В этом случае заявитель уведомляется о невозможности проведения формальной экспертизы до получения перевода документов заявки на узбекский или русский язык.

Зарегистрированные материалы заявки возврату не подлежат.

Сведения о заявке с момента ее поступления в Агентство до официальной публикации сведений о заявке или о выдаче патента считаются конфиденциальными и не подлежат разглашению без согласия заявителя (п.158 Правил).

4.14. Подача исправлений, уточнений и дополнительных материалов.

Подача исправлений, уточнений и дополнительных материалов может быть осуществлена по инициативе:
- самого заявителя;
- АИС.

4.14.1. Право на внесение исправлений, уточнений либо дополнительные материалы **без изменения сущности** заявленного объекта промышленной собственности (ч.2 ст.20 Закона).

Исправление, уточнение и дополнение материалов заявки осуществляется путем подачи заявителем соответствующих письменных заявлений и заменяющих листов. Формы заявлений приведены в приложениях 2, 3, 4 к настоящим Правилам. Заменяющие листы представляются на узбекском или русском языке для каждого экземпляра соответствующего документа заявки.

Заявитель уведомляется о поступлении заявления в Агентство и результатах его рассмотрения.

Реализация данного права осуществляется без обязательства заявителя по уплате патентных пошлин.

Однако, в силу ч.1 ст.21 Закона в случае, если заявитель ходатайствует о проведении формальной экспертизы до истечения 2 месячного срока с даты подачи заявки, то он лишается прав на дополнения, исправления и уточнения материалов заявки по своей инициативе **без уплаты дополнительной патентной пошлины**.

Таким образом, закон дает право на подачу исправлений, уточнений или дополнительных материалов и после истечения 2 месяцев с даты подачи заявки, но при условии уплаты патентной пошлины:
- резиденты – 50 % БРВ;
- нерезиденты – 8,5 БРВ.

Агентство принимает заявление о внесении исправлений, подписанное заявителем или его патентным поверенным либо доверенным лицом с указанием номера соответствующей заявки, и исправлений, которые должны быть внесены. Форма заявления приведена в приложении № 4 к настоящим Правилам.

Исправление очевидных и технических ошибок в документах заявки также может быть произведено до даты регистрации изобретения в соответствующем государственном реестре. Поправка является очевидной, если из общеизвестных знаний для специалиста следует, что ничего кроме предложенной поправки не могло быть предпринято.

Если исправления касаются опечаток в указании библиографических данных и т. п. и исправление документа не приведет к отрицательным последствиям в отношении четкости при непосредственном репродуцировании, необходимость внесения исправлений может быть выражена в письме заявителя без представления заменяющих листов.

4.14.2. По заявке на выдачу патента, оформленной с нарушением установленных требований, заявителю направляется **запрос с предложением**

**в трехмесячный срок с даты отправления представить исправленные или отсутствующие материалы (ч.3 ст.20 Закона)**.

Согласно п.131 Правил заявитель уведомляется:

- о необходимости внесения уточнения и/или исправления либо дополнительных материалов представленных документов;
- о невозможности внесения изменений в материалы заявки с приведением соответствующих доводов.

В случае, если в указанный срок заявитель не представит запрашиваемые материалы или ходатайство о продлении установленного срока, **заявка на выдачу патента считается отозванной**.

По ходатайству заявителя установленный срок может быть продлен не более чем на двенадцать месяцев с даты его истечения.

4.14.3. По заявке на выдачу патента, поданной с нарушением требований единства объекта промышленной собственности, заявителю предлагается в трехмесячный срок с даты отправления ему соответствующего запроса сообщить:

- какой из этих объектов должен рассматриваться,
- уточнить соответственно документы заявки.

**Другие объекты, вошедшие в материалы первоначальной заявки, могут быть выделены в отдельные заявки**.

Если заявитель не сообщит, какой из этих объектов необходимо рассматривать, и не представит уточненных материалов, проводится государственная экспертиза объекта, указанного первым в формуле изобретения.

4.15. право заявителя на отзыв заявки

Заявитель до факта государственной регистрации объекта промышленной собственности в соответствующем государственном реестре может отозвать заявку на выдачу патента на любой стадии государственной экспертизы (ч.6 ст.20 Закона).

Последствия отзыва заявки заявителем предусмотрены п.153 Правил.

Отозванная или считающаяся отозванной заявка не имеет правовых последствий, т. е.:

- никакие юридически значимые действия по ней не могут быть более совершены (экспертиза такой заявки не проводится, патент не выдается,
- она не может быть преобразована в заявку на полезную модель и т. д.),
- права заявителя не могут в дальнейшем основываться на этой заявке (в частности, при подаче следующей заявки **нельзя испросить приоритет** по дате поступления отозванной или считающейся отозванной заявки или дате поступления дополнительных материалов к ней);
- **отозванная или считающаяся отозванной заявка не включается в уровень техники** в процессе экспертизы других заявок при проверке новизны.

Причем, если в последующем заявитель обратится с просьбой считать недействительным его заявление об отзыве заявки, поступившая после направления заявителю уведомления о принятии этого заявления к сведению, не является основанием для отмены указанных п.153 Правил результатов отзыва заявки.

4.16. Преобразование заявки

Согласно ст.19 Закона заявитель вправе преобразовать заявку на изобретение в заявку на полезную модель, а заявку на полезную модель — в заявку на изобретение до принятия решения о выдаче патента. При указанных преобразованиях сохраняется приоритет первой заявки.

Преобразование заявок осуществляется при уплате соответствующей патентной пошлины.

4.17. Публикация заявки

Согласно ст.21-1 Закона публикация сведений о заявке на изобретение осуществляется в официальном бюллетене **по истечении восемнадцати месяцев с даты подачи заявки, принятой к рассмотрению**. Состав публикуемых сведений определяется Агентством.

**По ходатайству заявителя** Агентство может опубликовать сведения о заявке на изобретение **до истечения восемнадцати месяцев с даты подачи заявки**, принятой к рассмотрению.

**Любое лицо после публикации сведений о заявке на изобретение вправе ознакомиться с документами этой заявки**. Порядок ознакомления с документами заявки на изобретение устанавливается Агентством.

С момента ознакомления материалы заявки утрачивают свою конфиденциальность.

С фактом публикации связано реализация гарантии защиты прав заявителя посредством предоставления ему временной правовой охраны. Необходимость предоставления временной правовой охраны связано с возможностью любых лиц ознакомиться с материалами заявки.

4.18. Временная правовая охрана

Публикация сведений о заявке влечет предоставление изобретению временной правовой охраны.

Данная мера призвана обеспечить защиту прав заявителя в связи с утратой конфиденциальности заявки и получения доступа к материалам заявки неограниченному кругу лиц.

Предоставление временной правовой охраны должно исключить использование третьими лицами материалами заявки в своих интересах в ущерб интересам заявителя.

В силу ст.23-1 Закона изобретению с даты публикации сведений о заявке на изобретение до даты публикации сведений о государственной регистрации изобретения предоставляется временная правовая охрана.

Лицо, использующее изобретение в период его временной правовой охраны, обязано по требованию патентообладателя выплатить последнему после получения патента на изобретение денежную компенсацию, размер которой определяется соглашением с патентообладателем.

Временная правовая охрана считается ненаступившей, если заявка на изобретение:

- была отозвана;
- по этой заявке принято Агентством решение об отказе в выдаче патента, возможности обжалования которого исчерпаны.

## Глава 5. Экспертиза заявки на выдачу патента на изобретение

Процедура патентования включает в себя проведение двух экспертиз:
- формальной экспертизы;
- научно-технической экспертизы по существу.

Каждая из экспертиз отличается как по порядку ее проведения, так и по предмету вопросов, составляющих ее рассмотрения.

5.1. Формальная экспертиза.

Наиболее в обобщенном виде предмет формальной экспертизы указан в ч.2 ст.21 Закона.

Согласно ч.2 ст.21 Закона в ходе формальной экспертизы **рассматривается соответствие заявленного предложения объектам промышленной собственности, которым предоставляется правовая охрана**. По результатам формальной экспертизы заявителю сообщается решение Агентства.

Более детально круг вопросов, рассматриваемых в ходе формальной экспертизы, конкретизирован п.162 Правил.

Согласно 162 Правил при проведении формальной экспертизы заявки проверяются:

а) наличие документов, которые должны содержаться в заявке или прилагаться к ней;

б) соблюдение установленных к ним требований, выявляемое без анализа существа изобретения;

в) соблюдение порядка подачи заявки от имени заявителя патентным поверенным поверенным или доверенным лицом, включая наличие и правильность оформления доверенности, удостоверяющей полномочия представителя;

г) подана ли заявка на предложение, относящееся к объектам, охраняемым в качестве изобретений;

д) обоснованность испрашивания в заявке более раннего приоритета, чем дата ее поступления в Агентство;

е) правильность классифицирования изобретения по действующей редакции МПК, осуществленного заявителем (или производится такое классифицирование, если оно не сделано заявителем).

Таким образом, предметом формальной экспертизы изучение заявки и прилагаемых к ней документов в целях определения:

- их достаточности (подп.а, б и д);
- правильности оформления (подп.б) и е).

При этом анализ существа изобретения осуществляется в рамках экспертизы по существу.

По общему правилу, дата приоритета определяется по дате подачи заявки.

Однако, Закон устанавливает перечень обстоятельств, в силу которых дата приоритета может быть установлена более ранней датой.

Обоснованность испрашивания более раннего приоритета не означает установление приоритета, т.к. установление приоритета является предметом экспертизы по существу.

В рамках формальной экспертизы устанавливается наличие обстоятельств, в силу которых может возникает право на испрашивание более раннего приоритета.

Закон определяет 3 (три) таких обстоятельства:

- конвенционный приоритет, т.е. по дате подачи первой заявки в одному из стран – участниц Парижской Конвенции;

- по дате подачи дополнительных материалов;

- по дате подачи более ранней

Условием исправшивания приоритета **по дате подачи дополнительных материалов является оформление их** заявителем **в качестве самостоятельной заявки**.

Данная самостоятельная заявка должна быть подана **до истечения трехмесячного срока с даты получения заявителем уведомления Агентства о невозможности принятия во внимание дополнительных материалов** в связи с признанием их **изменяющими сущность заявленного объекта** промышленной собственности.

Условием испрашивания приоритета по более ранней заявке факт отзыва более ранней заявки и подачи новой заявки **не позднее двенадцати месяцев с даты поступления более ранней заявки** на изобретение.

Согласно п.168 Правил с целью соотнесения предмета заявки с той или иной отраслью техники Агентство классифицирует заявленное изобретение в соответствии с действующей редакцией МПК.

Классифицирование проводится в соответствии с правилами, установленными Введением в МПК.

**При классифицировании основанием для выбора классификационного индекса является формула заявленного изобретения**.

Для более полного понимания сущности изобретения привлекаются описание и чертежи.

Если заявка охватывает несколько объектов, относящихся к разным рубрикам МПК, устанавливаются все соответствующие классификационные индексы. **При этом выбор первого индекса определяется названием изобретения**.

Классификационные индексы, установленные на стадии формальной экспертизы, могут быть изменены в процессе проведения экспертизы заявки по существу.

Перечень вопросов, свидетельствующих о том, что заявка оформлена с нарушением требований к ее документам приведен в ст.165 Правил.

К их числу отнесены:

а) отсутствие в заявке, по крайней мере, одного из предусмотренных документов, т.е. заявления, описания, формулы, чертежей или реферата;

б) отсутствие доверенности на представительство, если заявка подана через патентного поверенного либо доверенное лицо, и/или нарушение требований к ее оформлению.

К нарушению требований к оформлению доверенности относится отсутствие консульской легализации или проставленного апостиля, если доверенность оформлялась за пределами Республики Узбекистан;

в) представление документов заявки в количестве экземпляров, меньшем установленного;

Требования к количеству экземпляров определены п.12 Правил:

- если документы заявки составлены на узбекском или русском языке, то они представляются в трех экземплярах: 2 экземпляра на бумажном носителе, в качестве третьего может быть представлен экземпляр в электронном виде на машиночитаемом носителе информации;

- те же документы, если они составлены на другом языке, представляются в одном экземпляре, а перевод их на узбекский или русский язык — в трех экземплярах: 2 экземпляра на бумажном носителе, третий может быть представлен в электроном виде.

г) подача заявки физическими лицами, проживающими за пределами Республики Узбекистан, или иностранными юридическими лицами не через патентных поверенных, зарегистрированных в Агентстве, если международным соглашением с участием Республики Узбекистан не установлен порядок, предусматривающий такую подачу заявки;

Речь идет о требованиях, предусмотренных ч.3 ст.35 Закона.

д) отсутствие в заявлении о выдаче патента реквизитов, подписей, оттиска печати (когда он необходим), предусмотренных настоящими Правилами;

Речь идет о требованиях, предусмотренных п.23 Правил, предписывающих:

- заполнение последней графы заявления «Подпись» с указанием даты подписания обязательно во всех случаях;

- заявление подписывается заявителем. От имени юридического лица заявление подписывается руководителем предприятия, организации или лицом, уполномоченным руководителем, с указанием его должности. Подпись скрепляется печатью;

- подписи расшифровываются с указанием фамилий и инициалов подписывающего лица.

е) необходимость выяснения вопросов, связанных с правильностью уплаты патентных пошлин;

Речь идет о требования, предусмотренных п.6 Правил, предписывающих представление:

- платежного документа, подтверждающего уплату патентной пошлины в установленном размере,
- документа, подтверждающего основания для освобождения от уплаты патентной пошлины либо для уменьшения ее размера.

При этом следует учитывать, что в соответствии с Законом РУз «О госпошлине» при исчислении размера патентных пошлин при подаче заявки учитывается, что при наличии указанных ниже обстоятельств дополнительно уплачивается:

- на группу изобретений, дополнительно за каждое изобретение свыше одного;
- дополнительно за каждый следующий лист описания свыше 35.

ж) отсутствие перевода документов заявки на узбекский или русский язык, если они представлены на другом языке;

Речь идет о требованиях, предусмотренных п.13 Правил.

з) **отсутствие документа о депонировании штамма микроорганизма**, линии клеток растений или животных в уполномоченной коллекции депозитарии;

Речь идет о требованиях, предусмотренных п.10 Правил.

и) выявление недостатков в оформлении документов, препятствующих их непосредственному репродуцированию, хранению и/или делающих невозможным подготовку к публикации описания к патенту (нарушение требований к формату листов, размерам полей и т. п., качество печати, затрудняющее прочтение материалов заявки и т. п.);

Речь идет о требованиях, предусмотренных п.91-111 Правил. В частности:

- все документы оформляются таким образом, чтобы было возможно их непосредственное репродуцирование в неограниченном количестве копий. Каждый лист используется только с одной стороны, с расположением строк параллельно меньшей стороне листа (п.91);
- каждый документ заявки начинается на отдельном листе. Листы имеют формат 210 х 297 мм. Минимальный размер полей на листах, содержащих описание, формулу, реферат, составляет, мм: верхнее — 20; правое — 20; нижнее — 20; левое — 25 (п.93).

к) **отсутствие в описании изобретения структурных разделов**, предусмотренных настоящими Правилами (если сведения, которые должны быть изложены в соответствующем разделе, приведены в другом разделе, запрос не направляется), а также замена в описании или формуле изобретения характеристики признака отсылкой к источнику информации, в котором этот признак раскрыт;

Речь идет о требованиях, предусмотренных п.25 Правил, предписывающий необходимость указания следующих разделов:

область техники, к которой относится изобретение;

уровень техники;

раскрытие изобретения;

краткое описание перечня фигур чертежей и иных материалов, если они содержатся в заявке;

сведения, подтверждающие возможность осуществления изобретения;

перечень последовательностей нуклеотидов и/или аминокислот (если такие последовательности использованы для характеристики изобретения).

л) наличие в заявке ссылок на источники, не являющиеся общедоступными, либо указаний на невозможность публикации тех или иных содержащихся в ней сведений (не считая сведений об авторах, пожелавших не быть указанными в качестве таковых при публикации сведений о выдаче патента);

Речь идет о требованиях, предусмотренных п.113 Правил, предусматривающих, что библиографические данные источников информации указываются таким образом, чтобы источник информации мог быть по ним обнаружен.

м) нарушение требований об изложении пункта формулы в виде одного предложения;

Речь идет о требованиях, предусмотренных п.75 Правил, предписывающих, что пункт формулы излагается в виде одного предложения.

н) отсутствие в формуле изобретения указания вида изобретения, для которого испрашивается правовая охрана;

о) наличие в формуле изобретения **вместо признаков** объекта соответствующего вида только данных о его эксплуатационных показателях и потребительских свойствах, эффектах и явлениях, имеющих место при его осуществлении и/или использовании;

Речь идет о требованиях, предусмотренных п.64 Правил, предписывающих, что формула изобретения должна выражать сущность изобретения, т.е. содержать совокупность его существенных признаков, достаточную для достижения указанного заявителем технического результата.

п) несоответствие документов заявки (название изобретения, приведенное в заявлении, не соответствует названию, приведенному в описании и в формуле изобретения; чертежи не соответствуют описанию изобретения и т. п.);

р) необходимость выяснения вопросов, связанных с установлением испрашиваемого в заявке более раннего приоритета.

В случае выявления в процессе формальной экспертизы заявки вышеуказанных нарушений заявителю **направляется запрос с указанием нарушений**, приведением необходимых аргументов правового характера и **предложением представить отсутствующие или исправленные документы в течение трех месяцев с даты его отправления**.

Таким образом, заявителя предоставляется возможность устранения выявленных недостатков на основании запроса АИС в трехмесячный срок.

Если заявитель в установленный срок не представит запрашиваемые материалы или ходатайство о продлении срока их представления, то заявка считается отозванной, о чем заявитель уведомляется. Делопроизводство по заявке прекращается (п.166 Правил).

Краткая таблица по формальной экспертизе:

| п/н | Изучаемый вопрос | Требование | Последствия |
|---|---|---|---|
| 1. | наличие документов, которые должны содержаться в заявке или прилагаться к ней, т.е. документов, предусмотренных:<br>- ч.2 ст.15 Закона,<br>- п.6 Правил (уплата патентной пошлины),<br>- п.8 Правил (заверенная копия первой заявки, поданной в другом государстве участнике Парижской Конвенции к заявке с испрашиванием конвенционного приоритета),<br>-п.10 Правил (депонирование штамма микроорганизима к заявке, относящейся к новому штамму микроорганизма) | Проверяется наличие:<br>1) **заявления о выдаче патента** с указанием автора (соавторов) изобретения и лица, на имя которого испрашивается патент (далее — заявитель), а также их местожительство или местонахождение;<br>2) **описания изобретения**, раскрывающее его с полнотой, достаточной для осуществления;<br>в) **формулы изобретения**, выражающую его сущность и полностью соответствующую описанию;<br>3) **чертежи и иные материалы**, если они необходимы для понимания сущности изобретения;<br>4) **реферат изобретения;**<br>5) к заявке с испрашиванием конвенционного приоритета: прилагается заверенная копия первой заявки, поданной заявителем в другом государстве участнике Парижской конвенции (далее — первая заявка), и перевод этой заявки на узбекский или русский язык, которые представляются не позднее трех месяцев с даты поступления конвенционной заявки в Агентство.<br>6) к заявке, относящейся к новому штамму микроорганизма, линии клеток растений или животных, их получению или использованию, прилагается документ о депонировании штамма в официально уполномоченной на это коллекции-депозитарии.<br>7) платежный документ об уплате патентной пошлины | Признается нарушением:<br>- отсутствие документов, предусмотренных ч.2 ст.15 (подп.а) п.165 Правил)<br>-е) необходимость выяснения вопросов, связанных с правильностью уплаты патентных пошлин;<br>ж) отсутствие перевода документов заявки на узбекский или русский язык, если они представлены на другом языке;<br>з) отсутствие документа о депонировании штамма микроорганизма, линии клеток растений или животных в уполномоченной коллекции депозитарии; |
| 2. | соблюдение установленных к ним требований, выявляемое **без анализа существа** изобретения;<br><br>Существенное условие: **Анализ существа изобретения не проводится** | Проверяется соблюдение требований к:<br>- описанию;<br>- формуле;<br>- чертежам;<br>- реферату<br><br>Например, согласно п.61 Правил для изобретения, относящегося к применению устройства, способа, вещества, штамма по новому назначению, **приводятся сведения, подтверждающие возможность реализации ими этого назначения**.<br>Другой пример:<br>согласно п.113 Правил библиографические данные источников информации указываются таким образом, чтобы источник информации мог быть по ним обнаружен. | Признается нарушением:<br>и) выявление недостатков в оформлении документов, препятствующих их непосредственному репродуцированию, хранению и/или делающих невозможным подготовку к публикации описания к патенту (нарушение требований к формату листов, размерам полей и т. п., качество печати, затрудняющее прочтение материалов заявки и т. п.);<br><br>к) отсутствие в описании изобретения структурных разделов, предусмотренных настоящими Правилами |

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| | | | (если сведения, которые должны быть изложены в соответствующем разделе, приведены в другом разделе, запрос не направляется), а также замена в описании или формуле изобретения характеристики признака отсылкой к источнику информации, в котором этот признак раскрыт;<br><br>л) **наличие в заявке ссылок на источники, не являющиеся общедоступными**, либо указаний на невозможность публикации тех или иных содержащихся в ней сведений (не считая сведений об авторах, пожелавших не быть указанными в качестве таковых при публикации сведений о выдаче патента);<br><br>м) **нарушение требований об изложении пункта формулы в виде одного предложения**;<br><br>н) отсутствие в формуле изобретения указания вида изобретения, для которого испрашивается правовая охрана;<br><br>о) наличие в формуле изобретения вместо признаков объекта соответствующего вида только данных о его эксплуатационных показателях и потребительских свойствах, эффектах и явлениях, имеющих место при его осуществлении и/или использовании; |
| 3. | соблюдение порядка подачи заявки от имени заявителя патентным поверенным поверенным или доверенным лицом, включая наличие и правильность оформления доверенности, удостоверяющей полномочия представителя; | | |
| 4. | г) подана ли заявка на предложение, относящееся к | Проверяется относится заявка к объектам, указанным в ч.9 ст.6 Закона. Согласно ч.9 ст.6 Закона не признаются | 169. Если в результате формальной экспертизы |

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|---|---|---|---|
| | объектам, охраняемым в качестве изобретений; | изобретениями:<br>- научные теории и математические методы;<br>- методы организации и управления;<br>- условные обозначения, расписания, правила;<br>- правила и методы выполнения умственных операций;<br>- алгоритмы и программы для электронных вычислительных машин;<br>- проекты и схемы планировки зданий, сооружений, территорий;<br>- решения, касающиеся только внешнего вида изделий, направленные на удовлетворение эстетических потребностей;<br>- топологии интегральных микросхем;<br>- сорта растений и породы животных;<br>- решения, противоречащие общественным интересам, принципам гуманности и морали.<br>Продублированы в п.3 Правил. | заявки установлено, что она оформлена на предложение, которое не относится к патентоспособным объектам, заявителю направляется запрос с приведением доводов, которые могут послужить основанием для отказа в выдаче патента и предложением опровергнуть приведенные доводы. Заявитель уведомляется также о том, что если в трехмесячный срок с даты направления запроса он не представит сообщение указанного содержания, то заявка считается отозванной.<br>Если в своем ответе заявитель не опроверг доводы экспертизы, принимается решение об отказе в выдаче патента.<br>170. Заявленное предложение не признается патентоспособным изобретением в случае, если оно в целом в том виде, как охарактеризовано в независимом пункте формулы, подпадает под перечень предложений, приведенных в пункте 3 настоящих Правил.<br>Если заявленный объект охарактеризован в многозвенной формуле и содержание зависимого пункта обусловливает противоречие этого объекта общественным интересам, принципам гуманности и морали, такой объект также не признается патентоспособным изобретением. |
| 5. | д) обоснованность испрашивания в заявке более раннего приоритета, чем дата ее поступления в Агентство; | | |

Срок: формальная экспертиза проводится Агентством **по истечении двух месяцев с даты подачи заявки на выдачу патента**.

По ходатайству заявителя формальная экспертиза может быть начата **до истечения указанного срока**.

В этом случае заявитель с момента подачи ходатайства **лишается прав на дополнения, исправления и уточнения материалов заявки по своей инициативе без уплаты дополнительной патентной пошлины**.

По результатам формальной экспертизы заявителю сообщается решение Агентства.

Данное решение может быть обжаловано заявителем путем подачи апелляции в Апелляционный совет.

Срок подачи апелляции: три месяца с даты отправления решения.

Апелляция должна быть рассмотрена Апелляционным советом в двухмесячный срок с даты ее поступления.

Решение Апелляционного совета может быть обжаловано в суд в течение шести месяцев с даты его принятия.

Результат формальной экспертизы:

Согласно п.171 Правил заявителю направляется решение о принятии заявки к рассмотрению, если:

- заявка содержит все необходимые документы,
- соблюдены требования к ним, установленные настоящими Правилами,
- заявленное предложение не относится к перечню не признаваемых патентоспособными изобретениями.

**Если в результате формальной экспертизы заявки установлено, что она оформлена на предложение, которое не относится к патентоспособным объектам**, **заявителю направляется запрос** с приведением доводов, которые могут послужить основанием для отказа в выдаче патента и предложением опровергнуть приведенные доводы. Заявитель уведомляется также о том, что если в **трехмесячный срок с даты направления запроса он не представит сообщение** указанного содержания, то заявка считается отозванной.

Делопроизводство может быть продолжено в случае восстановления Агентством пропущенного срока.

**Если в своем ответе заявитель не опроверг доводы экспертизы, принимается решение об отказе в выдаче патента**.

Заявленное предложение не признается патентоспособным изобретением в случае, если оно в целом в том виде, как охарактеризовано в независимом пункте формулы, подпадает под перечень предложений, приведенных в пункте 3 настоящих Правил.

Если заявленный объект охарактеризован в многозвенной формуле и содержание зависимого пункта обусловливает противоречие этого объекта общественным интересам, принципам гуманности и морали, такой объект также не признается патентоспособным изобретением.

**5.2. Экспертиза заявки: научно-техническая экспертиза по существу**

Особенностью второй экспертизы является, что основанием для проведения является ходатайство заявителя.

Таким образом, экспертиза по существу не осуществляется автоматически.

Отсутствие ходатайства на проведение экспертизы по существу означает, что такая экспертиза не будет проведена.

Предельный срок для подачи ходатайства – 3 года с даты подачи заявки.
Срок подачи ходатайства может быть продлен Агентством не более чем на два месяца по ходатайству заявителя, поданному до истечения трех лет с даты подачи заявки, при условии представления вместе с таким ходатайством документа, подтверждающего уплату патентной пошлины.

Ходатайство может быть подано и при подаче заявки.

В случае непоступления ходатайства о проведении научно-технической экспертизы по существу заявки на изобретение в трехлетний срок **заявка на изобретение считается отозванной**.

Предмет экспертизы по существу, т.е. перечень рассматриваемых в рамках ее проведения вопросов, определен п.174 Правил.

При экспертизе заявки по существу осуществляется:

1) установление приоритета изобретения, если он испрашивается более ранней датой;

2) проверка соответствия представленной заявителем формулы изобретения требованиям, приведенным в п.62-85 Правил;

3) проверка дополнительных материалов, если такие материалы представлены заявителем;

4) проверка соответствия условиям патентоспособности заявленного изобретения, охарактеризованного в формуле, предложенной заявителем в первоначальных материалах заявки или в дополнительных материалах, принятых во внимание при рассмотрении заявки.

Этапы экспертизы по существу:
- установление приоритета
- проверка формулы
- проверка патентоспособности.

5.2.1. Установление приоритета

**При испрашивании заявителем конвенционного приоритета проверяется**:
1) наличие заверенной копии первой заявки, поданной заявителем в государстве — участнике Парижской конвенции.

Данная копия может быть предоставлена:
- одновременно с подачей заявки;
- в течение **3 месяцев после даты подачи заявки**;

Согласно п.8 Правил к заявке с испрашиванием конвенционного приоритета (далее — конвенционная заявка) прилагается заверенная копия первой заявки, поданной заявителем в другом государстве участнике Парижской конвенции (далее — первая заявка), и **перевод этой заявки на узбекский или русский язык**, которые представляются **не позднее трех месяцев** с даты поступления конвенционной заявки в Агентство.

2) соблюдение заявителем **12-месячного срока, начиная с даты подачи первой заявки**, в течение которого заявка с испрашиванием конвенционного приоритета должна поступить в Агентство.

Если заявка поступила позднее указанного срока, но до истечения двух месяцев с даты его окончания, проверяется, названы ли заявителем независящие от него обстоятельства, воспрепятствовавшие подаче заявки в указанный 12-месячный срок, и устанавливается необходимость их документального подтверждения, если такое подтверждение отсутствует;

3) представление заявления об установлении конвенционного приоритета не позднее трех месяцев с даты поступления заявки в Агентство;

Согласно п.9 Правил просьба об установлении конвенционного приоритета может быть представлена при подаче заявки (приводится в соответствующей графе заявления о выдаче патента) или в течение двух месяцев с даты поступления заявки в Агентство.

4) **раскрытие заявляемого изобретения в первой заявке**.

При испрашивании заявителем приоритета изобретения **по дате поступления дополнительных материалов** к ранее поданной заявке того же заявителя проверяется соблюдение следующих требований:

1) заявка, по которой испрашивается такой приоритет, должна поступить в Агентство **в течение трех месяцев** с даты отправления заявителю уведомления Агентства **о невозможности принятия во внимание дополнительных материалов в связи с признанием их изменяющими сущность** заявленного предложения.

2) заявляемое изобретение должно быть раскрыто в дополнительных материалах, по дате поступления которых испрашивается приоритет (с учетом содержания первоначальной заявки, по которой эти материалы были представлены).

При испрашивании заявителем приоритета изобретения по дате подачи в Агентство **более ранней заявки** того же заявителя проверяется соблюдение заявителем следующих требований:

1) заявка, по которой испрашивается такой приоритет, должна быть подана **тем же заявителем**, что и более ранняя заявка;

2) заявка, по которой испрашивается такой приоритет, должна поступить в Агентство **не позднее 12 месяцев с даты поступления более ранней заявки**;

3) **заявляемое изобретение должно быть раскрыто в более ранней заявке**;

4) по ранее поданной заявке не должен испрашиваться более ранний приоритет.

При испрашивании приоритета на основании нескольких ранее поданных заявок соблюдение указанных требований устанавливается в отношении каждой из них.

При испрашивании указанного приоритета **более ранняя заявка** (или все заявки, если их несколько) **считается отозванной**, о чем заявитель уведомляется.

При испрашивании заявителем приоритета изобретения **по выделенной заявке** устанавливается соблюдение заявителем следующих требований:

**1) выделенная заявка должна поступить в Агентство до принятия по первоначальной заявке на изобретение решения об отказе в выдаче патента**, возможности обжалования которого исчерпаны (т. е. в период существования принципиальной возможности продолжения делопроизводства по заявке), или до даты регистрации изобретения в соответствующем государственном реестре Республики Узбекистан в случае принятия по первоначальной заявке решения о выдаче патента;

2) **изобретение, заявленное в выделенной заявке, должно быть раскрыто в первоначальной заявке**, а если заявка выделена из конвенционной заявки и приоритет испрашивается по дате ее приоритета — то по первой заявке.

При проверке соблюдения условий установления приоритета изобретения необходимо убедиться в том, что заявка, на основании которой испрашивается приоритет, или заявка, к которой поданы дополнительные материалы, являющиеся основанием для такого испрашивания, **не отозвана и не считается отозванной**.

При установлении соблюдения заявителем требования, связанного с раскрытием заявленного изобретения в ранее поданных материалах (ранее поданной заявке, дополнительных материалах), являющихся основанием для испрашивания приоритета, проверяется:

указаны ли в этих материалах (в описании, формуле ранее поданной заявки, в текстовой части дополнительных материалов) все признаки, включенные в формулу заявленного изобретения;

раскрыто ли изобретение в этих материалах на испрашиваемую дату приоритета с полнотой, достаточной для осуществления. При проверке

выполнения данного условия в случае испрашивания конвенционного приоритета от заявителя может быть потребовано представление перевода на узбекский или русский язык первой заявки, поданной им в государстве-участнике Парижской конвенции.

**При соблюдении заявителем требований** в отношении заявленного изобретения **устанавливается испрашиваемый приоритет** (п.183 Правил).

**При несоблюдении заявителем хотя бы одного из указанных требований приоритет** изобретения **устанавливается** (с предварительным уведомлением об этом заявителя) **по дате подачи заявки** в Агентство.

В том случае, когда после установления приоритета заявителем представлена **измененная формула** изобретения, **проводится повторная проверка** наличия оснований для установления испрашиваемого приоритета.

5.2.2. проверка формулы

Проверка проводится:

- **в отношении формулы** изобретения, содержавшейся в первоначальных материалах заявки на момент завершения формальной экспертизы заявки,

- если она изменялась заявителем после завершения экспертизы, то **проверяется измененная формула**.

При проверке формулы устанавливается:

- соблюдено ли требование **единства изобретения**;

- наличие в ней **существенных признаков** заявленного изобретения, **совокупность которых достаточна для получения** указанного заявителем **технического результата**;

- **включает установление возможности идентифицирования содержащихся в ней признаков**.

**Проверка формулы изобретения включает выявление в формуле признаков, необходимых только для получения результата, не являющегося техническим**, либо (для изобретения, характеризуемого с привлечением признаков программы для электронных вычислительных машин или используемого в такой программе алгоритма) результата, который не может быть признан относящимся к средству, воплощающему изобретение;

- устанавливается, содержатся ли в описании изобретения или отражены на чертеже понятия, которыми охарактеризовано изобретение;

- проверка формулы также включает:

а) установление наличия в зависимых пунктах многозвенной формулы изобретения признаков, обуславливающих противоречие изобретения в соответствующих частных случаях его выполнения или использования общественным интересам, принципам гуманности или морали;

б) наличие в формуле изобретения зависимого пункта, предполагающего исключение или замену признака (признаков) того пункта формулы, которому он подчинен;

Е**сли существенный признак**, без которого технический результат (никакой из результатов, если заявитель указал несколько их видов) не достигается, **не включен в независимый пункт формулы изобретения**, **но содержится в описании или в зависимом пункте формулы**, заявителю предлагается включить такой признак в независимый пункт формулы.

При этом приводятся доводы, подтверждающие необходимость включения этого признака в формулу для достижения технического результата. Такие доводы могут основываться на раскрытой в описании причинно-следственной связи между признаками и техническим результатом или на проведенном экспертизой научно-теоретическом анализе.

Если в заявке приведена однозвенная формула или многозвенная формула с одним независимым пунктом, то проверяется, охарактеризовано ли в такой формуле одно изобретение.

5.2.3. проверка патентоспособности;

Этапы проверки патентоспособности:

1) в первую очередь проводится проверка, не относится ли оно к перечню предложений, не признаваемых патентоспособными, и устанавливается соответствие изобретения условиям промышленной применимости, новизны и изобретательского уровня. При предполагаемом отнесении заявленного объекта к перечню предложений, исключенных из охраны, заявителю направляется запрос с изложением соответствующих доводов (п.202 Правил).

2) проверяется промышленная применимость.

Согласно п.212 Правил в отношении изобретения, для которого установлено несоответствие условию промышленной применимости, проверка новизны и изобретательского уровня не проводится.

3) проверяется новизна

Согласно п.224 Правил в отношении изобретения, для которого установлено несоответствие условию новизны, проверка изобретательского уровня не проводится.

4) проводится информационный поиск

5) проверяется изобретательский уровень

Проверка промышленной применимости.

**При установлении возможности использования изобретения проверяется:**

- содержат ли материалы заявки указание **назначения** заявленного объекта изобретения;

- проверяется также, **описаны ли в первичных материалах заявки средства и методы, с помощью которых возможно осуществление изобретения в том виде, как оно охарактеризовано в любом из пунктов формулы изобретения**. При отсутствии таких сведений в материалах заявки допустимо, чтобы указанные средства и методы были описаны в источнике, ставшем общедоступным до даты приоритета изобретения;

- следует убедиться в том, что в случае осуществления изобретения действительно возможна реализация указанного заявителем назначения.

Результат:

Согласно п.211 Правил если установлено, что на дату приоритета изобретения соблюдены все указанные требования, изобретение, охарактеризованное **в** данном **независимом пункте формулы, признается соответствующим условию промышленной применимости**.

**При несоблюдении хотя бы одного из указанных требований делается вывод о несоответствии изобретения условию промышленной применимости**.

В этом случае заявителю может быть **направлен запрос** с изложением соответствующих доводов, с предложением высказать свое мнение относительно этих доводов и откорректировать формулу изобретения (если, по мнению экспертизы, материалы заявки допускают такую корректировку, в результате которой указанный вывод может быть изменен).

Проверка новизны

Проверка новизны изобретения проводится в отношении всей совокупности признаков, содержащихся в независимом пункте формулы изобретения.

Информационный поиск

Информационный поиск проводится на основании формулы изобретения с учетом описания и чертежей (если таковые имеются), а также с учетом возможных допустимых изменений формулы изобретения.

Информационный поиск не прекращается и проводится до конца в полном объеме, даже если в процессе поиска обнаружено средство того же назначения, характеризующееся признаками, идентичными всем признакам изобретения, в отношении которого проводится поиск.

Количество выявленных в процессе поиска аналогов должно определяться из условия наиболее полной и содержательной информации об уровне техники без явного повторения и ненужного дублирования информации.

Результаты:

Согласно п.219 Правил изобретение **не признается соответствующим условию новизны**, если в уровне техники **выявлено средство, которому присущи признаки, идентичные всем признакам, содержащимся в предложенной заявителем формуле** изобретения, включая характеристики назначения.

Если заявленное изобретение относится к применению устройства, способа, вещества, штамма по новому назначению, то оно не признается соответствующим условию новизны при обнаружении источника информации, из которого известно применение того же устройства, способа, вещества, штамма с указанной заявителем предназначенностью.

В том случае, когда выявленным в уровне техники источником информации, из которого известно рассматриваемое изобретение, является заявка с более ранним приоритетом, **следует убедиться, что заявка не отозвана и не считается отозванной**.

Если заявка не отозвана и срок ее отзыва не истек, **заявителю рассматриваемого изобретения сообщается о наличии такой заявки** (без указания ее заявителя и раскрытия содержания) и о приостановлении рассмотрения его заявки до наступления определенности по заявке с более ранним приоритетом.

При несогласии заявителя с приостановлением рассмотрения заявки устанавливается несоответствие заявленного изобретения условию новизны.

Если установлено, что изобретение, охарактеризованное в независимом пункте формулы, содержащем зависимые пункты, соответствует условию новизны, **то анализ уровня техники в отношении зависимых пунктов не проводится**.

Согласно п.223 Правил при установлении отсутствия новизны изобретения, охарактеризованного формулой, не содержащей зависимые пункты, заявителю может быть направлен **запрос** с изложением доводов экспертизы и **с предложением представить свое мнение относительно этих доводов и, при необходимости, откорректированную** на основании первоначальных материалов заявки **формулу изобретения**.

**Проверка изобретательского уровня**

Проверка изобретательского уровня проводится в отношении изобретения, охарактеризованного в независимом пункте формулы, и включает:

**определение наиболее близкого аналога**;

**выявление** признаков, которыми отличается заявленное изобретение от наиболее близкого аналога (**отличительных признаков**);

выявление из уровня техники решений, имеющих **признаки, совпадающие с отличительными признаками** рассматриваемого изобретения.

Результаты:

Изобретение признается соответствующим условию изобретательского уровня, если:

- **не выявлены решения, имеющие признаки, совпадающие с его отличительными признаками**,

- или такие решения выявлены, но **не подтверждена известность влияния отличительных признаков на указанный заявителем технический результат**.

Условию изобретательского уровня соответствуют, в частности:

способы получения новых химических соединений (класса, группы) с установленной структурой;

способы получения известных химических соединений (класса, группы) с установленной структурой, если они основаны на новой для данного класса или группы соединений реакции или на известной для данного класса или группы соединений реакции, условия проведения которой не известны; композиция, состоящая, по крайней мере, из двух ингредиентов, обеспечивающая синергетический эффект, возможность достижения которого не вытекает из уровня техники (т. е. проявляющая свойства обоих ингредиентов, но количественные показатели хотя бы одного из этих свойств выше показателей свойств отдельного ингредиента);

композиция, состоящая, по крайней мере, из двух известных ингредиентов, обеспечивающая синергетический эффект, возможность достижения которого не вытекает из уровня техники (т. е. проявляющая свойства обоих ингредиентов, но количественные показатели хотя бы одного из этих свойств выше показателей свойств отдельного ингредиента);

химическое соединение, подпадающее под общую структурную формулу группы известных соединений, но не описанное как специально полученное и исследованное и при этом проявляющее новые неизвестные для этой группы свойства в качественном или количественном отношениях (селективное изобретение).

**Если заявленное изобретение, охарактеризованное в многозвенной формуле**, содержащей зависимые пункты, **признано соответствующим условию изобретательского уровня в отношении независимого пункта**, дальнейшая **проверка в отношении зависимых пунктов формулы не проводится**.

**Не признаются соответствующими условию изобретательского уровня** изобретения, основанные, в частности:

на дополнении известного средства какой-либо известной частью (частями), присоединяемой (присоединяемыми) к нему по известным правилам, для достижения технического результата, в отношении которого установлено влияние именно таких дополнений;

на замене какой-либо части (частей) известного средства другой известной частью для достижения технического результата, в отношении которого установлено влияние именно такой замены;

на исключении какой-либо части средства (элемента, действия) с одновременным исключением обусловленной ее наличием функции и достижением при этом обычного для такого исключения результата (упрощение

конструкции, уменьшение массы, габаритов, материалоемкости, повышение надежности, сокращение продолжительности процесса и пр.);

на изменении количества однотипных элементов, действий для усиления технического результата, обусловленного наличием в средстве именно таких элементов, действий;

на выполнении известного средства или его части (частей) из известного материала для достижения технического результата, обусловленного известными свойствами этого материала;

на создании средства, состоящего из известных частей, выбор которых и связь между которыми осуществлены на основании известных правил, рекомендаций и достигаемый при этом технический результат обусловлен только известными свойствами частей этого средства и связей между ними;

на применении известного устройства, способа, вещества, штамма по новому назначению, если новое назначение обусловлено его известными свойствами, структурой, выполнением и известно, что именно такие свойства, структура, выполнение необходимы для реализации этого назначения.

**Не могут быть признаны соответствующими изобретательскому уровню также изобретения, основанные на изменении количественного признака** (признаков), представлении таких признаков во взаимосвязи либо изменении ее вида, если известен факт влияния каждого из них на технический результат, и новые значения этих признаков или их взаимосвязь могли быть получены исходя из известных зависимостей, закономерностей.

**Известность влияния отличительных признаков заявленного изобретения на технический результат может быть подтверждена как одним, так и несколькими источниками информации**.

Допускается привлечение аргументов, основанных на общеизвестных в конкретной области техники знаниях, без указания каких-либо источников информации. Однако это не освобождает экспертизу от обязанности указать такие источники при дальнейшем рассмотрении заявки, если на этом будет настаивать заявитель.

**Если из уровня техники выявлены решения, которым присущи признаки, совпадающие с отличительными признаками изобретения, то подтверждение известности их влияния на технический результат не требуется**, если в отношении таких признаков он не определен заявителем, или в случае, когда установлено, что указанный технический результат заявителем не достигается.

Если установлено отсутствие изобретательского уровня изобретения, охарактеризованного формулой, не имеющей зависимых пунктов, то заявителю может быть направлен **запрос** с изложением соответствующих доводов, и предложением представить свое мнение относительно этих доводов.

Если изобретение охарактеризовано многозвенной формулой, содержащей зависимые пункты, и получен вывод о непатентоспособности изобретения в отношении независимого пункта ввиду отсутствия новизны или изобретательского уровня, то заявителю сообщается об этом и **предлагается высказать мнение** о целесообразности дальнейшего рассмотрения заявки с

представлением в случае подтверждения такой целесообразности откорректированной формулы изобретения. В том случае, когда эксперту известны источники информации, которые могли бы быть приняты во внимание при условии включения содержания зависимых пунктов в независимый пункт, заявителю может быть сообщено об этом.

В том случае, когда установлена патентоспособность изобретения в отношении независимого пункта формулы, имеющей зависимые пункты, необходимо убедиться, что содержащаяся в этих зависимых пунктах характеристика признаков изобретения не препятствует осуществлению изобретения или реализации указанного заявителем назначения. Кроме того, следует убедиться, что изобретение, охарактеризованное с привлечением признаков зависимых пунктов, не противоречит общественным интересам, принципам гуманности и морали.

**При положительном результате проверки** в отношении всех названных условий **изобретение,** охарактеризованное многозвенной формулой, имеющей зависимые пункты, **признается патентоспособным и принимается решение о выдаче патента.**

**При отрицательном результате проверки** в отношении любого из условий **заявителю сообщается об этом в запросе и предлагается представить доводы, опровергающие выводы экспертизы, либо откорректировать или исключить такие зависимые пункты из формулы изобретения**.

При установлении несоответствия объекта, заявленного в качестве изобретения или промышленного образца, условиям патентоспособности Агентство принимает решение об отказе в выдаче патента.

Заявитель может подать в Апелляционный совет апелляцию на решение Агентства в трехмесячный срок с даты его отправления. Апелляция должна быть рассмотрена Апелляционным советом в течение четырех месяцев с даты ее поступления.

Решение Апелляционного совета может быть обжаловано в суд в течение шести месяцев с даты его принятия.

Если заявлена группа изобретений, проверка патентоспособности проводится в отношении каждого из входящих в нее изобретений. Патентоспособность группы изобретений может быть констатирована только тогда, когда патентоспособны все изобретения группы.

Если установлено, что патентоспособны не все изобретения группы, то заявителю сообщается об этом и предлагается представить свое мнение относительно приведенных доводов и, при необходимости, исключить из формулы независимые пункты (и подчиненные им зависимые пункты), в которых охарактеризованы непатентоспособные изобретения, либо представить эти пункты в откорректированном виде.

Последствия изменения формулы

Согласно п.235 Правил если заявителем в изложенных выше случаях представляется **измененная формула** изобретения, то дальнейшее рассмотрение заявки проводится в соответствии с требованиями Правил в отношении изобретения (изобретений), охарактеризованного (охарактеризованных) в этой формуле.

В том случае, **когда заявитель**, не приводя доводов, опровергающих вывод экспертизы, или измененную формулу, **настаивает на выдаче патента с раннее изложенной им формулой, дальнейшее рассмотрение заявки не проводится и принимается решение об отказе в выдаче патента**.

**Выдача патента**

В соответствии со ст.24 Закона Агентство после принятия решения о выдаче патента производит государственную регистрацию объекта промышленной собственности соответственно в Государственном реестре изобретений, в Государственном реестре полезных моделей или Государственном реестре промышленных образцов.

Выдача патента на объект промышленной собственности производится Агентством по истечении десяти дней с даты публикации сведений о его регистрации в официальном бюллетене.

Патент на объект промышленной собственности выдается от имени Республики Узбекистан и подписывается руководителем Агентства.

При наличии нескольких лиц, на имя которых испрашивался патент, выдается один патент на объект промышленной собственности.

Форма патента на объект промышленной собственности и состав указываемых в нем сведений устанавливаются Агентством.

В выданный патент на объект промышленной собственности по требованию патентообладателя Агентством вносятся исправления очевидных и технических ошибок.

## Глава 7. Подача заявки на выдачу патента на полезную модель и ее экспертиза

7.1. Согласно ч.2 ст.16 Закона заявка на полезную модель должна содержать:

заявление о выдаче патента с указанием автора (соавторов) полезной модели и лица, на имя которого испрашивается патент, а также их местожительство или местонахождение;

описание полезной модели, раскрывающее с полнотой, достаточной для ее осуществления;

формулу полезной модели, выражающую ее сущность и полностью соответствующую описанию;

чертежи и иные материалы, если они необходимы для понимания сущности полезной модели;

реферат полезной модели.

Перечень документов заявки на выдачу патента на полезную модель идентичен перечню документов заявки на выдачу патента на изобретение.

7.2. Процедура патентования включает в себя проведение двух экспертиз:
- формальной экспертизы;
- экспертизы заявки.

Каждая из экспертиз отличается как по порядку ее проведения, так и по предмету вопросов, составляющих ее рассмотрения.

7.2.1. Формальная экспертиза.

Круг вопросов определен п.127 Правил, согласно которой при проведении формальной экспертизы заявки проверяются:

а) наличие документов, которые должны содержаться в заявке или прилагаться к ней;

б) соблюдение установленных к ним требований, выявляемое без анализа существа полезной модели;

в) соблюдение порядка подачи заявки в случаях, предусмотренных ч.4 статьи 14 Закона, включая наличие и правильность оформления доверенности, удостоверяющей полномочия представителя;

г) подана ли заявка на предложение, относящееся к объектам, охраняемым в качестве полезной модели;

д) обоснованность испрашивания в заявке более раннего приоритета, чем дата ее поступления в Агентство;

е) правильность классифицирования полезной модели по действующей редакции МПК, осуществленного заявителем (или производится такое классифицирование, если оно не сделано заявителем).

Таким образом, предметом формальной экспертизы, также как и при проведении формальной экспертизы на изобретение является изучение заявки и прилагаемых к ней документов в целях определения:

- их достаточности (подп.а, б и д);
- правильности оформления (подп.в), г) и е).

Перечень вопросов, свидетельствующих о том, что заявка оформлена с нарушением требований к ее документам приведен в ст.130 Правил.

К их числу отнесены:

а) отсутствие в заявке, по крайней мере, одного из предусмотренных документов;

б) отсутствие доверенности на представительство, если заявка подана через патентного поверенного либо доверенное лицо, и/или нарушение требований к ее оформлению;

в) представление документов заявки в количестве экземпляров, меньшем установленного;

г) подача заявки физическими лицами, проживающими за пределами Республики Узбекистан, или иностранными юридическими лицами не через патентных поверенных, зарегистрированных в Агентстве, если международным соглашением с участием Республики Узбекистан не установлен порядок, предусматривающий такую подачу заявки;

д) отсутствие в заявлении о выдаче патента реквизитов, подписей, оттиска печати (когда он необходим), предусмотренных настоящими Правилами;

е) необходимость выяснения вопросов, связанных с правильностью уплаты патентных пошлин;

ж) отсутствие перевода документов заявки на узбекский или русский язык, если они представлены на другом языке;

з) выявление недостатков в оформлении документов, препятствующих их непосредственному репродуцированию, хранению и/или делающих невозможным подготовку к публикации описания к патенту (нарушение требований к формату листов, размерам полей и т. п., качество печати, затрудняющее прочтение материалов заявки и т. п.);

и) отсутствие в описании полезной модели структурных разделов, предусмотренных настоящими Правилами (если сведения, которые должны быть изложены в соответствующем разделе, приведены в другом разделе, запрос не направляется), а также замена в описании или формуле полезной модели характеристики признака отсылкой к источнику информации, в котором этот признак раскрыт;

к) наличие в заявке ссылок на источники, не являющиеся общедоступными, либо указаний на невозможность публикации тех или иных содержащихся в ней сведений (не считая сведений об авторах, пожелавших не быть указанными в качестве таковых при публикации сведений о выдаче патента);

л) нарушение требований об изложении пункта формулы в виде одного предложения;

м) наличие в формуле полезной модели вместо признаков объекта соответствующего вида только данных о его эксплуатационных показателях и потребительских свойствах, эффектах и явлениях, имеющих место при его осуществлении и/или использовании;

н) несоответствие документов заявки (название полезной модели, приведенное в заявлении, не соответствует названию, приведенному в описании и в формуле полезной модели; чертежи не соответствуют описанию полезной модели и т. п.);

о) необходимость выяснения вопросов, связанных с установлением испрашиваемого в заявке более раннего приоритета.

Анализ показывает, что данный перечень идентичен перечня нарушений при проведении формальной экспертизы заявки на выдачу патента на изобретение.

Срок: формальная экспертиза проводится Агентством **по истечении двух месяцев с даты подачи заявки на выдачу патента**.

По ходатайству заявителя формальная экспертиза может быть начата **до истечения указанного срока**.

В этом случае заявитель с момента подачи ходатайства **лишается прав на дополнения, исправления и уточнения материалов заявки по своей инициативе без уплаты дополнительной патентной пошлины**.

По результатам формальной экспертизы заявителю сообщается решение Агентства.

Данное решение может быть обжаловано заявителем путем подачи апелляции в Апелляционный совет.

Срок подачи апелляции: три месяца с даты отправления решения.

Апелляция должна быть рассмотрена Апелляционным советом в двухмесячный срок с даты ее поступления.

Решение Апелляционного совета может быть обжаловано в суд в течение шести месяцев с даты его принятия.

Результат формальной экспертизы:

Согласно п.136 Правил заявителю направляется решение о принятии заявки к рассмотрению, если:

- заявка содержит все необходимые документы,
- соблюдены требования к ним, установленные Правилами,
- заявленное предложение не относится к перечню не признаваемых патентоспособными полезными моделями,

**Если в результате формальной экспертизы заявки установлено, что она оформлена на предложение, которое не относится к патентоспособным объектам**, **заявителю направляется запрос** с приведением доводов, которые могут послужить основанием для отказа в выдаче патента и предложением опровергнуть приведенные доводы. Заявитель уведомляется также о том, что если в **трехмесячный срок с даты направления запроса он не представит сообщение** указанного содержания, то заявка считается отозванной.

Делопроизводство может быть продолжено в случае восстановления Агентством пропущенного срока.

**Если в своем ответе заявитель не опроверг доводы экспертизы, принимается решение об отказе в выдаче патента**.

**7.2.2. Экспертиза заявки**

В отличии от экспертизы по существу заявки на выдачу патента на изобретение для проведения экспертизы заявки на выдачу патента на полезную модель **не требуется ходатайства заявителя**.

Таким образом, экспертиза осуществляется автоматически.

Предмет экспертизы по существу, т.е. перечень рассматриваемых в рамках ее проведения вопросов, определен п.139 Правил.

При экспертизе заявки осуществляется:

а) **установление приоритета** полезной модели, если он испрашивается;

Порядок и основания аналогичны при проведении экспертизы по существу на изобретение.

б) **проверка** соответствия представленной заявителем **формулы** полезной модели требованиям, приведенным в пунктах 34-52 Правил;

в) проверка дополнительных материалов, если такие материалы представлены заявителем;

г) проверка соответствия условиям патентоспособности заявленной полезной модели, охарактеризованного в формуле, предложенной заявителем в первоначальных материалах заявки или в дополнительных материалах, принятых во внимание при рассмотрении заявки.

7.3. Проверка формулы

Проверка проводится в отношении последнего варианта формулы полезной модели.

При проверке формулы устанавливается, соблюдено ли требование единства полезной модели. В случае установления нарушения требования единства полезной модели заявителю может быть предложено в трехмесячный срок с даты направления запроса представить уточненные описание и формулу, относящуюся к одной полезной модели либо к группе полезной модели, образующих единый творческий замысел, с указанием на необходимость доплаты патентной пошлины в случае, когда откорректированная формула может содержать новые пункты.

В случае, когда заявитель в установленный срок сообщил, какая (какие) полезная модель (полезные модели) подлежит (подлежат) рассмотрению в рамках поданной заявки, проверка проводится в отношении формулы указанной (указанных) полезной модели (полезных моделей).

Если такое сообщение в установленный срок от заявителя не поступило, то проверка проводится в отношении полезной модели или группы полезных моделей, образующих единый творческий замысел, указанных в формуле полезной модели первыми.

**При проверке формулы полезной модели устанавливается наличие в ней существенных признаков заявленной полезной модели, совокупность которых достаточна для получения указанного заявителем технического результата**.

**Если существенный признак, без которого технический результат** (никакой из результатов, если заявитель указал несколько их видов) **не достигается**, не включен в независимый пункт формулы полезной модели, но содержится в описании или в зависимом пункте формулы, заявителю предлагается включить такой признак в независимый пункт формулы.

При этом приводятся доводы, подтверждающие необходимость включения этого признака в формулу для достижения технического результата. Такие доводы могут основываться на раскрытой в описании причинно-следственной связи между признаками и техническим результатом или на проведенном экспертизой научно-теоретическом анализе.

Проверка формулы также включает:

а) установление наличия в зависимых пунктах многозвенной формулы полезной модели признаков, обуславливающих противоречие полезной модели в соответствующих частных случаях его выполнения или использования общественным интересам, принципам гуманности или морали;

б) наличие в формуле полезной модели зависимого пункта, предполагающего исключение или замену признака (признаков) того пункта формулы, которому он подчинен.

В отношении формулы, измененной заявителем по запросу экспертизы или по собственной инициативе, проводится проверка в соответствии с пунктами 152-162 Правил.

**Для проверки патентоспособности полезной модели принимается формула с изменениями, подтвержденными заявителем**.

7.4. проверка патентоспособности;

При проверке патентоспособности заявленной полезной модели проводится проверка:

- **не относится ли она к перечню предложений, не признаваемых патентоспособными**,
- устанавливается **соответствие полезной модели условиям промышленной применимости и новизны**.

При установлении возможности использования полезной модели **проверяется, содержат ли материалы заявки указание назначения заявленного объекта** полезной модели.

Проверяется также, **описаны ли в первоначальных материалах заявки средства и методы, с помощью которых возможно осуществление полезной модели в том виде, как она охарактеризована в любом из пунктов формулы полезной модели**.

При отсутствии таких сведений в материалах заявки допустимо, чтобы указанные средства и методы были описаны в источнике, ставшем общедоступным до даты приоритета полезной модели.

Кроме того, **следует убедиться в том, что в случае осуществления полезной модели действительно возможна реализация указанного заявителем назначения**.

Если о возможности осуществления полезной модели и реализации ею указанного назначения могут свидетельствовать лишь экспериментальные данные, проверяется наличие в описании полезной модели примеров ее осуществления с приведением соответствующих данных (п.31 Правил), а также устанавливается, являются ли приведенные примеры достаточными, чтобы вывод о соблюдении указанного требования распространялся на разные частные формы реализации признака, охватываемые понятием, приведенным заявителем в формуле полезной модели.

Согласно п.177 Правил в отношении полезной модели, для которой установлено **несоответствие условию промышленной применимости, проверка новизны не проводится**.

Полезная модель является новой, если она не известна из уровня техники.

Уровень техники включает все ставшие общедоступными в Республике Узбекистан сведения о средствах того же назначения, что и заявленная полезная модель, а также сведения об их применении.

Проверка новизны полезной модели проводится в отношении всей совокупности признаков, содержащихся в независимом пункте формулы полезной модели.

Информационный поиск проводится на основании формулы полезной модели с учетом описания и чертежей, а также с учетом возможных допустимых изменений формулы полезной модели.

Результаты:

При положительном результате проверки в отношении всех названных условий полезная модель, охарактеризованная многозвенной формулой, имеющей зависимые пункты, признается патентоспособной и принимается решение о выдаче патента.

При отрицательном результате проверки в отношении любого из условий заявителю сообщается об этом в запросе и предлагается представить доводы, опровергающие выводы экспертизы, либо откорректировать или исключить такие зависимые пункты из формулы полезной модели.

**Выдача патента**

В соответствии со ст.24 Закона Агентство после принятия решения о выдаче патента производит государственную регистрацию объекта промышленной собственности соответственно в Государственном реестре изобретений, в Государственном реестре полезных моделей или Государственном реестре промышленных образцов.

Выдача патента на объект промышленной собственности производится Агентством по истечении десяти дней с даты публикации сведений о его регистрации в официальном бюллетене.

Патент на объект промышленной собственности выдается от имени Республики Узбекистан и подписывается руководителем Агентства. При наличии нескольких лиц, на имя которых испрашивался патент, выдается один патент на объект промышленной собственности.

Форма патента на объект промышленной собственности и состав указываемых в нем сведений устанавливаются Агентством. В выданный патент на объект промышленной собственности по требованию патентообладателя Агентством вносятся исправления очевидных и технических ошибок.

## Глава 8. Авторы

Процесс создания объекта промышленной собственности, включая изобретения: от возникновения идеи до разработки, включающей обеспечение получения технического результата, достижение которого является целью разработки, представляет собой интеллектуальной труд их создателей.

Таким образом, объекты промышленной собственности, в том числе изобретения, являются результатом творческого труда их создателей.

В этой связи, Закон выделяет фигуру автора или авторов, если объект создан творческим трудом двух и более лиц, определяя статус и особые права автора (авторов) и специальные условия их защиты.

**Автором объекта промышленной собственности признается физическое лицо, творческим трудом которого он создан (ч.1 ст.9 Закона)**.

Согласно ст.1085 ГК автору изобретения, полезной модели, промышленного образца принадлежит:

- право авторства;
- право присвоения изобретению, полезной модели, промышленному образцу специального наименования.

Под правом авторства понимается право указания создателя изобретения в качестве его автора.

Сведения об авторе (фамилия, имя (отчество), полный почтовый адрес местожительства, включающий наименование страны и ее код по стандарту ВОИС ST.3) и его полный домашний адрес указываются в заявлении, прилагаемого к заявке (п.21, 22 Правил).

Из ст.1085 ГК следует, что право присвоения объекту наименования является прерогативой автора, т.е. именно автор вправе дать название изобретению с учетом требований, предусмотренных п.26 Правил.

Перечисленные выше права по своей правовой природе являются личными неимущественными правами (ч.3 ст.9 Закона).

Закон подчеркивает, что право авторства является неотчуждаемым и непередаваемым, т.е. автор не может его продать, уступить или иным образом распорядиться им.

Право авторства и другие личные права на изобретение, полезную модель, промышленный образец возникают с момента возникновения прав, основанных на патенте.

Право на изобретение, полезную модель и промышленный образец охраняется при условии выдачи патента.

Патент на объект промышленной собственности удостоверяет:

- приоритет;
- авторство объекта промышленной собственности;
- исключительное право патентообладателя на владение, пользование и распоряжение объектом промышленной собственности.

Таким образом, право авторства считается возникшим с момента принятия решения о выдаче патента.

В этой связи, возникает временный интервал между датой фактического создания и датой принятия решения о выдаче патента, поскольку фактически изобретение создано раньше, чем принято решение о выдаче патента.

Лицо, указанное в заявке в качестве автора, считается автором, пока не доказано иное. В качестве доказательств могут привлекаться лишь факты и обстоятельства, существовавшие до возникновения права.

Согласно ч.2 ст.9 Закона нсли объект промышленной собственности создан совместным творческим трудом нескольких физических лиц, все они признаются его равноправными соавторами, если соглашением между ними не предусмотрено иное.

В силу ст.1086 ГК взаимоотношения соавторов изобретения, полезной модели, промышленного образца определяются соглашением между ними.

Нетворческое содействие созданию изобретения, полезной модели, промышленного образца (техническая, организационная или математическая помощь, содействие оформлению прав и т. п.) не влечет за собой соавторства (ч.2 ст.1086).

Автору принадлежит право на подачу заявки на выдачу патента. Данное право может быть отчуждено, т.к. является имущественным правом.

Перечень имущественных прав, отчуждение которых автор может произвести, приведен в ст.1084 ГК.

Согласно ст.1084 ГК могут быть переданы полностью или частично другому лицу следующие права:

- **право на получение патента**,
- права, **вытекающие из регистрации заявки**,
- право на владение патентом,
- права, вытекающие из патента.

Право на получение патента принадлежит автору (ч.1 ст.10 Закона).

Автор может подать заявку на выдачу патента (ч.1 ст.14 Закона).

Право на получение патента автор может передать другому лицу до подачи заявки.

В этом случае заявителем будет лицо, которому автор передал право на получение патента.

Однако, заявитель обязан указать автора в заявлении, поскольку право авторства, являясь неотчуждаемым, не переходит к заявителю.

Лица, которым автор передал право на получение патента, по терминологии Закона именуются правопреемниками автора (ч.1 ст.14 Закона).

Автор может передать другому лицу права **после подачи заявки**, в этом случае его преемник приобретает права, вытекающие из регистрации заявки.

В этом случае согласно п.126 Правил в Агентство подается **заявление о внесении изменения наименования заявителя** и представляется документ, подтверждающий эти изменения. Форма заявления приведена в приложении №2 к Правилам.

В случае **уступки своего права на заявку** иному лицу заявителем подается в Агентство **заявление о внесении записи об изменении заявителя**. Форма заявления приведена в приложении №3 Правилам (п.127 Правил).

Изменение указания заявителя при передаче права на получение патента или в результате изменения наименования заявителя может быть произведено **до даты регистрации изобретения в соответствующем государственном реестре**.

Заявление должно содержать указание на уступку права на заявку иному лицу — правопреемнику, сведения об этом лице, предусмотренные п.15 Правил. Заявление подписывается заявителем и его правопреемником.

В случае соблюдения установленных требований заявитель и его правопреемник уведомляются о внесении в материалы заявки записи об изменении заявителя. Вся дальнейшая переписка ведется с новым заявителем.

**Датой перехода права на заявку считается дата направления заявителю и его правопреемнику уведомления о внесении в материалы заявки записи об изменении заявителя**. В случае несоблюдения установленных требований заявитель и его правопреемник уведомляются о необходимости внесения уточнения и/или исправления в представленные документы или о невозможности внесения в материалы заявки записи об изменении заявителя с приведением соответствующих доводов.

Агентство принимает заявление о внесении исправлений, подписанное заявителем или его патентным поверенным либо доверенным лицом с указанием номера соответствующей заявки, и исправлений, которые должны быть внесены. Форма заявления приведена в приложении №4 к Правилам.

## Глава 9. Патентообладатели

7.1. Патент

Согласно ч.1 ст.5 Закона **право на объект промышленной собственности удостоверяется патентом**.

Патент удостоверяет:

- приоритет,
- авторство объекта промышленной собственности,
- **исключительное право патентообладателя на владение, пользование и распоряжение объектом** промышленной собственности (ч.5 ст.5 Закона).

Исключительное право патентообладателя считается действующим с даты публикации сведений о регистрации объекта промышленной собственности в официальном бюллетене Агентства.

Объем правовой охраны, предоставляемой патентом:
- на изобретение и полезную модель, **определяется их формулой**,
- на промышленный образец — **совокупностью его существенных признаков и (или) их комбинацией** (далее — совокупность его существенных признаков), отображенных на изображениях изделия (макета, рисунка).

7.2. Срок действия патента

Патент на изобретение действует **с даты подачи заявки** на выдачу патента в Агентство в течение следующих сроков:

| Наименование объекта | Срок | Срок продления по ходатайству патентообладателя |
|---|---|---|
| Изобретение | 20 лет | 5 лет |
| Полезная модель | 5 лет | 3 года |
| Промышленный образец | 10 лет | 5 лет |

7.3. Лица, имеющие право на получение патента

Закон содержит две нормы ч.1 ст.5 и ч.1 ст.10

Согласно ч.1 ст.5 право на объект ПС принадлежит:
- автору (соавторам);
- или его правопреемнику (правопреемникам).

Согласно ч.1 ст.10 Закона **патент на объект промышленной собственности выдается**:
- автору (соавторам) объекта промышленной собственности или его (их) наследнику (наследникам);
- юридическим и (или) физическим лицам (при условии их согласия), которые указаны автором или его наследником в заявке на выдачу патента либо в **заявлении об изменении заявителя**, поданном в Агентство до регистрации объекта промышленной собственности;
- работодателю в случаях, предусмотренных настоящей статьей.

Право на получение патента может быть уступлено полностью или частично другому лицу.

Патент на объект промышленной собственности, а также право на его получение переходят по наследству.

Согласно ст.1084 ГК различает следующие виды прав:
- право на получение патента,
- права, вытекающие из регистрации заявки,
- право на владение патентом,
- права, вытекающие из патента.

7.4. Права патентообладателя

Согласно ст.11 Закона Патентообладателю принадлежит:
- право на использование объекта промышленной собственности по своему усмотрению, если такое использование не нарушает прав других патентообладателей,
- включая право на запрещение использования указанного объекта другими лицами, за исключением случаев, когда такое использование в соответствии с настоящим Законом не является нарушением права патентообладателя.

Нарушением исключительного права патентообладателя признается **несанкционированное** изготовление, применение, импорт, предложение к продаже, продажа, иное введение в гражданский оборот или хранение с этой целью продукта или изделия, содержащего соответствующий запатентованный объект промышленной собственности, а также применение способа, охраняемого патентом на изобретение, или введение в гражданский оборот либо хранение с этой целью продукта, изготовленного непосредственно способом, охраняемым патентом на изобретение.

Лица, использующие объект промышленной собственности в нарушение исключительного права патентообладателя, обязаны по требованию патентообладателя:
прекратить действия, нарушающие исключительное право патентообладателя;
возместить патентообладателю понесенные им убытки в соответствии с законодательством.

7.5. Принадлежность патента нескольким лицам

Если патент на объект промышленной собственности был выдан нескольким патентообладателям, то Закон предлагает два варианта определения правового режима их использования:

1) между патентообладателями может быть заключено соглашение;
Существенными условиями такого соглашения следует признать:
- порядок принятия решений;
- распределения получаемых от использования объекта доходов.
Такое соглашение имеет признаки сходства с договором простого товарищества (совместной деятельности)

2) при отсутствии такого соглашения каждый патентообладатель каждый патентообладатель вправе использовать самостоятельно.

Это означает, что каждый патентообладатель вправе выдавать третьим лицам простые неисключительные лицензии на использование объекта.

При этом действует существенное ограничение самостоятельности.

Согласие всех патентообладателей требуется по вопросам:

- предоставления исключительной лицензии;
- передачи патента, т.е. уступки патента, предполагающей передачу исключительного права (отчуждение в полном объеме).

7.6. Отказ от патента

Согласно ст.29 Закона **патентообладатель по письменному заявлению имеет право отказаться от патента** на объект промышленной собственности.

Отказ от патента со стороны одного из нескольких патентообладателей не приводит к прекращению действия патента на объект промышленной собственности.

7.7. Открытая лицензия

Согласно ч.2 ст.32 Закона патентообладатель может подать в Агентство заявление о предоставлении **любому лицу права на использование объекта промышленной собственности (открытая лицензия)**. В этом случае патентная пошлина за поддержание патента в действии снижается на пятьдесят процентов с года, следующего за годом опубликования сведений о таком заявлении Агентством.

Лицо, изъявившее желание приобрести открытую лицензию, обязано заключить с патентообладателем договор о предоставлении неисключительной лицензии. Споры по условиям договора рассматриваются судом. Заявление патентообладателя о предоставлении права на открытую лицензию отзыву не подлежит.

7.8. Уступка патента

Патентообладатель может передать удостоверяемое патентом право на объект промышленной собственности любому юридическому или физическому лицу (лицам) по договору об уступке патента или право использования объекта промышленной собственности по лицензионному договору. Договор об уступке патента и лицензионный договор подлежат регистрации в Агентстве.

Патентообладатель может использовать предупредительную маркировку, указывающую на то, что используемые объекты промышленной собственности запатентованы.

7.9. Закон предусматривает ограничение прав патентооболадателя:

1) устанавливается перечень обстоятельств, которые не считаются нарушениями прав патентообладателя в случае использования объекта

Согласно ст.12 Закона не признается нарушением исключительного права патентообладателя:

применение устройств, содержащих охраняемые в Республике Узбекистан объекты промышленной собственности, на транспортном средстве другого государства — участника Парижской Конвенции по охране промышленной собственности, когда указанное средство временно или случайно находится на территории Республики Узбекистан, при условии, что эти устройства используются исключительно для нужд данного средства;

проведение научного исследования или эксперимента над средствами, содержащими объекты промышленной собственности, охраняемые патентами;

применение средств, содержащих объекты промышленной собственности, охраняемые патентами, при стихийных бедствиях, катастрофах, эпидемиях и других чрезвычайных обстоятельствах;

**применение средств, содержащих объекты промышленной собственности, охраняемые патентами, если эти средства введены в гражданский оборот законным путем**;

применение средств, содержащих объекты промышленной собственности, охраняемые патентами, в личных целях без получения дохода;

разовое изготовление лекарственных средств в аптеках по рецептам врача.

2) механизм принудительной лицензии (ч.5 ст.11 Закона)

При неиспользовании или недостаточном использовании патентообладателями объекта промышленной собственности в течение трех лет с даты его регистрации любое лицо, желающее и готовое использовать охраняемый объект промышленной собственности, в случае отказа патентообладателя от заключения лицензионного договора может обратиться в суд с ходатайством о предоставлении ему принудительной неисключительной лицензии.

## Глава 10. Служебное изобретение

10.1. Вопросам правового регулирования служебных изобретений посвящена ст.10 Закона.

Служебное изобретение может быть создано:

1) в связи с выполнением работником своих служебных обязанностей;

2) либо конкретного задания работодателя.

Перечень обязанностей работников могут быть определен должностной инструкцией, трудовым договором.

Задание носит индивидуальный характер, оно может быть выражено либо в персональном поручении либо приказе.

10.2. Согласно ч.2, 3 ст.10 Закона право на патент на объект промышленной собственности, созданный работником в связи с выполнением им своих служебных обязанностей или конкретного задания работодателя, **принадлежит работодателю**, **если это предусмотрено в договоре между ними**.

Если **в договоре между работодателем и автором (соавторами) не предусмотрены положения ч.2 настоящей статьи**, то в этом случае **автор (соавторы) имеет право подать заявку и получить патент** на объект промышленной собственности на свое имя (ч.3 ст..10 Закона).

Положения ст.10 Закона по вопросу возникновения прав работодателя на патент на служебные изобретения не являются диспозитивными.

**Для получения права на патент работодателем об этом должно прямо предусмотрено в договоре, заключенного между работодателем и работником**.

**Если договор такого условия не содержит, то право на патент возникает у работника**.

Следует отметить, что Закон не конкретизирует о каком договоре идет речь: трудовом договоре или каком-либо ином.

В этой связи, можно констатировать, что под договором понимается как трудовой договор, так и любой иной договор. Под иным договором рассматривается договор гражданско-правового характера.

Не исключен вариант заключения дополнительного соглашения к трудовому договору, содержащий пункт о возникновении права на патент у работодателя, если в заключенном при приеме работника трудовом договоре такое условие не было оговорено.

10.3. В случаях, когда договором между работодателем и работником предусмотрено, что право на патент принадлежит работодателю, то такое **право работодателя на патент ограничено сроком, в пределах которого он должен подать заявку на патент**.

Согласно ч.4 ст.10 Закона работодатель должен в течение **четырех месяцев с даты письменного уведомления его автором (соавторами) о созданном**

**объекте** промышленной собственности подать заявку на выдачу патента в Агентство.

В пределах данного срока работодатель имеет право уступить право на подачу заявки на выдачу патента другому лицу.

Закон также допускает возможность принятие обязательства обеими сторонами о сохранении соответствующего объекта в тайне, о чем работодатель должен уведомить авторов - работников.

**После истечения 4-х месяцев**, если работодатель не подаст заявку, не уступит патент или не примет обязательство о сохранении объекта в тайне, **автор (соавторы) имеет право подать заявку и получить патент на свое имя**.

10.4. Закон определяет имущественные обязанности сторон:

10.4.1. **если права на патент возникают у работодателя, то автор (соавторы) имеет право на вознаграждение** за использование или продажу лицензии на соответствующий объект промышленной собственности.

Размер, условия и порядок выплаты вознаграждения автору (соавторам) за счет поступающих средств за использование или продажу лицензии на объект промышленной собственности **определяются договором между ним (ними) и работодателем**.

10.4.2. если права на патент возникают у авторов – работников, то работодатель имеет преимущественное право на использование объекта в собственном производстве с выплатой патентообладателю компенсации.

Размер компенсации определяется договором.

В данном случае закон подразумевает заключение отдельного договора по вопросам использования и выплаты компенсации, по сути лицензионного договора.

10.4.3. **в случае сохранения работодателем объекта** промышленной **собственности в тайне он обязан выплатить автору (соавторам) соразмерное вознаграждение**, величина которого определяется договором

## Глава 11. Агентство по интеллектуальной собственности

Уполномоченным органом государственного управления, осуществляющим единую государственную политику в области охраны и защиты прав на объекты интеллектуальной собственности, является **Агентство по интеллектуальной собственности**.

В соответствии с п.2 Постановления Президента РУз от 08.02.2019г. №ПП-4168 Агентство по интеллектуальной собственности Республики Узбекистан входит в систему Министерства юстиции Республики Узбекистан,

переименовав его в Агентство по интеллектуальной собственности при Министерстве юстиции Республики Узбекистан (далее — Агентство).

Статус Агентства определен ст.3 Закона.

Агентство по интеллектуальной собственности при Министерстве юстиции Республики Узбекистан (далее — Агентство):

- обеспечивает реализацию единой государственной политики в области правовой охраны объектов промышленной собственности.

Агентство:

- принимает к рассмотрению заявки на выдачу патентов на объекты промышленной собственности (далее — заявка на выдачу патента),

- проводит по ним государственную экспертизу, государственную регистрацию,

- выдает патенты на объекты промышленной собственности,

- издает официальный бюллетень,

- принимает правила и дает разъяснения по применению законодательства об объектах промышленной собственности,

- осуществляет иные полномочия в соответствии с Положением об Агентстве, утверждаемым Кабинетом Министров Республики Узбекистан.

Функции и права Агентства определены Положением об Агентстве, утвержденного ПКМ РУз от 20.07.2019г. №609.

В соответствии с п.10 данного Положения Агентство в соответствии с возложенными на него задачами осуществляет следующие функции:

1) в сфере реализации единой государственной политики в области интеллектуальной собственности, предоставления правовой охраны изобретениям, полезным моделям, промышленным образцам, товарным знакам и другим объектам интеллектуальной собственности:

**разрабатывает предложения и проекты нормативно-правовых актов в сфере интеллектуальной собственности**, вносит их в Министерство юстиции для дальнейшего согласования (визирования) в сроки, установленные регламентами Администрации Президента Республики Узбекистан и Кабинета Министров Республики Узбекистан;

**принимает к рассмотрению заявки** на выдачу охранных документов на изобретения, полезные модели, промышленные образцы, селекционные достижения, товарные знаки, знаки обслуживания, наименования мест происхождения товаров, программы для электронных вычислительных машин (далее — ЭВМ), базы данных и топологии интегральных микросхем;

**осуществляет государственную экспертизу** изобретений, полезных моделей, промышленных образцов, товарных знаков, знаков обслуживания, наименований мест происхождения товаров, устанавливает приоритет заявленных объектов, проводит формальную экспертизу селекционных достижений, программ для ЭВМ, баз данных и топологий интегральных микросхем;

осуществляет государственную регистрацию изобретений, полезных моделей, промышленных образцов, регистрацию селекционных достижений, товарных знаков, знаков обслуживания, наименований мест происхождения товаров, официальную регистрацию программ для ЭВМ, баз данных и регистрацию топологий интегральных микросхем, выдает охранные документы, ведет соответствующие реестры и Перечень общеизвестных в Республике Узбекистан товарных знаков;

принимает решения о выдаче или об отказе в выдаче охранных документов на изобретение, полезную модель, промышленный образец, товарный знак, знак обслуживания, наименование мест происхождения товаров, программы для ЭВМ, базы данных и топологии интегральных микросхем по результатам проверки соответствия поданных заявок установленным требованиям;

принимает решения о выдаче или об отказе в выдаче охранных документов по результатам установления соответствия заявленных селекционных достижений условиям патентоспособности, на основании заключений Центра по сортоиспытанию сельскохозяйственных культур Министерства сельского хозяйства Республики Узбекистан и Инспекции по контролю за агропромышленным комплексом при Кабинете Министров Республики Узбекистан;

устанавливает единые формы охранных и иных необходимых документов;

выполняет функцию депозитария с обеспечением открытости и доступности депонированных объектов интеллектуальной собственности, включая возможность получения по договору с депозитарием необходимого экземпляра любым лицом, которое обратилось в этот депозитарий;

регистрирует лицензионные договоры о предоставлении прав на использование объектов интеллектуальной собственности, а также договоры об их полной или частичной уступке и ведет соответствующие реестры;

формирует базу данных об официально зарегистрированных объектах интеллектуальной собственности, обеспечивает условия для их сохранности и использования;

организует и проводит работы по комплектованию Государственного патентного фонда, обеспечивает его сохранность и доступность для эффективного использования хозяйствующими субъектами, научными организациями, учеными и специалистами;

организует и осуществляет публикацию бюллетеней и других официальных изданий Агентства, а также иных сведений и материалов по вопросам правовой охраны и защиты прав на объекты интеллектуальной собственности;

проводит аттестацию и регистрацию патентных поверенных, ведет государственный реестр патентных поверенных;

выдает лицензии на воспроизведение аудиовизуальных произведений, фонограмм и программ для ЭВМ, изготовление фонограмм, а также осуществляет контроль за соблюдением лицензиатами лицензионных требований и условий;

2) в сфере осуществления комплексного анализа состояния правовой охраны объектов интеллектуальной собственности, выработки конкретных предложений по развитию данной сферы:

проводит всесторонний анализ и оценку состояния развития сферы интеллектуальной собственности, в том числе с учетом методологии и критериев международных рейтингов и индексов в этой сфере;

анализирует системные проблемы и недостатки, оказывающие негативное влияние на обеспечение надежной правовой охраны и защиты объектов интеллектуальной собственности, а также в целом на развитие данной сферы, и по итогам подготавливает предложения по их устранению;

подготавливает предложения по дальнейшему развитию сферы интеллектуальной собственности, обеспечению законных интересов правообладателей;

подготавливает и вносит в соответствующие государственные органы и организации предложения по совершенствованию и повышению эффективности правовой охраны объектов интеллектуальной собственности;

разрабатывает и вносит в установленном порядке предложения, направленные на последовательное развитие законодательства с учетом современных тенденций, имплементацию в национальное законодательство и правоприменительную практику общепризнанных международных стандартов в сфере интеллектуальной собственности;

проводит мониторинг выполнения принятых Республикой Узбекистан международных обязательств в сфере обеспечения надежной правовой охраны и защиты объектов интеллектуальной собственности;

принимает меры по укреплению международного имиджа Республики Узбекистан, в том числе путем доведения до мирового сообщества объективной информации о проводимых в стране реформах в сфере интеллектуальной собственности, подготовки обзорных, справочных и иных материалов;

3) в области реализации мер по обеспечению последовательной и единообразной правоприменительной практики в сфере интеллектуальной собственности:

проводит изучение и анализ практики применения нормативно-правовых актов в сфере интеллектуальной собственности в деятельности государственных органов и организаций;

**подготавливает и вносит в установленном порядке предложения по дальнейшему совершенствованию законодательства** по результатам анализа правоприменительной практики;

направляет государственным органам и организациям **материалы обобщений правоприменительной практики для принятия мер по устранению выявленных нарушений законодательства**, причин и условий, способствовавших их совершению;

принимает действенные меры по устранению неправильной или противоречивой практики применения нормативно-правовых актов в сфере интеллектуальной собственности, а также негативных факторов, причин и условий, способствующих совершению правонарушений в данной сфере;

формирует и доводит свою позицию по вопросам применения нормативно-правовых актов;

обобщает практику применения законодательства и проводит анализ состояния реализации государственной политики в сфере правовой охраны и защиты объектов интеллектуальной собственности, разрабатывает на этой основе меры по совершенствованию правоприменительной деятельности;

взаимодействует с правоохранительными, налоговыми и иными государственными органами по выявлению и пресечению правонарушений в сфере интеллектуальной собственности;

выдает заключения о нарушениях законодательства об авторском праве и смежных правах в установленном порядке;

рассматривает обращения физических и юридических лиц по вопросам правовой охраны и защиты прав на объекты интеллектуальной собственности в соответствии с законодательством;

4) в сфере налаживания и укрепления международно-правового сотрудничества по вопросам интеллектуальной собственности:

осуществляет международное сотрудничество и взаимодействие в сфере правовой охраны объектов интеллектуальной собственности;

вносит в установленном порядке предложения о заключении международных договоров, участвует в подготовке проектов международных договоров Республики Узбекистан в сфере правовой охраны и защиты прав на

объекты интеллектуальной собственности и по поручению Кабинета Министров подписывает указанные договоры;

ведет переговоры с соответствующими международными, региональными и иностранными организациями, в установленном порядке заключает межведомственные договоры в сфере правовой охраны и защиты прав на объекты интеллектуальной собственности;

осуществляет международный обмен патентной документацией и патентно-правовой литературой с иностранными патентными ведомствами, международными, региональными и иностранными организациями, организует изучение и использование зарубежного опыта в сфере правовой охраны и защиты прав на объекты интеллектуальной собственности;

осуществляет в установленном порядке международное сотрудничество в сфере интеллектуальной собственности и участвует в рамках этого сотрудничества в работе международных и региональных организаций по вопросам правовой охраны и защиты прав на объекты интеллектуальной собственности;

обеспечивает в пределах своих полномочий выполнение обязательств, вытекающих из соответствующих международных договоров Республики Узбекистан;

5) в области участия в проведении научно-исследовательских и других работ в сфере интеллектуальной собственности, а также повышения правовой культуры и формирования в обществе уважительного отношения к интеллектуальной собственности:

оказывает методическую помощь заинтересованным лицам в сфере правовой охраны и защиты прав на объекты интеллектуальной собственности;

осуществляет межведомственное информационное взаимодействие в части правовой охраны и защиты прав на объекты интеллектуальной собственности;

организует и участвует в проведении научно-исследовательских работ по проблемам развития и совершенствования деятельности в сфере интеллектуальной собственности;

проводит мероприятия по широкому разъяснению целей и значимости правовой охраны и защиты прав на объекты интеллектуальной собственности для социально-экономического и культурного развития страны;

организует и принимает участие в международных и национальных научных форумах, симпозиумах, конференциях, семинарах и других мероприятиях по вопросам интеллектуальной собственности;

проводит мероприятия по повышению правовой культуры и грамотности широких слоев населения в вопросах охраны и правомерного использования объектов интеллектуальной собственности;

проводит в пределах своей компетенции соответствующие мероприятия (консультации) и осуществляет сотрудничество с иностранными компаниями в сфере обеспечения правовой охраны и защиты объектов интеллектуальной собственности.

Агентство для выполнения возложенных на него задач и функций имеет право:

1) координировать деятельность органов государственного и хозяйственного управления, органов государственной власти на местах по вопросам, отнесенным к компетенции Агентства;

2) осуществлять изучение деятельности государственных органов и иных организаций на предмет соблюдения требований законодательства в сфере интеллектуальной собственности;

3) вносить руководителям государственных органов и иных организаций обязательные для рассмотрения представления об устранении выявленных нарушений в сфере интеллектуальной собственности, причин и условий, им способствующих;

4) письменно объявлять должностным лицам предостережения о недопустимости нарушения законодательства в сфере интеллектуальной собственности;

5) применять в отношении должностных лиц государственных органов и иных организаций административные взыскания за нарушение законодательства в сфере интеллектуальной собственности;

6) разрабатывать методические материалы и рекомендации по вопросам, входящим в компетенцию Агентства;

7) по согласованию с Кабинетом Министров Республики Узбекистан привлекать в качестве сотрудников и консультантов квалифицированных зарубежных специалистов с установлением им, в порядке исключения, размеров заработной платы и иных выплат в свободно конвертируемой валюте за счет внебюджетных средств Агентства;

8) запрашивать и безвозмездно получать от государственных органов и должностных лиц документы и сведения, в том числе статистическую информацию, необходимые для выполнения возложенных на Агентство задач и функций;

9) вызывать и привлекать представителей министерств и ведомств, а также других организаций для проведения проверок, изучения обращений физических и юридических лиц, а также подготовки информационно-аналитических материалов по вопросам, отнесенным к сфере деятельности Агентства;

10) вызывать должностных лиц и других работников государственных органов и иных организаций в целях уточнения обстоятельств, выявленных в ходе анализа и проверки, требовать устные и письменные объяснения по фактам нарушения законодательства;

11) вносить в установленном порядке в Министерство юстиции проекты нормативно-правовых актов, а также иные документы, связанные с выполнением задач и функций, возложенных на Агентство;

12) предоставлять платные услуги в соответствии с перечнем и по тарифам, утвержденными Министерством юстиции Республики Узбекистан;

13) разрабатывать в установленном порядке проекты международных договоров Республики Узбекистан, заключать в установленном порядке международные договоры межведомственного характера по вопросам, входящим в компетенцию Агентства, по согласованию с Министерством юстиции;

14) представлять в установленном порядке интересы Республики Узбекистан на международном уровне по вопросам, относящимся к компетенции Агентства, по согласованию с Министерством юстиции;

15) осуществлять сотрудничество с международными и иностранными организациями в рамках своей компетенции по согласованию с Министерством юстиции;

16) создавать веб-сайты, а также страницы в социальных сетях с целью широкого освещения деятельности Агентства;

17) проводить в пределах своей компетенции конференции, семинары, симпозиумы, а также участвовать в аналогичных мероприятиях, организованных другими организациями;

18) разрабатывать методические материалы и рекомендации по вопросам, входящим в компетенцию Агентства;

19) создавать рабочие группы, в том числе с участием зарубежных экспертов, в целях разработки актуальных и перспективных проблем развития сферы интеллектуальной собственности;

20) вносить в суды заявления и иски в защиту прав правообладателей на объекты интеллектуальной собственности;

21) выдавать в пределах своей компетенции представления, обязывающие лицензиата устранить выявленные нарушения;

22) вносить в установленном порядке предложения о присвоении почетных званий Республики Узбекистан за выдающиеся достижения в области изобретательства и других видах творчества;

23) запрашивать в установленном порядке у заявителей дополнительные материалы к заявкам на изобретения, полезные модели, промышленные образцы, селекционные достижения, товарные знаки, знаки обслуживания, наименования мест происхождения товаров, программы для ЭВМ, базы данных и топологии интегральных микросхем, необходимые для рассмотрения заявок и проведения государственной экспертизы;

24) организовывать и проводить обсуждение вопросов, связанных с рассмотрением заявок на объекты интеллектуальной собственности;

25) рассматривать обращения физических и юридических лиц в сфере правовой охраны и защиты интеллектуальной собственности;

26) в пределах своей компетенции составлять протоколы по фактам нарушения законодательства, влекущим административную ответственность;

27) принимать участие в заседаниях коллегий Министерства юстиции при рассмотрении вопросов, входящих в компетенцию Агентства;

28) поддерживать в пределах своей компетенции связь с органами иностранных государств и международными организациями;

29) формировать фонды внебюджетных средств в установленном законодательством порядке;

30) осуществлять меры социальной защиты работников Агентства.

31) создавать по согласованию с Министерством юстиции соответствующие подразделения, реорганизовывать и ликвидировать их, а также утверждать их уставы (положения), необходимые для обеспечения деятельности Агентства.

Агентство может иметь и иные права в соответствии с законодательством.

Согласно ст.4 Закона предусмотрено создание Апелляционного совета.

Апелляционный совет Министерства юстиции Республики Узбекистан (далее — Апелляционный совет) независим в принятии решений и руководствуется в своей деятельности настоящим Законом и иными актами законодательства.

Апелляционный совет рассматривает апелляции:

на решения Агентства в отношении заявленных объектов промышленной собственности;

заинтересованных юридических и физических лиц против выдачи патентов на объекты промышленной собственности;

против действительности патентов на объекты промышленной собственности.

Апелляционный совет в пределах своей компетенции может рассматривать и другие виды апелляций.

## Глава 12. Патентные пошлины

За совершение юридически значимых действий, связанных с предоставлением правовой охраны объектам промышленной собственности, взимаются патентные пошлины (ст.34 Закона).

Размеры патентных пошлин установлены Законом РУз «О государственной пошлине» от 06.01.2020г. №ЗРУ-600.

Патентные пошлины уплачиваются:

1) при подаче заявки за подачу заявки на выдачу патента, проведение формальной экспертизы и публикация сведений

Платежный документ об уплате государственной пошлины (патентной пошлины) за подачу заявки предоставляется одновременно с подачей заявки.

2) за проведение экспертизы полезной модели.

Платежный документ об уплате государственной пошлины (патентной пошлины) за проведение экспертизы предоставляется в течение трех месяцев с даты отправления решения формальной экспертизы.

3) проведение научно-технической экспертизы в отношении изобретений. При этом дополнительно за каждый зависимый пункт формулы свыше десяти и двадцати уплачивается дополнительная патентная пошлина;

Платежный документ об уплате государственной пошлины (патентной пошлины) за проведение научно-технической экспертизы изобретений предоставляется одновременно с подачей ходатайства о проведении научно-технической экспертизы в отношении.

При наличии в заявке на изобретение отчета о международном поиске, подготовленного одним из международных поисковых органов, в соответствии с Договором о патентной кооперации установлены отдельные патентные пошлины.

Платежный документ об уплате государственной пошлины (патентной пошлины) за проведение научно-технической экспертизы при наличии в заявке на изобретение отчета о международном поиске, подготовленного одним из международных поисковых органов, в соответствии с Договором о патентной кооперации предоставляется одновременно с подачей ходатайства о проведении научно-технической экспертизы.

4) за регистрацию, публикацию и выдачу патентов:

уплачивается отдельно за:

- регистрацию изобретения, полезной модели, промышленного образца,

- за публикацию в официальном бюллетене сведений о зарегистрированных изобретениях, полезных моделях, промышленных образцах;

- выдачу патентов

Платежный документ об уплате государственной пошлины (патентной пошлины) за регистрацию, публикацию и выдачу патентов предоставляется в **течение трех месяцев с даты отправления решения экспертизы**.

5) за поддержание в действии патентов:

За поддержание в действии патента на полезную модель ежегодно с даты подачи заявки **за каждый год действия**

Платежный документ об уплате государственной пошлины (патентной пошлины) за поддержание в действии патента на полезную модель за каждый год действия предоставляется:

- **за первый год — одновременно с документом, подтверждающим уплату патентной пошлины и (или) платы за регистрацию, публикацию и выдачу патента**,

- за последующие годы **— в течение последних трех месяцев до истечения срока действия патента в текущем году**.

6) за поддержание в действии патента на изобретение ежегодно с даты подачи заявки

Платежный документ об уплате государственной пошлины (патентной пошлины) за поддержание в действии патента на изобретение **за каждый год действия** предоставляется **с даты подачи заявки за третий год** — одновременно с документом, подтверждающим уплату пошлины и (или) платы за выдачу патента.

За последующие годы в течение последних трех месяцев текущего года.

7) дополнительная государственная пошлина (патентная пошлина)

за предоставление 6-месячного срока после истечения срока действия патента

за восстановление действия патента на изобретение, полезную модель

Платежный документ об уплате государственной пошлины (патентной пошлины) за предоставление 6-месячного срока после истечения срока действия патента пошлина предоставляется одновременно с подачей заявления о продлении, за восстановление действия патента на изобретение, полезную модель, промышленный образец пошлина одновременно с подачей ходатайства о восстановлении патента.

8) за регистрацию договоров о передаче прав на изобретения, полезные модели, промышленные образцы

9) за внесение по инициативе заявителя исправлений, дополнений и уточнений в заявку на изобретение, полезную модель, в том числе в формулу изобретения, полезной модели, в перечень существенных признаков промышленного образца до принятия решения государственной экспертизы

Платежный документ об уплате государственной пошлины (патентной пошлины) за внесение по инициативе заявителя исправлений, дополнений и уточнений в заявку на изобретение, полезную модель, промышленный образец, в том числе в формулу изобретения, полезной модели, в перечень существенных признаков промышленного образца до принятия решения государственной экспертизы предоставляется одновременно с материалами, содержащими изменения

10) за выделение заявки на изобретение, полезную модель, промышленный образец, за каждую выделенную заявку из первоначальной заявки заявки (в случае нарушения единства)

*Платежный документ об уплате государственной пошлины (патентной пошлины) за выделение заявки на изобретение, полезную модель, промышленный образец, за каждую выделенную заявку из первоначальной заявки (в случае нарушения единства) предоставляется одновременно с подачей выделенной заявки.*

11) за регистрацию изменений в зарегистрированном лицензионном договоре и договоре об уступке патента;

12) за преобразование заявок (заявки на изобретение в заявку на полезную модель и заявки на полезную модель в заявку на изобретение)

Платежный документ об уплате государственной пошлины (патентной пошлины) за преобразование заявки предоставляется одновременно с подачей заявления о преобразовании.

13) за продление и восстановление сроков представления документов

Патентные пошлины уплачиваются:
- заявителем,
- патентообладателем;
- иным заинтересованным лицом, т.е. Закон допускает, что платеж может осуществить любое лицо.

Льготы предусмотрены Законом РУз «Об изобретениях, полезных моделях и промышленных образцах» от 29.08.2002г. №397-II (далее – Закон).

1) для уплаты патентной пошлины за поддержание патента в действии патентообладателю предоставляется льготный шестимесячный срок при условии внесения дополнительной патентной пошлины (ч.4 ст.34 Закона);

В данном случае речь идет о льготном сроке уплате.

2) патентообладатель может подать в Агентство заявление о предоставлении любому лицу права на использование объекта промышленной собственности (открытая лицензия). В этом случае патентная пошлина за поддержание патента в действии снижается на пятьдесят процентов с года, следующего за годом опубликования сведений о таком заявлении Агентством (ч.2 ст.32 Закона).

В данном случае речь идет о льготе в виде уменьшения размера пошлины.

Последствия неуплаты патентной пошлины: если патентная пошлина за поддержание патента в действии и дополнительная патентная пошлина не внесены в течение льготного срока, то **действие патента прекращается** со дня неуплаты патентной пошлины в установленный срок.

Составитель Юлдашев Б.Т.

Составитель Юлдашев Б.Т.

# Guidelines of "**MIRAI**" Fund of Japan for UJICY

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# Content


**Chapter-I GENERAL ..... 5**

1. Definitions ..... 5

2. Outline of the Fund ..... 5

2.1 Background ..... 5

2.2 Name of the Fund ..... 6

2.3 Purpose of the Fund ..... 6

2.4 Amount of the Fund ..... 6

2.5 Source of the Fund and Operation ..... 6

2.6 Duration of the Fund and Termination ..... 7

3. Fund Management Organization (see Table-1 below) ..... 7

3.1 Fund Operation Committee ..... 7

3.2 Fund Accountant ..... 7

3.3 Board of Trustees ..... 8

4. Aid Programs under the Fund ..... 8

4.1 Programs ..... 8

4.2 Priority ..... 10

4.3 Obligation of the Projects ..... 10

Projects successfully awarded the Fund have the following obligations: ..... 10

**Chapter-II Programs and Projects ..... 12**

5. Planning Procedure ..... 12

5.1 Annual Planning ..... 12

5.2 Approval ..... 12

5.3 Monitoring ..... 12

5.4 Re-Allocation of Initial Planned Amount ..... 12

5.5 Reporting ..... 13

6. Application Procedure ..... 13

6.1 Application Guideline ..... 13

6.2 Submission of Application ..... 13

6.3 Requirements for Application ..... 13

7. Take-up Procedure ..... 14

7.1 Take-up Authority ..... 14

7.2 Formality Check ..... 15
7.3 Project Evaluation ..... 15
7.4 Take-up Decision ..... 15
7.5 Feedback to Applicant ..... 15
7.6 Reporting ..... 16
8. Evaluation Criteria ..... 16
8.1 Method of Evaluation ..... 16
8.2 Conflict of interests ..... 17
8.3 Modification of Criteria and weight ..... 17
9. Monitoring & Reporting Procedure ..... 18
9.1 Monitoring of Disbursement of the Fund ..... 18
9.2 Monitoring of Project Implementation ..... 18
9.3 Periodical Reporting ..... 19
9.4 Completion Report ..... 19
10. Intellectual Property Rights ..... 19
11. Evaluation of the Project ..... 19
11.1 Final Evaluation ..... 19
11.2 Privilege ..... 20
**Chapter-III Financial Procedure ..... 21**
12. Important Rules ..... 21
12.1 Definitions: ..... 21
12.2 Obligation of Beneficiaries of the Fund ..... 21
12.3 Eligible Receipt ..... 21
12.4 Settlement of Expenditure ..... 22
12.5 Inspection of goods at delivery ..... 23
12.6 Monitoring of disbursement of the Fund and annual closing ..... 24
13. Regulations for Expenditure ..... 24
13.1 Equipment (See Table-5 for definition) ..... 25
13.2 Consumables/Miscellaneous Expenses ..... 25
13.3 Travel Expense ..... 26
13.4 Commissioned Work ..... 28
13.5 Honorarium ..... 28

14. Procurement Procedure ..... 29
14.1 Process of Procurement of Goods and Services ..... 29
14.1.1 Direct Procurement by Project: ..... 29
14.1.2 Procurement by JICA Office: ..... 30
14.1.3 Travel Expenses ..... 31
14.1.4 Commissioned Work ..... 32
14.1.5 Honorarium ..... 32

# Chapter-I GENERAL

## 1. Definitions

1.1 **"Center"** means "Uzbek-Japan Innovation Center of Youth";

1.2 **"UJICY"** is the abbreviation of "Uzbek-Japan Innovation Center of Youth" and the same meaning of the Center (1.1)

1.3 **"Board of Trustees (BoT)"** means the highest governing organization of the Center that has authority for decision of the policy of the Center.

1.4 **"JICA"** means "Japan International Cooperation Agency";

1.5 **"JICA Project"** means" the Project for Strengthening Research Capacity of UJICY", which is a Technical Support Project of JICA and the agreement was concluded between JICA and Ministry of Higher and Secondary Specialized Education of the Republic of Uzbekistan;

1.6 **"Agency"** means JICA.

1.7 **"Fund"** means "MIRAI Fund of Japan for UJICY", which is a financial aid scheme under the scheme of JICA Project (1.5);

1.8 **"Program"** means financial aid package under the Fund to be provided to the selected Projects by the Center. Details is described in Chapter-II;

1.9 **"Project"** means research project or business start-up project approved by the Center to have financial aid through the Program. Details is described in Chapter-II;

1.10 **"Project Leader"** means a representing leader of the Project who has full authorization and responsibilities on the Project. PI (Principal Investigator) in research project and PD (Project Director) are considered as Project Leader (PL).

1.11 **"Fund Operation Committee"** or **"Committee"** mean an internal committee of the Center for managing the Fund;

1.12 **"Fund Accountant"** means an accountant who controls settlement of expenditure occurred under the Project on behalf of JICA;

1.13 **"Beneficiary"** means the Project which receives funding from the Fund under the Program;

1.14 **"Resident"** means a researcher who is approved to conduct its research activities inside the Center and to use the Centre's facility and services;

## 2. Outline of the Fund

2.1 Background

a. Uzbek-Japan Innovation Center of Youth (hereinafter referred to as "UJICY") was inspired by the communique jointly issued by the government of Uzbekistan and Japan on the occasion of visit of Prime Minister of Japan, Mr. Shinzo Abe in 2015, and established in accordance with the Presidential Decree No.2602 dated September 19, 2016.

b. Japan International Cooperation Agency (hereinafter referred to as "JICA") started supporting the Center through the Project for Strengthening Research Capacity of UJICY (hereinafter referred to as the "Project") from January 1, 2019, based on the agreement between JICA and Ministry of Higher and Secondary Specialized Education of the Republic of Uzbekistan dated December 11, 2018.

c. The government of Uzbekistan issued the Decree No.4550 on December 23, 2019 for realizing effective implementation of activities of UJICY, and demonstrated its strong initiative under the Ministry of Innovative Development and the Ministry of High and Secondary Specialized Education.
d. Since the inception of the Project in 2019, JICA has been implementing capacity building programs for the young researchers with cooperation of Japanese universities, and now has the intention to support an establishment of a fund for accelerating the research activities of UJICY and encouraging innovative activities of young entrepreneurs in Uzbekistan.

2.2 Name of the Fund

**"MIRAI" Fund of Japan for UJICY** (MIRAI means Future in Japanese)

2.3 Purpose of the Fund

This Fund is established for the purpose of assisting the Center to boost up its research activities at the early stage, and shall be used for:

a. activating basic/applied research activities of the Center for contributing development of industries in the Republic of Uzbekistan;
b. attracting young researchers and entrepreneurs to execute innovative projects under the initiative of the Center and providing them with opportunities for accumulating research experiences, and;
c. as the result, contributing to strengthen of research capacity of the Center", which is the purpose and target of the JICA Project.

2.4 Amount of the Fund

2.4.1 Amount of the Fund is USD 30,000 per year, until the final year of JICA Project. The amount of fund of each year shall be adjusted in accordance with the inception date of this Fund.
2.4.2 The Amount of the Fund may be revised upon the progress of disbursement.

2.5 Source of the Fund and Operation

2.5.1 The Fund is a stand-alone fund, solely owned by JICA, and the whole amount of the Fund is granted by JICA as a part of JICA Project.
2.5.2 The operation of the Fund shall be given to the Center, and the management of the Fund shall be conducted jointly by the Center and JICA in accordance with this Guideline as well as JICA regulations and procedures for procurement.
2.5.3 Fund money shall be under the custody of JICA and disbursed to Beneficiaries upon request, up to approved amount.
2.5.4 The Fund shall cover the following expenditure occurred at the Project:
   a. International and domestic traveling expenses for field research;
   b. Labor cost for research assistants;
   c. Minor Equipment (valued less than JPY 500,000 per unit);
   d. Consumables (including chemicals and stationery);
   e. Books, software and digital contents.

   Details shall be explained in Chapter-III Financial Guideline

2.6 Duration of the Fund and Termination

2.6.1 The Fund shall be started from the fiscal year of 2020 and terminated in the final year of JICA Project.
2.6.2 The inception date of the Fund is July 1, 2020.
2.6.3 If JICA Project may be terminated before the period mentioned in the above 2.6.1, this Fund will also be terminated automatically.
2.6.4 At the termination, all remaining balance of the Fund shall be reimbursed to JICA. However, in case that a succeeding project of the Project may be conducted under the agreement between JICA and the Uzbekistan side, the extension of the Fund may also be considered.

## 3. Fund Management Organization (see Table-1 below)

3.1 Fund Operation Committee

3.1.1 The Center shall form Fund Operation Committee (hereinafter referred to as "Committee").
3.1.2 The Committee shall be headed by Director of the Center, and include Deputy Directors of the Center and the expert from JICA as the Committee members.
3.1.3 The Committee shall be delegated the following authority for operating the Fund from JICA:
a. making policy and budget related to the Fund;
b. allocation of fund money to each Program;
c. evaluation of the candidate research projects and selection of Projects to be awarded the fund money;
d. inviting external experts or advisor regarding the Fund management if necessary.
3.1.4 The Committee shall have responsibilities:
a. managing the Fund properly with maximum transparency in full compliance with this Guideline, regulations and procedure of JICA, regulations and procedure of the Center and rules and regulations of the Republic of Uzbekistan;
b. monitoring the progress and results of awarded projects, and instruct to follow the guideline of the Fund;
c. reporting the progress and situation of operation of the Fund to Board of Trustees and JICA periodically.

3.2 Fund Accountant

3.2.1 JICA shall assign Fund Accountant and delegate authority for handling the Fund money on behalf of JICA.
3.2.2 Fund Accountant is independent from the chain of command of the Center.
3.2.3 Fund Accountant shall have authority for:
a. settlement of expenditure occurred at all Projects;
b. requesting Project Leader (PL) of the Project all necessary documents and evidences for the settlement;
c. providing advices and recommendations related to the accounting of the Fund to Fund Operation Committee;
3.2.4 Fund Accountant shall have the following responsibility:

a. control of disbursement of the Fund money in accordance with the Financial Guideline, which is described in Chapter-III;
b. monitoring the progress of disbursement;
c. reporting the progress and problems on disbursement to JICA Uzbekistan Office.

3.2.5 Fund Accountant can hire assistant staff for executing the duty if necessary. The cost for the assistant shall be borne by JICA.

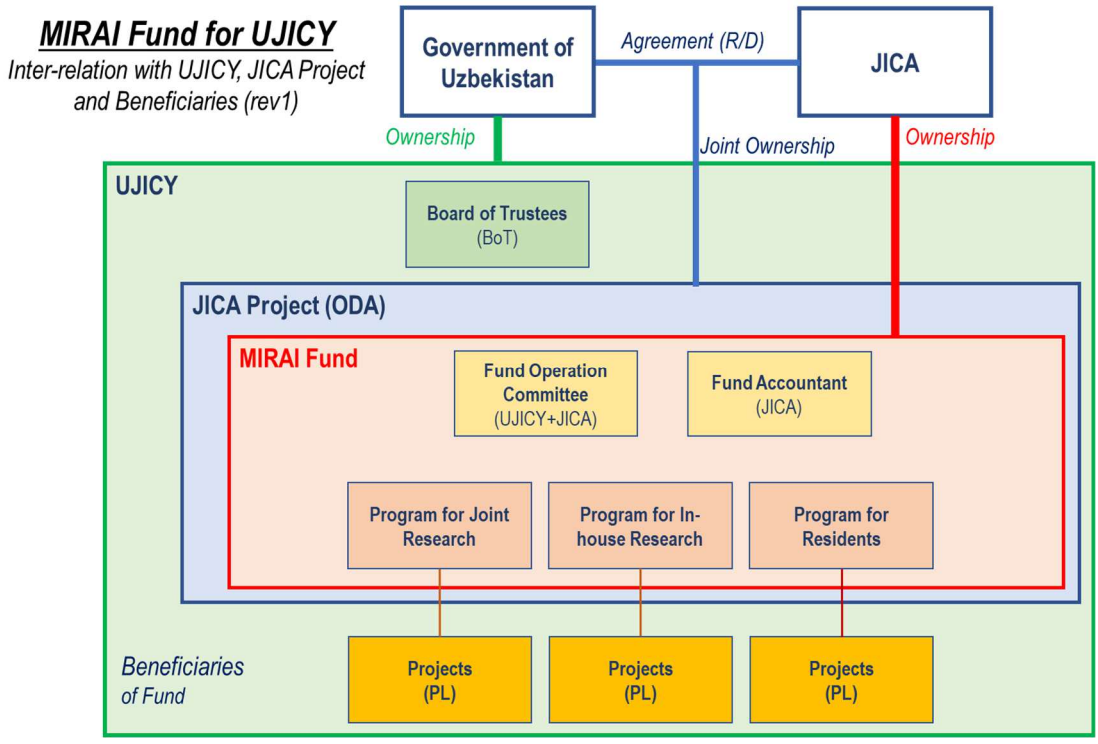
### 3.3 Board of Trustees

3.3.1 Board of Trustees is the highest decision-making function of the Center. The Board shall supervise operation of the Fund in high level as a part of activities of the Center.

3.3.2 Since the Fund is owned by JICA, the Board of Trustees shall respect independency of Fund Operation Committee as well as Fund Accountant as long as the activities related to the Fund is contributing to the Center.

3.3.3 The Director of the Center, who is also the member of the Board, shall be an interface between the Fund and the Board with close communication.

Chart-1: Organization for the Fund




## 4. Aid Programs under the Fund

### 4.1 Programs

The Fund shall provide its financial aid to three (3) sub-schemes, each of which is called “Program”. Each Program has different target and form of aid described as follows;

4.1.1 For “Joint Research Project” with Japanese universities/institutes

(Targeted Project)

Joint research projects between Japanese universities/institutes and the Center. The joint research shall be in line of the Centre’s policy and strategy ~~and approved by its Board of Trustees.~~

(Beneficiary)

A researcher or research team of the Center.

(Purpose)

a. to promote joint research activities with Japanese university and institutes,
b. to enable smooth implementation of projects and
c. to enhance quality of the research

(Covered Expenditure)

Minor equipment (less than JPY 500,000), consumables, domestic/international trip for meeting and field works, books and digital contents, software, outsourcing services, labour cost for assistants. (details shall be described in Chapter-III)

4.1.2 For In-House Research

(Targeted Project)

The Centre’s In-House research activities. The subject of the research shall be in line of the Centre’s policy and strategy.

(Beneficiary)

A researcher or research team of the Center.

(Purpose)

a. to motivate the Centre’s researcher to initiation of the Project
b. to increase quality and capacity of the research
c. to assist to publish high-impacted scientific papers to international journals

(Covered Expenditure)

Minor equipment (less than JPY 500,000), consumables, domestic trip for meeting and field works, books and digital contents, software, outsourcing services, labour cost for assistants. (details shall be described in Chapter-III)

4.1.3 For Residents of the Center

(Target Project)

The Residents of the Centre’s Residents, who are approved to conduct their research activities inside the Center and to use the Centre’s facility and services. The subject of the research shall be in line of the Centre’s policy and strategy and approved by its Science Committee or Board of Trustees. The subject Project shall be conducted jointly by the Center and the Residents, and the outcome of the Project, such as any created rights of intellectual properties as well as scientific papers, shall be shared equally between the two party.

(Beneficiary)

A researcher or research team of the Centre’s Residents.

(Purpose)

a. to attract outside researchers or manufacturers to be Residents of the Center and to encourage them to conduct innovative projects

b. to increase quality and capacity of the research
c. to promote commercialization of the result of the projects

(Covered Expenditure)

consumables, small tools, domestic trip for meeting and field works, books and digital contents, software, outsourcing services, labour cost for assistants. (details shall be described in Chapter-III)

## 4.2 Priority

There is a priority among the Programs as shown in the Table-1 below. If there are conflicts at the selection of taking-up Projects, Projects belonging to the Program having higher priority shall be prioritized.

Table-1 Summary of Program

| Program | Purpose | Beneficiaries | Usage of Fund | Priority (A to D) |
|---|---|---|---|---|
| 4.1.1 Joint Research with Japanese universities (*) | a. Promotion of Projects<br>b. Smooth implementation<br>c. Quality bottom-up | Researcher of the Center | Small equipment/tools, consumables, trip, books, software, services, labor cost of assistant | A (High) |
| 4.1.2 In-House Research | a. Rise up motivation<br>b. Quality bottom-up<br>c. High productivity of papers | Researcher of the Center | Small equipment/tools, consumables, trip(domestic), books, software, services, labor cost of assistant | B |
| 4.1.3 Resident Project | a. Promotion of Projects<br>b. Quality bottom-up<br>c. Transfer to Commercial | Residents of the Center | Small equipment/tools, consumables, books, software, services, labor cost of assistant | C |

(* Research for coping COVID-19 should be put a high priority in FY2020-2021.)

## 4.3 Obligation of the Projects

Projects successfully awarded the Fund have the following obligations:

### 4.3.1 Periodical Reporting

a) Project shall submit Monthly Progress Report to the Committee in the designated form monthly basis.
b) Project shall submit Annual Report to the committee at the completion of Program, duration of which is one (1) year, in the designated form.

### 4.3.2 Deliverables

The following deliverables shall be submitted by the Project to the Committee at the end of fiscal year, as the results

a) At least one (1) technical paper in English about results of research project, which shall be published to the scientific journal under the name of the Center,
b) At least one (1) workshop shall be held at the end of fiscal year ~~for public~~,
c) As for joint research with Japanese university, a paper (if not completed, intermediate paper) under supervision of the Japanese university.
d) As for Resident researcher seeking commercializing the research result, a paper regarding business model plan.

4.3.3 The successful fulfilment of the above obligations shall be evaluated by the Committee as a good “Advantage” for the continuation of the funding or increasing the amount of fund.

4.3.4 On the other hand, poor result of research or failure of appropriate submission of the deliverable and reporting, shall be evaluated as “Disadvantage” for the continuation of the support, and consequently the funding may be stopped.

## 5. Planning Procedure

5.1 Annual Planning

5.1.1 The Committee shall make fund allocation plan to each Program for the coming fiscal year **by the end of December of the prior year** in accordance with the applications from researchers or residents of the Center as well as the plan of any innovation awareness events to be held in the coming fiscal year. The Form “Fund Allocation and Distribution for the Fiscal Year xxxx” shall be filled as the outcome of the planning. At this stage, only the column of “Allocation Amount” and “Portion” only are required to fill.

5.1.2 The total allocated amount shall not exceed the annual fund amount specified in the article 2.4.1, and the total of percentage of “Portion” shall be 100 %.

5.1.3 In case of Projects to be executed by the researchers or research teams of the Center (the above 4.1.1 and 4.1.2), the amount shall be based on the research plan of each project, the appropriateness of which shall be checked inside the Center prior to the submission of the application.

5.1.4 Allocation amount for the Resident Project shall be calculated provisionally in accordance with the estimation from application submitted by candidate Resident researchers or target to be set by the Center in accordance with its operational plan.

5.2 Approval

5.2.1 The prepared Annual Allocation Plan shall be approved by the Committee.

5.2.2 Once the plan is approved, the Committee shall proceed to the Application process.

5.2.3 Approved plan shall be reported to JICA office for preparation of necessary fund.

5.3 Monitoring

5.3.1 The Committee shall monitor the progress of the disbursement of the Fund periodically and make necessary control on it.

5.3.2 If any divergences between the plan and actual disbursement are found, the Committee shall take necessary actions including the re-allocation of Fund as specified in Article 5.4.

5.4 Re-Allocation of Initial Planned Amount

5.4.1 During the implementation of the Fund, the initial allocated amount of fund can be modified by re-allocation among the Programs. However, at this re-allocation, the total amount shall not be exceeded the fund amount of the approved allocated amount in article 5.2.

5.4.2 Re-Allocation of the initial allocated amount shall be reviewed its justification by the Committee and approved. The justifications are;

a) Unexpected situation that the project cannot implement as scheduled (delay and cancel);

b) The actual disbursement of fund for the project is expected to be lower than the budget and there will be unused amount;

c) There is requirement of extra fund in a project, and unused amount may be expected in the other project as shown in a) and b) above;
d) The re-allocation of fund shall be beneficial for the purpose of the Fund and not harm the appropriate balance of the distribution of Fund;

5.4.3 The Committee shall make fair re-allocation and not make unused fund balance after the re-allocation.

5.5 Reporting

5.5.1 The Committee shall report the progress of disbursement, adjustment (re-allocation) and any related information regarding allocation of Fund to Board of Trustee and JICA.

5.5.2 The form of report is free format but shall be reported numerically.

## 6. Application Procedure

6.1 Application Guideline

6.1.1 The Committee shall call for internal application to the Fund for the following Programs:
- 4.1.1 Joint Research Project with Japanese Universities
- 4.1.2 In-House Research Project
- 4.1.3 Resident Research Project

6.1.2 The Committee shall prepare the Application Guideline before starting Application process, and the Guideline shall be disclosed to all researchers and the resident in the Center researchers via home-page of the Center.

6.1.3 All researchers who wish to have the Fund (hereinafter referred to as the “Applicant”) shall follow the Guideline. In case of failure to compliance, Applicant shall be disqualified.

6.2 Submission of Application

6.2.1 Applicant shall submit application form and necessary documents to the Committee anytime but not later than two (2) months before the cut-off date of annual fund allocation planning specified in the article 5.1.1.

6.2.2 Application for the Fiscal Year 2020 (the first year) is exceptional form the above 6.2.1.

6.3 Requirements for Application

6.3.1 <u>Application for Joint Research Project with Japanese Universities</u>:
a. PL of joint research project shall be the Applicant.
b. PL must be a researcher of UJICY with a Ph.D. degree.
c. The following document are required to submit with designated Application Form;
- Research Plan
- Project formation with CV of PL and members
- Expenditure Plan
- Implementation Schedule
- Expected benefits to the Center, industry and society of Uzbekistan, and the benefit to Japanese counterparts
- Any other information to explain the Project

d. All documents shall be submitted in PDF files and hardcopy as the original copy.

6.3.2 Application for In-House Research Project:

a. Lab heads of the Center with a Ph.D. degree shall be the Applicant.
b. The following document are required to submit with designated Application Form;
   - Research Plan
   - Project formation with CV of PL and members
   - Expenditure Plan
   - Implementation Schedule
   - Expected benefits to the Center, industry and society of Uzbekistan
   - Any other information to explain the Project
c. All documents shall be submitted in PDF files and hardcopy as the original copy.

6.3.3 Application for Resident Project

a. Eligible applicant for Resident Project shall fulfil the following conditions;
   - the Project shall be conducted jointly with the Center. Standalone project by the Residents is not eligible.
   - the subject of the Project must be in line of the Centre's policy and strategy and approved by its Science Committee or Board of Trustees
   - the outcome of the Project, including but not limited to any rights related to intellectual properties and scientific papers, shall be shared with the Center equally. The Applicant shall declare it by the form specified below
b. Resident researchers of the Center with a Ph.D. degree shall be the Applicant, who are planning to initiate or doing research projects. The Applicant shall apply to the Fund at any time but not later than two (2) months before the cut-off date of annual fund allocation specified in the article 5.1.1;
c. The following document are required to submit with designated Application Form;
   - Research Plan
   - Project formation with CV of PL and members
   - Expenditure Plan
   - Implementation Schedule
   - Expected benefits to the Center, industry and society of Uzbekistan
   - Certificate from the Corporate (if the researcher belongs to any commercial firms or other organizations)
   - Declaration on Intellectual Right on the Project result
   - Any other information to explain the Project
d. All documents shall be submitted in PDF files and hardcopy as the original copy.

## 7. Take-up Procedure

7.1 Take-up Authority

7.1.1 The evaluation and the decision of take-up (selection) of Projects shall be done by the Committee and Fund Accountant along with a recommendation by JICA.

7.1.2 JICA, the owner of the Fund, shall make verification of the Application's compliance with JICA Standards.

7.2 Formality Check

7.2.1 The Committee shall make a preliminary check on the formality of the application within two (2) days from the receipt of the Application.

7.2.2 If any missing documents or uncertainties in the documents are found, the Committee shall request the Applicant remedy within five (5) days. If the Applicant fails to remedy within the allowed time, Application may be disqualified as "incomplete application".

7.3 Project Evaluation

7.3.1 The Committee shall peruse all submitted documents and evaluate its justification of scope, reality on the schedule and impact of the final result.

7.3.2 The Fund Accountant shall peruse submitted scope and expenditure plan from the view point of accounting and verify its justification on the procurement in accordance with the Financial Guideline of the Fund as well as JICA's Procurement Standards.

7.3.3 The Fund Accountant shall refer its evaluation results to JICA and have its recommendation on acceptance (or rejection) from the viewpoints of technical, accounting and procurement.

7.3.4 The result of the above financial evaluation by Fund Accountant and JICA recommendation shall be referred to the Committee. However, if this financial evaluation is negative, the Application shall be treated automatically as "Pending" or "Rejection" in the following step, without waiting for the other evaluation results.

7.4 Take-up Decision

7.4.1 The Committee shall make comprehensive evaluation on the Application and make the judgement as follows:

- Approval: Application is accepted for having the Fund as requested
- Approval with condition: Application is accepted with modification. If Applicant accept the modification, the Application is accepted.
- Pending: Further information and confirmation from Applicant are required.
- Rejection: Application is rejected.

7.4.2 In case of "Pending", the Applicant shall reply to inquiry from the Committee or provide necessary information within one (1) week. Upon receipt of additional information, the Committee and Fund Accountant shall repeat the above step c. and d. again. If satisfactory remediation is not made by the Applicant, the Application may be disqualified.

7.5 Feedback to Applicant

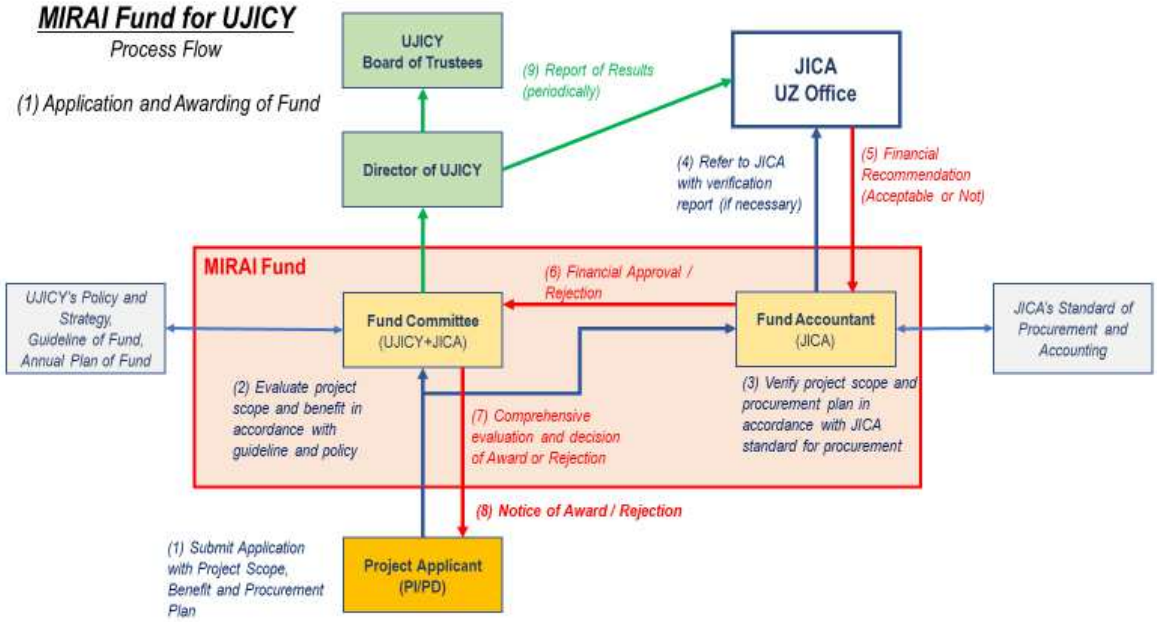
7.5.1 The result of the evaluation shall be announced to the Applicant immediately, and in case of acceptance, a certificate of approval shall be issued from the Director of the Center.

7.5.2 In case of rejection, the reason of the rejection shall be informed to the Applicant.

7.6 Reporting

Result of take-up shall be reported to Board of Trustees and JICA from the Director of the Center.

Chart-2 Take-up Process of Application




## 8. Evaluation Criteria

8.1 Method of Evaluation

8.1.1 Evaluation of each proposed project shall be conducted in accordance with Evaluation Criteria show as Table-3. Each criterion has its own weight which shall be used for calculation later.

8.1.2 Evaluators shall put score on each item of Evaluation Criteria in accordance with Table-4. The score is five (5) levels and each score has numerical point.

8.1.3 Project Scope must be “B” (Good) or above. If not, the Applicant shall be requested to modify its application only one time. Failing to be improved, the application will be disqualified regardless of other scores.

8.1.4 If score of any criteria is “D” (Poor) or “E” (Very Poor), the Applicant shall be requested to modify its application only one time. Failing to be improved to “C” or above, the application will be disqualified.

8.1.5 Total numerical evaluation of each proposed project shall be calculated in the following manner;

(1) Point of each criterion inTable-4 x Weight (Table-3) = Score of each Criterion ….. (A)

(2) Total Score of the proposal = Sum of (A) ….. (B)

8.1.6 The project is required 70% (3.5 pts) or the higher score for acceptance.

8.1.7 If there are multiple proposal in the same Program, the proposal which has higher score shall be priority for take-up and allocation of fund.

8.1.8 The Committee shall take important factors not mentioned in the criteria into account for the final judgement.

8.2 Conflict of interests

8.2.1 Any evaluator shall not participate in an evaluation of proposal for which s/he is a member. In those cases, an alternate evaluator shall be appointed by the chair (or vice chair) person of the Committee.

8.3 Modification of Criteria and weight

8.3.1 The evaluation criteria and their weight in Table-3 shall be reviewed and can be modified, if necessary, in accordance with the practice of evaluation.

Table-3 Evaluation Criteria

| | **Evaluation Criteria** | **Weight** |
|---|---|---|
| **1** | **Project Scope** | 50% |
| 1.1 | Compliance with the purpose of the Fund<br>*- Is the proposal comply with the purpose of the Fund?* | |
| 1.2 | Compliance with the philosophy and strategy of the Center<br>*- Does the proposal match with the Centre's policy?* | |
| 1.3 | High Academic/Scientific Impact and Innovation<br>*- Is the proposal expected high-impact academically and scientifically?*<br>*- Is the proposal enough innovative academically and scientifically?*<br>*(Thorough review of preceding research and quality patent map are highly evaluated.)* | |
| 1.4 | High Degree of application of Innovation<br>*- Does the proposal apply innovative technology or ideas?* | |
| 1.5 | Additional value to the industry of Uzbekistan | |
| 1.6 | Additional value to Society of Uzbekistan | |
| 1.7 | Contribution to the Centre's activities | |
| 1.8 | Tangible Results<br>*- Are the results of project tangible?* | |
| | | |
| **2** | **Capability of Research Team** | 10% |
| 2.1 | Academic/Research Experience of Project Leader<br>*- Does Project Leader have enough experience of research project as the principle position?* | |
| 2.2 | Academic/Research Experience of project team members<br>*- Do project members have enough experience of research?* | |
| | Previous academic achievement (papers issues, certificates)<br>*- The number of scientific papers published on international journals* | |
| | | |
| **3** | **Reality of Project Plan** | 20% |
| 3.1 | Project Team Formation:<br>*- Reasonable assignment of tasks?* | |
| 3.2 | Reality of manpower planning: | |

| | | |
|---|---|---|
| | *- Is number of team members enough and realistic?* | |
| 3.3 | Reality of time schedule<br>*- Is research schedule based on realistic estimation? Is contingency included?* | |
| 3.4 | Consideration on Project management<br>*- Are risk factors considered carefully? Is there assignment of project coordinator for control progress?* | |
| 3.5 | Appropriate milestones<br>*- Are the milestones for checking progress set properly?* | |
| | | |
| **4** | **Financial Appropriateness** | 20% |
| 4.1 | Reliability on Expenditure Plan<br>*-Is the expenditure plan calculated based on the realistic and appropriate financial parameters?* | |
| 4.2 | Appropriate Procurement Plan<br>*- Is the procurement plan made based on reasonable level? Not too much spending?* | |
| 4.3 | Understanding and compliance with JICA Standard<br>*-Does Applicant submit declaration of compliance with JICA standard?* | |
| | | |

Table-4 Evaluation Score and Point

| Score | Evaluation | Point |
|---|---|---|
| A | Excellent | 5 |
| B | Good | 4 |
| C | Average | 3 |
| E | Poor | 2 |
| F | Very Poor | 1 |
| X | Cannot Evaluate | 0 |

## 9. Monitoring & Reporting Procedure

9.1 Monitoring of Disbursement of the Fund

9.1.1 The Committee and Fund Accountant shall jointly monitor the progress of disbursement of the fund for each Project through the payment/settlement evidences from the PL.

9.1.2 The result of disbursement shall be recorded “disbursement control sheet” monthly. The progress shall be compared with the implementation schedule and expenditure plan, which have been submitted by the Project as application documents.

9.1.3 Any delay of disbursement shall be feedback to the PL and instruct the immediate remediation.

9.1.4 The control sheet as well as the remedial actions made by the Center shall be reported to JICA quarterly basis.

9.2 Monitoring of Project Implementation

9.2.1 The Committee shall also monitor the progress of implementation and results of the Project through close communication to the PL.

9.2.2 PL of each Project shall submit “Annual Progress Report” to the Committee at the end of fiscal year. The Committee peruse the Report and conduct interviews with PL and physical inspection of the Project site, and verify actual progress of implementation.

9.2.3 Any delay of implementation shall be feedback to the PL and instruct the immediate remediation.

9.3 Periodical Reporting

9.3.1 The Committee shall report the progress of disbursement of the Fund and the implementation of the Project at the Board of Trustees meeting and Joint Coordination Committee Meeting.

9.4 Completion Report

9.4.1 PL shall submit the Completion Report in accordance with the designated format by the Committee at the completion of the Project.

## 10. Intellectual Property Rights

10.1.1 The Committee supports creation of value through the collaborative research between UJICY researchers (including Resident researchers) and Japanese researchers and therefore encourages PLs to apply for a patent in Uzbekistan before publishing academic papers.

10.1.2 In this regard, it is strongly suggested that PLs make ex ante agreement with research partners in Uzbekistan and/or Japan on the intellectual property rights that are to be produced through the collaboration.

## 11. Evaluation of the Project

11.1 Final Evaluation

11.1.1 The Committee shall make final evaluation of the Projects upon the Completion of the Project. The evaluation shall be conducted in accordance with the Completion Report submitted by PL with the following evaluation criteria;

a) appropriate disbursement of the Fund
b) tangible and excellent results from the Project
c) rich and high-impacted deliverables (papers in public)
d) appeals to the public
e) compliance with the Guideline, standards and rules & regulation
f) accurate and punctual reporting

11.1.2 The result of the Final Evaluation shall be reported to Board of Trustees and JICA.

11.1.3 As a part of report, the Committee shall input necessary data to the summary sheet of disbursement and calculate achievement ratio (%) of each Program.

11.1.4 The result shall also feed-back to the PL.

11.2 Privilege

11.2.1 The Project acquires excellent evaluation may granted some privileges in the grant of the Fund for the coming year, such as;

a. continuation of the Fund assistance
b. increasing the amount of Fund

# Chapter-III Financial Procedure

## 12. Important Rules

12.1 Definitions:

12.1.1 Definition of the general terms shall be referred to Chapter-I 1. Definitions.

12.1.2 **"Expenditure"** means any expenditures paid by the Project or expenses payable by JICA for research works agreed by the Committee;

12.1.3 **"Fiscal Year"** means the period starting on April 1 and ending on March 31 of each calendar year;

12.1.4 **"JICA Office"** means Uzbekistan Office of JICA;

12.1.5 **"Supplier"** means a company or person to provide goods or services to the Project upon a commercial contract;

12.1.6 **"Claim for Payment" or "Claim"** mean the written request of settlement and reimbursement of any payable to Project from JICA, including supporting documents and evidences of payment;

12.1.7 **"Equipment"** means equipment, devices, spare parts, tools and material remained after usage with (a) an acquisition cost of fifty thousand yen (¥50,000) per unit or more but less than five hundred thousand yen (¥500,000) and whose usable period is one (1) year or more, or (b) with an acquisition cost of less than fifty thousand yen (¥50,000) and whose usable period is eleven (11) years or more;

12.1.8 **"Consumables"** means goods or materials with (a) an acquisition cost of fifty thousand yen (¥50,000) per unit or more and whose usable period is less than one (1) year, or (b) an acquisition cost of less than fifty thousand yen (¥50,000) per unit and whose usable period is less than eleven (11) years;

12.1.9 **"Commissioned Work"** means a temporary and/or occasional work for specialized tasks required by Project for achievement of expected results;

12.1.10 **"Honorarium"** means a payment given against services and labour works provided by assistants of Project.

12.2 Obligation of Beneficiaries of the Fund

Owner of the Fund is JICA as specified in the article 2.5.1 and all beneficiaries of this Fund shall oblige to comply with the follows;

a) JICA's rules and regulations
b) Agreement of the Fund between JICA and the Center
c) This Guideline as a part of the Agreement mentioned above
d) Rules and Regulations of the Center
e) Laws and Regulation of the Republic of Uzbekistan

12.3 Eligible Receipt

12.3.1 Definition of Eligible Receipt (For reimbursement)

a) Shall be an ORIGINAL copy (if receipt is in Uzbek or Russian, please add English translation)
b) The receipt MUST include;
   - Name, address of supplier/seller with Stamp or Sign
   - Name of buyer/payer (should be under Principle Investigator's name).
   - Description and quantity, unit price of items
   - Expense Date (within the JFY)
   - Price (Total and Unit)

12.3.2 Other rules on the Eligible Receipt

a) Tax invoices are accepted, but should have same items as with receipt and should be stamped as "PAID".
b) Other invoices (i.e. Payment Order, Purchase Order, Delivery Order, Requisition Note, etc. other than receipt) are not accepted as Receipt.
c) Corrections on the receipt are NOT allowed.
d) If a receipt is thermal paper, attaching its copy to the original receipt is necessary.
e) If language is not English, translation in English is required by pencil.

12.4 Settlement of Expenditure

12.4.1 Expenditure incurred before or after the duration of the Fund specified in the article 2.6.1 is unacceptable.

12.4.2 Carryover of fund in a Fiscal Year to the succeeding Fiscal Years is NOT permitted. Unused surplus shall be returned to JICA.

12.4.3 Only original hard copy (paper) is regarded as proper financial evidence, not copy, in principle.

12.4.4 The budget and disbursement of the Fund is managed and executed by JICA. All the procurement requests and claims shall be addressed to JICA via Fund Accountant.

12.4.5 Upon procurement of goods and services by the Project, cash payment is strongly recommended although payment by credit card should be avoided in principle. In case of reimbursement of payment by credit card or bank transfer, the statement must be submitted as the evidence.

12.4.6 JICA reserves the right to reject any requests or claims of reimbursement from the Project, even after the Project made payment through its own account for procurement of goods or services. The claim shall be rejected in case that procurement:

a) *is not fully compliant to the JICA's rules and regulations, and is not approved by JICA before incurred;*
b) *is suspicious of personal use*;*
c) *is deemed not necessary/not related to the research;*
d) *is paid for persons not in the research team in original plan;*
e) *has not completed delivery of goods or services yet.*

**Personal items may include such as meals, drinks, fuel for transportation, overhead fee, personal digital device etc. Own car usage cannot be paid.*

*Since items which are difficult to be judged, they are most likely to be rejected by JICA, therefore, acquiring prior confirmation from Fund Accountant before purchasing is essential.*

12.4.7 Note that in case that any intentional frauds or legal misconducts are found, JICA immediately stops funding to the subject Project and reports it to the management of the Center. PL of the subject Project shall be blacklisted and will not be able to participate in any JICA project for 5 years as well the Project is required to reimburse all the fund being paid.

12.4.8 Uzbekistan Som (UZS) is the base currency for the Fund. In case of transactions with any foreign currency, submission of the following acceptable evidence of exchange rate on the date of payment (or the date of receipt) is mandatory: (Order of the follows is by priority)

a) JICA's exchange rate (For JPY and other currencies)
b) National Bank of Uzbekistan's exchange rate (For other major currencies) https://nbu.uz/en/exchange-rates/
c) OANDA website currency converter https://www.oanda.com/currency/converter/

12.5 Inspection of goods at delivery

Any goods purchased should be inspected and tested that the goods work as expected upon their delivery to the place. Project shall submit "Receipt of the goods".

12.6 Monitoring of disbursement of the Fund and annual closing

12.6.1 Fund Committee and Fund Accountant shall monitor the progress of disbursement of the allocated fund to each Project, and report to JICA Office at the end of every quarter. If deviation between the budget and the actual disbursement is seen, Fund Committee and Fund Accountant shall analysis the activities of the Project, and the allocated amount shall be adjusted if necessary.

12.6.2 All outstanding unpaid or un-reimbursed transaction shall be settled by three (3) weeks prior to the end of the Fiscal Year, approximately by beginning of March. Delay on the final settlement may cause no reimbursement to Project.

12.6.3 Unused allocated fund as at the end of the Fiscal Year shall be returned to JICA Office. Fund Accountant will review the implementation of budget and report it to JICA Uzbekistan office. All settlement of payment described in the above 12.6.2 shall be completed before the end of Quarter.

## 13. Regulations for Expenditure

The Fund covers the following expenditures shown in Table-5 below:

Table-5

| Article | Type of Expenditure | Description |
|---|---|---|
| 13.1 | Equipment | Purchase of equipment, devices, spare parts, tools and material remained after usage with (a) an acquisition cost of fifty thousand yen (¥50,000) per unit or more but less than five hundred thousand yen (¥500,000) and whose usable period is one (1) year or more, or (b) with an acquisition cost of less than fifty thousand yen (¥50,000) and whose usable period is eleven (11) years or more |
| 13.2 | Consumables/Miscellaneous | Purchase of chemicals, solvent, disposal materials, stationery and materials decreased/degraded by usage and (a) with an acquisition cost of fifty thousand yen (¥50,000) per unit or more and whose usable period is less than one (1) year, or (b) with an acquisition cost of less than fifty thousand yen (¥50,000) per unit and whose usable period is less than eleven (11) years |
| 13.3 | Travel Expenses | Airfare, Accommodation, Allowance, Insurance |
| 13.4 | Commissioned Work | Remuneration against services rendered by outsources such as translator, lab work by third party |
| 13.5 | Honorarium | Remuneration against services and Labour rendered by internal staff |

13.1 Equipment (See Table-5 for definition)

a) Equipment, including devices, spare parts and tools, to be used for Project can be purchased, except:

   - General equipment such as Computer, Printer, Scanner, Monitor, Memory device, PC accessory, Mobile phone etc.
   - Equipment for personal use;
   - Any other equipment which Fund Accountant and JICA judge as inappropriate.

b) Regarding procurement of Equipment, the actual unit price must not be more than 500,000 JPY including any tax and duty.

c) The different process of procurements shall be taken in accordance with the amount of the equipment:

   - Consumables: see article 14.1.1
   - Equipment: see article 14.1.2

   The amount should include VAT, any taxes and charges imposed, transportation and installation cost, initial training, peripherals of the equipment/devices/tools.

d) For scientific equipment, submission of the specification of the equipment is required (brochure, web information, etc.).

e) Taking quotation from at least two (2) suppliers are mandatory. In case only one supplier could sell the equipment and no quotation for comparison is available, PL shall consultation with Fund Accountant with providing evidences of single supplier.

f) At the time of delivery and successful installation of the equipment, “Receipt of equipment” should be submitted.

g) All the Equipment shall be registered as the properties of the Center and make due maintenance and monitoring of usage by each Project. The Equipment shall also be reported to JICA Office via Fund Accountant and registered at JICA Office. ~~as Fixed Assets and shall be reported to JICA Office via Fund Accountant.~~

13.2 Consumables/Miscellaneous Expenses

h) Consumables, such as chemicals, solvent, stationary etc., can be purchased (see article 11.1 for definition of “Consumables). Consumables shall meet

either of the following: 1) the purchase price is not more than JPY 50,000 and the number of usable years is less than eleven, 2) the purchase price is more than JPY 50,000 but the number of usable years is less than one. The intended purpose and relevance to the research topic or component must be clarified in the proposal.

a) Miscellaneous expenses which are deemed to be essential for research and publication of its result, including software (not general purpose), digital contents and references/books, expenses for producing and publication of thesis (translation, publication fee for any scientific journal, proof-reading fee etc), shall be covered by the Fund. At the end of Project, software installed into PC, the software shall be deleted from the PC or transfer the ownership to the owner of the PC with monetary compensation agreed at the awarding.
b) Membership fee, conference registration fee and any other expenses for individual shall not be covered by the Fund except the case JICA accepts.
c) Taking quotation from at least two (2) suppliers are mandatory. In case only one supplier could sell the goods and no quotation for comparison is available, PL shall consultation with Fund Accountant with providing evidences of single supplier.
d) The stockpile of chemical and Consumables shall be under due control of Project and report their quantity to Fund Accountant if required.
e) The method of procurement could be changed to the one by JICA Office depending on volume and/or content of procurement.

13.3 Travel Expense

a) All travels to be made by members of Project must be approved by Fund Accountant beforehand. “Trip Application” should be submitted to Fund Accountant no later than 1 months prior to intended departure date.
b) Eligible person for receiving trip expense is only the team member of Project written on the initial application of this Fund.
c) “Trip Completion Report” must be submitted to Fund Accountant within 2 weeks after the trip.
d) Business trips supported by Fund must be separated from any private trips. It is not allowed to combine private trip with business trip, even if it is done during holiday. If the traveler has another business trip funded by other organization

before or after the business trip supported by Fund, consultation with JICA Project prior to the departure is required.

e) Necessary visa for the trip must be obtained solely under traveler's responsibility. All the cost (cancelling air ticket, hotel, conference, etc.) incurred by failing to obtain the visa must be borne by the traveler. Visa fee can be claimed.

*Visa Fee can be used for conferences and research visit purposes only

13.3.1 International/domestic airfare

- Only economy class air ticket or its equivalent is allowed (First, Business, or Premier economy and its equivalent are not allowed). Original boarding pass must be submitted to Fund Accountant at the settlement after the trip.
- In principle, Fund will not cover cancellation or changing flight fee.
- In principle, international air ticket will be procured by JICA Project and domestic air ticket will be directly procured by Project.

13.3.2 Land Transportation

- The traveler can claim train and bus fee after the trip based on actual expense.
- The use of taxi in Japan will not covered by this JICA Fund in principle.
- Cost of Land Transportation is calculated based on actual expense.
- Usage of the research team's private car or its fuel cost, highway fee, parking fee, cannot be claimed.

13.3.3 Allowance and Accommodation

- Allowance is to cover meals and small miscellaneous expenditure during the trip.
- Allowance rate should be discussed with JICA after reception of Fund Request.

13.3.4 Travel Insurance

- It is mandatory to purchase appropriate travel insurance that covers the trip duration (not only flight day) before the trip. Insurance cost can be claimed.
-

13.4 Commissioned Work

Commissioned Work, such as outsourcing experiment, shall be covered by the Fund (see article 11.1 for definition of “Commissioned Work”)

13.4.1 Contract

a) Eligible contractor of Commissioned Work shall be person or entity outside the Center, Project or entities related to the Project.
b) Procedure for selection of contractor should be fair and competitive.
c) Written contract should be prepared in principle.
d) Contract details must include but not limited to contractor’s information (registration, occupation, affiliation, identification, etc.), duration of the work, unit rate and work content/description.
e) In case two or more works are rendered by the same contractor in the same month, contracts that contain such works shall be consolidated in one contract.
f) Preliminary study on market price might be required for the commissioned work.
g) PL shall consult with Fund Accountant prior to contacting.
h) The Conract document shall be submitted Fund Accountant as the attachment of “Request of Procurement”.

13.4.2 Remuneration

Remuneration shall be calculated based on unit rate (hourly or daily), which is to be specified in the Contract, and actual time for each work. The rumpsum payment for certain period is not acceptable:

*Examples;*

*(acceptable) : , Unit Rate:UZS 80,000/hours, Actual Work: 40 hours for “sample analysis work. 80,000 x 40 = UZS 3,200,000*

*(not acceptable) : UZS 3,200,000 for administrative support for 2 weeks*

13.5 Honorarium

a) Project can hire students of technical universities as temporary Research Assistants (RA) for conducting research activities. RA shall be compensated by Honorarium. (see the definition of “Honorarium” in article 11.1)
b) Project shall make a contract with each RA before they start working.

Following support documents must be attached to the contract:

- Work schedule/Work description
- Rate for Honorarium by degree
- Certified true copy of Student Identity Card/Passport of RA

c) Project shall submit draft contract and the above documents to Fund Accountant for review. Once Fund Accountant approves, Project can hire RA.

d) Honorarium will be paid monthly by submitting "Request for Honorarium payment".

## 14. Procurement Procedure

14.1 Process of Procurement of Goods and Services

There are two (2) types of procurement process, as shown in Table-6, in accordance with the kind of expenditures related to activities of Project. Detailed specification and regulations of each expenditure are described the article 12 Regulations for Expenditure:

TABLE-6 Type of Procurement

| Expenditure | | Procurement Process | |
|---|---|---|---|
| 13.1 | Equipment | | |
| | Less than JPY 50,000 equivalent | 14.1.1 | Direct Procurement by Project |
| | JPY 50,000 equivalent or More | 14.1.2 | Procurement by JICA Office |
| 13.2 | Consumables/Miscellaneous | 14.1.1 | Direct Procurement by Project (or Procurement by JICA Office) |
| 13.3 | Travel Expenses | | |
| | 12.3.1 Airfare | 14.1.3.1 | International: Air ticket in kind by JICA Office<br>Domestic: Direct Procurement by Project |
| | 12.3.2 Land Transportation | 14.1.1 | Direct Procurement by Project |
| | 12.3.3 Accommodation/Allowance | 14.1.3.2 | Fixed Rate paid by JICA Office |
| | 12.3.4 Insurance | 14.1.1. | Direct Procurement by Project |
| 13.4 | Commissioned Work | 14.1.1 | Direct Procurement by Project or Procurement by JICA Office |
| 13.5 | Honorarium | 14.1.1 | Direct Procurement by Project |

14.1.1 Direct Procurement by Project:

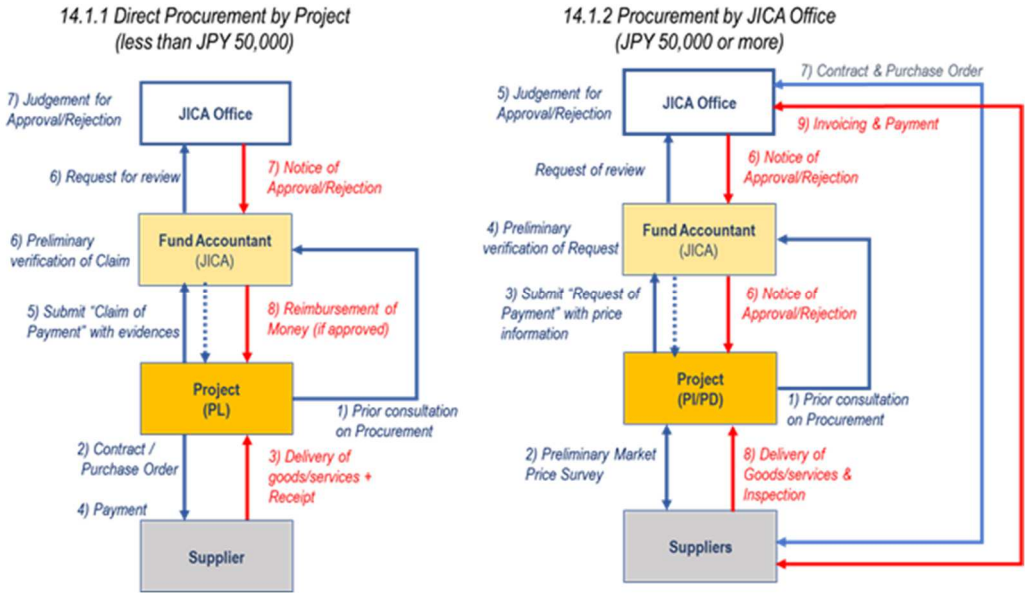
1) Project shall consult with Fund Accountant regarding goods or services to be procured, prior to making order or purchasing;
2) Project shall make a proper commercial contract or purchase order with Supplier. Acquisition of quotation from Supplier is optional;
3) Project has delivery of good(s) or services from Supplier and receive, and an invoice;

4) Project shall make payment to Supplier;
5) Project shall claim reimbursement from JICA Office by submitting “Claim for Payment”, together with supporting documents and evidences, to Fund Accountant at monthly basis;
6) Fund Accountant makes preliminary verification of the submitted Claim. Being incorrect or insufficient, Claim shall be returned to Project for correction (repeat the process from 5). The verified Claim shall be handed to JICA Office for review and acceptance;
7) After final review on Claim in accordance with JICA’s standard for procurement, JICA Office will inform its judgement for “acceptance” or “rejection” of Claim to Fund Accountant;
8) Once Claim is accepted, Fund Accountant shall inform Project and make reimbursement of claimed amount. In case of rejection, claimed amount shall not be reimbursed to Project;

14.1.2 Procurement by JICA Office:

1) Project shall consult with Fund Accountant regarding goods or services to be procured, prior to making order or purchasing;
2) Project submits the “Request for Procurement” to Fund Accountant with all quotations;
3) Fund Accountant makes preliminary verification of the submitted Request. Being incorrect or insufficient information, the Request shall be returned to Project for correction (repeat the process from 3). The verified Request shall be handed to JICA Office for review and acceptance;
4) After final review on Request in accordance with JICA’s standard for procurement, JICA Office will inform its judgement for “acceptance” or “rejection” of Request to Fund Accountant;
5) Fund Accountant instruct Project to make purchase order;

Chart-3 Flow of Procurement




14.1.3 Travel Expenses

Project shall submit Travel Plan (Itinerary) to Fund Accountant prior to the start of travel and acquire approval. Travelling expenses mentioned below are settled based on the Travel Plan.

14.1.3.1 Airfare

(International Airfare)

1) Project submits the “Request for Procurement” to Fund Accountant JICA with Travel Plan;
2) Fund Accountant makes preliminary verification of the submitted Request. Being incorrect or insufficient information, the Request shall be returned to Project for correction (repeat the process from 1). The verified Request shall be handed to JICA Office for review and acceptance;
3) Upon approval by JICA Office, JICA Office will procure the air ticket from the travel agent directly and provide it to Project. The choice of airline, route, etc. will be based solely on JICA Office’s decisions;

（Domestic Airfare）

The same process as 14.1.1 Direct Procurement by Project shall be applied.

14.1.3.2 Accommodation and Daily Allowance

Allowance and accommodation rates are fixed rate or direct expense. Project shall claim reimbursement with the same process as 14.1.1 Direct Procurement by Project (from step 4).

14.1.3.3 Land Transportation

Land transportation cost is based on actual expense. Project should use the public transportation in principal overseas, and usage of taxi is allowed only the case that there is no appropriate public transportations. Project shall claim reimbursement with the same process as 14.1.1 Direct Procurement by Project (from step 4).

14.1.4 Commissioned Work

The same process as 14.1.1 Direct Procurement by Project shall be applied

14.1.5 Honorarium

The same process as 14.1.1 Direct Procurement by Project shall be applied.

(End of Guideline)

Attachment-5 of ANNEX-2

December 15, 2023 (revision)

# Utilization Plan for Returned Trainees from Japan

## 1. Current Situations:

As of December 1, 2023, the situation of long-term trainees in Japan is;

**Table-1 Return schedule of long-term trainees in Japan (as of 2023 July)**

| | Name of Trainee/ Program (M)..Master (D)..Doctor | Timing of Return | Gov's Incentive | Status / Plan |
|---|---|---|---|---|
| 1 | Sunnat Islomov (M) | 2022/Mar (returned) | Not Eligible (not returned UJICY) | Working at Government Sector but has intention to work at UJICY |
| 2 | Anna Strijevslave (M) | 2022/Mar (returned) | Eligible | Working at UJICY (Junior Researcher-Energy Lab) Ph.D. Program in Wien University |
| 3 | Farrukbek Karimov (M) | 2022/Mar (returned) | Not Eligible (not returned UJICY | Working at RAKTEN (Japan) |
| 4 | Otabek Nigmatov (M) | 2022/Mar (returned) | Not Eligible (unlisted) | Ph.D Student of UJICY Doctor Program with having guidance of Prof,Ueda (Teikyo Univ). |
| 5 | Zikrilla Alimov (D) | 2022/Aug (returned) | Not Eligible (overaged) | Working at Institute of Environmental Technology as Head of Air Environment and promote collaboration with UJICY and Prof.Okuda (Keio Univ) |
| 6 | Shukur Gofurov (D) | 2023/Mar (returned) | Not Eligible (overaged) | Working at UJICY (Technical Support Manager) and preparing Ph.D thesis under the supervision of Prof.Sakurai (Tsukuba) |
| 7 | Ubaydullabek Ergashev (M) | 2023/Mar (returned) | Eligible | Seeking PhD program in Japanese university (own cost) |
| 8 | Berdakh Daniyarov (M) | 2023/Mar (returned) | Eligible | Working at UJICY(Junior Researcher – Chemistry Lab). Member of SATREPS |
| 9 | Javokhir Tashpulatov (M) | 2023/Mar (returned) | Eligible | Working at UJICY(Junior Researcher – Mining & Natural Resource) |
| 10 | Sherzod Allaev (D) | 2024/Mar | Eligible | Civil Engineering |
| 11 | Umidakhon Raimjonova (M) | 2024/Mar | Eligible | Energy |
| 12 | Akhror Narmatov (M) | 2024/Mar | Eligible | Mining & Natural Resource |
| 13 | Bilolidin Khakimov (M) | 2024/Mar | Eligible | Urban Planning |
| 14 | Fayzullakhuja Yusupov (M) | 2024/Mar | Eligible | Mechanical |
| 15 | Ulmazoda Akbarshokh (M) | 2024/Mar | Eligible | Mining & Natural Resource |

*(Trainees currently working at UJICY or its affiliated institute: )*

## 2. Problems and Solutions:

Important Assumption in PDM stipulates *"Those who studied and obtained degrees in Japan continue working in the Center"*, however, there are several circumstances which make the returned trainees working at UJICY difficult, mainly due to the following problems;

1. Insufficient available posts
   There is a quota for employment at UJICY and the maximum number of employees is limited to 35 people in total by Presidential Order. Currently UJICY has already used up this quota. And there is also limitation of researchers in each laboratory; one (1) Lab Head and two (2) junior researchers only. In order to hire more researchers, UJICY divides one quota (1 MM) into two (0.5MM x 2). The researcher who has half quota is hired as "part-time".

   The open new laboratories; environmental lab and material science lab, and the increase of researchers of each lab up to 6, were approved at Board of Trustee chaired by then-Prime Minister in 2022, but this resolution has not been implemented yet due to slow governmental procedure. Recently, Presidential Office noticed this problem and is planning the mitigating action. It is important that UJICY follows up this issue with Ministry of Higher Education, Science and Innovation.

2. Non-attractive salary level
   Researchers' salary consists of salary paid under the governmental budget (fixed) and remuneration from several competitive research funds which the researchers acquired by themselves. Therefore, their income is depending on how much they can get research projects.

   After the long negotiation with Ministry of Higher and Secondary Specialized Education (currently Ministry of Higher Education, Science and Innovations), the special allowance has been paid to students who studied at top 100 universities in Japan for 5 years, and additional allowance for Ph.D. holders.

In order to overcome the abovementioned obstacles and achieve Project Purpose and Overall Goal of JICA Project, UJICY needs to plan how to utilize returned trainees from Japan (Input of the Project) efficiently and sustainably.

**Overall Goal:** The Center (UJICY) conducts frontier research for industrial development of Uzbekistan with stronger linkage with industries and Japanese researchers.

**Project Purpose:** Capacity of researchers at the Uzbek-Japan Innovation Center of Youth to conduct research activities is strengthened.

make researcher's income more attractive, UJICY assists researchers to acquire competitive research fund, especially from Innovation Fund of Uzbekistan. JICA also can extend its help by introducing Japanese funds in the Project.

## 3. Utilization Plan of Retuned Trainees

Taking the above circumstances into the consideration, the following is a realistic plan to utilize the returned trainees with preserving the results of the JICA Project. There are five (5) major options;

**Option-1 Working at UJICY:**
This is the most ideal option which UJICY can directly receive the results of training from returned trainees.

**Option-2 Working at other scientific research institutes or universities:**
As the secondary option in case that there is no vacant post for the returned trainee or appropriate post for the trainee's research subject, UJICY will suggest the trainee to work at UJICY's collaborated institutes or universities.

Since UJICY has been strengthening tie with other institutes and universities and concluded more than 10 MOU with local institutes in various areas under the vision and goal – "being a hub of research network in Uzbekistan". In this option, the trainee is not belonging to UJICY but he/she will be the key person for connecting UJICY with the institute.

**Dr.Zikrilla Alimov:**, who graduated from Keio University in 2022, and now working at Head of Air pollution lab of National Institute of Environmental Protection Technology under Ministry of Ecology. He is now working with Prof.Okuda on the project for monitoring PM2.5 with KAKENHI. He can contribute to UJICY by expanding the network with other mereological institutes in Uzbekistan and initiate active projects.

Regarding trainees to return, **Sherzod Allaev** (Ph.D,, civil engineering) and **Bilolidin Khakimov** (Master, transportation), have the option to continue research work at other institutes related to their area of study; Sherzod's knowledge can be utilize for anti-earthquake technology which Uzbek government is interested in, and Bilolodin can also continue his study at Tashkent University for Transportation in the area of urban transportation system. As long as they continue their study, the results of the JICA Project can contribute to the achievement of Overall Goal of the Project.

Since Ph.D. is the minimum requirement for being senior researcher or working as laboratory head at any institutes, it is recommended to obtain Ph,D. making the results of the Project sustainable as we as the trainee's future.

**Option-3 Obtaining Ph.D. in Uzbekistan**
UJICY has permission for accepting Ph.D. students up to 2. If the subject of research of the trainee matches with UJICY's coverage, the trainee can continue Ph.D. program in Uzbekistan with low cost and having advice from Japanese professor.

**Otabek Nigmatov** (Master, Combustion Engineering) is currently studies under Dr,Okusana, head of Energy Lab of UJICY, with having advise of Prof.Ueda of Teikyo University. He is expected to get Ph.D. Degree in 2025.
**Shukur Gofurov** (semiconductor) completed doctor course at Tsukuba University but without degree. He is now working at UJICY and continues his study and prepares thesis with advice of Prof. Sakurai. He has 3 years moratorium period by acquire Ph.D. from Tsukuba University.

Regarding the trainees to come back, **Berdakh Daniyarov** (Master, Mining) who is working very actively at Chemistry Lab of UJICY, but wish to have Ph.D. So his choice is RONPAK program of JSPS with guidance of Prof.Miki of Kyushu University. This option has advantage for UJICY to utilize the result of JICA Project directly as well as increasing sustainability by providing researchers with higher education.

**Option-3 Obtaining Ph.D. in Japan or other countries**
If the trainee can get any scholarship, there is the option to study again in Japan or other country. In case of study in Japan, JICA's scholarship program can be use. After 2014, UJICY has two projects with JICA, SATREPS and Phase-II of JICA Project. If the trainee is going to study at the foreign country, scholarship is necessary.

**Umidakhon Raimjonova** (Master expected, Physics) is nominated to the member of SATREPS, so she has chance to study at Kyushu University. **Akhror Narmatov** (Master expected, Mining) and **Ulmazoda Akbarshokh** (Master expected, Mining) have also recommendation from their Supervisors to continue Ph.D. program in Kyushu Univ, After their graduation and a couple years study or work, they will be eligible for KIZUNA Program of JICA.

**Anna Strijevslave** (Master, Chemistry) was worked at UJICY after graduation and published high-impact paper to American Chemistry Journal. She is now studying in Wien University for Ph.D. She is also expected to lead UJICY's Chemical Lab in the future, therefor her study in abroad will contribute to the development of UJICY's international research network.

**Option-4 Working at Companies**
Working at companies is also the option to be taken by the trainees but UJICY need to guide them to work at companies which can be collaborate with UJICY in the framework of Academia-Industrial Collaboration. If the trainee is working at the industrial side, UJICY can get technical and scientifical needs from the company and propose joint research to solve their problems. The same as Option-2, the trainee is expected to be a hub connecting industry and academia. This option is can be taken by trainees who study/studied about mining.

UJICY will conduct interview the trainees individually enough prior to their return and discuss and if necessary, ask assistance from MHESI where committed to support returned trainees at 3rd JCC meeting.

The pros/cons of each option and the possibility for the trainees are described in Table-2 below;

**Table-2 Utilization Plan of Returned Trainees**

| OPTION | PROS | CONS | Possible Position & Options |
|---|---|---|---|
| **Option-1**<br>**Working at UJICY** | • Results of Input will contribute directly to UJICY's research activities.<br>• Utilization of facility of UJICY<br>• Research instruction from Senior Researchers of UJICY | • Research level is limited.<br>• Financial issues<br>• Shortage of positions in Lab | (Anna Strijevslave 2022-2023)<br>(Otabek Nigmatov 2022)<br>( Zikrilla Alimov 2022-2023)<br>**Berdakh Daniyarov** (2023-) Chemistry<br>**Javokhir Tashpulatov** (2023-) Mining<br>**Shukur Gofurov** (2023-) Energy<br>Ulmazoda Akbarshokh - Mining ? |
| **Option-2**<br>**Working at Other Scientific Institutes or Universities** | • Results of Input can be extended widely in the Country.<br>• Hub function of UJICY<br>• Sharing facility and knowledge<br>• Activating Publication with other researchers | • Control of UJICY become weak | **Zikrilla Alimov** Dr 2023- Head of Air Pollution, National Institute of Environment Protection Technology<br>Sherzod Allaev (Dr) Civil Eng Univ ?<br>Bilolidin Khakimov Transport Univ.?<br>Fayzullakhuja Yusupov Technical Univ? |
| **Option-3**<br>**Obtaining Ph.D. in Uzbekistan** | • No scholarship required<br>• Results of Input will contribute directly to UJICY's research activities.<br>• Utilization of facility of UJICY | • Limited area of subject<br>• Less academic prestage | **Otabek Nigmatov** 2022-<br>Dr.Okusana (Dr.Ueda)<br>Berdakh Daniyarov (RONPAK Dr.Miki) |
| **Option-4**<br>**Obtaining Ph.D.in Japan or Other Foreign Countries** | • Utilize research network established in Japan<br>• Advanced research environment and instruction<br>• Prestage of degree | • Cost of study abroad (Scholarship)<br>• Control of UJICY become weak if study not in Japan<br>• | **Anna Strijevslave** 2023- Austria<br>Umidakhon Raimjonova SATREPS<br>Akhror Narmatov KIZUNA Dr.Shimada<br>Ulmazoda Akbarshokh KIZUNA Dr.Miki |
| **Option-5**<br>**Working at Company** | • Results of Input can be applied to the industry and get actual date from industry.<br>• Hub function of UJICY for academia-industrial collaboration | • Control of UJICY become weak<br>• Not return to UJICY | Akhror Narmatov UzbekCoal?<br>Ulmazoda Akbarshokh Almalik Mining ? |

**Attachment-6 of ANNEX-2: Dispatch Plan of Short-Term Trainees to Japan under the Project for Strengthening Research Capacity of UJICY (JICA Project)**

As of January 15, 2024

Completed
Ongoing
Cancelled/Changed

| | | | INPUT (Mon-Month) | FY2019 IV | FY2020 I | FY2020 II | FY2020 III | FY2020 IV | FY2021 I | FY2021 II | FY2021 III | FY2021 IV | FY2022 I | FY2022 II | FY2022 III | FY2022 IV | FY2023 I | FY2023 II | FY2023 III | FY2023 IV |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | 2020 | | | | | 2021 | | | | 2022 | | | | 2023 | | | 2024 |
| | | | | 1 2 3 | 4 5 6 | 7 8 9 | 10 11 12 | 1 2 3 | 4 5 6 | 7 8 9 | 10 11 12 | 1 2 3 | 4 5 6 | 7 8 9 | 10 11 12 | 1 2 3 | 4 5 6 | 7 8 9 | 10 11 12 | 1 2 3 |
| 1 | Name of Researcher | **Dr.Zukhra Karidova** | **1.0** | | | | | | | | | | | Jul/2 | | | | | | |
| | Area of Research | Hydrogen Energy | | | | | | | | | | | | (1M) | | | | | | |
| | Training Institute | Kyushu University | | | | | | | | | | | | | | | | | | |
| | Supervisor | Prof Sugai/Prof. Matsumoto | | | | | | | | | | | | | | | | | | |
| | Status | **Completed** | | | | | | | | | | | | | | | | | | |
| | Type | SATREPS Preparation | | | | | | | | | | | | | | | | | | |
| 2 | Name of Researcher | **Dr.Oksana Ismailova** | **6.0** | | May (6M) | | Oct | | | | | | | | | | | | | |
| | Area of Research | Power Engineering | | | | | Oct (6M) Mar | | May (6M) | | Oct | | Apr (6M) | Aug/15 | | Feb | | | | |
| | Training Institute | **Tsukuba Univ.** | | | | | | | | | | | | | | | | | | |
| | Supervisor | Prof.Toshiaki HATTORI | | | | | | | | | | | | | | | | | | |
| | Status | **Completed** | | | | | | | | | | | | | | | | | | |
| | Type | Capacity Building | | | | | | | | | | | | | | | | | | |
| | Name of Researcher | **Mr. Rafael** | **0.0** | | May Jul | | | | | | | | | | | | | | | |
| | Area of Research | Power Engineering | | | | | | | | | | | | | | | | | | |
| | Training Institute | **Tsukuba Univ.** | | | (3M) | | Oct Dec | | May Jul | | | | Apr Jun | Aug/15 | Nov | | | | | |
| | Supervisor | A.Prof.Takeaki SAKURAI | | | | | (3M) | | | | | | | | | | | | | |
| | Status | **Cancelled** | | | | | | | (3M) | | | | (3M) | (CANCELLED) | | | | | | |
| | Type | Capacity Building | | | | | | | | | | | | | | | | | | |
| 3 | Name of Researcher | **Commercial/Startups Team** | **2.0** | | | | | Feb | | | | Feb | May | | | | | | | |
| | Area of Research | Acad-Indust Collab | | | | | | | | | | | | | | | | | | |
| | Training Institute | **NOASTEC Foundation** | | | | | | | | | | | (10 D) | | | | (3w) x 3 person (one person cancelled) | | | |
| | Supervisor | | | | | | | (10 D) | | | | | (5 person) | | | | | | | |
| | Status | **Completed** | | | | | | | | | | | | | | | | | | |
| | Type | Management Skill | | | | | | | | | | | | | | | | | | |
| 4 | Name of Researcher | **PM, PD of Project** | **3.0** | | | | | Feb | | | | Feb | May | | | | | | | |
| | Area of Research | Research Center Management | | | | | | | | | | | | | | | | | | |
| | Training Institute | **Teikyo University** | | | | | | | | | | | (10 D) | | | | | | | (10d) x 4 p. |
| | Supervisor | Prof.Ueda | | | | | | (10 D) | | | | | (5 person) | | | | | | | |
| | Status | **GI under Preparation** | | | | | | | | | | | | | | | | | | |
| | Type | Management Skill | | | | | | | | | | | | | | | | | | |
| 5 | Name of Researcher | **Dr.Sokhib, Lab Head** | **1.0** | | | | | | | | | | | | | | | | | |
| | Area of Research | Mining & Natural Resources | | | | | | | | | | | | | | | | | | |
| | Training Institute | Akita/Kyushu Univ | | | | | | | | | | | | | | (1M) | | | (1M) | |
| | Supervisor | Prof.Shibayama | | | | | | | | | | | | | | (1M) | | | | |
| | Status | **Arranged at JICA-HQ** | | | | | | | | | | | | | | (CANCELLED) | | | (SHOETENED) | |
| | Type | Joint Research Project | | | | | | | | | | | | | | | | | | |
| 6 | Name of Researcher | **Mr.Shukur** | **1.0** | | | | | | | | | | | | | | | | | |
| | Area of Research | Semiconductor | | | | | | | | | | | | | | | | | | |
| | Training Institute | Tsukuba Univ. | | | | | | | | | | | | | | (2M) | | (2M) | | (POSTPONE TO 4Q) |
| | Supervisor | Prof.Sakurai | | | | | | | | | | | | | | (CANCELLED) | | | | |
| | Status | **to postpone to 4Q** | | | | | | | | | | | | | | | | | | |
| | Type | Joint Research Project | | | | | | | | | | | | | | | | | | |
| 7a | Name of Researcher | **Dr. Zikrilla** | **1.0** | | | | | | | | | | | | | | | | | |
| | Area of Research | Atmosphic Environment | | | | | | | | | | | | | | | | | | |
| | Training Institute | Keio University | | | | | | | | | | | | | | | | | (1M) | |
| | Supervisor | Prof.Okuda | | | | | | | | | (CANCELLED) | | | | (CANCELLED) | (DEVIDED) | | | | |
| | Status | **Arranged at JICA-HQ** | | | | | | | | | | | | | | | | | | |
| | Type | Joint Research Project | | | | | | | | | | | | | | | | | | |
| 7b | Name of Researcher | **Mr.Albert** | **0.0** | | | | | | | | | | | | | | | | | |
| | Area of Research | Natural Resources | | | | | | | | | | | | | | | | | | |
| | Training Institute | Kyushu University | | | | | | | | | | | | | | (1M) | | | | |
| | Supervisor | Prof.Matumoto (I2CNER) | | | | | | | | | | | | | | (SUBSTITUTED TO UZBEK FUND) | | | | |
| | Status | **Executed with Uzbek fund** | | | | | | | | | | | | | | | | | | |
| | Type | Joint Research Project | | | | | | | | | | | | | | | | | | |
| 8a | Name of Researcher | **Mr.Otabek** | **1.0** | | | | | | | | | | | | | | | | | |
| | Area of Research | Combustion Technology | | | | | | | | | | | | | | | | | | |
| | Training Institute | Teikyo University | | | | | | | | | | | | | | | | | (1M) | |
| | Supervisor | Prof. Ueda | | | | | | | | | (3M) | | (2M) x2 | | | (2M) x2 | | | | (POSTPONE TO Sep) |
| | Status | **Arranged at JICA-HQ** | | | | | | | | | | | | (CANCELLED) | | (CANCELLED) | | (DEVIDED) | | |
| | Type | Joint Research Project | | | | | | | | | | | | | | | | | | |
| 8b | Name of Researcher | **Ms.Anna** | **0.0** | | | | | | | | | | | | | | | | | |
| | Area of Research | Semiconductor | | | | | | | | | | | | | | | | | | |
| | Training Institute | Tokyo Tech/NIMS | | | | | | | | | | | | | | | | | (1M) | |
| | Supervisor | Prof.Miyauchi/Prof.Abe | | | | | | | | | | | | | | | | (CANCELLED) | | |
| | Status | **Cancelled** | | | | | | | | | | | | | | | | | | |
| | Type | Joint Research Project | | | | | | | | | | | | | | | | | | |

| | | | | | | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Input Man-Month | Quarterly | | 1.5 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 2.5 | 3 | 1.5 | 0 | 3 | 3.5 | 1 |
| | Annualy | **16.0** | 1.5 | 0 | | | | 0 | | | | 7 | | | | 7.5 | | | | |

**Attachment-7 of ANNEX-2: Dispatch Plan of Short-Term Expert to Uzbekistan under the Project for Strengthening Research Capacity of UJICY (JICA Project) 1 of 2**

As of July 31, 2023

The contents of this list are subject to change

| | | | INPUT (Man-Day) | Schedule |
|---|---|---|---|---|
| 1 | Name of Expert | **Dr. Tokoaki Okuda** | **5.0** | Apr-May; Oct or Nov; Mar; Oct (Cancelled. Alternatively Zikilila visit Japan in Nov 2023) |
| | Area of Research | Environment (Air) | | |
| | Name of Institute | **Keio University** | | |
| | Position | Associate Professor | | |
| | | Seminar and discussion & field survey for Joint Research | | |
| 2 | Name of Expert | **Dr. Masahiro Miyauchi** | **5.0** | (Oct) |
| | Area of Research | Material Science/Semiconductor | | |
| | Name of Institute | **Tokyo Inst. of Technology** | | |
| | Position | Professor | | |
| | | Seminar and discussion & field survey for Joint Research | | |
| 3 | Name of Researcher | **Dr. (Shimada)/Sasaoka** | **5.0** | Apr-May; Oct; Mar; Nov (Cancelled Visit to Conference due to health reason); Nov (Cancelled) |
| | Area of Research | Mining | | |
| | Name of Institute | **Kyushu University** | | |
| | Position | Professor | | |
| | Type | Seminar and discussion & field survey for Joint Research | | |
| 4 | Name of Researcher | **Dr. Toshihisa Ueda** | **10.0** | (Oct); May-Jun; Mar; Oct; Jun |
| | Area of Research | Remote Electricty Supply | | |
| | Name of Institute | **Teikyo University** | | |
| | Position | Professor | | |
| | Type | Seminar and discussion of Joint Research (2023) | | |
| 5 | Name of Researcher | **Dr. Mamoru Kikumoto** | **5.0** | May-Jun; Nov |
| | Area of Research | Urban Planning & Transport | | |
| | Name of Institute | **Yokohama National Univ** | | |
| | Position | Professor | | |
| | Type | Partipation to UJICY Symposium & Conducting a seminar with TIACE (2022) | | |
| 6 | Name of Researcher | **Dr. Jumpei Kuwabara** | **5.0** | Nov |
| | Area of Research | Material Science/Semiconductor | | |
| | Name of Institute | **Tshukuba University** | | |
| | Position | A.Professor | | |
| | Type | Partipation to UJICY Symposium, Seminar, discussion of Joint Research (2022) | | |
| 7 | Name of Researcher | **Dr. Akira Hosoda** | **5.0** | Dec |
| | Area of Research | Urban Planning & Transport | | |
| | Name of Institute | **Yokohama National Univ** | | |
| | Position | Professor | | |
| | Type | Partipation to UJICY Symposium & Conducting a seminar with TIACE (2023) | | |
| 8 | Name of Researcher | **Dr. Hajime Miki** | **5.0** | Apr-May; Oct; Mar; Dec |
| | Area of Research | Mining | | |
| | Name of Institute | **Kyushu University** | | |
| | Position | Associate Professor | | |
| | Type | Partipation to UJICY Symposium & Conducting a seminar (2023) | | |
| | Name of Researcher | **N/A** | **0.0** | May-Jun; Mar; Sep (Cancelled) |
| | Area of Research | | | |
| | Name of Institute | **Nagoya University** | | |
| | Position | Professor | | |
| | Type | Seminar and discussion of Joint Research (2023) | | |
| | Name of Researcher | **Dr. Hajime Wagata** | **0.0** | May-Jun; Nov (Online participation to Conference due to schedule) |
| | Area of Research | Chemical | | |
| | Name of Institute | **Meiji University** | | |
| | Position | Special Teacher | | |
| | Type | Partipation to UJICY Symposium, Seminar, discussion of Joint Research | | |
| | Name of Researcher | **N/A** | **0.0** | Jun; May; Dec |
| | Area of Research | Industrial Collaboration | | |
| | Training Institute | | | |
| | Position | | | |
| | Type | Seminar for entrepreneurs & Startup | | |

| Input Man-Day by Year | | | FY2019 | | | | FY2020 | | | | FY2021 | | | | FY2022 | | | | FY2023 | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | I | II | III | IV | I | II | III | IV | I | II | III | IV | I | II | III | IV | I | II | III | IV |
| | Quarterly | | 0 | 0 | 15 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 15 | 5 | 0 | 0 | 10 | |
| | Annualy | **45.0** | 15 | | | | 0 | | | | 0 | | | | 20 | | | | 10 | | | |
| | | 45.0 | | | | | | | | | | | | | | | | | | | | |

**Attachment-7 of ANNEX-2: Dispatch Plan of Short-Term Expert to Uzbekistan under the Project for Strengthening Research Capacity of UJICY (JICA Project) 2 of 2**

As of July 31, 2023

**Expert Dispatched by Using External Fund （外部資金による派遣）**

| | | | INPUT (Man-Day) | FY2019 | | | | FY2020 | | | | FY2021 | | | | FY2022 | | | | FY2023 | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | I | II | III | IV | I | II | III | IV | I | II | III | IV | I | II | III | IV | I | II | III | IV |
| | | | | 2019 | | | | 2020 | | | | 2021 | | | | 2022 | | | | 2023 | | | 2024 |
| | | | | 4 5 6 7 8 9 10 11 12 | 1 2 3 | | | 4 5 6 7 8 9 10 11 12 | 1 2 3 | | | 4 5 6 7 8 9 10 11 12 | 1 2 3 | | | 4 5 6 7 8 9 10 11 12 | 1 2 3 | | | 4 5 6 7 8 9 10 11 12 | 1 2 3 | | |
| 1 | Name of Researcher | **Dr. Yuichi Sugai** | **15.0** | | | | | | | | | | | | Feb | | | | | | SATREPS (JST/JICA Fund) | | |
| | Area of Research | Earth Resources | | | | | | | | | | | | | | | | | | | Sep | Dec | |
| | Name of Institute | **Kyushu University** | | | | | | | | | | | | | | | | | | | | | |
| | Position | Professor | | | | | | | | | | | | | | | | | | | | | |
| | Fund Source | **JICA**:Research Project for Hydrogen/**SATREPS(JST/JICA)** | | | | | | | | | | | | | Other JICA Project (Energy-G) | | | | | | | SATREPS (JST Fund) | |
| | Type | Research, Seminar, Discussion on project | | | | | | | | | | | | | | | | | | | | | |
| 2 | Name of Researcher | **Dr. Hiroshige Matsumoto** | **10.0** | | | | | | | | | | | | | | Jun | | | | | Nov | |
| | Area of Research | Ploton Application | | | | | | | | | | | | | | | | | | | | | |
| | Name of Institute | **Kyushu University/I2CNER** | | | | | | | | | | | | | | | | | | | | | |
| | Position | Professor | | | | | | | | | | | | | | | | | | | | | |
| | Fund Source | **JICA**:Research Project for Hydrogen/**SATREPS(JST/JICA)** | | | | | | | | | | | | | | | Other JICA Project (Energy-G) | | | | | SATREPS (JST Fund) | |
| | Type | Research, Seminar, Discussion on project | | | | | | | | | | | | | | | | | | | | | |
| 3 | Name of Researcher | **Dr. Toshinori Matsushima** | **10.0** | | | | | | | | | | | | | | Jun | | | | | Nov | |
| | Area of Research | Perovzkite Solar Cell | | | | | | | | | | | | | | | | | | | | | |
| | Name of Institute | **Kyushu University/I2CNER** | | | | | | | | | | | | | | | | | | | | | |
| | Position | Associate Professor | | | | | | | | | | | | | | | | | | | | | |
| | Fund Source | **JICA**:Research Project for Hydrogen/**SATREPS(JST/JICA)** | | | | | | | | | | | | | | | Other JICA Project (Energy-G) | | | | | SATREPS (JST Fund) | |
| | Type | Research, Seminar, Discussion on project | | | | | | | | | | | | | | | | | | | | | |
| 4 | Name of Researcher | **Dr. Keiko Sasaki** | **5.0** | | | | | | | | | | | | | | | | | | | Sep | | |
| | Area of Research | Photocatalysis | | | | | | | | | | | | | | | | | | | | | |
| | Name of Institute | **Kyushu University** | | | | | | | | | | | | | | | | | | | | | |
| | Position | Professor | | | | | | | | | | | | | | | | | | | | | |
| | Fund Source | **SATREPS(JST/JICA)** | | | | | | | | | | | | | | | | | | | SATREPS (JST/JICA Fund) | | |
| | Type | Research, Seminar, Discussion on project | | | | | | | | | | | | | | | | | | | | | |
| 5 | Name of Researcher | **Dr. Hajime Miki** | **5.0** | | | | | | | | | | | | | | | | | | | Sep | | |
| | Area of Research | Mining | | | | | | | | | | | | | | | | | | | | | |
| | Name of Institute | **Kyushu University** | | | | | | | | | | | | | | | | | | | | | |
| | Position | Associate Professor | | | | | | | | | | | | | | | | | | | | | |
| | Fund Source | **SATREPS(JST/JICA)** | | | | | | | | | | | | | | | | | | | SATREPS (JST/JICA Fund) | | |
| | Type | Research, Seminar, Discussion on project | | | | | | | | | | | | | | | | | | | | | |
| 6 | Name of Researcher | **Dr.Atsushi Shibayama** | **15.0** | | | | | | | | | | | | | | | Sep | | | Feb | Sep | |
| | Area of Research | Natural Resources | | | | | | | | | | | | | | | | | | | | | |
| | Name of Institute | **Akita University** | | | | | | | | | | | | | | | | | | | | | |
| | Position | Professor | | | | | | | | | | | | | | | | | | | | | |
| | Fund Source | **Core-to-Core (JSPS)** | | | | | | | | | | | | | | | | | | | | (Visited with JSPS fund/Alternatively Dr.Sohib will visit Japan) | |
| | Type | Seminar and discussion, field survey for Joint Research | | | | | | | | | | | | | | | (Visited with JSPS fund) | | | (Visited with JSPS fund) | | | |
| 7 | Name of Researcher | **Dr.Hajime Ikeda** | **5.0** | | | | | | | | | | | | | | | | | | | Sep | | |
| | Area of Research | Natural Resources | | | | | | | | | | | | | | | | | | | | | |
| | Name of Institute | **Akita University** | | | | | | | | | | | | | | | | | | | | | |
| | Position | Assistant Professor | | | | | | | | | | | | | | | | | | | | | |
| | Fund Source | **Core-to-Core (JSPS)** | | | | | | | | | | | | | | | | | | | | (Visited with JSPS fund/Alternatively Dr.Sohib will visit Japan) | |
| | Type | International Seminar | | | | | | | | | | | | | | | | | | | | | |
| 8 | Name of Researcher | **Dr. Hikaru Fujii** | **5.0** | | | | | | | | | Apr-May | | | | | Aug | | | | | | |
| | Area of Research | Petroleum | | | | | | | | | | | | | | | | | | | | | |
| | Training Institute | **Akita University** | | | | | | | | | | | | | | | | | | | | | |
| | Position | Dean of Earth Science | | | | | | | | | | | | | | | | | | | | | |
| | Fund Source | **Own University** | | | | | | | | | | | | | | | | | | | | | |
| | Type | Disucssion on Joint Research Project & Scholarship | | | | | | | | | | | | | | | (Visited with Akita Univ Fund) | | | | | | |
| 9 | Name of Researcher | **Dr.Yasusgu Watanabe** | **5.0** | | | | | | | | | | | | | | | | | | | | |
| | Area of Research | Natural Resources | | | | | | | | | | | | | | | | | | | | | |
| | Name of Institute | **Akita University** | | | | | | | | | | | | | | | | | | | May | | Feb |
| | Position | Professor | | | | | | | | | | | | | | | | | | | | | |
| | Fund Source | **Own University** | | | | | | | | | | | | | | | | | | | | | |
| | Type | Seminar and discussion, field survey for Joint Research | | | | | | | | | | | | | | | | | | | (Visited with Akita Univ | | (Cancelled) |

| | | | | | | | | | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Input Man-Day by Year | Quarterly | | 0 | 0 | 15 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 5 | 10 | 10 | 0 | 5 | 5 | 25 | 15 | 0 | |
| | Annualy | **75.0** | 0 | | | | 0 | | | | 5 | | | | 25 | | | | 45 | | | | |

Attachment-8 of ANNEX-2:

**ROAD MAP**

**of scientific projects planned to be implemented in the Uzbekistan-Japan Youth Innovation Center**

| # | Activity | Implementation mechanisms | Expected result | Deadlines | Implementing agencies |
|---|---|---|---|---|---|
| **Energy Laboratory** | | | | | |
| 1 | Analyze the quality of ecological products used in the field of construction in recent years in accordance with the level of demand | 1. Study the requirements for ecological products used in the field of construction.<br>2. Conduct negotiations with manufacturers based on the results of the study.<br>3. Provide analysis services to manufacturers, which can be performed depending on the capabilities of the laboratory equipment available in the center. | A mechanism for analyzing the quality of ecological products used in the field of construction in accordance with the level of demand is introduced. | 2024-2026 | Center's Energy Laboratory, Ministry of Construction and Housing and Communal Services and private production sector |
| 2. | Develop inverting converters operating at a low frequency range of 0.5-1.5 kW | 1. Enter into the project implementation contract with the Center, Artel Group and Foton JSC.<br>2. Develop inverting converters operating in the low frequency range of 0.5-1.5 kW.<br>3. Introduce the developed inverting converters to industry. | When the power supply in the city network becomes unstable, a measure is developed to prevent the devices from turning off with the help of inverting converters. | 2024-2027 | Center's Energy Laboratory, Artel Group, Foton AJ, |
| 3. | Develop a solar panel cleaner to maintain the efficiency of solar panels in dusty climates. | 1. Conduct analysis of available solar panel cleaners.<br>2. Develop and introduce a cleaner to protect the solar panel surfaces from dust in the laboratory of the center. | In order to maintain the efficiency of solar panels despite seasonal climate changes, a solar panel cleaner is developed. | 2025-2028 | Center's Energy Laboratory, organizations that produce, maintain and operate solar panels |

| # | Activity | Implementation mechanisms | Expected result | Deadlines | Implementing agencies |
|---|---|---|---|---|---|
| 4. | Conduct synthesis of metal oxide photocatalyst materials and increase its photocatalytic activity through introduction of additional elements | 1. Study the need for mechanisms that work on solar energy.<br>2. Develop specific plans to conduct synthesis of photocatalyst nanomaterials and increase its photocatalytic activity based on available laboratory equipment and materials in the center.<br>3. Based on the research results, submit the development result to the Ministry of Energy of the Republic of Uzbekistan to introduce it into the hydrogen energy network. | Metal oxide photocatalyst, which is used for wastewater treatment and hydrogen gas extraction from water, is developed | 2025-2027 | Center's Energy Laboratory, Ministry of Energy of the Republic of Uzbekistan |
| 5. | Conduct synthesis of new perovskite materials, which are considered promising solar cells, and study their properties | 1. Using solar energy, extract new materials to generate electricity using perovskite-based nanomaterials<br>2. Based on the capabilities of the center, study the properties of perovskite nanomaterials development of specific plans for increasing efficiency.<br>3. Based on the research results, submit the development to the Ministry of Energy of the Republic of Uzbekistan to implement in hydrogen energy industry. | Compared to the materials used in the production of existing solar panels, perovskite materials are offered as a material with an efficiency ratio of 5% higher. | 2026-2028 | Center's Energy Laboratory, Kyushu University of Japan, Ministry of Energy of the Republic of Uzbekistan |
| 6. | Separate semiconductor nanoparticles using reverse micelles | 1. Obtain nano covers from powders synthesized in reverse micelles which could be used as catalysts and solar cell surfaces in future.<br>2. Show the advantages of the method of synthesis of reverse micelles, which | In order to develop materials with new properties, the technology of separation of semiconductor | 2024-2028 | Center's Energy Laboratory, Artel Group, Foton JSC. |

| # | Activity | Implementation mechanisms | Expected result | Deadlines | Implementing agencies |
|---|---|---|---|---|---|
| | | allows to control the size of the obtained nano covers.<br>3. Negotiate with the center, Artel Group and Foton JSC on the introduction of technology | nanoparticles using reverse micelles is created | | |
| 7. | Develop energy-efficient tile covers with reflective properties based on recycled scrap tires | 1. Create a technology for the production of energy-efficient floor coverings with reflective properties obtained through low-temperature processing of old truck tires.<br>2. Provide the developed technology for industrial production. | Introduce a technology for producing energy-efficient floor coverings with reflective properties by processing expired, recycled tires. | 2025-2026 | Center's Energy Laboratory, Ministry of Construction and Housing and Communal Services and private production sector |
| 8. | Develop membrane through novel photocatalysis-Fenton ceramic technology in wastewater treatment | 1. Develop specific plans to create a multifunctional membrane for water treatment based on new high-tech requirements.<br>2. Develop a new technology using the existing laboratory equipment of the Center and generate cleaning membrane.<br>3. Negotiate on the introduction of the developed cleaning membrane in wastewater treatment facilities | Due to the chemical reaction during the operation of the wastewater treatment plant, a membrane with a self-cleaning feature is developed. | 2026-2028 | Center's Energy Laboratory, Cold water sensors and membrane installation sector |
| 9. | Develop window filters based on liquid mixture of dry filters in order to avoid dusty air | 1. Analyze methods of development of new types of filters for air purification<br>2. Conduct an analysis of the air pollution level by region.<br>3. Develop a list of enterprises and organizations that require control of air quality. | As a result of environmental problems (air pollution) in the region, a protective device based on a combination of liquid mixture of dry filters is introduced for organizations which have to comply with the | 2026-2028 | Center's Energy Laboratory, Ministry of Health, Ministry of Ecology, Environmental Protection and Climate Change of the Republic of Uzbekistan |

| # | Activity | Implementation mechanisms | Expected result | Deadlines | Implementing agencies |
|---|---|---|---|---|---|
| | | 4. Produce a membrane based on a liquid mixture of dry filters in the laboratory conditions of the center.<br>5. Negotiate on the introduction of the produced filters in the organizations that have the need for air quality control. | requirement of air quality control. | | |
| 10. | Create an optical device to detect residual elements (aluminum and copper) in rocks | 1. Develop a new type express method for the analysis of residual elements in rocks.<br>2. Test the developed device in industrial zones.<br>3. Negotiate with mining and metallurgical complexes on introduction of the developed device. | After processing the ores in the mines using a device that determines the percentage of elements in the waste, one can identify the useful amounts of aluminum and copper among the remaining residual elements. | 2026-2028 | Energy laboratory of the center, Navoi MMC Almalyk MMC |
| **Mechanical Engineering and Materials Science Laboratory** | | | | | |
| 11. | Based on 3D technology according to customer's sketches and drawings, develop the technology of preparation of details of the modular structure of prosthetics, select suitable materials and prepare test samples based on them | 1. Conduct negotiations on the technical tasks and execution procedure of the contract between the Center and Orthopedic Rehabilitation LLC and enter into a contract.<br>2. Conduct an analysis of the service life of prostheses in cooperation with the customer.<br>3. Develop an electronic model of a prosthesis using a 3D printer based on 3D technologies.<br>4. Determine the type and composition of material that meets the requirements for orthopedic prostheses. | Test samples of prosthetic parts are developed according to the customer's sketches and drawings, and their cost is ensured to be 20-24% lower than the existing prosthetic parts. | 2023-2025 | Center’s Laboratory of mechanical engineering and materials science, Orthopedic rehabilitation LLC |

| # | Activity | Implementation mechanisms | Expected result | Deadlines | Implementing agencies |
|---|---|---|---|---|---|
| | | 5. Create a program for the production of prostheses in a metalworking center.<br>6. Produce test samples of prosthetic details using a processing machine. | | | |
| 12. | Design and produce orthopedic prostheses from materials that meet technical requirements | 1. Conduct negotiations on the technical tasks and execution procedure of the contract between the Center and Orthopedic Rehabilitation LLC and enter into a contract.<br>2. Conduct an analysis of problems in orthopedic prosthesis materials in cooperation with the customer.<br>3. Determine the type and composition of material that meets the requirements for orthopedic prostheses.<br>4. Create a program for the production of prostheses in a metalworking center.<br>5. Produce prostheses at the processing machine. | It is ensured that the friction resistance of the developed prostheses is 7-8% higher than the existing prostheses | 2024-2026 | Center's Laboratory of mechanical engineering and materials science, Orthopedic rehabilitation LLC |
| 13. | Develop and implement new hinge mechanisms for orthopedic prostheses | 1. Conduct negotiations between the Center and Orthopedic Rehabilitation LLC and enter into a contract.<br>2. Conduct an analysis of the problems of hinge mechanisms in existing prostheses with the customer.<br>3. Develop an electronic model of a prosthesis based on 3D technology using a 3D printer.<br>4. Determine the type of material that meets the requirements for hinge mechanisms. | New hinge mechanisms with 10-12% higher friction resistance will be developed for orthopedic prostheses. | 2025-2027 | Center's Laboratory of mechanical engineering and materials science, Orthopedic rehabilitation LLC |

| # | Activity | Implementation mechanisms | Expected result | Deadlines | Implementing agencies |
|---|---|---|---|---|---|
| | | 5. Creating a program for the production of prostheses in a metalworking center.<br>6. Produce prostheses at the processing machine. | | | |
| 14. | Develop aluminum-based alloys with improved mechanical properties and apply them to production | 1. Conduct negotiations and with the Center, enterprises under Uzavtosanoat and Alutex company on the project implementation and enter into a contract.<br>2. Select modifiers that serve to increase the mechanical properties of aluminum alloys.<br>3. Develop the technology of introduction of modifiers for aluminum alloys based on the effect of temperature.<br>4. Based on the improvement of the regime of liquefaction of aluminum alloys, improve the technology of casting the modified alloy into the mold.<br>5. Based on adaptation of mechanical engineering details to the mechanical properties of the obtained alloy, introduce it to production. | Achieve the composition of aluminum alloys with improved mechanical properties through improvement of the microstructure of the alloy | 2025-2027 | Center's Laboratory of mechanical engineering and materials science, enterprises under Uzavtosanoat |
| 15. | Improve the design of the electric arc furnace for liquefaction of different brands of steel | 1. Conduct negotiations between the Center, foundry enterprises, Uzmetkombinat JSC and Navoi Machine Building Plant JSC on the project implementation and enter into a contract. | An energy-efficient design of an electric arc furnace will be developed | 2025-2027 | Center, Department of Metallurgy Technologies of Tashkent State Technical University |

| # | Activity | Implementation mechanisms | Expected result | Deadlines | Implementing agencies |
|---|---|---|---|---|---|
| | | 2. Produce steel ingot samples in an improved electric arc furnace and research their properties.<br>3. Conduct research on the adaptation of the improved electric arc furnace to the production enterprise. | | | |
| 16. | Develop the technology of liquefaction of non-ferrous alloys in electric slag furnace | 1. Conduct negotiations between the Center and Almalyk MMC JSC on the project implementation and enter into a contract.<br>2. Take ingot samples from copper and aluminum alloys in an electric slag furnace and research their properties.<br>3. Conduct research on the adaptation of the improved electric arc furnace to the production enterprise | Flux technology is developed for liquefaction of copper and aluminum alloys in an electric slag furnace | 2025-2027 | Center, Department of Metallurgy Technologies of Tashkent State Technical University |
| 17. | Improve gas furnace design for liquefaction of aluminum alloys | 1. Conduct negotiations between the Center and UzAvtoInzi JV the project implementation and enter into a contract.<br>2. Take ingot samples from copper and aluminum alloys in an improved gas furnace and research their properties.<br>3. Conduct research on the adaptation of the improved gas furnace to the production enterprise | A resource-efficient design of a gas furnace will be developed | 2025-2027 | Center, Department of Metallurgy Technologies of Tashkent State Technical University |
| 18. | Develop the technology of using lithium element to increase the fluidity and moldability of light alloys | 1. Conduct negotiations between the Center and the secondary non-ferrous alloys enterprise on the project implementation and enter into a contract. | A technology шқ developed that enables to increase the fluidity and molding properties of light alloys by 18-20% | 2026-2028 | Center, Department of Metallurgy Technologies of Tashkent State Technical University |

| # | Activity | Implementation mechanisms | Expected result | Deadlines | Implementing agencies |
|---|---|---|---|---|---|
| | | 2. Take ingot samples from aluminum alloys in an improved gas furnace and research their properties.<br>3. Conduct research on the adaptation of the improved gas furnace to the production enterprise. | | | |
| 19. | Develop the technology of using the tantalum element to increase the mechanical properties of non-ferrous alloys | 1. Conduct negotiations between the Center and the secondary non-ferrous alloys enterprise on the project implementation and enter into a contract.<br>2. Take ingot samples from aluminum alloys in an improved gas furnace and research their properties.<br>3. Conduct research on the adaptation of the improved gas furnace to the production enterprise. | A technology is developed that enabless to increase the mechanical properties of non-ferrous alloys by 12-14% | 2026-2028 | Center, Department of Metallurgy Technologies of Tashkent State Technical University |
| 20. | Develop the technology for processing metal waste in the form of fine dispersion | 1. Conduct negotiations between the Center and Uzmetkombinat JSC on the project implementation and enter into a contract.<br>2. Determie the properties of fine dispersed metal waste and research on the effect of temperature during thermal treatment.<br>3. Determine the level of resource efficiency achieved based on the technology developed in laboratory conditions.<br>4. Conduct industrial tests of the technology developed in the production conditions of | Resource efficiency will increase by 26-30% based on the introduction of the technology of processing metal waste in the form of dispersion. | 2027-2029 | Center, Department of Metallurgy Technologies of Tashkent State Technical University |

| # | Activity | Implementation mechanisms | Expected result | Deadlines | Implementing agencies |
|---|---|---|---|---|---|
| | | Uzmetkombinat JSC and conduct research on technology improvement. | | | |
| 21. | Develop the technology for producing forgings from St45 steel using an electric slag furnace. | 1. Conduct negotiations between the Center and Almalyk MMC JSC on the project implementation and enter into a contract.<br>2. Research in laboratory conditions the technology of producing forgings based on the liquefaction of St45 steel in an electric slag furnace.<br>3. Ensure energy efficiency in the production of forgings based on the technology developed in laboratory conditions.<br>4. Conduct industrial tests of the technology in production conditions at the central repair plant of Almalyk MMC JSC and improve the technology.<br>5. Introduce the technology to the production conditions at the central repair plant of Almalyk MMC JSC. | Energy saving is achieved by 18-20% in the production of forgings from St45 steel using an electric slag furnace. | 2026-2028 | Center, Department of Metallurgy Technologies of Tashkent State Technical University |
| 22. | Develop the technology for increasing the malleable viscosity and friction resistance of white cast iron | 1. Conduct negotiations between the Center and Navoi Machine-Building Plant JSC on the project implementation and enter into a contract.<br>2. Improve the technology of making ingots from white cast iron in laboratory conditions and research the properties of the obtained ingots.<br>3. Conduct research on the adaptation of the technology of increasing the | The technology of increasing malleable viscosity and friction resistance of white cast iron is developed | 2026-2028 | Center, Department of Metallurgy Technologies of Tashkent State Technical University |

| # | Activity | Implementation mechanisms | Expected result | Deadlines | Implementing agencies |
|---|---|---|---|---|---|
| | | malleable viscosity and friction resistance of white cast iron to the production enterprise. | | | |
| **Mining and Deep Processing of Mineral Resources Laboratory** | | | | | |
| 23. | Develop an improved prototype of the flotation machine used in the flotation process | 1. Conduct negotiations between the Center, Almalyk MMC, Navoi MMC and private metallurgy enterprises and enter into contracts.<br>2. Develop an improved prototype of the flotation machine used in the flotation process.<br>3. Improve the quality of extraction of precious metal beneficiation in production enterprises with the help of an improved flotation machine. | The technology of beneficiation of copper and precious metals from polymetallic ores by flotation method | 2024-2025 | Center's Laboratory of mining work and deep processing of mineral raw materials, Almalyk MMC, Navoi MMC |
| 24. | Determine thermodynamic properties of liquid metal solutions. | 1. Conduct negotiations on the purchase of software and technology invented by scientists of the Institute of Iron and Steel Technology, Freiberg Mining Academy (Germany).<br>2. As a result of the negotiations, purchase the special software and created technology of the Institute of Iron and Steel Technology, Freiberg Mining Academy.<br>3. Establish cooperation with primary and secondary metallurgical industry, enterprises specialized in smelting various types of metal products. | Improve the quality level of the final product obtained in the primary and secondary metallurgical industry, various metal alloy smelting enterprises | Permanent | Center's Laboratory of mining work and deep processing of mineral raw materials |
| 25. | Improve the technology of flotation of copper and rare metals from polymetallic ores of | 1. Study the mineralogical composition and technological properties (physical and chemical properties, granulometric | The technology of beneficiation of copper and rare metals from | 2024-2026 | Center's Laboratory of mining work and deep processing of mineral |

| # | Activity | Implementation mechanisms | Expected result | Deadlines | Implementing agencies |
|---|---|---|---|---|---|
| | "Kalmakkyr" and "Yoshlik" deposits | composition) of polymetallic ores of "Kalmakkyr" and "Yoshlik" deposits through modern analysis.<br>2. Use electrochemical methods to increase the activity of reagents used in the flotation process.<br>3. Study the stages of formation and growth of heterogeneous gas nuclei during flotation.<br>4. Study the growth mechanisms of a group of small-particle bubbles during the interphase.<br>5. Determine the limit of exposure to minerals considered to be the concentrator of gold-bearing compounds by electrochemical treatment of PBX collecting reagent.<br>6. As a result of research, create an improved technology in beneficiation of porphyry copper ores by flotation.<br>7. Enter into a contract with Almalyk MMC JSC in order to introduce the developed technology into the industry. | polymetallic ores by flotation in Almalyk MMC JSC is improved. | | raw materials, Almalyk MMC JSC |
| 26. | Create the technology of obtaining an iron-based alloy from copper slag | 1. Study the structure and physical-chemical properties of copper production slag.<br>2. Study thermodynamic properties of slag formation<br>3. Study the reduction process of metal compounds in slag using CO gas. | Copper smelting slags can be processed by carbothermic method to obtain copper- and iron-based alloys. The waste product generated as a result of processing is applied to the building | 2024-2026 | Center’s Laboratory of mining work and deep processing of mineral raw materials, Almalyk MMC JSC |

| # | Activity | Implementation mechanisms | Expected result | Deadlines | Implementing agencies |
|---|---|---|---|---|---|
| | | 4. Reduce iron-based compounds in copper slag using local carbon-containing fuels.<br>5. Develop the technology of obtaining alloys containing iron and copper using carbothermal reduction process.<br>6. Enter into a contract with Almalyk MMC JSC in order to introduce the developed technology into the industry. | materials production industry. | | |
| 27. | Develop the processing technology for zinc-retaining steel smelting powders | 1. Conduct physical and chemical analysis of man-made dusts generated in steel smelting enterprises.<br>2. Develop the technology of vaporization of zinc oxide through carbothermic reduction<br>3. Develop the technology of reduction of the product separated from zinc oxide using carbon.<br>4. Enter into a contract with JSC Uzmetkombinat JSC in order to introduce the developed technology into the industry. | Zinc oxide and iron-based compounds are obtained, which are used in the production of various bulk products. | 2025-2026 | Center's Laboratory of mining work and deep processing of mineral raw materials, Uzmetkombinat JSC |
| 28. | Develop the technology of using waste car tires as a metal reducer | 1. Research the process of reduction of magnetite obtained from copper smelting with car tires.<br>2. Research the processes of reduction of man-made waste obtained from steel smelting with car tires.<br>3. Develop the optimal composition analyzing the reduction results.<br>4. Enter into contracts with Almalyk MMC JSC and Uzmetkombinat JSC in | Reduced raw materials used in copper and steel smelting metallurgy are created. | 2026-2027 | Center's Laboratory of mining work and deep processing of mineral raw materials, Almalyk MMC JSC, Uzmetkombinat JSC |

| # | Activity | Implementation mechanisms | Expected result | Deadlines | Implementing agencies |
|---|---|---|---|---|---|
| | | order to introduce the developed technology into the industry. | | | |
| 29. | Develop the technology for increasing the service life of refractory bricks of melting furnaces used in copper metallurgy | 1. Conduct analysis of the service life of refractory bricks used in copper smelting.<br>2. Select a copper converting furnace as a research object.<br>3. Develop the technology of creating a protective screen on the inner surface of the converting furnace.<br>4. Enter into a contract with Almalyk MMC JSC in order to introduce the developed technology into the industry. | High efficiency is achieved by increasing the service life of refractory bricks used in non-ferrous metallurgy. | 2025-2027 | Center's Laboratory of mining work and deep processing of mineral raw materials, Almalyk MMC JSC |
| 30. | Develop the technology for obtaining iron-based alloys from ores of Tebinbulak iron ore deposit | 1. Beneficiatiate ores from Tebinbulok deposit by preliminary beneficiation.<br>2. Smelt the resulting beneficiation in carbon dioxide.<br>3. Creaty special alloy production technology containing titanium and vanadium.<br>4. Enter into a contract with Uzmetkombinat JSC in order to introduce the created technology into the industry. | A base of primary non-ferrous metal raw materials will be created for the production of steel and cast iron products | 2025-2027 | Center's Laboratory of mining work and deep processing of mineral raw materials, Almalyk MMC JSC, Uzmetkombinat JSC |
| 31. | Improve the technology of beneficiation of gold-bearing sulphide ores by flotation | 1. Conduct analysis of technology of beneficiation of gold-bearing sulphide ores by flotation.<br>2. Take samples from deposits belonging to Navoiy MMC JSC and study beneficiation by flotation based on traditional and proposed technologies. | The degree of extraction of gold from gold-bearing sulphide ores is increased | 2025-2027 | Center's Laboratory of mining work and deep processing of mineral raw materials, Navoi MMC JSC |

| # | Activity | Implementation mechanisms | Expected result | Deadlines | Implementing agencies |
|---|---|---|---|---|---|
| | | 3. Analyzing the obtained results, develop optimal indicators of flotation.<br>4. Enter into contracts with Navoi MMC JSC in order to introduce the developed technology to industry. | | | |
| 32. | Create a technology for processing of metal slag generated during production of steel ingots | 1. Conduct physical and chemical tests and research of metal slag formed generated during production of steel ingots from various metal smelting enterprises.<br>2. Conduct various experiments with carbothermal reduction.<br>3. Develop optimal compositions as a result of research.<br>4. Enter into a contract with Uzmetkombinat JSC in order to introduce the developed technology to industry. | Additional oxide metal raw materials are created for steel smelting. | 2025-2027 | Center's Laboratory of mining work and deep processing of mineral raw materials, Uzmetkambinat JSC |
| **Chemical and Petrochemical Laboratory** | | | | | |
| 33. | Develop reagent-saving technology to reduce harmful environmental impact during gold extraction | 1. Compile economic contracts with Navoi MMC in the prescribed manner.<br>2. Implement technologies and innovative developments in economic entities in accordance with the contract | The sorption treatment of gold in bio-cake reduces the consumption of sodium cyanide and avoids the negative impact on the environment. | 2024-2025 | Center's Chemical laboratory, Navoi MMC |
| 34. | Conduct physical and chemical tests for archeological research | Establish permanent cooperation with the Cultural Heritage Agency of the Republic of Uzbekistan. | Establish and improvy the quality of spectral and microscopic studies for archaeological research | 2024-2025 | Center's Chemical laboratory, Cultural Heritage Agency of the Republic of Uzbekistan |
| 35. | Create a method for cleaning textile wastewater with modified natural mineral | 1. Study the requirements for dyes used in textile industry. | A mechanism for analyzing the quality of used dyes in textile enterprises in | 2024-2027 | Center's Chemical laboratory, textile industry enterprises |

| # | Activity | Implementation mechanisms | Expected result | Deadlines | Implementing agencies |
|---|---|---|---|---|---|
| | photocatalysts under the influence of visible light | 2. Study the negative impact of used dyes on the environment, especially on water.<br>3. Conduct negotiations with manufacturers based on the study results.<br>4. Obtaining highly efficient photocatalysts as a non-conventional energy source in addressing the environmental problem of textile wastewater treatment | accordance with the level of demand will be introduced, and highly efficient photocatalysts will be generated to address the environmental problem of textile wastewater treatment | | |
| 36. | Develop a method for determining the amount of metals in oil products and fuel oil | 1. Conduct negotiations between the Center, Ministry of Energy, Bukhara and Mubarak Oil refineries and enter into contracts.<br>2. Develop a method for determining the amount of metals in oil products and fuel oil.<br>3. Determine the amount of metal in related enterprises using the developed method. | A quick, accurate method for determining the amount of metals in oil products and fuel oil is developed. | 2024-2025 | Center's Chemical laboratory, Ministry of Energy, Bukhara Oil refinery, Mubarak Oil refinery |
| 37. | Create fluorescent composite materials for road pavements | 1. Conduct negotiations between the Center and the Ministry of Transport and enter into contracts.<br>2. Implement the technologies and developments in economic entities in accordance with the contract. | Fluorescent composite materials that glow in the dark are created for road pavements | 2024-2026 | Center's Chemical laboratory, Ministry of Transport |
| 38. | Create a methodology for determining the concentration of flotation reagents used in the flotation process using an ion-selective electrode | 1. Enter into economic contracts with Navoi MMC in the prescribed manner.<br>2. Implement the technologies and innovative developments in economic | Concentration control of the potassium butyl xanthate flotation reagent used in the flotation process leading to major | 2024-2025 | Center's Chemical laboratory, Navoi MMC |

| # | Activity | Implementation mechanisms | Expected result | Deadlines | Implementing agencies |
|---|---|---|---|---|---|
| | | entities in accordance with the contract. | element extraction is improved. | | |
| 39. | Study physical and chemical characteristics of small volatile particles (TSP, PM10, PM2.5) in the air and its sources using ancient and modern methods | 1. Establish cooperation between the Center and Scientific Research Institute of Environment and Nature Protection Technologies<br>and involve specialists from both sides.<br>2. Develop joint projects in cooperation with the employees of the Institute of Environment and Nature Protection Technologies.<br>3. Purchase necessary equipment at the expense of the project in order to strengthen the material and technical base of the center.<br>4. Organize short and long-term training and education for young researchers in Japan.<br>5. Organize seminars and workshops with Keio University.<br>6. Use the capabilities of Keio University's laboratories and attract its experts. | Strong ties will be established between the center, the Research Institute of Environment and Nature Protection Technologies, and Keio University. The material and technical base of the center will be strengthened. In Uzbekistan, the physical and chemical properties and sources of small volatile particles (TSP, PM10, PM2.5) in the air are studied using advanced and modern methods, and recommendations for their reduction are developed. | 2024-2027 | Center's Chemical laboratory, Research Institute of Environmental and Nature Conservation Technologies, Keio University, Ministry of Ecology, Environmental Protection and Climate Change |
| 40. | Develop efficient and inexpensive sample collection devices to analyze PM2.5 toxicity in arid climates | 1. Establish cooperation between the Center and the Research Institute of Environment and Nature Protection and attract experts from both sides.<br>2. Purchase necessary equipment at the expense of the project in order to strengthen the material and technical base of the center. | Strong ties will be established between the Center, Institute of Environment and Nature Conservation Technology, and Keio University. The material and technical base of the center will be strengthened. An efficient | 2023-2027 | Center's Chemical laboratory, Research Institute of Environmental and Nature Conservation Technologies, Keio University, Ministry of Ecology, Environmental |

| # | Activity | Implementation mechanisms | Expected result | Deadlines | Implementing agencies |
|---|---|---|---|---|---|
| | | 3. Organize short and long-term training and education for researchers in Japan.<br>4. Organize seminars and workshops with Keio University.<br>5. Use the possibilities of Keio University's laboratories and attract its specialists. | and inexpensive sample collection device will be developed to analyze PM2.5 toxicity in arid climates. | | Protection and Climate Change |
| 41. | Develop a device and system for real-time monitoring of the chemical composition of small volatile particles (TSP, PM10, PM 2.5) in the air | 1. Study the chemical composition of small volatile particles in the air in real time with the help of modern equipment in the Center, with the involvement of specialists of the Scientific Research Institute of Environmental and Nature Protection Technologies.<br>2. Develop a device for monitoring the chemical composition of small volatile particles in the air.<br>3. Submit an application for a patent for the created device.<br>4. Introduce the created device. | A device and system for real-time monitoring of the chemical composition of small volatile particles (TSP, PM 10, PM2.5) in the air will be developed. | 2024-2027 | Center's Chemical laboratory, Research Institute of Environmental and Nature Protection Technologies, Keio University, Ministry of Ecology, Environmental Protection and Climate Change |
| 42. | Determine the spectroscopic sizes of rare metals, hard alloys and powdery materials | 1. Enter into economic contracts with Almalyk MCC in the prescribed manner.<br>2. In accordance with the contract, conduct analysis of rare metals, hard alloys and powdery materials based on the capabilities of laboratory equipment available in the Center. | A mechanism for analyzing the quality of rare metals, hard alloys and powdery materials produced by Olmaliq KMK in accordance with the level of demand will be introduced. | 2024-2026 | Center's Chemical laboratory, Almalyk MMC |
| | **As part of the SATREPS project** | | | | |

| # | Activity | Implementation mechanisms | Expected result | Deadlines | Implementing agencies |
|---|---|---|---|---|---|
| 43. | Develop the technology for underground production of hydrogen | 1. Strengthen the material and technical base of the Center with the equipment provided as part of the project.<br>2. Organize short and long-term training and education for young researchers in Japan.<br>3. Organize seminars and workshops with Kyushu University.<br>4. Implement modern Japanese technologies and innovative developments. | Development of technology for underground (in-situ) production of hydrogen in oil wells of Uzbekistan operation of which has been completed | 2024-2029 | Center's Chemical laboratory, Ministry of Energy of the Republic of Uzbekistan, Uzbekneftegaz JSC, JICA |
| 44. | Developan energy-efficient method for hydrogen production by steam electrolysis | 1. Strengthen the material and technical base of the Center with the equipment provided as part of the project.<br>2. Organize short and long-term training and education for young researchers in Japan.<br>3. Organize seminars and workshops with Kyushu University.<br>4. Implement modern Japanese technologies and innovative developments. | A method for hydrogen production by steam electrolysis using proton-transferring oxides is developed | 2024-2029 | Center's Chemical laboratory, Ministry of Energy of the Republic of Uzbekistan, Uzbekneftegaz JSC, JICA |
| 45. | Develop green hydrogen production technology using perovskite solar panels | 1. Strengthen the material and technical base of the Center with the equipment provided as part of the project.<br>2. Organize short and long-term training and education for young researchers in Japan. | The stability of perovskite panels is controlled to create a green hydrogen production device. | 2024-2029 | Center's Chemical laboratory, Ministry of Energy of the Republic of Uzbekistan, Uzbekneftegaz JSC, JICA |

| # | Activity | Implementation mechanisms | Expected result | Deadlines | Implementing agencies |
|---|---|---|---|---|---|
| | | 3. Organize seminars and workshops with Kyushu University and ICNER.<br>4. Implement modern Japanese technologies and innovative developments. | | | |
| 46. | Develop photocatalytic hydrogen production technology using metallurgical waste | 1. Strengthen the material and technical base of the center with the equipment provided in the framework of the project.<br>2. Organize short and long-term training and education for young researchers in Japan.<br>3. Organize seminars and workshops with Kyushu University.<br>4. Implement modern Japanese technologies and innovative developments. | A technology for hydrogen production from water will be developed using photocatalysts obtained on the basis of metallurgical slags in Uzbekistan. | 2024-2029 | Center's Chemical laboratory, Ministry of Energy of the Republic of Uzbekistan, Uzbekneftegaz JSC, JICA |

Attachment-9 of ANNEX-2:

# PROJECT BASELINE SURVEY

**For**

**The Project for Strengthening the Capacity of Research Activities of Uzbek-Japan Innovation Center for Youth**

September 2019

by

Uzbek-Japan Innovation Center for Youth

| Rev | Date | Approved | checked | Prepared |
|---|---|---|---|---|
| 0.0 | 2019/9/9 | | | Y.Yanagida |

## TABLE OF CONTENTS


1. Preface ..... 3
   1.1 Background of Project ..... 3
   1.2 Purpose of Project Baseline Survey ..... 3
2. Subject of Survey and Method ..... 4
   2.1 Subject of Survey ..... 4
   2.2 Method and Criteria ..... 4
3. Conclusion ..... 5
   3.1 Result of Survey ..... 5
   3.2 Definition of Baseline Value ..... 6
   3.3 Conclusive Note ..... 6

# 1. Preface

## 1.1 Background of Project

The project for strengthening the capacity of research activities of Uzbek-Japan Innovation Center of Youth (hereinafter referred to as “the Project”) was incepted from December 11, 2018, on which the Record of Discussion (hereinafter referred to as “R/D”) was signed by Ministry of Higher and Secondary Specialized Education of the Republic of Uzbekistan and Japan International Cooperation Agent (hereinafter referred to as “JICA”), and the Project will be finished in March 2024.

This Project intends to strengthen the capacity of researchers at the Uzbek-Japan Innovation Center for Youth (hereinafter referred to as “the Center”) to conduct research activities and to achieve its overall goal that the Center conducts frontier research for industrial development of Uzbekistan with stronger linkage with industries and Japanese researchers.

## 1.2 Purpose of Project Baseline Survey

The effect of the Project shall be measured in accordance with “Objectively Verifiable Indicators” which set in Project Design Matrix (PDM) agreed as part of R/D and attached as Annex 2.

Some indicators required to show such effect quantitively and visually by the change of parameters at the start-point of the Project and the ones at the end-point of the Project.
Therefore, at the very beginning of the Project, the quantity at the start-point of the Project shall be measured and set as “baseline”. This survey has been conducted for this purpose.

The date of inception of the Project as the start-point (hereinafter referred to as “Date of Inception”) shall be set as December 11, 2018, on which the R/D was signed by both concerned parties.

## 2. Subject of Survey and Method

### 2.1 Subject of Survey

In accordance with the agreed PDM, the baseline survey is required to the following indicators;

(1) Project Purpose 2. : “Number of research projects increases”

(2) Output 2-2: “Number of collaborative activities with Japanese universities increases”

### 2.2 Method and Criteria

Survey was based on the information on a preliminary survey conducted by JICA in September 2018, and though the survey, the information has been updated and evaluated through an interview with Dr. Khaltursunov Erkin, Director of the Center. The interview was done on September 9, 2019 by Mr. Yukinori Yanagida, JICA Expert for Project Management.

The criteria, for judging whether each research/collaborative activities conducted by the Center’s researchers at the Date of Inception can be treated as the activities of the Center, are set as follows;

a) For “Research Projects”:
   (1) The project should be on-going at December 11, 2018
   (2) Fund of project should be allocated to the Center, directly or jointly
   (3) The project should be conducted at the premises of the Center or at other institutes under the leadership of the Center

b) For “Collaborative Activities with Japanese University”:
   (1) The project should be on-going at December 11, 2018
   (2) The activities should be done with Japanese universities, institutes and other entities in line with the purpose of the Center’s establishment
   (3) The activities should contribute to development, enhancement or strengthening of research capability of the Center

## 3. Conclusion

3.1 Result of Survey

(1) Research Projects:

As shown in Attachment-1, several research activities were conducted by researchers of the Center at the Date of Inception, however, in light of the criteria described in the above 2.2 a), the followings only are considered as the Center's research projects conducted under its initiative;

**Chemistry & Petrochemical Lab**

1. *"Solid-phase impregnated N,O,P,S-organic reagents polymeric sorbents for the complex extraction of valuable components from the waste of hydrometallurgical processing of Navoi Mining and Metallurgical Company (NMMC)",* 2018-2020 funded by MID(*)
2. *"Patterns and structural features in the modeling of nano porous activated coals with specified properties for directional production of sorption materials"*, 2018-2019 funded by MID(*)

*(*) MID: Ministry of Innovative Development*

Other projects are not considered as the Center's projects due to the following reasons;

Power Engineering Lab: there was one (1) project which the Center's researcher were involved as Project Leader. However, the owner of the project was Academy of Science and the budget was also distributed to the Academy and executed at their premises.

Mechanical Engineering & Material Science: three (3) projects were conducted at the Center as preliminary stage for acquiring research fund from outside, so that these projects had not been granted any official fund.

Mining Lab: no project was conducted at the time.

(2) Collaborative activities with Japanese universities;

No actual collaborative activities with Japanese entities were conducted at the Date of Inception although dialogue for future plan was continued with certain universities.

3.2 Definition of Baseline Value

| | No. of research project being under execution at the Date of Inception | No. of collaborative activities with Japanese universities being under execution at the Date of Inception |
|---|---|---|
| Baseline Value | **2** | **0** |

3.3 Conclusive Note

The baseline numbers indicated in the above 3.2 is shown the fact that the Center had been conducted research activities however due to the delay of set-up of its facilities, most of activities were jointly conducted with and at other institutes. The Project shall increase capacity of the Center to conduct research activities at and under the initiative of the Center itself.

As for collaborative activities with Japanese university, the Center has maintained good collaboration relations with several Japanese universities and discussion with these universities have been still going on. However, such discussions were pre-matured at the Date of Inception and no real activity was recorded at this baseline survey. Currently, several seminars have already been held by visiting Japanese professors and 6 researchers will be dispatched from the Center to Japanese universities for master/doctorate courses. These activities have been acknowledged as “increase” from the baseline.

XXXXX

**Attachment-1**

## List of Projects conducted by UJICY researchers as at December 11, 2018 (for Basline Survey)

| Information from Preleiminary Reseach Report of September 2018 | | | | | | | |
|---|---|---|---|---|---|---|---|
| | **Project Name** | **Duration** | **Partners** | **Premises** | **Fund** | **Status** | **Evaluation** |
| ***Mechanical Engineering & Material Sciences*** | | | | | | | |
| 1 | Development of 3D printers on the basis of novel kinematic diagram | 2018-?? | TSTU, Priv. companies | UJICY | n/a | Not officially funded | No |
| 2 | Development of remotely controlled unmanned aerial vehicle | 2018-?? | TSTU | UJICY | n/a | Not officially funded | No |
| 3 | Development of technology of alloying of high-temperature aluminum alloys | 2018-?? | TSTU,Harbin Eng.Inst(China), Penza State Tech.Univ (Russia), Priv.Companies | UJICY | n/a | Not officially funded | No |
| | | | | | | | |
| ***Power Engineering*** | | | | | | | |
| 1 | Heteroatoms in natural compounds: intermolecular interaction receptor recognition, pharmacophore | 2017-2020 | Academy of Science (Project Owner) | Academy of Science | MID | Project of Academy | No |
| | | | | | | | |
| ***Chemistry & Petrochemical*** | | | | | | | |
| 1 | Design of metal sulfide materials for photocatalytic purification of water and air against organic pollutants (Design of nanomaterials based on bismuth tungstates for photocatalysts in visible light) | 2017-2018 | Inst. of General & Inorganic Chemistry, SE Fan va Tarakkiyot, National Univ. of Uzbekistan, Inst. of Bioinorganic Chemistry, Center of Advanced Tech, Tashkent Chemical Tech.Inst., Nagoya Univ., Tokyo Inst of Tech. | Partially at UJICY | MID | Completed before D.O.I. | No |
| 2 | Development of biologically active metal coordination compounds with the carboline alkaloids from alkalids from Peganum Harmala | 2017-2018 | Inst. of General & Inorganic Chemistry, SE Fan va Tarakkiyot, National Univ. of Uzbekistan, Inst. of Bioinorganic Chemistry, Tashkent Chemical Tech.Inst.,Tashkent Pharmaceutical Inst. | Partially at UJICY | MID | Completed before D.O.I. | No |
| 3 | Solid-phase impregnated N,O,P,S-organic reagents polymeric sorbents for the complex extraction of valuable components from the waste of hydrometallurgical processing of Navoi Mining and Metallurgical Company (NMMC) | 2018-2020 | Navoi Mining & Metallurgical Co., Tashkent Chemical Tech.Inst., Inst. of Geology and Geophysics, Center of Afvanced Tech. | Partially at UJICY | MID | | **YES** |
| 4 | Patterns and structural features in the modeling of nano porous activated coals with specified properties for directional production of sorption materials | 2018-2019 | TSUT, Uzbek Oil & Gas Co. | Partially at UJICY | MID | | **YES** |
| | | | | | | | |
| **Mining and Deep Processing of Mineral Resources** | | | | | | | |
| | No Project Conducted | n/a | n/a | n/a | n/a | | n/a |
| | | | | | | | |

# ANNEX-2

# PROJECT ENDLINE SURVEY

**For**

**The Project for Strengthening the Capacity of Research Activities of Uzbek-Japan Innovation Center for Youth**

January 2024

by

Uzbek-Japan Innovation Center for Youth

| Rev | Date | Approved | checked | Prepared |
|---|---|---|---|---|
| 0.0 | 2024/01/08 | | | Y.Yanagida |
| 1.0 | 2024/02/22 | | | Y.Yanagida |

## TABLE OF CONTENTS


**1. Preface ..... 3**

1.1 Background of Project ..... 3

1.2 Purpose of Project Endline Survey ..... 3

**2. Subject of Survey and Method ..... 4**

2.1 Subject of Survey ..... 4

2.2 Applied Method ..... 4

**3. Survey Results based on Project Achievements (Method-A) ..... 5**

3.1 Number of Research Projects / Activities ..... 5

3.2 Number of Journal/Conference Publications ..... 5

3.3 Percentage of researchers who studied at Japanese universities and acquired higher degrees ..... 6

3.4 Number of collaborative activities with Japanese universities ..... 6

3.5 Number of MOU concluded with Japanese Universities ..... 6

**4. Survey Results based on Questionnaire (Method-B) ..... 7**

4.1 Outline of Questionnaire Survey ..... 7

4.2 Survey Target ..... 8

4.3 Survey Results ..... 8

**5. Conclusion – Endline Survey Results ..... 12**

5.1 Comparison with Baseline and Evaluation of achievement ..... 12

5.2 Conclusive Note ..... 12

# 1. Preface

## 1.1 Background of Project

The project for strengthening the capacity of research activities of Uzbek-Japan Innovation Center of Youth (hereinafter referred to as “the Project”) was incepted from December 11, 2018, on which the Record of Discussion (hereinafter referred to as “R/D”) was signed by Ministry of Higher and Secondary Specialized Education of the Republic of Uzbekistan and Japan International Cooperation Agent (hereinafter referred to as “JICA”), and the Project will be finished in March 2024.

This Project intends to strengthen the capacity of researchers at the Uzbek-Japan Innovation Center for Youth (hereinafter referred to as “the Center”) to conduct research activities and to achieve its overall goal that the Center conducts frontier research for industrial development of Uzbekistan with stronger linkage with industries and Japanese researchers.

## 1.2 Purpose of Project Endline Survey

The effect of the Project shall be measured in accordance with “Objectively Verifiable Indicators” which set in Project Design Matrix (PDM) agreed as part of R/D and attached as Annex 2.

The Project conducted Project Baseline Survey in September, 2019, just after the dispatch of a long-term expert to the Center. The result of the Baseline Survey is described in ANNEX-2 of Project Completion Report.

The purpose of Project Endline Survey is to prepare and exclude “objectively verifiable” information from the achievements of the Project at the endline of the Project. And then, in order to visualize the achievements objectively, this information shall be compared with the figures acquired through the baseline survey.

Although the date of termination of the Project is March 31, 2024, due to the requirement of closing date of Project Completion Report, the survey was conducted the data and information as of December 31, 2023, and made necessary assumption on the achievement from January 1, 2024 to March 31, 2024.

## 2. Subject of Survey and Method

### 2.1 Subject of Survey

In accordance with the applied PDM, the endline survey is required to the following indicators;

(1) Project Purpose

1. Percentage of researchers who satisfy the research management system of the Center;
2. Number of research projects;
3. Number of papers published by researchers;
4. Percentage of researchers who assess improvement of their research capacity;

(2) Output

1. 1-5 Number of Research activities;
2. 2-1 Percentage of researchers who studied at Japanese universities and acquired higher degrees;
3. 2-2 Number of collaborative activities with Japanese universities
4. 2-3 Number of MOU concluded with Japanese universities

### 2.2 Applied Method

Survey applied the following two (2) methods in accordance with the character of indicators;

**Method-A**: based on the record of input and achievements (shown in ”ANNEX-1 Results of the Project” of Project Completion Report)

**Method-B:** based on the feedback from researchers and staff of the Center acquired by questionnaire survey

Table-1 Applied Method of Survey by each indicator

| Indicators | Method to be applied |
|---|---|
| Percentage of researchers who satisfy the research management system of the Center | B |
| Number of research projects | A |
| Number of papers published by researchers | A |
| Percentage of researchers who assess improvement of their research capacity | B |
| Number of Research activities | A |
| Percentage of researchers who studied at Japanese universities and acquired higher degrees | A |
| Number of collaborative activities with Japanese universities | A |
| Number of MOU concluded with Japanese universities | A |

## 3. Survey Results based on Project Achievements (Method-A)

3.1 Number of Research Projects / Activities

(1) Competitive Research Fund Projects: **9 research projects,** which are worth **USD 4,371,000** in total, have been executed or are executed now. They include Japanese funded projects such as SATREPS (JICA/JST, JPY 500 million) and KAKENHI (JSPS, JPY 21 million). (*For details, refer to Table-6.A "List of Research Project", ANNEX-1 of Project Completion Report*)

(2) Contracted Research with Companies: **13 contracted projects**, which are worth **USD 305,500** in total, have been executed or are executed now. (*For details, refer to Table-6.B "List of Research Project", ANNEX-1 of Project Completion Report*)

(3) MIRAI Fund Projects**: 9 research projects**, which are worth **USD 109,015 (JPY 9.3 million)** in total, have been executed or are executed now. *(For details, refer to Table-5 "Results of MIRAI Fund", ANNEX-1 of Project Completion Report*)

Total **31 Research Projects (value of USD 4,785,000)** have been conducted or are on-going with fund at the endline of the Project.

3.2 Number of Journal/Conference Publications

Although UJICY is a small institute, it has been very actively producing high-impact scientific publications to international journals since its start. The following table shows the number of publications (only "high" or "medium" impact publications), by year and by kind:

| Year | International Journal | Domestic Journal | Books | International Conference |
|---|---|---|---|---|
| 2016 | 1 | | | |
| 2017 | 3 | | | |
| 2018 | 5 | 15 | 3 | 17 |
| 2019 | 6 | 15 | 1 | 10 |
| 2020 | 36 | 6 | 1 | 3 |
| 2021 | 9 | 7 | 1 | 5 |
| 2022 | 56 | 13 | 3 | |
| 2023 | 35 | 19 | 3 | |
| TOTAL | 151 | 75 | 12 | 35 |

Note: Average number of researchers (Man-Month base);

Before Project: 15.0 After Project: 12.9 (source: JICA Report (2018) and Employees list of UJICY(2020-2024) )

Before the Project started (before 2019), **44 publications (Ave.0.98**

**publications/year/researcher)** were made. This figure is treated as “Baseline”. After the Project started, **273 publications (Ave.4.37 publications/year/researcher)** have been made.

*For details, refer to Table-7 ”List of Scientific Publications”, ANNEX-1 of Project Completion Report.*

3.3 Percentage of researchers who studied at Japanese universities and acquired higher degrees

**77.78%** of researchers (trainees of Long-term Training Program) successfully acquired (will acquired within 2024) higher degree. Total 18 researchers participated to this program, and 13 researchers have been completed with degree and 1 researcher participated in doctor program at Yokohama National University will complete the program with Ph.D in September 2024 due to the recommendation from the supervisor**.** In total **14 researchers completed the program with degree**.

A researcher completed the Ph.D program at Tsukuba University without degree and is currently preparing doctor thesis in Uzbekistan under the supervision of a Japanese professor. However, it will be impossible to acquire degree within the Project period.

*For details, refer to Table-1”Results of Long-term Training Program”, ANNEX-1 of Project Completion Report.*

3.4 Number of collaborative activities with Japanese universities

Total **25 Japanese short-term experts (125 Man-Date)** were dispatched to the Center and **53 scientific outreaching events** (seminars, lectures, symposium etc.) were conducted during the Project period.

*For details, refer to Table-3 “Results of Dispatch of Short-term Experts” and Table-4 “Results of Scientific Outreach Events”, ANNEX-1 of Project Completion Report.*

3.5 Number of MOU concluded with Japanese Universities

Total **20 domestic/international MOUs** including **10 MOUs with Japanese Universities/Institutes** were concluded during the Project period.

*For details, refer to Table-8 “List of MOU with other Universities and Institutes”, ANNEX-1 of Project Completion Report.*

## 4. Survey Results based on Questionnaire (Method-B)

### 4.1 Outline of Questionnaire Survey

PDM has two (2) indicators in Project Purpose which require feedback from the Center;

- 80% of the researchers are satisfied with the research management system of the Center.
- 80% of the researchers assess that their research capacity was strengthened.

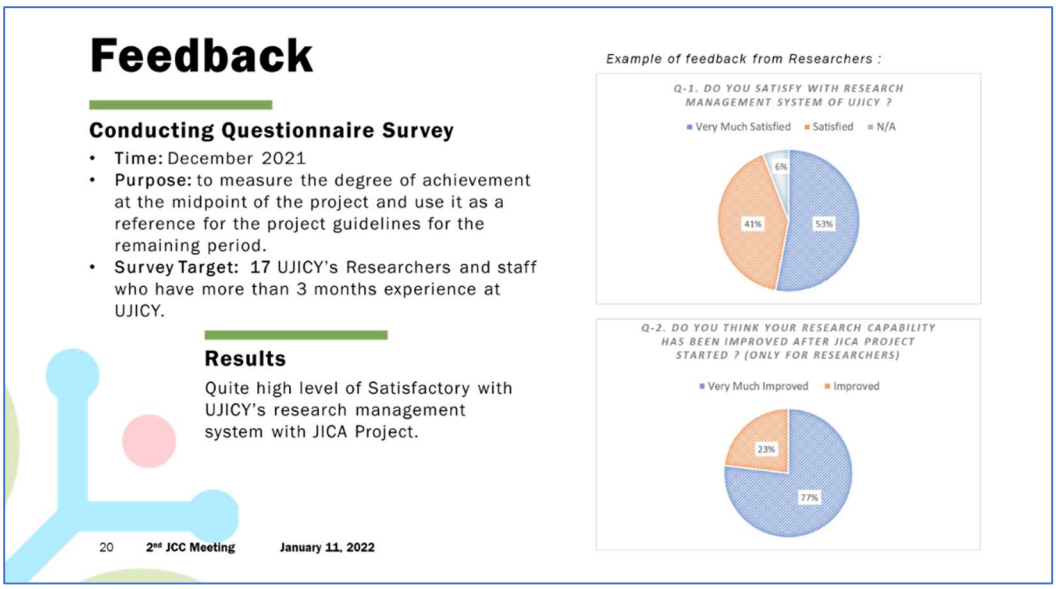
In order to monitor feedback from the Center, the Project has periodically conducted survey using the questionnaire as attachment-1. This questionnaire includes questions other than the above criteria for the purpose of collecting important information for implementation of the Project. The results were analyzed carefully by the Expert and shared with the management of the Counterpart as well as JICA by the reports as well as JCC meetings. *(see the example in next page)*

The surveys have been conducted three (3) times at the following points;

| | |
|---|---|
| Midpoint survey: | December 2021 |
| Supplemental survey (*) : | December 2022 |
| Endline survey: | December 2023 |

(*) Supplemental survey was conducted for collecting necessary information for design of Phase-II of the Project.

**Example: Report at 2nd JCC Meeting**



4.2 Survey Target

a) researchers and administrative staff who have been working at UJICY more than 3 months;

b) participants of long-term training program in Japan who are studying and have completed the program and returned to Uzbekistan ;

Total number of the target:

| **Total** | Male | Female |
|---|---|---|
| **31** | 24 | 7 |

Breakdown

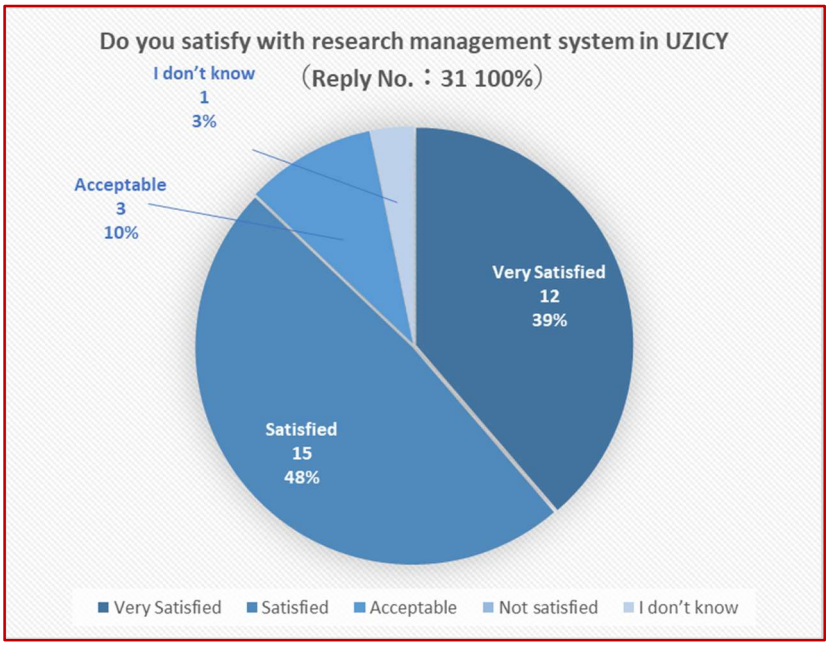
| Management | Administration | Senior Researcher | Junior Researcher | Lab Assistant | Students | Outside Institute |
|---|---|---|---|---|---|---|
| 3 | 7 | 4 | 4 | 5 | 7 | 1 |
| **Administrator** (*) | | **Research-oriented** (*) | | | | |
| **9 (29%)** | | **22 (71%)** | | | | |

*(*) Deputy Director for Research (Management) is counted as "Researcher"*

As of December 31, 2023, total number of survey target is 31, and the proportion of research-oriented personnel (researcher, student and other institute) is 71% and the one of Management and Administrator is 29%.

4.3 Survey Results

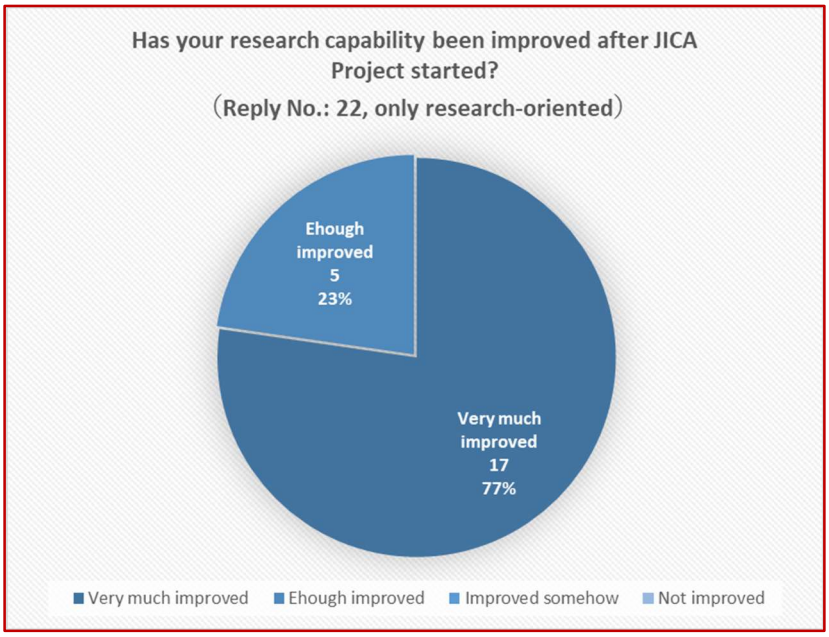
**Question-1**: Do you satisfy with research management system of UJICY ?



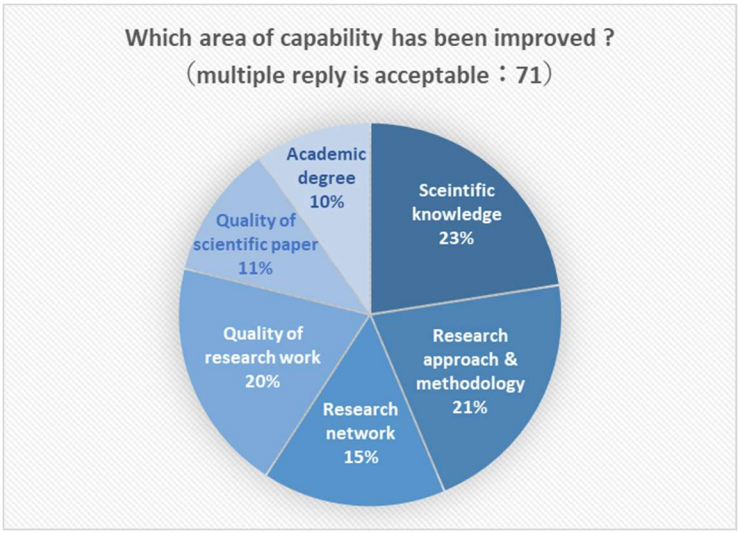
The result indicates that **87%** of staff are satisfied the current research management system of UJICY.

After follow-up research, the people who reply “Acceptable” are not satisfy with his current position or imbalance of allocation of equipment among labs, not the research management system itself.

**Question-2**: Has your research capability been improved after JICA Project Started ?

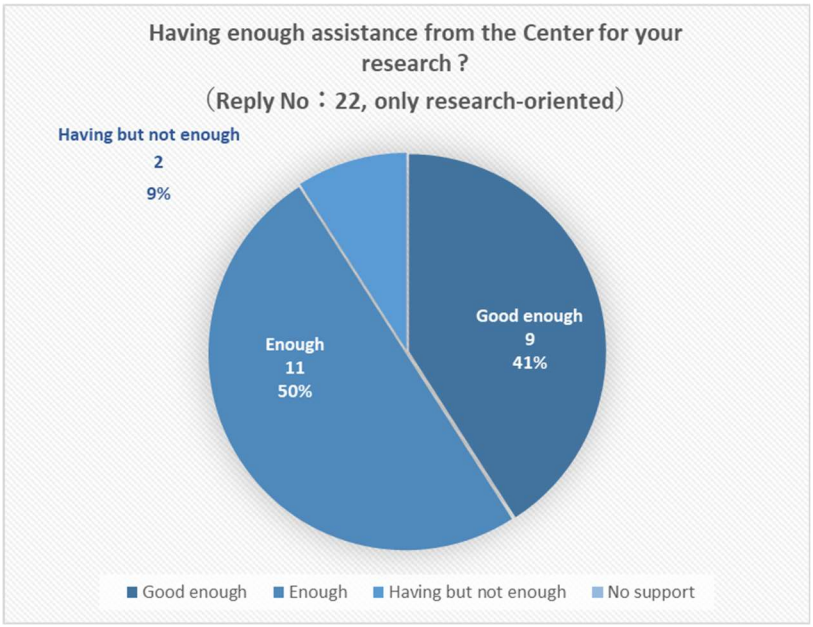



The result indicates that **100 %** of researchers access that their research capability has been improved. The following graph shows which areas of research capability have been improved (multiple reply is acceptable).



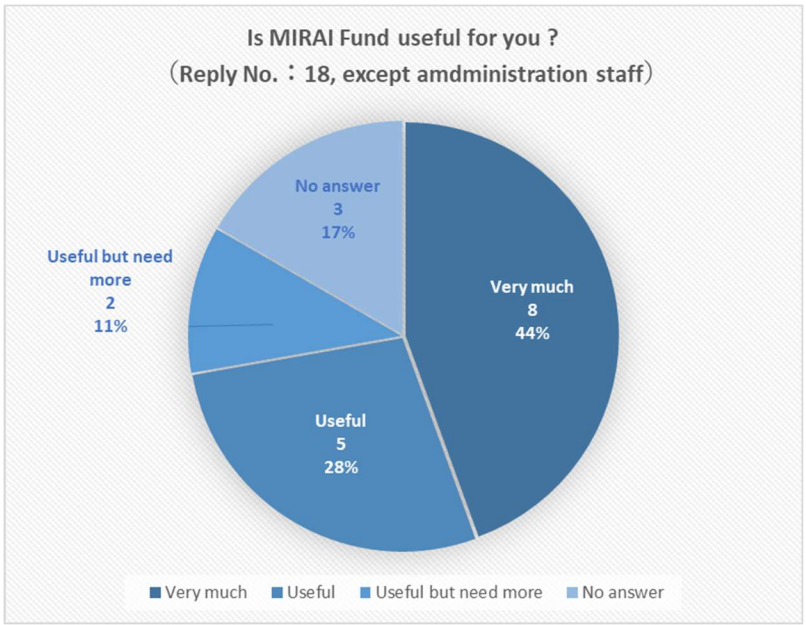
For reference purpose, the results of other questions are also shown below in order to evaluate the performance of the Project objectively:

**Question-3** Are you having enough assistance from the Center for your research ? (only research-oriented person)



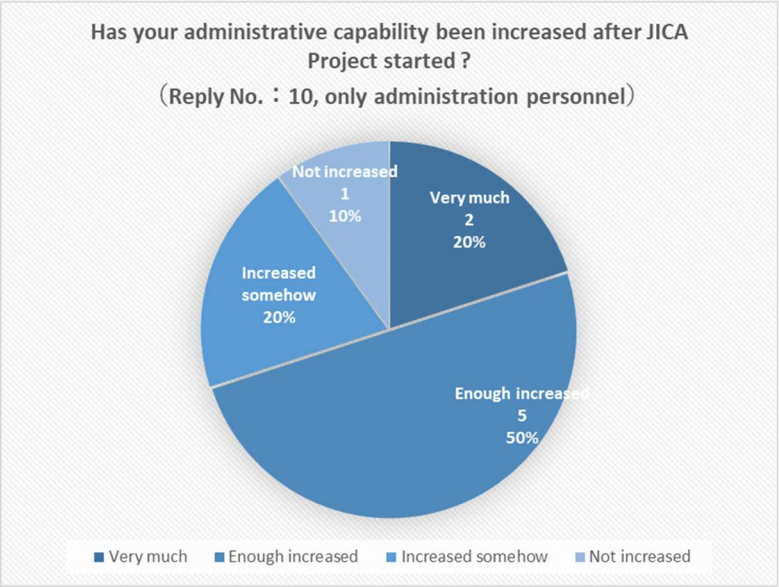

**91%** of researchers and trainee studying in Japan feel that they have enough assistance from UJICY.

**Question-4** Is MIRAI Fund useful for you ?



**83%** of researchers, trainees and management think that MIRAI Fund is useful although 11% of them feels not enough. There are researchers who couldn't get MIRAI Fund, and these group seems not to be satisfied.

**Question-5** Has your administrative capability been increased after JICA Project started? (Only administrative positions)




**90%** of administration staff (including Management) feels improvement of their capability.

**Question-6** Do you want continuous support from JICA Project ?

For this question, all staff of UJICY (**100%**) showed their wish of continuous support from JICA. The main expected areas of support are:

- Dispatching young talented people to Japan for study and training and inviting good experts from Japan. (Management)
- Finding business partners in Japan. Training courses for management personnel. (Management)
- Development of laboratory including additional equipment. (Researchers)
- Training for researchers. (Researchers)
- Opportunity of research work with Japan. (Researchers)
- Financial support. (Administration)
- Training for administrator in Japan (Administration)
- Support academic cooperation with Japanese universities (ex-trainee in Japan)

- Seminar as opportunity for networking and knowledge sharing (ex-trainee in Japan)
- Continuous study in Japan (Ph.D) (current trainees in Japan)

## 5. Conclusion – Endline Survey Results

5.1 Comparison with Baseline and Evaluation of achievement

In order to evaluate the Project's achievement objectively, the comparison with the target figures in PDM and figures acquired by Project Baseline Survey (see ANNEX-2 of Project Completion Report) is essential as shown in the following table:

| PDM Indicator | Baseline 2019 | Endline 2024 | Evaluation |
|---|---|---|---|
| (Project Purpose)<br>1. **80%** of researchers satisfy with the research management system of the Center | **n/a** | **87%** | **Achieved** |
| 2. Number of research projects increases | **2** | **22 projects** | **Increased** |
| 3. Number of papers published by researchers increases | **0.98/year/ researcher** | **4.37/year/ researcher** | **Increased** |
| 4. **80%** of researchers assess improvement of their research capacity | **n/a** | **100%** | **Achieved** |
| (Output)<br>5. The Center implements research activities in accordance with the strategies and the plan | **n/a** | **YES** | **Achieved** |
| 6. 2-1 **70%** of researchers who studied at Japanese universities acquired higher degrees | **n/a** | **77.78%** | **Achieved** |
| 7. 2-2 Number of collaborative activities with Japanese universities increases | **0** | **53 activities** | **Increased** |
| 8. 2-3 **At least three (3)** MOU concluded with Japanese universities | **n/a** | **11 MOUs** | **Achieved** |

5.2 Conclusive Note

As the conclusion of this survey, PDM indicators which can be verified with figures shows positive indication that the Project has been implemented correctly with remarkable achievement. Other indicators which shall be verified with "Monitoring Sheet" will be evaluated in Project Completion Report. (End of Report)

# Decree of the President of the Republic of Uzbekistan
# dated 11 September 2023 No. UP-158

## On “Uzbekistan 2030” Strategy

Adoption of the new edition of the Constitution of the Republic of Uzbekistan through nationwide voting during the referendum organized on 30 April 2023 has fostered enhancement of the constitutional framework for building the New Uzbekistan.

Presidential election, that has been organized in accordance with the new edition of the Constitution, has demonstrated once again the political maturity of our society, and full nation’s support of the implemented reforms towards building the New Uzbekistan.

Meanwhile, the updated constitutional and legal framework requires improvement of the key directions for the country development, as well as bring the ongoing large-scale reforms to the next phase.

In order to act upon the expression of our nation’s will on building the free and prosperous strong New Uzbekistan, to provide each and every citizen with all opportunities for development of their potential, to upbring healthy, educated and spiritual generation, to establish a strong economy that becomes an important link in the global production chain, as well as to guarantee enforcement of equity, rule of law, safety and stability:

**1.** Approve the **“Uzbekistan 2030” Strategy**, according to the Annex No. 1, that has been developed based on the experience acquired in the process of implementing the New Uzbekistan Development Strategy and the outcomes of public consultations.

Take into account that the “Uzbekistan 2030” Strategy reflects the following **key ideas**:

joining the ranks of **the upper-middle income countries** through sustainable economic development;

establishing a system of **education, healthcare** and **social protection** that shall fully meet the **needs of the nation** and comply with **international standards**;

creating **favorable environmental conditions** for the population;

building a **fair** and **modern** state that serves the nation;

ensuring guaranteed **sovereignty** and **security** of the country.

**2.** Resolve that:

**Implementation of the "Uzbekistan 2030" Strategy**, as well as achievement of **its target indicators** shall be established as the priority task for activities of all government authorities and institutions, which heads shall be **personally responsible** for its implementation thereof;

within the framework of the **"Uzbekistan 2030" Strategy**, there shall be ensured achievement of all objectives that remain relevant, as well as implementation of relevant tasks that are stipulated in the New Uzbekistan Development Strategy, which implementation is ongoing.

**3.** Approve the composition of **the Republican Commission for Implementation of the "Uzbekistan 2030" Strategy** (hereinafter - the Republican Commission), in accordance with the Annex No. 2.

Impose on the Republican Commission (A. Aripov) the tasks to ensure:

**a)** arrangement of complete, timely and quality implementation of the **"Uzbekistan 2030" Strategy**, as well as preparation and coordination of implementation of corresponding annual programs for its execution thereof;

**b)** control over quality implementation of reform activities **within the framework of the "Uzbekistan 2030" Strategy** based on opinions and initiatives provided by citizens, achievement of intended objectives, as well as submission of information on results to the President of the Republic of Uzbekistan **every six months**;

**c) within two months:**

critical analysis of **the local outcomes of implementation** of the New Uzbekistan Development Strategy;

broad discussion **with population of the outcomes of implementation of the New Uzbekistan Development Strategy**, systemic analysis of proposals submitted by citizens with regard to this issue.

following the outcomes of the analysis, identification of systemic factors that hinder achievement of objectives and implementation of tasks stipulated by the New Uzbekistan Development Strategy, as well as adoption of specific measures to eliminate the above factors within the framework of the "Uzbekistan 2030" Strategy implementation.

**4.** Recommend to the Jokargi Kenges of the Republic of Karakalpakstan, Kengashes (Councils) of People's Deputies of regions and Tashkent city to organize **quarterly hearings** and critical discussions of information of the heads of territorial subdivisions of the ministries and agencies on the **"Uzbekistan 2030" Strategy implementation** progress by regions.

**5.** Establish a **procedure to control** implementation of the "Uzbekistan 2030" Strategy and practical measures for its implementation thereof, achievement of corresponding **target indicators** and timely development of **laws and regulations** within their framework, in accordance with which:

**a)** the Ministry of Justice, together with the Chamber of Accounts, the Development Strategy Center and the Nationwide Movement "Yuksalish" shall perform a systemic monitoring of the "Uzbekistan 2030" Strategy implementation and measures for its implementation thereof in corresponding years, as well as to submit monthly monitoring outcomes to the Republican Commission;

**b)** the Jokargi Kenges of the Republic of Karakalpakstan, Kengashes (Councils) of People's Deputies of regions, districts and Tashkent city shall perform, **on quarterly basis**, control activities in its territory for implementation of the "Uzbekistan 2030" Strategy in corresponding years by regions;

**c)** the Cabinet of Ministers shall ensure **monthly** critical discussions of the "Uzbekistan 2030" Strategy implementation progress, with participation of Prime Minister Deputies, **quarterly** discussions during Government meetings; undertake corresponding measures in relation to Government members, including ministers, for untimely and incomplete implementation of the activities; as well as **every six months** submit the "Uzbekistan 2030" Strategy implementation report to the Legislative Chamber of Oliy Majlis.

**6. Within one-month period** the Cabinet of Ministers (A. Aripov) shall ensure the following:

adoption of the Government resolution on **measures for implementation of the "Uzbekistan 2030" Strategy in 2023-2024 by regions**;

identification of specific tasks by sectors and areas assigned to the Prime-Minister Deputies, based on the dimensions and objectives of the "Uzbekistan 2030" Strategy.

**7.** The Ministry of Justice, together with responsible ministries and agencies, shall provide a practical support to **quality and timely** drafting, approval, as well as submission for public consultations of draft laws and regulations within the framework of the "Uzbekistan 2030" Strategy.

**8.** In order to establish an effective public control over consistent, quality and timely implementation of specific reforms under the motto **"Uzbekistan 2030" Strategy is a people's strategy"**, the Development Strategy Center shall:

together with the Ministry of Digital Technologies, **within two weeks**, launch an online portal that enables assessment by the people of enforcement level of the "Uzbekistan 2030" Strategy implementation, quality implementation of reforms determined

in the Strategy by each objective and its indicators, as well as submission by citizens of their opinions and initiatives related to the reforms thereof;

consolidate and submit **on monthly basis** to the Republican Commission the assessment results, as well as opinions and judgments collected from citizens;

implement, together with the Coordination Council on implementation of the national sustainable development objectives and targets until 2030 (J. Kuchkarov), a system for performing, together with the public, **annual** analysis of the "Uzbekistan 2030" Strategy implementation, in accordance with the Sustainable Development Goals of the United Nations Organizations, and disclosure of its results thereof;

ensure preparation, **publication in foreign languages and wide dissemination** of information and analytical reviews dedicated to the outcomes of the "Uzbekistan 2030" Strategy implementation and implementation of its measures thereof in corresponding years.

**9.** The Agency for Information and Mass Communications, the National Television and Radio Company of Uzbekistan and Uzbekistan National News Agency, together with mass media, shall ensure continuous:

broad **coverage of the tasks and objectives of the "Uzbekistan 2030" Strategy**, as well as public awareness raising on the contents and the essence of the Strategy through mass media, including through the global information network Internet and social media;

communication to the population of **objective and full information** on implementation of ongoing measures and achievement status of specific target indicators within the framework of the "Uzbekistan 2030" Strategy.

**10.** Impose on **the heads of the ministries and agencies, the Chairman of the Council of Ministers of the Republic of Karakalpakstan, khokims (mayors) of regions and Tashkent city** personal responsibility for effective organization of enforcement of this Decree.

Discussion of this Decree implementation progress **every six months**, coordination and control over activities of organizations that are responsible for the enforcement of the Decree shall be entrusted to the **Republican Commission**.

**Monthly** submit to the President of the Republic of Uzbekistan information on implemented measures.

**President**

**of the Republic of Uzbekistan**

**Sh. MIRZIYOYEV**

*Tashkent city,*

*11 September 2023.*

Annex No. 1
to the Decree of the President of the Republic of Uzbekistan No. UP-158 dated September 11, 2023

## "UZBEKISTAN 2030" STRATEGY

| | Objective | Performance Indicators of Objectives that will be Achieved by 2030 |
|---|---|---|
| **I. CREATING DECENT CONDITIONS TO UNLOCK POTENTIAL OF EVERY PERSON** | | |
| **1.1. Reforms in the education system** | | |
| | Moving the preschool education system to a new level and ensuring full enrollment of children. | Ensuring **full** enrollment of children in preschool education and **pre-school groups.** |
| | | Developing **initial computer skills** of trainees in the state preschool educational institutions through their **100% equipping with computer classrooms**. |
| | | Ensuring 100% coverage of preschool educational institutions with **clean drinking water supply and modern sanitary and hygienic** infrastructure. |
| | Implementing the "Favorable Educational Environment" Program in the general secondary education system. | Arranging free buses for students of **715** general secondary educational institutions that are located in remote and hard-to-reach areas. |
| | | Ensuring full coverage of general secondary educational institutions with **clean drinking water supply** and **modern sanitary and hygienic** infrastructure. |
| | Moving the general secondary education system to a new level. | Creating **about 700 pieces** of new textbooks, exercise books, study guides and mobile applications for teachers. |
| | | Creating **1,000** multimedia applications for tablets based on new-generation textbooks. |
| | | Attracting **500 foreign specialists - native speakers** to educational institutions annually. |

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| | | Introducing **vocational training courses in all general secondary educational institutions.** |
| | | Implementing **the teaching methodology** of Presidential schools and specialized schools **into educational process of all general secondary educational institutions**. |
| | Improving the status of the teaching staff, developing their knowledge and qualifications in accordance with international standards. | Sending **1,000** childcarers and teachers to foreign countries for advanced training and internship. |
| | | Increasing an average salary of teaching staff of preschool educational institutions and general secondary educational institutions by **2 times**. |
| | | Providing continuous advanced training for **500 thousand** employees of preschool educational institutions and general secondary educational institutions. |
| | | Introducing a staff **training** system in relation to highly demanded professions and pedagogical education for prospective students in remote districts, to be fully **based on government grants**. |
| | Broadly involving the private sector for the development of general secondary education. | Increasing the number of non-government general secondary educational institutions to **1,000**. |
| | | Allocating concessional loans in the amount of **1 trillion UZS** for operationalization of non-government general secondary educational institutions in the next five years. |
| | | Starting from 2024, concluding contracts for construction of **at least 100 general secondary educational institutions on public-private partnership basis annually.** |
| | | Increasing the number of students in non-government general secondary educational institutions **by 3 times**. |
| | | Implementing projects for **expansion of the network of general secondary educational institutions for 2 billion USD** based on public-private partnership modality and using funds attracted from international financial institutions. |

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| | Teaching students modern knowledge and skills through the development of vocational education system. | Improving the quality of education and developing material and technical base in **700** vocational educational institutions. |
| | | Establishing **14** regional vocational training centers; increasing the share of teaching staff who possess a qualification category up to **50 percent**; increasing the share of advanced training courses that are organized in distance or combined learning format to **30 percent**. |
| | | Increasing the share of government grants for training of middle-level specialists in the field of **information technologies, construction, transport and logistics to 100 percent**. |
| | Increasing enrollment in higher education, improving the quality of training specialists with higher education. | Increasing the rate of youth enrollment in higher education to at least **50 percent**. |
| | | Fully staffing the general secondary educational institutions with teaching staff possessing **higher education**. |
| | | Performing the international accreditation of educational programs of **30** higher educational institutions. |
| | | Introducing **double degree** system based on at least **50 joint** educational programs with foreign universities from the **Top 500** universities. |
| | | Ensuring inclusion of **10** higher educational institutions in the ranking of **Top 1,000** most reputable higher educational institutions in the world. |
| | | Improving **performance of scientific researches** and increasing **up to 70 percent** research capacity in higher educational institutions. |
| | Improving organizational and managerial activities of higher educational institutions, enhancing their material and technical base. | Transforming **5** higher educational institutions into national research institutes. |
| | | Constructing additional educational buildings for **120 thousand** places and student accommodation facilities for **150** thousand places. |
| | | Expanding the libraries by at least **1 million** pieces of modern literature and implementing **full** digitalization of the library stock. |

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| | Enriching fundamental researches with new areas, based on the modern requirements. | Allocating **3 trillion UZS** for implementation of fundamental researches. |
| | | Establishing cooperation with **8** leading foreign scholar schools in the field of fundamental researches. |
| | | Allocating **2 trillion UZS** for scientific programs in the field of language and literature, history, archeology, culture and arts. |
| | Enhancing applied researches in the most rapidly developing economic sectors, introducing the cluster system - "an enterprise - a university - a scientific institution". | Allocating **4 trillion UZS** from the State budget for applied researches. |
| | | Manufacturing **850 types** of innovative products in the "driving" areas of economy sectors. |
| | | Creating **more than 2.5 thousand** new research developments based on the outcomes of applied researches. |
| | | Establishing **8 research and production clusters** in such areas as transport and logistics, agricultural yield, energy, biotechnologies, geology and metal industry, mechanical engineering and electronics. |
| | Increasing the share of young researchers, supporting their scientific researches. | Increasing the share of researchers aged below 40 to **at least 60 percent,** increasing **by 2 times, on average,** the salary of employees of scientific institutions. |
| | | Increasing **to 20** the number of annual competitions for provision of financing for research, applied, innovative and startup projects. |
| | | Increasing to **5,200** the number of quotas for research assistants, basic doctoral studies, doctoral studies and targeted doctoral studies. |
| | Broadly implementing innovative activities in all areas; supporting scientific researches and innovative initiatives. | Ensuring inclusion of Uzbekistan in the list of **Top 50 countries** in the ranking of the Global Innovation Index. |
| | | Increasing **to 2 thousand** the number of researchers per million of citizens. |
| | | **Doubling** the number of new innovative developments that are created as a result of commercialization in the domestic and external markets. |

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| **1.2. Reforms to ensure the health of citizens** | | |
| | Increasing the average life expectancy of population. | Increasing the average life expectancy of population **to 78 years**. |
| | | **Doubling** the amount of funds allocated for healthcare. |
| | | Decreasing **by 2.5 times** the number of early deaths from oncological, cardiovascular diseases, diabetes mellitus, and respiratory diseases. |
| | | Radically reducing tuberculosis incidence from current **34** per **100 thousand** people. |
| | Continue bringing primary medical services closer to people. | Ensuring full coverage with treatment of **350 thousand** patients with diabetes mellitus, **1,5 million** of patients with cardiovascular diseases. |
| | | Achieving resolution through primary care of **70 percent** of applications from people in need of medical care. |
| | | Ensuring full coverage of patients by provision of **hemodialysis beds** in the country. |
| | Increasing effectiveness of prevention and treatment of hereditary conditions among children. | **Halving** the number of hereditary conditions among children. |
| | | Increasing **by at least 50 percent the coverage of infants by selective screening examinations** for hereditary conditions. |
| | Reducing maternal and infant mortality, ensuring healthy childhood. | **Halving** the number of deaths of women, starting from diagnosing with pregnancy to **42 days** after childbirth; of infants and children below 5. |
| | | Increasing the number of labor beds **by 35 percent**. |
| | | Freely providing **micronutrient powder** to children aged 6-23 months, **special helminthosis prevention preparations** - to children aged 2-10 years, **iodine preparations** - for children aged 3-15 years, **polyvitamins, iron preparations** and **folic acid** - to women and girls aged 15-35 years. |
| | | Decreasing **by 20 percent** the number of infectious and non-infectious diseases among children. |

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| | Performing early diagnostics of oncological diseases and reducing the mortality rates. | Identifying during preventive examinations early stages of oncological diseases among people aged **30-69 years**, **doubling** the **life expectancy to 5 years**, halving the mortality rates on one-year horizon. |
| | | Ensuring full coverage with treatment of **120 thousand** oncological patients. |
| | Increasing the effectiveness of non-infectious disease prevention. | Increasing the level of early diagnostics of non-infectious diseases to **70 percent**. |
| | | **Doubling** the number of early detections of diabetes mellitus and arterial hypertension conditions among adults (aged 40 and above). |
| | | Reducing **by 30 percent** mortality rates among people aged 30-69 years related to cardiovascular, chronic respiratory diseases and diabetes mellitus, per **100 thousand** people. |
| | Ensuring healthy and active senility. | Performing annual preventive medical examinations and health improvement for **100 percent** of people aged **55 and above**. |
| | | **Doubling** the number of physically active population among adults (aged 40 and above). |
| | Promoting proper nutrition and healthy lifestyle among population. | Reducing by **32 percent** the share of people who consume salt above norms, by **22 percent** - the share of people that do not have sufficient physical activity; as well as the share of adults with overweight and obesity by **32 and 23 percent**, respectively. |
| | | Reducing **by 2 times, on average**, the share of children below 5 with delayed growth, underweight and overweight. |
| | | Limiting by **100 percent** the supply, production and sale of products with large quantities of trans fats, salt and sugar in educational and medical institutions. |
| | Implementing widely digital technologies in the healthcare sector. | Increasing the level of digitalization of medical institutions **up to 100 percent**. |

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| **1.3. Reforms in provision of social services and poverty reduction** | | |
| | Improving radically a system for provision of professional social services. | Reaching **full coverage** of all people in need with a social protection system. |
| | | Organizing activities of **“Inson” (“Human”) social services centers** in all districts and cities of the country for comprehensive implementation of social services. |
| | Establishing a new system to support disabled people, as well as creating favorable and comfort environment for them. | Increasing the level of provision of quality and modern prosthetic and orthopedic appliances to disabled persons in need **up to 100 percent**. |
| | | **Doubling** the employment of disabled people through **provision of decent work to them**. |
| | | Ensuring full coverage of disabled persons in need by **rehabilitation services**. |
| | | Introducing a **system for evaluation of existing infrastructure** for disabled persons, along with creating favorable and comfort environment for them. |
| | | Organizing free trips to **Samarkand, Bukhara and Khiva**, within the framework of **“Barrier-Free Tourism”** Program, for **1 thousand** disabled persons from each region annually. |
| | Improving a child social protection system. | Developing in the society the **culture of zero tolerance towards harassment and violence** against children. |
| | | Introducing **alternative non-institutional child care forms** for children deprived of parental care. |
| | Enhancing a system for support of women, enforcement of their rights and legal interests, increasing social, economic, political activity of women, and ensuring gender equality. | Increasing **to 30 percent** the share of women occupying management positions through continuing implementation of gender equality policy and increasing social and political activity of women. |
| | | Creating in the society the **culture of zero tolerance towards harassment and violence** against women, ensuring rights and legal interests of women. |
| | | Establishing a transparent mechanism for targeted work with Women Notebook; implementing public control in this area. |

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| | Providing comprehensive support to elderly generation. | Organizing excursions for more than **1 million** elderly people annually to visit landmarks of the country, including visits to historical cities, ancient architectural monuments, pilgrimage destinations and picturesque settings of our country. |
| | | Increasing **to at least 30 percent** the scale of activities implemented within the framework of programs providing support to elderly generation. |
| | Reducing the poverty level in the country. | Reducing the poverty level **by 2 times** until 2026 as compared to 2022; **radical** reduction by 2030. |
| | | Increasing income of **4.5 million** people that are at risk of going below the poverty line. |
| | | Training **500 thousand** qualified specialists based on social partnership. |
| | Ensuring involvement of people into income-generating labor activities; improving a social insurance system. | Reducing to **7 percent** the unemployment level through ensuring stable and effective employment of working-age people, including employment of youth and disabled persons. |
| | | Organizing payment of maternity benefits, temporary disability benefits, benefits for layoffs in case of liquidation of a legal entity - an employer and absence of the liquidated entity's funds for making the payments thereof, insurance payments related to occupational accidents through the **guaranteed social insurance system**. |
| | Teaching citizens professions at the expense of the state, developing their professional skills and qualifications for use of modern equipment and technologies. | Training **2 million** citizens in professions, business skills and foreign languages. |
| | | Providing advanced training to **1.6 thousand** trainers of vocational education centers based on international standards. |
| | | Increasing the private sector share in vocational education up to **30 percent**. |

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| **1.4. Reforms in the areas of the state youth policy and sports** | | |
| | Establishing a system for training youth in modern professions and foreign languages. | Organizing in every region one **"creative park"** in order to ensure involvement of youth in modern professions; attracting at least **40 thousand** young people in new professions annually. |
| | | Ensuring learning by school graduates of at least **2 foreign languages** and one **profession.** |
| | Increasing intellectual potential of the youth; fostering its scientific activities. | Developing talents of at least **2 million** young people through their engagement in scientific and innovative activities, intellectual games and foreign language studies. |
| | | Sending **500** talented young men and girls annually to foreign reputable universities for their studies. |
| | Strengthening social protection of the youth and reducing the unemployment level. | Ensuring employment of **400 thousand** young people and achieving resolution of their problems. |
| | | Reducing youth unemployment level from **14 to 11 percent**. |
| | Promoting further the IT sector among youth and increasing exports of services in the sector. | Ensuring employment of **300 thousand** young people in the IT sector. |
| | | Teaching school students **modern professions** that are demanded in the **international IT market**. |
| | | Scaling-up the **"One million coders"** project and training annually **15 thousand** the most talented young men and girls based on **programs in accordance with requirements of the reputable international companies**. |
| | Expanding the coverage of youth that engages in physical culture and sports. | Increasing the coverage of youth from **8 million** through organization of **mass sporting events**. |
| | | Increasing to **36 percent** the share of population engaged in sporting activities. |
| | | Creating in at least **5,000** makhallas **sports grounds** for engagement of people in physical culture and mass sports. |

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| | Increasing the share of youth in the country that play sports professionally and on permanent basis. | Increasing the number of young people that regularly exercise in sports and educational institutions **up to 1 million**. |
| | | Creating opportunities **for regular sports exercises for about 130 thousand young people**. |
| | Improving a system for training of highly qualified and highly performing sportsmen for national teams. | Achieving inclusion of Uzbek sportsmen into **Top 5** strongest teams, according to the team scoring, during the next 2030 Asian Games in Doha (Qatar). |
| | | Increasing the number of sportsmen with classes and ranks **up to 25 thousand**. |
| | | Increasing **to 85 percent** the share of employees with higher education in the field of sports. |
| | | Increasing to **140** the number of scientific researches and studies aiming to develop the sector. |
| | Developing Olympic and Paralympic movement. | Achieving a rank among the **15** strongest countries in Olympic and Paralympic Games. |
| **1.5. Reforms to ensure spiritual growth and to move the cultural sector to a new level** | | |
| | Ensuring stable social and spiritual environment in the society. | Jointly fighting against ideological impact that shall be based on a national idea; enhancing cooperation between a family, school and makhalla; and ensuring continuity of spiritual education on the above basis. |
| | | Adopting interactive educational and teaching methods in order to **transform** schools into a true **center of spirituality and enlightenment, culture**. |
| | | Developing new approaches for **preservation**, broad promotion and development of **national values and spiritual heritage** of Uzbek nation. |
| | | Ensuring coverage of all key objectives **on supporting stability of social and spiritual environment** in the society by scientific and sociological studies. |

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| | Promoting widely the pearls of Uzbek and global literature, developing book reading culture in the society, as well as providing information and library services to the population. | Increasing the number of young book lovers to **5 million**. |
| | | Creating **100** best artistic writings and **50** artistic books for children and teenagers. |
| | | Creating a **many-volume set** “From the Treasury of Uzbek Literature”, a **100-volume set** “Pearls of Global Children’s Literature” in Uzbek language. |
| | | Digitalization of book stock consisting of about **40 million books.** |
| | Integrated development of modern theater and circus arts; creating high-principled artistic work. | Repairing and equipping buildings of **40** theaters. |
| | | Constructing buildings of 6 new theaters, increasing to **5 million** the number of annual visits of state theaters by visitors. |
| | | Establishing **2** new puppet theaters. |
| | | Bringing **international cooperation** in the field of modern theater and circus arts to a new level. |
| | Increasing tourism potential of the country through promotion of Uzbek national arts. | Organizing at least **10** international festivals and forums in the field of makom, bakhshi, dance and theater arts. |
| | | Attracting **at least 20** highly qualified foreign specialists to teaching activities in the sector. |
| | Continuing improvement of activities on conservation, scientific study and promotion of the cultural heritage. | Transforming into a modern format **more than 3 thousand** materials that are stored in archives of the Institute of Art Studies, Institute of Uzbek Language, Literature and Folklore. |
| | | Achieving inclusion of at least **3** samples of unique intangible cultural heritage into UNESCO World Heritage Lists. |
| | | Performing in-deep scientific research of more than **30 elements** of intangible cultural heritage. |
| | | Performing works to conserve **158** cultural heritage sites. |
| | | Increasing the number of museum visits to **5 million**. |

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| | | Digitalizing **2.5 million** museum specimen. |
| | Developing activities and enhancing material and technical base of cultural organizations; supporting specialists in the sector; developing the fields of visual and applied arts. | Implementing in 2024-2030 construction and repair works, and equipping **432** cultural centers that are subject to repairs, with private sector involvement. |
| | | Equipping **13** children schools of music and arts, increasing the number of hobby groups to **7 thousand**. |
| | | Organizing in recreation and entertainment parks activities of **64** modern summer cinemas and **24** book cafes. |
| | | Creating **18** special walkways for elderly people, mothers with children. |
| | | Creating necessary conditions for increasing **from 5 percent** the share of creative economics in the Gross Domestic Product of the country. |
| | Developing national cinematography. | Publishing national movies through the **10** most popular global Internet platforms. |
| | | Creating in 2024-2030 a documentary series “Great History”, and broadcasting it through the **5** most popular **TV channels** in the world. |
| | | Creating 10 animation movies and series about national heroes. |
| **II. ENSURING PROSPERITY OF POPULATION THROUGH SUSTAINABLE ECONOMIC GROWTH** | | |
| | Doubling the size of economy by 2030 and joining the ranks of upper-middle income countries. | Increasing the GDP to **160 billion USD**, and income per capita - **to 4 thousand USD**. |
| | | **Ensuring provision of energy, water and infrastructure resources** at the level required for macroeconomic stability and economic development. |
| | | Ensuring **annual inflation level of 5-6 percent** by 2030 through continued implementation of structural reforms that aim at mutual coordination of monetary, fiscal and foreign trade policies, as well as improvement of competitive environment in the goods and services market. |

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| | | Consistently continuing **transformation and institutional reforms in the economy**, ensuring **favorable investment and business climate** in the country, **as well as implementation of a balanced monetary policy**. |
| | | Implementing **medium-term public debt management strategy** to prevent public debt from exceeding **50 percent** of GDP. |
| | | Ensuring the growth of investments volume, that are annually added to the charter capital, **by 7 percent** on average. |
| | Ensuring fiscal stability and effective management of state obligations. | Ensuring maintenance of the consolidated **budget deficit** in the amount less than **4 percent** of GDP in 2024 and **3 percent** - in subsequent years. |
| | | Moving to **performance budgeting** practice. |
| | | Using the opportunity to additionally expand the tax base through downsizing **the "shadow economy"**. |
| | | Further increasing effectiveness of tax administration system through increasing effectiveness and expansion of **labeling system and digitalization**. |
| | | **Classifying** projects implemented through public-private partnership modality based on **their return and load** on the State budget, as well as introducing a management system by the directions of the projects. |
| | Efficiently using local resource base and developing the industry based on advanced technologies. | Increasing the share of industrial technological products **from 25 to 32 percent**. |
| | | **Doubling** the labor productivity in the processing industry. |
| | | Increasing the production of **copper** necessary to obtain highly profitable products **by 3.5 times, gold - by 1.5 times, silver - by 3 times, uranium - by 3 times.** |
| | | Implementing widely advanced international standards for **assessment of field reserves.** |
| | | Establishing **large chemical and polymer clusters** in the Republic of Karakalpakstan, Bukhara, Navoiy, Tashkent and Fergana regions, and engaging enterprises in production of high value added finished goods. |

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| | | **Creating a competitive environment in automotive engineering industry** and increasing the production volume to **1 million cars.** |
| | | Increasing **copper processing volumes** in electrical engineering industry by **300 thousand tons** and attracting **1.5 billion USD** of investments in localization of production of all consumer electronics. |
| | | Introducing a system of industrial mortgage that envisions mechanisms for provision of **buildings to entrepreneurs in form of a "ready-made business"**. |
| | | Arranging **activities of advanced schools of engineers** in such fields as mining, chemical, textile sectors, electrical engineering, as well as organizing in-house **vocational training centers** at large enterprises. |
| | | Organizing **8 research and production clusters** in the fields of metalworking, mechanical engineering and electronics, transport and logistics, agricultural yield. |
| | | Establishing **Research and Development (R&D) centers** in such areas as electrical engineering, mechanical engineering, textile, chemical industries, construction materials industry, metalworking, geology, energy, biotechnologies, processing of agricultural produce, transport and logistics. |
| | Developing "driving" industrial sectors and full utilization of industrial potential of the regions. | Increasing the volume of added value in the industry to **45 billion USD** and creating **2.5 million** highly-profitable jobs. |
| | | Manufacturing **import-substituting products** by large enterprises and **expanding cooperation ties** with territorial enterprises; introducing a system for active remuneration of enterprises that establish industrial cooperation. |
| | | **Establishing modern technological industrial zones** in every district. |
| | | Implementing exploration works **on 60 thousand square meters** of areas in the country. |
| | | Increasing the level of **yarn processing** in textile industry **to 100 percent**, organizing production of **400 thousand tons of artificial and mixed fiber** in order to satisfy the demand for high-quality fiber. |

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| | | Increasing production volumes of construction materials **by 2 times** and expanding production of new types of **energy-saving materials.** |
| | | Satisfying the demand for pharmaceutical products in the pharmaceutical industry **by 70 percent** through domestic producers. |
| | | Increasing the value added **by 5 times** through attraction of more than **30 reputable foreign brands** into the leather and foot-wear industry. |
| | | Increasing **furniture** production volumes **by 3 times**. |
| | Further improving investment attractiveness of the country and ensuring accelerated development of the securities market. | Disbursing **250 billion USD** of investments in the country, in particular, attracting **110 billion USD** of foreign investments and **30 billion USD** of investments within the framework of public-private partnership. |
| | | Increasing the volume of the market for securities in free circulation to **8 billion USD**. |
| | | Implementing more than **500** strategically important technological and infrastructure projects for the total value of **150 billion USD**. |
| | | Maintaining an **investment ranking** of regions, continuing improvement of **attractiveness of each territory** for investors, based on their capacities thereof. |
| | | **Doubling** the volume of portfolio investments through arrangement of activities of **mutual and venture funds.** |
| | | Including shares of **40 state-owned entities in "People's IPO",** implementing incentive mechanisms for participation of people in IPOs. |
| | | Developing an infrastructure for participation of **foreign nominal investors** and **custodian** banks in the local capital market. |
| | | Enabling **uninterrupted access to the required infrastructure** in all economic zones (road, water and sewerage system, electricity). |

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| | Accelerating reforms in the banking sector, increasing the size of banking services market and developing competition in the sector. | Increasing the annual volume of lending in the banking and financial system **to 40 billion USD**, increasing the volume of bank deposits **by 4 times**. |
| | | Privatizing banks and leaving **3-4** banks in the state ownership; attracting at least **4** large reputable foreign banks to the banking market. |
| | | Improving norms and control bases through implementation of **internationally recognized minimum standards and requirements** in banks. |
| | | Implementing **Islamic finance criteria and procedures** in at least **3** commercial banks, setting the regulatory framework for Islamic finance. |
| | | Implementing mechanisms for **suspension of accrual of interests** and fines with regard to loans related to claims submitted to courts. |
| | Implementing green economy transition, radically increasing the usage of renewable energy as the cornerstone of the green economy. | Increasing the capacity of renewable energy sources to **25 thousand** Megawatts and its share in the total consumption - to **40 percent**. |
| | | Developing a **"green certificate"** market in the industry and implementing an **"ecolabelling"** practice. |
| | | Reducing consumption of natural gas through modernization of **3 thermal power plants** of 3GW capacity. |
| | | Implementing an **energy efficiency assessment (energy audit)** system for apartments in multi-storey buildings. |
| | | **Completely** moving urban public transport to **an eco-friendly fuel**. |
| | | Establishing a monitoring system that shall cover **all greenhouse gases** in the climate change area (MRV). |
| | | Reducing greenhouse gases emissions per unit of GDP by **30 percent**, as compared to their **2010 levels**. |

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| | Ensuring uninterrupted provision of required energy resources to the economy sectors and population. | Increasing to **120 billion** kW the volume of power supplied to satisfy the needs of the economy sectors and population. |
| | | Increasing the volume of natural gas production to **62 billion** cubic meters. |
| | | **Doubling** the energy efficiency of economy sectors. |
| | | **Establishing an independent regulator** to streamline energy resources market, separating **functions of procurement, sale and supply of electricity.** |
| | | Modernizing infrastructure for distribution, generation and supply of electricity and natural gas to consumers. |
| | | Attracting foreign investors to geological survey works that aim to increase the **reserves of hydrocarbon deposits.** |
| | | Fully digitalizing **record-keeping for all types of energy resources**. |
| | | Achieving sustainable operation of the energy system in Uzbekistan **together with energy systems of neighboring countries**. |
| | Enhancing integration of the Republic of Uzbekistan in global transportation and logistics chains, and increasing capacity of the national transportation system. | Increasing the volume of transportation of transit cargoes through the territory of the country to **16 million tons**. |
| | | Reducing the time needed for railway transportation of cargoes in the northern direction by **40 percent**. |
| | | Increasing the volume of passenger and cargo transportation services by **3 times**. |
| | | Increasing the share of electrified railroads to **65 percent**. |
| | | Increasing the number of air flights by **4 times**. |
| | | Constructing and repairing **56 thousand kilometers** of roads. |
| | | Transitioning to market-based principles in setting tariffs for passenger and cargo transportation services using railway and air transportation, as well as attracting private and foreign operators in the sector. |

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| | | Constructing in total **5.5 thousand kilometers of roads with cement concrete pavement** going from district centers to rural settlements. |
| | | Constructing **new motor roads** on the routes “Tashkent - Samarkand” and “Tashkent - Fergana Valley” based on public-private partnership. |
| | | Ensuring full coverage of cities and districts by public transport; increasing the number of new buses to **5 thousand** and electric buses - to **2 thousand**. |
| | | Constructing new high-speed railroads on the routes “Tashkent - Samarkand”, “Samarkand - Navoiy - Bukhara”, increasing **by 2.5 times** the passenger traffic on high-speed trains. |
| | | Modernizing low-margin regional **airports using public-private partnership modality**, and transferring them to trust management. |
| | | Modernizing **6** large airports of the country, including through public-private partnership, and increasing the number of private airlines to **10**. |
| | | Introducing **Open Skies** regime with strategic partners in all airports, increasing to **100** the number of planes in the country. |
| | Increasing dramatically the yield and profitability in the agricultural sector. | Increasing average revenue per hectare to **5 thousand** USD. |
| | | Increasing the volume of exports in the agricultural sector **to 10 billion** USD annually. |
| | | Attracting **15 billion** USD of investments to the agricultural sector. |
| | | Increasing average cotton yield to **45-50 quintals**, grain - to **80-85 quintals**. |
| | | Developing additional **300 thousand hectares of land** through the use of water saving **techniques** and planting on such lands **fodder, medicinal, oil, leguminous crops, rice, wheat, melons,** growing **intensive orchards and vineyards.** |
| | | Increasing the level of provision of local seeds of vegetables, melons, potato **to 50 percent**. |

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| | | Ensuring the share of **agricultural produce processing to more than 25 percent**. |
| | | Organizing in the territory of the country operation of **100** new agricultural logistics centers of **2.5 million tons** capacity, and increasing their export potential to **1 billion USD**. |
| | | Introducing a mechanism for **pledging the right for renting land areas** within the framework of reforms of land relations. |
| | | Maintaining **a register of nursery farms** and introducing a system for **certification** of seedlings. |
| | | Operationalizing, in each district, centers for assisting implementation of science and innovations, new approaches in the agricultural sector, as well as implementing modern **farming activities**. |
| | | Providing all subsidies to dekhkan farms and ordinary farms, as well as to clusters, through a single platform **"Agro Subsidy"** based on the **"walking distance"** principle. |
| | | Reforming a system for agricultural produce and livestock insurance, establishing a separate insurance fund, and attracting **100 million USD** to this fund, implementing a system to **subsidize 50 percent** of insurance premium for dekhkans and farmers. |
| | | Strengthening a **fodder base** in the livestock breeding sector, ensuring effective use of grazing lands. |
| | | Creating **105 thousand hectares of new mulberry plantations based on a cluster system** in the field of silk farming, and creating **more than 1 million** new jobs. |
| | Strengthening export potential of the national economy, and increasing dramatically the share of high value added products in the economy. | Increasing the volume of exports by **2 times** to **45 billion** USD, increasing the number of exporting businesses from **6.5 thousand to 15 thousand**. |
| | | Increasing the volumes of finished and semi-finished products within exports by **3.3 times**, expanding exports of finished and technological produce to European states within the framework of **GSP+ and other systems**. |
| | | Increasing the number of enterprises, that have **implemented international standards**, by **10** times, to increase their number to **5 thousand**. |

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| | | Establishing **special economic zones** together with **50** reputable global brands. |
| | | Providing comprehensive support to exporters that promote in foreign markets national brands, based on the idea **"New Uzbekistan is the country of competitive products"**. |
| | Implementing consistent transition of monopolistic sectors to market principles, increasing the private sector share in the economy, creating the most favorable conditions for free activities of entrepreneurs. | Increasing the share of non-public sector in the economy to **85 percent**, decreasing by 6 times the number of state-owned enterprises (**2.3 thousand**). |
| | | Canceling **17 types of the state monopoly** in the country; broadly involving the private sector in these sectors; keeping in state ownership only **primary energy and transportation networks**, sectors related to **public administration and security**. |
| | | Transferring to the private sector **railway transportation, motor road construction and management, gas and electricity supply** services. |
| | | Broadly introducing private partnership mechanisms in such state monopoly sectors as **irrigation, waste recycling, management of energy and heat supply systems at social facilities.** |
| | | Expanding the practice of providing to domestic business entities deposits of **strategic mineral resources**, increasing **by 4 times** the number of permissions provided to **deposits on mining gold, silver, non-ferrous metals, tungsten, coal and non-metallic minerals.** |
| | | In order to ensure stability of the tax system, ensuring the non-increase of Value Added Tax and Corporate **Income** Tax rates **for businesses** for three years. |
| | | **Performing full digitalization, simplification of taxation system** and creating equal conditions for all entrepreneurs, ensuring all required conditions in order to make the official sector more preferable and profitable than illegal activities. |
| | | Expanding opportunities for promotion of small and medium business **in international markets**, developing **micro-finance**, supporting innovations and startups, as well as implementing in practice new instruments for developing cooperation with large business. |

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| | | Moving from simple **“manual labor” to industrial production phase** in ensuring employment based on family entrepreneurship, increasing the size of a concessional loan for equipment purchase to **100 million UZS**. |
| | | Reducing by 3 times, on average, time for servicing and providing to business entities **all services** through an online portal, based on **“single window” principle**. |
| | Transforming the country into a regional “IT-HUB” through development of digital technologies. | Ensuring full coverage of all settlements by Internet and increasing its speed by **10 times**; increasing international Internet connection speed to **5,000 Gb/s**; increasing to **100 percent** the coverage by fiber optic communication lines and broadband data transmission networks. |
| | | Increasing the volume of exports of IT-Services and software to **5 billion USD**. |
| | | Entering the **Top 30** of UN E-Government ranking. |
| | | Increasing the number of residents of IT-Park by 10 times, increasing the share of services they provide in GDP to **2.2 percent**, while the number of created jobs thereof - to **100 thousand**. |
| | | Increasing the number of representative offices of foreign companies to **1,000** through establishing in IT-Park an International Digital Technologies Center for foreign companies. |
| | | Developing a first (Unicorn) startup project to capitalize the national market for **1 billion USD** by supporting startup projects through acceleration (development) program of IT-Park. |
| | | Launching **300** priority projects within the framework of the **“Digital Government”** program, covering Tashkent city, the Republic of Karakalpakstan and regional centers by fifth generation communication networks. |
| | | Ensuring full coverage with **mobile Internet** of international motor highways. |

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| | Increasing the number of tourists through establishing broad conditions for development of external and internal tourism in Uzbekistan. | Increasing the number of foreign tourists to **15 million**, domestic tourists - to **25 million**, pilgrimage tourists - to **3 million.** |
| | | Creating in the country **30 large tourist clusters**, increasing by at least **2 times** the number of guest beds, constructing **25** aerial lifts in mountainous areas, increasing the number of tourist makhallas to **175**. |
| | | Increasing the export of tourist services to **5 billion USD**, medical and educational tourism - to **1.5 billion USD annually**. |
| | | Introducing a **"Tax Free" system in all international airports** for products that were purchased and registered by foreign tourists in the country. |
| | | Developing a national program **"Pearls of Ancient History"** and restoring within its framework cultural heritage sites, establishing **"open-air museums"** on landmark sites. |
| | | Continuing further promotion of establishing companies that support inter-city bus routes nationwide. |
| | | Building more than **1,000** charging stations, catering, recreation, trade and service locations. |
| | Ensuring accelerated development of the services sector in the regions. | Increasing by **3 times** the volume of services provided through development of the services sector and servicing in the regions. |
| | | Developing in medium-size and large cities, as well as in districts with population **exceeding 300 thousand modern market services, IT-services, educational, medical, legal services in the field of arts, tourism, hospitality, public catering and transportation.** |
| | | Developing **trade, consumer, park and entertainment services** through putting up for auctions **233 thousand vacant land plots** at busy streets with existing required infrastructure, based on urban planning projects. |
| | | Creating **36 thousand trade and service facilities** through organizing in the centers of medium-size and large cities **central streets that specialize in provision of services**. |

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| | | Constructing **6 thousand trade and service facilities** in “Yangi Uzbekiston” (“New Uzbekistan”) residential blocks and along international motor highways. |
| | | Attracting leading design institutions, transforming **markets in modern, convenient shopping centers** that meet all safety requirements. |
| | Providing integrated development of regions, implementing urbanization strategy, increasing the coverage of population by affordable housing. | Undertaking measures to increase the level of urbanization from **51 percent to 60 percent**; transforming Samarkand and Namangan cities in **million-population cities**; increasing **to 28** the number of cities and districts with population exceeding **300 thousand** people; developing master plans for all settlements. |
| | | Constructing in regions residential houses for **1 million apartments**; increasing to **100** the number of “Yangi Uzbekiston” (“New Uzbekistan”) residential blocks; constructing additional housing for **200 thousand** families; constructing social houses in the country that shall accommodate at least **140 thousand families**. |
| | | Implementing the practice of developing general plans and master plans of districts (cities) with subdivision in **3 categories** (renovation, reconstruction and conservation) through a simplified procedure, as well as **in due regard of proposals from population and entrepreneurs**. |
| | | In order to renovate residential blocks with lapsed service life and dilapidated dwellings, developing **renovation programs** based on general public opinion, building multi-storey buildings in densely populated territories, following the **“development into growth”** principle. |
| | | Constructing local **engineering, communications and social infrastructure** in due regard of **long-term socio-economic and demographic development** of the territory. |
| | | Implementing new standards of developed countries based on **safety requirements for construction of buildings and structures**. |
| | | Broadly involving the private sector into the system for **assessment, inspection and acceptance of installation works** during construction. |
| | | Revising a system for **training middle-level specialists** in construction; training **20 thousand** professional foremasters annually. |

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| | | Establishing a **legislative framework that regulates** share-based construction of multi-storey houses and other real properties. |
| | Providing stable and long-term sources of financing to infrastructure projects. | Establishing, together with international financial institutions, a **Fund for Development of Public-Private Partnership Projects in Uzbekistan**. |
| | | Launching the practice of **"infrastructure bond"** issuance. |
| | | Introducing financial mechanisms for guaranteed provision of clean drinking water and sewerage services in all settlements. |
| | | Equipping laboratories of water-supplying enterprises with modern laboratory equipment and reagents in order to perform monitoring of drinking water quality. |
| | | Ensuring establishment of local treatment facilities in remote territories that do not have a centralized sewerage system. |
| **III. WATER RESOURCE CONSERVATION AND ENVIRONMENTAL PROTECTION** | | |
| **3.1. Reforms to conserve water resources** | | |
| | Improving the culture of rational water use and water consumption efficiency in the country. | Increasing by **25 percent** the efficiency of water use, increasing the total area of lands covered by water-saving technologies for irrigation of agricultural crops **to 2 million hectares**, including lands with implemented drip irrigation technologies - **to 600 thousand hectares**. |
| | | Increasing the efficiency factor of the irrigation system and irrigation networks **to 0.73** within the framework of **seven-year program** for transforming earth-bed channels into concrete-bed channels and internal irrigation networks - to closed piped irrigation systems. |
| | | Preparing a long-term **balance of water resources** for the country and implementing a system for managing its **continuous monitoring**. |
| | | Attracting **the private sector** into the system for treatment, supply and distribution of water; handing over field water supply facilities to **entrepreneurs** (to farms and clusters). |

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| | | Continuing active bilateral mutually beneficial cooperation with neighboring states on the matters of integrated water resource management, joint use of cross-border water resources and **inter-state water management facilities**. |
| | | Increasing to **300 thousand hectares the annual capacity of domestic enterprises** on production of water-saving technologies. |
| | | Ensuring installation of meters for all drinking water consumers. |
| | | Implementing indicators for drinking water quality, coverage of drinking water supply, performance of water supply and sewerage enterprises. |
| | Ensuring rational water consumption in the agricultural sector. | Increasing the share of concrete coating of **18.7 thousand kilometers** or **66 percent** of trunk and inter-farm channels with earth beds **to 13.1 thousand kilometers** or **46 percent**. |
| | | Reducing the area of salinized lands in irrigated land plots **to 1.7 million hectares**, through construction and reconstruction of ameliorative facilities. |
| | | Modernizing an irrigation system and increasing the share of channels with concrete coating **to 46 percent** or **13.2 thousand kilometers**. |
| | | Reducing the area of irrigated land areas with high and medium salinization to **430.0 thousand hectares**, land areas with poor condition of underground waters - to **773.4 thousand hectares**. |
| | Developing an irrigation system and water-saving technologies, broadly involving the private sector and public-private partnership mechanisms in the sector management. | Implementing in at least **100** large water management facilities of **an automated control system.** |
| | | Increasing the size of **Tuyamuyun** water reservoir by additional **1 billion cubic meters**, improving water supply at **1.2 million hectares**, and creating a drinking water reserve. |
| | | Increasing the **inflow of private investments** into irrigation sector through involvement of private sector, broad implementation of **public-private partnership** mechanisms. |

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| | Reducing electricity consumption by pumping stations within the framework of broad introduction of “green energy” technologies. | Replacing in pumping stations obsolete **1,069** pumps and **1,079** electric motors with energy-saving units. |
| | | Installing energy-saving units, modernizing pumping stations, reducing their annual electricity consumption by **30 percent**. |
| | | Transitioning pumping stations to the use of alternative energy **through broad implementation of modern technologies** that provide for saving of electricity and other resources. |
| **3.2. Environmental protection reforms** | | |
| | Dramatically improving the environmental situation in the country; eliminating environmental problems that affect lives of people. | Installing and modernizing existing highly effective **gas-cleaning and dust-catching equipment and local water treatment plants**, introducing an environmentally clean territory regime in **14** regions. |
| | | When preparing master plans of cities, ensuring creation of **green areas** on at least **30 percent** of their territories, and ensuring **proportionality of green areas to the population** - when constructing residential buildings. |
| | | Implementing a system of **automatic sample collection from the pollution sources** at facilities with high **(category I) environmental impact** risk. |
| | | Improving mechanisms for assessment of the **level of environmental pollution**, developing an environmental monitoring system, **forecasting** the level of its pollution. |
| | | Introducing a system for **identification** and **vaccination** of homeless animals, operationalization of **14 stations** that provide housing for such animals. |
| | | Implementing a practice of regular disclosure, through the official websites and mass media, to the general public of information on the level and quality of industrial wastewaters. |

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| | Expanding the nationwide project “Yashil Makon” (“Green Space”) that aims to stabilize the environmental situation. | Planting **200 million** tree seedlings annually, and increasing the greenification level in the country to **30 percent**, creating a system for caring and irrigating every planted tree. |
| | | Creating **1,984** green gardens, including creation of **“green belts”** by **112** large industrial enterprises in their own and adjacent territories , within 3 years, using **30 million** seedlings. |
| | | Creating **“green gardens”** in the territories of **all** government authorities, enterprises, and educational institutions. |
| | | Increasing the **area of green territories in Tashkent city by 5 times, increasing it up to 5 thousand hectares**. |
| | | Implementing a **system of aerobiology monitoring in 10 regions** of the country in accordance with initiatives of the nationwide project “Yashil Makon” (“Green Space”). |
| | | Establishing **public parks** in city and district centers, per **50-100 thousand people**. |
| | Increasing the area of forests. | Creating **26,200 hectares** of protective forest plantations in order to protect lands from erosion and ameliorative facilities - from sand slides. |
| | | Increasing the area of forest plantations in the country to **6.1 million hectares**; increasing by **840 tons** preparation of stock of tree and shrub seeds. |
| | | Establishing forest fund plantations **in mountainous and submontane territories**, increasing plants in steppe area, creating **protective forest plantations** in the territories. |
| | | Developing **eco-tourism, mountainous, hunting and safari tourism** in the territories of forest funds and national natural parks, in mountainous and steppe areas, as well as protected zones of water bodies. |
| | Stabilizing environmental situation in Aral Sea region, mitigating | Increasing the area of forest plantations in Aral Sea region to **2.3 million hectares**. |
| | | Creating in dry seabed of the Aral Sea additional **600 thousand hectares** of green areas; increasing their total area to **2.6 million hectares**, or to **80 percent** of the territory. |

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| | negative impact of environmental problems that emerged as a result of drying Aral Sea. | Implementing the projects of **Green Climate Fund and Global Environment Facility** for **300 million USD** based on programs aiming to **conserve biodiversity, prevent climate change and soil erosion**. |
| | | Implementing, together with international partners, **the Project on Improvement of Condition of Lands Subject to Degradation in Low Reaches of Aral Sea Basin.** |
| | Preventing negative climate change impact. | Creating green plantations on **600 thousand hectares** - protective forest plantations as a measure to combat desertification, droughts, sand and dust storms, and temperature rises. |
| | | Increasing the early warning on hazardous hydrometeorological events to **100 percent,** the reliability level of mountainous river runoff forecasts - to **98 percent**. |
| | | Increasing the reliability level of agrometeorological forecasts on growth of agricultural crops and yield to **96 percent**. |
| | | Reclamation of **6,075 hectares** of land areas that degraded as a result of production of mineral resources. |
| | | Breeding **high-yield varieties of agricultural crops, fruits and grapes, resistant to shortages of water and droughts**, that correspond to specifics of each territory; increasing the **yield by 30-35 percent**. |
| | Ensuring sustainable biodiversity conservation. | Expanding the area of protected natural territories to **12 percent**; implementing annual bio-botanical examination of plants on **2 million hectares** of natural grazing areas and haylands. |
| | | Creating each year on the area of **25 thousand hectares** cultivated plantations to plant and breed medicinal and edible plants. |
| | | Enhancing **control over illegal use** of plants and animals, increasing **ecological culture and awareness** of population on biodiversity. |

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| | | Creating in Tashkent, Termez and Fergana state zoos **rehabilitation centers for provision of temporary housing, treatment and care** to confiscated wild animals. |
| | Improving the quality of services for collection and removal of municipal solid waste. | Increasing the coverage by services of collection and removal of municipal solid waste to **100 percent**, level of waste recycling - **by 65 percent**. |
| | | Increasing the share of waste burning to **35 percent**, reducing the municipal waste landfills - by at least **50 percent**. |
| | | Introducing a cluster system that covers processes of **removal from cities, processing of municipal wastes and production of environmentally clean energy and other products** thereof within the framework of the **"Zero Waste"** system. |
| | Preventing atmospheric air pollution, undertaking decisive measures to preserve its natural composition. | Reducing by **10.5 percent** the amount of pollutants discharged into the atmosphere. |
| | | Ensuring **full modernization** of polluting technologies used by business entities, that correspond to category I and II of environmental impact; construction and reconstruction of local drainage and treatment facilities at **249 industrial enterprises**. |
| **IV. ENSURING THE RULE OF LAW, ORGANIZING PEOPLE-CENTERED PUBLIC ADMINISTRATION** | | |
| **4.1. Reforms to organize people-centered governance and to improve public administration** | | |
| | Transforming makhallas intro a "connecting bridge" between the general public and government authorities in ensuring wellbeing of population and resolution of daily issues in the regions. | Implementing a practice for disbursement of makhalla funds, based on voting of people, to infrastructure projects in makhallas; increasing the amount of funds allocated for resolution of problems in makhallas by at least **3 times**. |
| | | Increasing the volume of funds allocated for improvement of infrastructure based on the initiative of population to **24 trillion UZS**. |
| | | Organizing provision **of more than 100 public services** in makhallas based on the principle of "walking distance". |

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| | | Performing **100 percent digitalization** of processes for interaction with population in makhallas; introducing **“e-services units” i**n each makhalla. |
| | Transforming local representative government authorities into the true voice of people. | **Fully cancelling the practice when khokims (mayors) manage** local Kengashes (Councils); specifically determining the **legal status, key roles and objectives, as well as area of responsibility** of a Kengash Chairman. |
| | | Creating required conditions **for citizen engagement** in activities of local Kengashes (Councils), broad **engagement of civil society institutions, phased digitalization** of their activities. |
| | | Revisiting more than **300 functions** of local Kengashes (Councils), canceling functions not related to their competence thereof. |
| | | Systematizing more than **500** legal acts that relate to activities of local Kengashes (Councils). |
| | Transforming activities of local executive government authorities, arranging territorial administration based on the “serving the interests of the population” principle. | Ensuring clear separation of **roles and objectives** of khokimiyats (municipalities) of regions and districts (cities). |
| | | Establishing a **legal framework** for forming local executive authorities based on **democratic principles**; establishing a legal framework for their **early dismissal thereof**. |
| | | Increasing the role of khokimiyats (municipalities) in **determining staffing units and structures** of territorial executive authorities, creating a **“register of powers”** for tasks (functions) implemented in the territories. |
| | | Optimizing **more than 70 redundant functions** of khokimiyats (municipalities) and subdivisions of ministries. |
| | | Cancelling tasks, out of **more than 500** currently existing ones, imposed on khokimiyats (municipalities) that are not appropriate thereof. |
| | | Systematizing **more than 500** legal acts that relate to activities of khokimiyats (municipalities). |
| | Implementing a “Service State” system for population through scaling-up digitalization | Increasing to **100 percent** the share of public services provided in an electronic form. |
| | | Increasing to **50 percent** the share of services provided exclusively through the Single Portal of Interactive Public Services. |

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| | of public services, eliminating bureaucratic procedures in relations between a citizen and the state. | Increasing to at least **40** the number of public service types provided in composite and proactive manner. |
| | | Transferring at least **300** public services to the private sector. |
| | | Reducing by at least **20 percent** and simplifying **50 percent** of licensed and permit documents. |
| | | Simplifying about **300** procedures for provision of public services. |
| | | Performing digitalization of public services based on **"3 Steps", "user-friendly" and "all in one mobile application"** principles. |
| | | **Transferring 40 percent of public services to the private sector**, and reducing **personal participation** of citizens **by 2 times**. |
| | | Moving to the new phase - from **"E-Government"** system to **"Digital Government"** system; ensuring digitalization of all documents and relations. |
| | | Canceling such excessive formal procedures as **writing an application, filling-in different forms by citizens** when applying for access to public services; establishing a system when **government agencies** on their own receive required documents from an electronic database. |
| | Organizing activities of public administration authorities based on the "State Serving the People" principle. | Increasing by at least **3 times** the share of private sector in such fields as healthcare, construction, transportation, education. |
| | | Performing **100 percent** digitalization of processes for implementation of about **5 thousand** functions that exist in public administration. |
| | | Decreasing by at least **20 percent** mandatory requirements included in the **Single Electronic Register of Mandatory Requirements**. |
| | | Transferring at least **30 percent** of roles and objectives of the republican executive authorities to local executive authorities within the framework of the policy on **decentralization** of public administration. |

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| | | **Introducing an institution of political accountability** for serious mistakes and deficiencies that were made by heads of government authorities with regard to activities of agencies or systems they are leading. |
| | | Targeting control functions of the state exclusively at **ensuring life, health and safety of citizens**. |
| | Further increasing the role of the Chambers of Oliy Majlis (Parliament) and political parties in building the New Uzbekistan. | Performing digital transformation of operational processes of the Parliament and its bodies, including **100 percent digitalization** of **decision making and disclosure** processes. |
| | | Ensuring the possibility of electronic communication with electorate, sending and controlling a deputy's inquiry in an electronic form. |
| | | Implementing a procedure for submission and consideration of **legislative proposals**. |
| | | Introducing a **mixed (majoritarian-proportional)** electoral system for representative authorities in order to further enhance the role of political parties in the process of deepening democratic reforms and modernization of the country. |
| | Ensuring harmonization of law drafting activities and reforms, developing institutional framework of the state's legal policy. | Reducing **by at least 30 percent** the regulatory burden as a result of optimization of laws and regulations. |
| | | Expanding the practice of adopting **direct-action laws;** increasing their share to at least **60 percent**. |
| | | Increasing to **100 percent** the coverage of laws and regulations by an effective monitoring of enforcement thereof. |
| | | Increasing by at least **2 times** the volume of **regulatory impact assessment** for draft laws and regulations. |
| | | **Increasing competitiveness of a legal system**, creating a **simplified and compact** legislative system that is convenient for population and business entities. |
| | | Radically reducing the number of **department legal acts** through identification of **specific limits for their adoption**. |

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| | Organizing state civil service based on meritocracy, integrity and professionalism principles. | Ensuring full digitalization of activities of **more than 2 thousand** structural units on human resource management. |
| | | Increasing to **100 percent** the coverage of state civil servants by continuous advanced training system. |
| | | Ensuring coverage by state civil service system of more than **70 government authorities within the framework of full engagement of the state civil service system** as stipulated in the Law "On the State Civil Service". |
| | | Increasing the number of candidates for managerial positions in the National candidates pool to at least **one thousand** people. |
| | | Implementing the **practice for assessment** of activities of the heads of government authorities and their deputies **based on public opinion**. |
| | Increasing effectiveness of a system for identification and resolution of problems of population through subsequent expansion of the dialog with citizens. | Canceling in the government authorities and organizations of a practice for registration of applications in paper format. |
| | | Creating an opportunity for submitting applications to all government authorities and organizations, as well as their territorial subdivisions, in electronic form, including through a corresponding mobile application. |
| | | Ensuring satisfaction of at least **80 percent** of applications at the local level. |
| | | Reducing the share of repeated applications by at least **2 times**. |
| | | Creating a **people's system for resolution** of socio-economic problems of territories in makhallas themselves. |
| | | Increasing to **100 percent** the possibility to **participate** in receptions of officials of republican executive authorities **in distance format through videoconferencing**. |
| | Further developing a free civil society and activities of mass media. | **Improving a system for protection of rights** of mass media, enhancing **responsibility for obstructing their professional activities.** |
| | | Consistently pursuing the policy of openness, guaranteed enforcement of exercise of rights of citizens **for acquisition, use and dissemination of information**. |

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| | Transforming Uzbekistan into a hub for civil society development. | Increasing by at least **3 times** the number of projects implemented in social partnership. |
| | | Increasing the number of non-governmental non-commercial organizations that participate in the state programs to at least **80**. |
| **4.2. Reforms to ensure the rule of law and reforms in the judicial and legal system** | | |
| | Ensuring supremacy of the Constitution and laws; transforming reliable protection of rights and freedoms of people into a key criterion for judicial and legal reforms. | Full equipping with traffic lights (with control button) of pedestrian walkways at open roads with two and more lanes in settlements. |
| | | Reducing from **30 percent to 20 percent** the number of custodial sentences. |
| | | Increasing by at least **2 times** the possibilities for **distance enforcement** of some procedural actions related to activities of courts and investigative authorities. |
| | Establishing an effective judicial control over activities of government authorities and officials, as well as further developing the administrative justice system. | Completely eliminating factors that prevent **direct application to administrative courts.** |
| | | Increasing by **50 percent** effectiveness of resolution of dispute that are settled at pre-trial stage. |
| | | Reducing by **50 percent** the number of cases submitted to courts with regard to disputes that can be resolved at pre-trial stage. |
| | | Fully implementing administrative procedural principles in **traffic-regulating signs and signals**. |
| | Increasing the level of justice administration through enhancement of independence of the judiciary and ensuring openness of its activities. | Increasing to **50 percent** the share of appeals **in electronic form** submitted to courts following the outcomes of consideration of administrative violation cases. |
| | | Ensuring **participation of a legal defender or public legal defender in 100 percent** of criminal cases that are considered in relation to business entities. |
| | | Fully implementing within the judicial system management a **principle of self-governance of judges** and establishing a system of judicial community bodies. |

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| | | Ensuring attainment of **the 0.64 score** under the Rule of Law Index of the **World Justice Project**. |
| | | Ensuring attainment of **the 61.5 score** under the Rule of Law dimension of the **Worldwide Governance Indicators**. |
| | Focusing activities of law enforcement bodies on protection of interests, honor, dignity and rights of people. | Introducing a possibility to observe, using an **individual number and QR-code**, the process - from initiation of a criminal case to sentencing, through establishing a **Single Electronic Register**. |
| | | Performing **full digitalization** of activities **on collecting and securing evidence** through implementation of modern technologies and the latest scientific achievements. |
| | | Arranging enforcement of at least **30 percent** of category of cases on enforcement of court rulings and rulings of other authorities with the **private sector** support. |
| | | Decreasing **by at least 50 percent** the number of **road traffic accidents** that lead to serious consequences. |
| | | Maintaining an electronic version of **100 percent** of criminal cases and materials; providing an electronic document control for such cases. |
| | Dramatically improving the status of advocacy institution, as well as developing a system for provision of qualified legal support. | Transferring the advocacy institution to self-governance system, **ensuring its true independence** from government authorities and other structures. |
| | | Implementing a system for advanced training of attorneys **that will be aligned with modern international standards and based on optionality principles.** |
| | | Increasing the number of attorneys by at least **2,000**. |
| | | Increasing to at least **50 percent** the share of **electronic document circulation** between attorneys and courts, law enforcement authorities and other government authorities with regard to civil, administrative and economic cases. |

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| | Increasing effectiveness of a system for preventing corruption factors, continuing in accelerated manner the work to create in the society an attitude of zero tolerance to corruption. | Attaining at least **50th rank** in the **Corruption Perceptions Index** that is compiled by the international organization “Transparency International”. |
| | | Attaining **2-times** decrease in the number of cases related to violations of regulatory requirements on public procurement. |
| | | When performing public procurement through direct contracting method, broadly introducing public control in order to prevent **the cases of embezzlement of funds, overpricing of goods and services as compared to the their market value.** |
| | | Ensuring preparation of **100 percent** of legal acts based on the principle of **“corruption-free legislation”**. |
| **V. CONSISTENT PURSUANCE OF THE POLICY BASED ON THE PRINCIPLE OF “SAFE AND PEACEFUL STATE”** | | |
| **5.1. Reforms targeted at implementation of open, pragmatic and active foreign policy** | | |
| | Consistently implementing a foreign policy of the New Uzbekistan based on the interests of the nation and the state. | Consistently continuing implementation of **open, pragmatic, active and good-neighborly foreign policy** against the backdrop of complicated processes that take place globally. |
| | | Establishing with partner countries and within the framework of reputable international organizations a **prudent and continuous dialog on regional and global issues**. |
| | | Ensuring accelerated development of **neighborliness and strategic partnership** relations with all neighboring countries, regular and effective organization of **bilateral and multilateral negotiations in political, economic, cultural and humanitarian fields**. |
| | Moving practical cooperation in Central Asian region to a qualitatively new level. | Enhancing close cooperation in the region in various priority dimensions, especially in the field of **ecology and environmental protection, rational use of water resources, further development of transportation and communications infrastructure**. |
| | | Deepening **full-scale strategic partnership and allyship relations** in Central Asia in due regard of the international law and national interests of all states in the region. |

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| | | Phased achievement of free movement of citizens in the territory of the Central Asian states, as well as **circulation of goods, services and capital without artificial limitations**, continuing work to establish a **common tourist space**. |
| | | Developing **multifaceted and mutually beneficial relations** with Afghanistan, providing close assistance to its **economic recovery**, contributing to tapping into **transportation and transit potential**. |
| | Developing mutually beneficial relationships with traditional partners, expanding the geography of international cooperation, connecting to global production and supply chains. | **Increasing effectiveness and mainstreaming economic diplomacy** in promotion and protection of the national interests. |
| | | Continuing further effective expansion of **traditional, multidimensional ties and strategic partnership relationships** with CIS countries. |
| | | Developing **trade and economic, financial, investment and technological cooperation** with European countries, further enhancing the **regulatory framework for multidimensional partner and practical cooperation**. |
| | | Strengthening cooperation with the states in Asia-Pacific Region, **increasing the volume and nomenclature of exports in the regional markets**, as well as increasing investment inflows into the country. |
| | | **Further expanding existing relationships** with the countries in South Asia, Near East and Middle East, and Africa; **developing mutually beneficial cooperation in the new and prospective areas**; establishing **transportation and logistics corridors** that connect the regions and enable Uzbekistan to enter the global market. |
| | | Further expanding **at a new level the strategic partnership and holistic cooperation** with the countries in America, in particular with the USA, strengthening relationships in the field of **investments, exports and advanced technologies.** |

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| | Becoming a full member of the World Trade Organization. | Aligning **national legislation and enforcement practice** with **rules, norms and agreements** of the World Trade Organization. |
| | | Finalizing negotiations with at least **10** foreign states annually, on the matters of entering their markets. |
| | | Arranging systematic **negotiations with WTO Member States** on the matters of market entries, effectively finalizing **WTO accession process**. |
| | Supporting compatriots living abroad, introducing a system for continuous dialog with them. | Creating comprehensive **incentives to activities of public associations** that are established by compatriots, and increasing their number to **300**. |
| | | Allocating **200 grants** for compatriots that study abroad at universities in the field of Uzbek language and literature, history, culture, arts and craftsmanship. |
| | | Implementation of **100 projects** in the field of medicine, education and science with participation of compatriots. |
| | | Increasing by **100 thousand** the number of artistic literature publications that are provided to public associations of compatriots. |
| | Improving a system for external labor migration, providing comprehensive assistance to citizens that work abroad. | Increasing by **30** the number of employment agreements with foreign states. |
| | | Organizing a vocational educational system and providing employment to citizens together **with 2 thousand foreign companies** within the framework of vocational and foreign language education together with foreign partners based on **public-private partnership.** |
| | | Reintegrating people coming back from labor migration, in particular, ensuring their **employment**, improving their **professional qualifications**, as well as promoting **entrepreneurial initiatives**. |
| | | Developing further the **international cooperation** in the field of **combating illegal external labor migration** and **human trafficking**. |

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| **5.2. Reforms to enhance security and defense potential of the country** | | |
| | Enhancing further the guarantees for exercise of rights of citizens for free search, acquisition and dissemination of information. | Ensuring **regulatory compliance** in the national information space; improving the **culture of information use**; protecting population from the **impact of alien and destructive information;** preventing **radicalization**. |
| | | Creating required conditions for **barrier-free access** to the global information network Internet; ensuring **cybersecurity in the national Internet space;** and **improving the literacy** of citizens with regard to Internet use. |
| | Strengthening further the capacity of the Armed Forces, defense capacity and military potential of the country in due regard of ongoing complicated processes in the world. | Increasing **digital capacity** and ensuring information security of the Armed Forces, improving knowledge and skills of military servicemen in use of **modern information and communication technologies.** |
| | | Improving the **morale and capacity** of the troops, improving **combat readiness and mastery** of the troops based on examination of **modern fighting methods and military conflicts**, as well as **advanced experience of foreign armies**. |
| | | Enhancing cooperation with security agencies of the Armed Forces, increasing **effectiveness and improving coordination** of joint actions. |
| | | Regular improvement of a **system for training of highly-qualified military manpower**, widely introducing **modern military training methods in educational processes**. |
| | Preventing emergency situations and disasters related to the global climate change that represent a threat to human life. | Implementing a **National System for Early Warning on strong earthquakes in the country** based on integration with the global system of international seismic observations. |
| | | Establishing a **monitoring system and early forecasting of emergency situations** in water reservoirs and other major hazard facilities. |
| | | Enhancing cooperation in such areas as ensuring single global security, **strengthening the response capacity in case of emergency situations**, prompt **information exchange** with all countries of the region, organizing **joint drills**. |

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| | Strengthening security of the borders. | Introducing widely in the State Border security system **modern technologies, communication means and technical (engineering) facilities.** |
| | | **Providing further automation of the process to ensure security of the State Border** using Artificial Intelligence technologies. |
| | | Increasing the equipping level in order to **slow down and complicate actions of illegal border infiltrators.** |
| | Enhancing the environment of interethnic concord in the society and developing friendly relationships with foreign countries. | Organizing a competition “Yosh Kitobkhon” (“Young Book Lover”) in **6 additional languages** (Karakalpak, Tajik, Kazakh, Russian, Kyrgyz and Turkmen). |
| | | **Doubling** the stock of artistic literature at schools with education in foreign languages. |
| | | **Tripling** the number of popular-scientific articles in the field of interethnic relationships. |
| | | Increasing to **60** the number of friendship societies and **doubling** the number of sister cities. |

Annex No. 2
to the Decree of the President
of the Republic of Uzbekistan
No. UP-158 dated September 11, 2023

**COMPOSITION**
**of the Republican Commission on implementation of the**
**“Uzbekistan 2030” Strategy**

| | | |
|---|---|---|
| A.N. Aripov | - | Prime Minister, *Chairman of the Republican Commission* |
| T.K. Narbaeva | - | Chairman of the Senate of Oliy Majlis |
| N.M. Ismailov | - | Speaker of the Legislative Chamber of Oliy Majlis |
| B.D. Ismailov | - | Chairman of the Supreme Court |
| A.A. Azizov | - | Chairman of the State Security Service |
| N.T. Yuldoshev | - | General Prosecutor |
| D.A. Kuchkarov | - | Deputy Prime Minister – Minister of Economy and Finance |
| A.J. Ramatov | - | Deputy Prime Minister |
| J.A. Khodjaev | - | Deputy Prime Minister |
| Z.B. Makhkamova | - | Deputy Prime Minister |
| V.V. Makhmudov | - | Secretary of the Security Council under the President of the Republic of Uzbekistan |
| R.A. Gulyamov | - | Advisor to the President of the Republic of Uzbekistan on economic development issues |
| R.K. Davletov | - | Advisor to the President of the Republic of Uzbekistan on socio-political development issues |
| G.G. Mirzaev | - | Advisor to the President of the Republic of Uzbekistan on HR policy issues |
| D.B. Kadyrov | - | Advisor to the President of the Republic of Uzbekistan on coordination of activities of law enforcement and controlling bodies |
| Sh.M. Ganiev | - | Advisor to the President of the Republic of Uzbekistan on agricultural development issues |
| M.M. Kamilov | - | Advisor to the President of the Republic of Uzbekistan on religion and interethnic issues |
| A.S. Sultanov | - | Advisor to the President of the Republic of Uzbekistan on energy security issues |
| K.I. Allamjonov | - | Head of the Information Policy Department of the Administration of the President of the Republic of Uzbekistan |

| | | |
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| B. M. Mavlonov | - | Head of Department on Legal Expertise and Comprehensive Analysis of the Administration of the President of the Republic of Uzbekistan |
| E.T. Aripov | - | First Deputy Secretary of the Security Council under the President of the Republic of Uzbekistan |
| *based on the position* | - | Chairman of the Jokargi Kenges of the Republic of Karakalpakstan, khokims (mayors) of regions and Tashkent city |
| A.A. Djurabaev | - | Chairman of the Secretariat of the Prime Minister, Secretary of the Republican Commission |

***Note**. In case when members of the Republican Commission move to another job, the persons newly appointed to the above positions shall be included in the composition of the Commission thereof.*

Attachment-12 of ANNEX-2:

# Analysis of Problems and Proposal of Solutions
## Regarding Uzbek-Japan Innovation Center of Youth

**Background:**

- After establishment of the Center under Presidential Decree No. 2602 dated September 19, 2016, only equipment value of USD43,000 was supplied by the government by now.
- Ministry of Higher and Secondary Specialized Education (MHSSE) had agreement with Japan International Cooperation Agency (JICA) for "the Project Strengthening the Capacity of Research Activities of Uzbek-Japan Innovation Center of Youth" on December 11, 2018, and the agreement mentioned clearly that *"The Uzbekistan side will make its best efforts to equip the Center with basic equipment for laboratories as the Center is eligible to apply for funds from Uzbekistan side…".*
- Unfortunately, since then, the issue of supply of basic equipment by Uzbek government has not been progressed, so that the Center is under very critical situation

**A. Root-Cause Analysis**

The analysis identifies a root-cause and several subsequent risks conducted by a Japanese expert specialized for project management, and the following is the summary of results of the analysis. (see also the attached Chart-1 "Root-Cause Analysis of risks harming UJICY's development")

**1. Root-Cause - Shortage of Basic Experimental Equipment - EQUIPMENT**

Shortage of basic experimental equipment (hereinafter referred to as "Equipment") is the direct cause of impossibility of conducting research activities at the Center. This impossibility or difficulty in research activities have made several serious consequences such as;

a) Dependency on other research institutes;
   Due to lack of Equipment, Center's researchers have been continuing their works by renting or out-sourcing part or whole of their experiments with paying fees.

b) Pressure from government bodies
   Supervising bodies (Ministries and University) accuse the Center as if they did nothing although researchers continue their research works under limited conditions. This is the huge pressure to all researchers.

c) Deterioration of motivation of researchers
   Due to the pressure from outside as well as non-efficient research environment, it is quite difficult to maintain motivation of researcher high.

2. **Weakening Financial Basis of Research Operation - FINANCE**
   Since the Center has been paying not a small amount of money to other research institute for renting or outsourcing its necessary experiments, this payment becomes huge burden for the Center currently. This makes financial base of the Center weak, and the situation will be worse after several privilege on tax and duty under the Presidential Decree is expired in January, 2022.
3. **No Accumulation of Intellectual Experience Internally - IP**
   Since out-sourcing the core part of experiment, the knowledge and experience to be gained by researchers of the Center have been flowing away to others. Without accumulation of Intellectual Property (IP) inside the Center, no sustainable development of capacity will never be achieved.
4. **Loosing Integrity of Organization and Security on Property -ORGANIZATION**
   Excessive intervention from the upper authorities of the Center has been seen as a part of pressure from them. One obvious example is that the area to be assigned to the Center is now used as classroom of lessons, meeting with parties no related to the Center and occupied by other foreign university etc. These kinds of intervention may weaken integrity as the research center, divert from original purpose of the Center. In addition, no security for physical and intellectual properties stored inside the Center venue has been deteriorated by access of unspecified number of people without control.
5. **Increasing Resignation of Researchers -HUMAN RESOURCES**
   Due to the all factors, but specially above 1 and 3, have made discouraged researcher and actually some researchers and staff have been resigned from the Center.

As a conclusion of this analysis, there are risks on five (5) areas; “Equipment (Root-Cause)”, ‘Finance”, “IP (Intellectual Property)”, “Organization & Security” and “Human Resources”. Each of the above areas is essential for sustainable development of any research institutes, so that the urgent counter-actions for preventing or remedying risks described above.

## B. Proposed Solutions

The followings are proposed solutions for current problems UJICY facing (see also the attached Chart-2);

### Solution-1 for Shortage of Basic Experimental Equipment

Since Equipment is “root-cause”, immediate remedy on this problem is the most essential and the effect to other subsequent problems (risks) are huge.

1) To procure Equipment by allocate necessary budget of Uzbekistan Government;
   List of necessary Equipment shall be prepared with indicating priority of each equipment. No need “All in one time” installation, but step-by-step installation in accordance with the priority is practical.
2) Allowing researchers of the Center to use equipment installed at other research institute and universities free-of-charge and free-access to the equipment;
   This solution shall be the alternative and/or tentative solution in case that procurement of Equipment by the government may be failed or as a tentative measure until procurement of Equipment is completed. Instructions from Ministries (Ministry of Innovative Development and/or Ministry of Higher Secondary Specialized) is essential.

In addition to the above solutions, the Center has been applying to international grant program (World Bank, Islamic Development Bank, Volks Wargen), however, these programs are too competitive to be awarded.

### Solution-2 for Weakening Financial Basis of Research Activities

There are two different aspect to weakening financial basis:

1) Allowing researchers of the Center to use equipment installed at other research institute and universities free-of-charge and free-access to the equipment;
   The same as above 1.2). To make usage fee of equipment free, financial burden of the Center will be eased very much. Instructions from Ministries (Ministry of Innovative Development and/or Ministry of Higher Secondary Specialized) is essential.
2) To extend the expiration date of privilege on tax etc. in the Presidential Decree till January 2025;
   Tax and custom duty exemption will also ease the financial environment of the Center effectively. The government actions to amend or renew the current Presidential Decree is the most important action.

**Solution-3 for No Accumulation of Intellectual Experience Internally - IP**

Accumulation of scientific knowledge, know-how and experiences experiments, technical data and valuable intellectual properties (patents) is life-line of any research center. As a joint research center with Japan the following solutions are more efficient;

1) To conduct as many as joint research activities with Japanese institutes:
   Inviting Japanese universities or institutes, the Center shall conduct joint research with using the state-of-art technology of Japan, conducting special lecture at the Center by inviting Japanese professors.
2) To establish close scientific network with Japanese institutes:
   Expanding relations with Japanese institutes and universities, the Center shall be a hub of research network between Uzbekistan and Japan

Both of the above solutions are part of currently on-going Project with JICA. In order to activate these joint activities, it is essential to equip the necessary Equipment at the venue of the Center

**Solution-4 for Loosing Integrity of Organization and Security on Property**

The misunderstanding of the purpose of the Center by stakeholders (ministries, university as well as committee of trustees) is key reason of giving the Center unnecessary pressure and making intervention. Therefore it is essential to remind the original concept of the Center;

1) To reform Committee of Trustees of the Center:
   Since the establishment of the Center, circumstances surrounding the Center has been changed although member of the Committee of Trustees, which is the highest decision-making board of the Center, doesn't changed. By amendment of Presidential Decree, the member shall be re-selected in accordance with the reality. By this reform, misunderstanding will be resolved and more active action may be taken for further development of Center.
2) To activate Committee of Trustees:
   Since 2016, the Committee didn't hold general meeting at all. It is urgent and essential to hold the general meeting of the Committee periodically, two-three times per year, for review the activities of the Center and making necessary decision-making as well as recommendation to the President.
3) To strengthen of Security of the Center:
   Strengthen the security control, in-out control, introducing id process and install secured internet line are all urgently required. As for the international standard, no

foreign joint research partner will conduct activities under the vulnerable security environment. This will be harm the opportunities of joint research activities.

**Solution-5 for Increasing Resignation of Researchers**

In order to stop “brain out-flow”, it is urgently necessary to give academic incentive to researchers in the Center who are losing their motivation;

1) To utilize JICA’s short-term training program in Japan:
   Since the current JICA Project has a program and budget for sending trainees to Japan for short-term (2-3 months), it will be effective to increase motivation to send researcher to Japan for conducting research work under the latest technology and scientific environment.
2) To activate research works at the Center:
   As for sustainable solution to stop “brain-outflow”, installing necessary Equipment at the Center and reactivate research work at the Center is the most essential.

**Chart-1**

**Root Cause Analysis on the risks of harming UJICY's development**

**CONFIDENTIAL**

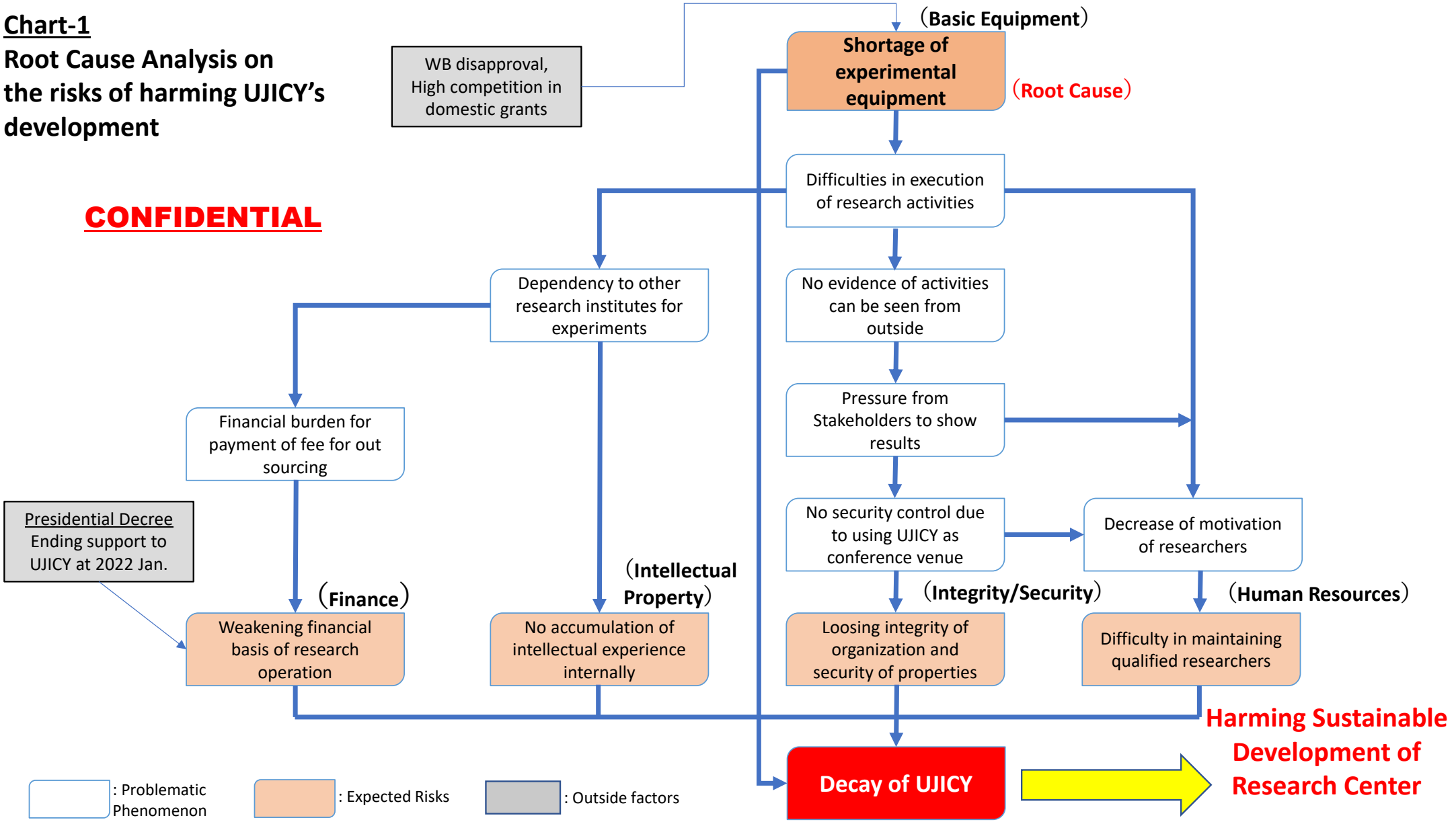
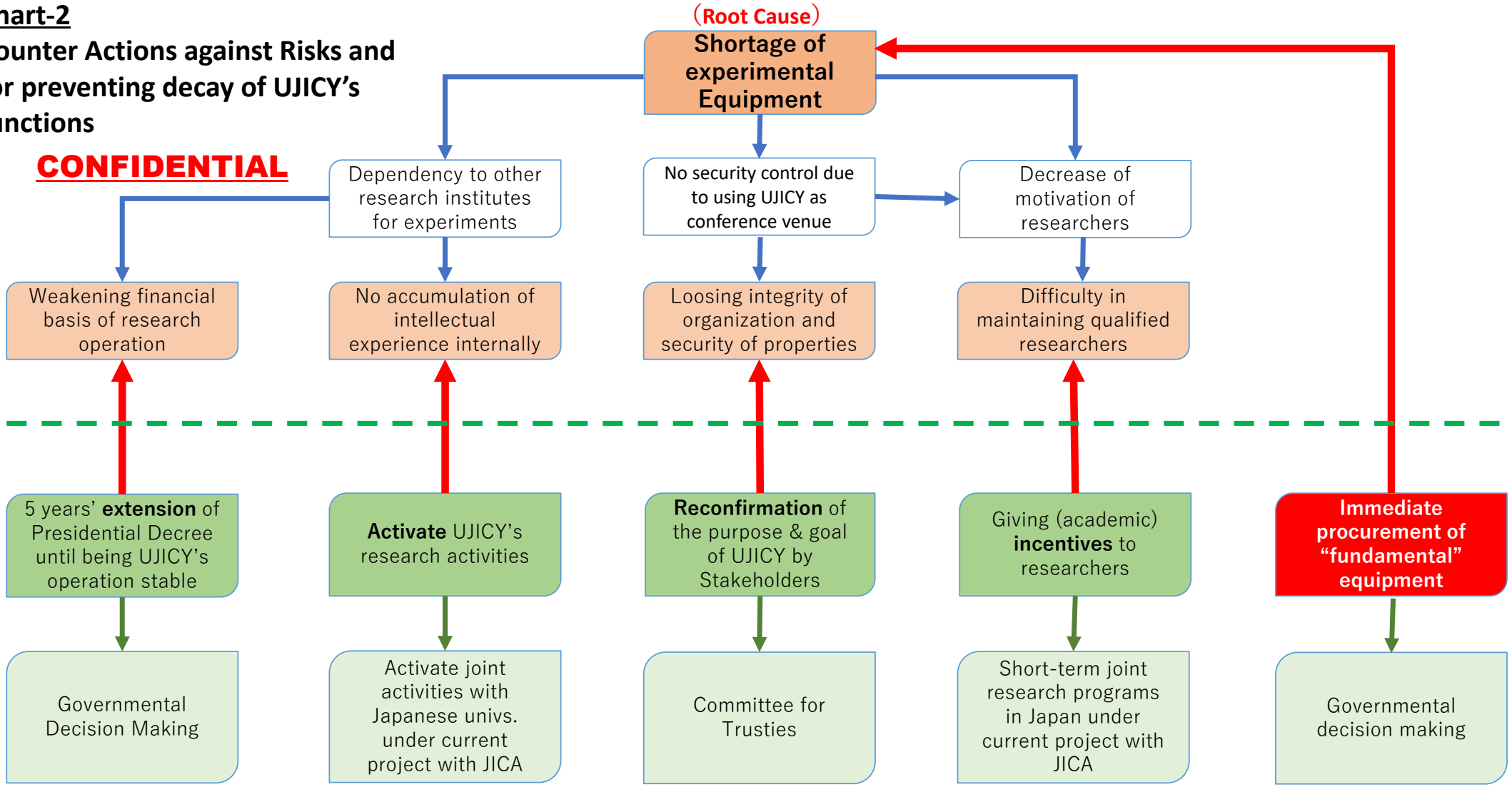


**Chart-2**

**Counter Actions against Risks and for preventing decay of UJICY's functions**

**CONFIDENTIAL**




***Proposed Counter-Actions***

*(Attachment -2 of the Minutes of 1st Joint Coordination Committee Meeting dated 2020/12/25)*

December 10, 2020
*(Revised on 2020/12/25)*

# Analysis on Potential Problems of UJICY

Prepared by:
Yukinori Yanagida
Expert for Project Management, JICA

## Current problems and future consequences

Pandemic of COVID-19 have been giving unforeseeable effects to human being in all over the world. Uzbek-Japan Innovation Center of Youth was not the exception. Since the last meeting of Board of Trustees, the Center has been facing several problems or expected to face potential problems in future.

This paper is a brief analysis on such potential problems of UJICY under current situation as of the situation of early December 2020. Therefore it is noted that some situations might be changed since then.

The problems are categorized in the following five (5) aspects;

1) Strategy and Plan
2) Insufficient human resources
3) Insufficient finance allocation
4) Delay on procurement of equipment
5) Delay of preparation of venue for implementation of equipment

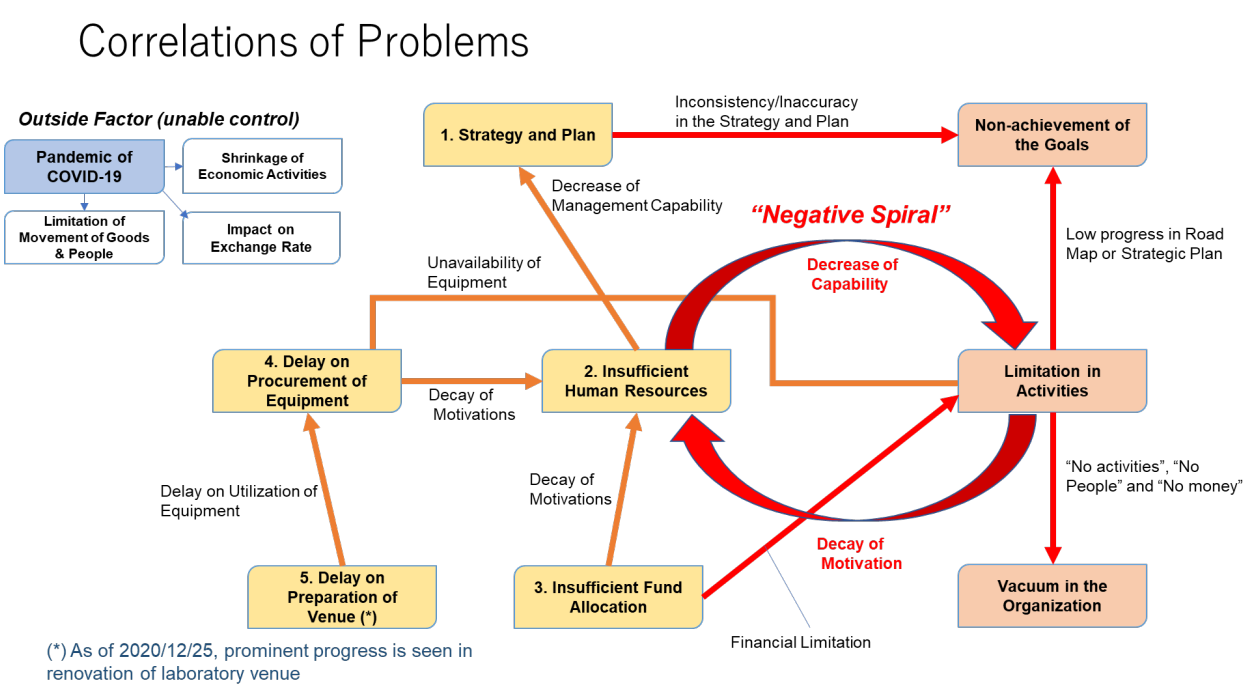
Each problem is corelated with others and the current phenomenon (problem) becomes a root cause of the other problem in future.

However, in these problems, the most serious problem seems to be 2) Insufficient Human Resources in the Center and the capability limitation in research activities as its consequence. There is a risk to induce **"Negative Spiral"** to make situations worse rapidly. (see Chart-1 in later part)
If the current problems are left without any countermeasures and the negative

spiral will be happened, there may be a risk to cause more serious consequences, such as weakening the organization and inactivation of research activities, and as the result, the Center may not be able to achieve its targets given by the Presidential Decree. It is highly essential to take mitigation actions for these problems in order to cut the negative spiral as soon as possible.

The following chart describes such correlation among the problems;

**Chart-1**




The followings are the details of each problem and proposed solutions (mitigation actions). The solutions are not limited to these proposed ones, and it is necessary to make further discussion for seeking better ones.

## 1. Strategy and Plan

### Problem:

The Center created its Road Map to achieve the targets specified in Presidential Decree and also set Long & Middle-term Strategic Plan for sustainable development (SPSD-UJICY). However, some inconsistencies are seen between the above two policies, in such key factors as targets and time for completion. And some targets and implementation schedule in Road Map seem to be ambiguous and less realistic.

**Root Cause:**

1. Inconsistency in Road Map and SPSD-UJICY. Road Map in general requires the results in short-term although SPSD is seeing longer period of time to accomplishing from the view point of reality.
2. Insufficiency of human resources and budget assigned to the Center for accomplishing the wide-range of requirements in Presidential Decree in short time. Especially no staff who have qualified knowledge of business startup related engineering exist in the Center.

**Consequent Problems:**

1. Confusion in the decision-making process in the Center.
2. More delay in implementation of the targets.

**Solution:**

1. To make more precise estimation of the necessary resources (human and finance) and review the Road Map and keep consistency with SPSD-UJICY.
2. The government shall make consideration to assist employment of qualified staff and allocation of budget based on the re-calculated necessary input.

## 2. Insufficient human resources

**Problem:** Lack of enough scientific and administrative human resources has caused the difficulty in operation of the Center and made its activities at low level. This is a root cause of the above "1. Policy Issues".

**Root Cause:**

1. Law salary and utilization of existing old building for attracting the first graded researchers and scientists.
2. Delay of procurement of equipment makes the research staff disappointed.
3. Limitation of movement enforced due to COVID-19 indirectly affected the resignation of staff as well as recruitment of new staff.

**Consequent Problems:**

1. Limitation and delay of activities of the Center in future.

2. Without necessary training for certain number of researchers and staff, the sustainability of the Centner's activities cannot be achieved. Especially senior researchers and management staff will be critical.
3. Shortage of human resources in long term shall cause further consequent problem on transferring advanced technology from outside the country and applied to domestic industries.

**Solution:**

1. Attract more researchers and staff of the Center and increase their motivations by;
   a) Increasing financial benefit
   b) Providing attractive projects ->JICA has prepared joint-research projects with several Japanese universities
   c) Providing opportunities for knowledge-building related to scientific and engineering.
2. As a part of the above solutions 1. b) and c), JICA Project has already taken the following counteractions;
   a) Providing opportunities for studying the latest technology and engineering knowledge in Japan as well as acquiring degrees,
   b) Prompting several joint research projects with Japanese universities and concluded three (3) MOU for collaboration in the research fields,
   c) Conducting and planning seminars and workshops in Uzbekistan by visiting scientists from Japan (although it is currently suspended due to COVID-19).

**3. <u>Insufficient financial allocation</u>**

**Problem:** The Center is in chronical shortage of operational budget for conducting the required research activities, purchasing consumable chemical etc. The government has been requiring the Center to be self-financed operation by contracting paid-research projects with the outside or acquiring grants from domestic/international organization.

**Root Cause:**

1. No Budget allocation for operation nor grant of projects from the government.
2. The Center is not ready to conduct commercial research works due to

the shortage of human resources and equipment.

**Consequent Problems:**

1. Limitation and delay of activities of the Center in future.
2. Decrease motivation of researchers in the Center, who cannot execute experiments or projects due to the lack of finance.

**Solution:**

1. To make realistic plan for "self-standing" of the Center in long-tern
2. To inject, for limited period, operational budget by the government for certain period. As for this aspect, JICA has started to assist the Center financially by establishing MIRAI Fund from November 2021. However, as the scale and operation period of the Fund is limited, the assistance from the government of Uzbekistan is remarkably essential.
3. To accelerate preparation of research infrastructure (equipment)
4. To keep seeking grant from outside

## 4. Delay of procurement of equipment

**Problem:** Procurement of necessary equipment is undergoing but due to COVID-19, the delay on procurement process has become critical. Delay of the procurement has given negative impact on currency rate and delivery, and accordingly the equipment list endorsed by Japanese side has been modified two times. Currently the verification of the contracts at the government are still going on and further delay will put the Center's activities critical.

**Current Remarkable Progress** (reported at Joint Coordination Committee Meeting dated December 25, 2020)

As of 2020/12/25, the contracts of 10 out of 12 of equipment have been approved at verification committee of the government and ministry of finance. If the necessary arrangement of L/C can be completed within this year, the equipment shall be delivered in May 2021. One of the remaining items need to the suitable place for installation due to heavy weight. It needs discussion and solution among the government.

If issuance of L/C will be smoothly done, the risk will be eased.

**Root Cause:**

1. Closedown of offices and companies by pandemic of COVID-19
2. Complicated procedures in approval at government and banking process to issue L/C.
3. Change of Price of equipment due to exchange rate between USD and UZS, mainly due to COVID-19.
4. Delay in internal authentication caused by the resignation of Director in late November.

**Consequent Problems:**

1. Stagnation in activities of the Center due to inability of experiment because of lack of necessary equipment, and consequently causing decline of motivation of researchers and increase leaving the Center.
2. Inability to apply international/domestic competitive research grants, and consequently, the Center cannot get grant fund.
3. Delay on promoting resident researchers.

**Solution:**

1. The government shall provide assistance for acceleration of required verification procedure and banking procedure (acquiring L/C), which the Center cannot make necessary influences, in order to prevent further delay.

## 5. Delay of preparation of venue for installation of equipment

**Problem:** It was found that the current on-going modification works at the Center's premises is normal "class room" feature, and that it would not have necessary utility supply as well as safety features for using experimental equipment to be procured.

**Current Remarkable Progress** (reported at Joint Coordination Committee Meeting dated December 25, 2020)
As of 2020/12/25, the first floor of the Center is currently under renovation for laboratory and necessary furniture and utility supplies shall be ready by the delivery of procured equipment in May 2021. Accordingly, if the renovation works will be completed as schedule, the item will not be a risk anymore.

**Root Cause:**

1. Not proper design and renovation.
2. Budget for such safety feature has not been allocated.

**Consequent Problems:**

1. Purchased equipment may not be placed in the premises because the area will not meet the installation requirement.

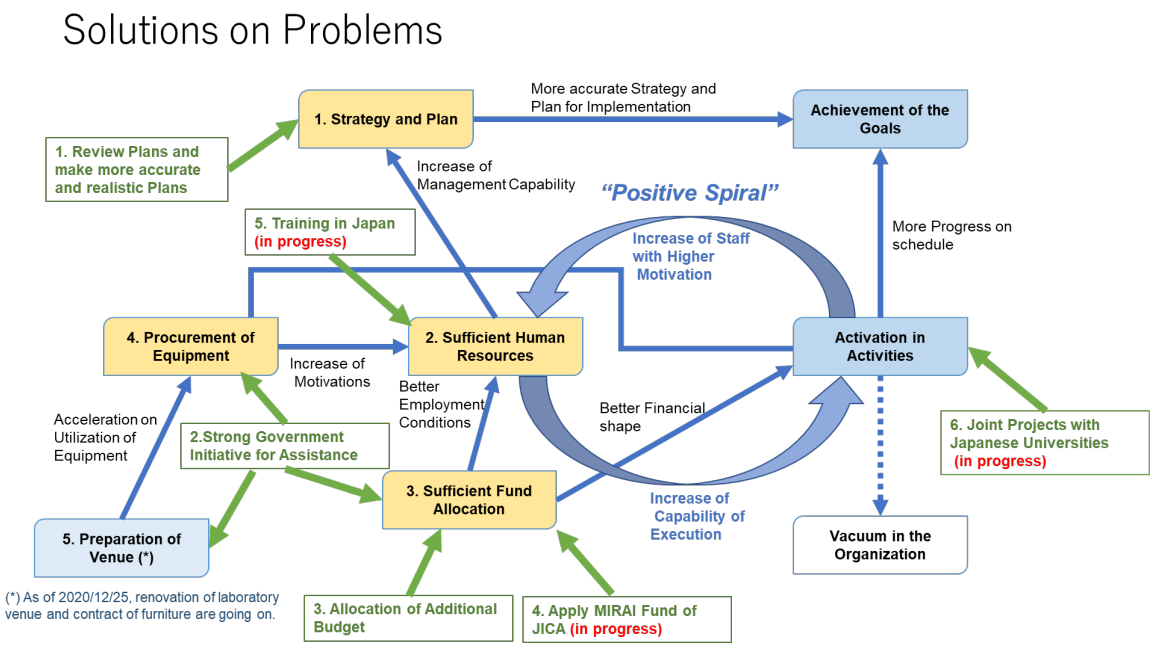
**Solution:**

1. Immediate allocation of budget for such renovation.
2. Redesign the renovation of the current building with minimal requirement of safety and power supply. It is not realistic to build a new building for the Center.
3. For the time being, evacuate equipment at the other venue, such as science institutions or universities for early utilization.

## Conclusion:

Because of the correlations of each problem, a result of a solution will affect to others. The following chart is describing the positive chain reactions caused by the countermeasures against problem;

## Chart-2



It is worth to mention here that the improvement on human resource and activation of research activities can turn the Negative Spiral into a “Positive Spiral” which enables entire situations better. For this purpose, JICA has already offered and implemented some resolutive actions specially for problems in human resource, research activities, and provided finance assistance through its project for “Strengthening the Research Capability of UJICY”.

Not all of the above problems can be solved by the Center’s self-effort, since the root causes of problems seem to be beyond the capability and authority of the Center, and the followings are currently the most needed areas:

- issuance of L/C at bank for procurement of equipment,
- making the employment conditions more attractive for high-skilled scientists, engineers and specialists and
- providing additional budgetary support to the Center in limited period until the Center becoming self-standing financially.

Therefore, the solutions shall be a combination of self-effort of the Center and the strong initiative of the government. (End)