Republic of Kenya
Kenya Medical Research Institute□

Project Completion Report
Project for Research Capacity Building at Kenya Medical Research Institute

March, 2025

Japan International Cooperation Agency (JICA)

Kenya Medical Research Institute (KEMRI)

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Kenya Medical Research Institute (KEMRI),
Japan International Cooperation Agency (JICA)

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Abbreviation

CDC: Center for Disease Control and Prevention
DCS: Directorate of Cooperate Services, KEMRI
DG: Director General, KEMRI
DRD: Directorate of Research and Development, KEMRI
EARIMA: Eastern Africa Research and Innovation Management Association
EOJ: Embassy of Japan
GoK: Government of Kenya
HQ: Headquarter
INORMS: The International Network of Research Management Societies
HRD: Human Resource Department, DCS, KEMRI
RMAN-J: The Research Manager and Administrator Network Japan
JCC: Joint Coordination Committee
JICA: Japan International Cooperation Agency
KCCP: Knowledge Co-Creation Program by JICA
KEMRI: Kenya Medical Research Institute
KPI: Key Performance Indicator(s)
LMS: Learning Management System
M/M: Minutes of Meeting
MOFA: Ministry of Foreign Affairs
MOH: Ministry of Health
NCD: Non-Communicable Disease
NIID: National Institute of Infectious Disease, Japan
NTD: Neglected Tropical Diseases
ODA: Official Development Assistance
PDM: Project Design Matrix
PO: Plan of Operation
SATREPS: Science and Technology Research Partnership for Sustainable Development
SARIMA: Southern Africa Research and Innovation Management Association
SDGs: Sustainable Development Goals
TCP: Technical Cooperation Project
TDP: Talent Development Plan
TICT: TCP In-country Training
R/D: Record of Discussions
RMA: Research Management and Administration
UHC: Universal Health Coverage
WARIMA: Western Africa Research and Innovation Management Association
WHO: World Health Organization

Project Completion Report

I. Basic Information of the Project

1. Country

Republic of Kenya

2. Title of the Project

Project for Research Capacity Building at Kenya Medical Research Institute

3. Duration of the Project (Planned and Actual)

From 4 March 2022 to 3 March 2025 (three years, actual is same as planned)

4. Background

This technical cooperation Project for Research Capacity Building at Kenya Medical Research Institute (TCP, KEMRI) contributed to KEMRI, with which the Japanese Government through JICA has cooperated for over 40 years through technical cooperation including long-term & short-term training and third-country training, grant aid, etc., since 1979, in strengthening human resources, such as effective human resource development systems, targeting research and administrative directorates, and to enhancing a network in Japan, East Africa and international network.

To respond to infectious diseases including emerging and re-emerging infectious diseases in Kenya and Africa, it was an urgent issue to strengthen the capacity of KEMRI to respond to health crisis management in addition to its current research on infectious diseases during normal times. To strengthen organizational governance including strategic human resources and budget allocation, it was important to develop KEMRI's talent development plan and human resource development system.

Before this project was requested by the Kenyan government to the Japanese Government, the final report of the ‘Data Collection Survey on Capacity Development for Infectious Diseases including COVID-19 in Kenya’(hereinafter referred to as “Data Collection Survey”), which was implemented by JICA Kenya Office with the full cooperation of KEMRI and others, was completed in April 2021. In this report, the necessity of this project was confirmed as a necessity for technical aspects

of cooperation. In addition, the necessity of facilities and hardware was also confirmed, and a Grant Aid Project was also requested to the Japanese government by the Kenyan Government.
The above-mentioned report was used as a source of information when implementing the TCP.

In the course of the Survey before the TCP started, KEMRI's strategy paper, and brainstorming meetings for the Survey to hear KEMRI's opinion, indicated the importance of and need for strengthening research capacity through human resource development to provide quality healthcare services in response to the Ministry of Health's mandate, which is KEMRI's primary mission. This led to the initiation of this TCP, which was implemented jointly by KEMRI and JICA.

KEMRI's human resource development includes mentorship within the departments, the operation of KEMRI Graduate School which trains young researchers, and training opportunities obtained ad-hoc on international collaboration projects basis. The system needs to be designed to strengthen the capacity of researchers and administrative staff on a systematic, organization-wide human resource development system basis.

5. Outline of the TCP

After the TCP started, a needs survey and gap survey on human resource development for KEMRI based on subjective data from interviews were implemented, and together with counterparts and JICA Experts, pilot capacity-strengthening internal training plans were formed based on this. One of the first steps was the development of internal training courses and a plan to develop and use the KEMRI learning management system (LMS) for human resource development materials kept and reused. Using initial pilot training courses implemented by KEMRI management, JICA short- and long-term Experts, etc., KEMRI has worked to develop a system that KEMRI can provide high-quality training to junior researchers and administrators, lectured by the senior and middle researchers and administrators, in addition to relying on mentors, TCP worked for KEMRI to develop the Talent Development Plan (TDP).

For researchers and above, the project aims to establish an optimal training system at KEMRI, including the above e-learning system and hands-on training, with the cooperation of external organizations, including Japanese organizations, based on several models, and OMICS-related scientific field was recognized as one that become more important in the future and TCP provided seven times of pilot internal training courses, including hands-on training. It was aimed to establish

optimal training materials for LMS, which KEMRI Graduate School and TCP collaborated for development. KEMRI expanded networks with external research organizations, including Japanese organizations.

Furthermore, as the importance of research management and administration (RMA) in research institutions were increasing worldwide to strengthen institutional research capacity, KEMRI has started training RMA internally with TCP's cooperation. KEMRI has been working on the introduction of RMA to multiple administrative departments and directorates to strengthen the research capacity of the organization as a whole by researchers and RMA staff working together. KEMRI is considering collaboration with Japanese Universities, INORMS, SARIMA, EARIMA, and WARIMA, and has been planning to exchange various views with RMA networks. KEMRI was willing to consider leading an RMA network with the East Africa Region as the main body in the future.

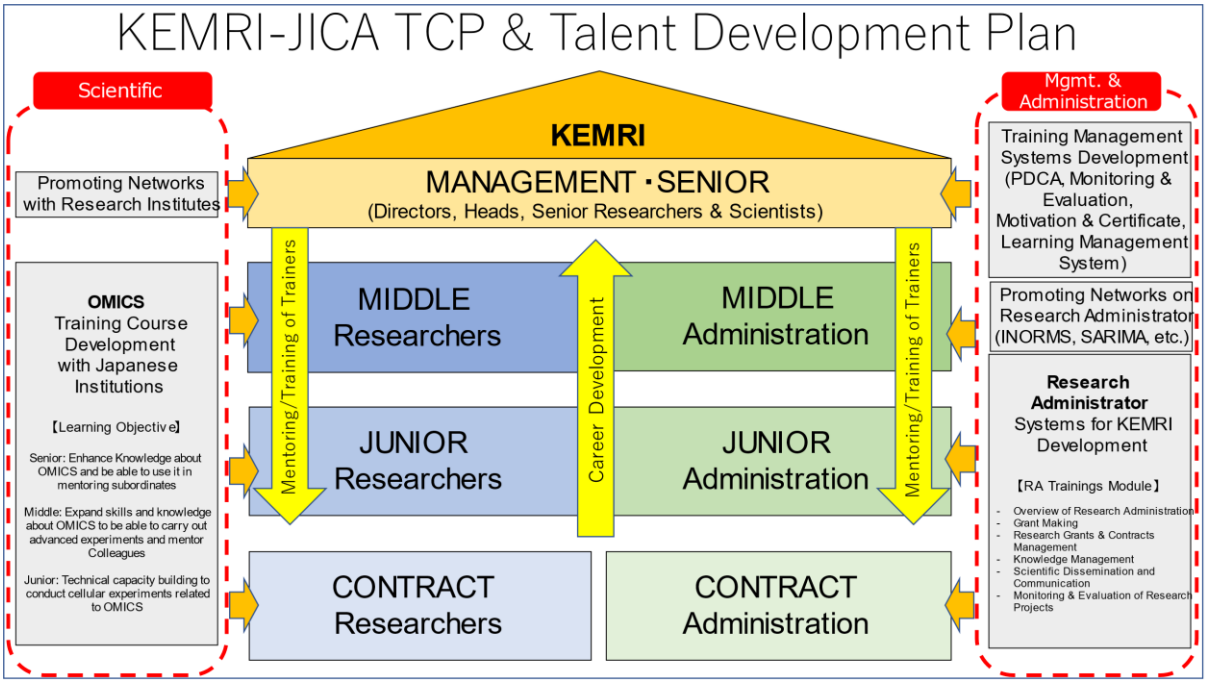

Figure 1. Conceptual Diagram of the Internal Training by the TCP

6. Overall Goal and Project Purpose (from R/D)

	Original version (November 2021)	Amended Version (January 2023)
Overall Goal	Health emergency preparedness is strengthened towards attainment of Universal Health Coverage (UHC) in Kenya and East Africa Region.	New concepts from the KEMRI Talent Development Plan (TDP) are applied to human resource development across the entire institute.
Project purpose	The system for capacity development for scientists at KEMRI is strengthened.	The system for capacity development for KEMRI staff is strengthened.

Reason for revision of PDM in January 2023: As this Project was carried out in two phases, following a needs assessment and preparations for the start of internal training in the first year, a detailed planning survey by JICA was carried out about a year later to confirm the framework of the project and to reflect specific activities in the PDM.

Reason for revision of overall goal: To better reflect the contribution made by the achievement of the Project goal in the Overall Goal, according to the Minutes of Meeting dated 18th January 2023.

Reason for revision of project purpose: To reflect a more appropriate form of officialization of TDP in KEMRI, according to the Minutes of Meeting.

Outputs of the Revised PDM (PDM 1):

Output 1. A holistic TDP for core research & development, including monitoring & evaluation system is developed.

Output 2. Capacities for advanced research & development and innovation among scientific staff are enhanced.

Output 3. Capacities for grants management of KEMRI staff are enhanced.

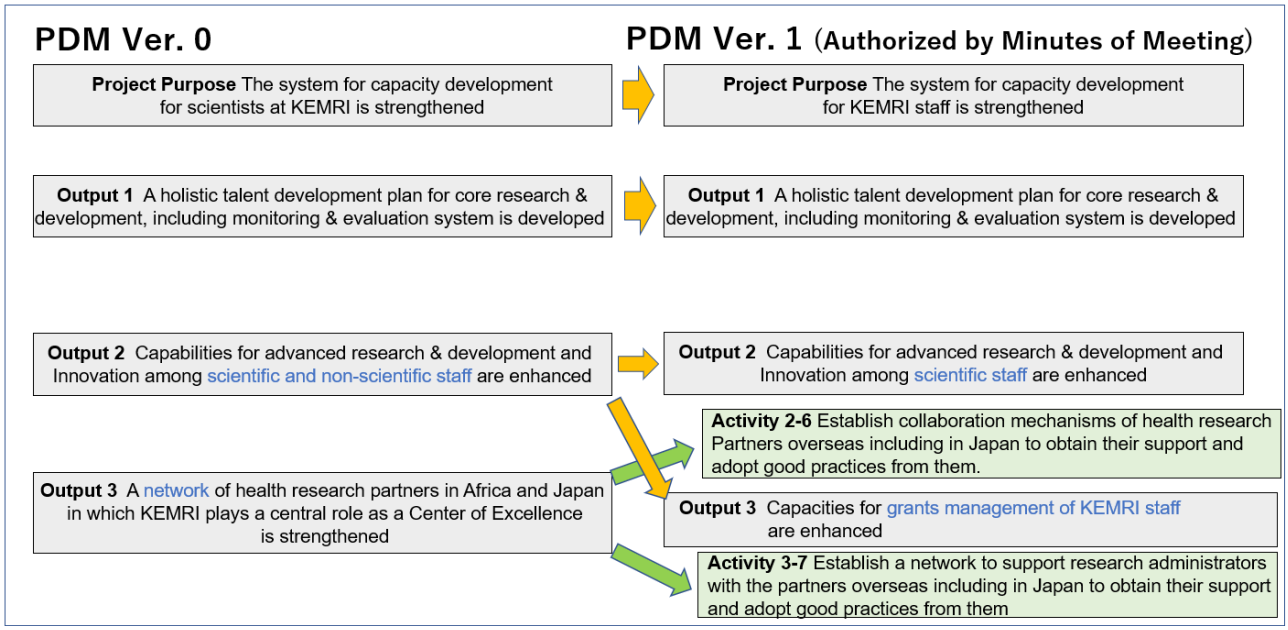

Figure 2. Project Design Matrix Revision (Jan. 2023)

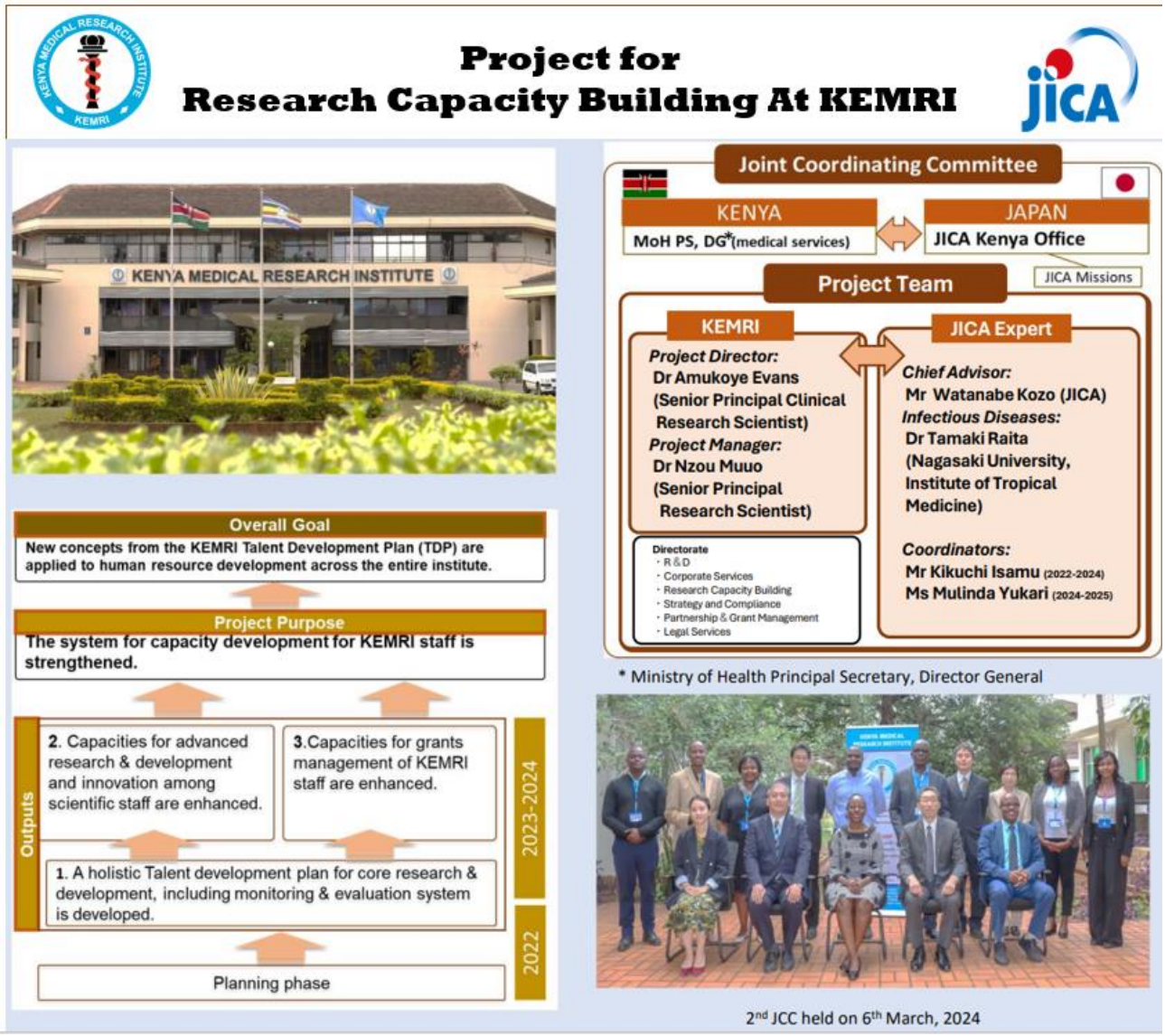

Figure 3. Project Outline at a Glance

7. Implementing Agency: KEMRI

- Project Director: Senior Principal Clinical Research Scientist, DRD, KEMRI
- Project Manager: Principal Investigator, DRD, KEMRI
- Technical Counterpart Directorate: Directorate of Research Development (DRD), Directorate of Corporate Services (DCS), Directorate of Research Capacity Building, Directorate of Strategy & Compliance, Directorate of Partnerships & Grant Management, Directorate of Legal Services

A Joint Coordinating Committee (JCC) was established and its functions were stipulated in Section 3.3 of the Basic Principles for Technical Cooperation.

II. Results of the Project

1. Results of the Project

1-1 Input by the Japanese side

Item	Actual Input
1) Expert dispatch	Long Term Expert Dispatchment Total: 4 ✓ Chief Advisor: 1 ✓ Infectious Disease: 1 ✓ Project Coordinator: 2 Short-term Experts Dispatchment Total: 5 times ✓ Lecturers for training courses and workshops: 5 Note: Although not classified as a dispatched Expert, a professor from the Nagasaki University Kenya Branch contributed to the project by lecturing and LMS training material development in four internal training sessions and participating in workshops.
2) Receipt of training participants	Receipt of training course in ✓ KEMRI internal training: 43 in total (completed participants) ✓ Country-focused Training in Japan: 16 in total (Three times in each fiscal year) ✓ JICA Knowledge Co-Creation Program (KCCP) on "To strengthen the relationship with NIID, one laboratory specialist was sent to JICA's KCCP training on HIV/AIDS-focused laboratory technology": 2 (in JFY 2023, 2024) ✓ TCP organized Intensive Workshops: 5 times
3) Equipment Provision	3,701,250Kshs (¥ 4,453,529 / 1Kshs＝￥1.20325 as of Feb. 2025) was spent on the following main equipment procurement: Server, Printer, TV monitor, Video Camera, VR/AR Equipment, UPS power Backup System, Computers, etc. In addition, to reduce the effects of inflation and the rising cost of fuel due to changes in the international situation, additional funds were allocated to support the strengthening of KEMRI's functions through the enhancement of equipment, and as part of this, a protein synthesizer, freezer and biosafety cabinets were procured.
4) Overseas activities cost	39,804,159Kshs (¥42,837,928 / 1Kshs＝￥1.20325 as of Feb. 2025) was spent on the following: Staff salaries of national project staff Project car rental Office supplies and consumables Training Activity costs Travel expenses, etc.

1-2 Input by the Kenya side

Items	Actual Inputs
1) Counterpart assignment	Counterparts were assigned, including the Project Director and the Project Manager from the DRD, two administrative staff from the DCS, etc.
2) Project Office	The project office was provided at the KEMRI Training Center Building.
3) Local operating cost	Electricity and daily cleaning costs, etc. for the project office were secured at KEMRI expense. Part of the workshop's organizing cost was also covered by KEMRI.

1-3 Activities (Planned and Actual)

[Activity 1.1] Develop TDP based on the role of KEMRI as a center of excellence in medical research.

(Done) During the actual planning and implementation of the internal training, incorporating the practical know-how and tools gained there, and the incorporation of knowledge about training and organizational management appropriate to KEMRI's circumstances, the KEMRI project members and JICA experts discussed the content thoroughly and divided up the writing, and the first TDP was completed. The TDP was approved in December 2023 by the KEMRI management. The TDP was revised after implementation, discussions among the project technical teams, and comments from JICA Headquarters and JICA Kenya Office in August 2024 and was approved in October 2024 by the KEMRI management.

[Activity 1.2] Identify the gaps that currently exist in scientific skills across KEMRI staff to deliver its research mandate based on TDP.

(Done) During the first year, a comprehensive list of scientific and administrative skill gaps was identified after a thorough review of the organization structure, human resource manuals, and data from a skills gap assessment conducted at KEMRI.

Participants of the training needs consultation workshop in 2022 organized by the Project, expressed a very wide range of needs, but also the importance of maintaining and transferring skills through practical work in the research sector, the need for collaboration between departments (which are in fact siloed according to the participants), and strengthening research management, including monitoring and evaluation. The importance of a broad range of relevant knowledge areas was mentioned.

Based on the above workshop, priorities were identified through discussions with project members and KEMRI Management in the research area, 'knowledge and practical training' in technical areas related to OMICS (the bibliometric analysis showed KEMRI's gap in the virology).
There are many items that require staff training prepared by KEMRI. The KEMRI Skills Gap Templates (Year 2022), which are included in the TDP (Ver. 2), list a great many training items that need implemented by KEMRI to the staff.
Scientific skill gap fields identified include OMICS, bioinformatics and biostatistics skills, laboratory management, animal lab use, biosafety and biosecurity measures, study designing, epidemiology skills, surveillance, and pharmacovigilance skills. Nonscientific skills required for scientists included health systems and policy management, knowledge management and dissemination, scientific communication, and intellectual property management skills among others. Research administration skills gaps were also identified as including grants management skills, budgeting skills, financial reporting skills, competency-based recruitment, HR analysis and big data, performance management skills, contract management skills, partnerships and collaborations management, asset management, risk-based auditing, etc.

In the first fiscal year's training in Japan which took place from February to March 2023, the purpose of the training was to learn and also observe the situation of human resource development efforts in each of the Japanese institutions that was visited. Based on the KEMRI skill gaps and those observed in Japan by the counterparts, the project team prioritized skills to train based on urgent needs and in line with the KEMRI strategic plan, and available resources.

[Activity 1.3] Identify fields of training that are necessary for KEMRI to close the gaps identified in 1-2.

(Done) Based on the above Activity 1.2, for OMICS-related scientific fields, a series of topics related to experimental techniques in laboratories, and for the Administration area including grant management, and RMA-related knowledge were selected for the KEMRI's internal training to be conducted in the FY2023.

[Activity 1.4] Develop a training plan and program based on the analysis in 1-3.

(Done) A training plan framework has been developed. It elaborates the purpose of training, targets to be trained, and the training methodology. The training plans were included in the appropriate chapter of the TDP as 2.2 for the Scientific field and 2.3 for the RMA field.

[Activity 1.5] Develop a plan to introduce a repository system.

(Done) Plans were made to create a repository / LMS, and discussions had taken place with various departments within KEMRI that had repository systems and potential stakeholders, including the ICT department, the knowledge management department, which has a research repository, and the KEMRI Graduate School, which was planning to establish an LMS. As a result, the project has developed an LMS development and operations plan. This plan was included in Section 2.6 of the TDP.

[Activity 1.6] Establish a pilot repository system as a training platform.

(Done) To prevent duplicating efforts by the KEMRI Graduate School and TCP, and sustainable operation by KEMRI, the project team collaborated with the KEMRI Graduate School, ICT Department, and Human Resource Department, etc. to create a KEMRI's common LMS platform. The system was based on the Moodle software and was equipped with functions such as curriculum setting, repository management, downloading content, examination, and certification. The project procured a server needed to store KEMRI's internal training content including videos.

[Activity 1.7] Evaluate and adapt the pilot repository system for integration into the system of KEMRI.

(Done) After evaluating continuity and cost for sustainable implementation between KEMRI ICT staff's development and maintenance services and contract out to the outside ICT companies in terms of price and services, the project supported KEMRI's internal development and maintenance of the LMS, while the servers for storing LMS training content were to be installed in KEMRI's server room, procured by the project. The LMS was hosted at the KEMRI Graduate School, as a part of KEMRI's system as of March 2025.

[Activity 1.8] Monitor progress and impact of implementation of TDP.

(Done) The impact of implementation has been monitored through pre-and post-tests, questionnaires for seven times of one or two weeks of scientific training courses, and focus group discussions for the first RMA training course with lectures and workshops aligned with TDP.

Project members held monitoring and self-evaluation discussions on project activities, including TDP, before and after JCC meetings, Monitoring Reports preparation, and JICA Mission visits.

[Activity 1.9] Revise the TDP as needed based on the analysis in Activity 1.8.

(Done) After implementation, based on discussions among the project's technical teams and feedback from JICA Headquarters and the JICA Kenya Office in August 2024, the TDP was revised and approved in October 2024 by the KEMRI management.

[Activity 2.1] Identify specific and priority trainings for scientific staff as a part of TDP.

(Done) Scientific training prioritized OMICS techniques as per Data Collection Survey's recommendation. The bibliometric analysis showed that strengthening the capacity of the virus sector was important to specify the OMICS-related training.

Components of the training included Cell Culture, Isolation, Serology, Expression of Protein, Subcloning, PCR, Immunochromatography.

[Activity 2.2] Conduct the master training courses for KEMRI staff by both internal and external experts.

(Done) The internal training courses began on 19th June 2023 to 4th November 2024. They were facilitated by a Professor from Nagasaki University four times and a Professor from Sanyo Women's College three times, each course was one to two weeks long.

TOPICS OF THE LECTURE	PERIOD	LECTURER
Cell Culture Techniques	19th June 2023-23rd June 2023	Nagasaki University
Virus isolation & CPE Observation	31st July- 11th August 2023	Nagasaki University
Serological examinations (ELISA) Virus titration tests and Neutralization tests	23rd -27th October 2023	Nagasaki University
Expression and purification of recombinant protein in E. coli	21st -30th August 2023	Sanyo Women's College
Subcloning	11th -22nd March 2024	Sanyo Women's College
The Diverse Research Applications Based on PCR	20th August – 5th September 2024	Sanyo Women's College
Infectious disease surveillance and diagnostics & Development and optimization of immunochromatographic (IC) test kits	29th October to 4th November 2024	Expert & Nagasaki University

Table 1. Scientific Field Internal Training Courses Organized by the TCP

[Activity 2.3]: Conduct Training of Trainers (TOT) by the master trainers for specific training courses.

(Done) The 21 participants who fulfilled the pass rate (See page 22) of scientific internal training courses conducted in FY2023 were certificated and they were recognized by KEMRI management as candidates for trainers. The Workshop on 'Comprehensive review of LMS development and pilot training for TOT' was held in Nakuru from June 3 to 7, 2024, and KEMRI staff (21 internal training participants, and others) who were expected to become trainers learned about e-learning, LMS, training evaluation, etc., and also discussed how to use the video teaching materials for LMS created by the project. A short-term expert from Nagasaki University participated as a lecturer.

[Activity 2.4] Provide training courses for scientific staff using a combination of training methodologies best suited to the skills required.

(Done) In addition to the internal training courses implemented by the project of Activities 2.2 and 2.3, on December 11, 2024, an internal training workshop was held for KEMRI's internal training participants from the Scientific and RMA fields. The TCP Expert and Project Manager lectured and introduced courses provided by Elsevier on RMA, and training packages provided by the US CDC on laboratory techniques using VR, introduced to the KEMRI staff so that the participants could be able to obtain international standards by using those media.

[Activity 2.5] Conduct workshops to enhance the mentorship among KEMRI staff.

(Done) At the Workshop on 'Comprehensive review of LMS development and pilot training for TOT' held in Nakuru from June 3 to 7, 2024, the project counterpart served as a lecturer and gave a lecture on mentorship, and the participants discussed the importance of mentorship at KEMRI.

[Activity 2.6] Establish collaboration mechanisms with health research partners overseas including in Japan to obtain their support and adopt good practices from them.

(Done) The NIID (National Institute of Infectious Diseases) is a key organization in Japan's infectious disease prevention and research efforts. KEMRI has yet to establish a partnership with NIID, and through this project, KEMRI has taken steps to send two training participants to the NIID-JICA Knowledge Co-Creation Program, an HIV laboratory training course. Additionally, during three times of country-focused training programs of the project, KEMRI learned about Japan's surveillance systems and advanced genome-editing tools like CRISPR-Cas9, etc., made possible by training visits to the NIID. Moreover, significant groundwork has been laid for the signing of an MOU between the two institutions. Building such a partnership with NIID was

expected to significantly enhance KEMRI's capabilities and contribute to its overall development in the future.

KEMRI and Nagasaki University have maintained a collaborative relationship in research and educational initiatives for over 40 years. In this project as well, significant contributions were made to nearly all outcomes through the dispatch of a long-term expert, training conducted by resident faculty, LMS training led by short-term experts, and country-focused training courses in Japan for KEMRI researchers and RMA staff. On-site training included OMICS-related training with four hands-on sessions and lectures on surveillance, while the training programs in Japan guided topics such as virology, joint laboratory management, biobank management, and bibliometric analysis, which contributed to preparatory training related to grant aid cooperation and quantitative analysis of KEMRI's research capacity. For the LMS, discussions advanced regarding the utilization of content developed and operated by the Institute of Tropical Medicine, Nagasaki University. This progress addresses one of the major challenges of the project's key outcome—the expansion of content on the LMS platform. Moving forward, Nagasaki University will continue to serve as an important partner for KEMRI in research and educational collaborations, and this project has played a vital role in reinforcing that partnership.

A business trip to Uganda was made by the project counterparts from October 16th to 19th 204, with the aim of learning about the experience of implementing training using VR at Makerere University in Uganda, and plans were made for strengthening future cooperative relationships with the university and KEMRI.

[Activity 3.1] Prioritize the capacity development needs for research administrators in KEMRI.

(Done) RMA-related knowledge has been identified as the priority training need for the administrative staff of KEMRI in line with the KEMRI strategic plan and Data Collection Survey's recommendation, etc. RMA which encompassed a combination of Grants management, Human resource management, Finance & Procurement, Public Relations, Monitoring& Evaluation, Knowledge Management, etc., topics were prioritized for RMA training course contents.

[Activity 3.2] Develop a necessary virtual training system for research administrator to support researchers as a part of TDP.

(Done) A series of RMA internal training courses were planned and held in FY2023 (Activity 3.3) to meet KEMRI's needs for RMA capacity development, and the lecture videos were recorded as LMS teaching materials. First, we discuss the implementation of the RMA training.

With the cooperation of research administrators at Kyoto University and an Expert as lecturers, the project held a series of online and face-to-face lectures and workshops in FY2023 on a wide range of topics related to RMA for internal training participants of KEMRI, potential lecturers selected from the administration-related departments within KEMRI. At the same time, in order to address the need to promote collaboration between multiple departments related to RMA work, which was recognized by KEMRI staff as an issue, the project held collaborative workshops called the 'RMA Mapping Project', and worked to visualize RMA work process across departments within KEMRI. During this training activity, the online and face-to-face lectures were recorded covering a wide range of topics related to RMA as video materials in the LMS.

[Activity 3.3] Provide trainings for selected KEMRI staff as research administrator using a combination of training methodologies best suited to the skills.

(Done) As explained above in Activity 3.2, the project held a series of online and face-to-face lectures and workshops in FY2023 on a wide range of topics related to RMA for internal training participants of KEMRI. At the same time, the project held collaborative workshops called the 'RMA Mapping Project', and worked to visualize the RMA work process across departments within KEMRI. In January 2024, a one-week intensive workshop was held in Nakuru to learn about RMA knowledge and strengthen the network of staff across a variety of departments. At that time, a lecturer on RMA from Kyoto University was invited as a JICA short-term expert.

TOPICS OF THE LECTURE	PERIOD	LECTURER
Introduction to University Research Administration	31st July 2023	Kyoto University
Introduction to the PDCA Concept	31st July 2023	Expert
Problem-Solving Utilizing Mapping Strategies	14th August 2023	Kyoto University
SWOT & Why Why Analysis	14th August 2023	Expert
Research Administration at Kyoto University: Theory and Practice	31st August 2023	Kyoto University
Business Communication HoRenSo	31st August 2023	Expert
Research Grants and Contract Management	23rd October 2023	Kyoto University

Monitoring and Evaluation	23rd October 2023	Expert
Program Evaluation	30th November 2023	Kyoto University
Leader and Leadership	30th November 2023	Expert
Cooperation and division of roles among departments within the organization in RA-related work	7th December 2023	Kyoto University
Scientific Communication and Dissemination	7th December 2023	Kyoto University
Organization and Leadership for Research Administration	17th January 2024	Kyoto University
Research Strength Analysis and Its Use	17th January 2024	Kyoto University
Research Project Management Methods	17th January 2024	Kyoto University
Continuous Professional Development – How it Works?	17th January 2024	Expert
Efforts to strengthen RMA in Kenya and the need to strengthen RMA in Kenya	11th December 2024	South East Kenya University

Table 2. RMA Internal Training Courses Organized by the TCP

[Activity 3.4] Monitor the performance of the trained staff as research administrator.

(Done) After receiving approval at the JCC meeting in March 2024, the project implemented the first RMA training evaluation, hearing the KEMRI staff opinions who had participated in the RMA internal training by four times of focus group discussions between April and May 2024. The project then compiled the results into an RMA training evaluation report and submitted it to KEMRI management and JICA.

[Activity 3.5] Review and improve training contents based on the results of 3-4.

(Done) In March 2024, with the participation of RMA internal training participants and KEMRI management, the RMA system policies (Mission, Vision, Motto, etc.) and KEMRI's internal training curriculum were developed. The mission is to provide comprehensive support, strategic oversight, and efficient management throughout the research process, the vision is to be at the forefront of fostering a dynamic and collaborative research ecosystem and the motto is that RMA is for seamless research. The curriculum has two levels and has elements of research administration, research development, pre-award, award negotiation and acceptance, post-award, certification plan, etc. These policies and curriculums were discussed at the training evaluation in Activity 3.4 above, presented at the EARIMA, East Africa's regional RMA network organization's annual conference held in Tanzania in August 2024, and the HSR Symposium 2024 held in Japan in November 2024, and were reviewed after receiving internal and external opinions. KEMRI has come up with the idea of specific roles for RA in each specific department, enhancing knowledge and skills in a

specialized field through each RA's duties and aptitudes and, developing systems for grading and evaluation. These are issues that KEMRI will work to improve.

[Activity 3.6] Develop a management system for the training plan based on the result of 3-5 for integration into the HRD system of KEMRI.

(Done) From May 13th to 17th 2024, the project participated in a workshop hosted by KEMRI to revise KEMRI's organizations, personnel rules, and regulations for the year 2024-2025. As the use of the results of the project implementation of RMA internal training courses, the decision to newly create an RMA Department in the proposed organizational changes at KEMRI can be said to be related to the fact that the efforts done by the project to strengthen RMA system including training curriculums within KEMRI.

[Activity 3.7] Establish a network to support research administrators with the partners overseas including in Japan to obtain their support and adopt good practices from them.

(Done) During the FY2022 training in Japan, a meeting was held with the Japanese RMA network organization RMAN-J (The Research Manager and Administrator Network Japan) and KEMRI training in Japan participants. A relationship was formed with the RMA organization at Kyoto University's RMA Organizations through the RMAN-J's introduction. Kyoto University provided significant cooperation for the internal RMA internal training through online lectures and a face-to-face workshop by short-term expert dispatch, at KEMRI in FY2023. Meanwhile, through the RMAN-J, KEMRI began to build relationships with INORMS, the global organization for RMAs, including holding online meetings, and this led to the participation of KEMRI counterparts in the INORMS international conference and SARIMA annual general meeting May-June 2023, hosted by SARIMA, the RMA network organization for southern African countries. As a result of KEMRI C/Ps participating in the INORMS international conference, KEMRI counterpart was elected as the Vice President of Membership of EARIMA, a trend has been created in which KEMRI will play an important role within EARIMA. In August 2024, KEMRI counterparts participated in the EARIMA academic conference and annual general meeting held in Tanzania, and the KEMRI members had the opportunity to meet the representative of WARIMA, the RMA network organization in West Africa.

It was an opportunity to get to know RMAs in Uganda, when the KEMRI counterparts visited Uganda on a business trip in October 2024.

In addition to Kyoto University, other Japanese organizations such as Nagasaki University, Kanazawa University, and the University of Tokyo also gave lectures to KEMRI counterparts who visited Japan for country-focused training on the RMA system improvement and RMA human resource development in Japanese universities.
In this way, the exchange between KEMRI and RMA organizations in Africa and others has expanded through the support of the project.

2. Achievements of the Project

2-1 Outputs and indicators

(Target values and actual values achieved at completion)

[Output 1] A holistic TDP for core research & development, including monitoring & evaluation system is developed.

[Indicator1.1] TDP is developed by 2023.

(Achieved) The TDP Ver.1 was approved in December. 2023. The second revised version based on one year of implementation was approved in October 2024.

[Indicator 1.2] Pilot of the repository system for training is completed by September 2024.

(Achieved) The LMS developed by KEMRI Graduate School also used for KEMRI Internal Training has been authorized within KEMRI, and Training Contents for LMS were created for the four OMICS-related courses which the lecturer could cooperate for making the LMS contents as pilot content development including lecture and hands-on videos, texts for downloads, quiz for evaluate the knowledge gained, etc. The LMS Contents Development Manual is developed by the Project for make KEMRI staff easy by their own training contents development.

Equipment for Training Material Development: The Project procured and utilized the equipment necessary for video recording and editing. The server for the LMS contents repository has been procured, set-up in the KEMRI main server room, and started in use, the server is maintained by the ICT department. Video recorder, digital, camera, computer for video editing is in good use by Public Relation Department and be kept in good condition in the Project office.

[Output 2] Capacities for advanced research & development and innovation among scientific staff are enhanced.

[Indicator 2.1] More than 90 % of the trainings for scientific staff planned in TDP are implemented.

(Achieved) 100% of training courses (Table 1) were implemented. The project consulted closely with Japanese lecturers who had a lot of experience in training KEMRI's researchers, about KEMRI's scientific human resource development needs, and planned seven one-week long training courses in the second and third years when the first internal

training by the Project was to be carried out and was able to implement these seven courses according to the plan implemented by the above mentioned Japanese lecturers.

[Indicator 2.2] More than 90 % of the target number of trainers for researchers planned in TDP are trained.

(Achieved) As a result of seven internal research field training courses (Table 1), the result is 95%. (Table 3.)

	Number of passed	The target number	% of complete rate
Junior	7	7	100%
Middle	8	8	100%
Senior	3	4	75%
Total	18	19	95%

Table 3. Complete Rate of 7 Scientific Training Courses

[Explanation of the Table 3]

1-3 Achievement of Outputs (More than 90% of the target number of trainers for researchers planned in the TDP have been trained) was reviewed with JICA HQ up to TICT 5 (Aug 2024), and the following calculation method was agreed upon. When this method was applied to all TICTs (1-7), a 95% achievement rate was demonstrated.

1. Individual Attendance Rate per TICT (Pass rate for each TICT)
   Determine the pass or fail status for each TICT based on the individual's attendance rate (60% or higher).
2. Individual Pass Rate Calculation (Pass rate for all TICT)
   Calculate the pass rate for each individual (numerator = number of passes as determined in step 1; denominator = total number of TICTs courses). Determine the overall pass or fail status for each individual based on a pass rate of 60% or higher.
3. Overall Pass Rate Calculation (Total pass rate for Project output)
   Calculate the overall pass rate (numerator = number of individuals who passed in step 2; denominator = total number of participants).

Note: (1) Dropouts are not included in the total number of participants (target number). Official absences are excluded when calculating attendance rates in step 1. (2) With some exceptions, the junior category generally includes young staff with 5-10 years of work experience, the middle category with 10-15 years, and the senior category with over 15 years.

[Output 3] Capacities for grants management of KEMRI staff are enhanced.

[Indicator 3.1] Collaboration mechanism with INORMS is established.

(Achieved) Three counterparts participated in the INORMS Congress 2023 (30th May to 2nd June 2023) hosted by SARIMA and created networks with INORMS and SARIMA. KEMRI RMA Network was officially launched at the 14th KASH Conference on 13th Feb. 2024, the RMA Network was the point of contact at KEMRI for exchanges with INORMS and other RMA-related network organizations. KEMRI RMA policies and internal training curriculum was developed in March 2024.
In August 2024, 6th Annual EARIMA conference in Zanzibar, Tanzania, 4 KEMRI counterparts participated. KEMRI members acted as panelists in the plenary discussion and presented KEMRI's efforts to introduce RMA in poster exhibitions. In addition, a KEMRI management was elected to the vice president of membership of EARIMA. KEMRI was able to meet INORMS members online and in person at the Congress venue and was able to interact with SARIMA and WARIMA, who are INORMS members as the EARIMA vice president. KEMRI intends to learn about RMA human resource development systems and practical know-how from the RMA network organizations, which are already active, and in particular, WARIMA, a member of INORMS has expressed a clear intention to move forward together with KEMRI and EARIMA, so it can be said that an initial collaboration mechanism has been formed.

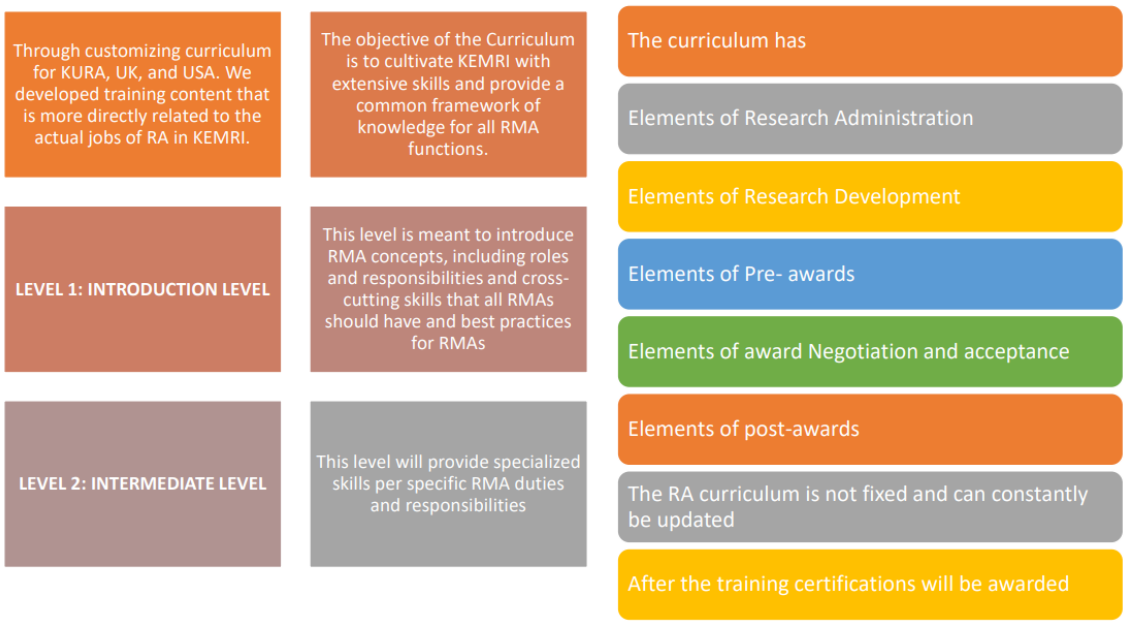

Figure 4. Development of KEMRI's RMA Internal Training Curriculum
(From HSR2024 Presentation by the KEMRI Counterparts)

[Indicator 3.2] More than 20 KEMRI staff obtained the certificate of the training program for grants management introduced under the Project.

(Achieved) Of the 23 participants (7 of the original 30 participants withdrew from the program due to busy work schedules), 20 were selected to receive a certificate of completion based on their participation rate (as an optional criterion by KEMRI, those who exceeded 50%; 15 persons) and actively participated to the group works and recognized as having achieved the necessary level of the knowledge and skills as the trainers on RMA (5 persons).

2-2 Project Purpose and Indicators

(Target values and actual values achieved at completion)

[Project Purpose]
The system for capacity development for KEMRI staff is strengthened.

[Indicator] TDP is officially approved by KEMRI.
(Achieved) The TDP Ver.1 was approved in December. 2023. The second revised version based on one year of implementation was approved in October 2024.

The TDP was developed as a plan to continuously develop a competent workforce to ensure that KEMRI continues to play an important role in Kenya and East Africa as a center of excellence in medical research for human health. The TDP will be placed as the closely linked document to KEMRI's human resource development policy including new HR Instruments. TDP includes content about the development of the capacity development system for KEMRI staff, e.g. develop and use of digital systems such as the LMS for efficient implementation of training courses and strengthening staff motivation by proposing the KEMRI Human Resource Point System and institutionalizing effective internal training as annual planned activities. (See 1.2 of TDP Ver.2)

The existing KEMRI HR Instruments 2019 will be revised in 2025. The TDP is positioned to serve as an important related document on internal training policy, guiding the planning, implementation, and evaluation by KEMRI, as outlined in the HR Instruments. The TDP is a document that requires periodical updates based on the internal training practices implemented by KEMRI. (See 1.4 of TDP Ver.2)

3. History of PDM Modification

The PDM was revised once. As this Project was carried out in two phases, following a needs assessment and preparations for the start of internal training in the first year, a detailed planning survey by JICA was carried out about a year later to confirm the framework of the project and to reflect specific activities in the PDM in January 2023.

III. Results of Joint Review

1. Results of Review based on DAC Evaluation Criteria

1-1. Relevance

This project is relevant, that aims to support the Kenyan government's efforts to combat infectious diseases and achieve UHC, by strengthening KEMRI's human resource development system.

Kenya's national development plan, "Vision 2030", identifies infectious disease control as a priority issue for achieving Universal Health Coverage (UHC), and the Kenya Health Policy (2014-2030) states that "eradicating infectious diseases" is the top priority of the policy objectives. In addition, the Kenya Health Sector Strategic Plan (2018-2023) lists "emergency preparedness and response, early recovery and resilience" as one of its objectives, and strengthening infectious disease control and health crisis preparedness and response capacity is a priority issue in Kenya.

KEMRI is the most important health and medical research institute of the Kenyan government, and in addition to working in line with the Kenyan government's policies as mentioned above, this project is relevant to the KEMRI's organizational important issues of evidence-based policymaking, UHC, and strengthening research for human diseases including infectious diseases.

Even now, there are still outbreaks of many kinds of infectious diseases in Kenya and neighboring countries even after COVID-19, and the importance of human resource development at KEMRI has not changed in order to deal with this situation. At KEMRI, there is a large deficiency in the technical ability of both scientists and administrative staff, and it is important to fill in the gap. The knowledge required to address today's health issues has been increasing, but KEMRI staff had very limited opportunities to increase their knowledge with the organization's support, which has created a gap between their abilities and those required of both scientists and RMA staff.

Furthermore, while scientists still had some opportunities to study abroad, etc. although the number was quite limited, RMA staff had few opportunities to receive training after they started their careers.

Directly, this project contributed to fairness by supporting both scientific staff and RMA staff in terms of staff capacity building, rather than providing training opportunities that have been biased towards one of the two staff categories, namely scientific staff, and indirectly, the general public because illness affects everybody.

1-2. Coherence

The Project is coherent with the policies of both the governments of Kenya and Japan and also the international initiatives.

KEMRI is a center for human health research in Kenya and KEMRI is a premier health research institute in the region, it is considered by KEMRI that the importance of Japanese Official Development Assistance cooperation through JICA over 40 years both for human resource development by the technical cooperation and for facility and equipment provision by the Grant Aid Projects, in enabling this, cannot be overemphasized.

JICA is focusing on promoting the “JICA Global Health Initiative” based on solidarity and trust with the world, as it is important to strengthen the system for protecting health from the global impact of the COVID-19 infection, by strengthening responses to the most important public health crisis among the diversifying health issues. JICA aims to support achieving UHC in the long term by strengthening the health systems through the initiative.

This technical cooperation project aims to contribute to the fight against infectious diseases, which is a key issue for Kenya's healthcare sector, by enhancing the research and research management capabilities of KEMRI through research capacity building and is expected to contribute to UHC in Kenya. For this reason, this project is ‘coherent’ with the policies of both governments.

In addition to the training programs by the Project related to the New Grant Aid Project for KEMRI by the Japanese government, which is scheduled to begin in the future, the KEMRI staff who had strengthened their capacity through the internal training implemented by this Project will be involved in the operation of the facilities to be constructed under the New Grant Aid Project.

The Third Country Training Program (TCTP) implemented by JICA and KEMRI, as its content was specific to laboratory technology, was not directly related to this Project, which dealt with human resource development in a broader range of areas. However, collaboration was promoted, with project counterparts introducing project activities in a TCTP lecture and a JICA expert cooperating in a TCTP lecture. The enhancement of KEMRI's research and RMA capacities through the Project is expected to benefit neighboring countries through the TCTP to be implemented by KEMRI and JICA in the future.

As a result of this project, the network between KEMRI and network platforms in the

RMA field, such as INORMS, SARIMA, EARIMA, and WARIMA, has expanded. KEMRI's counterparts hope to contribute to the region by learning from advanced examples of RMA initiatives in global and other regions, implementing them in KEMRI, and then extending the experience to East Africa.
In relation to the SDGs, it is directly related to No. 3 'Good health and well-being' and No. 17 'Partnerships for the goals', and it is also coherent because it can indirectly contribute to the No. 1 'Poverty', through the improvement of healthcare for all.

1-3. Effectiveness

The Project met its verifiable indicators, and trainers for the internal training program were educated and trained, the TDP was developed to promote KEMRI's training system. The project goal indicators were achieved. The further realization of the effects of this will depend on KEMRI's subsequent initiatives.

The project is effective because it has achieved the PDM's Objectively Verifiable Indicators within the planned three-year period.
The fact that KEMRI staff who participated in the internal training program, not only received training but also received further training as trainers and had the opportunity to give lectures to interns as lecturers, contributes to the effectiveness and sustainability of the project.
Although the project has developed some of the internal training content to be loaded onto the LMS, since KEMRI's training needs are wide-ranging, the further realization of the effects after the project ends will depend on whether KEMRI subsequently conducts developing training content.
The formulation and approval of the TDP have organized KEMRI's system for planning, implementing and evaluating internal training.
Within the framework of this project, one of the participants who participated in the KCCP program in the field of HIV/AIDS laboratory technology in Japan is using the knowledge gained from the training course to set up a new laboratory in conjunction with establishing a new KEMRI regional center.

1-4. Impact

The new RMA Department is in the process of approval, the Human Resources Department is preparing to continue RMA training in response to the high demand, LMS was established, and internal training has led to a movement to

improve inter-departmental collaboration, which can be regarded as signs of impact.

The following shows the emergence of multiple positive impacts. There were no negative impacts.
The start of this project's internal training in the field of RMA led to the KEMRI's official plan to establish a new RMA Department (as of February 2025, in the process of approval by the Kenyan government). In addition, it was found that there was a very high demand for RMA training, and the KEMRI Human Resources Department is planning to continue training in the field of RMA.
The TCP has established an LMS-use internal training system that allows KEMRI to conduct internal training efficiently, despite constraints on resources like lecturing staff and training budgets, etc.
Through the RMA Mapping Project and Workshops with both researchers and RMA participants, there has been a change in the mindset of the participants of the internal training program, who were trying to improve cooperation between departments. This was confirmed through the Focus Group Discussion after the RMA training, etc.
The National Institute of Infectious Diseases (NIID) in Japan is a key organization in the prevention and research of infectious diseases in Japan, and KEMRI had hoped to build a relationship with NIID, and exchange opinions with NIID during the country-focused training program in Japan implemented by this Project brought to the preparation of an MOU between NIID and KEMRI. (As of February 2025, KEMRI is in the process of legally checking the MOU draft).

1-5. Efficiency

Efforts were made to reduce costs by making use of digital tools, and the project was implemented within the total project cost initially planned by JICA.

As this Project was carried out in two phases, following a needs assessment and preparations for the start of internal training in the first year, a detailed planning survey by JICA was carried out about a year later to confirm the framework of the project and to reflect specific activities in the PDM, so it is difficult to compare the difference between the local cost plan before the project started and the actual local costs operated. However, for example, the introduction of online training methods to reduce the cost of dispatching short-term experts, including the case, digital tools were used to save costs. As a result, the project was implemented within the total cost range of the project

originally planned by JICA, so it can be said to be efficient in terms of costs.
On the KEMRI side, although the amount that could be covered by the Kenyan government budget varied from year to year for the intensive workshops held as part of the project, the fact that they were able to share as much of the cost as possible, contributed to the efficiency of the project.
The LMS was introduced as a means to reduce the cost of internal training implementation and to expand training to a larger number of staff on limited budget. KEMRI LMS was developed and operated in collaboration with the KEMRI Graduate School and the Project, which also ensured efficiency.

1-6. Sustainability

To enhance sustainability, the project revised the first TDP and improved, once new HR Instruments are approved, the TDP will be linked to these as a key document, and the RMA Department will be established. The LMS-used training reduces costs, project-trained staff will be internal trainers of KEMRI, and networks with organizations in Japan and KEMRI continue. Future content development and internal training will depend on the initiative of KEMRI's management.

The project has made the following various efforts to enhance the sustainability of the project.
The project's creation of the first TDP at KEMRI and the second revised version based on one year of implementation will become an important document for KEMRI to continue its human resource development activity in the future. When the new draft HR Instruments, KEMRI's new human resource regulations, are authorized, TDP will be linked to HR Instruments officially as an important related document on the human resource development of KEMRI. As a result of the Project's work on RMA internal training, the new HR Instruments proposed the establishment of an RMA Department, which would be responsible for RMA-related tasks and work with researchers to strengthen KEMRI's research capacity.
The project's creation of content for the LMS by not only conducting internal training but also creating video materials for the training courses is expected to reduce the cost of implementing the internal training course, and therefore it will contribute to sustainability. On the other hand, it is necessary to strengthen operations, such as increasing the number of personnel for maintenance and content development.

It is expected that KEMRI will continue to provide internal training in the future, with staff who had received internal training by the Project acting as lecturers for the TOT training, with the Human Resource Development's leadership, RMA Department which is planned to newly established after new HR Instruments are approved will provide training in the RMA field and the Directorate of Research and Development providing training in the scientific field. On the other hand, the budget allocation required for training is affected by the overall budget allocation policy of the Kenyan government, even it is beyond the scope of the project and KEMRI to deal with, various forms of initiative for internal training by KEMRI's management are expected.
Although it is in the process of HR Instruments' approval process as of February 2025, the realization of the HR point system and the new RMA department included in it are essential to maintaining the sustainability of the Project's results.
The project supported networking between KEMRI and organizations in Japan and others and strengthened relationships with the NIID in Japan, several Japanese universities, and an IT global enterprise in Japan, as well as with international networking platforms in the field of RMA. It is hoped that these networks between KEMRI and other organizations will continue in the future, even without direct support from the current Project, through developed personal connections and other means.

2. Key Factors Affecting Implementation and Outcomes

When an emergency situation involving an infectious disease outbreak occurs (which occurs frequently in rural areas of Kenya), some internal training participants in the TCP planned training were unable to attend due to the need to respond to the situation and related works. There are unavoidable aspects to responding to infectious disease-related emergencies for KEMRI staff. On the other hand, it is also a reality that the priority of participating in human resource development training was not necessarily high for the departments to which the training participants belong compared to the other departments' assignments. When the KEMRI's new HR instruments which are important organizational management policies are updated (it is under the procedure as of February 2025), the importance of internal training as a means of human resource development will be positioned higher within the KEMRI organization tasks than it has been up to now, TDP will be linked to HR Instruments as an important related document. The Human Resource Development Point System will be introduced when the new HR Instruments draft is authorized and becomes ingrained in the organizational culture of KEMRI in the future, this issue will improve in the future, more than it did during the period of this project implementation.

3. Evaluation on the results of the Project Risk Management

There were periods when there were restrictions on movement due to the presidential election, and citizens were demonstrating, but in such cases, the project responded by working from home and prevented major impact for the project activities.

4. Lessons Learnt

The commitment of the project to RMA human resource development and the implementation of RMA internal training with the cooperation of Japanese universities led to efforts to strengthen research administration and management capacity including pre- and post-award grant management by breaking down the ‘silos’ among departments at the health and medical research organization, KEMRI and strengthening collaboration between researchers and administrative staff through workshops both parties joined. The importance of training for administrative staff, which had not been addressed in most of JICA's previous cooperation in health to strengthen research capacity, and in particular the importance of human resource development of RMA, was recognized by KEMRI's senior management, leading to an impactful initiative with ownership that resulted in the creation of the RMA Department as part of KEMRI's organizational reform. In order to use this project’s lessons learnt as a reference for similar projects in the future, strengthening the collaboration between the research department and the administrative department by strengthening the administrative departments of the partner organization will lead to the breaking down of the siloed situation of the organization, if there are recognized by the partner organization. This will increase the probability of improving the research results in the research organization.

While taking advantage of opportunities for country-focused training in Japan and business trips to third countries, TCP also made use of opportunities for KEMRI counterparts with Experts to make presentations at various academic conferences. This was an opportunity for networking, as well as opportunities to summarize the project's achievements at that point and disseminate the findings externally, those chances had a positive impact and were effective as opportunities to reconfirm the project’s achievement.

Academic Meeting & Conference	Period/Place	What was done
INORMS Conference	May-June 2023 / South Africa	Participation, Networking with SARIMA, etc.
Global Health Joint Conference 2023	November 2023 / Japan	Organized an Oral Session with other African Research Institutes
EARIMA Annual Conference	August 2024 / Tanzania	Plenary Session, Poster Presentations
HSR Symposium 2024	November 2024 / Japan	JICA Satellite Session, Poster Presentations
15th KASH 2025	February 2025 / Kenya	Organized a Session

Table 4. Academic Meetings & Conferences for RMA

To proceed with the project and its activities, it was necessary to thoroughly comply with KEMRI's organizational decision-making protocol regarding various approval procedures, and this takes a considerably long time. It is necessary for both countries' parties involved in the project including preparation for the next project to have a common understanding that it takes a considerably long time for the KEMRI side to make decisions regarding planning and implementation. It is important to understand the differences between the partner organization's system and the JICA’s system and to optimize the plan and logistics.

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

1. Prospects for achieving the Overall Goal

Once the HR instruments that KEMRI is in the process of approving as of February 2025 are approved, the TDP will be used as a human resource development plan by the HRD which is responsible for KEMRI's human resource development, and the framework will be organized in which the RMA Department planned to be establish under the new KEMRI organization chart after TCP initiated developing RMA internal training, and Research & Development Department will continue to implement internal trainings. The LMS content development will be continued in the KITCAT Project described below, and the continued implementation of training by trained trainers is necessary to approach the overall goal, described in the following paragraphs.

In October 2024, the project developed a plan for the 'KEMRI Internal Training Contents Advancement Team' Project (KITCAT Project). This was a plan to establish an in-house project within KEMRI to continue the work that TCP had started on KEMRI's internal training through planning, implementing, and evaluating the pilot training courses in the RMA field and Research field. The KITCAT Project plan was to continue internal training and develop tools for the LMS under the leadership of KEMRI management in two areas of the RMA and research. To implement this KITCAT Project, concrete plans were discussed at the final workshop for TCP, which was held in January 2025, and the commitment of the participants including management of KEMRI to this activity was confirmed. The implementation of this approach will be an important part of the approach to achieving the Overall Goal.
If the next phase of TCP, which KEMRI is requesting for the Japanese side, is realized, it is hoped that the next TCP will support the implementation of the KITCAT Project initiated by KEMRI.

In Kenyan FY2024, the budget allocation for Kenyan government agencies is reportedly facing a significant challenge, and as this is beyond the control of KEMRI, in Kenyan FY2025 it is anticipated that it might be difficult to continue the internal training courses that KEMRI was able to implement with support from JICA through TCP in the same way as the project period. However, even with budget allocation constraints, KEMRI staff who were trained as trainers by participating in the internal training courses delivered by the project can use their knowledge to implement internal training

and create teaching materials, so the future efforts of facilitation by the counterparts are expected after the current project period is over.

It is also hoped that the actual functioning of the Human Resource Development Point System, which is planned to be introduced by revised HR Instruments (under approval process as of February 2025), from the work of the TDP (Ver.1) December 2023, will help to establish a fair personnel evaluation system for KEMRI's staff and stimulate non-monetary 'incentives' for internal training participation and implementation for the KEMRI staff. (See 1.4 of TDP Ver.2)

2. Plan of Operation and Implementation Structure of the Kenya side to achieve Overall Goal and Recommendations for the Kenya side

The content of this chapter is the same as that described in the previous chapter, IV. 1.

3. Monitoring Plan from the end of the Project to Ex-post Evaluation

(If the Project will be continuously monitored by JICA after the completion of the Project, mention the plan of post-monitoring here.)

When KEMRI produces documents that reflect the activities of the project, such as the official approval of HR instruments and various planning documents, etc., KEMRI will share the information with the JICA Kenya Office.

It is recommended that JICA implement the following two strategies for post-project monitoring:

1. The TDP will play a significant role in the realization of KEMRI's policy of placing importance on human resource development if the current draft of the new HR Instruments with which the TDP has a close relation (KEMRI’s Personnel Management Documents) is approved by the Kenyan government, which is in the process of approval as of February 2025. For the TDP to be put to use, it is important to monitor the status of approval of the HR Instruments and their actual implementation after approval.

2. Once the above new HR Instruments have been approved, they will be integrated into KEMRI's annual work plan and five-year strategy. At that time, it will be important to set KPIs (Key Performance Indicators) concerning the human resource development that is part of the HR Instruments (which is closely related to the TDP) and to monitor

the implementation status of inclusion of KPIs on human resources development into KEMRI's annual and mid-term documents and plans.

3. The Human Resources Department is in the process of creating a 'Succession Planning Management Policy' and 'Mentorship Policy' as of February 2025, and the draft policy document includes content that incorporates the PDCA concept and the importance of monitoring and evaluation, which were covered in the RMA training course. If it can be confirmed in the future that this policy document has been completed and be used, it will be evidence that the effects of the RMA training have been institutionalized at KEMRI.

ANNEX 1: Results of the Project
(List of Dispatched Experts, List of Counterparts, List of Trainings, etc.)
ANNEX 2: List of Products (Manuals, etc.) Produced by the Project
ANNEX 3: PDM (All versions of PDM)
ANNEX 4: HSR Conference 2024 Materials
ANNEX 5: 15th KASH Conference Materials

ANNEX 1: Results of the Project

(List of Dispatched Experts, List of Counterparts, List of Trainings, etc.)

List of Dispatched Experts

- Chief Advisor (1)
- Infectious Disease (2)
- Project Coordination (2)

List of Counterparts

- Project Director (1)
- Project Manager (1)
- Counterparts (2)

List of Trainings, etc.

- Country Focused Training (3 Times; FY2022, FY2023, FY2024, 16 persons in total)

- Workshops (5 Times)

- Scientific Field Internal Training Courses Organized by the TCP

TOPICS OF THE LECTURE	**PERIOD**	**LECTURER**
Cell Culture Techniques	19th June 2023-23rd June 2023	Nagasaki University
Virus isolation & CPE Observation	31st July- 11th August 2023	Nagasaki University
Serological examinations (ELISA) Virus titration tests and Neutralization tests	23rd -27th October 2023	Nagasaki University
Expression and purification of recombinant protein in E. coli	21st -30th August 2023	Sanyo Women's College
Subcloning	11th -22nd March 2024	Sanyo Women's College
The Diverse Research Applications Based on PCR	20th August – 5th September 2024	Sanyo Women's College
Infectious disease surveillance and diagnostics & Development and optimization of immunochromatographic (IC) test kits	29th October to 4th November 2024	Expert & Nagasaki University

- RMA Field Internal Training Courses Organized by the TCP

TOPICS OF THE LECTURE	PERIOD	LECTURER
Introduction to University Research Administration	31st July 2023	Kyoto University
Introduction to the PDCA Concept	31st July 2023	Expert
Problem-Solving Utilizing Mapping Strategies	14th August 2023	Kyoto University
SWOT & Why Why Analysis	14th August 2023	Expert
Research Administration at Kyoto University: Theory and Practice	31st August 2023	Kyoto University
Business Communication Ho-Ren-So	31st August 2023	Expert
Research Grants and Contract Management	23rd October 2023	Kyoto University
Monitoring and Evaluation	23rd October 2023	Expert
Program Evaluation	30th November 2023	Kyoto University
Leader and Leadership	30th November 2023	Expert
Cooperation and division of roles among departments within the organization in RA-related work	7th December 2023	Kyoto University
Scientific Communication and Dissemination	7th December 2023	Kyoto University
Organization and Leadership for Research Administration	17th January 2024	Kyoto University
Research Strength Analysis and Its Use	17th January 2024	Kyoto University
Research Project Management Methods	17th January 2024	Kyoto University
Continuous Professional Development – How it Works?	17th January 2024	Expert
Efforts to strengthen RMA in Kenya and the need to strengthen RMA in Kenya	11th December 2024	South East Kenya University

ANNEX 2: List of Products (Manuals, etc.) Produced by the Project

Note: Many Products of the Project are incorporated in the Talent Development Plan (Ver.2) as its Reference Materials.

- Talent Development Plan (Ver.2)
- Talent Development Plan (Ver.2) Reference Materials

1. Trends and principles of human resource development in international organizations
(1) Changes taking place after COVID-19
(2) Features and principles of adult education
2. Management and training evaluation based on the PDCA cycle
3. Effective methods in the use of e-Learning
4. What are the keys to success in implementing digital health systems-Reference for the LMS implementation
5. Setting up a training plan
6. Important viewpoints in creating teaching materials (Instructional Design)
7. Compliance in creating teaching materials
8. Introduction of experiences in Japanese universities and other organizations
9. TOT Guide (Essence for effective teaching)
10. What is Succession Planning (From KEMRI Lectures' contents at the TCP workshop)
11. Introduction to Mentoring Skills (From KEMRI Lectures' contents at the TCP workshop)
12. Checklist on Preparation for Researcher Internal Training
13. Checklist on Preparation for RMA Internal Training
14. Sample of Workshop Planning Document (Workshop on LMS and TOT, June 2024)
15.Informed consent form
16.Reference material; Overview of CDC's Quality Training Standard
17. Useful resources and online materials provided by international organizations

- KEMRI-JICA TCP Manual for Learning Management System Content Generation and Repository
- Project Brochure

Project Design Matrix

ANNEX 3

Project Title: Project for Research Capacity Building at Kenya Medical Research Institute

Implementing Agency: Kenya Medical Research Institute (KEMRI)

Period of Project: The duration of the Project will be 3 years from the date of first arrival of the JICA experts

Project Site: Nairobi

Version 0

Dated

Narrative Summary	Objectively Verifiable Indicators	Means of Verification	Important Assumption	Achievement	Remarks
Overall Goal					
Health emergency preparedness is strengthend towards attainment of Universal Health Coverage (UHC) in Kenya and East Africa Region.	KEMRI scientists participate in the response to infectious diseases in Kenya and abroad				
Project Purpose					
The system for capacity development for scientists at KEMRI is strengthened.	Talent Development Plan developed by the Project is incorporated in the next strategy document of KEMRI.				
Outputs					
1. A holistic talent development plan for core research & development, including monitoring & evaluation system is developed.	1) KEMRI's talent development plan is developed by●●.				
2. Capabilities for advanced research & development and innovation among scientific and non-scientific staff are enhanced.	1)Trainings specified in the talent development plan are implemented as planned. 2)The number of trained staff is increaced by ●%. 3) The number of trainers is increased by ●%. 4) The number of scientists enrolled in mentorship is increased by ●%.	Baseline survey Monitored by the Project			
3. A network of health research partners in Africa and Japan in which KEMRI plays a central role as a Centre of Excellence is strengthened.	1)The roadmap to strengthen the Africa and Japan networks is developed by ●●. 2)● webiners/workshops are implemented as pilot interventions for the African and Japanese networks 3)The number of research partners strengthened and increased by ●%. 4) The number of joint research with partners is increased by ●%.				

Activities	The Japanese Side	The Kenyan Side	Important Assumption
1. A holistic talent development plan for core research & development, including monitoring & evaluation system is developed. 1-1. To map what scientific and non-scientific skills are required for KEMRI to deliver against its research mandate, using any existing R&D strategic and HR plans as a starting point 1-2. To identify what gaps in skills currently exist across KEMRI staff, scientific and non-scientific, based on the above 1-1. 1-3. To identify how different types of training can be provided, including a view of existing training activities conducted by JICA and affiliated partners 1-4. To design KEMRI's talent development plan. 1-5. To develop a plan to monitor progress and impact of implementation of the project. 1-6. To revise the talent development plan as needed based on changes in context. **2. Capabilities for advanced research & development and innovation among scientific and non-scientific staff are enhanced.** 2-1.To identify specific and priority trainings as part of the talent development plan. 2-2. To provide trainings using a combination of training forums best suited to the skills required. 2-3. To conduct Training of Trainers (TOT) for specific trainings. 2-4. To build an internal mentorship network to share learning from each other 2-5. To establish collaborations with local institutions to build overall capacity within Kenya 2-6. To seek opportunities for KEMRI scientists to apply enhanced research capabilities. **3. A network of health research partners in Africa and Japan in which KEMRI plays a central role as a Centre of Excellence is strengthened.** 3-1. To define desired value proposition of a medical research network in East Africa / Africa and Japan with KEMRI's potential role as a hub, considering demand / needs of different African and Japanese players and existing collaborative efforts. 3-2. To develop roadmap to grow the Africa and Japan networks, based on the above 3-1. 3-3. To conduct pilot interventions to strengthen the African and Japanese networks organically (i.e. host research conferences, trainings)	**Dispatch of Experts** 1. Chief Advisor 2. Infectious Disease Control 3. Project Coordinator and Training Coordination 4. Subject matter experts (to be identified during the development of "talent development plan") **Equipment and Material** 1. Necessary equipment and materials for the project activities. 2. Other commodities and supplies mutually agreed upon as necessary **Local Costs** Training and meetings (cost sharing with MOH, Counties and Partners)	**Counterparts** 1. Project Director 2. Project Manager 3. Technical Staff 4. Other personnel mutually agreed upon as needed **Facilities, equipment and materials** 1.Office space for the Project 2.Necessary equipment and materials for the Project activities **Local Costs** Operational expenses for implementing activities	**<Issues and countermesures>**

Project Design Matrix

Project Title: Project for Research Capacity Building at Kenya Medical Research Institute

Implementing Agency: Kenya Medical Research Institute (KEMRI)

Period of Project: The duration of the Project will be 3 years from the date of first arrival of the JICA experts

Project Site: Nairobi

Version 1

Dated

Narrative Summary	Objectively Verifiable Indicators	Means of Verification	Important Assumption	Achievement	Remarks
Overall Goal New concepts from the KEMRI Talent Development Plan (TDP) are applied to human resource development across the entire institute.	The repository system for internal training is incorporated into the human resource development across the entire KEMRI.	Annual report published by KEMRI			
Project Purpose The system for capacity development for KEMRI staff is strengthened.	TDP is officially approved by KEMRI.	Monitoring sheet			
Outputs 1. A holistic TDP for core research & development, including monitoring & evaluation system is developed.	1) TDP is developed by 2023 . 2) Pilot of the repository system for training is completed by September 2024.	Monitoring sheet			
2. Capacities for advanced research & development and innovation among scientific staff are enhanced.	1) More than 90 % of the trainings for scientific staff planned in TDP are implemented. 2) More than 90 % of the target number of trainers for researchers planned in TDP are trained.				
3. Capacities for grants management of KEMRI staff are enhanced.	1) Collaboration mechanism with INORMS is established 2) More than 20 KEMRI staff obtain the certificate of the training program for grants management introduced under the Project.				

Activities			Important Assumption
1. A holistic TDP for core research & development, including monitoring & evaluation system is developed.	**The Japanese Side**	**The Kenyan Side**	
	Dispatch of Experts	**Counterparts**	
1-1. Develop TDP based on the role of KEMRI as a center of excellence in medical research. 1-2. Identify the gaps that currently exist in scientific skills across KEMRI staff to deliver its research mandate based on TDP. 1-3. Identify fields of trainings which are necessary for KEMRI to close the gaps identified in 1-2. 1-4. Develop a training plan and programme based on the analysis in 1-3. 1-5. Develop a plan to introduce a repository system. 1-6. Establish a pilot repository system as a training platform. 1-7. Evaluate and adapt the pilot repository system for integration into the system of KEMRI.	1. Chief Advisor 2. Infectious Disease Control 3. Project Coordinator and Training Coordination 4. Subject matter experts (to be identified during the development of "talent development plan")	1. Project Director 2. Project Manager 3. Technical Staff 4. Other personnel mutually agreed upon as needed	
1-8. Monitor progress and impact of implementation of TDP. 1-9. Revise the TDP as needed based on the analysis in 1-8.	**Equipment and Material**	**Facilities, equipment and materials**	
	1. Necessary equipment and materials for the project activities. 2. Other commodities and supplies mutually agreed upon as necessary	1.Office space for the Project 2.Necessary equipment and materials for the Project activities	
	Local Costs	**Local Costs**	
2. Capacities for advanced research & development and innovation among scientific staff are enhanced. 2-1. Identify specific and priority trainings for scientific staff as a part of TDP. 2-2. Conduct the master training courses for KEMRI staff by both internal and external experts. 2-3. Conduct Training of Trainers (TOT) by the master trainers for specific training courses. 2-4. Provide training courses for scientific staff using a combination of training methodologies best suited to the skills required. 2-5. Conduct workshops to enhance the mentorship among KEMRI staff. 2-6. Establish collaboration mechanisms with health research partners overseas including in Japan to obtain their support and adopt good practices from them.	Training and meetings (cost sharing with MOH, Counties and Partners)	Operational expenses for implementing activities	
3. Capacities for grants management of KEMRI staff are enhanced. 3-1. Prioritize the capacity development needs for research administrators in KEMRI. 3-2. Develop a necessary virtual training system for research administrator to support researchers as a part of TDP. 3-3. Provide trainings for selected KEMRI staff as research administrator using a combination of training methodologies best suited to the skills required.			**<Issues and countermesures>**

3-4. Monitor the performance of the trained staff as research administrator.			
3-5. Review and improve training contents based on the results of 3-4. 3-6. Develop a management system for the training plan based on the result of 3-5 for integration into the HRD system of KEMRI. 3-7. Establish a network to support research administrators with the partners overseas including in Japan to obtain their support and adopt good practices from them.			

Project for
Research Capacity Building At KEMRI

New Scope for Enhancing Research Capacity in Eastern Africa:

"Development and Implementation of a Robust Research Management and Administration System at Kenya Medical Research Institute (KEMRI)"

SAMSON NZOU*, PATRICIA NZIOKI, ANNE MWANGI, SHEILA MBAABU, GABRIEL GITAU, FRANKLINE OKIIRY

KENYA MEDICAL RESEARCH INSTITUTE (KEMRI)

19th NOV 2024 12:30-14:00

We confirm that the presenters have no actual or potential conflicts of interest in relation to this workshop presentation.

Contents		Presenter	Time (Min)
Introduction	Background Evidence of RMA effectiveness for research capacity enhancement KEMRI's status (brief) E/Africa's status (INORMS)	SAMSON NZOU	12
Research	Current status of Research Capacity Challenges and opportunities in relation to RMA	ANNE MWANGI SHEILA MBAABU	12
RMA	Current status of RMA in KEMRI Challenges and opportunities	GABRIEL GITAU FRANKLINE OKIIRY	12
Project	Project briefing Project achievement	PATRICIA NZIOKI	12
Panel	What effort is required to achieve the goal after the project	Chair: SAMSON NZOU	30
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- The world has faced **seven Public Health Emergencies of International Concern (PHEICs),** with six significantly impacting Sub-Saharan Africa (SSA), including Ebola and COVID-19.
- SSA holds **16% of the global population and 25% of the disease burden but contributes only 1% to global research output**, revealing a critical research capacity gap.
- Enhancing Africa-led research capacity is essential, but SSA faces challenges in both researcher numbers and quality, **due to limited training, resources, and support systems**.
- Research Management and Administration (RMA) is crucial for boosting research efficiency, **benefiting researchers during both pre-award and post-award** phases.
- The Kenya Medical Research Institute (KEMRI), a key player in East African health policy, also faces various challenges.
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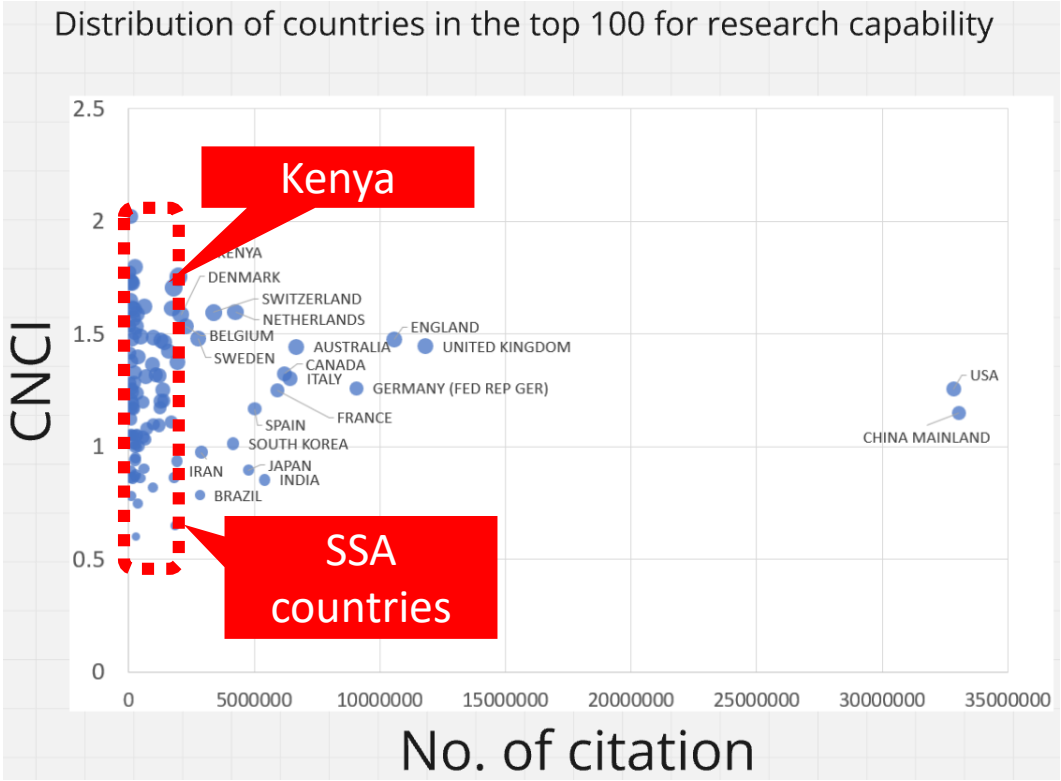
EVIDENCE (Research capacity in SSA and Kenya)



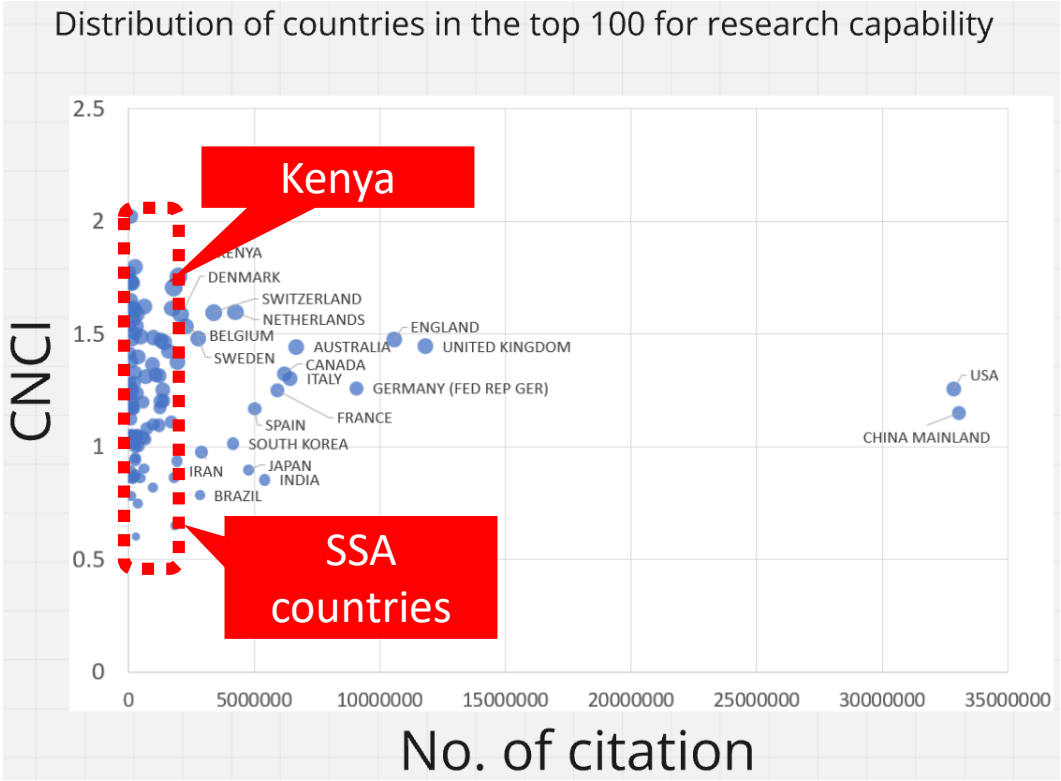
Kenya's research capacity:

- **Ranked 72nd out of 214 countries**
- **Top5 of SSA countries**

Major Challenges identified:

1. Lack of domestic funding
2. Understaff/ brain drain
3. Donor dependency

EVIDENCE (Research capacity in SSA and Kenya)



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Cost-effective, efficient research activities for better outcomes rely on not only researchers also “RMA”

EVIDENCE (RMA trend)

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Home / Books / The Emerald Handbook of Research Management and Administration Around the World

The Emerald Handbook of Research Management and Administration Around the World

Subject: Research methods > Research projects

Synopsis

The ebook edition of this title is Open Access and freely available to read online. The most comprehensive book about practitioners working in research management and administration, with insights from around the globe and across disciplines to provide a comprehensive account of RMAs as a profession.

Read less

Chapter 1.1

The Contribution of International Donors to African Research Management

John Kirkland

Diversity in Development, London, UK

Abstract

The case of Africa is important in understanding the growth of research management as a profession. Africa has rapidly increased its research output in recent years, and its institutions are increasingly in demand as research partners. Yet research management structures have developed from a very low base, and need not be confined by past practice. Through the Southern African Research and Innovation Management Association (SARIMA), it has been represented since the origins of International Networks of Research Management Societies (INORMS). Several external donors have sought to help build research management structures on the continent, and the success (or otherwise) of these initiatives can tell us much about the potential for common research management structures globally.

This chapter does not provide a comprehensive account of progress over the past two decades, or a complete list of relevant initiatives. Rather, it reflects on whether international assistance and collaboration have made a meaningful contribution to the progress that has been made, and its strengths and limitations. It considers how far growth would have happened regardless of funder intervention, or indeed whether international partners have inhibited progress by prioritising their own norms and priorities. It asks uncomfortable questions for funders about the way in which they plan and evaluate their work.

Keywords: Africa; research management; profession; professional development; international support; impact

Chapter 5.2

Research Management and Administration in Kenya in a Challenging Research Environment

Patrizia Rampioni[a] and Carol Wangui Hunja[b]

[a]0009-0004-4435-1299, Erasmus University Rotterdam, Rotterdam, The Netherlands; Conceptualization, Data Curation, Formal Analysis, Resources, Writing – original draft, Writing – review & editing
[b]South Eastern Kenya University, Kitui, Kenya; Resources, Validation, Writing Original Draft, Writing – review & editing

Abstract

This chapter provides an overview of the current state of research policy and research management and administration (RMA) in Kenya. Although RMA is an emerging field globally, it is not yet fully recognised in Kenya. The main objective of this chapter is to provide an overview of the vibrant research environment in Kenya, its most important challenges in the field of management and administration of research, and how some Kenyan Universities are dealing with them.

The findings in this chapter are based first on a research policy documents analysis and on literature review. In a second phase, qualitative data were collected through desk-based research and informant questionnaires and interviews.

In the conclusions, concrete suggestions are formulated that could support the enrichment of the research environment, find solutions for RMA-related

Chapter 5.4

The Profession of Research Management and Administration in South Africa

Les Labuschagne

0000-0003-3953-3034, University of South Africa (UNISA), Pretoria, South Africa; Conceptualization, Writing – original draft, Writing – review & editing

Abstract

This chapter outlines the circumstances in South Africa (SA) that led to the evolution of the profession of research management and administration (RMA) in the country. The public higher education (HE) sector has undergone significant change since 1994, and the RMA profession has struggled to keep abreast. However, through its national professional society, SARIMA, a concerted effort is being made to facilitate and advance the RMA pipeline.

SARIMA was instrumental in developing the Professional Competency Framework for SA and is now focussed on creating awareness and providing development opportunities for RMAs to meet the requirements.

RMA in SA is proliferating as the public HE sector expands in response to growing demands and deliberate interventions by the government.

Keywords: South Africa; research management and administration; professional competency framework; public higher education; national system of innovation; SARIMA

Invisible Intermediaries: A Systematic Review into The Role of Research Management in University and Institutional Research Processes

Dr. Gemma Derrick
Health Economics Research Group (HERG)
Brunel University London
Middlesex, UK

Alicen Nickson, MA Hons, MBA, MSc
Brunel University London
Middlesex, UK

Abstract: *The introduction of competitive rankings and research assessment frameworks have necessitated that research organisations continually monitor their research strengths and weaknesses. Such monitoring is essential to be able to strategically respond in a competitive environment. There is little research on the role of research management in research organisations, including universities, but the literature suggests that when implemented well, research management is an essential component of the research process. Despite this, an evidence-based understanding of the strategies available for successful research management is lacking. In order for organisations to structure their research management strategies more efficiently, as well as to inform practitioners of the best way to deliver their service, an understanding of the evidence for successful research management strategies is needed. The aim of this article is to provide a systematic review to investigate the evidence base for successful research management strategies.*

Keywords: *research support, research management, technology transfer, knowledge transfer, commercialisation, research collaboration*

AAS Open Research

RESEARCH ARTICLE

Competency-based Training Needs Assessment for Research Managers and Administrators in Africa and the United Kingdom to Strengthen Equitable Partnerships [version 1; peer review: 2 approved, 1 approved with reservations]

Victoria Nembaware[1], Simon Glasser[2], Anne Priest[3], Ailsa Davies[4], Michelle Skelton[5], Paidamoyo Bodzo[3], Olivia Lelong[6], Alecia Naidu[7], Colleen Masimirembwa[8], Alice Mutambirarwa[8], Annette Hay[9], Ambroise Wonkam[1], Collet Dandara[1]

[1]Division of Human Genetics, Department of Pathology, Faculty of Health Sciences, University of Cape Town, Cape Town, 7925, South Africa
[2]Research and Enterprise Development, University of Bristol, Bristol, BS8 1QU, UK
[3]Research and Innovation Services, University of Bath, Bath, BA2 7AY, UK
[4]Research and Innovation Services,, Cardiff University, Cardiff, CF10 3AT, UK
[5]H3Africa Administrative Coordinating Centre, Integrative Biomedical Sciences, Faculty of Health Sciences, University of Cape Town, Cape Town, 7925, South Africa
[6]Research, Business & Innovation Service, University of the West of England, Bristol, BS16 1GY, UK
[7]South African National Bioinformatics Institute, University of the Western Cape, Cape Town, 7535, South Africa
[8]African Institute of Biomedical Science and Technology (AIBST), Harare, Zimbabwe
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https://doi.org/10.12688/aasopenres.13272.1
Latest published: 10 Mar 2022, 5:11
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Abstract

Background: The need for competent research managers and administrators (RMAs) has increased due to the complexity in managing research projects between disparate and international partners. To facilitate the creation of robust training and professional development programmes it is essential to first understand the status quo. A collaborative project, Sustainable Management and Administration for Research: Training across the project Lifecycle (SMARTLife), made up of RMAs from South Africa, Zimbabwe and the United Kingdom (UK) developed a set of competencies to conduct an RMA competency-based training needs assessment scoping tool.

Method: Nine areas were identified: Equitable partnership; Finance Management; Project Management; Monitoring and Evaluation; Reporting and Communications; Equity, Diversity & Inclusion; Training and Capacity Development; Impact a& Sustainability; and Ethical,

Open Peer Review

Approval Status ? ✓ ✓

	1	2	3
version 1 10 Mar 2022	? view	✓ view	✓ view

1. **Golbahar Pahlavan**, European Clinical Research Infrastructure Network (ECRIN), Paris, France
Council on Health Research for Development (COHRED), Geneva, Switzerland

2. **Rakeshnie Ramustar-Priescht**, University of Pretoria, Pretoria, South Africa

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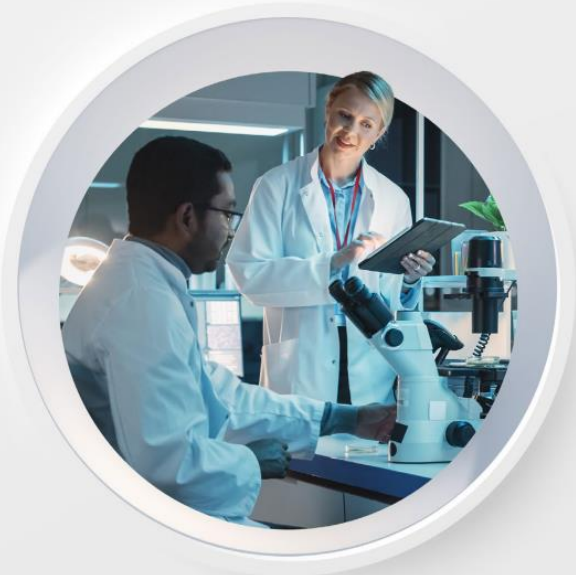

The future of research administration: Adapting to thrive

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EVIDENCE
(RMA trend)

Kasprowicz et al. BMC Public Health (2020) 20:1104
https://doi.org/10.1186/s12889-020-08875-3

BMC Public Health

DEBATE Open Access

African-led health research and capacity building- is it working?

Victoria O. Kasprowicz[1,2†], Denis Chopera[1†], Kim Darley Waddilove[1], Mark A. Brockman[3,4,5], Jill Gilmour[6], Eric Hunter[7,8], William Kilembe[8], Etienne Karita[8], Simani Gaseitsiwe[9,10], Eduard J. Sanders[11,12] and Thumbi Ndung'u[1,2,13,14,15*]

Abstract

Background: Africa bears a disproportionately high burden of globally significant disease but has lagged in knowledge production to address its health challenges. In this contribution, we discuss the challenges and approaches to health research capacity strengthening in sub-Saharan Africa and propose that the recent shift to an African-led approach is the most optimal.

Methods and findings: We introduce several capacity building approaches and recent achievements, explore why African-led research on the continent is a potentially paradigm-shifting and innovative approach, and discuss the advantages and challenges thereof. We reflect on the approaches used by the African Academy of Sciences (AAS)-funded Sub-Saharan African Network for TB/HIV Research Excellence (SANTHE) consortium as an example of an effective African-led science and capacity building programme. We recommend the following as crucial components of future efforts: 1. Directly empowering African-based researchers, 2. Offering quality training and career development opportunities to large numbers of junior African scientists and support staff, and 3. Effective information exchange and collaboration. Furthermore, we argue that long-term investment from international donors and increasing funding commitments from African governments and philanthropies will be needed to realise a critical mass of local capacity and to create and sustain world-class research hubs that will be conducive to address Africa's intractable health challenges.

Conclusions: Our experiences so far suggest that African-led research has the potential to overcome the vicious cycle of brain-drain and may ultimately lead to improvement of health and science-led economic transformation of Africa into a prosperous continent.

Keywords: Capacity building, Global health, Africa, Health research

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Offering quality training and career development opportunities to large numbers of junior African scientist and “support staff (= RMA staff)”

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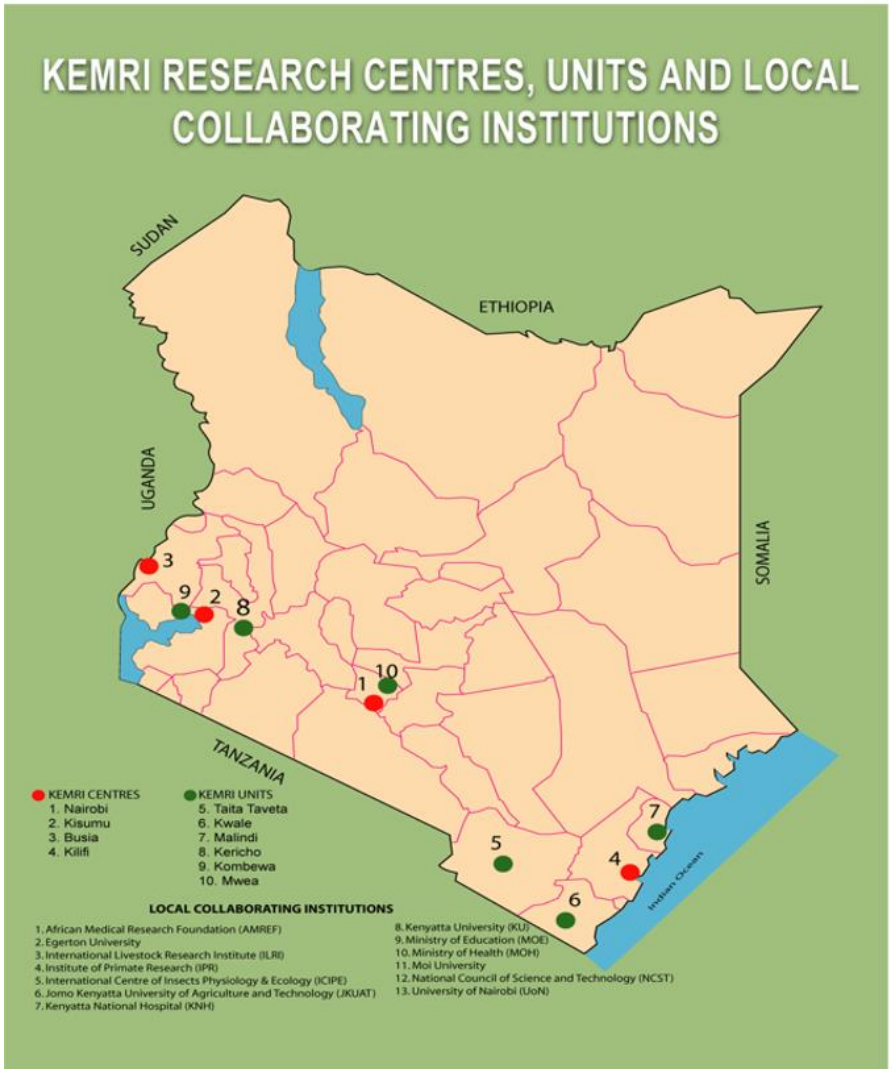
Introduction of KEMRI



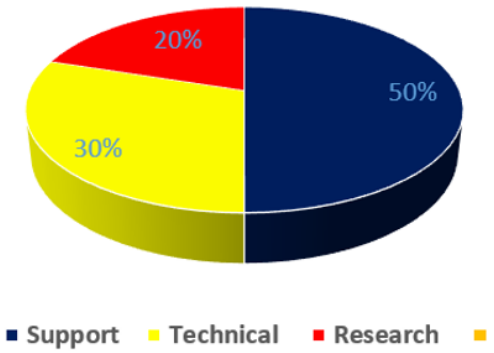
Mandate

1. **Conduct health, biomedical and public health** research for human health;
2. Build human health research capacity;
3. **Collaborate and partner** with other local and international research bodies and institutions in carrying out human health research and capacity building;
4. **Advice the responsible Ministry** in matters pertaining to health research policies and priorities;
5. Undertake **scientific and technological innovation** as well as in the discovery, transmission and enhancement of knowledge and stimulate the intellectual life in the economic, social, cultural, scientific, and technological development;
6. Establish incubation **centers for innovation**, and link research, policymakers, academia and industry in the health products value chain;
7. To do all such things that are necessary or desirable to carry out its functions.

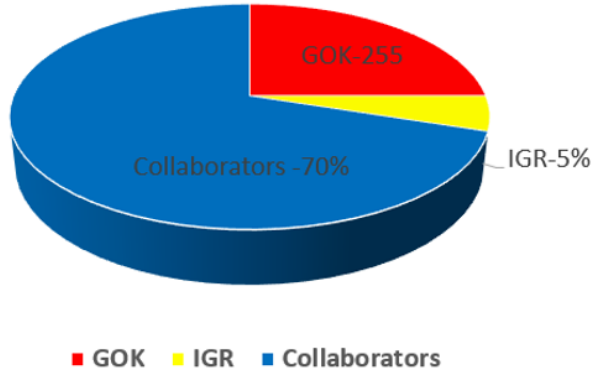
Research Programs

1. **Infectious & Parasitic Diseases** (Malaria, HIV, TB)
2. **Non-Communicable Diseases** (Cancer, Diabetes, Hypertension, Road Accidents and Injuries)
3. **Sexual, Reproductive, Adolescent and Child Health** (Maternal Health)
4. **Public Health & Health Systems Research** (Health Service Organization, Human Resource for Health, Health Information Systems)
5. **Biotechnology Research** (Molecular Diagnostics & Vaccine Initiatives)
6. **Natural Products Research & Drug Development** (Traditional & Alternative Medicines)

HUMAN RESOURCE



FINANCIAL SOURCES



International recognition and initiatives

- WHO designated Centre's of Excellence in the following:-
  - NTD
  - Malaria & Ebola Vaccine Trials
  - Nutrition and Virology
  - HIV/Aids
  - Polio, Measles, Anti microbial Resistance
- ANDi,
- TB and lung diseases regional centre
- Clinical Trials (GCP)
- Regional centre for Emerging & Re-emerging diseases and climate change.
- Regional laboratory capacity building in operation research under the East African Public Health Laboratory networking project (EAPHLN).
- WHO designated International Training Center to implement capacity strengthening training courses to support Neglected Tropical Diseases (NTDs) control Programmes.
- WHO designated Centre of excellence in Malaria, Nutrition and Virology
- World Health Organization (WHO) Collaborating Centre for HIV/AIDS, Tropical Diseases Research, Polio Immunization, Viral Haemorrhagic Fevers and Anti-Microbial Resistance (WHO-NET).
- USA National Research Council recognized training institute for postdoctoral and senior research awards
- The Africa Regional headquarters for Drugs for Neglected Diseases Initiative (DNDi).
- KEMRI as Africa-CDC reference center for Biosecurity/Biosafety

Capacity building

- Trained over 200 PhDs in Nairobi that collaborates with JKUAT and open university in our Kilifi Campuses.
- Graduated over 300 Kenyans and Masters level
- Regional Training
  - Pan African Thoracic society
  - JICA Third country training
  - JICA Technical Cooperation Project (Train Researchers and Research administrators)
  - World bank and WHO: Counties training in research
- We have over the years offered over 400 industrial/internship to youth

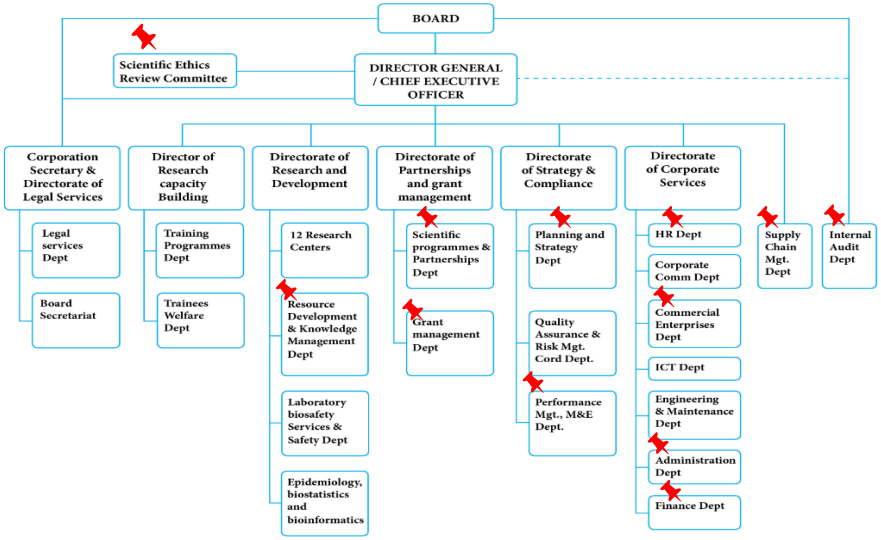
Major support from Japan

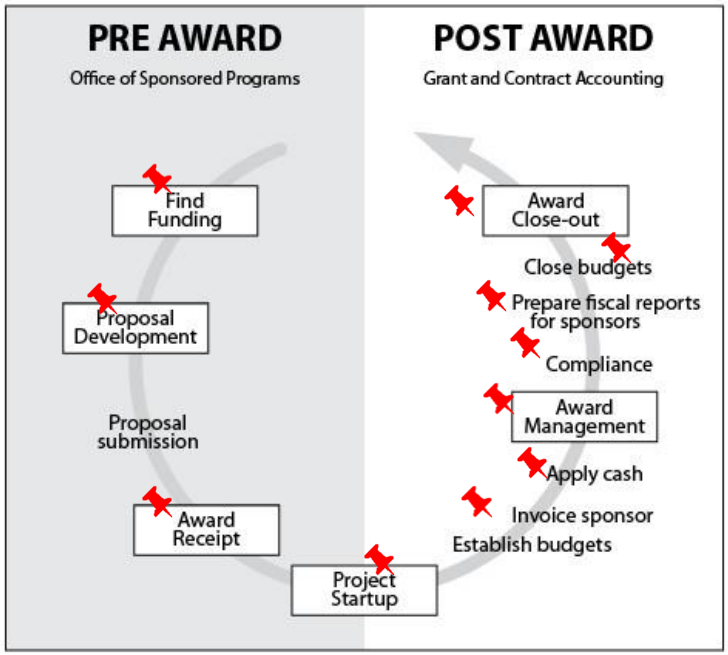
1. Construction of KEMRI HQ, Laboratories in Nairobi: admin block, research centers, animal house, staff clinic and staff quarters .
2. Biosafety Level 3 Laboratory at CVR: level 3 pathogen research
3. Construction and equipping of Production Department: production of products eg VTM, sanitizers, COVID PCR kits
4. Construction and equipping of Training Centre: Graduate school for capacity development of staff, national and regional.
5. Technical Cooperation Project: Capacity development of KEMRI researchers and administrative staff
6. Third Country Training Program: strengthening laboratory capacity for infectious disease control
7. COVID -19 Testing Support

Challenges

- **Human Resource:** Inadequate, remuneration, environment to attract and retain the best- non competitive terms and conditions.
- **Financial Resources:** Inadequate financial resources, overreliance on development partners.
- **Infrastructure:** Aging Infrastructure (most building over 30 years old)
- **Devolution:** Low prioritization by County governments on resource allocation for health research.

KEMRI's status on RMA

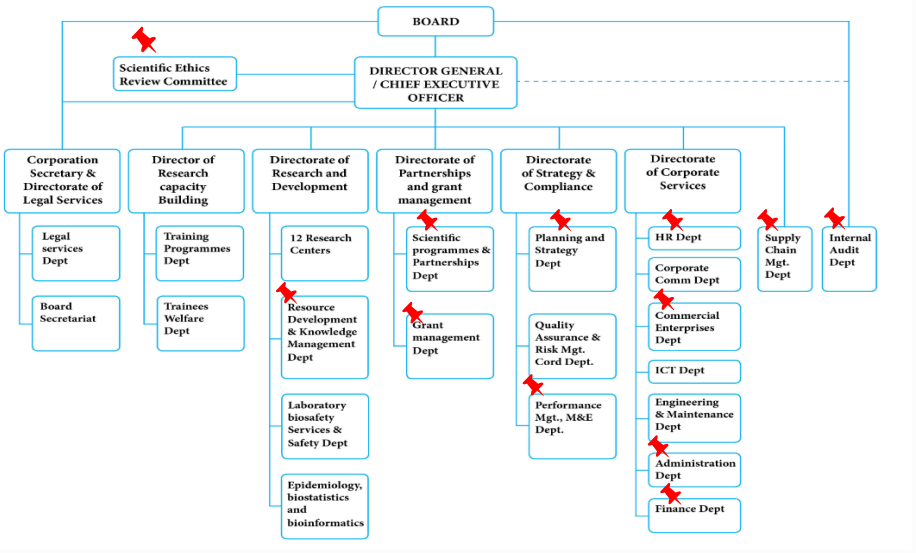


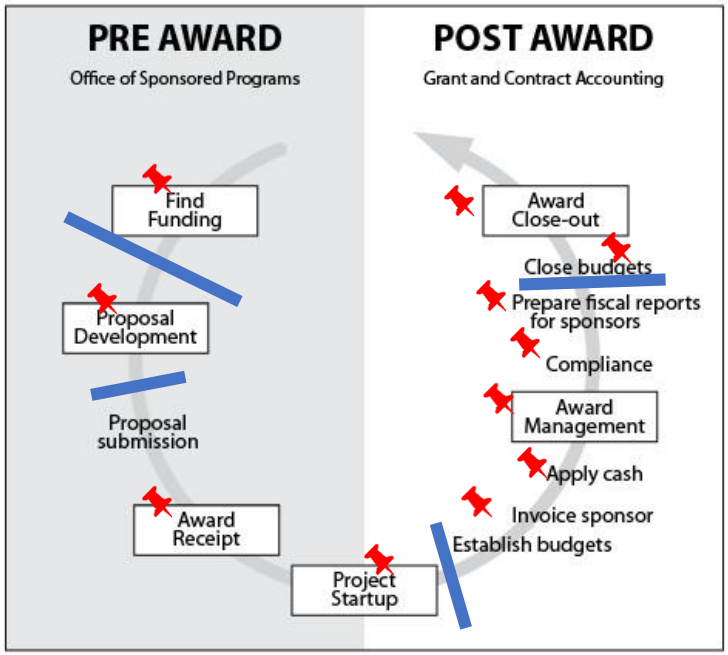


Research administrators in KEMRI encompasses various staff involved directly in the management of Research and grants from

pre to post award including:

1. Grants management staff ,
2. Administrative Staff (HR, Finance& Accounting, Procurement, Communication)
3. Knowledge Management and IP,
4. Planning, Strategy and monitoring





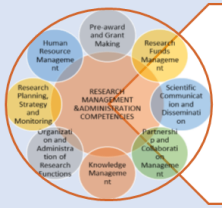
Major challenges in the award loop

1. Silo structure
2. No training system
3. Digitalization
4. Understaff

BACKGROUND

- The world has faced **seven Public Health Emergencies of International Concern (PHEICs),** with six significantly impacting Sub-Saharan Africa (SSA), including Ebola and COVID-19.
- SSA holds **16% of the global population and 25% of the disease burden but contributes only 1% to global research output**, revealing a critical research capacity gap.
- Enhancing Africa-led research capacity is essential, but SSA faces challenges in both researcher numbers and quality, **due to limited training, resources, and support systems**.
- Research Management and Administration (RMA) is crucial for boosting research efficiency, **benefiting researchers during both pre-award and post-award** phases.
- The Kenya Medical Research Institute (KEMRI), a key player in East African health policy, also faces a researcher shortage.
- Since 2023, **KEMRI has been developing an RMA system to enhance domestic support capacity**, and to establish an East African RMA network via the INORMS platform to foster equitable partnerships and strengthen research capacity, with the support of JICA TCP project.

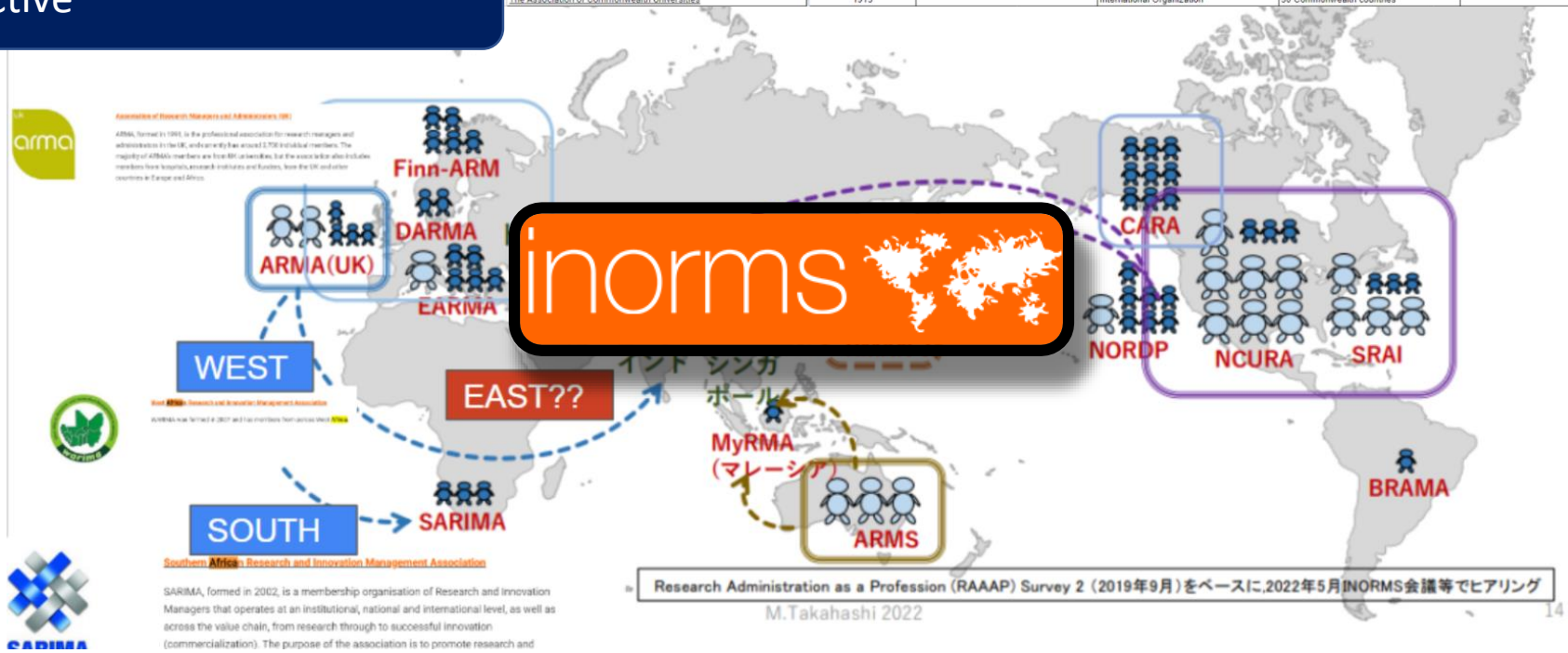
KEMRI's situation

Major challenges	Initiatives to improve of capacity of RMA in KEMRI
1. Silo structure	**Strategic plan to establish RMA department** • To enhance the coordination capacity to break the silo structure
2. No training system for RMA	 **CAPACITY BUILDING IN COLLABORATION WITH JICA** • Through a KEMRI-JICA collaborative project, we have trained about 30 participants after mapping out competencies required for RMAs from a KEMRI and international perspective through a skills exchange program with JICA and Kyoto university. • The goal of the training was to help trainees comprehend how to approach their already existing duties and functions from a research administration perspective, emulating the successful practices of Kyoto University
	PROFESSIONAL UPSKILING AND MENTORSHIP PROGRAMS • Continuously sponsored research administrators to short courses and professional conferences relevant to their skills i.e. ICPAK, ACCA, NCURA, INORMS, ISRAI,ETC. • Ensuring that staff are aware of the development changes happening in the professional world • Mentorship through staff mentoring program and consultancy-led trainings that many find more effective than passive learning. Currently in the process of developing a mentorship policy.
3. Digitalization for the process	**AUTOMATION** • Rolled out ERP modules to automate RMA processes in KEMRI including Finance, procurement, HR, Grants management.

Global trend on RMA

INORMS comprises of a membership network of research management societies from around the globe. In African continent, only EAST and SOUTH are active

NAME	YEAR OF FOUNDATION	FUNDED BY/ SPONSORS/ MEMBERS	TYPE (NGO/NGO/NPO etc)	MEMBER COUNTRIES	NOTE
Association of Research Managers and Administrators (UK)	1991	UK universities, members from hospitals, research institutes and funders	Professional Association	United Kingdom	
Association of Research Managers and Administrators (The Netherlands)	2018	Evers + Manders Subsidieadviseurs, Hezelburcht, RESEARCHconnect	Professional Association	Netherlands	
Australasian Research Management Society	1999	F1 Solutions, research master, cayuse, Exlibris, Australian Government	Professional Association	Australia, New Zealand, Pacific Islands, Papua New Guinea and Singapore as well as other locations around the world	
Brazilian Association of Research Managers and Administrators	2013		Professional Association	Brazil	Could not get the funding orgainzations
Canadian Association of Research Administrators			Professional Association	Canada	
Chinese Association for Science of Science and Science &Technology Policy (CASSSP)	1982	China Association for Science and Technology	non-governmental organization of scientific and technological professionals	China	
Danish Association of Research Managers and Administrators	2008		Professional Association	Denmark	
European Association of Research Managers and Administrators	1994	Research professional news, Exlibris	Professional Association	Europe	Founding member of the International Network of Research Management Societies (INORMS).
Finnish Association of Research Managers and Administrators	2012		Professional Association	Finland	
Network of Research- and Transfermanagement (FORTRAMA)	2018		Non-profit Association	Germany	
Icelandic Association for Research Managers and Administrators (ICEARMA, Iceland)					No information, website unavailable
Malaysia Association of Research Managers and Administrators (MyRMA)	2019			Malaysia	
National Council of University Research Administrators	1959	Attain Partners, John Hopkins Advanced Academic Programs, Streamlyn Research, Cayuse, Huron, Kuali, Delloite	Professional Association	USA	
National Organization of Research Development Professionals	2010		Professional Association	USA	
Norwegian Network for Administration and Research Management	2013		Professional Association	Norway	
PraxisAuril	2010		Non-profit organization	United Kingdom	
Research Manager and Administrator Network Japan	2015	Valuenex, Clarivate, Elsevier, Panasonic	Professional Association	Japan	
Southern African Research and Innovation Management Association	2002			Southern Africa	
Society of Research Administrators International	1967		non-profit association	Global	
West African Research and Innovation Management Association	2007		non-profit association	West Africa	
The Association of Commonwealth Universities	1913		International Organization	50 Commonwealth countries	



» Research Administration as a Profession (RAAAP) Survey 2（2019年9月）をベースに,2022年5月INORMS会議等でヒアリング

M.Takahashi 2022

Global trend on RMA

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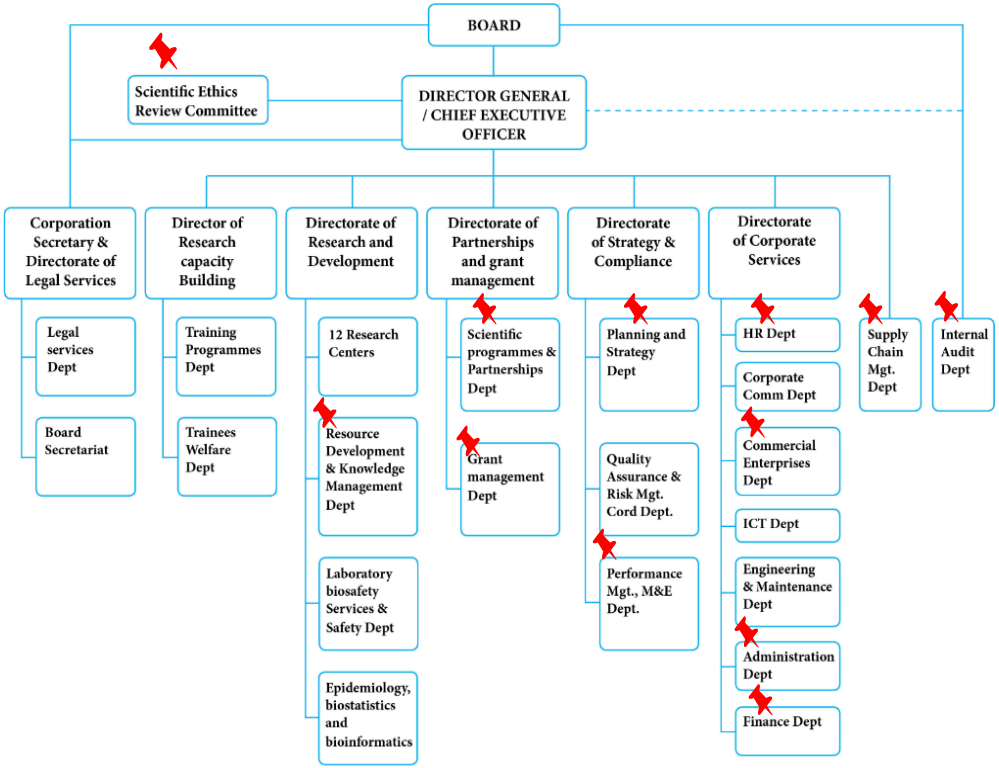
Orientation of presenters

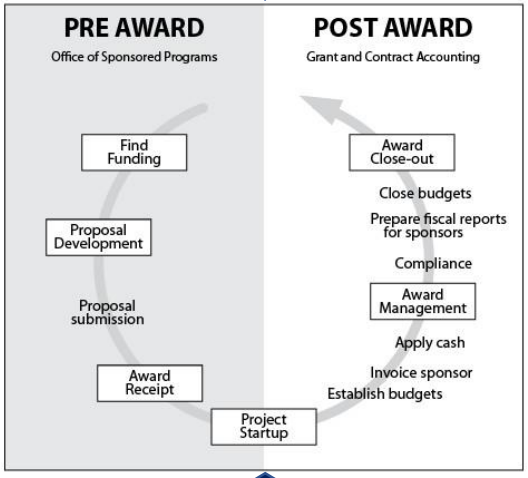
Researchers

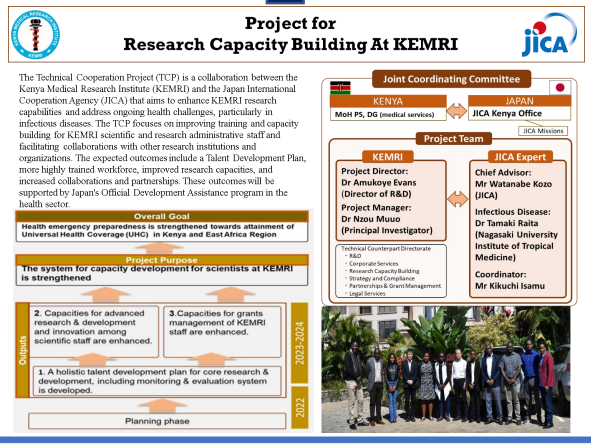
RMA

EARIMA

Eastern Africa Research and Innovation Management Association (EARIMA)



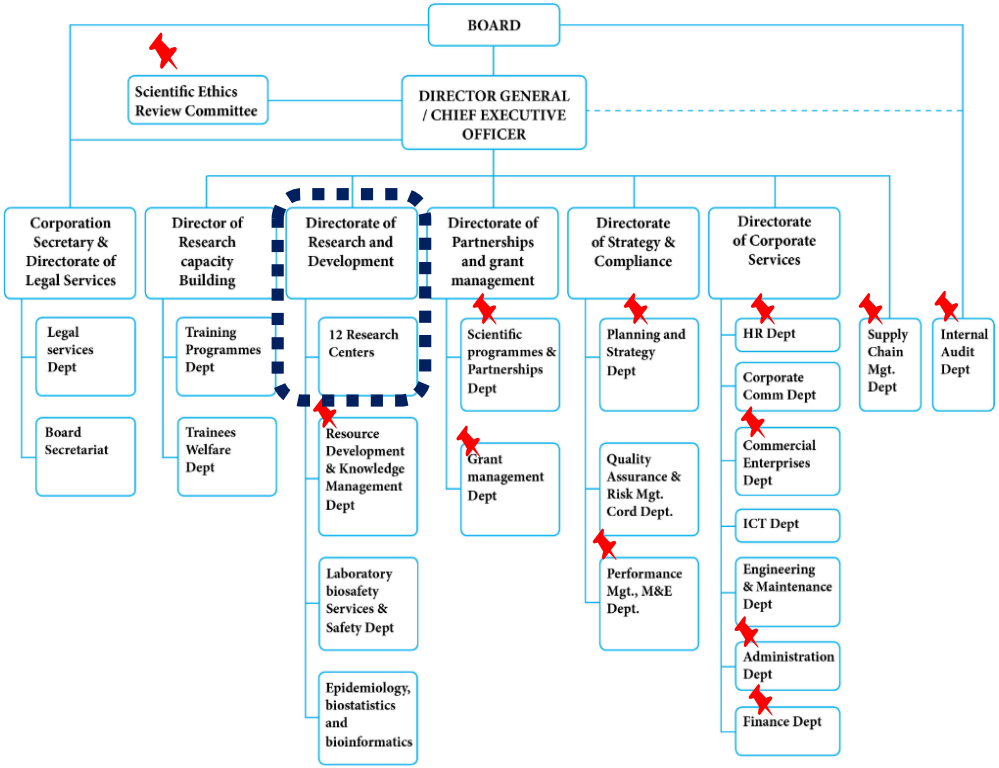




Orientation of presenters

Researchers

RMA



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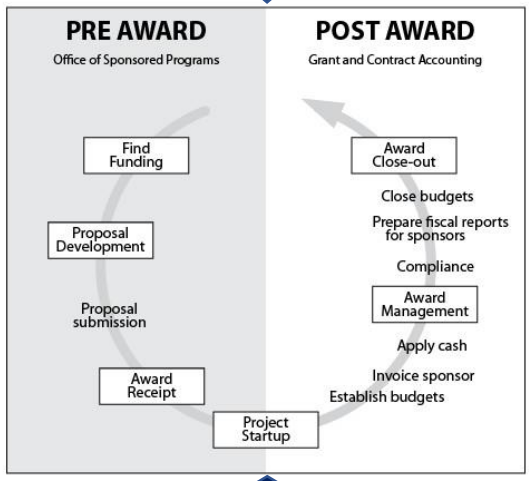
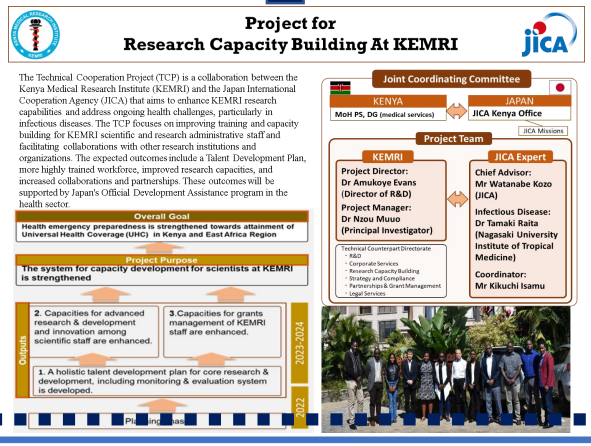


Project for Research Capacity Building At KEMRI



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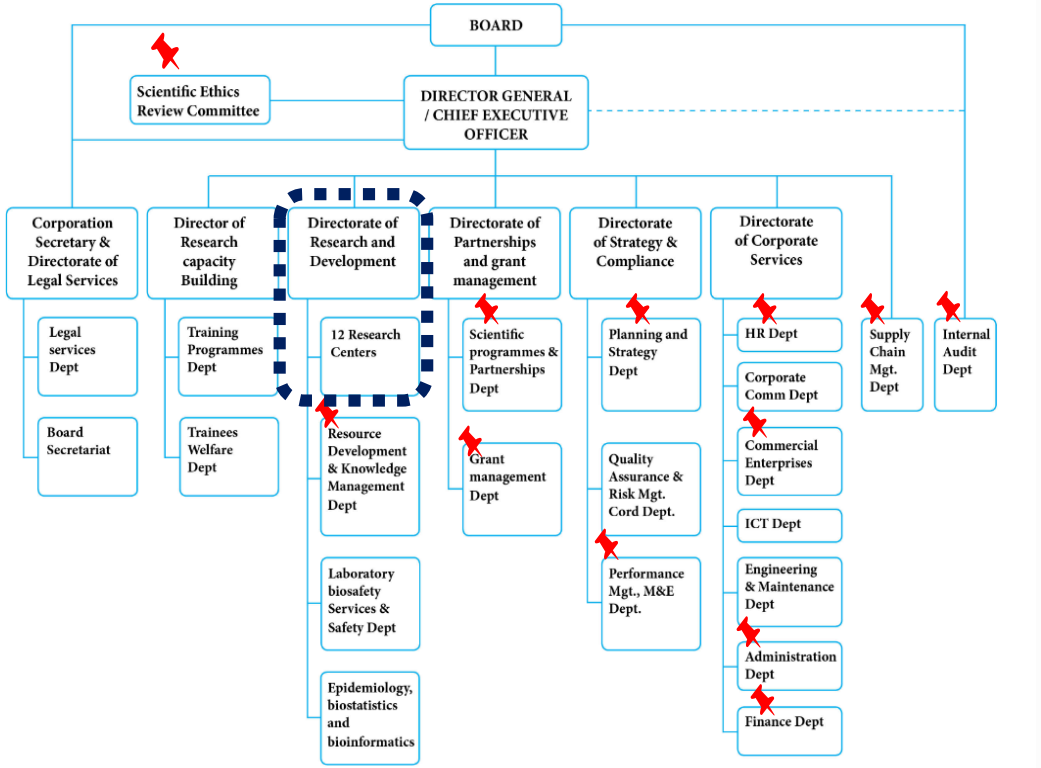

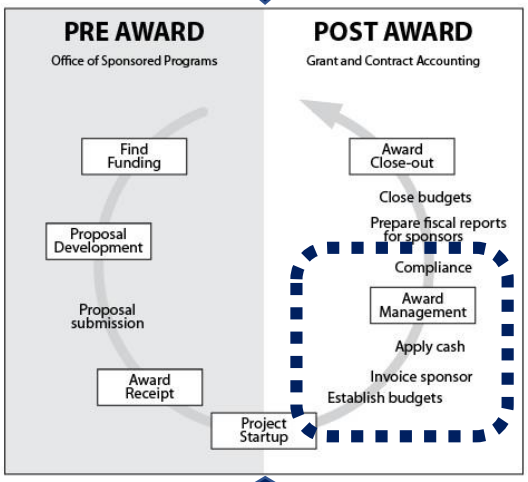

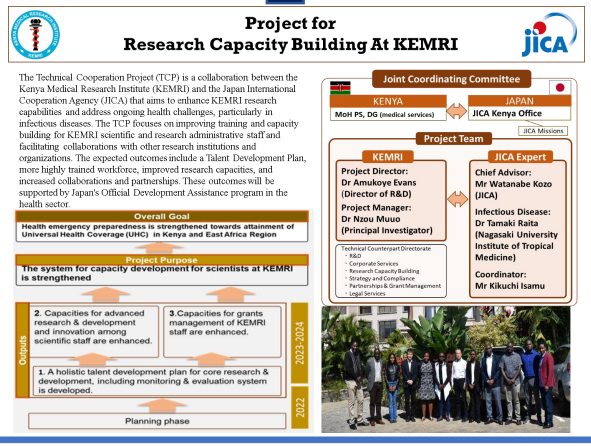

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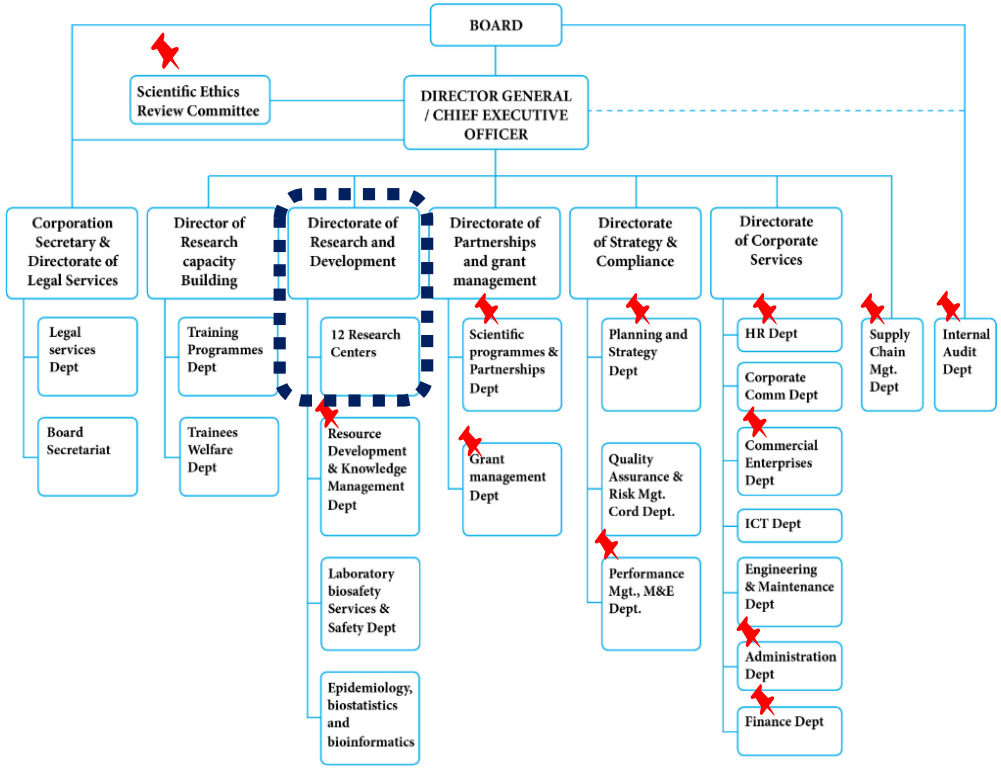

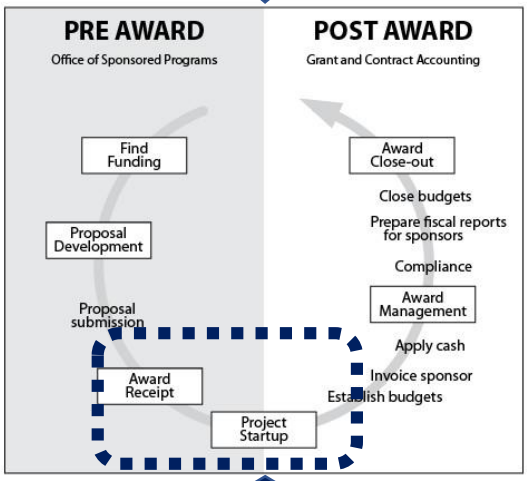

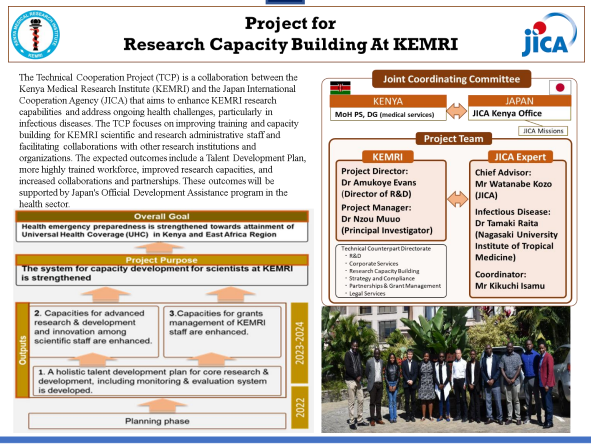

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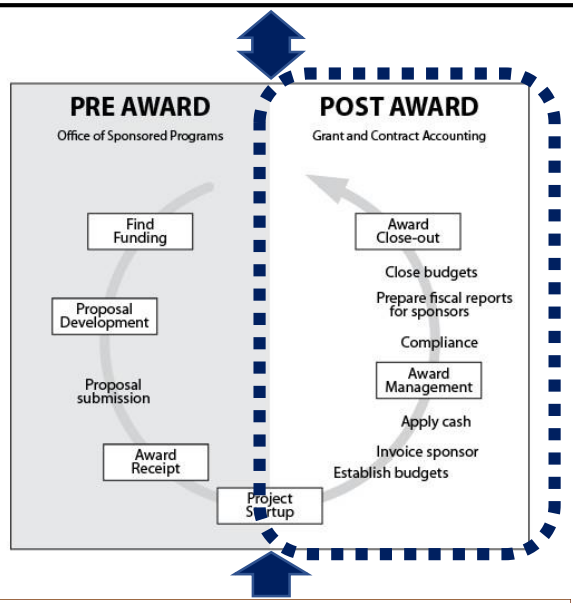
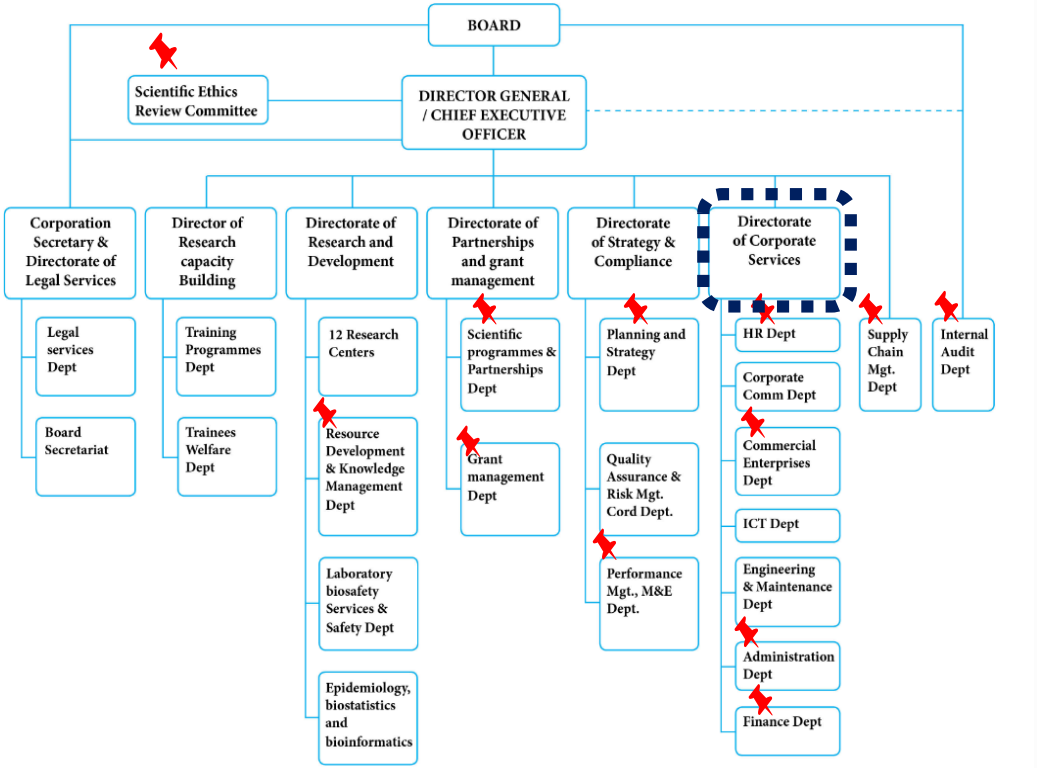
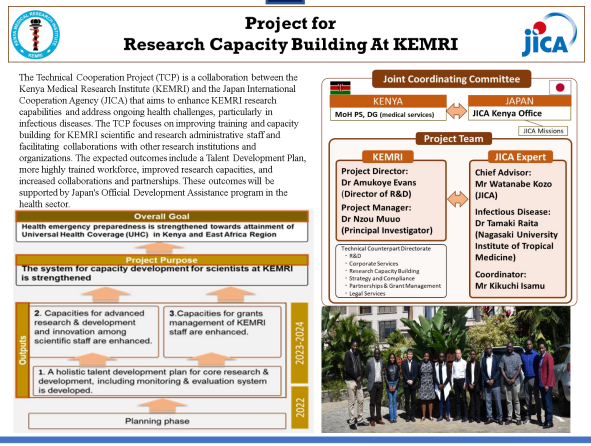


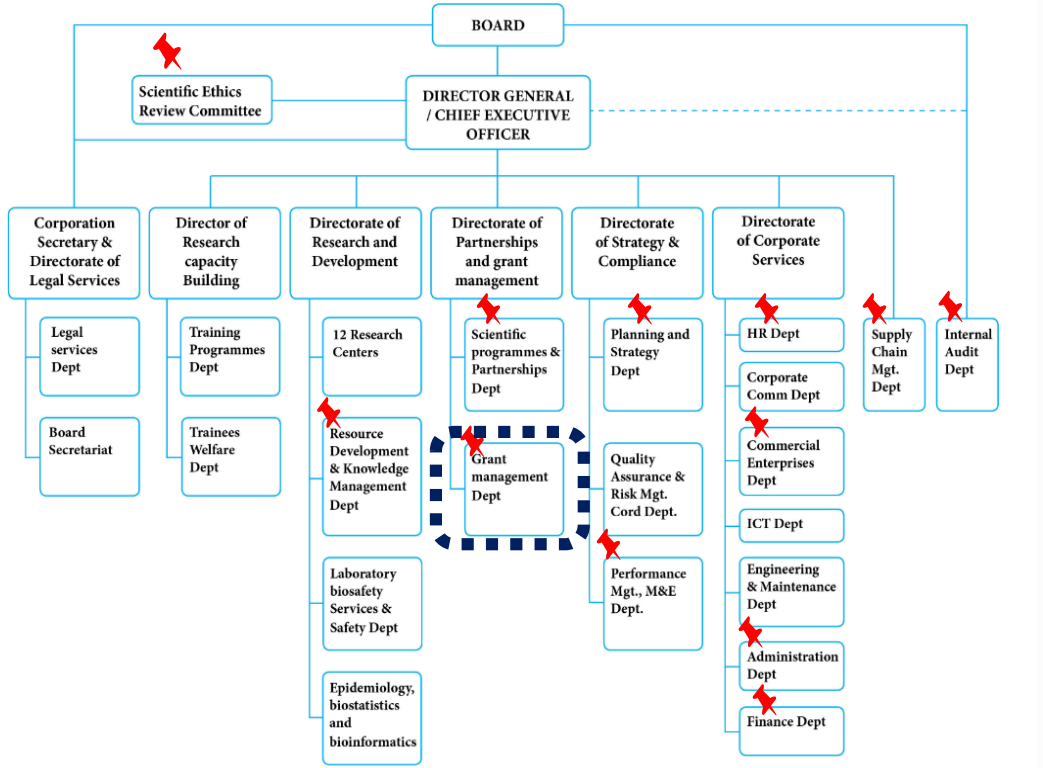


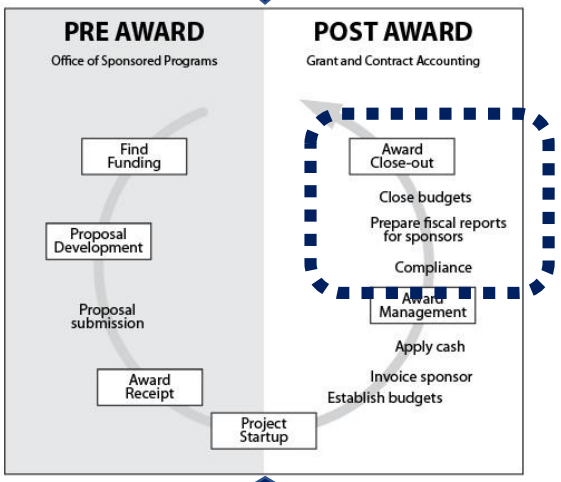


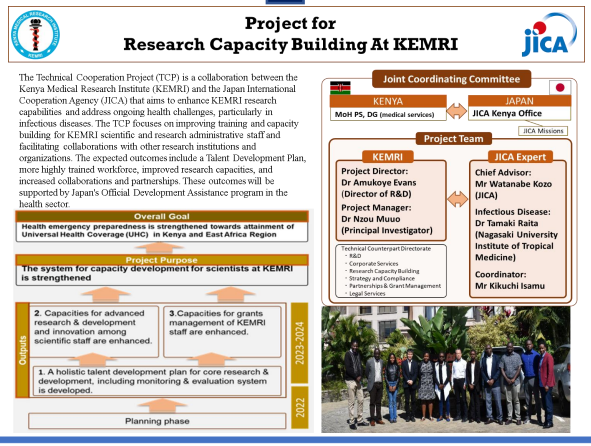
Orientation of presenters

Researchers

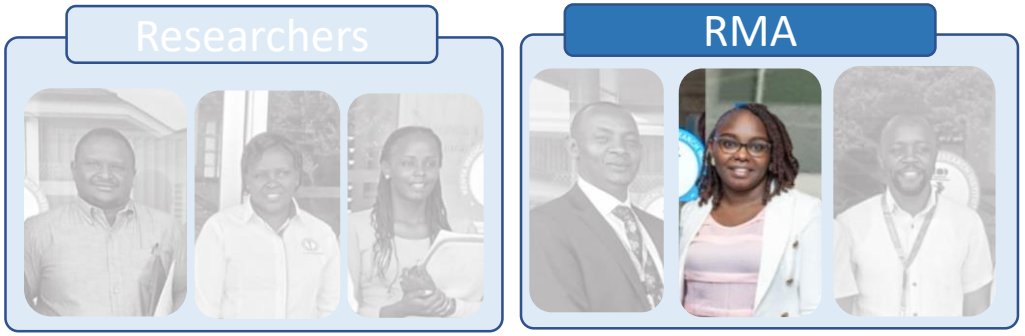
RMA

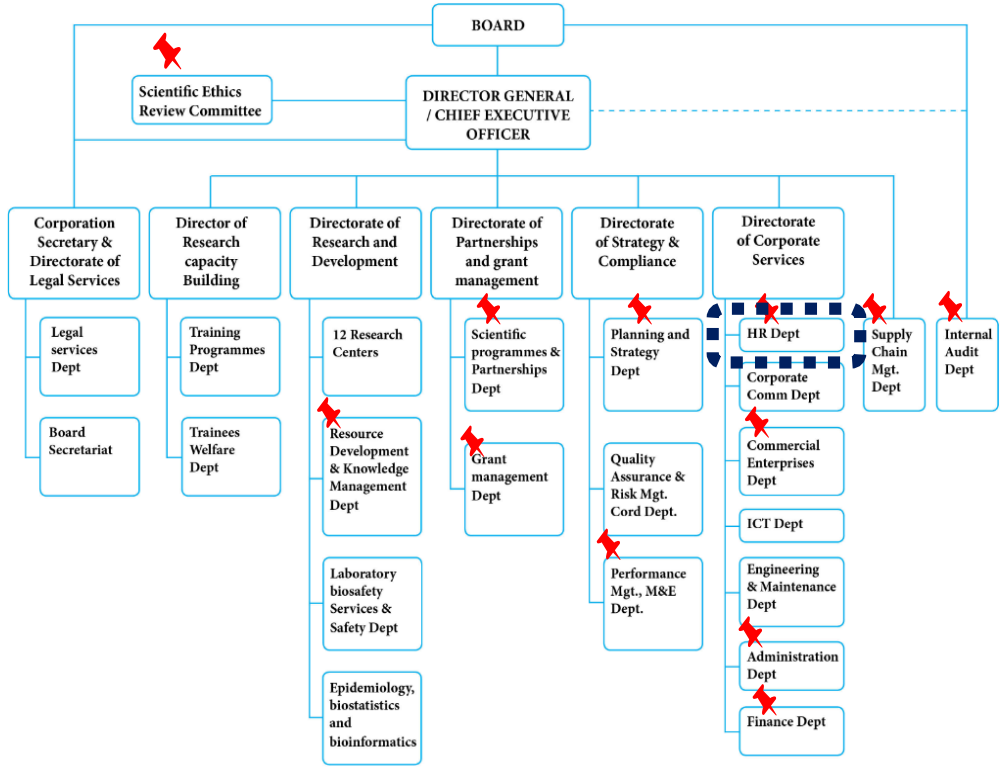


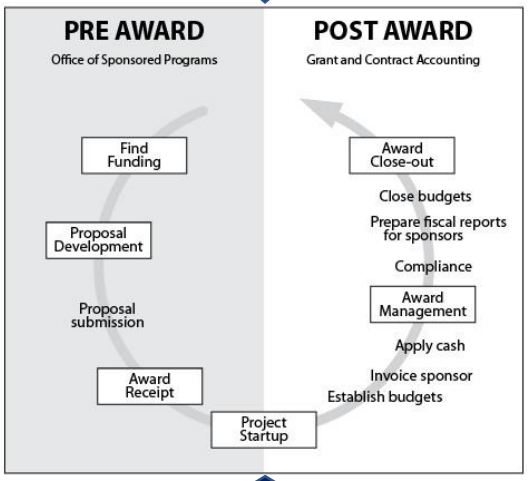


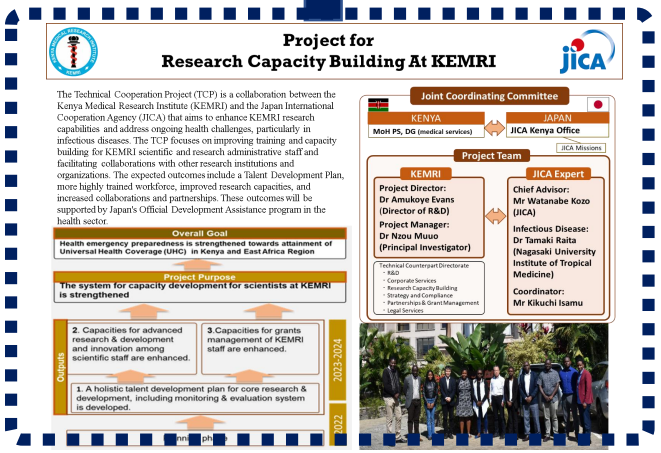


Orientation of presenters









Contents		Presenter	Time (Min)
Introduction	Background Evidence of RMA effectiveness for research capacity enhancement KEMRI's status (brief) E/Africa's status (INORMS)	SAMSON NZOU	12
Research	Current status of Research Capacity Challenges and opportunities in relation to RMA	ANNE MWANGI SHEILA MBAABU	12
RMA	Current status of RMA in KEMRI Challenges and opportunities	GABRIEL GITAU FRANKLINE OKIIRY	12
Project	Project briefing Project achievement	PATRICIA NZIOKI	12
Panel	What effort is required to achieve the goal after the project	Chair: SAMSON NZOU	30
Q&A		Facilitator: PATRICIA NZIOKI	12

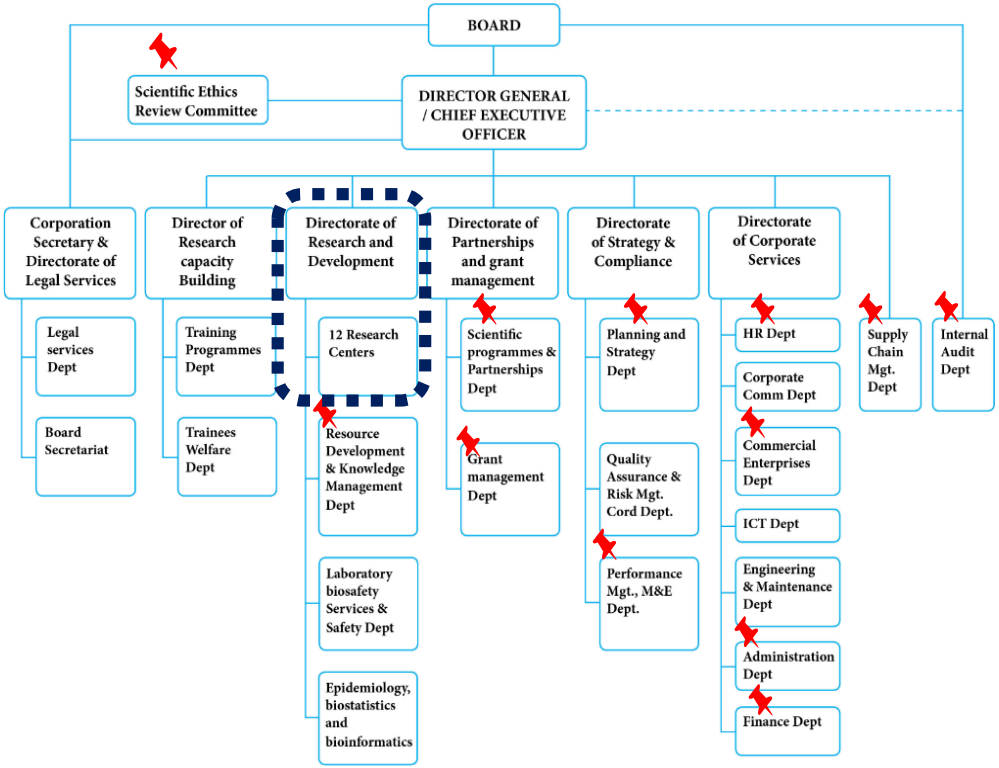
Orientation of presenters

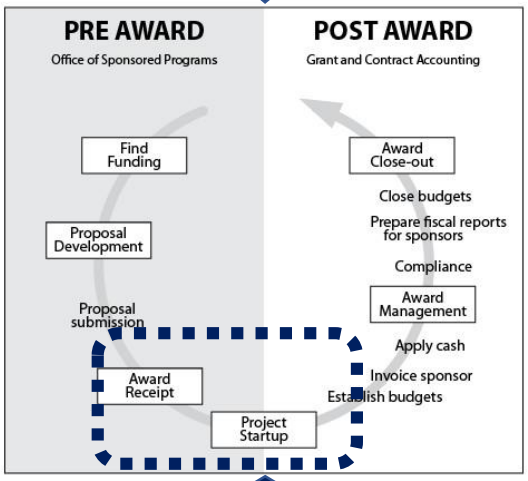
Researchers

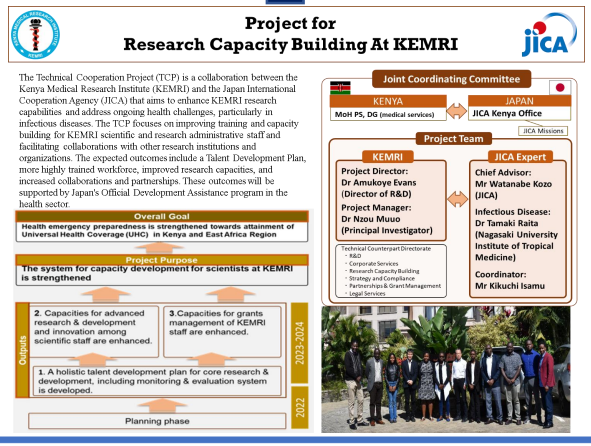
RMA

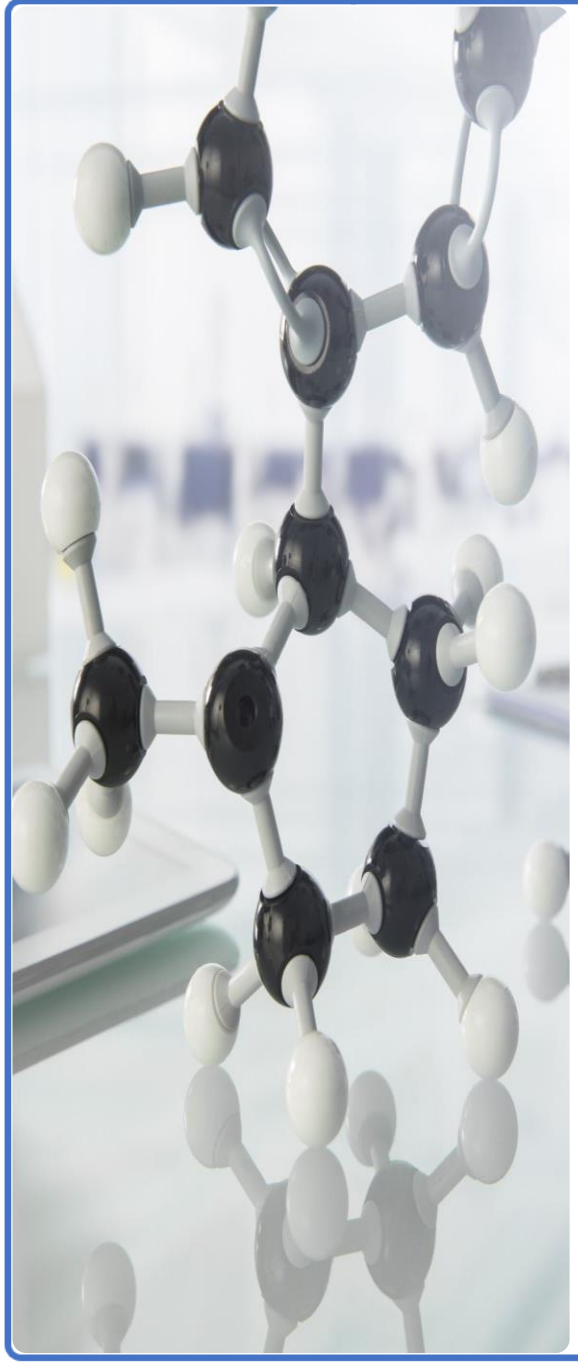
EARIMA

Eastern Africa Research and Innovation Management Association (EARIMA)









Introduction

- KEMRI's immunology and molecular infrastructure include:
  - Cell Culture Techniques
  - Flow Cytometry Techniques
  - Animal House Facility
  - PCR techniques
  - Molecular application techniques

Challenges

Kemri's research output is limited

There are few research scientists and technical staff with technical immunology and molecular skills

There is limited training resources in KEMRI and East Africa

There are limited internal training systems to improve research

KEMRI centers and programs working in silos

Integrating Science and RMA -LMS

Learning **M**anagement **S**ystems (**LMS**)	Create basic immunological techniques and molecular knowledge to newly recruited scientific employees
	To add on to and improve knowledge of researchers and technical laboratory personnel
	Provide certification as proof of having being trained
	Retaining of information on LMS for constant revision
	Scheduled updating of the LMS system and information with newer techniques and renewal of certificates

Integrating Science and RMA- Partnerships

Build partnerships with internationally reputable RMA societies such as INORMS, SARIMA, EARIMA.

To strengthen RMA capacity in Eastern Africa so as to have an effective network promotion and partnership

Need to provide strategic guidelines in molecular testing and surveillance of global health burdens in Eastern Africa

Harmonized translation of research findings, provide actionable solutions to ministries and engage the communities in Eastern Africa through RMA partnerships

Integrating Science and RMA- RMA Centre

Establishment of an RMA core facility in KEMRI and Eastern Africa

RMA facility will provide insights on the system, development , improvement and implementation

RMA core facility can provide long term solutions of developing and generating molecular and immunological reagents and kits that are cheaper and easily rolled out to scientists.

The core RMA center will provide adequate grant management and enable diversification of financial input when it comes to molecular testing for emerging and re-emerging infections and pandemic preparedness.

Integrating Science and RMA- Personnel

- Training of Research Administrative staff on the global disease burdens and those affecting Eastern Africa; significant challenges of thr quantity and quality of researchers
- Engaging the KEMRI management and human resource department on the importance of RMA support project
- KEMRI-JICA Corporation project to develop internal immunology and molecular content to strengthen research knowledge and promote efficient procurement procedures and purcheses for research implementation.
- Optimal use of the KEMRI graduate school to implement immunology and molecular training approaches through LMS system

Opportunities

- RMA integration into immunology and moleculer testing approaches will be beneficial to researchers in terms of knowledge and skills
- Sub-Saharan Africa global research output will improve from 1% with contribution from strengthened RMA systems in Eastern Africa
- The quality of research output will be improved as a a result of improved immunological and moleculer methodologies.
- There will be adequate training resources and support systems provided by RMA.

Opportunities

- Development and customization of immunological and molecular training curriculum through LMS to fit African countries and context
- Digital training of immunology and molecular approaches that will be available in remote centres
- Automated maintainance and repair scheduling of equipment for RS and RA through RMA systems
- Digitalized knowledge management interactive system with scientists for scientific implementation and research administration during policy developments

Opportunities

- Commercialization of scientific outputs for use even when austerity measures are in place and for use in areas with limited resources.
- Intricate Intellectual property rights/patenting processes can be mitigated through RMA and encourage scientists to have more research inputs and outputs i.e drug development
- Duplication of research and silo research structures can be impeded by RMA fostering collaborations and overall collaboration synergy
- Use of virtual reality (VR) and auguemented reality (AR) for realistic research implementation strategies

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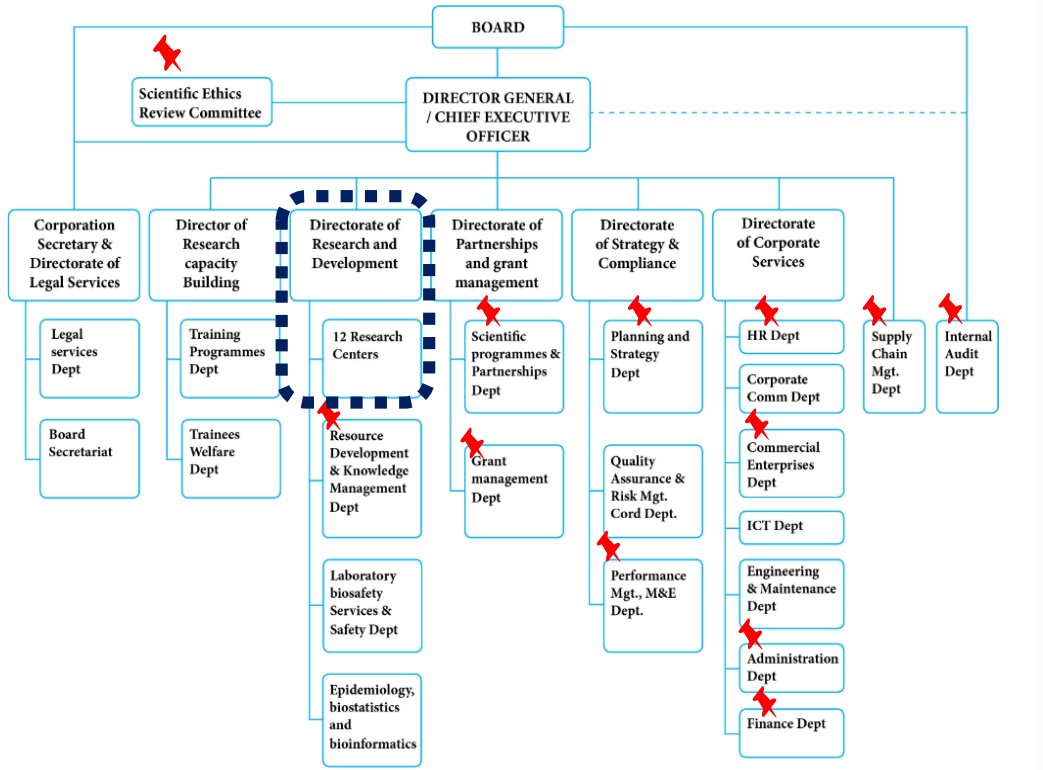
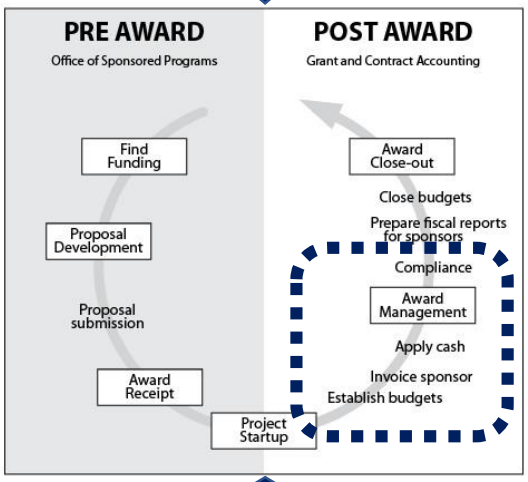
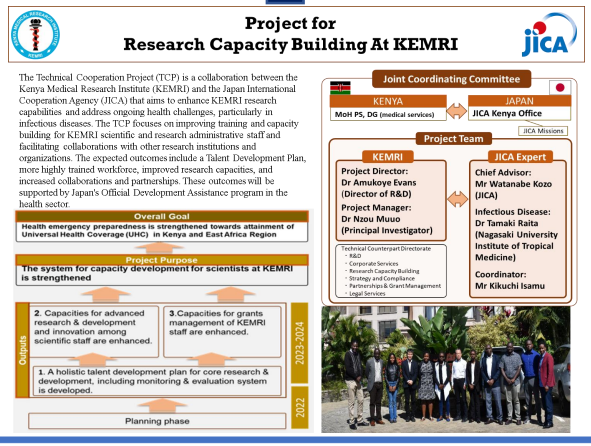
Orientation of presenters

Researchers

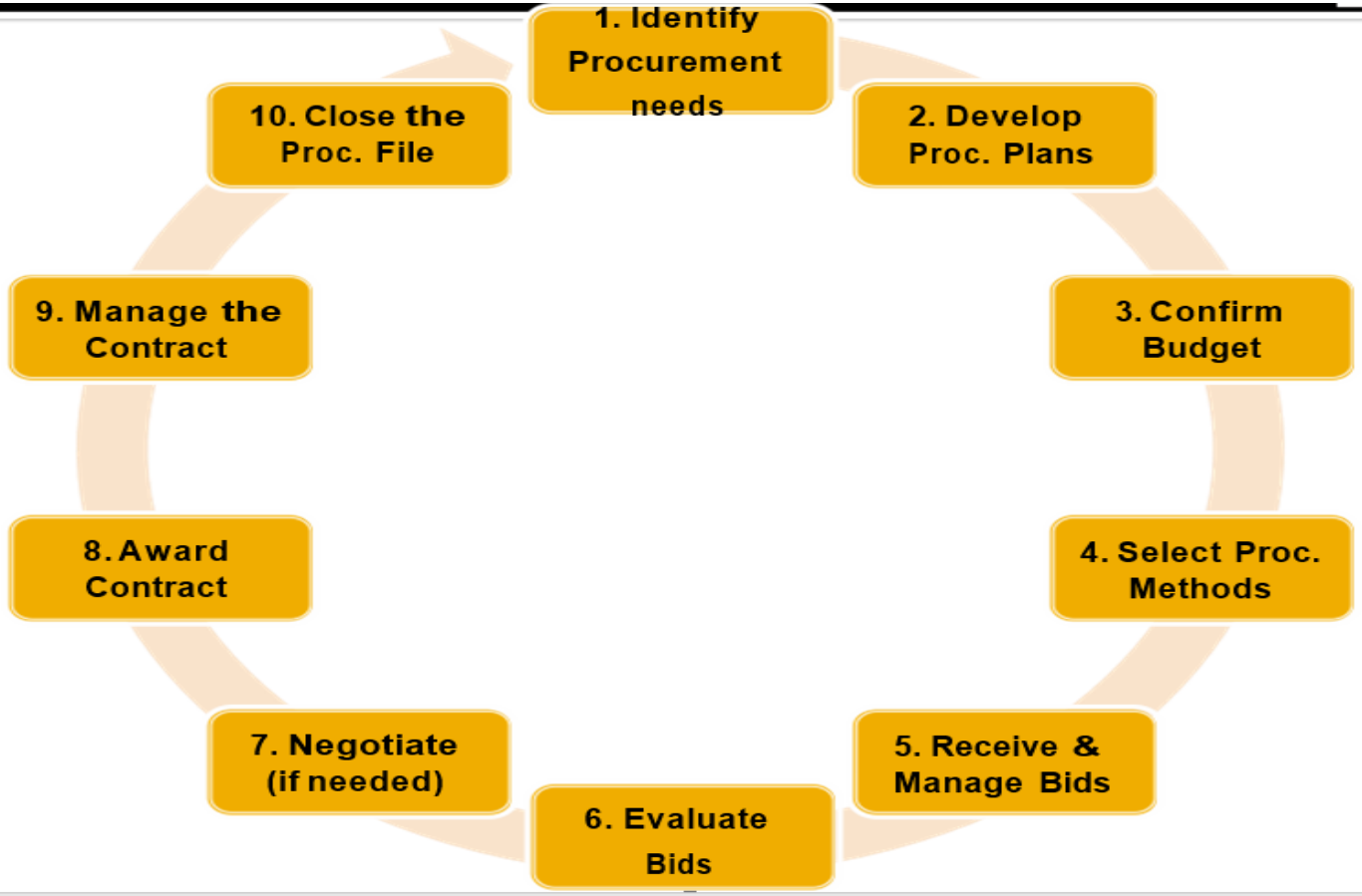
RMA







Procurement cycle



User department responsibility in procurement

- Prepare and submit departmental **procurement plan** through the PU
- Initiation of procurement / disposal process – requisitioning
- Specification of requirements
- Maintain contract records
- Participate in inspection & acceptance of good / services
- Participate in contract management
- Identification of items for disposal

User responsibility	Specification of requirements
	Specification and description of items should be provided by the user to the Procuring Department
	Specification of IT items and Machines can be made in liaison with the ICT and Engineering department
	Only items specified and described can be found in the item list while making requisition

Methods of Procurement

Direct Procurement

(a)The goods, works or services are available only from a particular supplier

(b) Engaging in tendering proceedings or any other method of procurement will be impractical in cases of war, invasion or natural disaster or when there is an urgent need for the goods, works or services.

Low Value Procurement

(a) This is procuring low value items which are not procured on a regular or frequent basis and are not covered in framework agreement;

(b) the estimated value of the goods, works or non consultancy services being procured are less than or equal to the maximum value per financial year for that low-value procurement procedure as may be prescribed.

Challenges in Procurement and Supply Chain

- Initiation of procurement
- Specification of requirements
- Maintenance of contract records
- Identification of items for disposal

Opportunities

Participation in inspection & acceptance of good / services by scientists

Proper maintenance of supply records

Easier preparation and submission of **procurement plan** through the RMA

RMA in Supply Chain

- Specification of IT items and Machines can be made in liaison with the ICT and Engineering department
- Creation of description items by scientists, finance, ICT and procurement officers
- Liaison of scientists and procurement officers on procurement items while making requisitions via RMA systems
- Calibration and maintenance of equipment by engineering department

Supply Chain and RMA Requisition

GENERATION OF REQUISITION BY P. I, PROCUREMENT AND FINANCE

APPROVAL OF REQUISITION BY P.I, H.O.D AND PROCUREMENT MANAGER

UPLOADING OF REQUISITION AND SUPPORTING DOCUMENTS ON PROCUREMENT SYSTEM FOR APPROVALS

FOLLOW UP OF APPROVAL BY PROCUREMENT OFFICERS AND FINANCE PERSONNEL.

APPROVED REQUISITION, CREATION OF PROCUREMENT METHOD AND DELIVERY

Output of RMA in Lab Supply Chain and Infrastructure

Standardization of the procuring entity, procured goods, equipment, technology or services from suppliers

Fairness of acquisition prices for good and services to scientists and administrative staff

Direct and centralized procurement for all scientists and administration staff

Sustainability of procurement procedures

Transparency in procurement documents such as proforma invoice, authorization letter, copies of existing contracts

Inventories on procured items

Output of RMA in Lab Supply Chain and Infrastructure to Scientists

- Easier procurement procedures
- Reduced procurement mistakes during requisitions
- Timely approvals from the management and procurement staff
- Stock and inventory reports from scientists, procurement and finance officers
- Proper storage of testing reagents and test kits from supplier to the user
- Improved quality for research reagents

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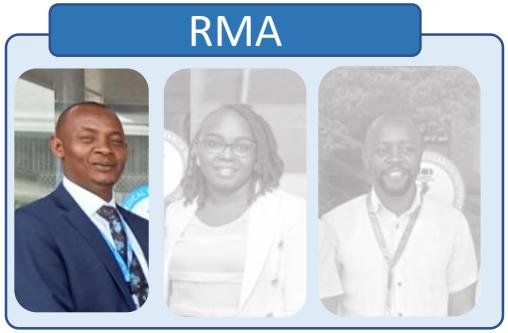

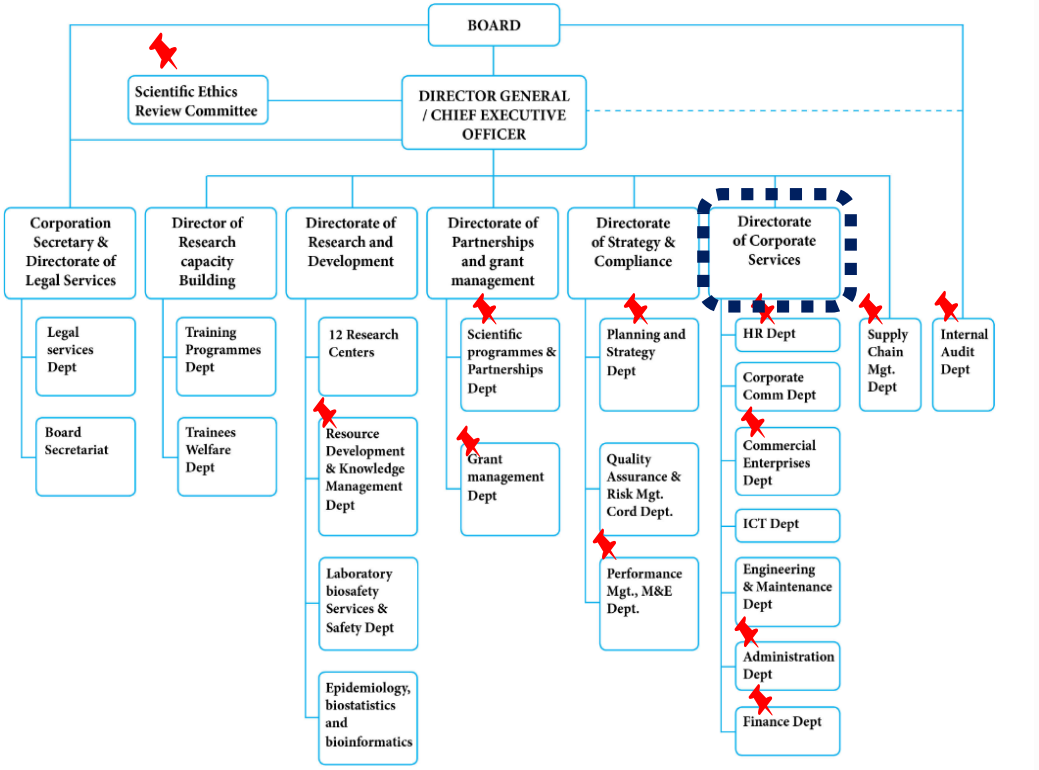

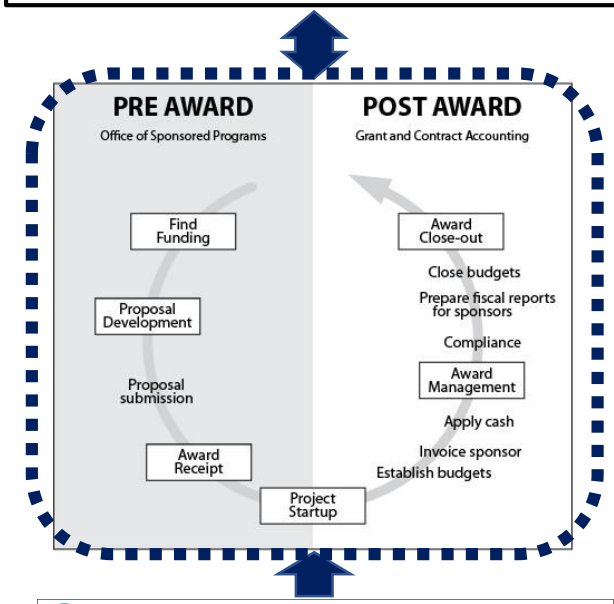

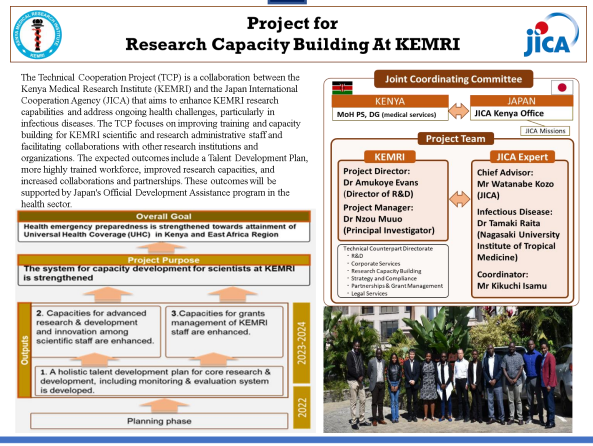

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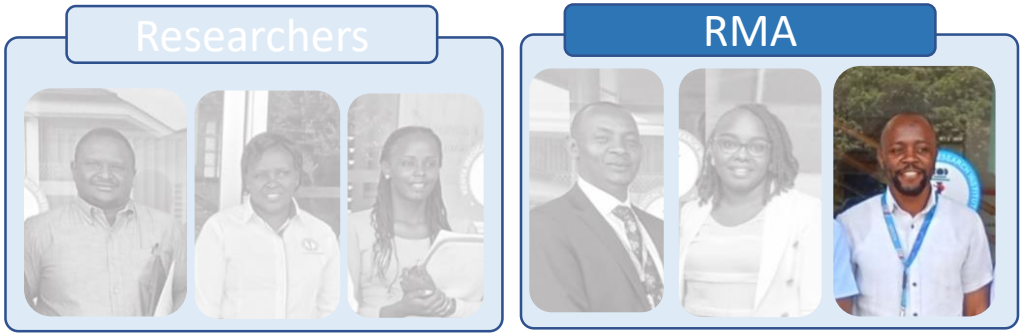
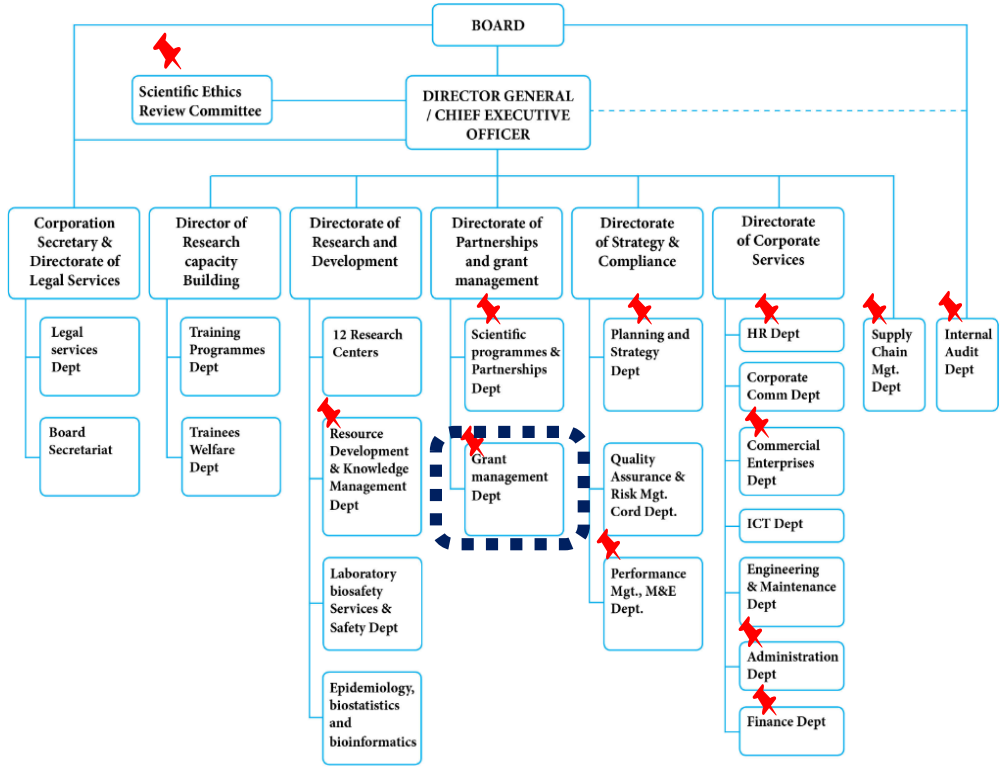
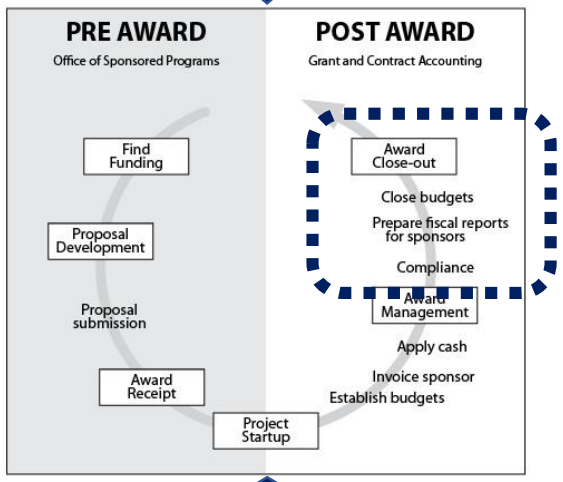
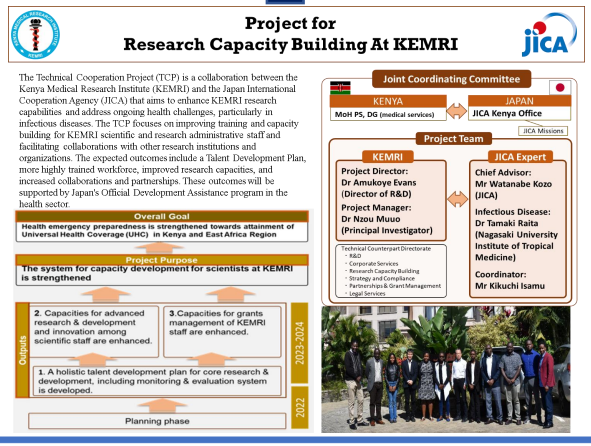








KEMRI Research Administration Process into 4 stages as below

1. Pre-Award

- Funding Opportunity Identification (creation of core application team)
- Application and submission (support in assembling requirements, internal review and submission)
- Communication with review team to clarify or submit additional material

2. Award phase

- Receipt of Notification of Award
- Contracting
- Project set up in the ERP (budget setup, assigning of project number, donor mapping, project period)

3. Post Award

Initial Funding Invoicing
Procurement functions (requests, purchases, stores management etc)
Finance functions (Budget tracking, postings, payments, reconciliations, reporting)
Human resources functions (talent identification, recruitment, onboarding, training, remuneration, discipline)
Monitoring and Evaluation
Research communication and publicity
Internal auditing

4. Closeout

Submission of final reports (technical and financial)
Recording of key outputs (IP, Publications, Products)
Records archive as per the contract and GoK regulations

RMA CURRENT STATUS

STRENGTHS

- Experienced senior scientists and administrators
- KEMRI is a reputable medical research platform in the region
- Robust ERP that can be automated for efficiency
- Adequate research resources like laboratories and equipment
- In-house IRB (SERU) helps with quick ethical approvals

WEAKNESS

- Researchers work in silos during grant application
- Lack of capacity building and mentorship among both teams
- Lack of team work
- Under-customized ERP, not working optimally

PROJECT ACHIEVEMENTS

Major challenges	Initiatives to improve of capacity of RMA in KEMRI
1. Silo structure	**Strategic plan to establish RMA department** • To enhance the coordination capacity to break the silo structure
2. No training system for RMA	**CAPACITY BUILDING IN COLLABORATION WITH JICA** • Through a KEMRI-JICA collaborative project, we have trained about 30 participants after mapping out competencies required for RMAs from a KEMRI and international perspective through a skills exchange program with JICA and Kyoto university. • The goal of the training was to help trainees comprehend how to approach their already existing duties and functions from a research administration perspective, emulating the successful practices of Kyoto University
	PROFESSIONAL UPSKILING AND MENTORSHIP PROGRAMS • Continuously sponsored research administrators to short courses and professional conferences relevant to their skills i.e. ICPAK, ACCA, NCURA, INORMS, ISRAI,ETC. • Ensuring that staff are aware of the development changes happening in the professional world • Mentorship through staff mentoring program and consultancy-led trainings that many find more effective than passive learning. Currently in the process of developing a mentorship policy.
3. Digitalization for the process	**AUTOMATION** • Rolled out ERP modules to automate RMA processes in KEMRI including Finance, procurement, HR, Grants management.

EFFORT REQUIRED TO ACHIEVE THE GOAL

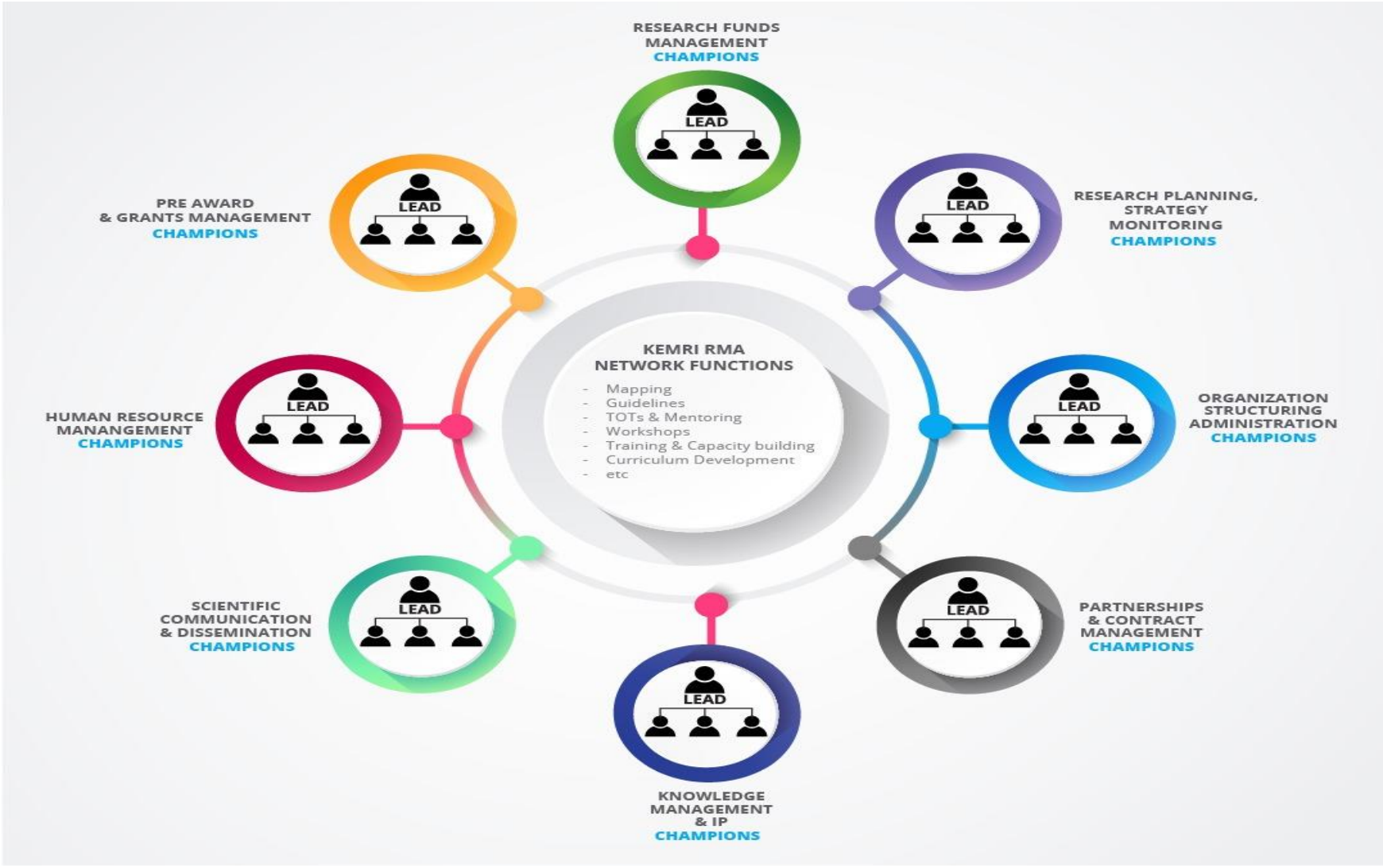
- Establishment of regular meetings to discuss opportunities and challenges
- Identification of funding for capacity building
- Creation of team leads and support teams to implement RMA

PROPOSED SUSTAINABILITY FOR RMA INITIATIVES IN KEMRI

The RMA network began with an initial membership of KEMRI-JICA qualified trainees, and it will:

- Advocate for reforms in their respective functional areas at both departmental and management levels.
- Disseminate acquired skills to other staff through mentorship programs.
- Serve as a link between researchers and administrators by organizing outreach activities to assess researchers needs and collaborating with fellow RMAs on finding solutions.
- Develop ongoing capacity-building and awareness initiatives through platforms such as webinars and themed seminars.

PROPOSED SUSTAINABILITY FOR RMA INITIATIVES IN KEMRI



SHARED CHALLENGES IN RESEARCH MANAGEMENT

- Lack of specialized RMA professionals leading to dual roles of PIs as researchers and admins.
- Limited capacity available to develop the needed research soft skills (e.g. science communication, scientific writing and mentorship, etc)
- Challenging funding and grants acquisition and management.

WHAT IS THE RMA FUTURE FOR KEMRI?

- Be **the RMA ambassadors/champions** to Increase the understanding and recognition of Research Management and Administration and the role RMAs play in influencing, enabling and advancing research through activities like webinars, departmental mentorship, outreach with scientists, etc.
- Form a **domestic/internal RMA network** in KEMRI that will not only identify common obstacles in developing a rich research environment but will also lobby for common remedies at grassroot levels and management and level
- **Invest in the professionalization of a Research Managers** and Administrators which is integral element for the development of a richer research environment.

WHAT IS THE RMA FUTURE FOR KEMRI?

- RMA networking and increased understanding of the diverse roles RMA play in enabling and advancing research has great potential in:
- Improving acquisition and management of research funding
- Better Equitable partnerships.
- Incubating research innovations and inventions
- Enhancing capacity of researchers and dissemination of research outputs

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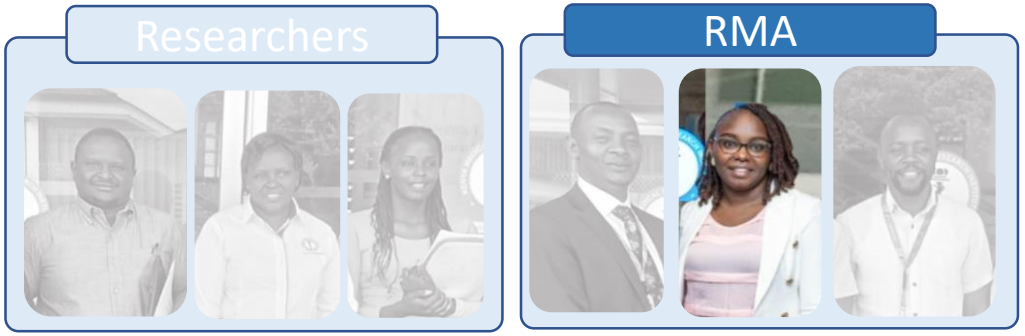
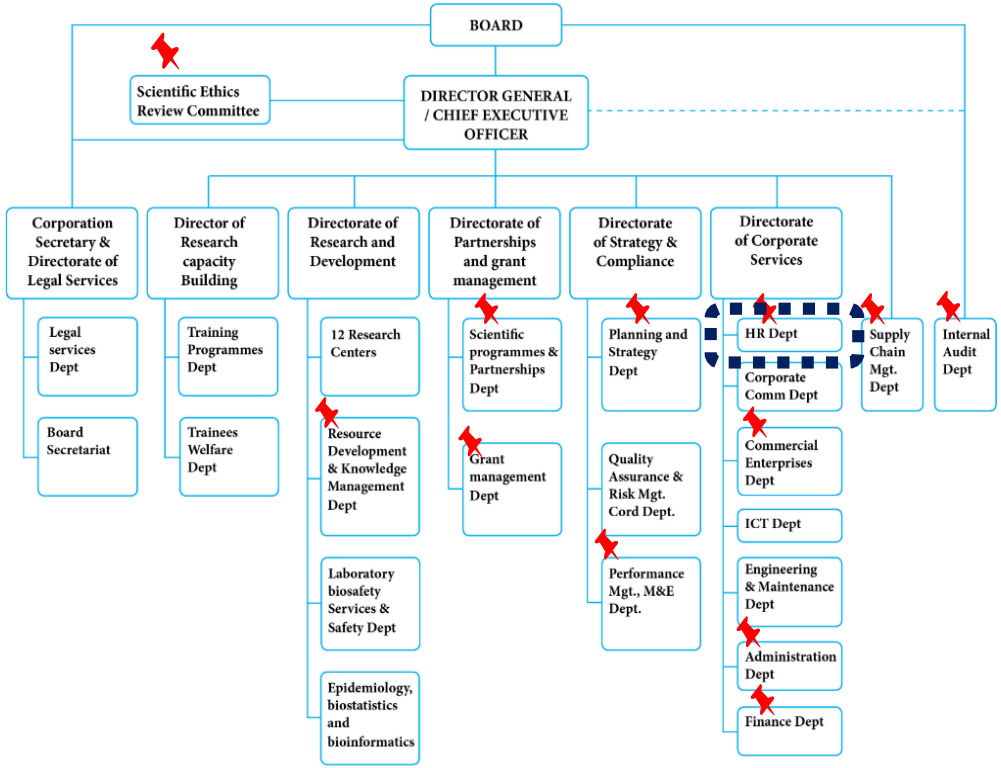
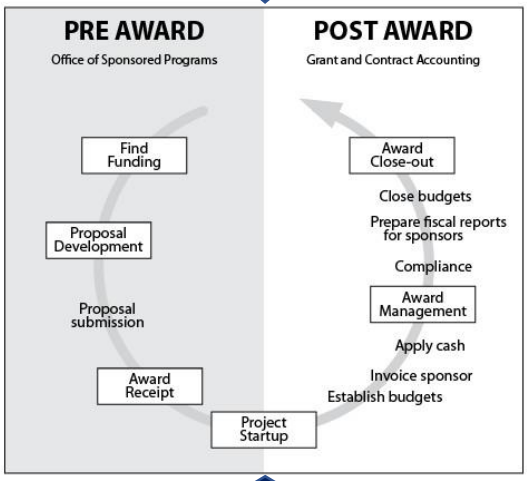
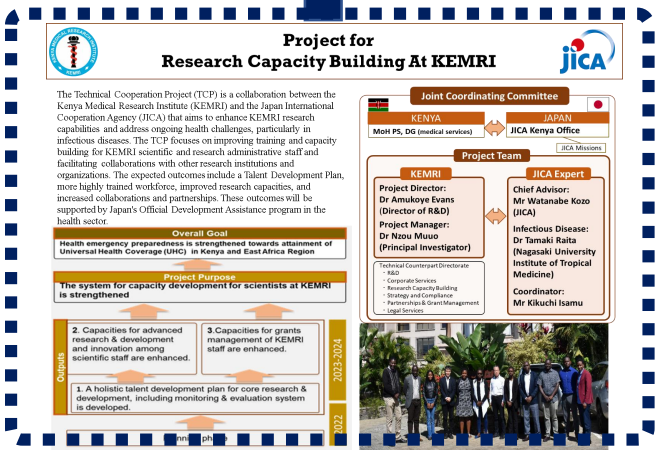






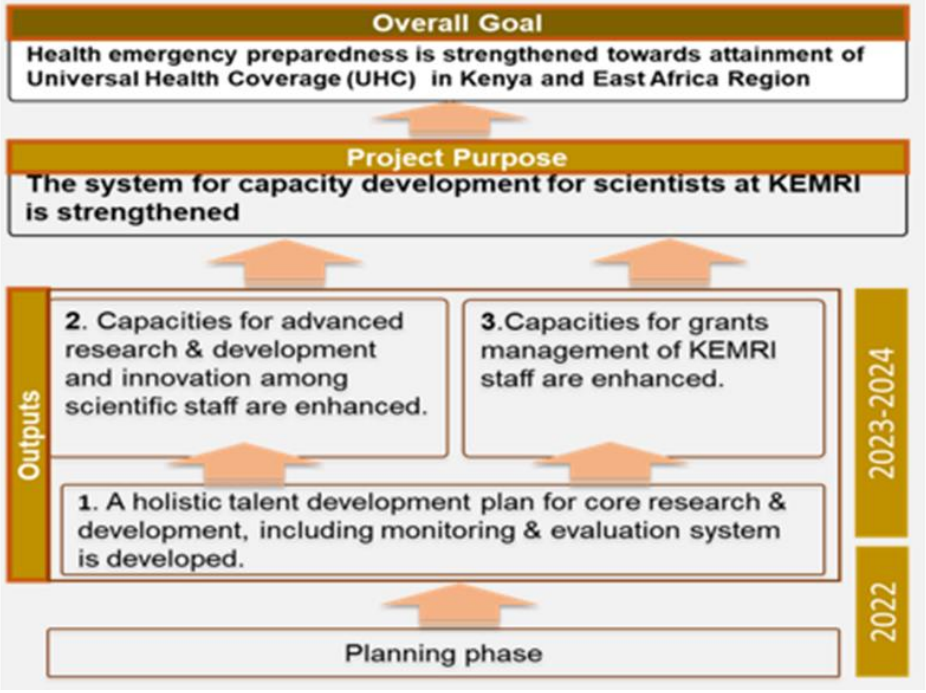


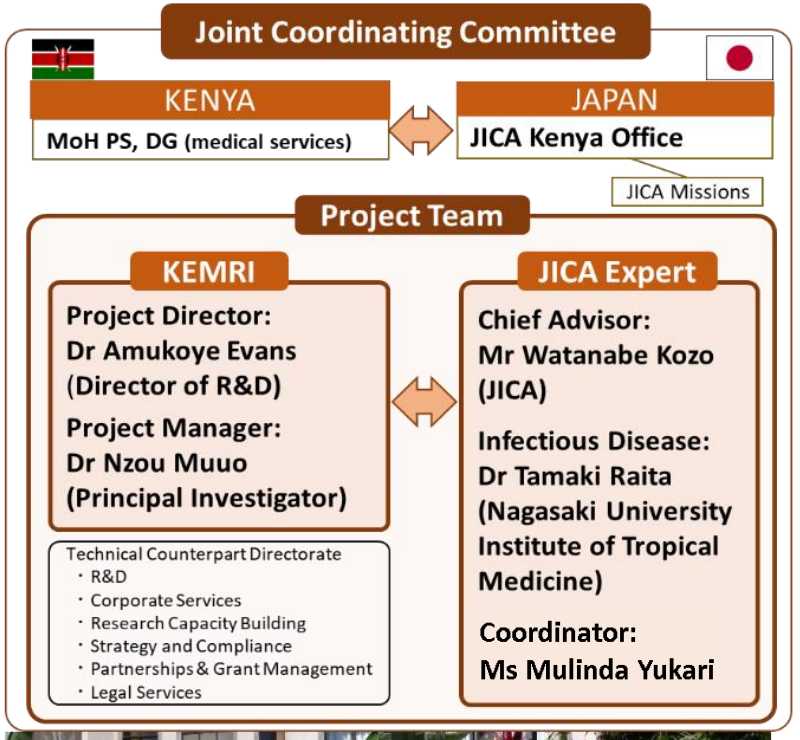
Project for
Research Capacity Building At KEMRI

Human Capacity Development for Research Administrator in KEMRI

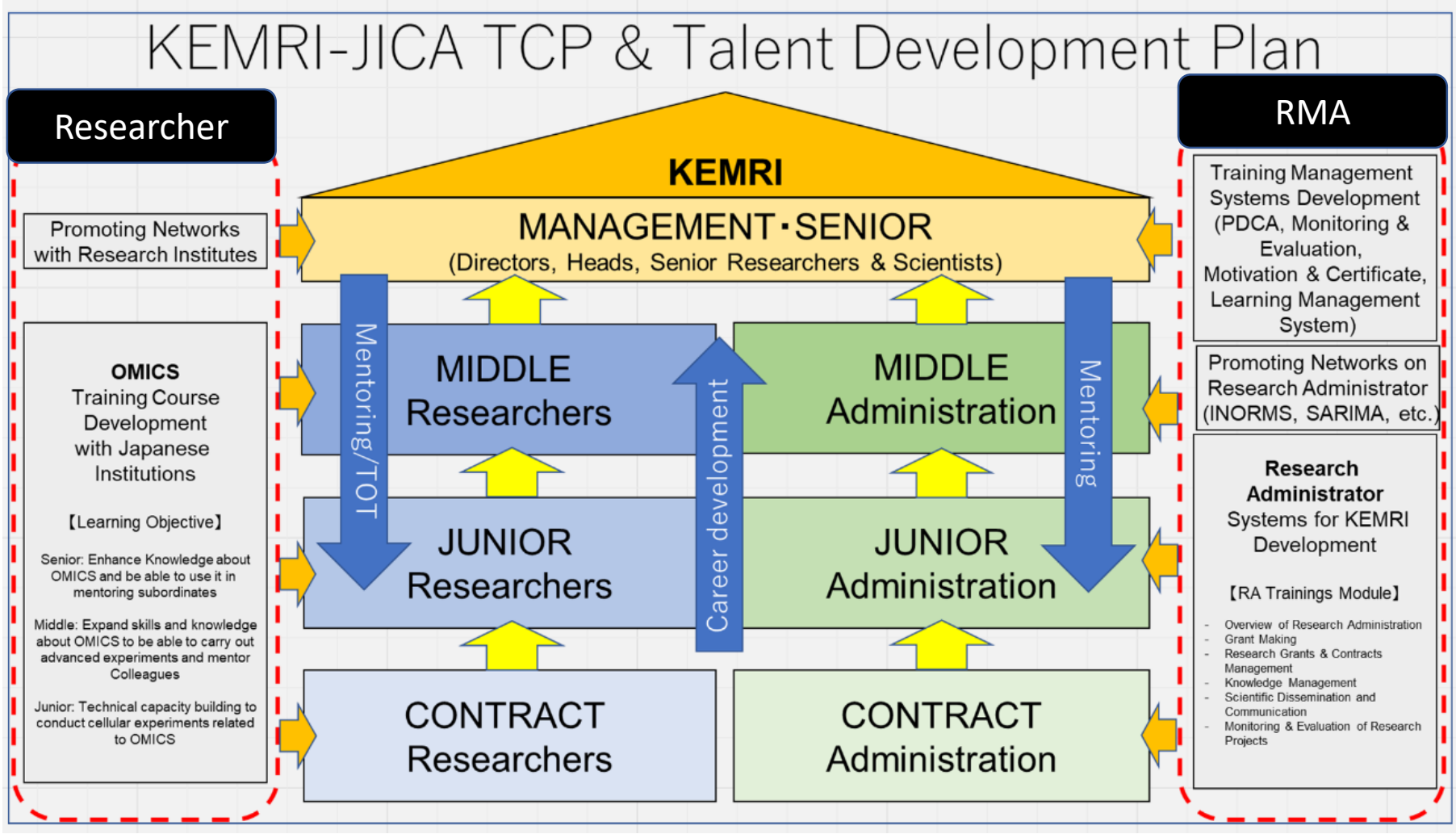
Project for Research Capacity Building At KEMRI

The Technical Cooperation Project (TCP) is a collaboration between the Kenya Medical Research Institute (KEMRI) and the Japan International Cooperation Agency (JICA) that aims to enhance KEMRI research capabilities and address ongoing health challenges, particularly in infectious diseases. The TCP focuses on improving training and capacity building for KEMRI scientific and research administrative staff and facilitating collaborations with other research institutions and organizations. The expected outcomes include a Talent Development Plan, more highly trained workforce, improved research capacities, and increased collaborations and partnerships. These outcomes will be supported by Japan's Official Development Assistance program in the health sector.

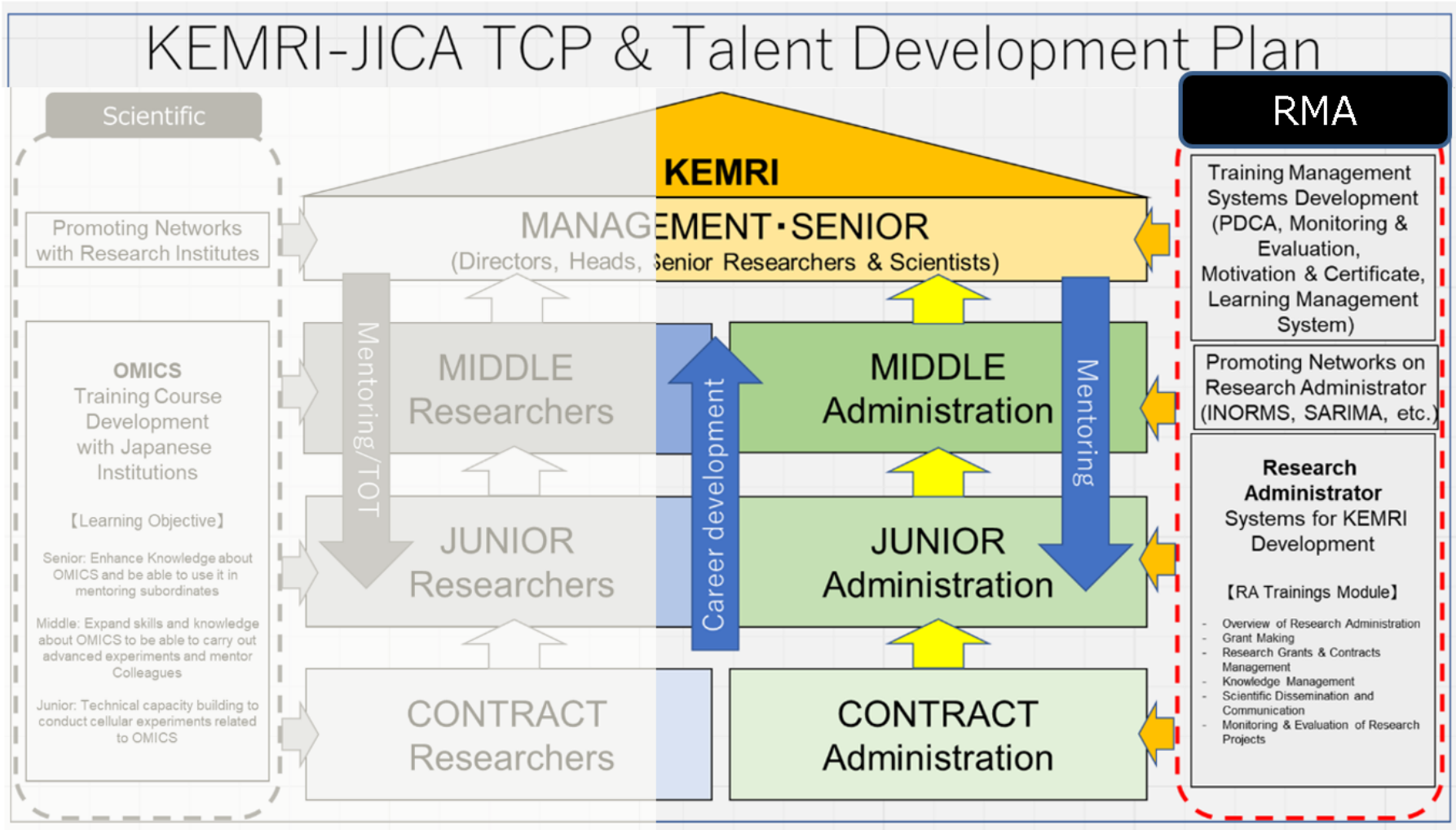




FRAMEWORK


KEMRI-JICA TCP & Talent Development Plan
Researcher
RMA
KEMRI
MANAGEMENT・SENIOR
(Directors, Heads, Senior Researchers & Scientists)
Promoting Networks with Research Institutes
OMICS
Training Course Development with Japanese Institutions
【Learning Objective】
Senior: Enhance Knowledge about OMICS and be able to use it in mentoring subordinates
Middle: Expand skills and knowledge about OMICS to be able to carry out advanced experiments and mentor Colleagues
Junior: Technical capacity building to conduct cellular experiments related to OMICS
Mentoring/TOT
MIDDLE Researchers
JUNIOR Researchers
CONTRACT Researchers
Career development
MIDDLE Administration
JUNIOR Administration
CONTRACT Administration
Mentoring
Training Management Systems Development (PDCA, Monitoring & Evaluation, Motivation & Certificate, Learning Management System)
Promoting Networks on Research Administrator (INORMS, SARIMA, etc.)
Research Administrator Systems for KEMRI Development
【RA Trainings Module】
- Overview of Research Administration
- Grant Making
- Research Grants & Contracts Management
- Knowledge Management
- Scientific Dissemination and Communication
- Monitoring & Evaluation of Research Projects

FRAMEWORK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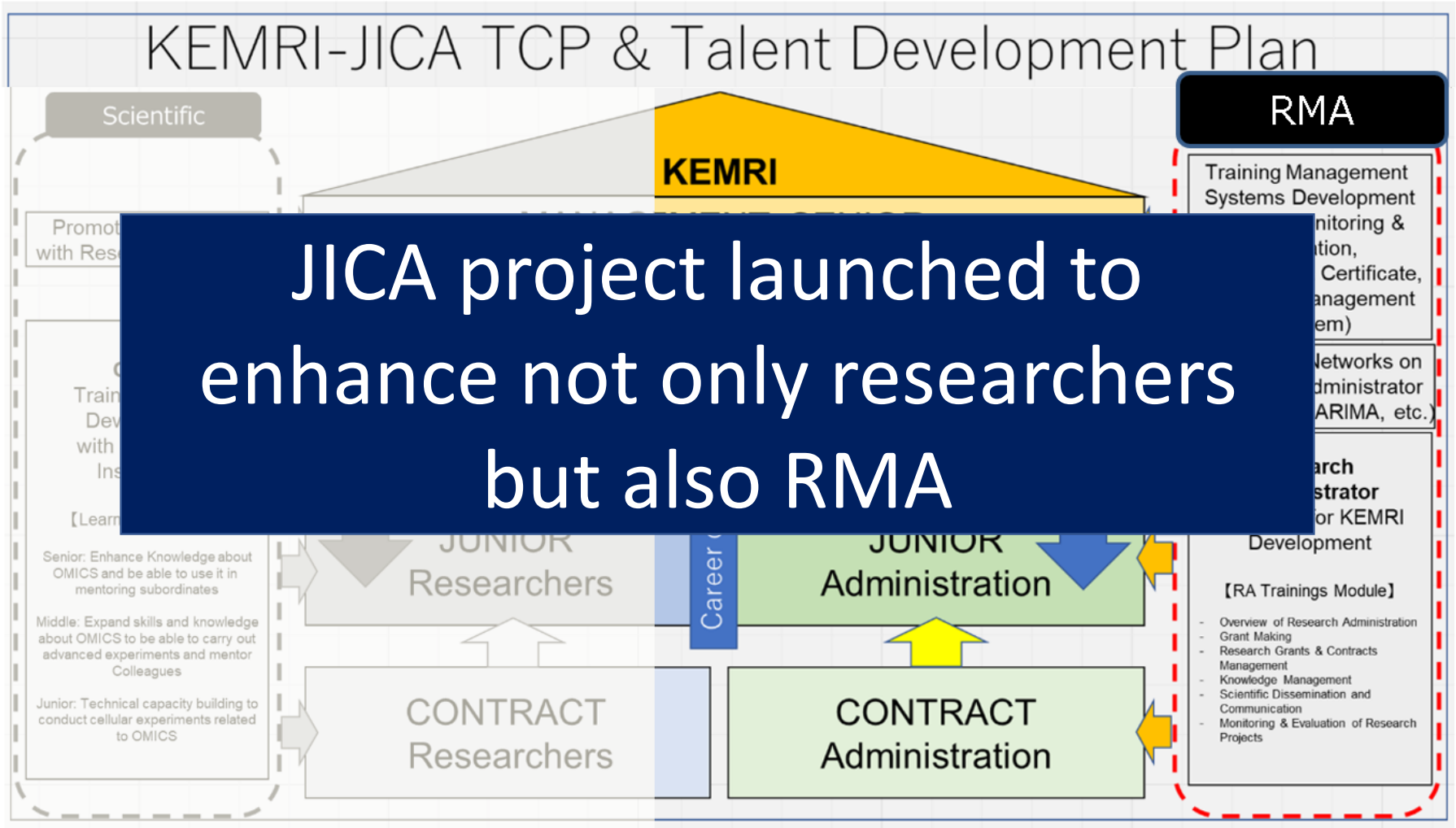


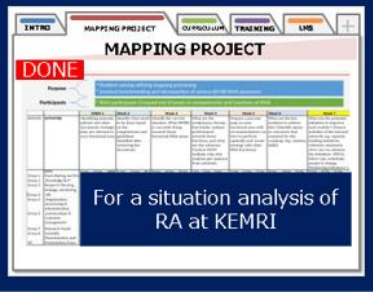
JICA project launched to enhance not only researchers but also RMA

ACHIEVEMENT

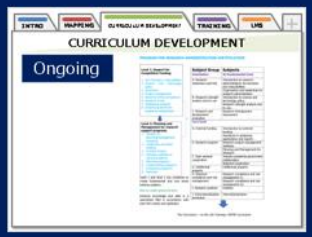
IDENTIFY COUNTERPART

INTRODUCTORY COURSE

MAPPING PROJECT



CURRICULUM



PLATFORM

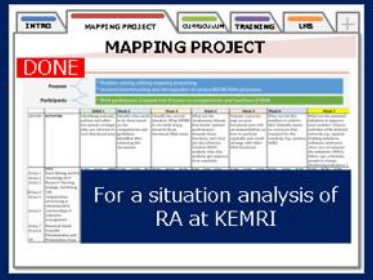
TRAINING TOOL

ACHIEVEMENT

IDENTIFY COUNTERPART

INTRODUCTORY COURSE

MAPPING PROJECT

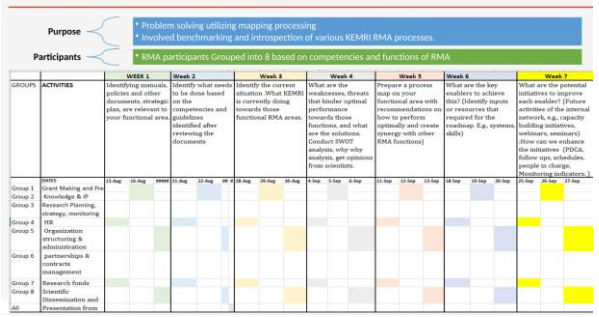


CURRICULUM

PLATFORM

TRAINING TOOL

MAPPING PROJECT



RMA FUNCTIONS MAPPING

Through the KEMRI-JICA project, participants conducted a mapping project which involved identifying RMA functions from a global and internal perspective to enable them understand how the RMA function should be operating, the current state of the functional area in KEMRI, identify areas for improvement, and develop a strategic roadmap with actionable initiatives to optimize performance of RMA functions and collaboration within the organization.

A MASS OF SKILLED RMA PROFESSIONALS

Presence of Qualified and certified staff in various professional fields

Enhanced competency through extensive local and global networking initiatives

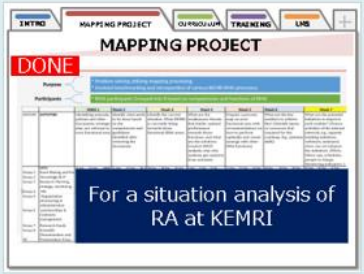
For a situation analysis of RMA at KEMRI

ACHIEVEMENT

IDENTIFY COUNTERPART

INTRODUCTORY COURSE

MAPPING PROJECT



CURRICULUM

PLATFORM

TRAINING TOOL

CURRICULUM DEVELOPMENT

RMA

Motto- RMA for seamless research

Vision- To be at the forefront of fostering a dynamic and collaborative research ecosystem

Mission- **P**rovide comprehensive support, strategic oversight, and efficient management throughout the research process

RMA MANDATE

CAPACITY BUILDING MANDATES

- Pursue RMA certification
- Mentor fellow staff
- Conduct peer trainings through webinars , seminars, etc.
- Network and learn from RMAs in the region through INORMS

OUTREACH MANDATES

- Assist researchers in Identifying, pursuing, and securing research funding and managing the grant.
- Engage in outreach activities with scientists to understand Scientists' needs, and solutions.
- Organize forums within the network to interrogate and recommend solutions for issues affecting RMA
- Champion for reforms at Departmental and management level.
- Team Building activities

DEVELOPMENT OF RMA CURRICULUM

Through customizing curriculum for KURA, UK, and USA. We developed training content that is more directly related to the actual jobs of RA in KEMRI.

The objective of the Curriculum is to cultivate KEMRI with extensive skills and provide a common framework of knowledge for all RMA functions.

LEVEL 1: INTRODUCTION LEVEL

This level is meant to introduce RMA concepts, including roles and responsibilities and cross-cutting skills that all RMAs should have and best practices for RMAs

LEVEL 2: INTERMEDIATE LEVEL

This level will provide specialized skills per specific RMA duties and responsibilities

The curriculum has

Elements of Research Administration

Elements of Research Development

Elements of Pre- awards

Elements of award Negotiation and acceptance

Elements of post-awards

The RA curriculum is not fixed and can constantly be updated

After the training certifications will be awarded

CURRICULUM DEVELOPMENT

PROGRAM FOR RESEARCH ADMINISTRATION CERTIFICATION

Level 1; Support for Competitive Funding

1. RA's functions /roles/abilities
2. Science and technology policy
3. Interviews
4. Project management
5. Research ethics/compliance
6. Research funds
7. Intellectual property
8. Industry-government academia collaboration

Level 2; Planning and Management for research support programs

1. Mindset for planning/management programs
2. Leadership and team building
3. Problem finding
4. Devising methods of solving problems.
5. Planning programs
6. Implementing programs.
7. Evaluating programs.
8. Seminars

Level 1 and level 2 are combined to create fundamental and core levels training subjects.

Plan to create advanced level.

Enhance knowledge and skills in a specialized field in accordance with each RA's duties and aptitudes.

Subject Group	Subjects
Orientation	**At Fundamental level**
A. Research institutions and RAs	Introduction to research administration/ RA functions and roles/abilities
	Organization and leadership for research administration
B. Research strength analysis and its use	Introduction to science and technology policy
	Research strength analysis and its use.
C. Research and development evaluation	Research Development Assessment
Core level	
D. External funding	Introduction to external funding
	Assistance in preparing applications and reports
E. Research projects	Research project management methods.
	Planning and Management for Research
F. Inter-sectoral cooperation	Industry-academia-government collaboration
	Regional cooperation
G. Intellectual property	intellectual property
H. Research compliance and risk management	Research compliance and risk management (i)
	Research compliance and risk management (ii)
I. Research publicity	Publicity
J. Internationalization promotion	Internationalization

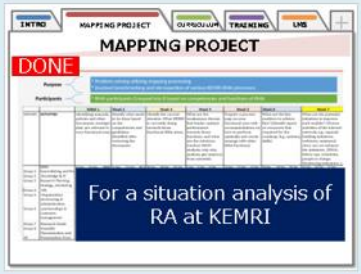
The Curriculum + on the Job Training= KEMRI Curriculum

ACHIEVEMENT

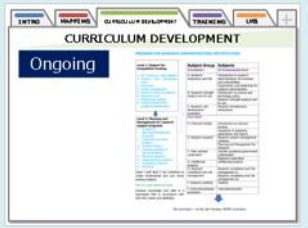
IDENTIFY COUNTERPART

INTRODUCTORY COURSE

MAPPING PROJECT



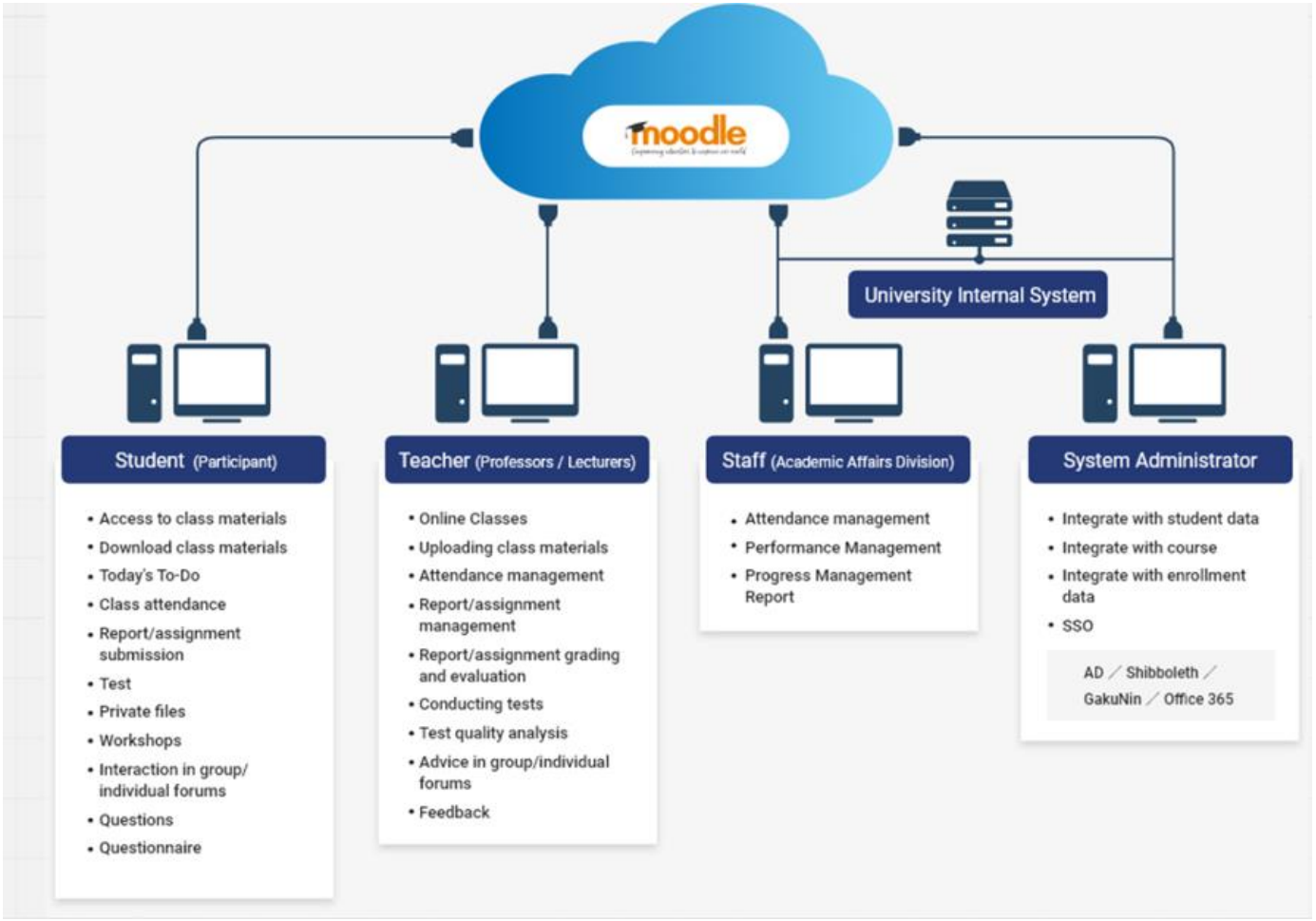
CURRICULUM



PLATFORM

TRAINING TOOL

PLATFORM DEVELOPMENT



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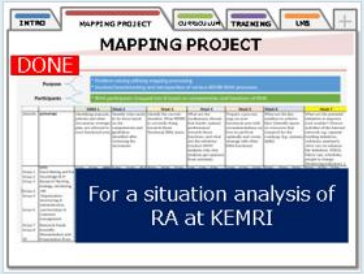
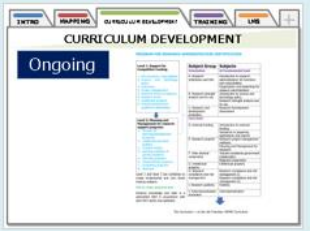


CURRICULUM



PLATFORM

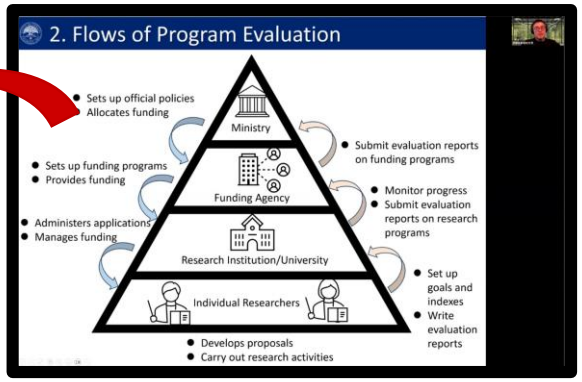
TRAINING TOOL

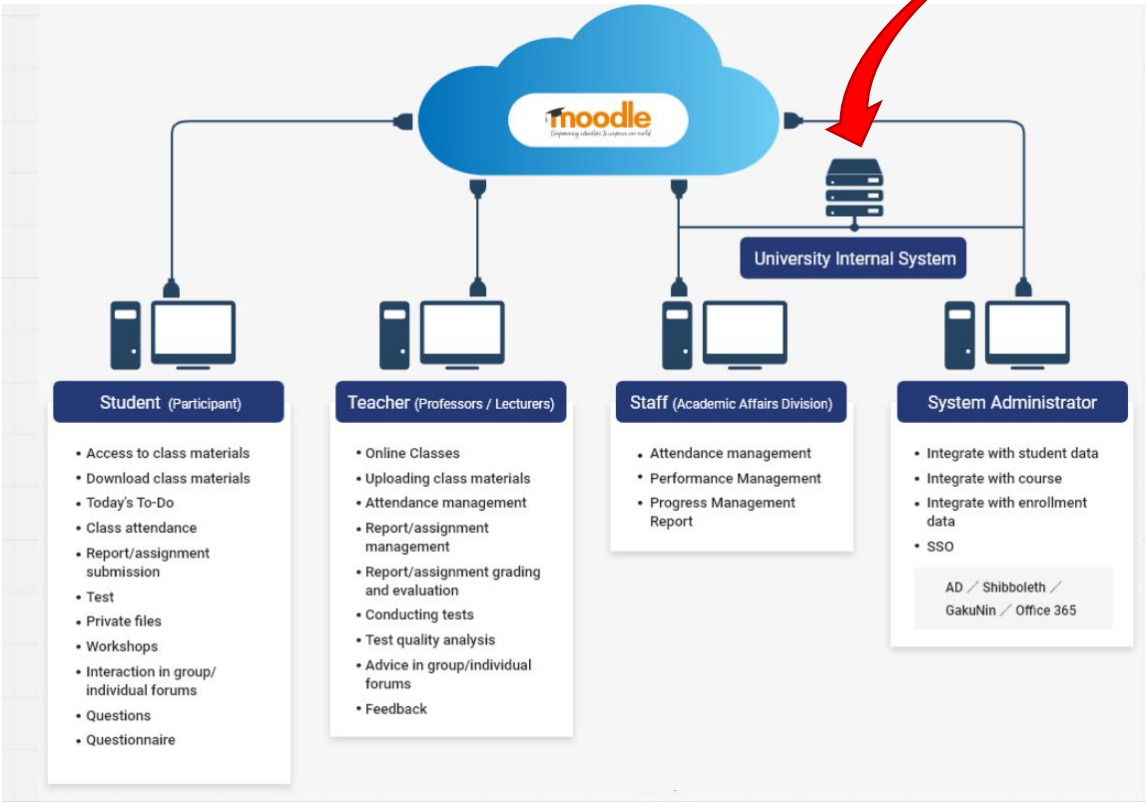
TRAINING OF STAFF AND STRENGTHENING NETWORKS

The KEMRI project team identified key competencies needed for RMAs (Research Management Administrators) by analyzing KEMRI's internal functions and benchmarking against global RMA practices, including those from INORMS and leading JAPANESE institutions like KYOTO UNIVERSITY and NAGASAKI UNIVERSITY

To strengthen RMA skills at KEMRI, 30 staff members from different departments were trained on the identified key competencies. The trainings were delivered through online, in-person lectures, process mapping workshops, and short-term expert-led workshops, where all participants received certificates.

TRAINING TOOL DEVELOPMENT (KIT-CAT project)





RMA INCORPORATION IN KEMRI DOCUMENTS

RMA has been incorporated into the Human Resource Tools during the KEMRI Documents review period which is a great milestone for the implementers of RMA.

Organization Structure and staffing

RMA has featured in the Kemri Organization structure as a department headed by a Deputy Director and reports to a Directorate headed by a Director. It also has several divisions.

The department and the division have functions and have been provided with cadres, job groups, and the number of staff they should have to operate optimally.

Career Guideline

Provides job and person specifications and key competencies and skills required for each cadre of Research Management Administrators

Human Resource Policy and Procedure manual

A clause of the RMA talent development plan was added in the Performance management section of HR Policy and procedure manual

HUMAN RESOURCE INVOLVEMENT IN RMA

Implementing post-training evaluation for the TOT participants to check the status of training effectiveness. RMA participants trained KEMRI interns on what they had learned

Ensuring that RMA activities are reflected in KEMRI strategy and human tools

Ensuring sustainability of the RMA by being the custodian of LMS and the project server.

Development of the curriculum and ensure that RMA are trained on necessary skills.

Ensure training experts deliver the right training content

Identify potential RMAs in every Department, Organize, plan communicate and coordinate training

Evaluation for RMA Training by FGDs

(FGD: Focus Group Discussion)

ORGANIZATION

Mission, Vision, Long/Short Term Plans

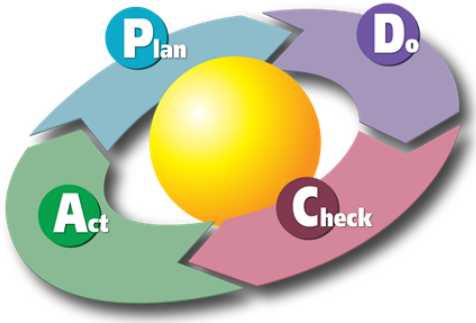
Human Resource Development

Before → *Training* → After

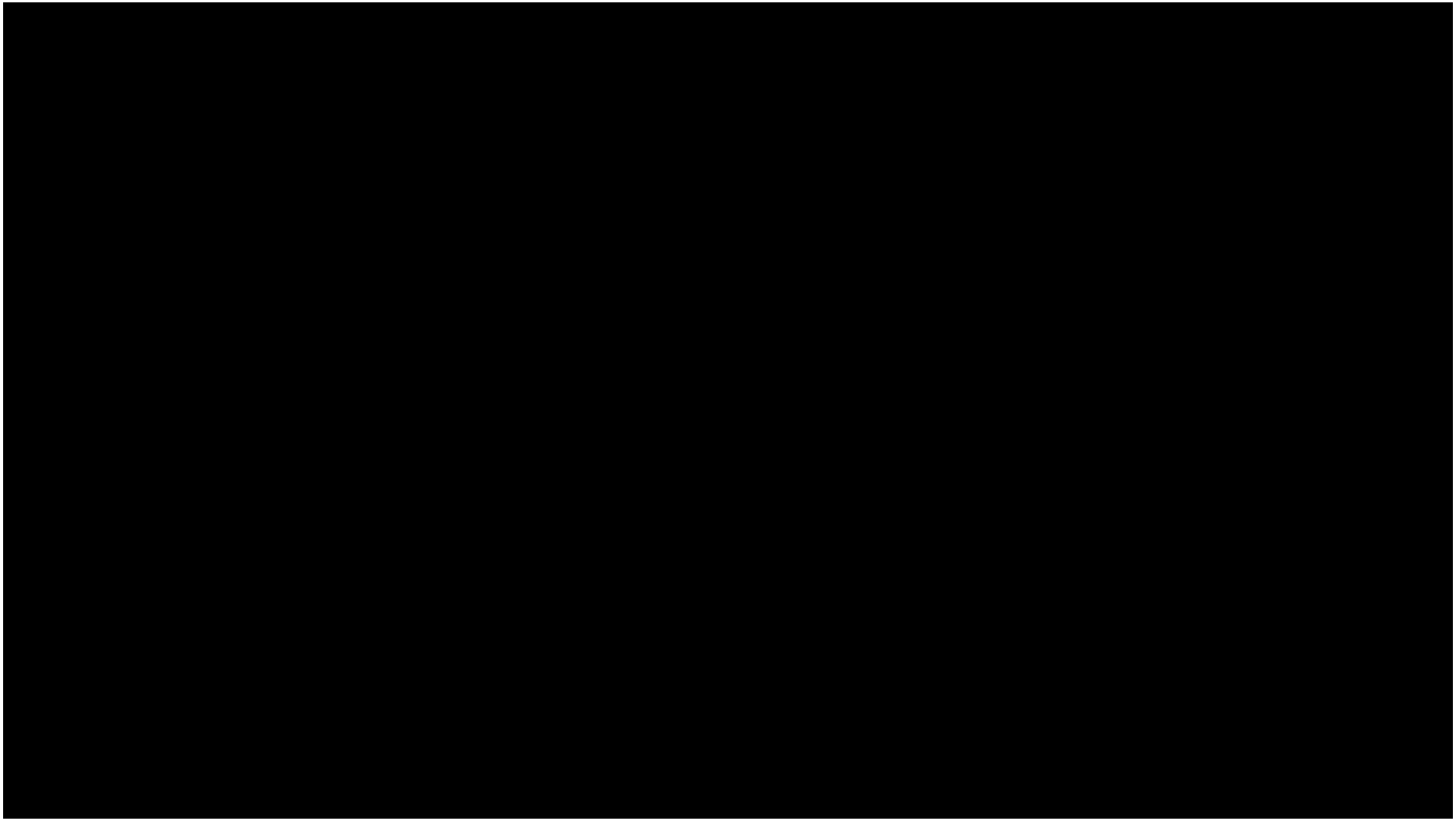
Behavior Change of Staff

Improving Works, Services Provision

Contribution to the Society



Training Evaluation



https://www.youtube.com/watch?v=VH5-BSDo_I0

Contents		Presenter	Time (Min)
Introduction	Background Evidence of RMA effectiveness for research capacity enhancement KEMRI's status (brief) E/Africa's status (INORMS)	SAMSON NZOU	12
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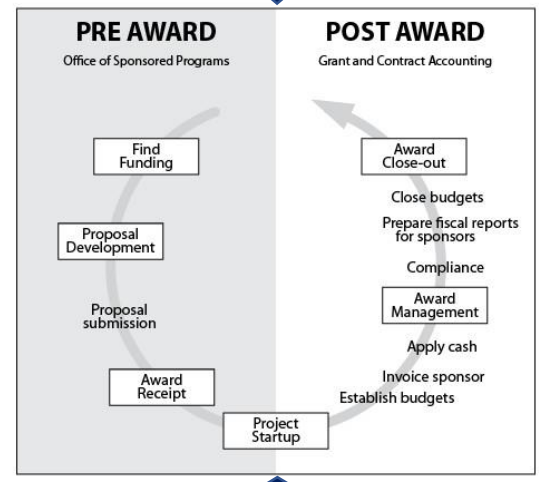
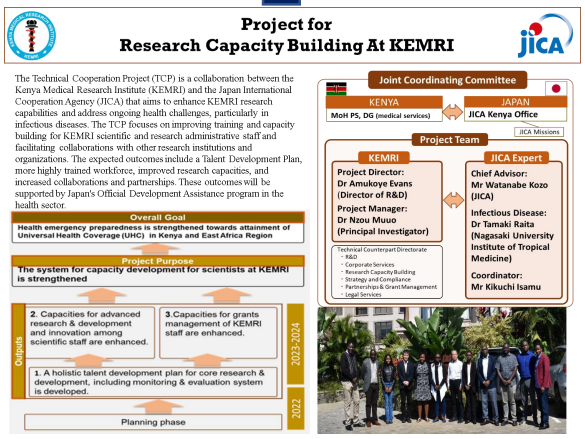
RMA	Current status of RMA in KEMRI Challenges and opportunities	GABRIEL GITAU FRANKLINE OKIIRY	12
Project	Project briefing Project achievement	PATRICIA NZIOKI	12
Panel	What effort is required to achieve the goal after the project	Chair: SAMSON NZOU	30
Q&A		Facilitator: PATRICIA NZIOKI	12

EARIMA

Eastern Africa Research and Innovation Management Association (EARIMA)





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Q&A

New Scope for Enhancing Research Capacity in Eastern Africa

JICA Satellite Session-8
Under JICA Technical Cooperation Project titled
"Project for Research Capacity Building
At Kenya Medical Research Institute (KEMRI)"

November 19th, 2024
12:30 - 2:00 PM (JST)
In the Room 110,
DEJIMA MESSE NAGASAKI

01 Presentation and Panel Discussion
Development and implementation of a robust Research Management and Administration System at KEMRI

02 Q&A
Interactive discussion on the Research Management and Administration with the audience

SCAN NOW FOR CHECKING THE DETAIL

Speakers

Dr. Samson Muuo Nzou
Senior Principal Research Scientist, KEMRI

Ms. Patricia Ndinda Nzioki
Human Resource management Officer, KEMRI

Mr. Gabriel Kamau Gitau
Ag. Deputy Director Finance & Accounts/Senior Accountant, KEMRI

Mr. Frankline Oyenyo Okiiry
Senior Accountant, KEMRI

Ms. Anne Wanjiru Mwangi
Senior Laboratory Analyst, KEMRI

Ms. Sheila Mwendwa Mbaabu
Research Scientist, KEMRI

Get Lunch Box with This Session!

JICA

hsr 2024 EIGHTH GLOBAL SYMPOSIUM ON HEALTH SYSTEMS RESEARCH NAGASAKI, JAPAN 長崎

15TH KEMRI ANNUAL SCIENTIFIC AND HEALTH CONFERENC

SYMPOSIUM 5

12th February, 2025 / 1430-1700hrs

Project for Research Capacity Building at KEMRI

KEMRI-JICA Technical Corporation Project

Abstracts

ADVANCING HUMAN HEALTH RESERCH AND OUTBREAK RESPONSE PREPAREDNESS AT KEMRI THROUGH CAPACITY BUILDING

Infectious diseases remain a significant human health challenge in Kenya, demanding robust research and response mechanisms. This work explores key strategies and initiatives aimed at strengthening these capacities within the country. We examine the role of advanced technologies like cell culture and protein analysis in understanding disease mechanisms and developing diagnostic tools. We also delve into the impact of training programs like the Japan International Cooperation Agency (JICA) Technical Cooperation Project (TCP)-InterCountry Training (TICT) program in enhancing skills and knowledge for outbreak response. Furthermore, we analyze the utilization of Learning Management Systems (LMS) for knowledge dissemination and capacity building, highlighting the challenges and opportunities in their uptake. Through case studies of bacterial species analysis from environmental samples and the application of TICT knowledge in enhancing the Kenya Medical Research Institute's (KEMRI) mandate, we illustrate the practical implications of these initiatives. This work emphasizes the importance of a multi-faceted approach, combining cutting-edge research, effective training, and sustainable institutional capacity building to effectively combat infectious diseases and safeguard human health in Kenya.

ENHANCING HEALTH SYSTEMS THROUGH RESEARCH MANAGEMENT AND ADMINISTRATION: INSIGHTS FROM KEMRI – JICA TCP PROJECT

Research Management and Administration (RMA) is a critical component that ensures research projects are efficiently managed, comply with regulations, and align with institutional and funder goals. There exist gaps in the integration and coordination between scientists and research managers emphasizing the need for enhanced RMA as highlighted by the COVID-19 pandemic. (Further, with growing research grants portfolio in KEMRI, there has been a growing need for automation of research processes to improve efficiency).

This work explored the transformative journey of KEMRI in addressing these challenges through its collaboration with JICA/TCP. Focusing on capacity building and information systems, this work highlights the role of RMA in optimizing grant management, capacity development, and the effective use of technology.

Through a systematic approach, JICA/KEMRI mapped out RMA functions, identified key training counterparts, and developed a comprehensive framework that included introductory courses by RMA experts from Kyoto University, tailored training content, and a LMS for continuous education. This work detailed the creation of a Talent Development Plan, mentorship initiatives, and the introduction of innovative tools like Virtual Reality and automated platforms such as Funds beeline and KEMRI Enterprise Resource Planning enhancement meant to streamline operations and enhance RMA efficiency.

Additionally, the study underscores KEMRI's efforts in strengthening networks, promoting researcher development, and ensuring knowledge dissemination through global platforms such as Eastern Africa Research and Innovation Management Association. Ultimately, the collaboration between KEMRI and JICA exemplifies how strategic RMA functions, advanced training programs, and technology integration contribute to the advancement of health systems. These RMA functions enable rapid responses to health crises by ensuring timely access to funding, seamless ethical approval processes, data-driven decision-making, and robust collaboration and knowledge sharing. Our findings indicate that the uptake and integration of research administration services lead to better management, increased donor confidence, improved efficiency, enhanced synergy between scientists, and, ultimately, the continued success of KEMRI and the strengthening of health systems.

KEMRI-JICA TCP PROGRESS REPORT

PRESENTED BY
Dr. EVANS AMUKOYE

Japan International Cooperation Agency

KENYA MEDICAL RESEARCH INSTITUTE
KEMRI

In Search of Better Heal

Overall Goal

New concepts from the KEMRI Talent Development Plan (TDP) are applied to human resource development across the entire institute.

Project Purpose

The system for capacity development for KEMRI staff is strengthened.

Outputs

2. Capacities for advanced research & development and innovation among scientific staff are enhanced.

3.Capacities for grants management of KEMRI staff are enhanced.

1. A holistic Talent development plan for core research & development, including monitoring & evaluation system is developed.

2023-2024

2022

Planning phase

KENYA

MoH PS, DG*(medical services)

JAPAN

JICA Kenya Office

JICA Missions

Project Team

KEMRI

Project Director:
Dr Amukoye Evans
(Senior Principal Clinical Research Scientist)

Project Manager:
Dr Nzou Muuo
(Senior Principal Research Scientist)

Directorate
- R & D
- Corporate Services
- Research Capacity Building
- Strategy and Compliance
- Partnership & Grant Management
- Legal Services

JICA Expert

Chief Advisor:
Mr Watanabe Kozo (JICA)

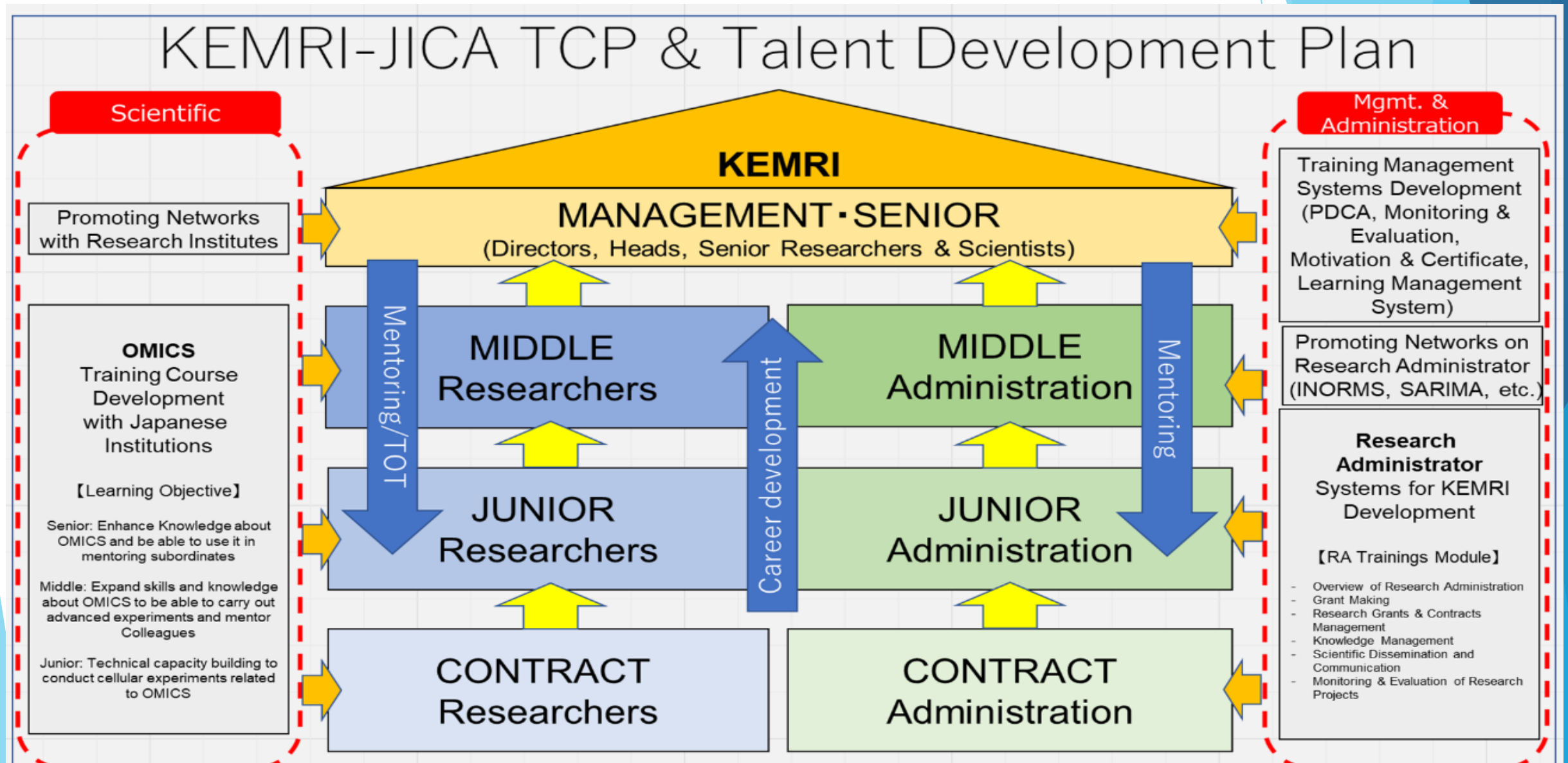
Infectious Diseases:
Dr Tamaki Raita
(Nagasaki University, Institute of Tropical Medicine)

Coordinators:
Mr Kikuchi Isamu (2022-2024)
Ms Mulinda Yukari (2024-2025)

* Ministry of Health Principal Secretary, Director General

2nd JCC held on 6th March, 2024

TCP Framework



Project for Research Capacity Building At KEMRI

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2023-2024

2022

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Joint Coordinating Committee

KENYA	JAPAN
MoH PS, DG*(medical services)	JICA Kenya Office

JICA Missions

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Ms Mulinda Yukari (2024-2025)

* Ministry of Health Principal Secretary, Director General

2nd JCC held on 6th March, 2024

In Search of Better Health

Japan International Cooperation Agency

15TH KEMRI ANNUAL SCIENTIFIC AND HEALTH CONFERENCE (KASH)

SYMPOSIUM

EMPOWERING RESEARCH AND ADMINISTRATION: LEVERAGING TECHNOLOGY, CAPACITY BUILDING, AND HEALTH SECURITY PREPAREDNESS FOR RESILIENT HEALTH SYSTEMS

DATE: **12TH FEB, 2025** TIME: **1430**HRS **- 1700**HRS
AT **MASAI MARA HALL**, SAFARI PARK HOTEL

Theme for **OMICS team**

Advancing Infectious Disease/ Human Health Research and Capacity Building in Kenya

Theme for **RMA team**

Enhancing health system through Research Management and Administration

JOIN US!

Technical Corporation Project

Project for Research Capacity Building At KEMRI

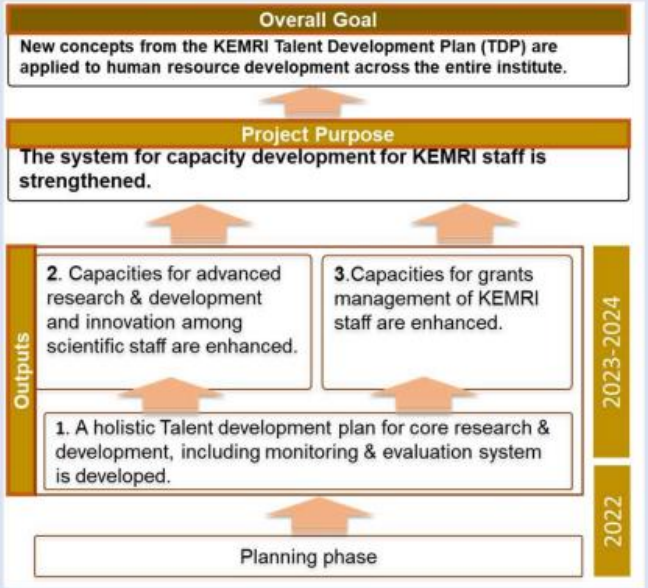
Japan International Cooperation Agency

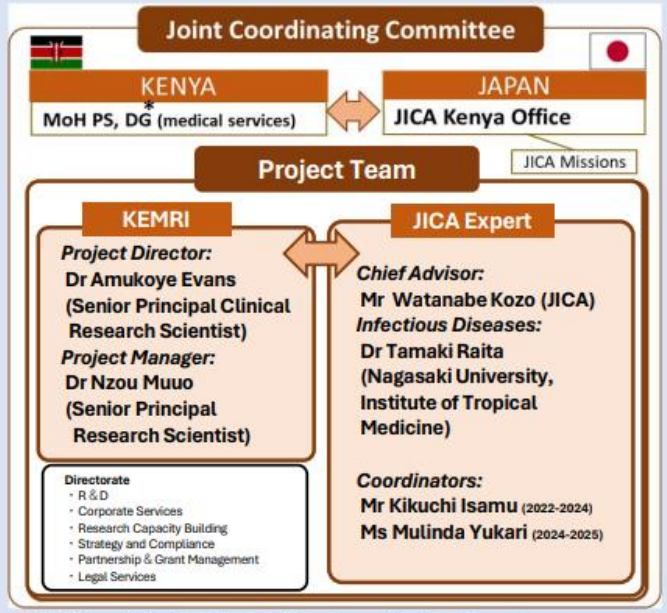
KEMRI-JICA

The Technical Cooperation Project (TCP) is a collaboration between the Kenya Medical Research Institute (KEMRI) and the Japan International Cooperation Agency (JICA) that aims to enhance KEMRI's research capabilities and address ongoing health challenges, particularly in infectious diseases. The TCP focuses on improving training and capacity building KEMRI scientific and research administrative staff and facilitating collaborations with other research institutions and organizations. The expected outcomes include a more highly trained workforce, improved research capacity and increased collaborations and partnerships. These outcomes will be supported by Japan's Official Development Assistance program in the health sector.

Research Management Administration Members

Research Members

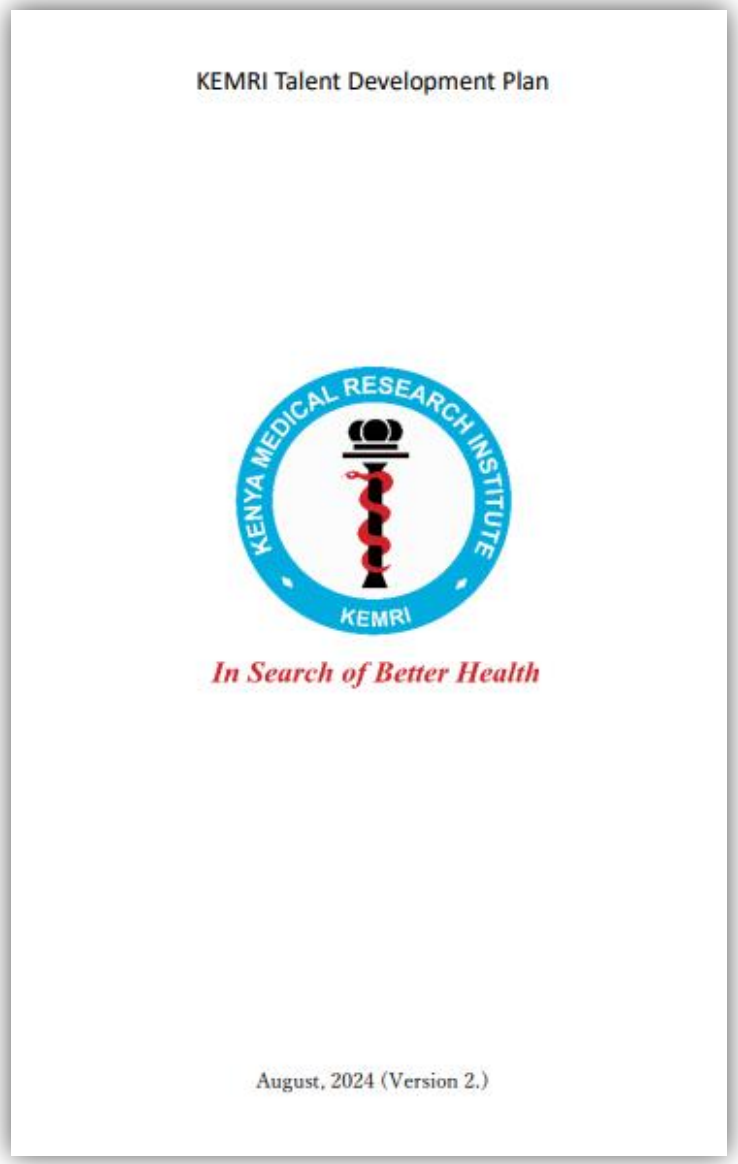




* Ministry oh Health, Principal Secretary, Director General

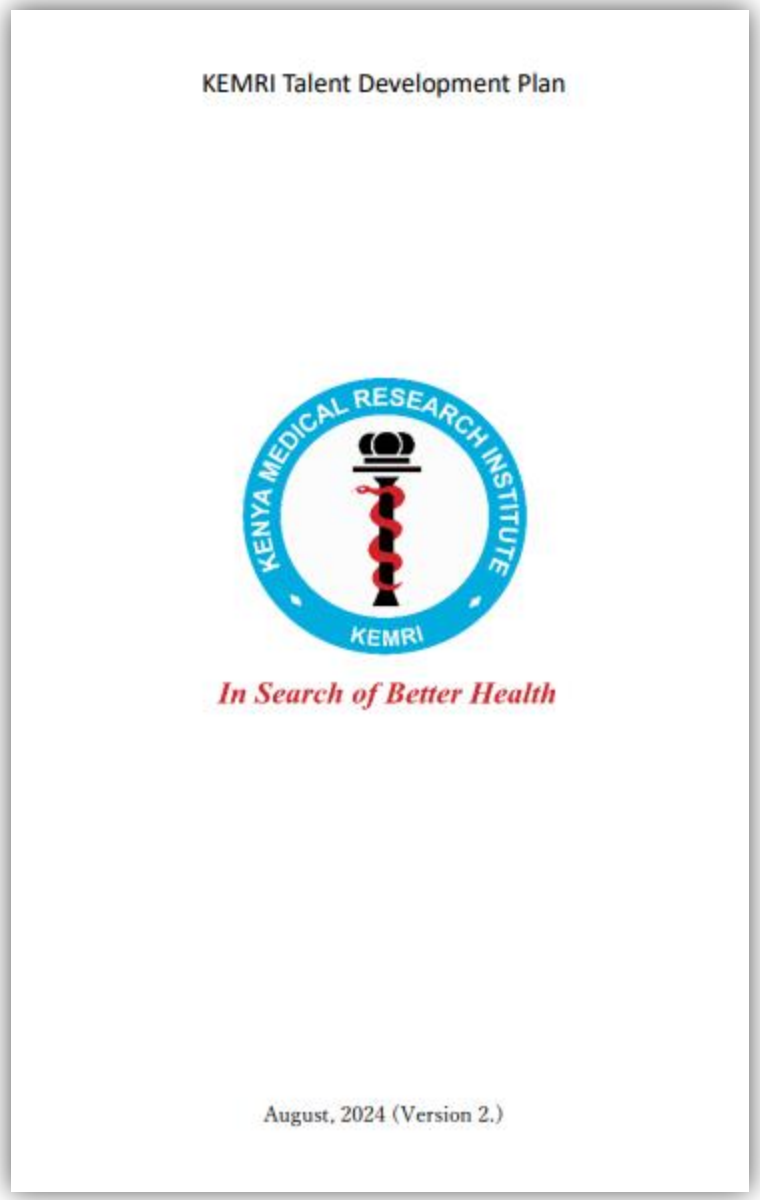
2nd JCC held on 6th March, 2024

KEMRI Talent Development Plan (TDP)



- The Talent Development Plan (TDP) was developed to continuously provide internal training courses for KEMRI staff to ensure that KEMRI continues to play an important role in Kenya and East Africa as a center of excellence for human health research.
- The TDP is closely linked to KEMRI's human resource development policy including new draft HR Instruments (Human Resource Instruments).
- The system for capacity development includes;
  - KEMRI Learning Management System (LMS)
  - Develop a system to provide effective training as annual planned activities based on the Plan-Do-Check-Act (PDCA) concept.

TDP Version 2. (October 2024)


KEMRI Talent Development Plan

KENYA MEDICAL RESEARCH INSTITUTE
KEMRI

In Search of Better Health

August, 2024 (Version 2.)

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- Why is internal training important?
- How do you plan and implement internal training?
- Utilizing a learning management system
- The importance of training evaluation
- Internal training needs at KEMRI
- Reference materials

SAMPLE

Scientific Training Planning and Implementation

Training Plan Development

(2) OMICS Training Plan for FY2023-2024

An overview of the OMICS Training plan for FY2023-2024 (Apr.-Mar.) according to the 5W3H is shown in the table below. This is a record for future reference for similar training plans.

Item to be Clarified	Specific Content
Why ?	Train the future Trainers, develop systems to sustain the training inside KEMRI for OMICS
To Whom ? (Tentative number)	(1) Senior Scientists active in the laboratory and research work, TOT level Lecture and specific skills training including new technology (10) (2) Middle level scientists active in the laboratory and research work, Lectures and hands-on training (10) (3)-a Junior scientists or beginner level or limited experience (3)-b Technologists with specific kills (For category (3) total 10, Lectures and hands-on training)
What ?	(1) Culture, Isolation and Serology will be covered Inoue-sensei (Concept part for middle and practical technics for Junior) (2) Molecular technology and bio-informatics part will be covered Fujii-sensei (Concept part for middle and practical technics for Junior)
When to When ? & How many times?	Starting June 19(Monday) and 5 days for 1 Course - 3 groups (each 10) 1 Lecture and 1 hands-on sessions for each senior, middle, junior groups. 5 courses for FY2023-2024. (Timeline and contents should depend on the topic)
Where ?	KEMRI and Nagasaki Kenya Branch
How ?	Lectures and Practical Hands-on
How to prepare?	(1) Video recording for learning management system will be done in addition to the training itself (actual training and video lecture is different) (2) Selection of Topics (3) Nomination of participants (How? DRD selected according to the 3 categories with consolidation of centers of HQ by the end of April 2023) (4) Procurement of reagent and/or consumables (5) Reservation of room and ordering catering services
How Much? - Budget Plan	(1) Procurement of reagent and/or consumables Approx. 2mil (Request Base) (3) Reservation of room and ordering catering services Approx. 0.5mil per week with 30 participants
Other	Concept is provided by lecturers, practical part will be hands-on

Preparation Using Check Lists

4.12 Checklist on Preparation for Researcher Internal Training

To Do ✓	Timeline	Task	Assignee
o	Before	Generate Training Schedule	
o	Before	Confirm schedule for attendance	
o	Before	Contact participants	
o	Before	Booking of venue	
o	Before	Lab coat preparation	
o	Before	Finalizing of program	
o	Before	Communication with PR team for support	
o	Before	Confirmation of attendance/attendees	
o	Before	Make arrangements for catering	
o	Before	Pre/Post test generation	
o	Before	Preparation of recording equipment	
o	Before	Catering serice booking and engagement	
o	Before	Preparation of lecture materials/presentation	
o	Before	Printing out of lecture materials/presentations	
o	Before	Preparation of questionnaire (feedback)	
o	Before	Printing pre & post test	
o	Before	Distribution and invigilation of pre & post test	
o	After	Compilation and dissemination of questionnaire responses	
o	After	Make training report	
o	After	Send report to JICA	

Implementation of Training

SAMPLE

Scientific Training Planning and Implementation

Training Plan Development

(2) OMICS Training Plan for FY2023-2024

An overview of the OMICS Training plan for FY2023-2024 (Apr.-Mar.) according to the 5W3H is shown in the table below. This is a record for future reference for similar training plans.

Item to be Clarified	Specific Content
Why ?	Train the future Trainers, develop systems to sustain the training inside KEMRI for OMICS
To Whom ? (Tentative number)	(1) Senior Scientists active in the laboratory and research work, TOT level Lecture and specific skills training including new technology (10) (2) Middle level scientists active in the laboratory and research work, Lectures and hands-on training (10) (3)-a Junior scientists or beginner level or limited experience (3)-b Technologists with specific kills (For category (3) total 10, Lectures and hands-on training)
What ?	(1) Culture, Isolation and Serology will be covered Inoue-sensei (Concept part for middle and practical technics for Junior) (2) Molecular technology and bio-informatics part will be covered Fujii-sensei (Concept part for middle and practical technics for Junior)
When to When ? & How many times?	Starting June 19(Monday) and 5 days for 1 Course - 3 groups (each 10) 1 Lecture and 1 hands-on sessions for each senior, middle, junior groups. 5 courses for FY2023-2024. (Timeline and contents should depend on the topic)
Where ?	KEMRI and Nagasaki Kenya Branch
How ?	Lectures and Practical Hands-on
How to prepare?	(1) Video recording for learning management system will be done in addition to the training itself (actual training and video lecture is different) (2) Selection of Topics (3) Nomination of participants (How? DRD selected according to the 3 categories with consolidation of centers of HQ by the end of April 2023) (4) Procurement of reagent and/or consumables (5) Reservation of room and ordering catering services
How Much? - Budget Plan	(1) Procurement of reagent and/or consumables Approx. 2mil (Request Base) (3) Reservation of room and ordering catering services Approx. 0.5mil per week with 30 participants
Other	Concept is provided by lecturers, practical part will be hands-on

Preparation Using Check Lists

4-2 Checklist on Preparation for Researcher Internal Training

To Do ✓	Timeline	Task	Assignee
o	Before	Generate Training Schedule	
o	Before	Confirm schedule for attendance	
o	Before	Contact participants	
o	Before	Booking of venue	
o	Before	Lab coat preparation	
o	Before	Finalizing of program	
o	Before	Communication with PR team for support	
o	Before	Confirmation of attendance/attendees	
o	Before	Make arrangements for catering	
o	Before	Pre/Post test generation	
o	Before	Preparation of recording equipment	
o	Before	Catering serice booking and engagement	
o	Before	Preparation of lecture materials/presentation	
o	Before	Printing out of lecture materials/presentations	
o	Before	Preparation of questionnaire (feedback)	
o	Before	Printing pre & post test	
o	Before	Distribution and invigilation of pre & post test	
o	After	Compilation and dissemination of questionnaire responses	
o	After	Make training report	
o	After	Send report to JICA	

Implementation of Training

Important comments from presenters (1)

[Scientific group]

- Scientific training was implemented using local infrastructure, directly applicable techniques are trained.
- TOT is not a one-off workshop, it’s a structured multi-year commitment. This program is a catalyst.
- The LMS plays a crucial role in building capacity.
- In environmental sample collection training and analysis training, participants prepare papers.
- We learned online/face-to-face, Hands-on laboratory training, VR training, and LMS use.
- The participants believe continuous training and follow-up are crucial.

Important comments from presenters (2)

[RMA group]

- Participants aimed for breaking silos, nourishing the capacity for support scientists.
- Capacity building and mentorship, strengthen team work.
- The RMA training is learning from different professionals, learning from each other.
- Training content development internally in line with the developed curriculum is starting.
- KEMRI enrolled RMA international network and now expected important role in EARIMA society.
- Challenges of RMA-related work can be managed by new technology introduction by KEMRI RMAs.

Human Capacity Development for Health Research in KEMRI

"Bibliometric analysis"

Raita TAMAKI
JICA expert
Associate Professor, Nagasaki University

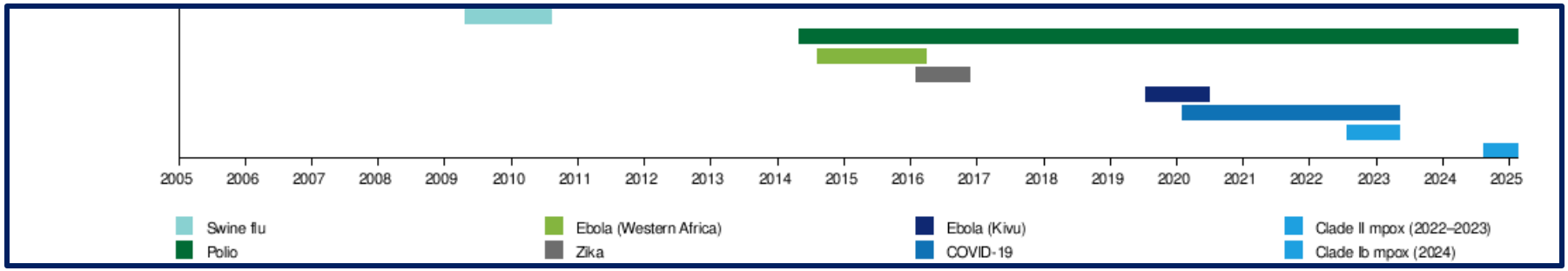
VENUE: Safari Park Hotel
DATE: 12/Feb/2025
TIME: 14:30-17:00

COI

The presenter has NO actual or potential conflict of interest in relation to this presentation.

BACKGROUND

1. Encountered eight PHEICs since 2009, with a majority having origins, being spread from, or affecting the **Sub-Saharan Africa** region
2. KEMRI is a pivotal institute in **reducing the burden of disease in Kenya and Sub-Saharan Africa**.
3. It is important to assess KEMRI's health research capacity to respond to the threat; however, **quantitative assessments have been limited**.



PHEIC : Public Health Emergency of International Concern

OBJECTIVES and METHOD

Objective:
To assess the **human resource capacity for health research in KEMRI, "qantitatively"**

Method:
Bibliometric analysis to identify prevalent challenges.

METHODS

Four basic indicators for analysis of health research capacities.

#	Indicator	Metric
1.	Clinical trial capacity	Number of clinical trials conducted in-country between 2016 and 2018 (annual average) based on data obtained from the Global Observatory of Health R&D, sourced from the WHO International Clinical Trials Registry Platform
2.	Capacity to attract funding for health/clinical research	Volume of funded health/clinical research in-country as measured by number of grants by major global R&D funders and recorded in the World RePORT platform between 2016 and 2018 (annual average).
3.	Capacity to produce research output in peer reviewed journals	Number of scientific publications catalogued in the PubMed database in between 2016 and 2018 (annual average), whose authors are affiliated to the country.
4.	Capacity to provide quality health research training	Number of higher education institutions providing doctorate degree for key health disciplines based on 2019 data obtained from the Global Observatory of Health R&D sourced from the World Higher Education Database.

Reference: ESSENCE on Health Research

TDR For research on diseases of poverty

UNICEF · UNDP · World Bank · WHO

METHODS

Four basic indicators for analysis of health research capacities.

#3 is used to simplify the discussion for this symposium .

#	Indicator	Metric
1.	Clinical trial capacity	Number of clinical trials conducted in-country between 2016 and 2018 (annual average) based on data obtained from the Global Observatory of Health R&D, sourced from the WHO International Clinical Trials Registry Platform
2.	Capacity to attract funding for health/clinical research	Volume of funded health/clinical research in-country as measured by number of grants by major global R&D funders and recorded in the World RePORT platform between 2016 and 2018 (annual average).
3.	Capacity to produce research output in peer reviewed journals	Output indicator RESEARCH CAPACITY = PUBLICATION IMPACT By bibliometric analysis
4.	Capacity to provide quality health research training	Number of higher education institutions providing doctorate degree for key health disciplines based on 2019 data obtained from the Global Observatory of Health R&D sourced from the World Higher Education Database.

Reference: ESSENCE on Health Research

TDR For research on diseases of poverty

UNICEF · UNDP · World Bank · WHO

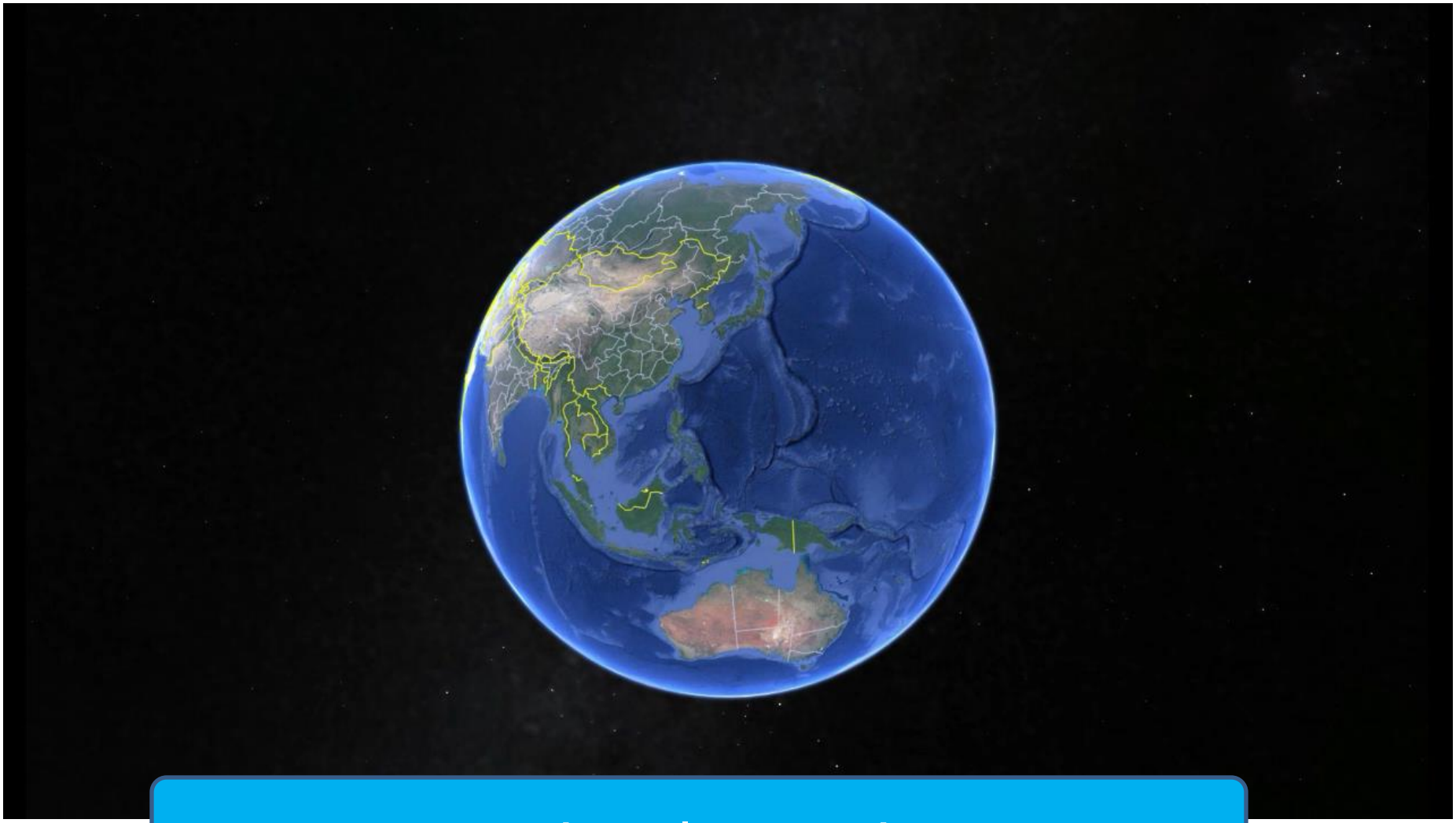
Bibliometrics is a field of study that **quantitatively analyzes academic publications** and literature to reveal trends in research, impact, citation patterns, and more. It primarily **evaluates research activities and academic influence** based on factors like citation analysis and publication frequency.

Four levels of targets

1. Regional level
2. Country level
3. Institutional level
4. Individual level

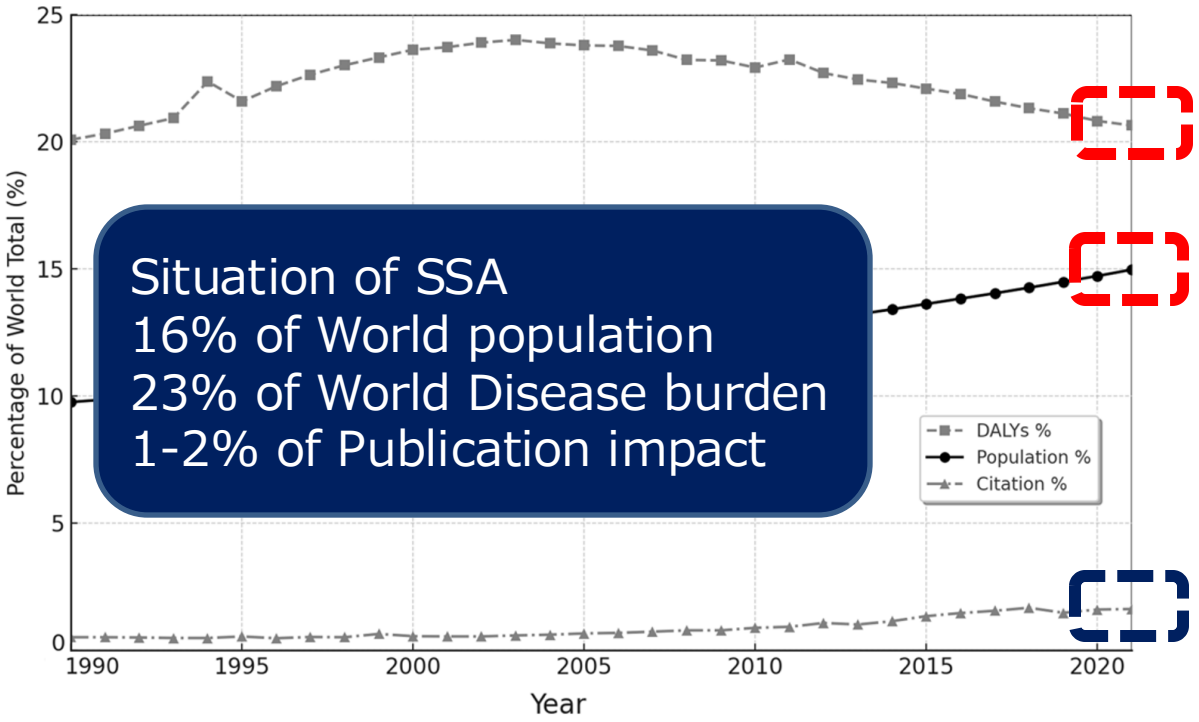
Four levels of targets

1. Regional level
2. Country level
3. Institutional level
4. Individual level



Regional capacity (Sub-Sahara Africa)

SSA PUBLICATION IMPACT VS REGIONAL DISEASE BURDEN



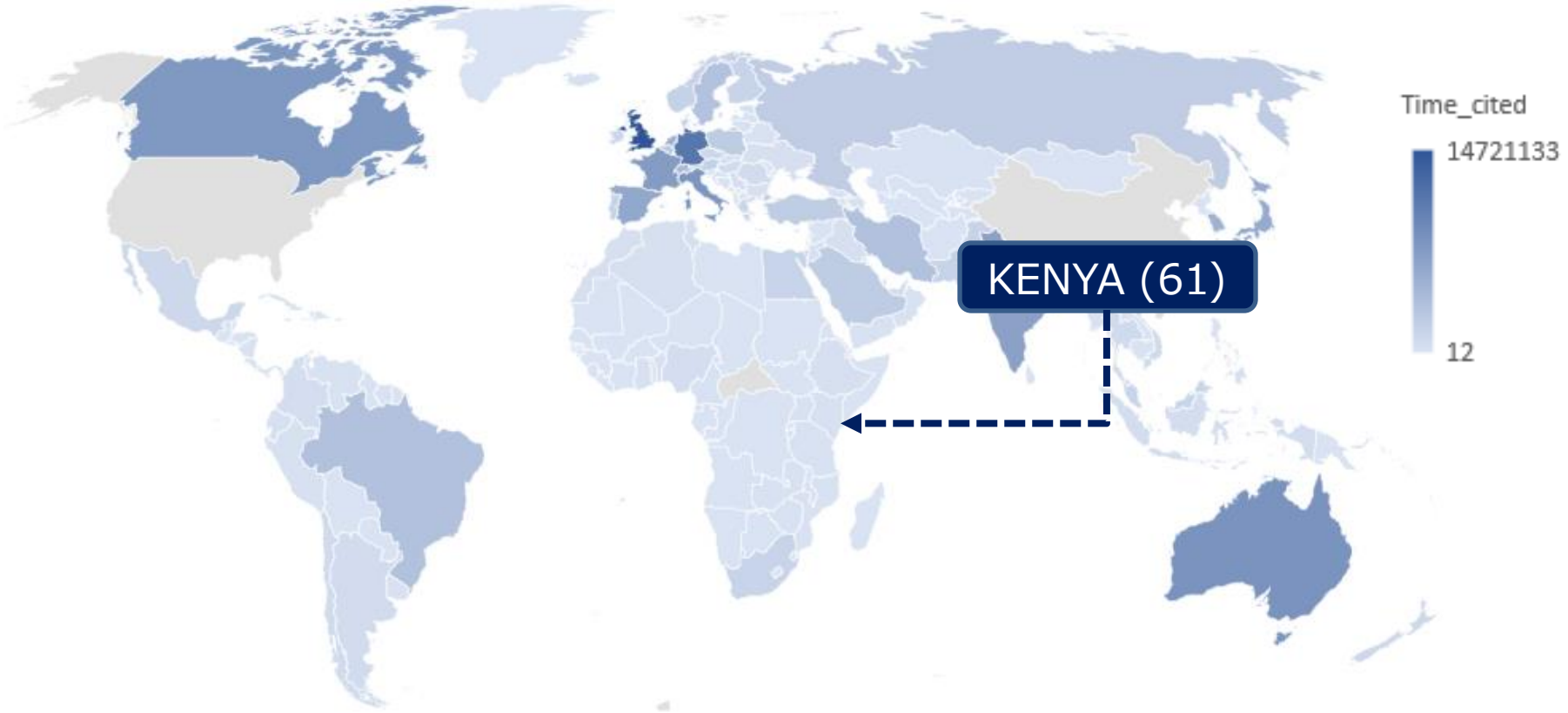
While SSA comprises 16% of the global population and accounts for about 23% of the disease burden, its research capability in infectious diseases is only around 1-2%. This situation has remained relatively unchanged for the past 40 years, despite tremendous efforts made both internally and externally.

Four levels of targets

1. Regional level
2. Country level
3. Institutional level
4. Individual level

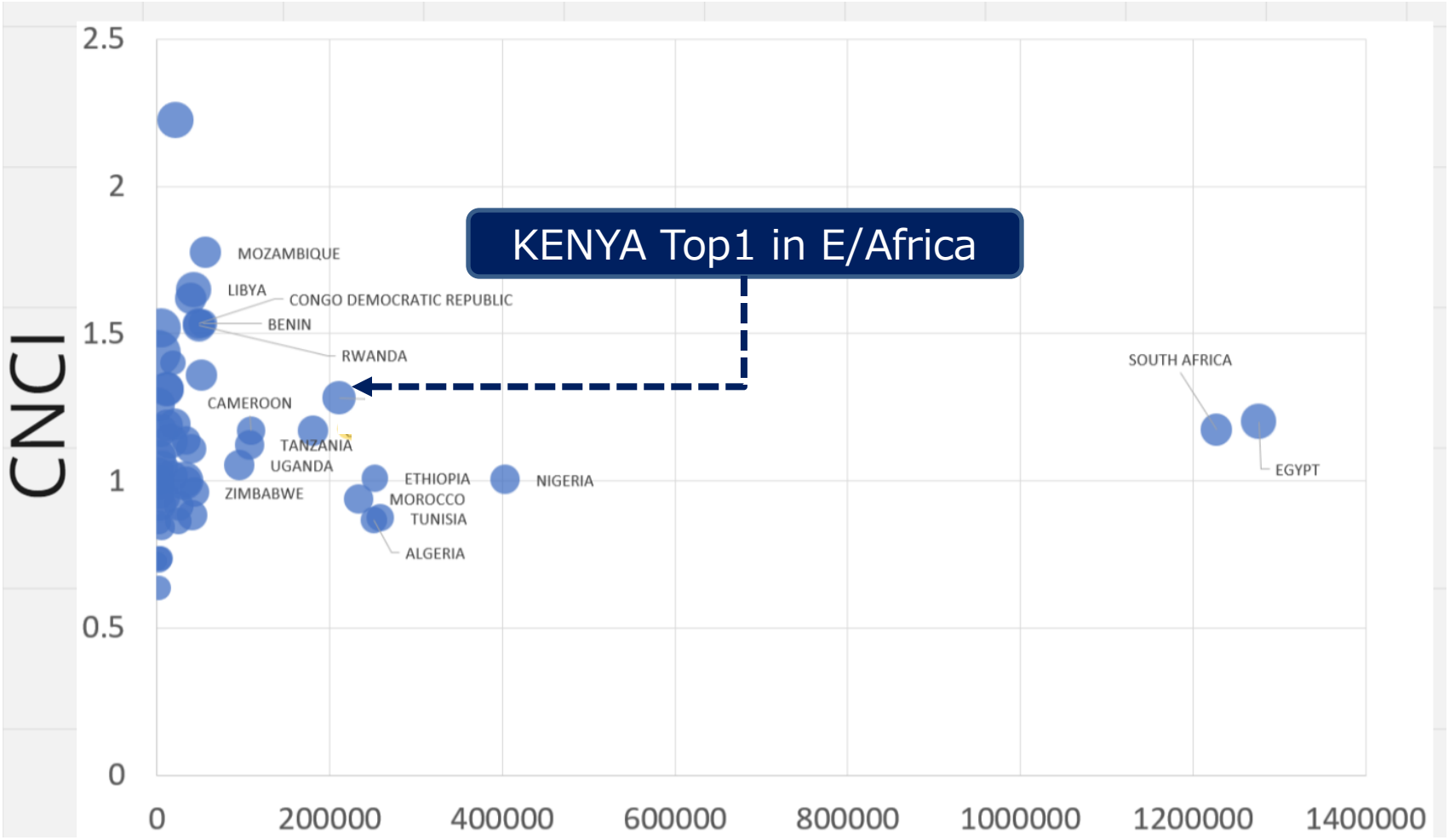
Country level capacity (Kenya)

Rank in the world



Times cited for all research papers in WoS by countries (2018-2022, **Top2 ranked USA/China excluded*)

Distribution of research capability across the 52 countries of Africa



CNCI: Category Normalized Citation Impact (adjusted for impact across fields)

Four levels of targets

1. Regional level
2. Country level
3. Institutional level
4. Individual level

Institutional level capacity (KEMRI)

Visualization of KEMRI's research capacity

Institution Level

Frame 223

Note	Name	Web of Science Documents	Times Cited	% Docs Cited	Rank	Category Normalized Citation Impact	Country

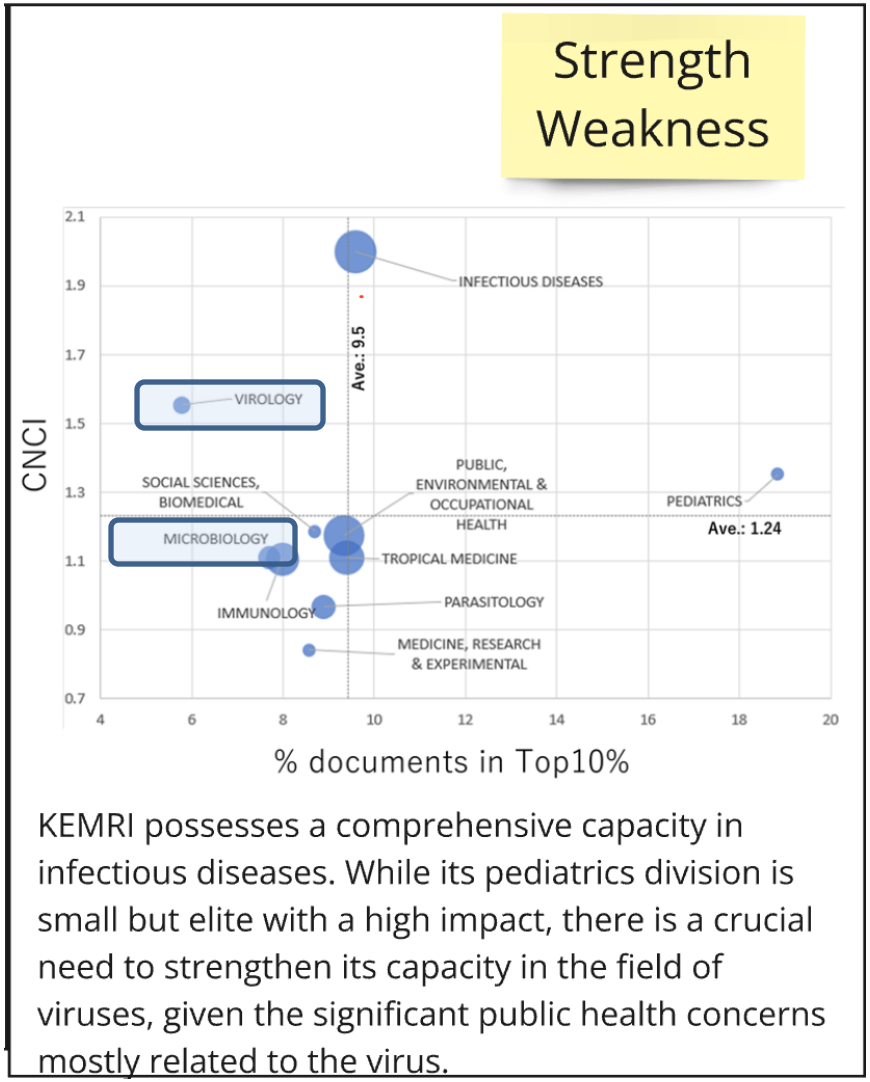
(Among all research fields)

1. KEMRI ranks 2nd in Kenya
2. High CNCI: 1.7
3. International collaboration rate: >90%
4. Concern: Limited percentage of primary author

KEMRI has an international collaboration rate of over 90% and its CNCI is extremely high at 1.7. In the field of infectious diseases, KEMRI ranks 1st in Kenya and is among the top 2 in all research fields. However, % of primary authors is limited, raising concerns about its dependency on external donors.

Visualization of KEMRI's research capacity

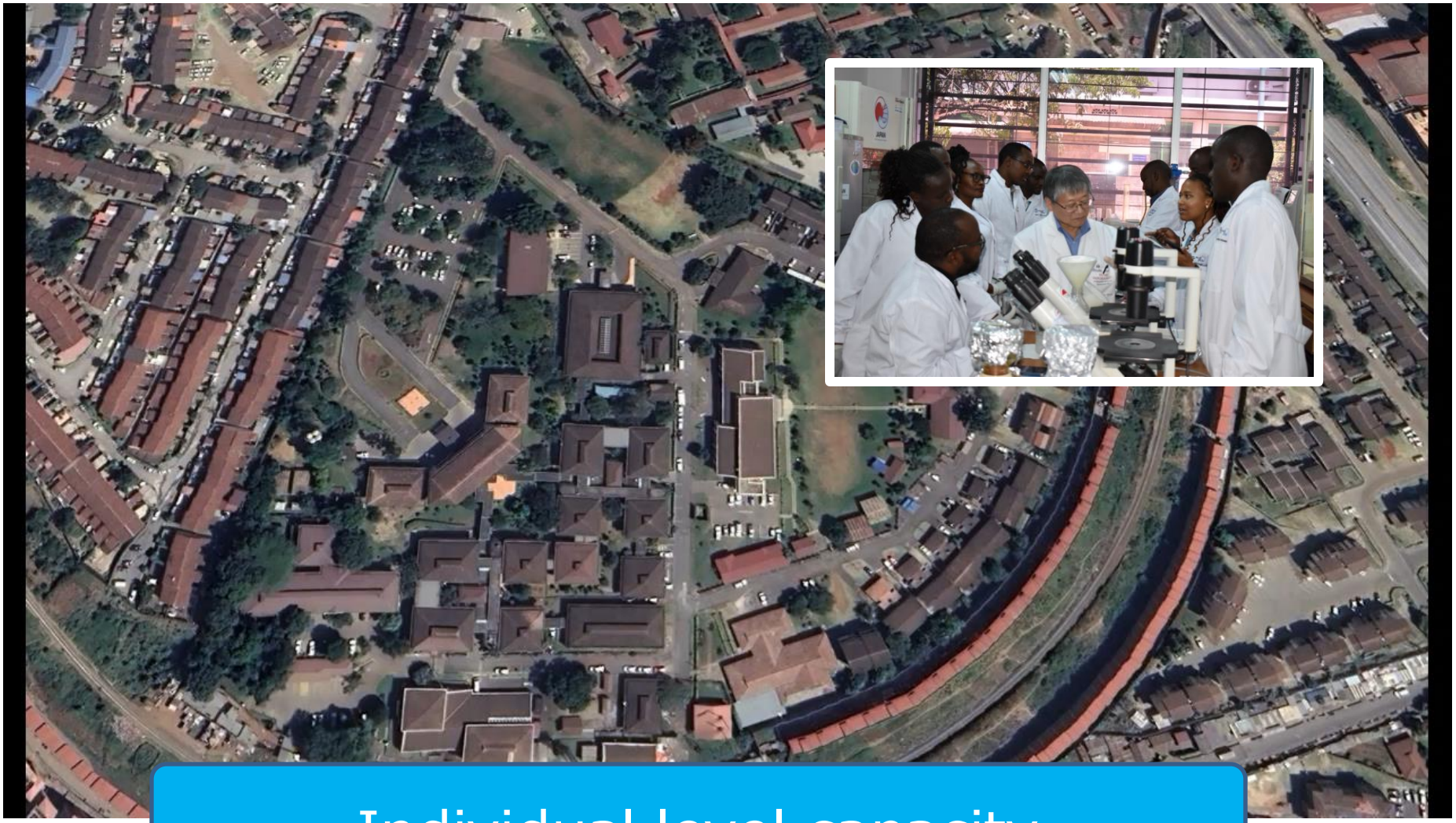
Considering emerging infectious diseases in SSA, strengthening the field of virology and microbiology is crucial.



KEMRI possesses a comprehensive capacity in infectious diseases. While its pediatrics division is small but elite with a high impact, there is a crucial need to strengthen its capacity in the field of viruses, given the significant public health concerns mostly related to the virus.

Four levels of targets

1. Regional level
2. Country level
3. Institutional level
4. Individual level

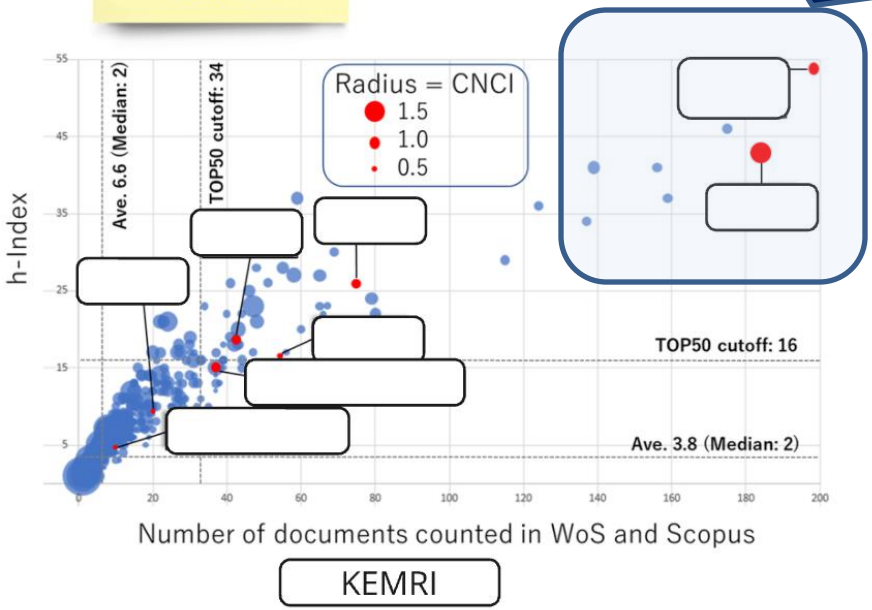


Individual level capacity (KEMRI)

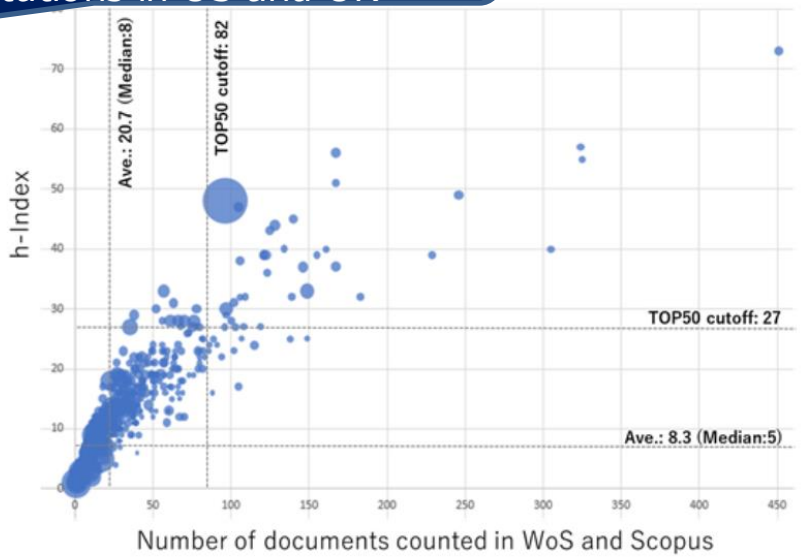
Visualization of KEMRI's research capacity

Indivisual Level

A researcher with strong connections to renowned research institutions in US and UK



KEMRI

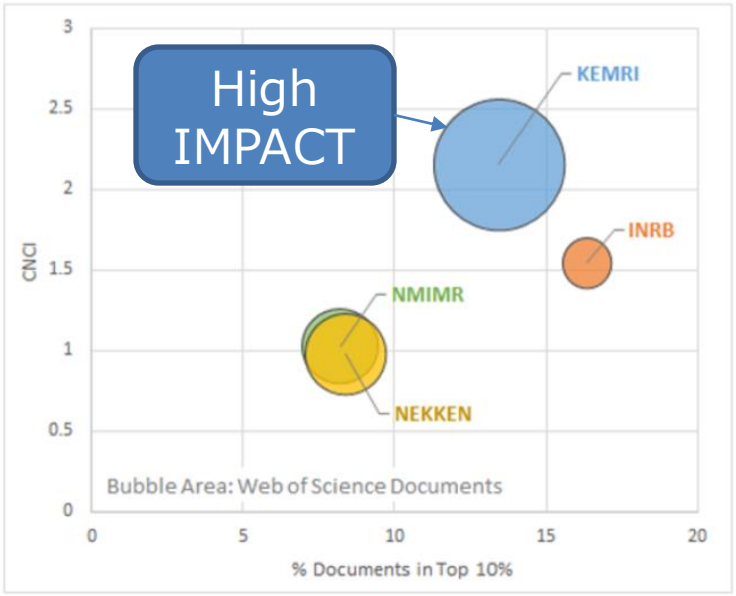


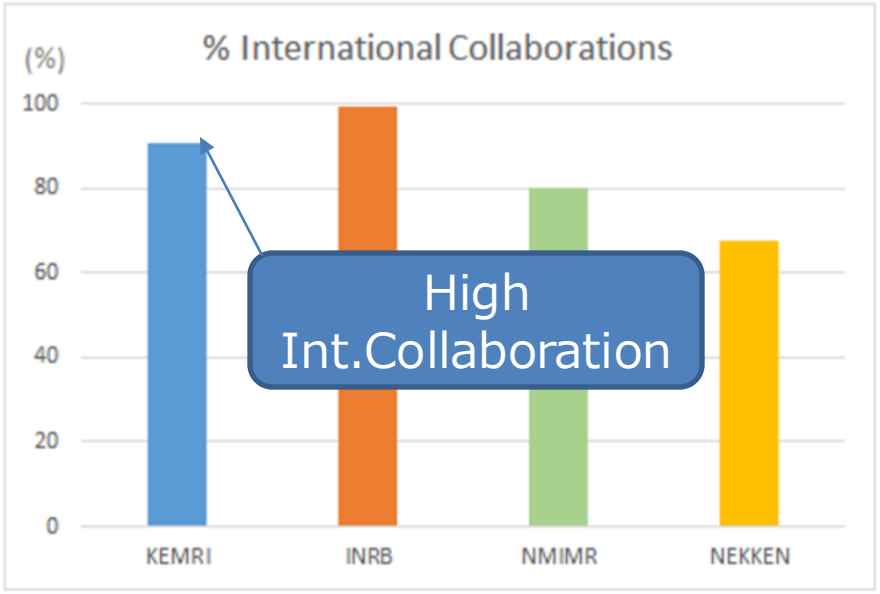
NIID

At the individual level evaluation in KEMRI, there is a polarization observed among KEMRI researche
Compare trates
about one

Huge disparity between the majority of researchers and top researchers

COMPARISON AMONG 4 INSTITUTIONS for SW(OT)





Organization	❶Documents	❷Documents of (First + Corresponding)	Rate ❷/❶
INRB	269		18.2%
KEMRI	1934		26.0%
University of Ghana*	748	388	51.9%
Nagasaki university**	1188	631	53.1%

Low Primary author rate

Ghana, NMIMR: Noguchi Memorial Institute for Medical Research
Japan, NEKKEN: Nagasaki University Institute of Tropical Medicine
DRC, INRB: National Institute for Biomedical Research

COMPARISON AMONG 4 INSTITUTIONS

Organization	❶Documents	❷Documents of (First + Corresponding)	Rate ❷/❶
INRB	269	49	18.2%
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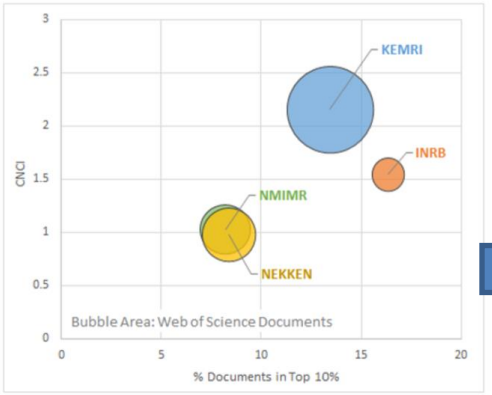
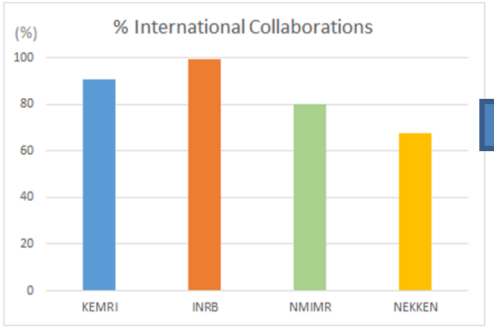




	STRENGTH	WEAKNESS
KEMRI	**Securing External fund with High Impact Research outputs**	**External fund dependency Less primary author**
NMIMR	Good ownership of research activities	Publication impact (compared to KEMRI)
INRB	Highest Top10%	External fund dependency Less primary author

Conclusion

1. The research capacity outcomes in **SSA still remain at only 1–2%,** which is low compared to its disease burden (23%) and population (16%). Kenya and KEMRI are no exceptions.
2. This study highlights the analysis of publication impact as a comprehensive outcome of RCB, the most critical of the four basic indicators, using the KEMRI case, which demonstrates that **KEMRI has a high impact but raises concerns about donor dependency**.
3. A strategic approach that **quantitatively (rarely done)** and qualitatively (commonly done) **assesses all four indicators with proper KPIs** will strengthen IHR's Core Capacity of Kenya and contribute to regional UHC.
4. As a recommendation, **establishing dedicated strategic units in KEMRI, such as IR(Institutional Research), for KPI management** will be key to enhance the analytical capacity for institutional and individual evaluation.

Four basic indicators for analysis of health research capacities.

#	Indicator	Metric
1.	Clinical trial capacity	Number of clinical trials conducted in-country between 2016 and 2018 (annual average) based on data obtained from the Global Observatory of Health R&D, sourced from the WHO International Clinical Trials Registry Platform[10]
2.	Capacity to attract funding for health/clinical research	Volume of funded health/clinical research in-country as measured by number of grants by major global R&D funders and recorded in the World RePORT[11] platform between 2016 and 2018 (annual average).
3.	Capacity to produce research output in peer reviewed journals	Number of scientific publications catalogued in the PubMed[12] database in between 2016 and 2018 (annual average), whose authors are affiliated to the country.
4.	Capacity to provide quality health research training	Number of higher education institutions providing doctorate degree for key health disciplines based on 2019 data obtained from the Global Observatory of Health R&D sourced from the World Higher Education Database.[13]

Project Perspective

1. JICA TCP has developed a model training system for RCB, which will be presented by the following presenters.

2. Once the training system is fully established, active utilization of this system will be key to enhancing capacity not only for the researchers also the administrators.

Asante sana

Raita TAMAKI
JICA expert
Associate Professor, Nagasaki University

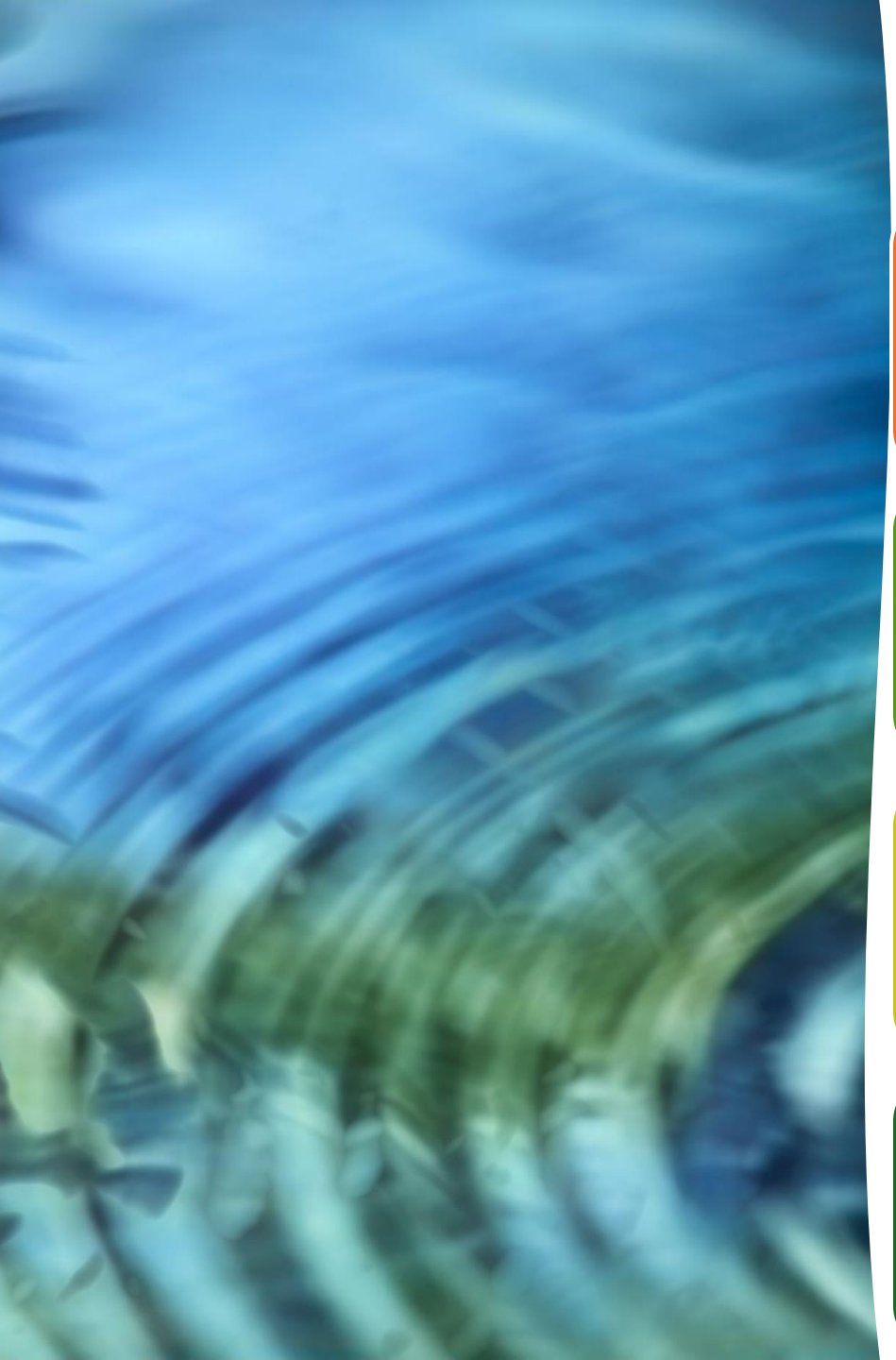
VENUE: Safari Park Hotel
DATE: 12/Feb/2025
TIME: 14:30-17:00

Empowering the Future: The Impact of KEMRI-JICA Technical In Country Omics Training 1-7 on Research and Innovation among Research Scientists

KEMRI-JICA SYMPOSIUM
12th FEB,2025
Presenter : Bridget Kimani

Team Members

James Gikunda, Sheila Mbaabu, Matthew Munyao, Vicoty, Susan Chao, Prof. Inoue, Prof. Fuuji, Prof. Muuo Nzou



INTRODUCTION

The KEMRI-JICA collaborative omics training began from June 2022 to February 2025.

Kenya’s pursuit of Universal Health Coverage requires robust research ecosystems.

It aims to strengthen Kenya capacity to address health challenges through cutting-edge omics technologies.

The KEMRI-JICA partnership addresses this by equipping scientists with advanced omics skills.

Introduction

Designed to enhance Kenya's capacity to respond to health crises, the program emphasizes capacity building, research, and equitable healthcare.

Omics technologies encompassing genomics, proteomics, and metabolomics have revolutionized biomedical research by providing unprecedented insights into complex biological systems.

This training equips researchers with a diverse toolkit to explore biological systems at multiple levels, driving innovation and improving health outcomes

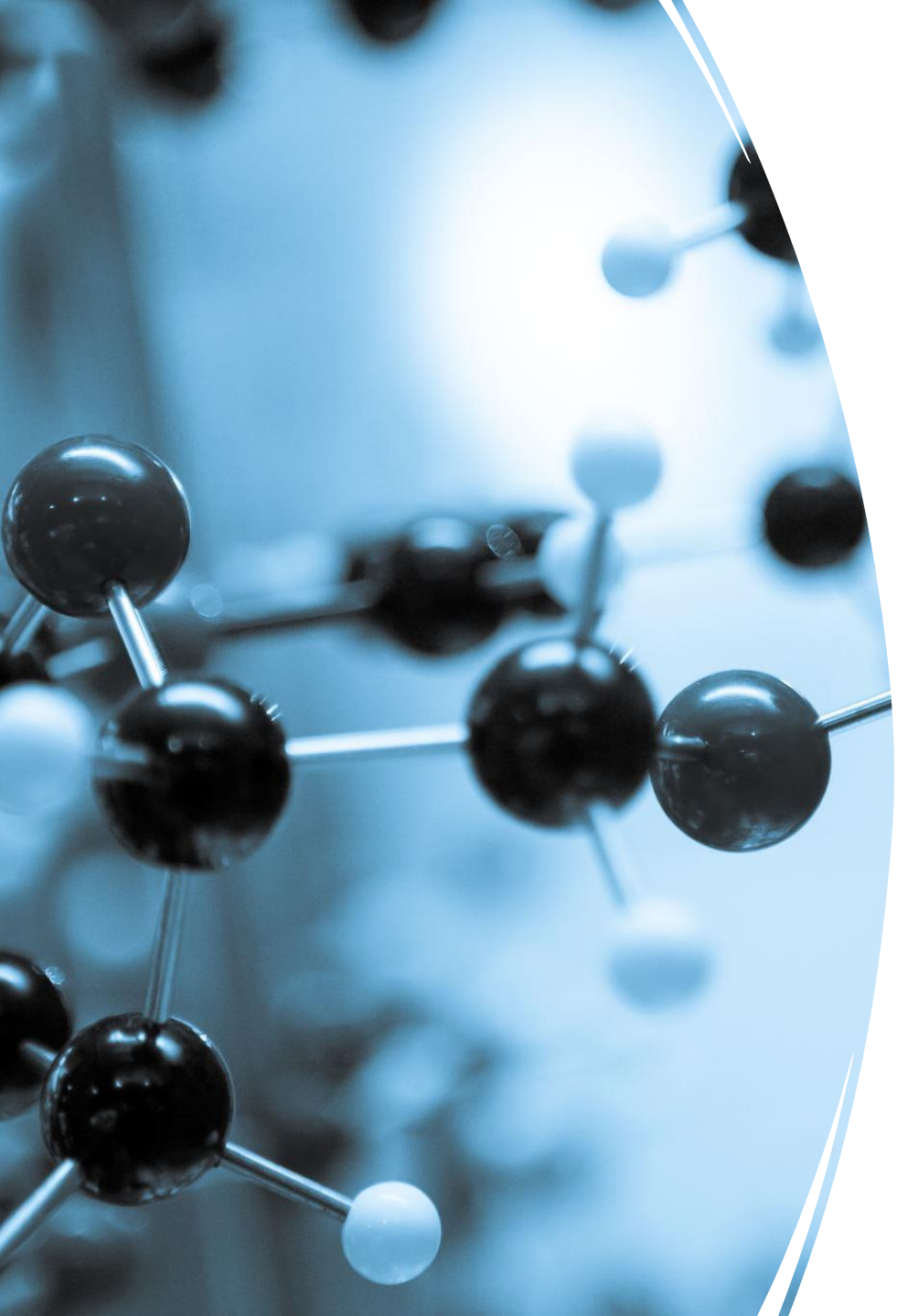
Program Overview

- ***WHO?*** The program engaged **30 scientists** across **junior, middle,** and **senior** career stages recruited from **various centres in KEMRI.**

- ***WHY?*** To foster **mentorship** and ensure knowledge **cascades** through **all levels** of KEMRI's research teams.

- ***WHERE?*** KEMRI labs, the training leveraged **local infrastructure,** ensuring skills are **directly applicable** to Kenya's health priorities.

This isn't a one-off workshop—it's a structured, multi-year commitment



WHAT?

- **Omics technologies**—genomics and proteomics—allow us **to decode biological systems** at unprecedented resolutions.
- **Genomics** helps **track pathogen evolution**, while proteomics **identifies disease biomarkers.**
- These tools are game-changers for **precision medicine** and **outbreak response.**
- Think of them as a ‘***molecular microscope’*** for understanding health and disease."

Cont’d

We combined theory with hands-on practice

Pre- and post-tests ensured measurable progress.

Modules

Prof. Inoue and Prof. Muuo

- Cell culture
- Viral isolation
- Serology

Prof. Fuuji and Prof. Muuo

- Cloning
- Protein expression
- Protein purification
- Immunochromatography

How We Did It!

Panasonic

Subcloning Strategies
Subcloning is a basic procedure in molecular biology for transfer of DNA
fragments from one vector to another to gain functionality to study the
sequence of interest. Essentially all subcloning reactions proceed the
same way as illustrated in the figure below. You release and purify your
insert from the parent vector, ligate this insert into a prepared destination
vector, and transform this ligation reaction into competent bacterial cells.
Then, you screen the transformed cells for the inserted DNA.
before you begin your subcloning experiment, you need to know the
which restriction enzyme (RE) sites are present in the multiple cloning
sites (MCS) in both your parent vector and destination vector, and if these
same sites also occur in your insert. Once you know this information, you
can begin to develop your subcloning strategy.

Outcome

The training significantly enhanced participants' skills and knowledge in omics technologies. Research scientists gained expertise in cell culture, virus isolation, serology, cloning, expression and purification, and immunochromatography.

Participants mastered bacterial pathogen identification using 16S rRNA gene sequencing and deepened their understanding of antibody-antigen interactions for diagnosing infections like Dengue and Chikungunya.

Virus isolation modules improved technical expertise in cell line preparation and maintenance, while cloning and protein expression techniques enabled the production of monoclonal antibodies and recombinant proteins.

Immunochromatography training provided insights into the design, development, and application of IC test kits.

Conclusion

This program is a catalyst.

By mastering omics, KEMRI scientists are no longer just data collectors—**they're innovators driving solutions!**

Looking ahead, we aim to expand partnerships for omics-driven pandemic surveillance and mentor the next generation of researchers.

As omics technologies evolve, their impact on research and innovation will continue to grow, paving the way for a healthier and more sustainable future.

Universal Health Coverage isn't a dream; it's a goal within reach."

All work and no play makes makes researchers dull!

Acknowledgement

THANK
YOU

ありがとう!

asante

KENYA MEDICAL RESEARCH INSTITUTE

KEMRI

In Search of Better Health

15th KASH CONFERENCE 2025

at Safari Park Hotel NAIROBI

Learning Management Systems (LMS) Used in Technical In Country Training (TICT1-7) as a tool in OMICS: Capacity Building, Challenges, and Opportunities

Enhancing Technical In-Country Training (TICT)

Group 2 Team

Tony Teya

Lucy Kanyara

Anne Mwangi

Nicholas Mwikwabe

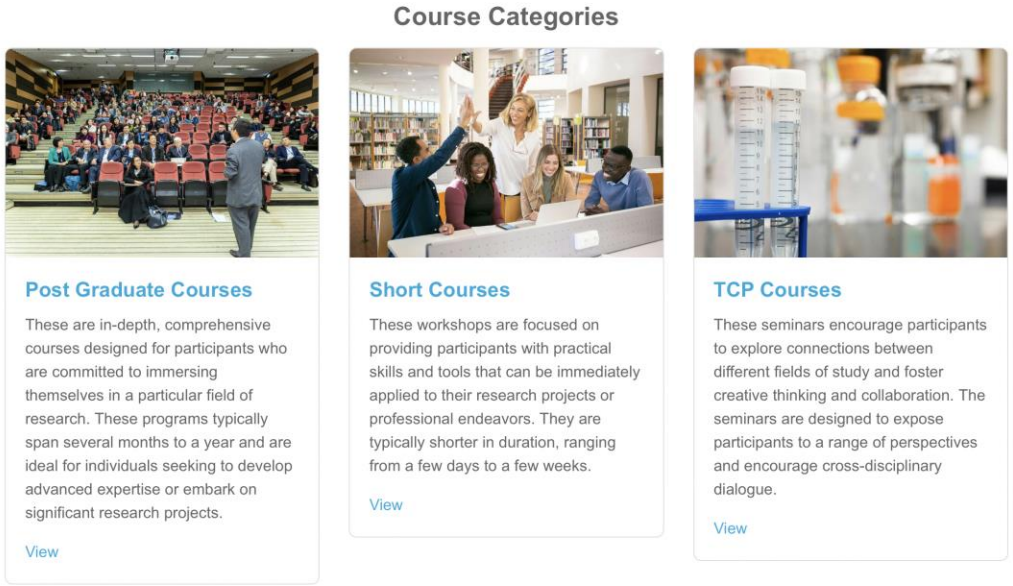
Tiffany Wandera

Background

The Need for Enhanced OMICS Training

- LMS: A promising solution for enhanced effectiveness.

- JICA's TICT crucial for OMICS capacity building in resource-limited settings.
- Traditional TICT limitations: scalability, accessibility, sustainability.

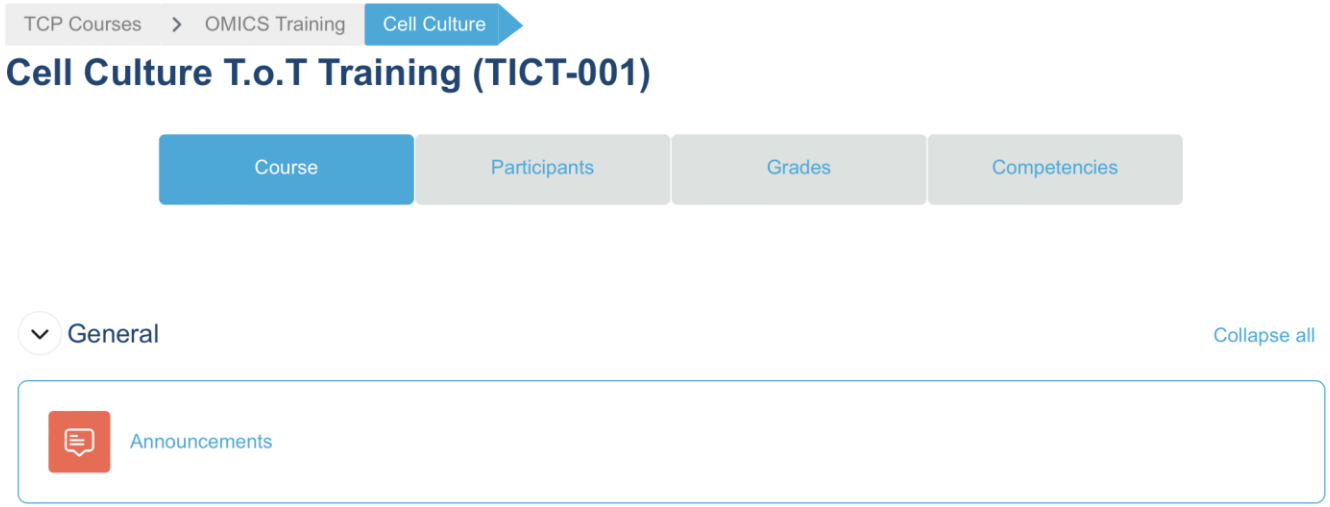


Capacity Building with LMS

LMS: A Centralized Hub for Learning

Centralized platform for OMICS training content (multimedia, interactive modules, assessments).

- Personalized learning experiences: self-paced progress, targeted support.
- Learner progress tracking and data analysis for continuous improvement.



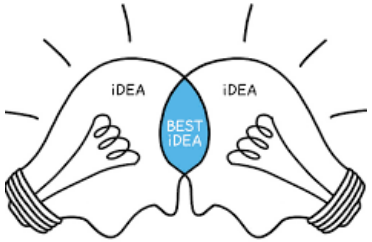
Challenges of LMS Implementation

Overcoming Implementation Challenges

- Technical expertise required for development and maintenance.
- Specialized skills needed for high-quality OMICS content creation (e.g., VR modules).
- Adaptability to cultural and linguistic diversity.
- Ensuring long-term sustainability: funding, technical support, content updates.

Opportunities with LMS

Unleashing the Potential of LMS



→ Collaboration and knowledge sharing.

→ Wider reach, overcoming geographical barriers.

→ Flexible, self-paced learning.

Conclusion

LMS: A Crucial Tool for OMICS Capacity Building

- LMS plays a crucial role in building OMICS capacity.
- Contributes to advancements in health, agriculture, and environmental science.

THANK YOU

Arigatou Gozaimasu

12.02.2025

KEMRI- JICA-TICT 6 PRESENTATION

Analysis and classification of bacteria species from environmental samples at KEMRI headquarters, Nairobi, Kenya.

Robinson Irekwa

CMR-KEMRI

Introduction

Microbes are ubiquitous, including in research facilities.

Understanding microbial diversity is crucial for hygiene and safety.

KEMRI headquarters houses diverse research centers with varying activities.

This study investigates bacterial communities on various surfaces within KEMRI.

Methods

Sample collection

Investigating Bacterial Diversity

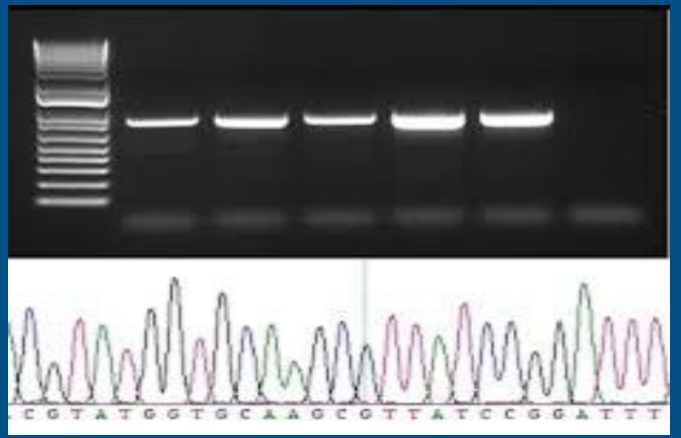
Samples collected from:

- Male and female toilets
- Kitchen sinks, microwaves, fridges
- Access doors

Methods cont'

- Microscopy (Gram staining, morphology)
- PCR amplification of 16S rRNA gene
- Sequencing and database comparison

(65 purified DNA samples sent for sequencing)



Methods cont'

PCR

Primers

Bacteria universal primers

The 16S rRNA gene was amplified using universal primers 800F (5'-GGATTAGATACCCTGGTA -3') and 1500R (5'- TACCTTGTTACGACTT -3')

		Concentration	f/c	Volume (x1)
a	Nuclease free water			7.2µL
b	2x MightyAmp Buffer	2x	1x	10.0µL
c	800F Primer	5.0µM	0.3µM	1.2µL
d	1500R Primer	5.0µM	0.3µM	1.2µL
e	MightyAmp Polymerase Ver. 3		0.5U/20µL	0.4µL
f	Bacteria single colony		tiny	tiny

Results

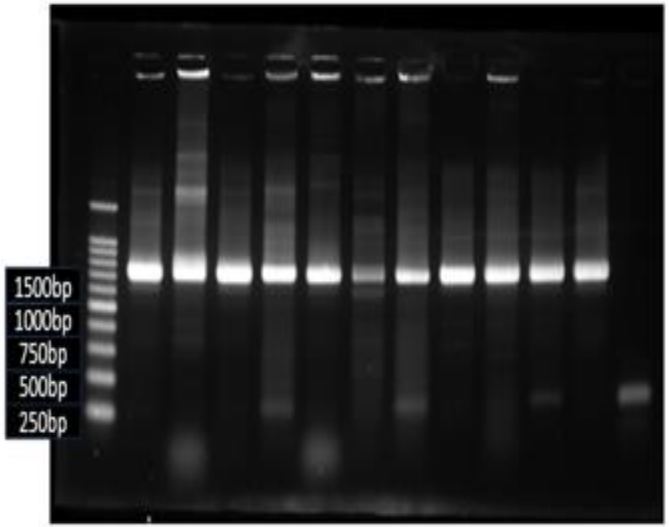
Diverse Bacterial Communities Identified

- Wide variety of bacterial species identified.
- Both Gram-positive and Gram-negative bacteria present.
- Predominance of rod-shaped bacteria especially in the kitchen areas.
- Cocci in toilets

Results cont'

High positivity

- 65 positive samples (60% rate)
- 2528bp



Results cont'

Bacteria species

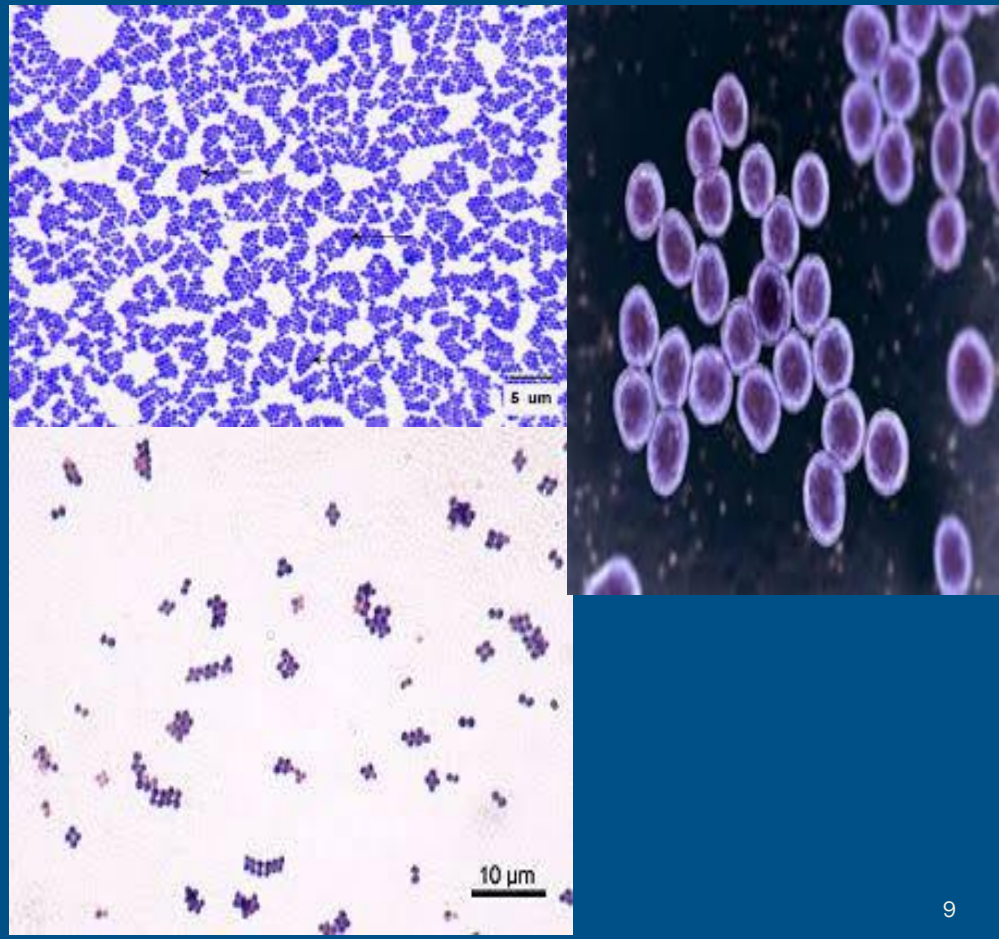
Common bacteria found

Staphylococcus sp	4
Bacillus cereus	8
Bacillus thuringiensis	2
Staphylococcus haemolyticus	4
Staphylococcus aureus	1
Staphylococcus warneri	4
Staphylococcus saprophyticus	4
Exiguobacterium mexicanum	3
Staphylococcus epidermidis	3

Results cont'

Potential Pathogens Detected

- *Staphylococcus* spp. found in toilets and kitchens
- Potential for opportunistic infections
- Species-level identification through sequencing



Results cont'

Location-Specific Variations

- Toilets: Mix of Gram-positive and Gram-negative bacteria
- Kitchens: Higher prevalence of Gram-positive cocci
- Reflects different sources and hygiene practices

Discussion

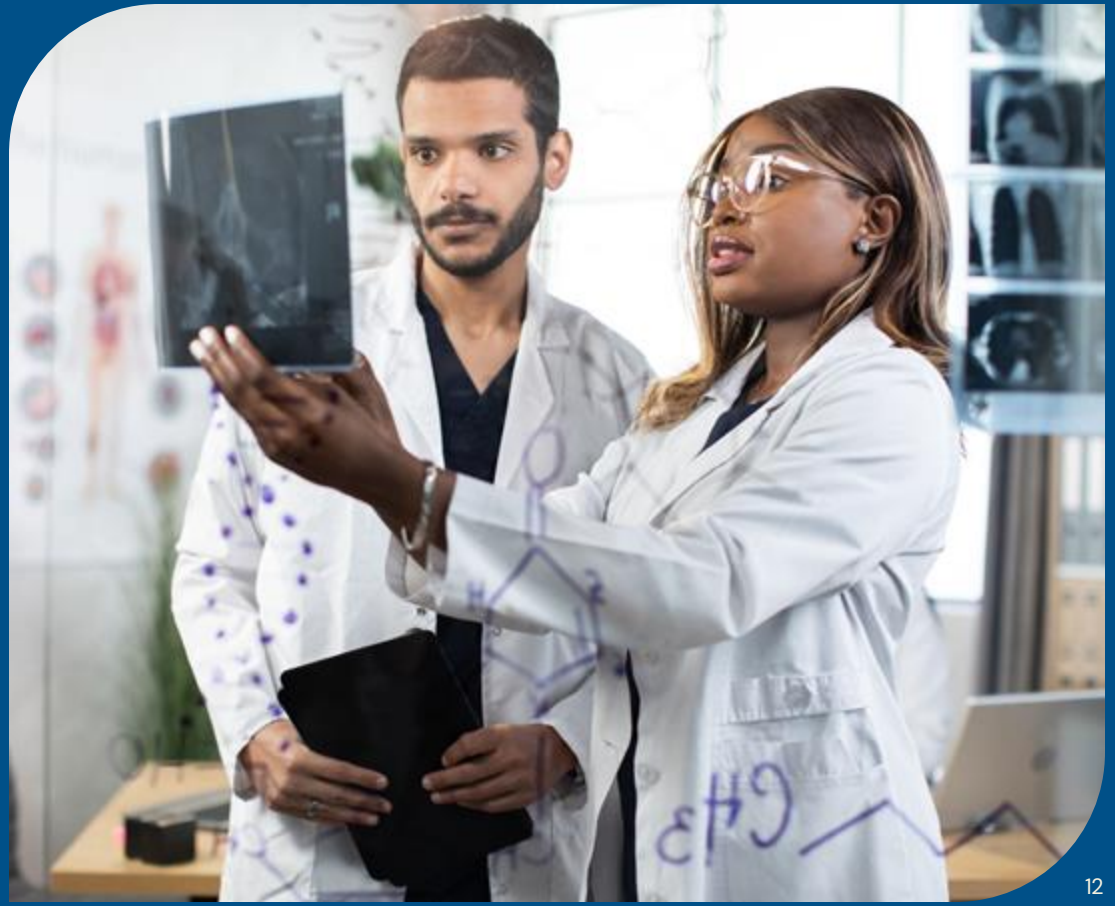
Understanding the Findings

- Consistent with previous research on indoor environments (CDC, 2024)
- Human activity and hygiene practices influence bacterial diversity
- Importance of regular cleaning and disinfection

Conclusion

Drawing a Conclusion

- Diverse bacterial communities present at KEMRI
- Potential pathogens detected, highlighting hygiene importance
- Regular monitoring and hygiene practices crucial for safety



Acknowledgement

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The End

thank
you

KENYA MEDICAL RESEARCH INSTITUTE

KEMRI

In Search of Better Health

15th KASH CONFERENCE 2025

at Safari Park Hotel NAIROBI

TCP-OMICS Training: A Case Study of JICA-TICT Phase 1 and Prospects for Phase 2 and Beyond

Presenter: Jeremiah Ndeto

Team members: Francis Kimani,Caroline Njoroge, Daniel Njenga, Vincent Rutto, Alfred Muia

12th February 2025

Introduction

- JICA and KEMRI partnered to implement TICT program.
- The initiative addressed skill gaps in research particularly OMICS.
- OMICS techniques are crucial for advancing infectious disease research.
- This presentation reflects on our experience with TICT phases 1.

Objectives

STRENGTHEN KEMRI&APOS;S RESEARCH CAPACITY

ENHANCE RESEARCHERS&APOS; OMICS KNOWLEDGE AND SKILLS.

Methodology

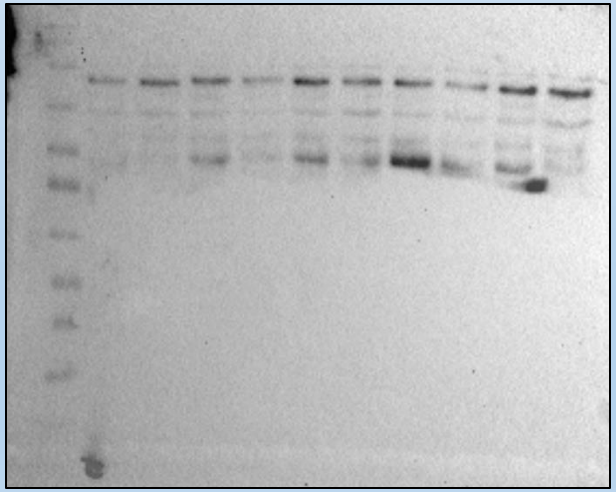
Online classes

Lectures

Hands-on Lab training

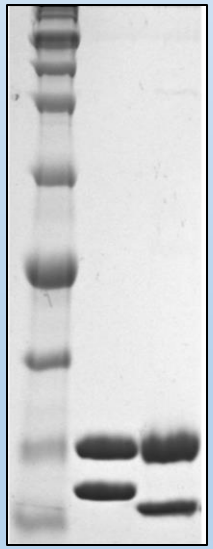
Results - Training Impact

Mammalian cell culture



Western blot

PoC design and validation



Protein Purification

VR Technology

Bacterial culture

Conclusion

Equipped KEMRI researchers with the capacity and technical skills, including OMICs, to combat infectious disease threats.

Continued training and follow-up are crucial for maintaining and advancing these skills.

Prospects for Phase 2 and Beyond

- Building on the success of Phase 1.
- Expanding the scope of training (e.g. New OMICS techniques such as advanced bioinformatics, metabolomics and transcriptomics).
- Strengthening collaborations with JICA and other partners.
- Ensuring long-term sustainability of the program.
- Developing a center of excellence for OMICS training.

OMICS TEAM

Acknowledgements

RESEARCH MANAGEMENT ADMNISTRATION KEMRI

Current status of RMA in KEMRI

Challenges and opportunities

KEMRI Research Administration Process into 4 stages as below

1. Pre-Award

- Funding Opportunity Identification (creation of core application team)
- Application and submission (support in assembling requirements, internal review and submission)
- Communication with review team to clarify or submit additional material

2. Award phase

- Receipt of Notification of Award
- Contracting
- Project set up in the ERP (budget setup, assigning of project number, donor mapping, project period)

3. Post Award

- Initial Funding Invoicing
- Procurement functions (requests, purchases, stores management etc)
- Finance functions (Budget tracking, postings, payments, reconciliations, reporting)
- Human resources functions (talent identification, recruitment, onboarding, training, remuneration, discipline)
- Monitoring and Evaluation
- Research communication and publicity
- Internal auditing

4. **Closeout**

- Submission of final reports (technical and financial)
- Recording of key outputs (IP, Publications, Products)
- Records archive as per the contract and GoK regulations

RMA CURRENT STATUS

STRENGTHS

- Experienced senior scientists and administrators
- KEMRI is a respectable medical research platform in the region
- Robust ERP that can be automated for efficiency
- Adequate research resources like laboratories and equipment
- Inhouse IRB (SERU) helps with quick ethical approvals

WEAKNESS

- Researchers work in silos during grant application
- Lack of capacity building and mentorship among both teams
- Lack of team work
- Under-customized ERP, not working optimally

PROJECT ACHIEVEMENTS

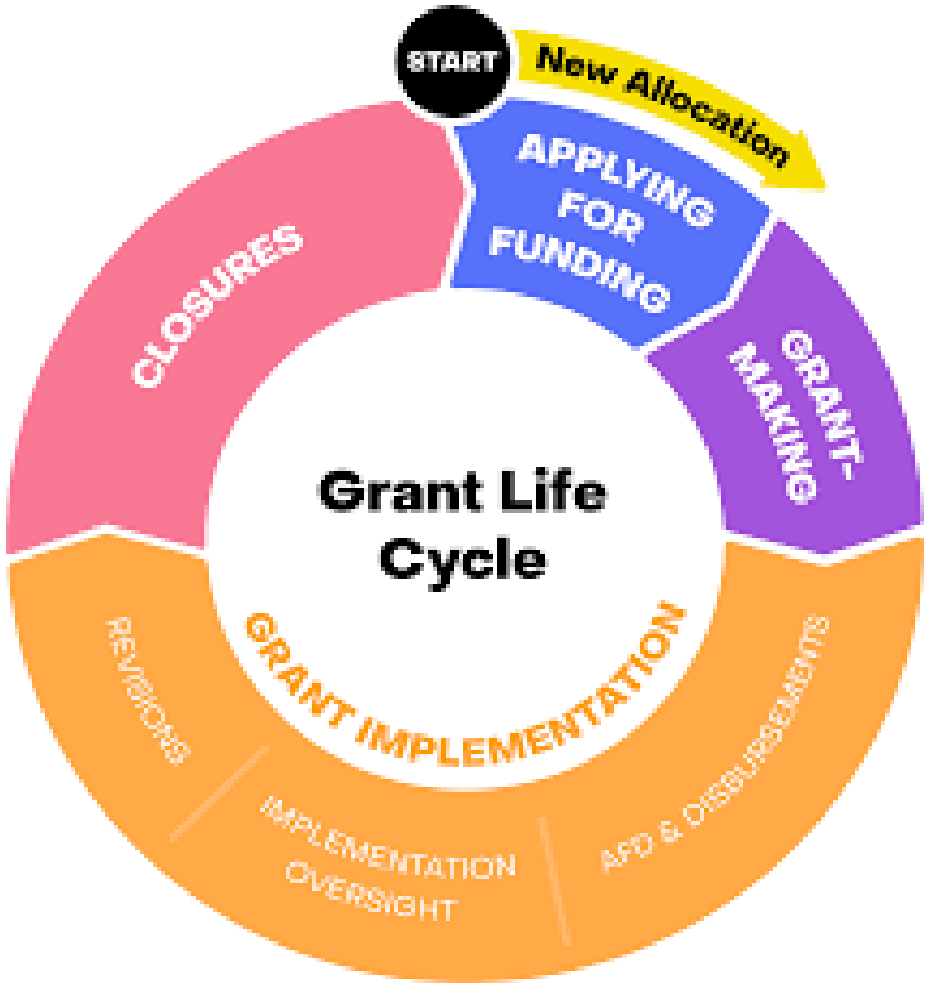
Initiation of RMA has led to

- Enhancing team work. Appreciation of team work between researchers and administrators
- Mapping all relevant material (policies, SOPs, manuals, reports)
- Developing of training manual for research administration
- Mapping and documenting various funders requirements

EFFORT REQUIRED TO ACHIEVE THE GOAL

- Establishment of regular meetings to discuss opportunities and challenges
- Identification of funding for capacity building
- Creation of team leads and support teams to implement RMA

MAPPING OF RMA IN KEMRI



15th, KASH CONFERENCE

In Search of Better Health

ENHANCING HEALTH SYSTEM THROUGH RESEARCH MANAGAMENT AND ADMINISTRATION

PRESENTED BY; RUTH NYAMBURA

GROUP MEMBERS; PATRICIA NZIOKI
MELVIN NGUGI
TIMANOI SANINGO
SHEILA MUNDALO

RMA CAPACITY BUILDING AND MENTORSHIP

PRESENTATION OUTLINE

- Background of TCP Capacity Building
- RMA Motto, vision, Mission and Mandate
- Capacity Building Initiatives
- Succession and Mentorship
- Principles of implementing the Programme

TCP CAPACITY BUILDING

- Collaboration with Japan International Cooperation Agency under the Technical Cooperation Project(TCP) focusing on capacity building of Research Administrators and the OMICs training.

- KEMRI/JICA mapped out RMA functions, identified key training counterparts, and developed a comprehensive framework that included introductory courses by RMA experts from Kyoto University and tailored training content.

- Working alongside the HR Department to Implement approved TDP and mentorship initiatives;

Research Management Administration

Motto- RMA for seamless research

Vision- To be at the forefront of fostering a dynamic and collaborative research ecosystem

Miss**ion-P**rovide comprehensive support, strategic oversight, and efficient management throughout the research process

RMA MANDATES

CAPACITY BUILDING MANDATES

- Pursue RMA certification
- Mentor fellow staff
- Conduct peer trainings through webinars , seminars, etc.
- Network and learn from RMAs in the region through INORMS

OUTREACH MANDATES

- Assist researchers in Identifying, pursuing, and securing research funding and managing the grant.
- Engage in outreach activities with scientists to understand Scientists' needs, and solutions.
- Organize forums within the network to interrogate and recommend solutions for issues affecting RMA
- Champion for reforms at Departmental and management level.
- Team Building activities

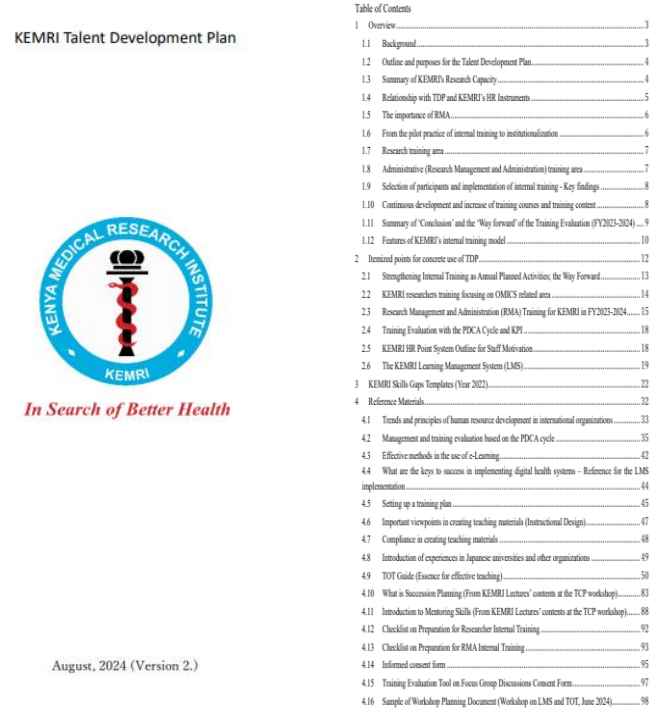
CAPACITY BUILDING INITIATIVES

- Development of TDP
- Introductory Courses
- Mapping Project
- Development of Curriculum
- Training tool
- TOT of Interns

Training Development Plan

The Talent Development Plan(TDP) –
plan to continuously develop a competent workforce to ensure that KEMRI continues to achieve its mandate

TDP is linked to KEMRI's human resource development policy to strengthen the capacity building initiatives.



KEMRI Talent Development Plan

KENYA MEDICAL RESEARCH INSTITUTE
KEMRI

In Search of Better Health

August, 2024 (Version 2.)

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Introductory Courses

SESSIONS
Introduction to Research Administration
Research Administration at Kyoto University: Theory and Practice
Business Communication HoRenSo
Problem Solving utilizing Mapping strategies
SWOT & Why Why Analysis
Research Grants and Contract Management
Monitoring and Evaluation using PDCA concept
Program Monitoring and Evaluation
Scientific Communication and Dissemination
Cooperation and Division of Roles in RMAs
Cooperation and Synergy between RAs and Scientists
Research Project Management
Research Strength Analysis and its use
Leadership and Teambuilding for Research Management
Continuous Professional Development in the Workplace

- To strengthen RMA skills at KEMRI, 30 staff members from different departments were trained on the identified key competencies. The trainings were delivered through online, in-person lectures, process mapping workshops, and short-term expert-led workshops, where all participants received certificates.

The training emulated the successful practices of Kyoto University led by Mr. Wakamatsu Fumitaka and Dr. Shida Makoto. Participants were also given soft-skill training on leadership and continuous improvement by JICA expert, Prof. Watanabe

Mapping Project

RMA FUNCTIONS MAPPING

Training Participants conducted a mapping project which involved identifying RMA functions from a global and internal perspective to enable them understand how the RMA function should be operating, the current state of the functional area in KEMRI, identify areas for improvement, and develop a strategic roadmap with actionable initiatives to optimize performance of RMA functions and collaboration within the organization.

RMA Training tools (kitcat Project)

- Kemri Launched an intra-organizational (Kemri Internal Contents Advancement Team ,KITCAT Project) to develop content for internal training, which will be enhanced to cover the entire institute.
- The KITCAT Team from RMA and Research will be formed to develop internal training content to strengthen the human resources of RMA and Researchers and to help establish the new RMA Department
- The TCP has adopted the Learning Management System (LMS) estalished by Graduate School which will be used for training Research Managers and Administrators and research scientist in their respective fields.Work in progress to increase the number of courses.

Development of curriculum

ONGOING DEVELOPMENT OF RMA CURRICULUM

The Curriculum is customized from the KURA Curriculum to fit the KEMRI Setup. RMA team reviewed the training content to be more directly related to the actual jobs of RMA in KEMRI

The objective of the Curriculum is to cultivate KEMRI with extensive skills and provide a common framework of knowledge for all RMA functions.

The curriculum has

- Elements of Research Administration
- Elements of Research Development
- Elements of Pre- awards
- Elements of award Negotiation and acceptance
- Elements of post-awards

LEVEL 1: INTRODUCTION LEVEL

This level is meant to introduce RMA concepts, including roles and responsibilities and cross-cutting skills that all RMAs should have and best practices for RMAs

LEVEL 2: CORE LEVEL

This level will provide specialized skills per specific RMA duties and responsibilities

PROGRAM FOR RESEARCH ADMINISTRATION CERTIFICATION

Level 1; Support for Competitive Funding

1. RA's functions /roles/abilities
2. Science and technology policy
3. Interviews
4. Project management
5. Research ethics/compliance
6. Research funds
7. Intellectual property
8. Industry-government academia collaboration

Level 2; Planning and Management for research support programs

1. Mindset for planning/management programs
2. Leadership and team building
3. Problem finding
4. Devising methods of solving problems.
5. Planning programs
6. Implementing programs.
7. Evaluating programs.
8. Seminars

Level 1 and level 2 are combined to create fundamental and core levels training subjects.

Plan to create advanced level.

Enhance knowledge and skills in a specialized field in accordance with each RA's duties and aptitudes.

Subject Group	Subjects
Orientation	**At Fundamental level**
A. Research institutions and RAs	Introduction to research administration/ RA functions and roles/abilities
	Organization and leadership for research administration
B. Research strength analysis and its use	Introduction to science and technology policy
	Research strength analysis and its use.
C. Research and development evaluation	Research Development Assessment
Core level	
D. External funding	Introduction to external funding
	Assistance in preparing applications and reports
E. Research projects	Research project management methods.
	Planning and Management for Research
F. Inter-sectoral cooperation	Industry-academia-government collaboration
	Regional cooperation
G. Intellectual property	intellectual property
H. Research compliance and risk management	Research compliance and risk management (i)
	Research compliance and risk management (ii)
I. Research publicity	Publicity
J. Internationalization promotion	Internationalization

The Curriculum + on the Job Training= KEMRI Curriculum

Training of interns by ToTs - TCP RMA and OMICS

The TCP ToTs from OMICS and Research Management Administration (RMA) trained interns and demonstrated their training abilities and showcased their skills and knowledge they have acquired.

The training concluded with a certificate presentation ceremony for the participants

SUCCESSION MANAGEMENT

- Orderly passage of any KEMRI office from one leader to another.
- **Identifying critical roles** – Leadership positions, key scientific roles and essential admin. positions- Loss of personnel could impact institution's ability to function.
- **Identifying and developing future leaders** through mentoring, training and coaching in order to close skills gaps.
- **Identify individuals** who posses necessary KSA to fill these roles – Assess current workforce and identify successors ready to take up the critical positions.
- **Having a robust Training and Development program** – OMICS and RMA
- **Mentorship Program** – Knowledge transfer.

SUCCESSION MGT. POLICY HIGHLIGHTS

Framework through which the functions of succession planning and succession management will be conducted within KEMRI.

- Officers holding key positions to identify at least two individuals who can fill the positions – Names forwarded to HRM.
- Selection of candidates done by a team.
- Heads of Departments/Centres to hold career discussion with prospective successors – assess the potential and identify gaps in functional and behavioural competencies.
- Regular meetings/appraisal to confirm current and new leaders for the succession plan.
- Mentorship, training and coaching – exposure to the role.

Appendix 2. KEMRI SUCCESSION PLANNING MANAGEMENT POLICY DRAFT 21.6.2024 (1).docx

MENTORSHIP

- Critical element of succession management to be mainstreamted in the Institute. Anchored on the reviewed HR Policies and Procedures Manual and the PSC Policies and Procedures Manual.
- Developed an administrative Mentorship Policy which outlines a clear structure, roles and responsibilities of mentors and mentees, the goals and objectives of the mentorship, and the processes for monitoring and evaluating the program.
- KEMRI mentorship draft policy clean copy-3rd june 2024 (1).docx

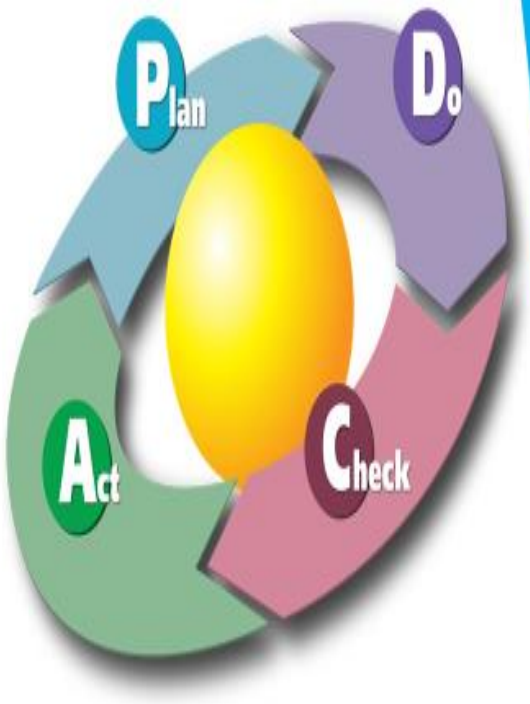
MENTORSHIP POLICY HIGHLIGHTS

- New staff to be introduced into the Program
- HRM in consultation with Centre Directors & HoD to match individuals according to competencies, interests and provide notification to the parties – Mentorship Agreement to be signed.
- Mentorship to form part of PC Targets and evaluation of senior Staff
- Training for mentors to build their capacity on implementing the Programme.
- Mentors to make initial contact with their mentees
- Critical component of the TDP

CRITICAL SKILLS

PDCA CYCLE

If you only undertake one activity the Organization is not ready to improve?????



"KEMRI RMA Process Mapping"

Let's find the root cause of Problem through group work and come up with Map(s) to deal with it!

Step 1 SWOT Analysis to find Weaknesses, etc.- Lack of succession Planning, Lack of Mentorship, Mistrust & Misinformation, Working in silos

Step 2 Why? Why? Analysis – Need for quantitative data to find Root Causes

Step 3 Make RMA Process Map(s) to Tackle the Root Causes of Problems & PDCA Recommendations to Improve

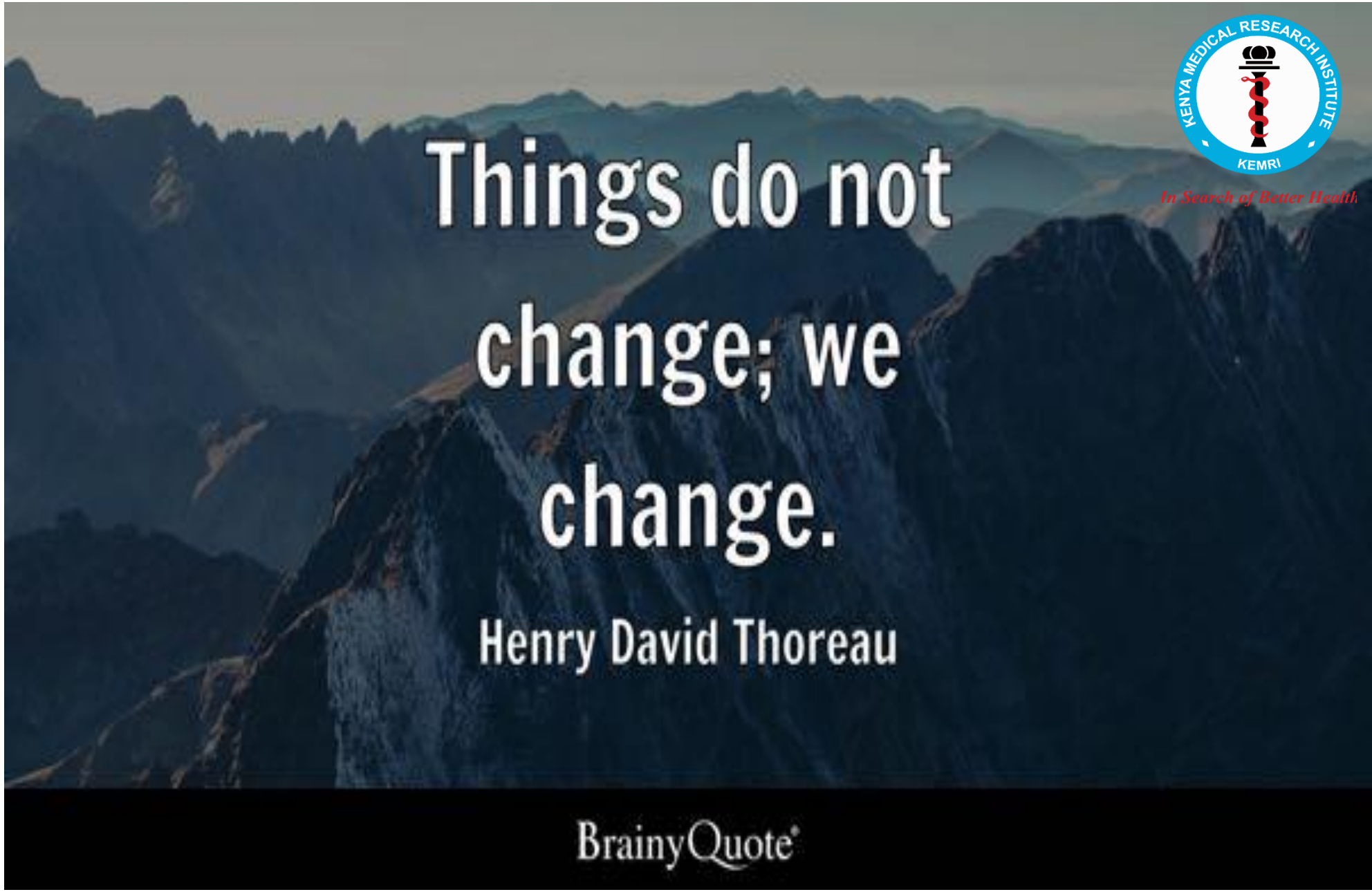
Why?-Why? Analysis

REPEAT 'WHY?' to find REASONs

Lack of Succession Planning

- Principles of implementing succession management and mentorship? **Trust, respect, commitment, and confidentiality**.
- Collaborative process with tone from the Top Management.
- Need for commitment to developing staff and willingness to share experiences.
- Cultivating **Ho-Ren-So** in our offices.
- Gradual, thoughtful, with lots of sharing of information and knowledge and perspective, so that it's almost a nonevent when it happens."
- What challenges do we face that could hinder the implementation of an effective succession management and mentorship Programme?
- What strategies can we share to overcome these challenges?

ASANTENI



KENYA MEDICAL RESEARCH INSTITUTE
KEMRI
In Search of Better Health

ENHANCING RESEARCH MANAGEMENT AND ADMINISTRATION FUNCTIONS THROUGH NETWORKS AND COLLABORATIONS

WHAT IS INORMS?

- The International Network of Research Management Societies (INORMS) brings together research management societies and associations from across the globe.

- Its purpose is to :
  - Provide networking opportunities
  - Develop international practices to support research.
    - enable interactions, share good practice, and •Forming partnerships with international research institutions to share best practices.

  - coordinate activities between the member societies, to the benefit of their individual membership.

- Each member society has its own distinct remit, constitution, membership and geographical base.

ROLE OF INORMS IN PROMOTING RMA PRACTICE

INORMS through the HIROSHIMA statement 2021 a set of common principles, to guide the RMA practice

WHAT RMAs DO

BEST PRINCIPLES OF RMAs; HIROSHIMA INORMS STATEMENT

Collegiate: RMAs work in partnership with researchers and other professionals to add value to the research enterprise. They share information and best practice among the research community.

Inclusive: RMAs value the diversity of individuals, skills, and experiences in their profession and support a culture which embraces equity, fairness and inclusivity.

Professional: RMAs have a responsibility to develop their knowledge and skills, and to mentor and train future RMA professionals and researchers.

Innovative: RMAs should be innovative, responsive and resilient to operate in a rapidly changing research environment.

Accountable: RMAs should be aware of the external regulatory environment and should ensure effective policies and procedures are in place to support best practice and integrity in research.

INFLUENCE OF RMA NETWORKS AND SOCIETIES

1

IMPORTANT ASSET OF PROFESSIONALIZATION

Membership to INORMS associations facilitates knowledge exchange and capacity building initiatives, shaping professional identities and recognition.

2

CREATES A COMMON PROFESSIONAL CULTURE

Belonging to an INORMS society reveals a sense of community with a global perspective including shared knowledge, work, culture norms and values.

3

PROVIDE A PLATFORM FOR INSTITUTIONALIZED COLLECTIVE ACTIONS

RMA societies can be viewed as corporate agents that represent structured collective actions that can shape funding requirements, rules and policies at various levels.

KENYAN RESEARCH MANAGEMENT & INORMS LANDSCAPE

VIBRANT RESEARCH ENVIRONMENT

- Presence of universities, specialized research institutes, and Research Hubs.
- Clear research framework backed by national research policy instruments, including STI Policy, National Research Priorities, Science, Technology and Innovation Act (2013), and others
- International collaborations.

SHARED CHALLENGES IN RESEARCH MANAGEMENT

- Lack of specialized RMA professionals leading to dual roles of PIs as researchers and admins.
- Limited capacity available to develop the needed research soft skills (e.g. science communication, scientific writing and mentorship, etc)
- Challenging funding and grants acquisition and management.

WEAK RMA COMMUNITY (EARIMA)

- EARIMA founded in 2015 but currently inactive.
- Opportunity to be part of its revival.

WHAT IS THE RMA FUTURE FOR KEMRI?

OPPORTINUTIES TO BECOME PROFESSIONAL RMAs

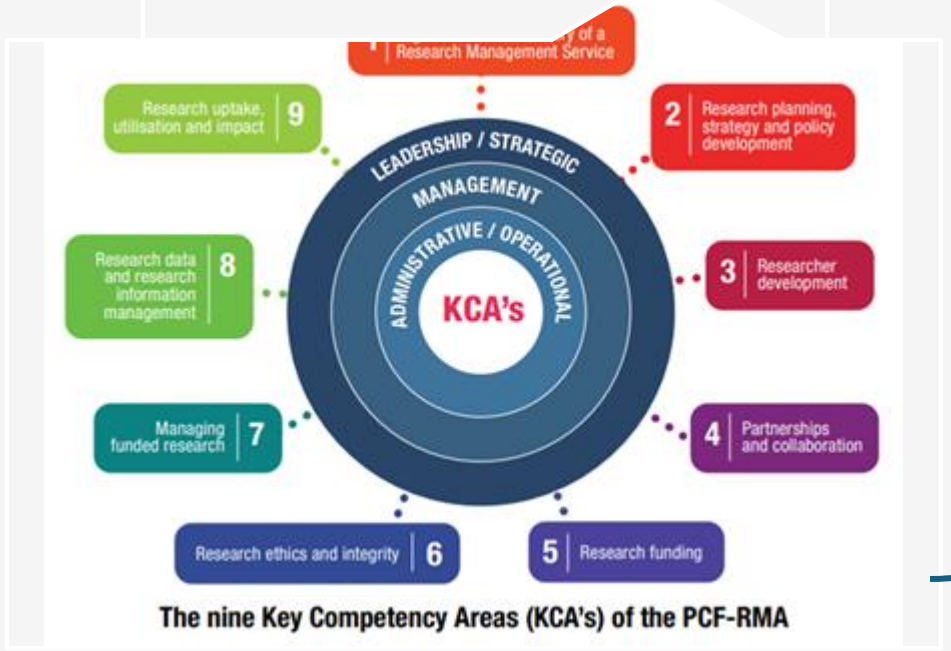
There are several RMA certifying bodies including Research Administrators Certification Council (RACC), and the International Professional Recognition Council(IPRC)

RACC
Suitable for RAs in research financial management and pre-award grants management

RESEARCH ADMINISTRATORS CERTIFICATION

Certified Research Administrator (CRA®)
Certified Pre-Award Administrator (CPRA®)
Certified Financial Research Administrator (CFRA)

IPRC International Professional Recognition Council



The nine Key Competency Areas (KCA's) of the PCF-RMA

IPRC Guided by SARIMA
Suitable for RAs in non-financial fields like ethics, planning strategy and monitoring, partnerships and collaborations, organization structuring and administration.

WHAT IS THE RMA FUTURE FOR KEMRI?

ROLES TO PLAY

RMA Trainees

- Be **the RMA ambassadors/champions** to Increase the understanding and recognition of Research Management and Administration and the role RMAs play in influencing, enabling and advancing research through activities like webinars, departmental mentorship, outreach with scientists, etc.
- Form a **domestic/internal RMA network** in KEMRI that will not only identify common obstacles in developing a rich research environment but will also lobby for common remedies at grassroot levels and management and level

Management

- **Invest in the professionalization of a Research Managers** and Administrators which is integral element for the development of a richer research environment.

Everyone

- **Be part of RMA revival at institutional, national and**

ULTIMATE RMA GOALS

RMA networking and increased understanding of the diverse roles RMA play in enabling and advancing research has great potential in:

- Improving acquisition and management of research funding
- Better Equitable partnerships.
- Incubating research innovations and inventions
- Enhancing capacity of researchers and dissemination of research outputs

STRENGTHENING RMA THROUGH NETWORKS AND COLLABORATIONS

1. Strengthening RMA networks and collaborations (Networking, (Sharon, **Eunice**,Mulinge, Nduati)
    - INORMS
2. Dissemination & Knowledge management through stakeholders engagement through 4 KM processes.
    - Identifying and capturing knowledge
    - Organizing and storing knowledge
    - Sharing and transferring knowledge
    - Applying and innovating knowledge
    - - IPR reviews MoU between KEMRI and other collaborating institutions, to ensure the interests of KEMRI are taken care of (any innovations, patents and benefits emanating from such research)
    - - IPR also advises KEMRI on research contracts with other organization
    - - Advise on the need to protect innovation before publication or dissemination
    - - RMA can support scientists in the application and management of grants

ENHANCING KM/RMA & DISSEMINATION

Categories of Knowledge & 4KM Steps

- **Explicit Knowledge:** Written down information. Knowledge employees can access & share. E.g. details about a product.
- **Implicit knowledge**: Knowledge learned through experience and practice.
- **Tacit knowledge**: Hard to put into words and share. Mostly interpersonal skills & hard to express.

1 -Identifying & Capturing Knowledge

Collect insights from existing documentations, talking to experts(PIs) thro knowledge mapping to spot the gaps & capture and document critical items to Knowledge suppositories.

2 - Organizing and Storing Knowledge

Staring the organized knowledge &store by codifying and categorizing.

Use technology by structuring knowledge to ease share and tech transfers.

3 - Sharing Knowledge

- KM/RMA collaborate with MOH and County Govt' among other stakeholders & dissemination of research outputs to improve health outcomes.
- Meant to improve the knowledge sharing culture and staff works as a team.
- KM/RMA capacity building within KEMRI and collaborate with Counties, Universities, communities and media briefs to improve Evidence Based Decision Making.

4: Applying and Innovating with Knowledge

- KEMRI has been able to come up with innovative ideas by providing products and services.
- Through the ongoing research recommendations, stakeholders uses the gathered knowledge to
  - Solve existing problems,
  - Make smart choices through networks and strong collaboration networks in our organization.

KEMRI RMA PROCESS MAP FOR (KM PROCESS)

Leveraging Technology to Advance RMA Efficiency

Presenter: Francis N. Mwangi

Computer Scientist, KEMRI HQ

Overview of RMA Functions

- Pre-Award & Post-Award Grant Management

- Research Ethics and Compliance

- Finance & Resource Management

- Data Governance & Collaboration

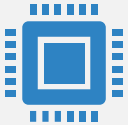
- Research Impact Assessment

Challenges in Traditional RMA

- Manual Processes: Reliance on spreadsheets and paper-based approvals
- Compliance Complexity: Changing regulations make compliance difficult
- Siloed Data & Poor Collaboration: Limited accessibility across institutions
- Resource-Intensive: High administrative workload detracts from research focus
- Example: A university research office processing 100+ grants manually.

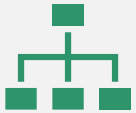
Technology Fitted into Functions

Pre-Award & Post-Award Grant Management



• AUTOMATES PROPOSAL SUBMISSION, REVIEW, AND BUDGETING

• INTEGRATES PRE-AWARD PROCESSES WITH POST-AWARD TASKS



• CENTRALIZES COMMUNICATION AND DOCUMENT MANAGEMENT

• EXAMPLE: KEMRI IRG PORTAL .SEEKS STREAMLINES THE GRANT LIFECYCLE.

Research Ethics and Compliance

- Facilitates electronic protocol submission and review
- Real-time monitoring of compliance training and certifications
- Secure storage of ethics documentation
- Example:-Institutional Review Board- IRBManager enhances the ethics review process.

Finance & Resource Management

- Integrates funding with budgeting and accounting systems

- Real-time dashboards for financial reporting

- Optimizes allocation of resources and expenditures

- Example: Microsoft Business Central, Odoo, Oracle ERPs.

Data Governance & Collaboration

- Centralizes research data repositories
- Supports interdisciplinary and multi-institutional collaboration
- Ensures robust data security and regulatory compliance
- Example: Open Science Framework, **Dataverse**, FDP,CKAN. enables secure data sharing.

Research Impact Assessment

• Leverages analytics to measure scholarly impact using : citation counts, altmetrics and collaboration networks. This helps in understanding the reach and influence of research ouputs.

• Custom dashboards track publications, citations, and altmetrics(public, social media e.t.c)

• Facilitates benchmarking against peer institutions

• Example: SciVal supports strategic decision-making with data-driven insights.

Technical Use Cases

Open-Source Learning Management Systems (LMS) - Moodle

Facilitates researcher training & compliance courses

Centralized platform for research documentation and collaboration

Case Study: KEMRI Graduate School & JICA TCP use Moodle for online research training

Artificial Intelligence (AI) in RMA

- AI-driven funding application reviews & compliance tracking
- AI chatbots for researcher support (funding, documentation)
- Predictive analytics for funding success rates
- Example: Ex Libris Pivot-RP uses AI for funding recommendations

Virtual Reality (VR) & Augmented Reality (AR) in Research Training

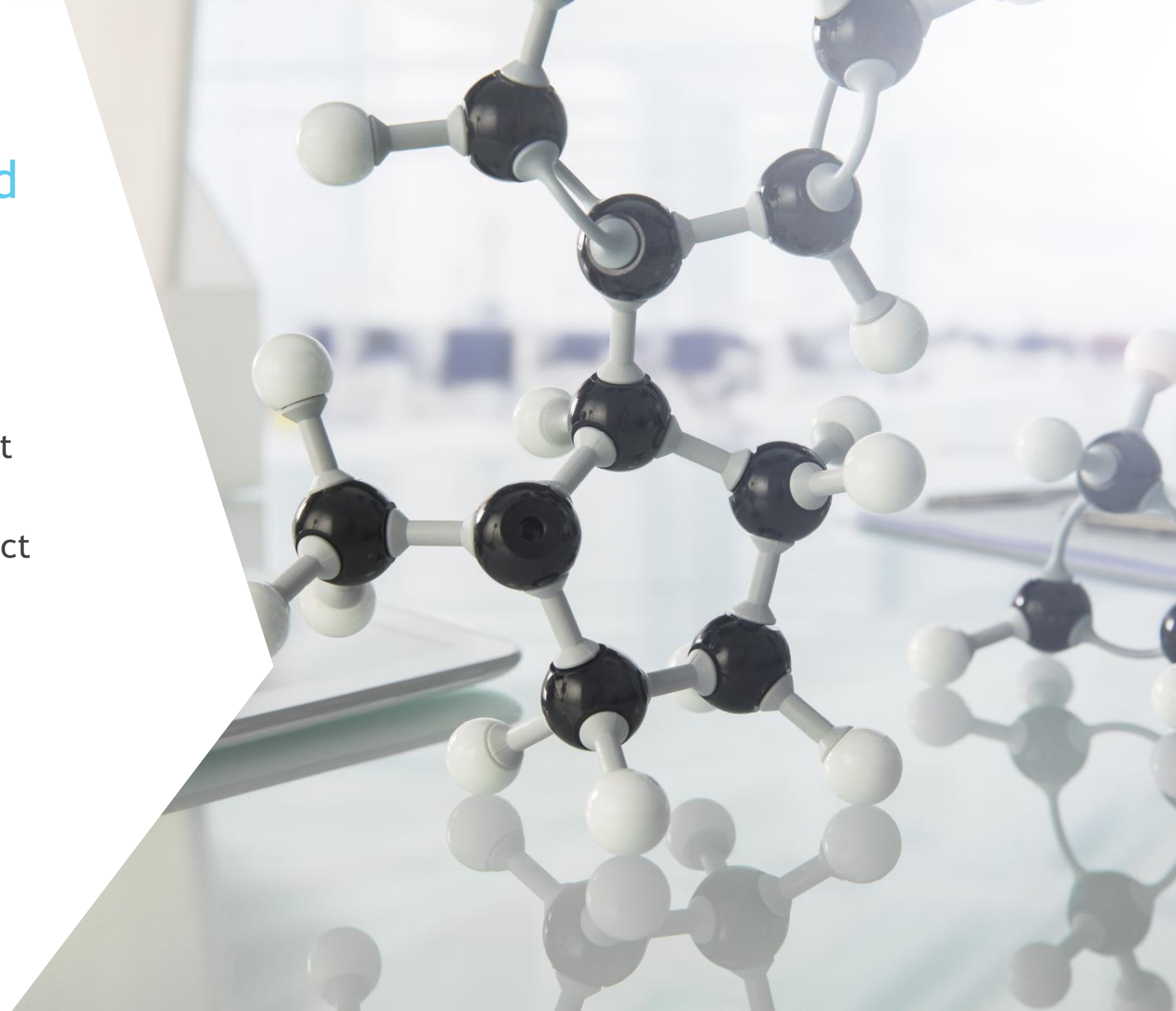
- VR for immersive researcher training

- AR for compliance and interactive lab safety training

- Example: Stanford Medicine uses VR for clinical research training

Blockchain for Research Integrity and Compliance

- Secure and tamper-proof research records
- Transparent and verifiable grant disbursements
- Example: EU-funded DEIP project ensures transparent funding



Internet of Things (IoT) for Research Infrastructure Monitoring

- IoT sensors for lab equipment monitoring
- Real-time alerts for environmental condition violations
- Example: MIT Media Lab uses IoT to monitor energy usage

Data Analytics & Business Intelligence (BI) in RMA

- • Predictive analytics for funding allocation
- • Real-time dashboards for project tracking and compliance
- • Example: NIH uses BI dashboards to track research grant outcomes

Conclusion & Call to Action

- **Key Takeaways:**
  - Technology streamlines RMA functions, reducing inefficiencies.
  - AI, VR, Blockchain, and BI tools drive innovation in RMA.
  - Research institutions must **adopt a digital-first strategy.**
- **Next Steps:**
  - Identify tech gaps in your RMA process.
  - Explore and pilot one new technology in your institution.
  - Foster collaboration between researchers and tech developers.

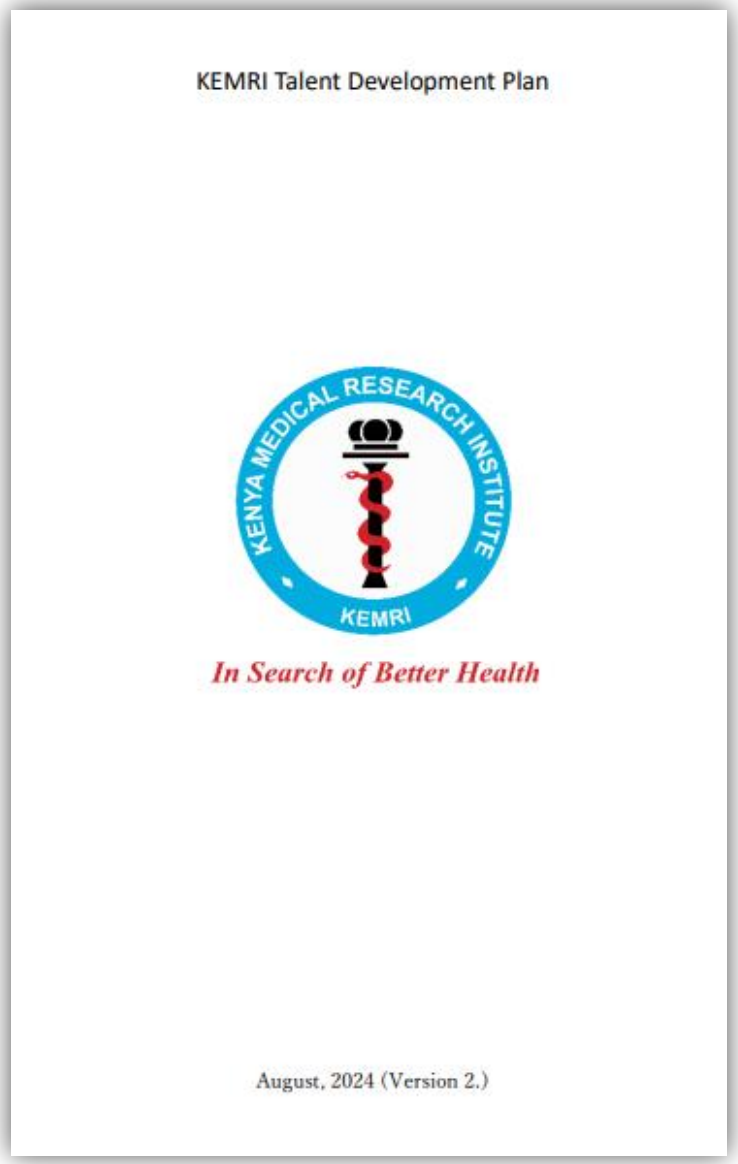
Summary & Q&A

By integrating these advanced technological tools into each core function of RMA, institutions can:

- **Streamline Processes:** Automate and integrate complex administrative workflows.
- **Enhance Compliance:** Maintain rigorous standards in ethics, finance, and data management.
- **Improve Decision-Making:** Leverage real-time analytics and comprehensive reporting to inform strategic initiatives.
- **Foster Collaboration:** Enable secure, efficient, and transparent collaboration across departments and institutions.

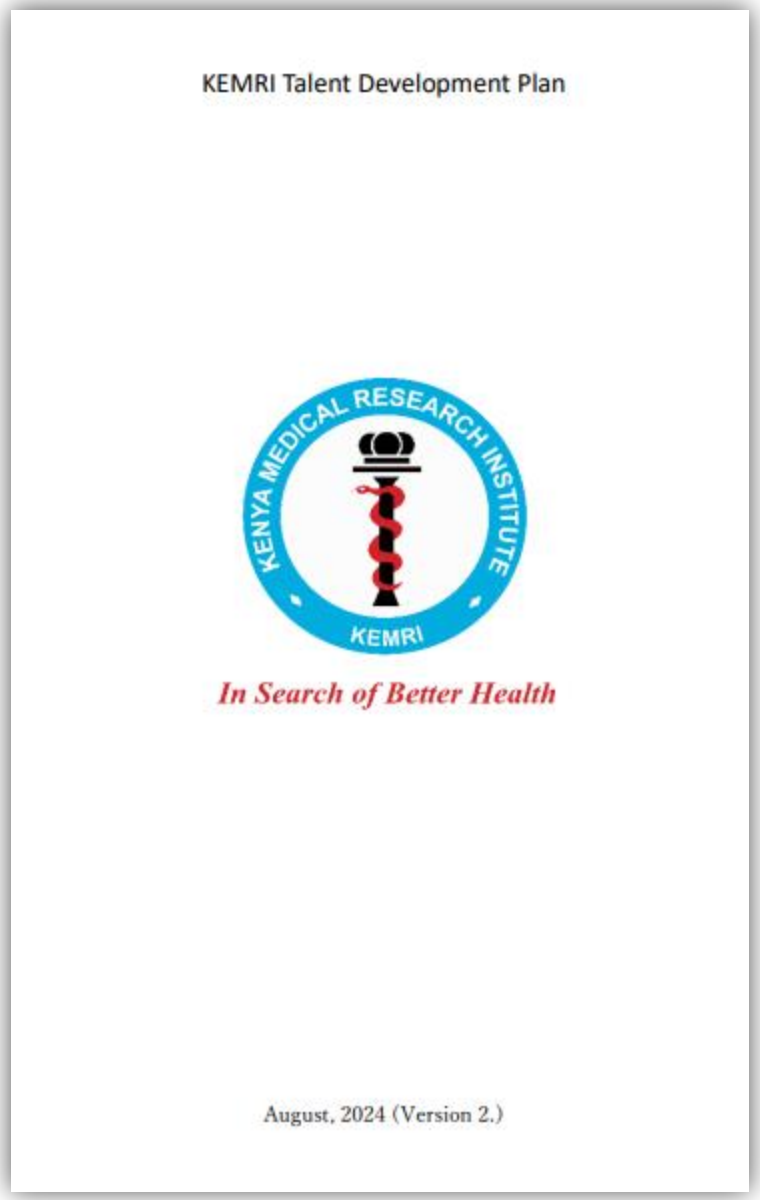
These benefits not only reduce administrative burdens but also empower research institutions to focus more on innovation and impactful research outcomes

KEMRI Talent Development Plan (TDP)



- The Talent Development Plan (TDP) was developed to continuously provide internal training courses for KEMRI staff to ensure that KEMRI continues to play an important role in Kenya and East Africa as a center of excellence for human health research.
- The TDP is closely linked to KEMRI's human resource development policy including new draft HR Instruments (Human Resource Instruments).
- The system for capacity development includes;
  - KEMRI Learning Management System (LMS)
  - Develop a system to provide effective training as annual planned activities based on the Plan-Do-Check-Act (PDCA) concept.

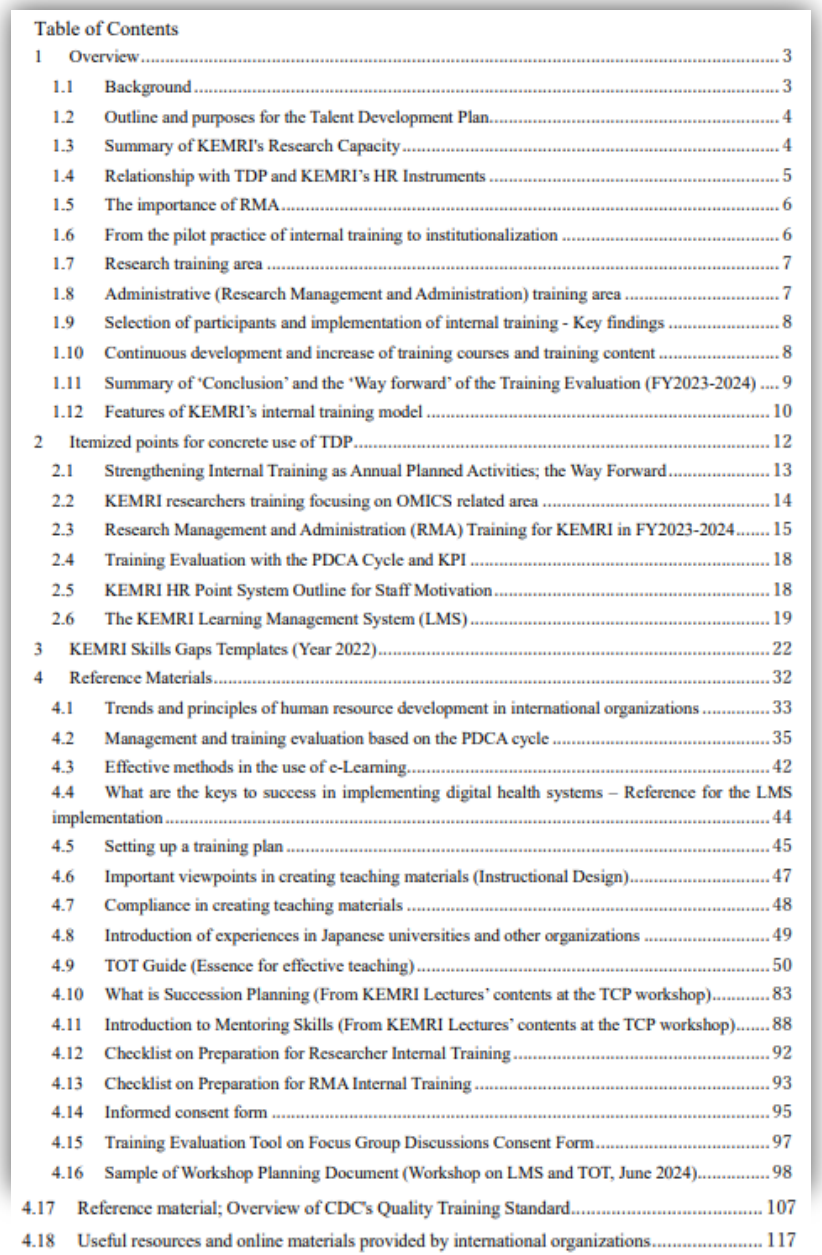
TDP Version 2. (October 2024)


KEMRI Talent Development Plan

KENYA MEDICAL RESEARCH INSTITUTE
KEMRI

In Search of Better Health

August, 2024 (Version 2.)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- Why is internal training important?
- How do you plan and implement internal training?
- Utilizing a learning management system
- The importance of training evaluation
- Internal training needs at KEMRI
- Reference materials

SAMPLE

Scientific Training Planning and Implementation

Training Plan Development

(2) OMICS Training Plan for FY2023-2024

An overview of the OMICS Training plan for FY2023-2024 (Apr.-Mar.) according to the 5W3H is shown in the table below. This is a record for future reference for similar training plans.

Item to be Clarified	Specific Content
Why ?	Train the future Trainers, develop systems to sustain the training inside KEMRI for OMICS
To Whom ? (Tentative number)	(1) Senior Scientists active in the laboratory and research work, TOT level Lecture and specific skills training including new technology (10) (2) Middle level scientists active in the laboratory and research work, Lectures and hands-on training (10) (3)-a Junior scientists or beginner level or limited experience (3)-b Technologists with specific kills (For category (3) total 10, Lectures and hands-on training)
What ?	(1) Culture, Isolation and Serology will be covered Inoue-sensei (Concept part for middle and practical technics for Junior) (2) Molecular technology and bio-informatics part will be covered Fujii-sensei (Concept part for middle and practical technics for Junior)
When to When ? & How many times?	Starting June 19(Monday) and 5 days for 1 Course - 3 groups (each 10) 1 Lecture and 1 hands-on sessions for each senior, middle, junior groups. 5 courses for FY2023-2024. (Timeline and contents should depend on the topic)
Where ?	KEMRI and Nagasaki Kenya Branch
How ?	Lectures and Practical Hands-on
How to prepare?	(1) Video recording for learning management system will be done in addition to the training itself (actual training and video lecture is different) (2) Selection of Topics (3) Nomination of participants (How? DRD selected according to the 3 categories with consolidation of centers of HQ by the end of April 2023) (4) Procurement of reagent and/or consumables (5) Reservation of room and ordering catering services
How Much? - Budget Plan	(1) Procurement of reagent and/or consumables Approx. 2mil (Request Base) (3) Reservation of room and ordering catering services Approx. 0.5mil per week with 30 participants
Other	Concept is provided by lecturers, practical part will be hands-on

Preparation Using Check Lists

4.12 Checklist on Preparation for Researcher Internal Training

To Do ✓	Timeline	Task	Assignee
o	Before	Generate Training Schedule	
o	Before	Confirm schedule for attendance	
o	Before	Contact participants	
o	Before	Booking of venue	
o	Before	Lab coat preparation	
o	Before	Finalizing of program	
o	Before	Communication with PR team for support	
o	Before	Confirmation of attendance/attendees	
o	Before	Make arrangements for catering	
o	Before	Pre/Post test generation	
o	Before	Preparation of recording equipment	
o	Before	Catering serice booking and engagement	
o	Before	Preparation of lecture materials/presentation	
o	Before	Printing out of lecture materials/presentations	
o	Before	Preparation of questionnaire (feedback)	
o	Before	Printing pre & post test	
o	Before	Distribution and invigilation of pre & post test	
o	After	Compilation and dissemination of questionnaire responses	
o	After	Make training report	
o	After	Send report to JICA	

Implementation of Training

SAMPLE

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Preparation Using Check Lists

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Implementation of Training

KENYA MEDICAL RESEARCH INSTITUTE
KEMRI
In Search of Better Health

JICA
Japan International Cooperation Agency

15TH KEMRI ANNUAL SCIENTIFIC AND HEALTH CONFERENCE (KASH)

SYMPOSIUM

EMPOWERING RESEARCH AND ADMINISTRATION:

LEVERAGING TECHNOLOGY, CAPACITY BUILDING, AND HEALTH SECURITY PREPAREDNESS FOR RESILIENT HEALTH SYSTEMS

DATE: **12TH FEB, 2025** TIME: **1430**HRS - **1700**HRS
AT **MASAI MARA HALL**, SAFARI PARK HOTEL

Theme for **OMICS team**

Advancing Human Health Research and Outbreak Response Preparedness at KEMRI through Capacity Building

Theme for **RMA team**

Enhancing Health System through Research Management and Administration

JOIN US!

Group Photo, After the Last JCC Meeting (19th February 2025)