Republic of Peru
Ministry of Housing, Construction and Sanitation
Urban Transport Authority for Lima and Callao
Metropolitan Municipality of Lima
Province Municipality of Callao

Peru
Project for Enhancing Capacity of Transit Oriented Development

Project Completion Report

February 2025

Japan International Cooperation Agency (JICA)

Nippon Koei Urban Space Co., Ltd.
Nippon Koei Co., Ltd.

IM
JR
25-027

Foreign Currency Exchange Rate

Currency	Rate
U.S. Dollar or (USD1= ¥)	154.401000
PEN (PEN1= ¥)	41.785400

(JICA foreign currency exchange rate in February, 2025)

Table of Contents

Figure Index

Table Index

List of abbreviations

abbreviation	Spanish / English
ATU	Autoridad de Transporte Urbano para Lima y Callao / Urban Transport Authority for Lima and Callao
APP / PPP	Asociación Pública Privada / Public Private Partnership
BID / IDB	Banco Interamericano de Desarrollo / Inter-American Development Bank
BRT	Bus de Tránsito Rápido / Bus Rapid Transit
CCC / JCC	Comité de Coordinación Conjunta / Joint Coordination Comitee
C/P	Contraparte / Counterpart
DOT/TOD	Desarrollo Orientado al Transporte / Transport Oriented Development
EEJ / JET	Equipo de Expertos de JICA / JICA Expert Team
EPAP/POPS	Espacio Privado de Acceso Público / Private Owned Public Spaces
GEF	Fondo para el Medio Ambiente Mundial / Global Environment Facility
GaG / G-to-G	Gobierno a Gobierno / Government to Government
GTT / TWG	Grupo Técnico de Trabajo / Technical Working Group
IMP	Instituto Metropolitano de Planificación / Metropolitan Planning Institute
JICA	Agencia de Cooperación Internacional de Japón / Japan International Cooperation Agency
MML	Municipalidad Metropolitana de Lima / The Municipality of Metropolitan Lima
MP	Master Plan
MDP/PDM	Matriz de Diseño del Proyecto / Project Design Matrix
MPC	Municipalidad Provincial del Callao / Provincial Municipality of Callao
MTC	Ministerio de Transportes y Comunicaciones / Ministry of Transport and Communications
MVCS	Ministerio de Vivienda, Construcción y Saneamiento / Ministry of Housing, Construction and Sanitation
OJT	On The Job Training
ONG / NGO	Organización no-gubernamental / Non-Governmental Organization
PDM	Plan de Desarrollo Metropolitano / Metropolitan Development Plan
PDM Callao 2040	Plan de Desarrollo Metropolitano del Callao al 2040 / Callao Metropolitan Development Plan for 2040
PDU	Plan de Desarrollo Urbano / Urban Development Plan
PE	Plan Específico / Specific Plan
PLANMET 2040	Plan de Desarrollo Metropolitano de Lima 2021-2040 / Lima Metropolitan Development Plan 2021-2040
PMU	Plan de Movilidad Urbana / Urban Mobility Plan
PMUS	Plan de Movilidad Urbana Sostenible / Sustainable Urban Mobility Plan
PO	Plan of Operation
R/D	Record de Discusiones / Record of Discussions

1 Basic Information of the Project

1.1 Country

Republic of Peru

1.2 Title of the Project

Project for Enhancing Capacity of Transit Oriented Development

1.3 Duration of the Project

February 2022 to February 2025

1.4 Background

Peru has a population of 34 million, of which approximately one-third (11 million) reside in the National Metropolis (Lima-Callao), This population is expected to continue to grow in the coming years. Along with population growth, urban expansion is in progress, and travel distances within the metropolitan area tend to increase. This has led to an increase in the number of automobiles, resulting in chronic traffic congestion and air pollution.

To address this problem, six public transportation Metro lines have been planned for the National Metropolis (Lima-Callao). Among them, Metro Line 1 (inaugurated in 2012, elevated, spanning 34.5 km between Bayóvar and Villa El Salvador, supported by the Andean Development Corporation) is currently in operation. In addition, construction is underway on Line 2 of Lima and Callao, an underground system developed with the participation of Japanese companies. A part of Line 2 has been operated free of charge as trial operation. Regarding Lines 3 and 4, both also underground, studies under the G-to-G (Government to Government) scheme were announced around 2020; however, these were temporarily canceled due to the impact of COVID-19 pandemic but after the pandemic the government has restarted the studies on development scheme including G-to-G. On the other hand, Lines 5 and 6 remain in the conceptual stage, with no concrete plans for implementation. Also, Metropolitano, a bus rapid transit system, serves the city of Lima, Peru since 2010 and the northern extension of Metropolitano has been operated in December of 2024.

The Ministry of Transport and Communications (MTC) created the Urban Transport Authority for Lima and Callao (ATU) in April 2019 by integrating the Lima-Callao Railway Corporation (AATE) and the Public Transportation Department of the Lima Municipality, among others, to comprehensively address the urban transportation issues in the National Metropolis (Lima-Callao) area. In parallel, the revision of the Metropolitan Development Plan for Lima to 2040 (PLANMET 2040) had been underway since August 2020 and was published in 2022, while the revision of the Metropolitan Development Plan for Callao to 2040 (PDM Callao 2040) began in July 2020.

Despite the progress of urban transport and the updating of these Metropolitan Development Plan (PDM), it has become evident that these developments and plans are not fully aligned. Although the central urban

area, which functions as the core of the city, has the potential to concentrate population thanks to the use of public transport, the land is not being used intensively, which leaves important development opportunities unexploited. The disconnect between public transport and urban development has reduced the convenience and use of public transport.

In this context, the concept of Transit Oriented Development (TOD) has gained recognition as a necessary approach to promote public transport-centered urban development within Peruvian institutions. However, its implementation faces several challenges. For instance, urban development management instruments such as land use regulations and control methods, including standards and regulations for land readjustment and redevelopment, are underdeveloped. Moreover, the realization of TOD requires collaboration with various related organizations. However, it has been pointed out that currently, urban and transportation plans are being formulated by each organization, and cross-organizational collaboration is not being fully achieved.

To promote TOD and enhance urban quality through effective collaboration among urban development and transportation stakeholders, the following measures are necessary:

- Establishing land use and building regulations and TOD implementation procedures that align with urban planning and transportation plans.
- Developing policy tools, such as TOD guidelines, to define the roles of relevant agencies and methods for coordinating interests.
- Improving redevelopment methods along transit corridors and enhancing transportation hubs.

Based on this recognition of the challenges, the Peruvian government requested Japan’s cooperation to implement the project to promote TOD in the National Metropolis (Lima-Callao).

1.5 Overall Goal and Project Purpose

The project's overall goal, purpose, outputs, and activities are summarized in Table 1-1.

Table 1-1 Summary of this Project

Overall Goal	Transit Oriented Development (TOD) approach is implemented as part of urban-territorial planning and management in the National Metropolis (Lima-Callao).
Purpose	Planning and implementation capacity to realize TOD in National Metropolis (Lima-Callao) is enhanced.
Outputs	[Output 1] Capacity for formulation of legal framework and technical standards for the TOD approach in urban planning is strengthened. [Output 2] A guideline for the implementation of TOD in the National Metropolis (Lima-Callao), which includes a roadmap, as part of urban planning and management, is developed and shared. [Output3] Issues and challenges in applying TOD approach in the National Metropolis (Lima-Callao) are confirmed through three (3) pilot projects.
Activities	Activities related to Output 1 1-1. Design and implement seminars and workshops inviting TOD experts from Japan and Latin American countries such as Colombia and Brazil. 1-2. Formulate TOD menu, measures for regulation, and incentives for the realization of TOD with relevant organizations and share among stakeholders. 1-3. Propose necessary amendments to the current legal framework and technical standards to promote TOD. 1-4. Develop socialization workshops and awareness about TOD approach.
	Activities related to Output 2 2.1 Develop a draft TOD Guideline referring to the global TOD examples. 2-2. Develop a TOD implementation roadmap in the National Metropolis (Lima-Callao), which describes the timeframe, the roles, responsibilities, and actions of relevant organizations. 2-3. Finalize the TOD Guideline and the roadmap through discussions among the stakeholders, and share among entities involved. 2-4. Establish indicators to measure the TOD approach impact in the National Metropolis (Lima-Callao).
	Activities related to Output 3 3-1. Carry out surveys on the current situation of urban development and urban transport at potential pilot project sites, which will be proposed by the Counterpart.

	3-2. Select three (3) pilot project sites. 3-3. Conduct market survey and additional surveys for the pilot project sites. 3-4. Develop transit-oriented development strategies for the pilot project sites from urban planning and urban transport perspectives. 3-5. Propose any necessary modifications/changes to the zoning of the pilot project sites, based on the analysis of the current zoning and regulation, paying particular attention to housing projects. 3-6. Prepare a basic development plan with the description of the implementation procedure for each pilot project sites. 3-7. Analyze potential issues and challenges for implementation, as well as make some suggestions to minimize them.

Source: JICA Expert Team

1.6 Implementing Agency (C/P)

The agency in charge of implementing this project, referred to as the C/P, is organized as follows:

- The primary implementing agency: Ministry of Housing, Construction, and Sanitation (MVCS)
- The relevant agencies: Urban Transport Authority for Lima and Callao (ATU), Metropolitan Municipality of Lima (MML), Provincial Municipality of Callao (MPC)

The Metropolitan Planning Institute (IMP), under the jurisdiction of the Metropolitan Municipality of Lima (MML), is the entity responsible for urban planning in Lima. Consequently, in this project, IMP staff were the majority of participants in the discussions on TOD, as well as in the various training sessions organized.

2 Results of the Project

2.1 Results of the Project

2-1.1 Input by the Japanese Side

(1) Dispatch of Experts

The JICA Expert Team (JET) initially consisted of 11 Japanese experts and started activities of the project in February 2022. The planned man-months and those performed by each expert are detailed in Table 2-1.

Table 2-1 Dispatch of Experts

Team of Experts	Local Assignment (Man Months)		Domestic Assignment (Man Months)	
	Plan	Actual	Plan	Actual
Team Leader/Urban Planning System and Urban Development (1)	5.00	5.00	2.51	2.51
Deputy Team Leader/Urban Planning System and Urban Development (2)	5.00	5.00	2.71	2.71
Urban Transport, Urban Mobility (1)	5.00	4.77	3.36	3.36
Urban Transport, Urban Mobility (2)	0.53	0.53	0.00	0.00
Land Use Plan, GIS	1.17	1.17	1.60	1.60
Urban Design, Town Planning (1)	5.27	5.27	3.17	3.17
Urban Design, Town Planning (2)	3.03	3.03	0.30	0.30
Economic and Financial Analysis	5.05	2.23	1.40	4.15
Socio Environmental Consideration, Social Management	2.37	2.43	0.50	0.40
Organization and Capacity Building/TOD promotion	0.00	0.00	0.50	1.10
TOD promotion	2.50	2.50	0.60	0.00
Organization and Capacity Building	2.56	2.56	0.10	0.10
Training Management/Administration	2.50	2.50	0.75	0.75
Total Amount	39.75	36.99	17.50	20.15

Source: JICA Expert Team

(2) Acceptance of Trainees

In this project, a total of three overseas trainings (two in Japan and one in a third country) and three domestic seminars were conducted. The details of each training session are shown in Table 2-2.

Table 2-2 Trainee Acceptance

Training Title		Target	Period	Participants
Overseas training	1st Training in Japan	· Understand advanced examples of TOD projects in Japan. · Prepare for the study of the direction of TOD in the National Metropolis (Lima-Callao) based on the Japanese case study.	April 17, 2023 ~April 29, 2023	Total 13 persons 3 (MVCS) 3 (IMP) 3 (MPC) 4 persons (ATU)
	2nd Training in Japan	· To understand the planning methods of TOD projects in Japan and examples of how they are implemented through public-private partnerships, and so on. · Understand the effects of TOD projects. · Clarify the role of each C/P agency and its future tasks and policies in order to prepare for the study of the draft implementation strategy for the pilot project based on the Japanese case study.	May 13, 2024 ~May 25, 2024	Total 11 persons 3 (MVCS) 1 person (MML) 2 (IMP) 3 (MPC) 2 persons (ATU)
	Training in a Third Country (Colombia)	· Learn about advanced TOD cases and methods in Latin American countries.	June 19, 2023 ~June 28, 2023	Total 13 persons 3 (MVCS) 4 (IMP) 3 (MPC) 3 persons (ATU)
Total (Overseas Training Programs)				37 persons
Domestic Seminars	1st Seminar	· Understand the pilot site selection flow. · Understand the need for analytical data in the selection of pilot sites. · Understand the viewpoint required for primary screening.	June 22, 2022, June 27, 2022, June 28, 2022, June 30, 2022	Total 30 persons 6 persons (MVCS) 8 (IMP) 8 (MPC) 8 persons (ATU)

Training Title		Target	Period	Participants
	2nd Seminar	· Develop the vision and policies in the four pilot sites.	January 23, 2023, January 24, 2023	Total 22 persons 6 persons (MVCS) 4 (IMP) 7 (MPC) 5 persons (ATU)
	3rd Seminar	· Update the development vision and strategy based on the experience and knowledge gained through the project. · Create an image of the concept plan. · Clarify the actions required to realize the concept plan.	July 11, 2023, July 12, 2023	Total 28 persons 6 persons (MVCS) 9 (IMP) 7 (MPC) 6 persons (ATU)
Total (domestic seminars)				80 persons
Number				117 persons

Source: JICA Expert Team

2-1.2 Input by the Peruvian Side

(1) Assignment of C/P Personnel

Each C/P institution assigned members, as detailed in the Table 2-3.

Many members of the C/P institution commented that participating routinely in these activities, such as trainings, seminars, and TWGs, was an unusual experience for them. They highlighted that this dynamic, which involved discussing and planning together with members of other C/P institutions, was beneficial for their future actions related to the promotion of TOD. Through the collaboration of various institutions, awareness has been deepened that the involvement of multiple government agencies, such as those responsible for urban planning, urban development, public transportation, infrastructure development, etc. is essential for the realization of TOD.

On the other hand, although changes in mayors and senior directors of relevant institutions occasionally led to replacements of managerial-level C/P, there were no significant changes in the TWG members responsible for practical work. As a result, the impact on the project was minimal.

Table 2-3 C/P Participation

Name of C/P		Position	Number of People Deployed	Total
MVCS		General Director	1	14
		Director	6	
		Technical Specialist	7	
MML		City Councilor	1	29
		Head of Division	1	
		Technical Specialist	1	
	IMP	Executive Director	4	
		General Director	6	
		Director	3	
		Deputy Manager	1	
		Head of Division	1	
		Consultant	1	
		Technical Specialist	10	
MPC		City Councilor	6	30
		Municipal Manager	3	
		General Manager	2	
		Manager	6	
		Deputy Manager	1	
		lawyer	1	
		Technical Specialist	11	
ATU		Director	5	16
		Deputy Director	3	
		Coordinator	1	
		Technical Specialist	7	
Total Number			89	89 persons

Source: JICA Expert Team

(2) Provision of Office Space

The MVCS provided adequate office space, equipped with electricity, internet lines, furniture and security personnel at the building entrances. On the other hand, since the provided office was little far and different building located separately from the MVCS's main workplace, daily contact with the C/P was limited to TWG meetings or individual discussions, therefore communication with the C/P was insufficient at times. Nevertheless, both the trainings in Japan and in the third country, served as opportunities to enhance the communication between the parties.

The number of spaces in the provided office was around 10, which considering the presence of Japanese and local experts, sometimes resulted in a shortage of space.

(3) Other Items Borne by C/P

Each C/P covered the personnel costs, domestic travel cost, the provision of relevant information, and the preparation of official correspondence related to the project.

2-1.3 Project Activities (Planned and Actual)

(1) Implementation Schedule for the Entire Project and Each Activity

As detailed in the overall project implementation schedule in Annex6 and Table 2-4, each activity was carried out virtually as planned since February 2022. The topics covered in the presentations and discussions of each TWG's are as specified in Annex 2.

Table 2-4 Major Meeting and Committee

Major Conferences	Schedule	Contents
Initial Meeting	March 2022	Exchange views on key issues such as work plan, project implementation structure, and potential pilot sites.
TWG	February 2022-January 2025 (About 60 times in total)	Practitioner-level meetings to review and discuss the progress of project activities.
1st JCC	April 2022	(1) Approve the project work plan (2) Formally establish the TWG and appoint a leader (3) Exchange of opinions on site selection for pilot projects
2nd JCC	April 2023	(1) Approval of the Table of Contents of the TOD Guideline (2) Approval of two short-term pilot project sites and one medium-term pilot site (3) Progress report of project activity

Major Conferences	Schedule	Contents
3rd JCC	July 2024	(1) Progress report on TOD Guideline (2) Detailed reports on three pilot projects (3) Identification of pilot sites and project implementation issues (4) Progress report of project activity
4th JCC	January 2025	(1) Approval of TOD Guideline (2) Approval of TOD-JCC[1] (3) Report on the Final Results of Pilot Projects in Three (3) Pilot Sites (4) Report on the Revision of PDM (5) Report on the Project Completion Report

Source: JICA Expert Team

(2) Output 1

The activity plans, achievements, and its evaluation for “Output 1: Capacity for formulation of legal framework and technical standards for the TOD approach in urban planning is strengthened" are shown in Table 2-5.

Table 2-5 Planned and Actual Activities, and Evaluation of Achievement for Each Activity of Output 1

Activity	Activity Plans and Actual	Achievement Evaluation
1-1 Design and implement seminars and workshops inviting experts of TOD from Japan and Latin American countries such as Colombia and Brazil	**Plan** · Plan and implement seminars and workshops to strengthen their capacity on TOD, inviting experts from Latin American countries (Colombia, Brazil, and so on.). · Training in Japan (2 times), training in a third country (1 time), and training in Peru (2 times) will be conducted. After the training in Japan, a report will be prepared by the participants and a	· The level of achievement is high because the learnings from the seminars, workshops, and trainings were used for various studies in the project. On the other hand, in the selection of some C/P training members, there was room for improvement in the practical sense because

[1] The committee that will be established based on the JCC member organizations of this project to continue coordination and discussions on TOD even after the project's completion. For details, refer to Section 4.2.1, etc.

Activity	Activity Plans and Actual	Achievement Evaluation
	debriefing session will be held upon their return to their home country to share the results of the training within the C/P organization. **Actual** · Training in Japan (April 17-29, 2023 and May 13-25, 2024), training in a third country (Colombia) (June 18-28, 2023), and training in Peru (June 2022, January 2023 and July 2023). · A debriefing session on the return trip was held at the TWG to share the results of the training within the C/P institutions.	there were selected people who had not participated in the project.
1-2. Formulate TOD menu, measures for regulation, and incentives for the realization of TOD with the relevant organizations and share among stakeholders	**Plan** · Analyze and share the current Peruvian legislation (Sustainable Urban Development Law, Urban Development Regulations, and so on.) as well as urban development regulations and incentives in Japan and Latin American countries. · Examine the operational reality and applicability of urban development regulations and incentives under the current legal system in Peru. · Establish TOD typologies. In establishing the typologies, the C/P will propose three basic typologies based on the purpose and scale of development: (1) residential development around suburban stations, (2) redevelopment of the business core (CBD) around major stations, and (3) improvement of transportation nodes and the pedestrian environment at each station.	· C/P had the opportunity to learn about the case of Special Urban Revitalization Districts during the training in Japan, but did not proceed to institutionalize the state-led designation of these districts because Peru has no model district designation mechanism for promotion, even though the law stipulates the tools available for urban development. · It should be noted that the division of roles is well-established, in which the main responsibility for urban development at the district level is left to local governments and the

Activity	Activity Plans and Actual	Achievement Evaluation
	Actual · The three types of TOD were explained to C/Ps in the TWG and published in the TOD Guideline. In the TWG the concept of urban development regulations and incentive were explained, but the level of application is not high enough because the criteria for application, etc. have not been defined. · It was found that the current Sustainable Urban Development Law of Peru establishes land readjustment instruments that may be useful in promoting TOD, as well as the granting of floor-area bonuses when developers provide public and environmental functions. · Three basic types of TOD were established.	private sector, while the national government develops the legal system that is applied nationwide. For this reason, the main focus for the local government for TOD was to recognize and utilize tools that can be used to promote municipal TOD projects. · In the future, it is desirable to promote the use of tools and systems that lead to the promotion of TOD at the national level.
1-3. Propose necessary amendments to the current legal framework and technical standards to promote TOD	**Plan** · Based on the above findings, examine regulatory and incentive mechanisms required for TOD implementation, as well as draft amendments to laws and standards necessary for developing transport hubs. **Actual** · From a legal perspective, while the Sustainable Urban Development Law includes applicable incentives, it does not specify eligibility requirements focused on TOD. In January 2024, a proposal was submitted to the MVCS to amend the law to explicitly include eligibility requirements focused on TOD at key stations within public	· The JET can say that there has been a certain amount of promotion in terms of the legal amendments, including provisions focusing on TOD and mobility within the Law on Sustainable Urban Development (Law No. 31313), delivered.

Activity	Activity Plans and Actual	Achievement Evaluation
	transport networks. Several of these proposals were incorporated into the revised law, which was promulgated as Ministerial Decree No. 1674 in September 2024, officially coming into effect as the amended Sustainable Urban Development Law. Additionally, recommendations for amendments were issued for the Regulations on Land Use and Urban Planning for Sustainable Urban Development (N°012-2022), a ministerial decree under the Sustainable Urban Development Law. However, it was determined that the timing was not suitable for amendments, and no changes have been made to date. · It should be also important to note that the Manual for the preparation of Sustainable Urban Mobility Plans, was approved by Ministerial Resolution No. 229-2024-VIVIENDA · The Manual for the preparation of Sustainable Urban Mobility Plans (PMUS) [2], approved by Ministerial Resolution No. 229-2024-VIVIENDA, did incorporate DOT concepts.	
1-4. Develop workshops for socialization and awareness about TOD	**Plan** · A total of two workshops will be held to socialize and raise awareness of the TOD approach. (This activity was	· The level of achievement is high because the seminar was highly successful in introducing Japanese TOD

[2] It is master plan for urban transport and urban mobility, as stipulated in the Regulations on Land Use and Urban Planning for Sustainable Urban Development (No. 012-2022-VIVIENDA), and it is a statutory document formulated at the metropolitan level. However, since Law No. 30900, which established the Urban Transport Authority for Lima and Callao (ATU), defines it as the "Urban Mobility Plan (PMU)". Therefore, in this law, the Sustainable Urban Mobility Plan (PMUS) for National Metropolis (Lima-Callao) is referred to as the PMU.

Activity	Activity Plans and Actual	Achievement Evaluation
approach	added at the request of MVCS during the RD discussions. It was not included in the original special specifications at the start of the project and was also omitted from the project work plan. Later, a discrepancy between the RD and the specifications was identified, and the specifications were subsequently amended through a meeting record.). **Actual** · Conducted TOD seminar each in Lima (January 20th, 2025) and Callao (January 21st, 2025). · Conducted a lecture titled "TOD in Peru and Japan -Toward Sustainable Cities" at the National Urban Forum 2024 held by MVCS in October 2024. · Conducted a lecture titled "Experiences of TOD in Japan and its mechanism" at the extension course held by MVCS in February 2025.	cases, TOD Guideline, and an overview of the TOD projects in the National Metropolis (Lima-Callao) to broad public audience, and it can be said that the seminar deepened the understanding of TOD among government agencies, private sector entities, students and the general public.

Source: JICA Expert Team

1) Activity 1-1

The main outputs, history, and issues related to "Activity 1-1: Design and implement seminars and workshops inviting experts of TOD from Japan and Latin American countries such as Colombia and Brazil" are presented below.

The overview of the various seminars and training programs are detailed in Table 2-2. The executed schedule, the stablished objectives and the number of C/P participating were as initially planned. The expert team prepared for the seminars and training sessions, while the C/P attended the seminars and training sessions, participated in exercises and discussions, and made valuable contributions to the project based on the content delivered.

The main training locations and outputs achieved in the activities carried out outside the country are summarized in Table 2-6. Both the content of the conferences and the destinations of each training course were selected based on the progress of the project, prioritizing their applicability to the various studies

carried out. As a result, the JET received numerous positive comments from the trainees. They noted that they gained knowledge on aspects such as the basic concept for implementing TOD, the vision structure, coordination with relevant organizations and legal systems at the planning stage of TOD-related projects, selection of implementation methods and strategies for advancing TOD-related projects.

Table 2-6 Outputs for this Project Based on Out-of-Country Training

Training Course	Period	Main Training Sites	Main Comments from Trainees	Project Output
First Training in Japan	April 2023	· Akihabara Station · Kashiwanoha Station · Busta Shinjuku · Himeji Station	A solid understanding of redevelopment methods around station areas and the implementation methods for land readjustment projects has been gained. Moving forward, it is suggested that the courses focus on transportation hubs and mobility.	Application of the knowledge acquired in the creation of a DOT vision for each of the three stations selected for the pilot project.
Training in a Third Country (Colombia)	June 2023	· Bogota City · City of Medellín	A solid understanding has been gained on land use planning, integration of various transportation modes, funding strategies, and the structure of the legal system in Colombia, a country with a similar background to Peru. Many aspects applicable to Peru were identified.	Update of TOD visions, TOD implementation strategies, and related plans for the three pilot project sites. Clarification of the action plans required by each C/P to move forward with the concept plans.
Second Training in Japan	May 2024	· Toranomon Hills · Utsunomiya Station · Futakotamagawa Station · Hatsukaichi Shiyakusho Mae Station	The content of the national legal system for promoting TOD and the methods of administration-led implementation have been well understood. The usefulness of enhancing the overall potential of an area	Application of the pilot project discussed at each of the three stations to the study of implementation methods and the division of roles among related organizations

Training Course	Period	Main Training Sites	Main Comments from Trainees	Project Output
			through the connection of public transportation and commercial facilities has been recognized. Moving forward, it is suggested that courses focusing on management methods for the public sector be included.	

Source: JICA Expert Team

On the other hand, although members were invited for the practical work activities, there were some mismatches in the selection of participants. For example, parliamentarians who were not directly involved in the project activities were included. As a result, some people were not suitable for the intended level of involvement or were not project stakeholders, which limited practical input. However, after each training, trainees presented at the TWG, sharing their learnings and discussing the outcomes with project members. Furthermore, trainees were encouraged to continue actively participating in the TWG, and efforts were made to establish a system that would allow the knowledge gained during the training to be applied to the project.

Source: JICA Expert Team

Figure 2-1 Training in Japan

Source: JICA Expert Team

Figure 2-2 Training in Third County

2) Activity 1-2

The main outputs, history, and issues related to “Activity1-2: Formulate TOD menu, measures for regulation and incentives for the realization of TOD with relevant organizations and share among stakeholders” are presented below.

In the first training session held in Peru in June 2022, the JET delivered a lecture titled "Prospects and Challenges of TOD Projects in Peru." During this lecture, the current Peruvian urban development laws and regulations regarding the practice of TOD were reviewed. Law N° 31313 - Sustainable Urban Development Law, which is the basic law for urban development in Peru, stipulates the following systems that may be useful for urban development and urban renewal, including TOD.

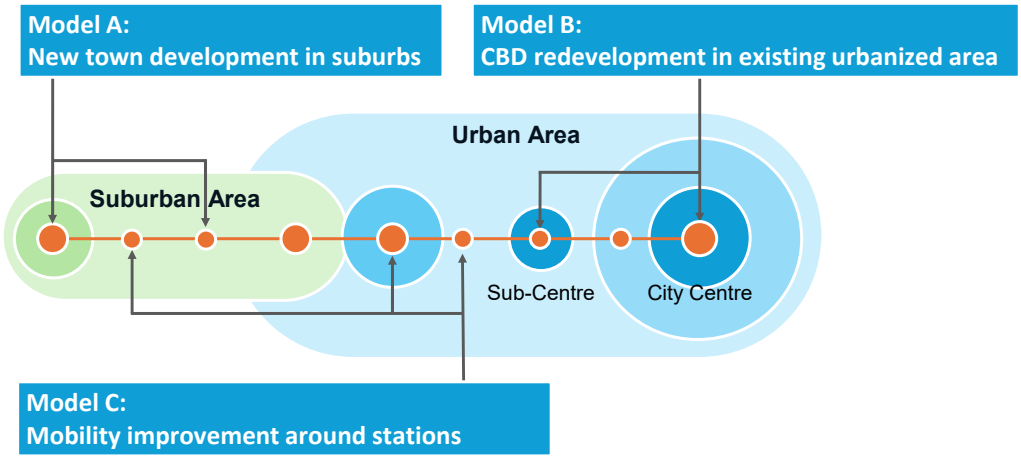
- Land Readjustment (Article 45): Allows changes and consolidation of land rights in urban or rural areas with multiple owners for the purpose of maximizing land value and altering the urban structure.
- Real Estate Integration (Article 46): The physical and spatial reconfiguration of properties located on urban land in order to achieve a reorganization and optimization of the land, improving the quality of life, social and economic of the area of intervention and its immediate surroundings, through urban renewal, urban regeneration and/or urban densification.
- Additional Transferable Building Rights (Article 62): in order to protect and preserve historical buildings and ecosystems, promote urban regeneration, urban development, and urban transport infrastructure, and promote the development of social housing for low-income, the building capacity located in a generating zone can be transferred to another building property located in a receiving zone.
- Public Interest Bonus (Article 64): A bonus is granted in urban planning regulations (density, building area, height, and so on.) when the promotion of public interest is achieved in land development. The promotion of public interest includes, for example, the provision of public housing, public space, and higher densities.
- Building potential compensation (Article 66): Developers can obtain bonuses in FAR and/or height by providing Private Owned Public Spaces (POPS) on private land.

Although the Sustainable Urban Development Law stipulates the basic concepts of these systems, it does

not provide specific criteria for their implementation or examples of application, which has limited the realization of these methods. For example, the private sector led an urban development in San Isidro, within the National Metropolis (Lima-Callao) known as the San Isidro Financial Center project, where the Building Potential Compensation (Article 66 of the Law) was applied and a special floor area ratio bonus was granted by providing a POPS of 20% of the site, was approved in July 2024, but has not yet been realized.[3]

In addition, since no specific provisions have been adopted to apply these methods to TOD projects, the proposed amendments to the legal framework are as described in Activity 1- 3 below.

Finally, the TOD typology was shared with the Peruvian side through lectures on the three typologies of TOD in the training held in Peru. These three typologies were finalized with modifications based on the pilot project plan, and presented in the TOD Guideline.



Source: JICA Expert Team

Figure 2-3 Three Types of TOD

3) Activity 1-3

The main outputs, history, and issues related to “Activity 1-3: Propose necessary amendments to the current legal framework and technical standards to promote TOD" are presented below.

In January 2024, the JET proposed legal text amendments to the law and related laws and regulations (No. 012-2022) of the Peruvian State with a view to promoting TOD in relation to the Law on Sustainable Urban Development (Law No. 31313), the basic law for urban development in the country. The background of this proposal is that the law before the revision has little or no direct focus on the promotion of TOD.

As of July 2024, the MVCS stated that it would consider the JET's proposed legal amendments during the scheduled revision of the law in October 2024. However, regarding related regulations, it indicated

[3] https://msi.gob.pe/portal/wp-content/uploads/2021/07/202107-PE-CFSI-01_compressed-1.pdf

that the proposals would not be considered, citing reasons such as the absence of plans for immediate amendments. In September 2024, Legislative Decree No. 1674 regarding amendments to the Sustainable Urban Development Law was promulgated. It was revealed that three of the JET's proposed legal amendments were adopted, while two were not. The breakdown is as follows, with details provided in Annex 3. Matters Adopted are:

- Article 4 (Principles of Land Use Planning, Urban and Rural Planning, and its Sustainable Urban Development): The concept of universal accessibility was added as “Item m” (modification). It states that urban planning should apply the concept of universal design based on the needs and demands of people, and that the scope of the concept should cover equipment, services, safety, individual autonomy, construction, roads, public spaces, parks and green spaces, natural environment, transportation, signage, communication, and service provision. The scope of the project is construction, roads, public spaces, parks and greenery, natural environment, transportation, signage, communication, and service provision.
- Article 4.3 (Concepts Guiding Land Use Planning, Urban and Rural Planning, and its Sustainable Urban Development): The concept of TOD was added as “Item i” (new addition), which states that the concept of TOD is to develop mixed-use, high density urban centers, and create urban areas at multi-modal locations on public transportation networks.
- Article 45 (Land readjustment): The purpose of land readjustment is to guide and redefine comprehensive urban development to include the development of public space, facilities, and public infrastructure.

Although the Law for Sustainable Urban Development stipulates the purpose of land readjustment projects, there are few examples of land readjustment projects in Peru due to the lack of specific standards specific rules that regulate the technical processes and administrative procedures that these require. In the future, it would be desirable to develop standards applicable to Peru by referring to technical standards in Japan and other countries. It is also desirable to increase the number of cases of implementation of the urban development systems and tools stipulated in the Sustainable Urban Development Law through public solicitation of municipalities that wish to apply them and technical support by the MVCS.

Additionally, starting in January 2024, JET reviewed the Manual for Sustainable Urban Mobility Plan (PMUS), which was being developed by MVCS, and proposed to include the TOD approach in the manual. Subsequently, the manual was approved in July 2024 as Ministerial Resolution No. 229-2024-VIVIENDA.

4) Activity 1-4

The main outputs, history, and issues related to “Activity 1-4: Develop workshops to socialization and awareness about TOD approach” are presented below.

a) National Urban Forum 2024

In October 2024, the MVCS hosted a talk entitled "TOD in Peru and Japan - Towards Sustainable Cities" for 25 minutes within the National Urban Forum 2024, featuring a speaker from the JET. Participants were from public and private institutions related to urban planning. The lecture introduced examples of TOD implementation in Japan, especially in the capital city of Tokyo, from a wide range of perspectives, including development along the Denentoshi Line, which the C/Ps had visited during this project's training in Japan, redevelopment at Shibuya Station, suburban development along the Tsukuba Express Line, and railroad development methods using land readjustment. The first half of the presentation featured a case study of the National Metropolis (Lima-Callao). In the latter half of the presentation, TOD development in the National Metropolis (Lima-Callao) was explained in an easy-to-understand manner, referring to the TOD plan in the pilot project.

b) TOD Seminar

TOD seminar was held in Lima on January 20th and in Callao on January 21st 2025, and the followings were invited to participate through C/P and JICA Peru Office:

- Related organizations
- University professors
- Japanese and Peruvian chamber of commerce and industry
- Lima chamber of commerce and industry
- University students and the general public (through MVCS-managed Facebook / Instagram)

The majority of participants were from relevant ministries, local governments, and other public sectors, while a certain number of NGOs and private companies were also represented. This Seminars were held with the aim of socializing and raising awarenesses of TOD approach, and JET introduced case studies from Shibuya, Kashiwanoha, Akihabara, etc. under the title of “TOD in Japan”. MVCS explained the contents of TOD Guideline to be released in February 2025, and IMP and MPC explained the TOD policies they are trying to promote in Lima and Callao and the details of their pilot projects. Refer to Annex5 for more details.

Source: JICA Expert Team

Figure 2-4 Photo of TOD Seminar

c) Lecture of the Extension Course

Receiving an invitation of MVCS, JET provided a virtual lecture entitled as "Experiences of TOD in Japan and its mechanism" for about two hours and half as a part of II University Extension Course in Housing and Urbanism (II Curso de Extensión Universitaria en Vivienda y Urbanismo). In the course, 125 people participated, selected out of 1321 applicants. The characteristics of the participants are as follows:

- Out of 125 participants, about 39% are university students, and about 40% are graduates.
- Out of 1321 applicants, about 56% are from Lima Metropolitan Area, and the other 44% are from other regions in Peru.

Above data shows that the lecture contributed to socialize the concept of TOD with those who possibly didn't participate in before-mentioned forum and seminar: students and people from other regions.

The lecture focused on TOD in Japan, avoiding duplication with other lectures in the course. Especially, due to the duration of 2 hour and half, it contained explanation in detail about history and mechanism of formalization of TOD-like urban structure.

(3) Output 2

The activity plans, achievements, and evaluation for "Output 2: A guideline for the implementation of TOD in National Metropolis (Lima-Callao), which includes a roadmap as part of urban planning and management, is developed and shared are detailed in Table 2-7.

Table 2-7 Planned and Actual Activities and Evaluation of Achievements for Each of Outcome 2

Activity	Activity Plans and Actual	Achievement Evaluation
2-1. Develop a draft TOD Guideline referring to the global TOD examples	**Plan** · Based on the draft guideline items prepared by the expert team, the TWG will assign C/P staff members to write the TOD guideline, which will be prepared by the on-the-job training method under the guidance of the expert team. **Actual** · The TOD Guideline was drafted based on the writing assignment, with the TWG reviewing the content of each chapter. Since the Peruvian side was not familiar with writing documents such as guidelines, many parts were written by the expert team. The Peruvian side contributed to the improvement of the document by making comments and corrections to the draft document.	· Significant learning was gained through the training programs in Japan and the third-country training in Colombia. Based on the TOD case studies from various countries, including those visited during the training, a draft guideline was created. Therefore, it can be said that a certain level of achievement was reached.
2-2. Develop a TOD implementation roadmap in National Metropolis (Lima-Callao), which describes the timeframe, the roles, responsibilities, and actions of relevant organizations	**Plan** · The roadmap for TOD implementation in the Lima-Callao Metropolitan Area will be drafted by the expert team based on the results of the group discussion on the roles and	· The JET can say that the level of achievement is high in that the roles, responsibilities, and actions of the agencies involved have been organized.

Activity	Activity Plans and Actual	Achievement Evaluation
	authorities of each relevant organization for TOD implementation at the first training session in Japan. It will be prepared by the TWG through consultation and coordination with C/P agencies. · The roadmap will describe the activities of the four C/P agencies in the short-, medium-, and long-term time frames. **Actual** · The TOD project involves multiple institutions and departments within Peru, spanning areas such as developing necessary legal frameworks, feasibility studies, planning, examination of development methods, detailed design, post-development monitoring, and further improvements. Since the Peruvian side was not accustomed to organizing the implementation tasks and role distribution for the entire TOD project, the roadmap was developed collaboratively. To ensure alignment with the separately created Urban Mobility Plan for Lima and Callao Metropolitan (PMU), the JET supported the C/P for alignment between the two documents.	

Activity	Activity Plans and Actual	Achievement Evaluation
2-3. Finalize the TOD Guideline and the roadmap through discussions among the stakeholders, and share among entities involved	**Plan** · The draft TOD guideline and roadmap prepared in Activities 2-1 and 2-2 will be reported at the 2nd JCC meeting, and then finalized by the TWG, reflecting the contents of the proposed revisions to regulations and technical standards in Output 1 and the planning activities for the pilot project in Output 3. **Actual** · The draft TOD Guideline and Roadmap were reported and approved at the 2nd JCC meeting. The roadmap was harmonized with the related PMU, then reported to and approved by the TWG. The draft TOD Guideline including Roadmap was approved at the 4th JCC meeting and will be published by the end of February 2025 by the MVCS.	· TOD guidelines and roadmap were approved at the 4th JCC, and it as also approved that they will be released by the end of February 2025. Therefore, it can be said that the level of achievement is high.
2-4. Establish indicators to measure the TOD approach impact in the National Metropolis (Lima-Callao)	**Plan** · To ensure continuity of measurement based on five perspectives (urban transportation usage, user satisfaction of station users, added value of land, active development trends, and contribution to climate change prevention), to be established in consultation with the C/P.	· The setting of indicators was successfully completed through a workshop format, and it can be said that the level of achievement of the plan is high.

Activity	Activity Plans and Actual	Achievement Evaluation
	Actual · Since this project will address TOD planning in the station area, the indicators were considered at two scales: citywide (National Metropolis (Lima-Callao)) and station area scale. · A logical model was adopted as the basic approach for setting indicators, and indicators were set with lectures and workshops. · For the station area scale, draft indicators were developed in a workshop format with the planning teams for each station in the pilot project. · For the city as a whole, while taking into account the above five perspectives, the elements were broken down into indicators based on the TOD concept that was put into writing in consultation with the C/P.	

Source: JICA Expert Team

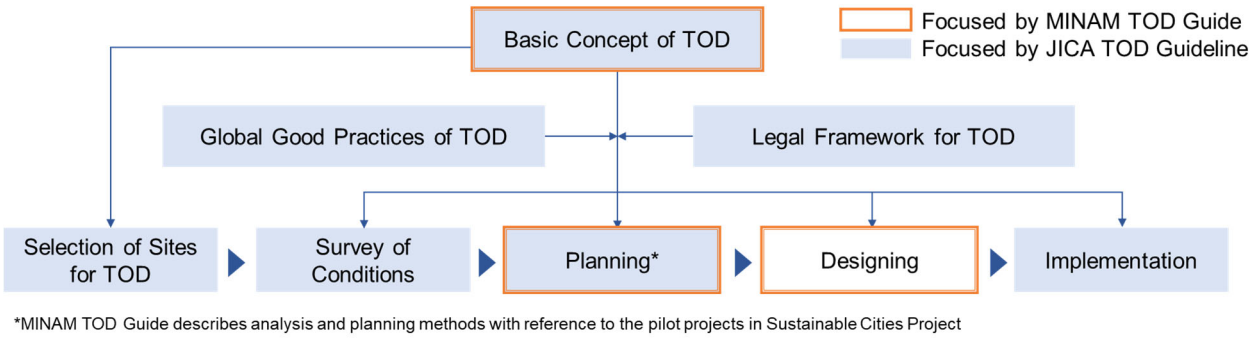
1) Activity 2-1

The main outputs, history, and issues related to "Activity 2-1. Develop a draft TOD Guideline referring to the global TOD examples" are presented below.

The draft table of contents of the TOD Guideline was included as an annex to the R/D agreed upon at the beginning of the project. Based on this draft, the table of contents of the TOD Guideline was approved at the 2nd JCC meeting held in April 2023, and it was agreed that the Japanese and Peruvian sides would share the writing responsibilities. The draft table of contents includes case studies from Japan and Latin America and describes the local explanations and lessons learned on the precedents of TOD in Japan and third-country training under this project.

On the other hand, within the project "Support for the National Platform for Sustainable Cities and

Climate Change in Lima, Peru", (hereinafter referred to as "Sustainable Cities Project") a TOD Guideline developed by the Ministry of Environment of Peru (hereinafter referred to as "MINAM TOD Guide") (MINAM). The MINAM TOD Guide focuses on guiding urban design, including analysis and planning methods with reference to the pilot project studies selected for Sustainable Cities Project and design of public spaces, architecture, and landscapes in target areas. Consequently, the TOD Guideline for this project differs from the MINAM TOD Guide by covering broader content, including TOD good practices, legal framework, TOD planning, and a roadmap for the National Metropolis (Lima-Callao). In addition, it was agreed at the TWG that the MINAM TOD Guide would be attached as an Annex to the TOD Guideline of this project. The basic structure of MINAM TOD Guide and This TOD Guideline is shown in Figure 2-5.



Source: JICA Expert Team

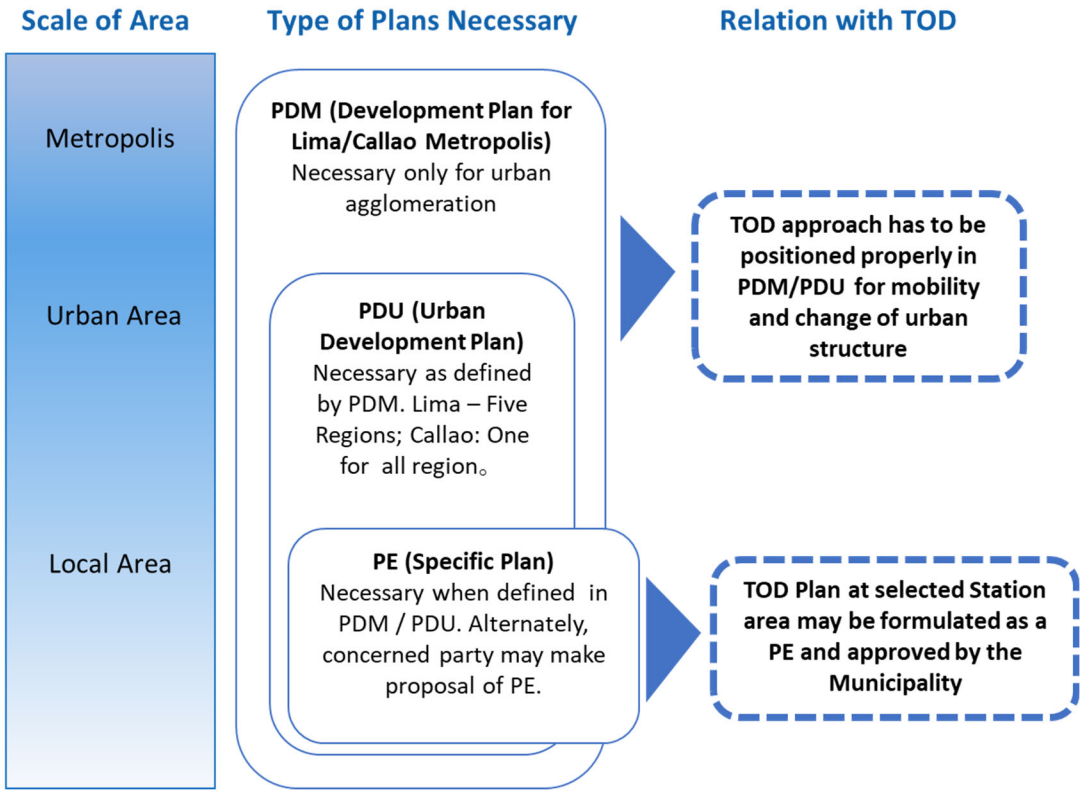
Figure 2-5 Basic Structure of MINAM TOD Guide and JICA TOD Guideline

In discussions with the MVCS in July 2024, the Peruvian side proposed a reorganization of the TOD guideline text to be more concise, with explanatory documents located at the end of the document, and the draft reorganized table of contents was approved at the third JCC meeting held in the same month. The TOD Guideline was finalized according to this revised table of contents. The cases in Japan, Latin America, and elsewhere have been moved to the end of the document, but the lessons learned and suggestions from these cases have been incorporated into the TOD Guideline in various sections. The Annex4 includes a draft of the table of contents before and after the revision.

2) Activity 2-2

The main outputs, history, and issues related to "Activity 2-2: Develop a TOD implementation roadmap in National Metropolis (Lima-Callao), which describes the timeframe, the roles, responsibilities, and actions of relevant organizations" are detailed below.

The TOD approach and the urban planning system in Peru are summarized in the following figure. The TOD approach should be integrated into the Metropolitan Development Plan (PDM), which is the plan at the metropolitan area level, and into the Urban Development Plan (PDU), which is the plan for each urban area. Both plans should consider both mobility and urban structure concepts. In addition, JET proposed that the TOD plans for specific station areas be approved as Specific Plans (PE) as stipulated by the Peruvian urban planning legal system.



Source: JICA Expert Team

Figure 2-6 Relationship of the TOD Approach to the City Planning Legal System

The timing of starting development related to TOD approach was categorized in two phases: pre-opening and post-opening (during operation) of trunk public transportation. In addition, it was mentioned as one of the important things was TOD would require continuous developments not only the initial development but also developments in under operation stage, based on urban and transportation network developments and the demands of the public transportations. In preparing the overall roadmap, basic TOD approach efforts at individual target sites were developed.

The division of roles necessary for the TOD approach was established in consultation with the C/Ps, after organizing the implementation details in Table 1-1 to 1-5 in Annex 6 of the TOD guideline and assigning them to each of the organizations concerned in light of the division of duties for each organization. The scope of responsibility of the C/P was also clarified by organizing the output of these implementation details and necessary information on planning and implementation. Here, since there was little experience of projects implemented in close collaboration among C/P organizations for a single development, the division of roles and responsibilities of each organization for a single project was organized, and it was reaffirmed that the TOD approach requires collaboration among the organizations, and planning for the pilot project site. Since there was little experience with projects implemented in close collaboration between C/P organizations for a single development, the division of roles and responsibilities of each organization for the project was organized, reaffirming that the DOT approach requires close collaboration between the parties involved. In addition, a change in the way of working was identified, which included holding regular meetings in the planning of the pilot project site.

In the preparation of the roadmap for the selection of target stations for the TOD approach and its schedule for the National Metropolis (Lima-Callao), stations were selected using the evaluation criteria for the pilot project site selection and agreed with the C/P. However, the urban mobility plan (PMU), which was being developed by the ATU, also influenced the selection, as it was based on updated public transport demand forecasts and existing urban plans. It was agreed with the C/P that the target stations for this roadmap would align with potential TOD stations in the PMU.

As an issue, the timings of opening of metro lines have not been finalized (with a 10-year span), so even if the target stations remain the same, the order and timing of their opening remain uncertain. However, as indicated earlier, the content and timing of the approaches to each station are shown, so it is understood that the C/P can be updated and used as appropriate when the development schedule is finalized or changed in the future.

3) Activity 2-3

The main outputs, history, and issues related to “Activity 2-3: Finalize the TOD Guideline and the roadmap through discussions among the stakeholders and sharing among entities involved" are presented below.

The TOD Guideline was discussed and coordinated in various meetings with the TWG and individually in cooperation with the C/P. Both the table of contents and the content of TOD Guideline were agreed upon .at the 2nd and 3rd JCC meetings and are now underway.

At the October 2024 TWG meeting, the JET presented a new draft table of contents, comparing it with the previous draft table of contents, with respect to the request from C/P to make the TOD Guideline more compact and understandable by using visual elements. JET also explained the main contents of the TOD Guideline again and distributed a draft version of the TOD Guideline for review by C/P. At the 4th meeting of the JCC, the contents of TOD Guideline was approved and the Guideline is planned to be published by the end of February 2025.

4) Activity 2-4

The main outputs, history, and issues related to "Activity 2-4: Establish indicators to measure the TOD approach impact in the National Metropolis (Lima-Callao)" are shown below.

At the start of the project, it was decided to establish that the impact indicators would be set at the city-area scale. However, since monitoring indicators were also needed for the TOD planning around the stations to be addressed in the pilot project, indicators were considered at two scales: city-wide and station-area scale. Therefore, the JET considered it desirable to conduct the project in parallel with the development of the TOD plan and moved up the work plan to organize the draft indicators from the end of 2023 to the beginning of 2024.

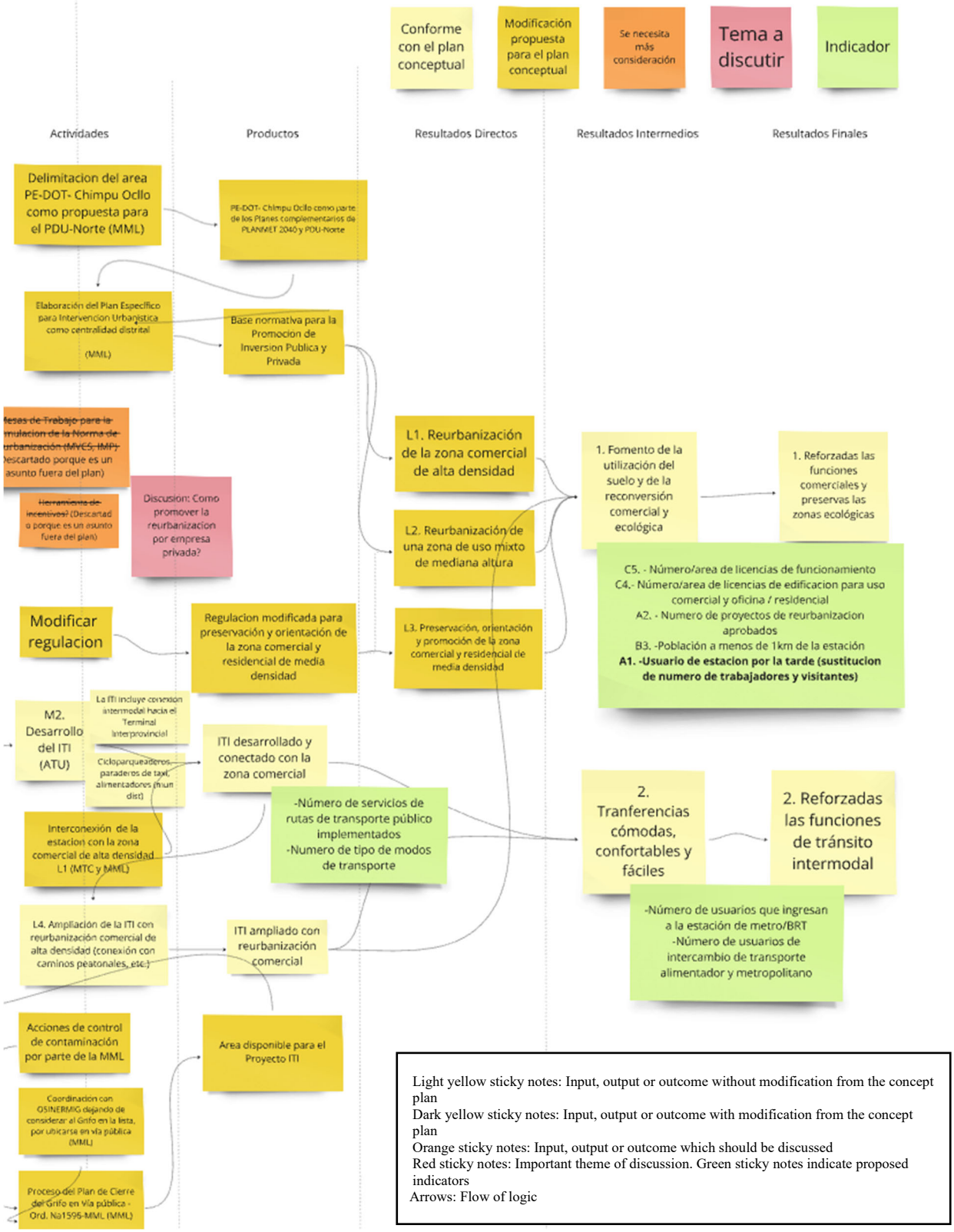
The logic model was adopted as the basic approach for setting indicators, and indicators were set through a combination of lectures and workshops. The reasons for adopting this model were: (1) the planning process tended to confuse outputs and outcomes, and it was a challenge to promote the distinction between the two, and (2) the method is also presented in Peru's Guideline of National Policies “*Guía para la elaboración de indicadores de políticas nacionales y planes estratégicos* (CEPLAN 2021)”, and it was expected to be easy for C/Ps to accept and deploy. In particular, the following steps were taken for the station area scale indicators: (1) organize a logic model based on the proposed TOD concept plan, (2) propose indicators based on the logic model, and (3) evaluate and select proposed indicators, including the continuity of monitoring. In response to this procedure, workshops were held three times, each with the person in charge of each target site in the C/P to select indicators. The table below shows detailed activities and specific consideration in each procedure. The figure below shows an example of the results of the workshop discussions.

Table 2-8 Contents of Activity 2-4

Procedure	Activities	Specific consideration
(1) Organize a logic model based on the proposed TOD concept plan	· Based on the TOD concept plan, inputs, outputs and outcomes were graphically organized. It visualized logical consistency or inconsistency among them, excess and deficiency. · C/Ps with JET checked the consistency of logic flow of inputs, outputs and outcomes, and if necessary, modified them. The modifications were reflected to the concept plan.	· To review logical consistency from vision to action of the concept plan. · To distinguish direct actions of public entities (inputs and outputs) and actions of other entities such as private firms induced by such actions (a part of outcomes). · Public and private actions were treated in the same way, so that it was unclear what actions the public sector should take to promote private action.
(2) Propose indicators based on the logic model	· C/Ps with JET proposed indicators for each input, output and outcome. First, indicators were proposed as just an idea without caring details, and later their definition and way of measurement (use of existing data source or survey method) were detailed.	· C/Ps proposed and detailed the indicators by themselves considering how they will keep monitoring. · To encourage independence of C/Ps in implementation and monitoring of the plan.
(3) Evaluate and select proposed indicators	· C/Ps with JET evaluated each proposed indicator with three criteria (technical easiness, procedural easiness and importance).	· JET proposed the evaluation criteria and let C/Ps to evaluate the indicators. · To encourage independence of C/Ps in implementation and monitoring of the plan.

Source: JICA Expert Team

The indicators selected at each target site are listed in the respective TOD plans. In addition, those with high universality in terms of their relationship to TOD and continuity of monitoring were selected and included in the TOD Guideline. Therefore, detailed results are listed in the TOD Guideline and in the TOD Plan for each target site.



Source: JICA Expert Team

Figure 2-7 Example of the Results of the Workshop's Study of the Station Area Scale Indicators using the sticky note tool (Creation of a Logic Model)

Propuesto por	Producto/Resultado	Indicador	Descripción	Unidad	Fuente de información	Método de medición	Frecuencia	Facilidad técnica	Facilidad administrativa	Importancia (borrador) (A, B, C)	Prioridad (borrador) (A, B, C)
IMP - MML	Producto	Área del terreno disponible para ITI(m2)	Proyecto donde se aplica el plan de cierre del grifo existente y se destina el área para el ITI	Metro cuadrado	Fuente: Diario Oficial El Peruano	% de avance de etapas de cierre *No corresonde al indicador	Única vez	A	B	A	A
ATU	Producto	Número de pasajeros que ingresan a la zona comercial	Número de pasajeros que luego de salir de la Estación Chimpu Ocllo y del ITI, ingresen a la zona comercial	Pasajeros	Ente planificador	Estudio de conteo	Cada año	A	B	B	B
MML	Resultado	Número de licencias de funcionamiento de actividades comerciales	Número de Licencias de funcionamiento de actividades comerciales en el área definida por el Plan Conceptual	Licencias de funcionamiento	Resolución publicada en el portal de la Municipalidad Distrital	Elaborar un base de dato en base a la información que tiene la municipalidad distrital	Cada año	B	B	A	A
MML	Producto	Número de Resoluciones/ordenanzas	Número de Resoluciones emitidas por la autoridada competente de la MML (EMILIMA)	Resolución/ ordenanza	Resolución publicada en el portal de la Municipalidad Metropolitana de Lima	Elaborar un base de dato en base a la información	Por cada proyecto presentado	B	A	C	B
MML	Resultado	Número y área de licencias de edificación para uso comercial y oficinas	Número y área de Licencias de edificación para uso comercial y oficinas en el área definida por el Plan Conceptual	Licencias de edificación	Resolución publicada en el portal de la Municipalidad Metropolitana de Lima	Elaborar un base de dato en base a la información que tiene la municipalidad distrital	Cada año	B	B	C	B
MML	Resultado	Número y área de licencias de edificación para uso residencial	Número y área de Licencias de edificación para uso residencial en el área definida por el Plan Conceptual	Licencias de edificación	Resolución publicada en el portal de la Municipalidad Metropolitana de Lima	Elaborar un base de dato en base a la información que tiene la municipalidad distrital	Cada año	B	B	C	B
MML	Producto	Número de cicloparqueadero en el área DOT	Número de cicloparqueadero en el área DOT	unidad	Resolución publicada en el portal de la Municipalidad Metropolitana de Lima	Elaborar un base de dato en base a la información	Cada año	B	B	A	A
MML - Municipalidad Distral	Producto	Longitud de ciclovias implementadas	Longitud de la infraestructura ocupada por cicloví as en la zona de intervención del Plan Conceptual, el que debe cumplir con las caracterí sticas establecidas en la R.G. N° 311-2017-MML-GTU y R.M. N° 0694-2020-MTC/01.02, según corresponda	kilómetro	Municipalidad	La ejecuta cada institución (provincial y distrital), por lo tanto no existe un dato integrado. Se recomienda realizar estudio para obtener este dato.	Cada año	C+	B	A	B
MML - Municipalidad Distral	Producto	Semaforización	Número de intersecciones con semáforos	Unidad	Municipalidad - PROTRANSITO	Realizar estudio en sitio para elaborar una capa de GIS	Cada año	B	B	A	A
MML - Municipalidad Distral	Producto	Señalización vertical y horizontal de Vías	Número de señalización horizontal (m2) y vertical (unidad) que cumplen ciertos requisitos en el á rea definida por el Plan Conceptual	Metro cuadrado Unidad	Municipalidad - GMU	Realizar estudio en sitio para elaborar una capa de GIS	Cada año	A	B	A	A
MML	Resultado	Población a menos de 1km de la estació n	Población demográfica dentro de la zona DOT que se encuentra a menos de 1km	Número	INEI	Censo poblacional	Cada 10 años	B	B	B	B
ATU	Resultado	Usuario de estacion por la tarde (sustitucion de numero de trabajadores y visitantes)	Número de validaciones registradas por el ingreso a las estaciones de metro /BRT vinculadas al Proyecto DOT entre las 4pm - 11pm	Número por día	ATU	ATU cuenta con el dato de nú mero de ingreso por horario de cada estación. Solo se necesita calcular el promedio de acuerdo con la condición definida del indicador.	Cada año	A	B	A	A
ATU	Producto	Número de servicios de rutas de transporte público implementados	Número de servicios de rutas de transporte pú blico en un área definida por el Plan Conceptual.	Número por día	ATU	Consultar con ATU para obtener el dato.	Cada año	B	A	A	A
ATU	Resultado	Frecuencia de vehí culos de transporte p úblico	Número de Frecuencia de vehículos de transporte público en un área definida por el Plan Conceptual.		ATU	Actualmente no hay dato, por lo tanto se requiere un estudio. (Sin embargo, se propone que en un corto plazo la ATU cuente con la información (PRR))	Cada año	C+	A	A	A
ATU	Producto	Número de participación en el uso del transporte	Porcentaje de viajes realizados mediante el transporte público en lugar de automoviles privados	%	ATU	Consultar con ATU para obtener el dato.	Cada 5 años	C	B	A	B
ATU	Resultado	Cantidad de vehí culos de taxi	Número de vehículos de taxi en el ingreso a las estaciones de metro /BRT vinculadas al Proyecto DOT	Número por día	ATU	Consultar con ATU para obtener el dato.	Cada año	C	B	B	B
ATU	Resultado	Número de usuarios que ingresan a la estación de metro/BRT	Número de validaciones registradas por el ingreso a las estaciones de metro /BRT vinculadas al Proyecto DOT	Número por día	ATU	Consultar con ATU para obtener el dato.	Cada año	A	B	A	A
ATU	Resultado		Número de personas que transbordan entre transporte alimentador y metropolitano en la ITI	Número por día	Ente planificador	Actualmente no hay dato disponible. La información puede basarse en estudios de conteo.	Cada año	C	B	A	B
MML	Producto	Cantidad de arboles	Número de árboles en ejes y áreas verdes	Número	MML	castro de arboles distrital	cada año	B	B	A	A
MML - Municipalidad Distral	Producto	Área ocupada de las aceras construidas (referir a JPII)	Área de acera en la zona de intervención del Plan Conceptual, el que debe cumplir con las características de la Norma GH. 020 "Componentes de Diseño Urbano".	kilómetro cuadrado	Municipalidad	Desarrollo a través de información del catastro urbano de las á reas de acera.	Cada año	B	B	A	A
MML	Producto	Número de elementos de iluminacion	Número de postes iluminación de la vía, de sendero peatonales, ciclovías e iluminación ornamental	Unidad	empresa ENEL	Desarrollo a través de información del catastro de ubicación de luminarias	Cada año	B	B	A	B
MML	Producto	Número de elementos de reducción de velocidad	Número de gibas, de camellón, resalto trapezoidal	Número	Municipalidad	Desarrollo a través de información del catastro de ubicación de elementos de reducción de velocidad	Cada año	B	B	A	B
MML	Resultado	Número de ciclistas	Número de ciclistas por las ciclovías definidas por el Plan Conceptual	Número en cada localización	MML-MD	Actualmente no hay dato disponible. La información puede basarse en estudios de conteo.	Cada año	C	B	A	B
MML	Resultado	Número de peatones	Número de peatones en el área definida por el Plan Conceptual	Número en cada localización	MML-ATU-MD	Actualmente no hay dato disponible. La información puede basarse en estudios de conteo.	Cada año	C	B	A	B
MML	Resultado	Número de accidentes del tráfico	Número de accidentes en el área definida por el Plan Conceptual	Número por día	PNP ??	Debe ser requerida en la Comisaria de la jurisdiccion	Cada año	C	C	A	B

Concretization and comparative study of the proposed indicators. Evaluated each indicator proposal from three perspectives: technical simplicity, procedural simplicity, and importance.

Source: JICA Expert Team

Figure 2-8 Example of the Results of the Workshop's Study of Indicators of the Station Area Scale (Drafting and Selection of Indicators)

In setting the indicators for the overall city scale, the elements of the TOD concept were broken down into indicators based on the written TOD concept developed in consultation with the C/P. The three elements of the organized TOD concept are (1) use of public transportation, (2) urban development centered on transportation nodes, and (3) citizen- and environment-friendly city. Based on these three perspectives, the indicators in the table below were established as realistically sustainable indicators based on the availability of existing data. For example, data on floor space around stations can directly indicate the status of urban development, but since such data does not currently exist, it was excluded from the viewpoint of sustainability of monitoring. For Indicator 3-2, while ATU has installed equipment and monitors the National Metropolis (Lima-Callao), it is not necessarily monitored in other cities. Therefore, it was judged that the possibility of calculating the indicator from existing data is not certain, and it was left as a recommended indicator.

Table 2-9 Indicators of Overall City Scale

TOD Component	Indicator	Description	Unit	Evaluation Method
1. Major use of public transportation	1-1. Number of mass transit users (metro and BRT)	Number of entries at all mass transit stations (metro and BRT)	Number / day	Get data from ATU Calculate using EXCEL
	1-2. Share of trips made by walking, cycling, and public transport *	Number of trips made by walking, cycling, and public transport divided by the total number of trips in the city	%	A citywide travel study is needed.
2. Urban development centralized in transportation nodes	Population covered by public transport	Rate of population within 1,000 m of a metro station and Metrobus stop, or 300 m of a corridor stop, divided by the total population of the city.	%	Get location of ATU stations and stops Obtain population per block from INEI Calculate by GIS
	Population density near public transport	Population density within 1,000 m of a metro station and Metrobus stop, or 300 m of a corridor stop, divided by total city	%	Get location of ATU stations and stops Obtain population per block from INEI Calculate by GIS

TOD Component	Indicator	Description	Unit	Evaluation Method
		population.		
3. City friendly for every citizen and environment	3-1. CO2 emissions from transportation	Fuel consumption in the city x carbon dioxide emission factor	tCO2	Obtain the total fuel consumption in the city. Multiply it with the carbon dioxide emission factor of each fuel.
	3-2. Air quality *	AQI (Air Quality Index) on a monthly basis.	AQI	Get data from the ATU

*Recommended Indicators

Source: JICA Expert Team

In this activity, indicators were developed through a participatory process that incorporated many workshop formats, with the intention of ensuring continuity by fostering a sense of ownership during the monitoring phase. Specifically, the JET first presented the steps of the process ((1) creation of a logic model, (2) creation of draft indicators, and (3) selection of indicators), then visited each C/P every day of the week to discuss and work on them, and the expert team organized the progress for that week and discussed and worked on the next step in the following week. The fact that such a process was well-received by the C/Ps suggests that the objective of fostering awareness of the parties involved was achieved. On the other hand, due to the lack of available data, there remained an issue of continuity in monitoring indicators at the station area scale. The JET proceeded with the workshop while pointing this out, but in the end, the JET respected the opinions of the C/Ps and incorporated indicators that would require more time and effort for continuous monitoring.

(4) Output 3

The activity plans, achievements, and evaluation for “Output 3: Issues and challenges in applying TOD approach in National Metropolis (Lima-Callao) are confirmed through three pilot projects" are shown in Table 2-10.

Table 2-10 Activity Plans and Achievements and Achievement Evaluation for Each of the Activities in Output 3

Activity	Activity Plans and Actual	Achievement Evaluation
3-1. Carry out surveys on the current situation of urban development and urban transport at potential pilot project sites, which will be proposed by the Counterpart.	**Plan** · The Project collects information on current land use, zoning, appraised land values, current public transportation network, and demand forecast data for the candidate sites for the pilot project as a longlist. Analyze and evaluate the current status of urban development and urban transportation. **Actual** · After collecting the above information, the Project finalized the current status analysis and evaluation results through discussions with the C/P in TWG and compiled them as the basic data for Activity 3-2.	· Since each of the activities in Output 3 was implemented based on the results of information collection and analysis, and the understanding of the current status of C/P was deepened, this activity is highly accomplished.
3-2. Select three pilot project sites	**Plan** · Three target stations for the pilot project are selected in the longlist through the first screening as a mid-list and the second screening as a shortlist. (Two sites for the short-term projects and one site for the medium-term project) · The evaluation method and	· Since three pilot project sites were selected as planned, this activity is highly accomplished.

Activity	Activity Plans and Actual	Achievement Evaluation
	weighting of the selection process is discussed by the TWG. **Actual** · For the first screening, the selection criteria based on the 3V Approach[4] were established and agreed by the TWG. For the actual evaluation, the first training in Peru was held and the mid-list was finalized through workshop-style exercises. · For the second screening, selection criteria were established that allowed for a certain degree of microscopic evaluation and were discussed and agreed by the TWG. An evaluation of each candidate site was discussed, and four candidate sites were narrowed down in the TWG. · It was agreed by the TWG in February 2023 to finally select three target stations for the pilot project through Activity 3-3. The project was approved by the second JCC.	
3-3. Conduct market survey and additional surveys for the pilot project sites	**Plan** · The Project conducts the current condition survey, the market survey, and the transport	· Since survey methodologies and utilization of survey results were understood,

[4] The 3V approach is an approach that enables a typology for clustering stations in terms of the three values, Node, Place, and Market, as economic value assessment indicators in TOD, and provides an evaluation tool to better understand the urban economy, land use, mass transit networks, and urban characteristics of station areas. (TOD Implementation Resources & Tools, World Bank, 2018)

Activity	Activity Plans and Actual	Achievement Evaluation
	condition survey in the area around the candidate stations for the pilot project. **Actual** · Topographic maps were developed as the basis for each survey and TOD concept plan within a 1-km radius around the four final candidate stations selected through Activity 3-2. · The current condition survey on population, building, land use, and so on., and the market survey on real estate prices and demands were conducted within 500-meter radius area around target stations, and the transport condition survey on traffic volume was conducted at major intersections in front of and around target stations. · The topographic maps were directly managed by the Project, while the current condition survey, the market survey, and the transport condition survey were conducted by the local subcontractors.	this activity is highly accomplished.
3-4. Develop transit-oriented development strategies for the pilot project sites from urban planning and urban transport perspective.	**Plan** · The Project formulates a future vision and TOD concept plan for the entire area surrounding the target station. · C/P prepares a draft of the vision and TOD concept plan at the Training in Peru, which are	· Since the TOD strategy was developed jointly with the C/P, which also improved the C/P's ability to develop a TOD plan, this activity is highly accomplished.

Activity	Activity Plans and Actual	Achievement Evaluation
	finalized by the TWG. · To finalize the TOD strategies, a menu of TOD implementation is identified based on the TOD concept plan, taking into consideration the implementation entity and the schedule. **Actual** · Two trainings in Peru (2nd and 3rd) were held to analyze the characteristics of the target stations and their issues and to create a draft of a future vision and TOD concept plan through workshop-style exercises. · Based on the draft prepared, the future vision and TOD concept plan for the target station were finalized through discussions in the TWG. · Based on the finalized TOD concept plan, a menu of TOD implementation was identified in three categories: short-term, medium-term, and long-term, as TOD strategies.	
3-5. Propose any necessary modifications/changes to the zoning of the pilot project sites based on analyzing the current zoning and regulation, paying particular attention to housing projects.	**Plan** · The Project analyzes the current zoning of the target station area in terms of land use classification, building parameters, floor demand, and other market trends. · Based on the results of the analysis and the TOD concept	· Based on the revision of the Sustainable Urban Development Law implemented through Activity 1-3 and the TDO strategies developed in Activity 3-4, since specific proposed zoning

Activity	Activity Plans and Actual	Achievement Evaluation
	plan developed in Activity 3-4, necessary zoning changes are proposed to facilitate TOD. **Actual** · The current zoning is designated as the old zoning (zoning regulations prior to Supreme Decree No. 012-2022-VIVIENDA), and zoning changes are proposed based on the new zoning regulation. · Market trends were estimated for floor demand using the analysis in Activity 3-3, and zoning and building parameters based on the TOD concept plan were discussed with the C/P and agreed by the TWG.	changes by C/Ps in this activity have been proposed, continuous C/P capacity building has been achieved. Therefore, this activity is highly accomplished.
3-6. Prepare a basic development plan with a description of the implementation procedure for each pilot project site.	**Plan** · The Project develops a basic development plan for each pilot project based on the TOD implementation menu for each target station area developed in Activity 3-4. · The basic development plan includes a development schematic plan, implementation entity, implementation method, implementation schedule, calculation of estimated project costs, and a technical sheet (Ficha Técnica) prepared as a Peruvian official document. · The basic development plan is discussed and finalized by	· While C/Ps have not had the experience to develop PEs on their own initiative, this Project has developed a preliminary PE, which has strengthened the planning and formulation capacity of C/Ps. Therefore, this activity is highly accomplished. · The development and approval of the PE will take time and will be continuously updated by the Peruvian side.

Activity	Activity Plans and Actual	Achievement Evaluation
	TWG. **Actual** · Initially, it was planned that only Ficha Tecnica would be developed as a Peruvian official document, but it was agreed with the C/P that the final output of the basic development plan would be formulated as a preliminary Specific Plan (PE), a legal document on urban planning at the local level in Peru. · In the TWG, each component of the basic development plan, such as the development schematic plan, implementation entity, and implementation method, was discussed and formulated the basic development plan as a preliminary PE. · In discussion with C/P, the Project assisted in the preparation of the Ficha Tecnica, based on the preliminary PE, using the regular format (simplified version) on the Peruvian side. · When IMP proceeded coordination for finalization of PE after completing its preliminary version, IMP found a local community organization which is willing to prepare a PE, so that the JET assisted	

Activity	Activity Plans and Actual	Achievement Evaluation
	coordination of planning mechanism and sensibilization of TOD. · Furthermore, two organizations, MML and ATU, each prepared a plan for development of transfer station for the extension of the Metropolitano (the extension from Central station to Miguel Grau station). Therefore, a coordination meeting was held between the two organizations and IMP, and JET provided support for the review of both plans and direction for coordinating the plans.	
3-7. Analyze potential issues and challenges for implementation, as well as make some suggestions to minimize them.	**Plan** · The Project organizes issues and concerns anticipated in the implementation of the basic development plan developed in Activity 3-6. **Actual** · Anticipated issues and concerns were compiled through discussions with C/P.	· Since the anticipated issues and concerns are summarized and shared with stakeholders at the JCC and TOD Seminar (tentative name), this activity is highly accomplished.

Source: JICA Expert Team

1) Activity 3-1

The main outputs, history, and issues related to "Activity 3-1： Carry out surveys on the current situation of urban development and urban transport at potential pilot project sites, which will be proposed by the counterparts" are shown below.

A total of 12 sites were proposed by the C/Ps as potential pilot project sites (long list), and a current situation survey was conducted. In particular, based on PLANMET 2040, a long list was proposed based on the importance of the districts in the region. The initial long list is shown in Table 2-11. Furthermore, the public transportation network in Lima-Callao Metropolis is shown in Figure 2-9, and its development

status is shown in Table 2-12.

Table 2-11 Proposed Initial Long List

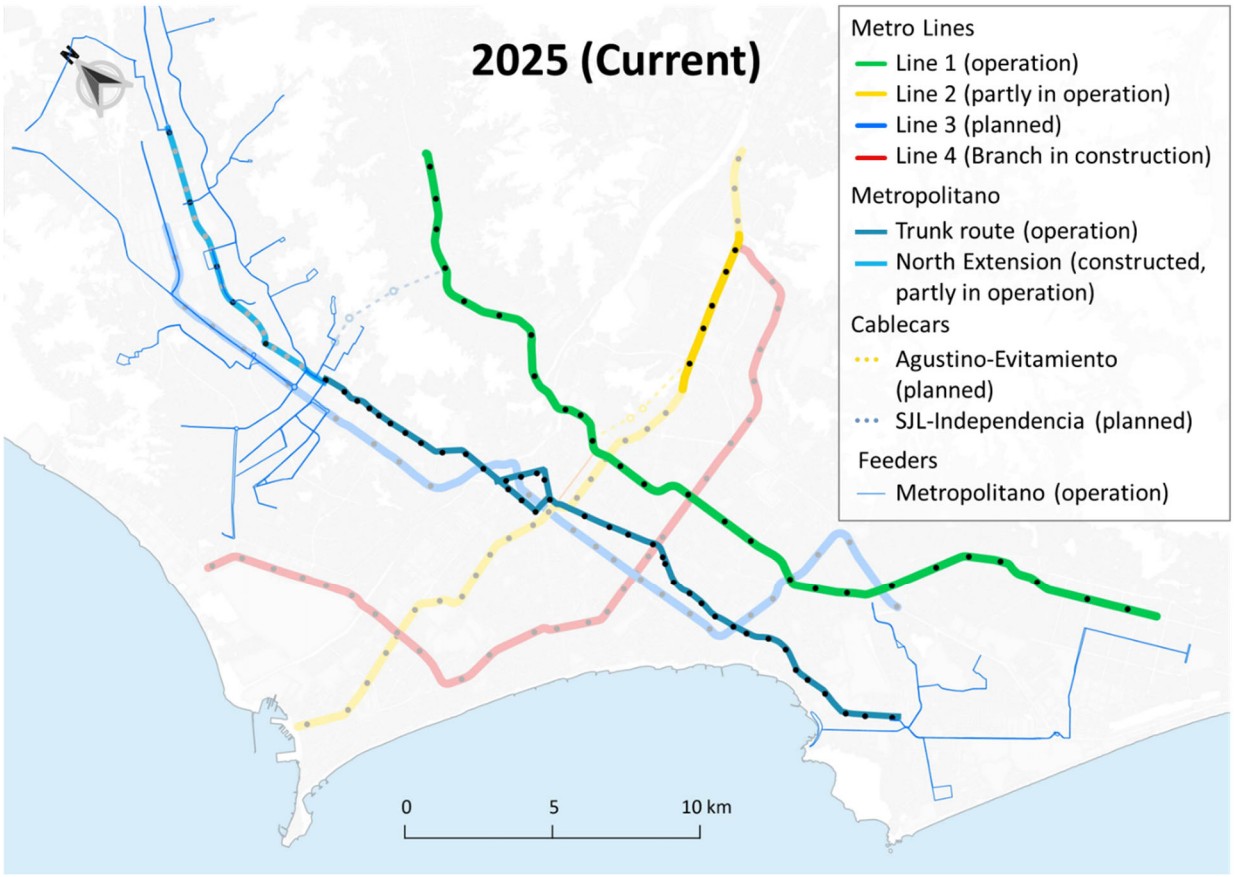
No.	Proposed Site	Characteristics	Proposing Organization
1	Independencia	· It is located between the Metropolitano (Izaguirre Station) and Metro Line 3. · It is an emerging centrality, which attracts a large number of trips, with a high diversity of uses and the potential to provide services and equipment to the population, but which requires consolidation. · The area has numerous industrial lands, with tendency to change to mixed-use, so it could be classified as urban land for transformation.	MVCS
2	Central Market of Callao (Puerto Callao)	· It is located between the Callao Central Market and the future Line 2 of the Lima Metro, which is under construction. · It is an emerging centrality, which attracts a large number of trips for employment and commerce, with the potential to provide services and equipment to the population. · The area has a high density of commercial establishments and access to health and education facilities, so it could be classified as consolidated urban land or urban transformation land, with potential for densification.	MVCS
3	Matellini Station (Metropolitano)	· Matellini Station is a connection node with other modes of transportation, including bicycles. · It has a population of 22,650 inhabitants in the area of indirect influence and a population density of 151 inhabitants/ha.	ATU
4	Evitamiento Station (Metro Line 2)	· The population in the area of indirect influence (Isochronous 15 minutes away) is estimated at 10,353 inhabitants and a population density of 41 inhabitants/ha. · It is very close to a shopping center with a high influx of people. · According to the projections made in the feasibility	ATU

No.	Proposed Site	Characteristics	Proposing Organization
		studies for Line 2, it has a demand of 1,797 passengers during the morning rush hour.	
5	Miguel Grau Station (Metro Line 1)	· The population in the area of indirect influence (Isochronous 15 minutes away) is estimated at 58,327 inhabitants and a population density of 197 inhabitants/ha. · An important modal interchange between the metro and the regular public transport system. At this point, it will connect to the Agustino cable car line. · According to working day peak hour demand data for 2019 (normal year prior to the pandemic), Miguel Grau Station had 1,811 validations.	ATU
6	Naranjal Station (Metro Line 3)	· Compatibility with the Urban Development Model proposed for Lima (PLAN MET 2040): promotes metropolitan urban decentralization as it is located outside the central area of the city. · Linkage with the largest number of mass transportation modes: Station linked to the future Metro Line 3 (the most important in the city) and to the future Metro Line 6 in the district of Los Olivos and Independencia: · Near centralities: It is located within a metropolitan centrality considered in the PLANMET 2040, for the North Area, Los Olivos - Independencia District. · Adequate accessibility: The station is located in the central core of the Northern Area, linked to Avenida Naranjal (Anillo Vial Periférico) and close to Avenida Los Alisos and Avenida Túpac Amaru (Metropolitano), with very good accessibility.	MML
7	Naranjal Station (Metropolitano)	· Ditto to Naranjal Station (Metro Line 3)	MML
8	Huandoy Station (Metro Line 3)	· Compatibility with the Urban Development Model proposed for Lima (PLAN MET 2040): promotes metropolitan urban decentralization as it is located outside the central area of the city.	MML

No.	Proposed Site	Characteristics	Proposing Organization
		· Linkage with the largest number of mass transportation modes: Linked to Lima Metro Line 3 (the most important in the city), with the planned rail transportation in Canta Callao (proposed MET 2040 PLAN) and with the cable transportation system planned to integrate Puente Piedra-Comas - Carabayllo (MET 2040 PLAN): · Close to centralities: Location in future Centralidad de Lima Norte (PLAN MET 2040) · Adequate accessibility: Located on the Panamericana Norte Highway, connected to Huandoy Avenue, and close to the future Canta Callao Highway, it has adequate accessibility. · Connection to the metropolitan road system: the station is located at the intersection of two roads of the Metropolitan Road System: the Panamericana Norte (Expressway) and Huandoy Avenue or Próceres Avenue (Collector Road) and near the (future) Canta Callao Highway (Expressway):	
9	San Carlos Station (Metro Line 1)	· Compatibility with the Urban Development Model proposed for Lima (PLAN MET 2040): Promotes metropolitan urban decentralization by being located outside the central area of the city. · Linkage to most modes of mass transportation: Station linked to Metro Line 1 and the cable car (proposed) that links to the Metropolitano's Naranjal Station in the district of Independencia: · Near centralities: It is located within a metropolitan centrality considered in the MET 2040 PLAN for the district of San Juan de Lurigancho. · Adequate accessibility: The station is located in a strategic location in the district of San Juan de Lurigancho, with very good accessibility. · Connection to the metropolitan road system: The station is located at the intersection of two roads of the metropolitan road system: Próceres de la Independencia	MML

No.	Proposed Site	Characteristics	Proposing Organization
		Avenue (Arterial Road, proposed as Semi Expressway in the PLANMET 2040) and the planned Peripheral Ring Road (Expressway).	
10	Av. Venezuela/ Av. Elmer Faucett (Morales Duárez /Carmen De La Legua)	· Venezuela Avenue/Elmer Faucett Avenue, with a pedestrian flow of 2,807, is among those with the highest pedestrian access flows to public transportation. · Callao Cercado is the district with the greatest generation and attraction of trips, the north and south of Lima being the sectors with the greatest desire to travel from the district, and receives the greatest number of trips from the southern zone of Lima.	MPC
11	Óvalo 200 Millas (Gambetta)	· Óvalo 200 Millas has a pedestrian flow of 3,155; it is among those with the highest flows of pedestrian access to public transportation. This is due to the large number of authorized routes that circulate on these roads and to the main centers that attract trips: work establishments, educational institutions, health centers, recreation, and shopping areas. It should be noted that the pedestrian flows analyzed are obtained from the demand for public transport trips. · The 200 Mile Oval is comprised of Elmer Faucett Avenue, where the greatest number of routes circulate with 51, and Néstor Gambetta Avenue, with 32 routes.	
12	Juan Pablo II (Metro Line 2)	· The intersection Santa Rosa Av. - Oscar R. Benavides Av. Benavides (Ex Colonial) has highly attractive centers.	MPC

Source: JICA Expert Team



Source: Created by JICA Expert Team based on ATU information

Figure 2-9 Map of Public Transportation Network in National Metropolis (Lima-Callao)

Table 2-12 Development Status of the Public Transportation Network

Classification	Line	Structure & Station	Implementation Entity	Status
Metro	Line-1	Elevated: 33km No. of stations: 26	· MTC (construction: with PPP) · ATU (Administration) · Operated by concessionaire	In operation since 2014
	Line-2	Underground: 35km No. of stations: 27	· MTC (Construction with PPP) · ATU	From 2024, the first stage composed of 5 stations started operation. Operation is

Classification	Line	Structure & Station	Implementation Entity	Status
			(Administration) · Operated by concessionaire	expected to start in 2028, but this is an estimation.
	Line-3	Underground: 38.5km No. of stations: 28	ATU (plan)	It has been completed a feasibility study. The development scheme is under study including G-to-G contract.
	Line-4	Underground: 23.6km No. of stations: 28	ATU (plan)	It has been completed a feasibility study. The development scheme is under study including G-to-G contract.
	Line-5	Underground: 12km No. of stations: 27	ATU (plan)	Concept level
	Line-6	Underground: 30km No. of stations: 35	ATU (plan)	Concept level
BRT	Metropolitano	27km No. of stations: 56 (18 stations constructed in the extension line in 2024)	· MML (Construction) · ATU (Administration) · Operated by concessionaires	In operation since 2010 All stations of the extension line have been completed and handed over by the MML. However, only 5 are operational, including the terminal station Chimpu Ocllo.
	Feeders	23 routes 4 routes for South area 19 routes for North area	· MML (Construction) · ATU (Administration) · Operated by concessionaires	In operation since 2010

Classification	Line	Structure & Station	Implementation Entity	Status
Complementary Corridors		5 routes concessioned, 4 in operation	· ATU (Administration) · Operated by concessionaires	In operation since 2014. Currently the blue, red and purple corridor is in operation. Each one operates in one main road axis. The yellow corridor is expected to operate in the future.
Conventional Railway	Central Railway	535km	· ATU (Administration) · Operated by concessionaires	In operation since 1871. Currently only freight transportation. Passenger transportation service was active until September 2020. Passenger service is expected to function again in 2026.
Local Bus		-	· ATU (issuing authorizations to persons or companies for a bus route) · Operated by private personas and companies.	The Routes Regulator Plan for Lima and Callao was approved in December 2024.

Source: JICA Expert Team

The survey item and data collection method are shown in Table 2-13. The results of the analysis were organized based on TOD perspective. An example of the analysis results is shown in Figure 2-10.

Table 2-13 Current Situation Survey Items and Data Collection Methods in Potential Pilot Project Sites

Survey Items	Data Collection Method	Confirmation Details
Population data by region and year	Gathering open data from INEI	Demographics of the area around the subject station
Major commercial facilities	Gathering information through IMP, MPC hearings, and field surveys	Location and size of major commercial facilities
Housing development status	Gathering information through IMP, MPC hearings, and field surveys	Development policy, current status of urbanized areas, and so on.
Real estate price	Gathering information from IMP and MPC (land price range data)	Confirmation of market trends in the vicinity of the target station
Information on the number of station users	Gathering information from ATU	Current number of users and future demand
Station location and entrance/exit information	Gathering information from ATU	Confirmation of station location and information on entrances and exits (location and number)
Road GIS data	Gathering information from IMP and MPC	Confirmation of road network, width, and density
Land use GIS data	Gathering information from IMP and MPC	Confirmation of current land use around the station
Zoning GIS data	Gathering information from IMP and MPC	Confirmation of current zoning
Information on public transportation (urban transit, BRT) routes	Gathering information from ATU	Study existing transportation network and station characteristics (nodal points, terminus points, and so on.)
GIS data for existing feeder traffic network	Gathering information from ATU	

Source: JICA Expert Team

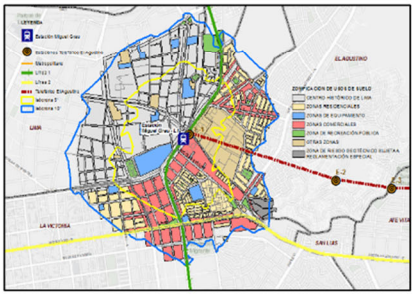
2.11 ATU 3: Miguel Grau station, Line 1

■ Characteristics of the Site

- This station seems to have many bus routes and to be used transit station, but there is not space for bus stops on adjacent road.
- In front of the station, buses were waiting passengers on the road, therefore, the road was congestion
- There are big hospital or school near the station, so many pedestrian's traffic was there
- The ticket gate is elevated level, but an access bridge is provided only a side, therefore, a passenger who wants to go opposite side area have to go downstair and across the road
- A cable car station is planned to connect this station, but concrete plan is under planning

■ Perspectives for TOD (tentative)

- The station seems to have potential to be main transit station around this area
- It seems to be required to improve connectivity among metro, buses, mototaxies and cable car considering with safety and efficiently
- One of the challenges is how to create bus or taxi bays near the station, however in the process of locating these, temporary bus stations would be implemented but would not be close enough to the Miguel Grau station.



Zoning

Source: JICA Expert Team

Figure 2-10 Example of Current Situation Analysis Results (Miguel Grau)

2) Activity 3-2

The main outputs, history, and issues related to "Activity 3-2: Select three (3) pilot project sites" are shown below.

Two short-term projects (one in Lima and one in Callao) and one medium-term project (one in National Metropolis (Lima-Callao)) are selected as pilot project sites. The short-term projects are expected to be implemented for a period of about three years, and the medium-term project is expected to be implemented for a period of about ten years. In the selection process, each C/P proposed candidate sites for pilot projects, and the Project prepared a long list. From the long list, three pilot project sites are finally selected through the first screening (mid-list) and second screening (short-list).

The Mayor of Lima at the time requested modifications to the long list, and four new sites were proposed. Based on the location conditions in each of the sites on the long list, the IMP discussed and agreed to revise the long list from the perspective of selecting more diverse sites for pilot projects. The finalized long list is shown in Table 2-14, and the location map of the long list is shown in Figure 2-11.

Table 2-14 Results of Long List Modifications

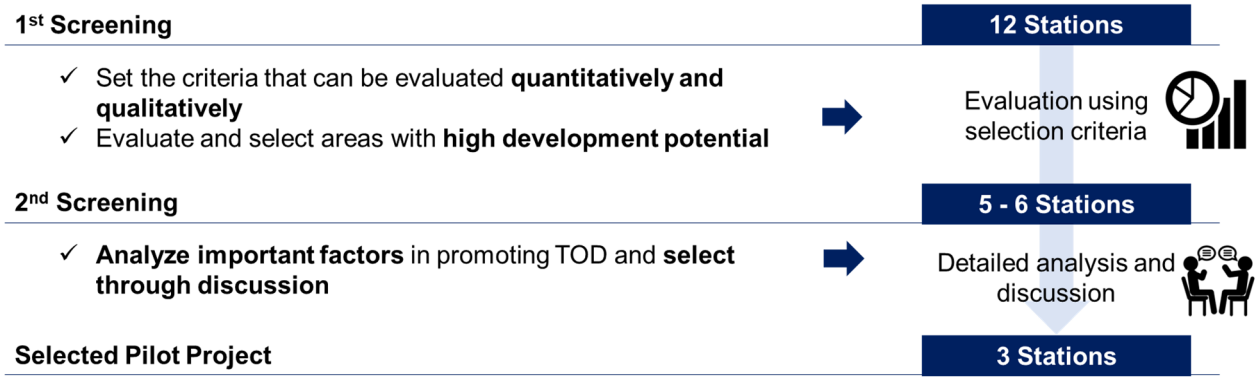
No.	Candidate Site	Public Transport	Location	Final Decision
1	Gambetta	Line-4	Callao	X
2	Carmen De La Legua	Line-4	Callao	X
3	Juan Pablo II	Line-2	Callao	X
4	Puerto del Callao	Line-2	Callao	X
-	Huandoy	Line-3	Lima North	Withdraw
5	Naranjal	Line-3	Lima North	X
5	Naranjal	BRT	Lima North	Combine into one site
6	Carlos Izaguirre	Line-3	Lima North	X
-	San Carlos	Line-1	Lima East	Withdraw
7	Miguel Grau	Line-1	Lima Central	X
8	Evitamiento	Line-2	Lima Central	X
9	Matellini	BRT	Lima South	X
10	Chimpu Ocllo (new proposal)	BRT (ext.)	Lima North	X
-	Los Incas (new proposal)	BRT (ext.)	Lima North	Withdraw
11	Parque Industrial (new proposal)	Line-1	Lima South	X
12	Ancón (new proposal)	-	Lima North	X

Note: “X” means selected site
Source: JICA Expert Team

Source: JICA Expert Team

Figure 2-11 Location Map of Long List

For the selection of pilot project sites, a two-stage selection method was adopted for the long list: first and second screening. By presenting a clear selection process and building stage-wise consensus, it was possible to efficiently select the sites for the pilot project. The selection process adopted is shown in Figure 2-12.



Source: JICA Expert Team

Figure 2-12 Pilot Project Site Selection Process

In the first screening, evaluation criteria based on the 3V Approach were established and agreed by the TWG in order to quantitatively and qualitatively evaluate a total of 12 sites. The evaluation was conducted in a workshop-style during the first training in Peru. The evaluation criteria for the first screening are shown in Table 2-15, and the results of the workshop are shown in Figure 2-13, Table 2-16, and Table 2-17.

Table 2-15 Evaluation Criteria for First Screening

3V Approach/Evaluation Viewpoint		Evaluation Method	Criteria
Node Value	Passenger Volume	· Evaluate the number of future passengers · Calculate demand for Y2030 from current demand (Line 1 and Metropolitano) and future demand forecast (Line 2, Line 3, and Line 4)	Demand forecast for Y2030 a) Higher (more than 30,000 pax/day) b) Fair (10,000 - 30,000 pax/day) c) Lower (less than 10,000 pax/day)
	Inter-modal Diversity	· Evaluate the connection with other public transportation · Target current and public transport with prospects for	Number of other public transport connections a) Higher (connect with Metro or BRT) b) Fair (connect with more than

3V Approach/Evaluation Viewpoint		Evaluation Method	Criteria
		finance and project implementation	one type of public transport) c) Lower (connect with less than one type)
	Accessibility	· Evaluate the accessibility to the stations · Calculate the population within 30 minutes by bus from the station	Population within 30 minutes by bus from the station (inhabitants) a) Higher (more than 500,000) b) Fair (250,000 - 500,000) c) Lower (less than 250,000)
Place Value	Upper Plan Consistency	· Evaluate the importance and role of the regional hub as the consistency of upper plans · Refer to PLANMET 2040 and PDM Callao 2040	a) In designated centralities area b) Close to designated centralities area c) No designated centralities area
	Urbanizing Level	· Evaluate the degree of infrastructure development · Calculate the road density within 1 km circle from the station	Degree of road development a) Higher (more than 25%) b) Fair (20 - 25%) c) Lower (less than 20%)
	Convenience	· Evaluate the accumulation of large-scale commercial facilities and public service facilities · Calculate the current land use within the 1 km circle from the station	Degree of accumulation of commercial, health and public recreation land use a) Many (more than 20%) b) Fair (10 - 20%) c) Less (less than 10%)
Market Potential Value	Real Estate Trends	· Evaluate the real estate trend (land price, rent price, and so on.) · Calculate the maximum land price by weighted averaging the land price range within 1 km from the station	Max value in the land price range a) Higher (more than 8,000/2,000 S/m2) b) Fair (8,000/2,000 - 3,000/1,000 S/m2) c) Lower (less than 3,000/1,000 S/m2)
	Real Estate Opportunities	· Evaluate the human densities (residential and/or employment) · Calculate the population within	Population within 1 km from the station a) Higher (more than 50,000)

3V Approach/Evaluation Viewpoint		Evaluation Method	Criteria
		1 km from the station	b) Fair (30,000 - 50,000) c) Lower (less than 30,000)
	Developable Land	· Evaluate the scale of vacant lands and developable public lands · Find the vacant and unused land in the RoW of public facilities	Degree of the vacant land or unused land a) Higher (there is large vacant land) b) Fair (there is some vacant land) c) Lower (no vacant land)
	Ease of Development	· Evaluate the difficulty of development/redevelopment based on the topography, existing building conditions, and so on. · Find the preserved area	Degree of the preserved land a) Easy (no preserved area) b) Normal (there is some preserved area) c) Difficult (there is a large preserved area)

Source: JICA Expert Team

Source: JICA Expert Team

Figure 2-13 Workshops During the First Training in Peru

Table 2-16 Primary Selection Evaluation Results (Callao)

Evaluation Items		01 Gambetta	02 Morales Duarez/Carman De La Legua	03 Juan Pablo 2	04 Puerto Callao
Place Value	Upper Plan Consistency	A	B	B	A
	Urbanizing Level	C	A	A	B
	Convenience	C	B	C	B
Node Value	Passenger Volume	A	A	B	C
	Inter-modal Diversity	C	A	C	C
	Accessibility	B	B	B	A
Market Potential Value	Real Estate Trends	A	B	C	C
	Real Estate Opportunities	C	A	A	B
	Developable Land	C	C	C	C
	Ease of Development	C	A	A	B
Comprehensive Evaluation		C	A	B+	B

Source: JICA Expert Team

Table 2-17 Primary Selection Evaluation Results (Lima)

Evaluation Items		05-1 Naranjal (Line-3)	05-2 Naranjal (BRT)	06 Carlos Izaguirre	07 Miguel Grau	08 Evitamiento	09 Matellini	10 Chimpu Ocllo	11 Parque Industrial	12 Ancón
Place Value	Upper Plan Consistency	A	A	A	A	B	C	A	A	A
	Urbanizing Level	A	A	B	B	B	B	A	A	C
	Convenience	A	A	A	A	A	A	B	A	C
Node Value	Passenger Volume	(A)	(A)	(C)	(A)	(C)	(B)		(C)	
	Inter-modal Diversity	A	A	A	A	B	B	B	B	C
	Accessibility	B	A	A	A	C	A	C	C	C
Market Potential Value	Real Estate Trends	A	A	A	A	A	B	B	B	B
	Real Estate Opportunities	B	B	B	A	C	B	A	B	C
	Developable Land	B	C	C	C	C	C	B	B	A
	Ease of Development	A	B	B	C	B	A	B	A	A
Comprehensive Evaluation		A	A	B+	B+	C	B	B	B+	C

Source: JICA Expert Team

As a result of the workshop-style exercise, six sites passed the first screening, but three sites, Naranjal, Migel Grau (Gamarra in the Sustainable Cities Project), and Carmen de la Legua, duplicate in this project and Sustainable Cities Project, which was being carried out in parallel with this project . Therefore, through meetings with the Sustainable Cities Project and discussions in the TWG, it was decided that Naranjal and Carman De La Legua would not be included in the project because it would be effective to consider various types of areas in the National Metropolis (Lima-Callao). For Miguel Grau, it was decided to include it in this project because it is in proximity to Gamarra and is expected to overlap, but different stations are to be considered. The final result of the first screening is shown in Table 2-18.

Table 2-18 First Screening Results

No.	Candidate Site	Location	Score	Passed the 1st Screening
1	Naranjal	Lima North	A	Withdrawn due to duplication in the Sustainable Cities Project
2	Miguel Grau	Lima Central	B+	X
3	Carlos Izaguirre	Lima North	B+	X
4	Parque Industrial	Lima South	B+	X
5	Matellini	Lima South	B	X
6	Chimpu Ocllo	Lima North	B	X
7	Carman De La Legua	Callao	A	Withdrawn due to duplication in the Sustainable Cities Project
8	Juan Pabro II	Callao	B+	X
9	Puerto Callao	Callao	B	X

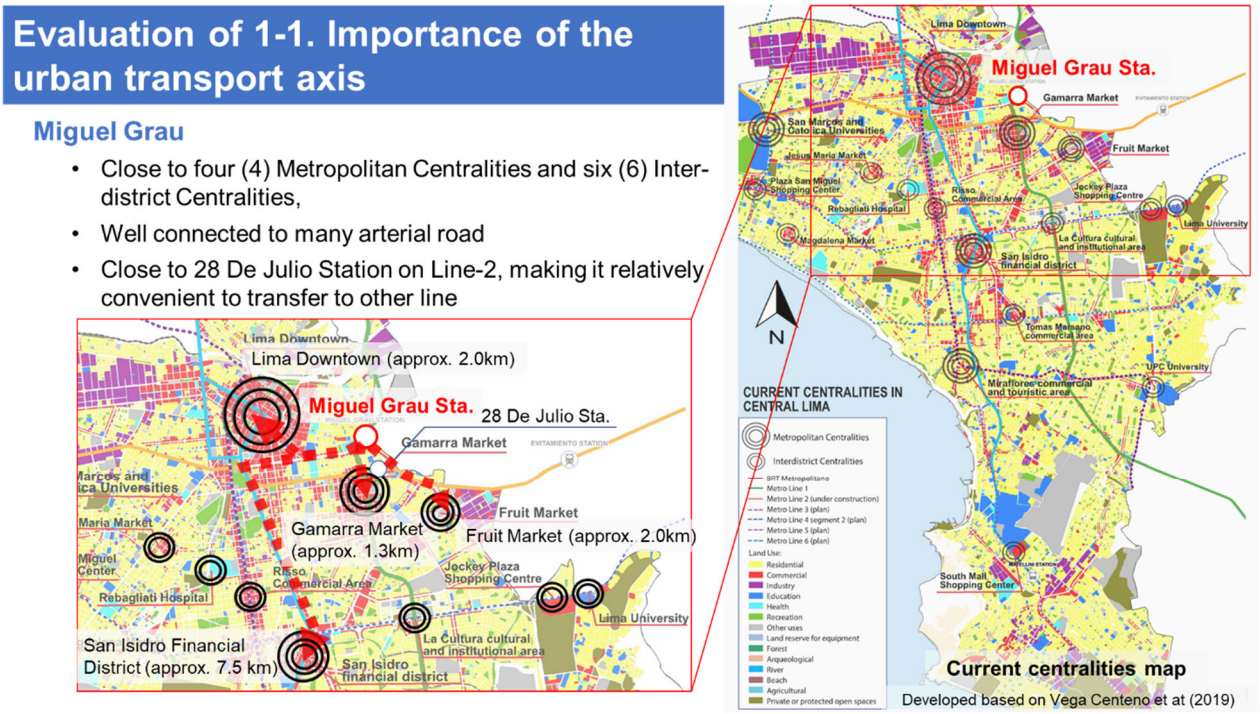
Note: "X" means selected sites
Source: JICA Expert Team

For the second screening, the selection criteria for evaluation and analysis from a more microscopic perspective for the sites that passed the first screening (middle list) were discussed and agreed upon in the TWG. Since the National Metropolis (Lima-Callao) has no experience with the TOD approach, the criteria were set from the perspective of suitability as a model for TOD and possibility of implementation. The adopted selection criteria for the second screening are shown in Table 2-19, and an example of the evaluation analysis is shown in Figure 2-14 and Figure 2-17. The evaluation analysis was conducted in the short-term and medium-term categories.

Table 2-19 Selection Criteria for the Second Screening

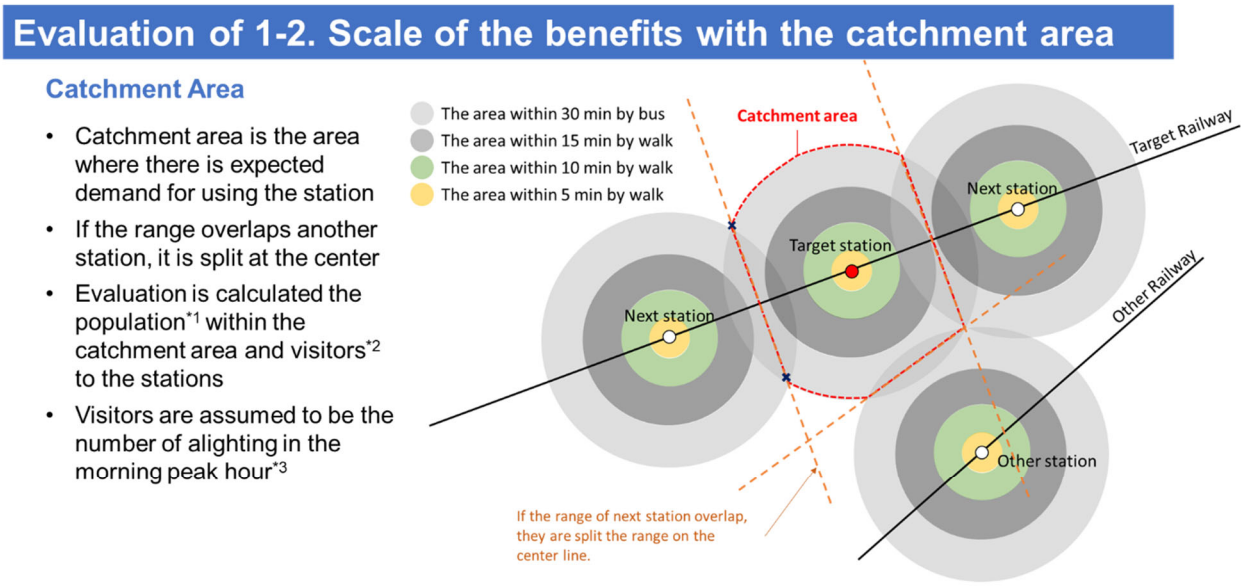
Evaluation Viewpoint		Evaluation Method
1. Regional importance and centralities	1-1. Importance on the urban transport axis	Evaluate the importance of the region from a wide-area perspective. · Analyze accessibility to surrounding centralities
	1-2. Scale of the benefits with the catchment area	Evaluate the scale of coverage that will benefit from the service generated by implementing TOD. · Analyze the population within the catchment area and visitors to the station
2. Development effect/impact	2-1. Diversity for introduction of TOD menu	Evaluate the possibility of introducing Inter-modal Transit Facility (ITF) and urban development from a short-term and medium-term perspective. · Analyze the possibility of the development and develop the outline of the concept plan
	2-2. Environmental and social assessment	Evaluate the environmental impact based on the TOD menu to be introduced · Confirm the environment and social condition
Opinion of the local government		Based on the above evaluation, discuss with the local government and confirm the opinions

Source: JICA Expert Team



Source: JICA Expert Team

Figure 2-14 Example of Evaluation Analysis of the Importance of Urban Transport Axis



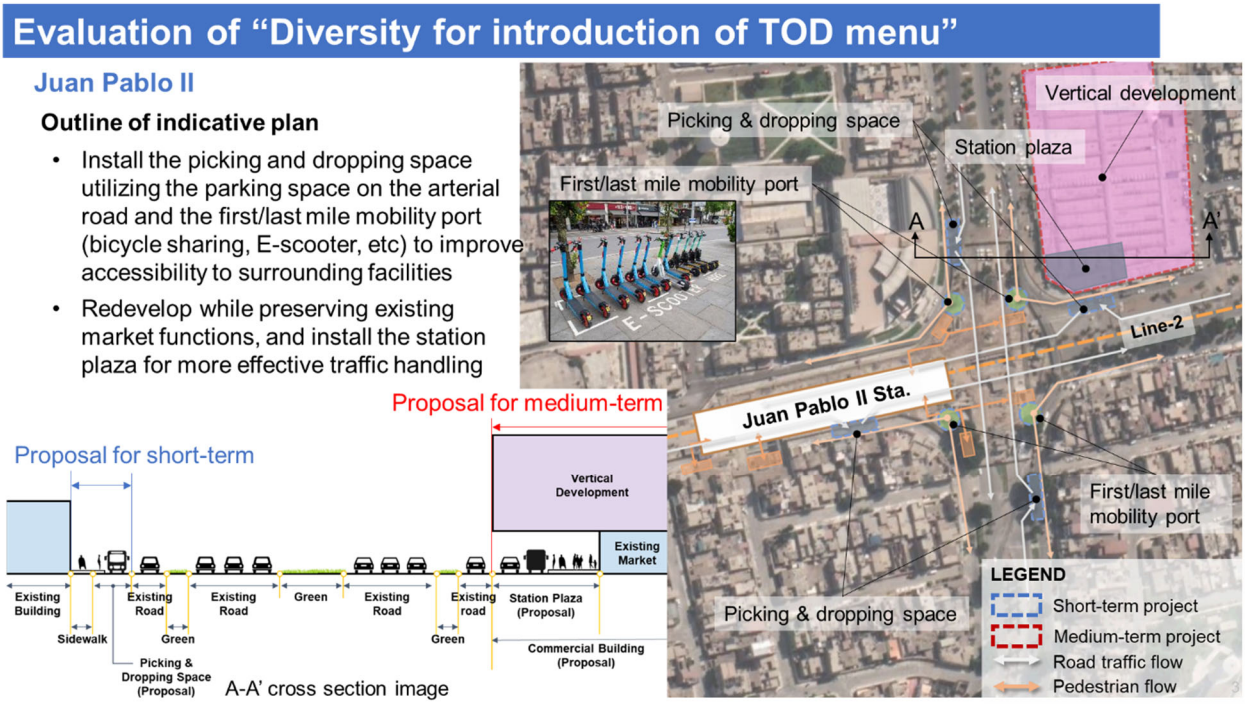
*1: population data as of Y2017 based on 2017 National Census, INEI

*2: estimation as of Y2055 based on demand forecast for each line

*3: if the number of alighting is unknown, it's assumed that the number of boarding in the afternoon peak hour is the same as the number of alighting in the morning peak hour as the visitors

Source: JICA Expert Team

Figure 2-15 Example of Evaluation Analysis of the Scale of Benefits Within the Catchment Area



Source: JICA Expert Team

Figure 2-16 Example of Evaluation Analysis of Diversity for Introduction of TOD Menu

Evaluation of "Environmental and Social Assessment"

Candidate Sites Evaluation in Callao

Items	Juan Pablo II		Puerto del Callao	
Term	Short	Medium	Short	Medium
Evaluation *Degree of possible negative impacts	**A: Higher**	**B: Fair**	**A: Higher**	**B-: Fair**
	The Project is likely to have minor negative environmental and social impacts with appropriate countermeasure. The evaluation of the impacts during the construction requires the concretion of the plan.	The project will require medium-scale resettlement or land acquisition, as well as some negative impacts related to the landscape. The evaluation of the impacts during the construction requires the concretion of the plan.	The Project is likely to have minor negative environmental and social impacts with adequate countermeasure. The evaluation of the impacts during the construction requires the concretion of the plan.	The project will require medium-scale resettlement or land acquisition, as well as some negative impacts related to the landscape. The evaluation of the impacts during the construction requires the concretion of the plan.
Current situation of the project site (some examples)	 Public road and parking space	 Market	 Roundabout (currently construction zone)	 Residential zone

Source: JICA Expert Team

Figure 2-17 Examples of Evaluation Analysis of Environment and Social Assessment

As a result of the second screening, four sites were selected (two for short-term projects and two for medium-term projects), and based on the results of Activity 3-3, it was agreed in the TWG that the final selection would be narrowed down to three sites (two for short-term projects and one for medium-term project). In the opinion of the local government, even in sites with a high level of difficulty for development, the intention of the local government was confirmed to select sites with important regional positioning and high importance and urgency for development. A summary of the local government's opinions on the second screening evaluation is shown in Table 2-20, and the results of the second screening are shown in Table 2-21 Table 2-22 , and Table 2-23 .

Table 2-20 Summary of Local Government Opinions

Candidate Districts		Local Municipality Comments
Lima	Miguel Grau	・ Some of the areas surrounding the station has ownership problems, where the land titles are not properly registered, and some lots are informally occupied ・ The station is one of the most important modal interchange points in Lima ・ It will become even more important when the construction of Line 2 is completed ・ The station is facing a problem of being dangerous for vehicles and pedestrians, which is why it is necessary to take measures quickly
	Carlos Izaguirre	· No comments
	Parque Industrial	· The landowners in its surroundings are officially registered · A cable car project was approved in the metropolitan plan, which will connect this area with the transportation of the Pan-americana South Highway and with Venecia beach · The cable car project does not have previous studies and environmental studies are needed
	Matellini	· The space is limited, but ATU has the possibility of purchasing land · No objection to selecting this station
	Chimpu Ocllo	· No objection to selecting this station
Callao	Juan Pablo II	· The best option for a candidate site in Callao is the Juan Pablo II station · Agreed to select this station
	Puerto del Callao	· No comments

Source: JICA Expert Team

Table 2-21 Second Screening Results in Lima (Short-term Projects)

Evaluation Items		Miguel Grau	Carlos Izaguirre	Parque Industrial	Matellini	Chimpu Ocllo
1. Regional importance and centralities	1-1. Importance on the urban transport axis	A	B	B	B	C
	1-2. Scale of the benefits with the catchment area	C	B	C	A	A
2. Development effect / impact	2-1. Diversity for introduction of TOD menu	A	B	C	B	B
	2-2. Environmental and Social Assessment	A	A	A	A	A
Recommendation		○	Difficulty in matching the schedule of Line-3			

Source: JICA Expert Team

Table 2-22 Second Screening Results in Callo (Short-term Projects)

Evaluation Items		Juan Pablo II	Puerto del Callao
1. Regional importance and centralities	1-1. Importance on the urban transport axis	B	B
	1-2. Scale of the benefits with the catchment area	A	C
2. Development effect / impact	2-1. Diversity for introduction of TOD menu	A	B
	2-2. Environmental and Social Assessment	A	A
Recommendation		○	

Source: JICA Expert Team

Table 2-23 Second Screening Results in Lima-Callao Metropolis (Medium-Term Projects)

Evaluation Items		Miguel Grau	Carlos Izaguirre	Parque Industrial	Matellini	Chimpu Ocllo	Juan Pablo II	Puerto del Callao
1. Regional importance and centralities	1-1. Importance on the urban transport axis	A	B	B	B	C	B	B
	1-2. Scale of the benefits with the catchment area	C	B	C	A	A	A	C
2. Development effect / impact	2-1. Diversity for introduction of TOD menu	B	C	B	C	B	B	C
	2-2. Environmental and Social Assessment	B	B	B	B	B+	B	B-
Recommendation			Difficulty in matching the schedule of Line-3	○		○		

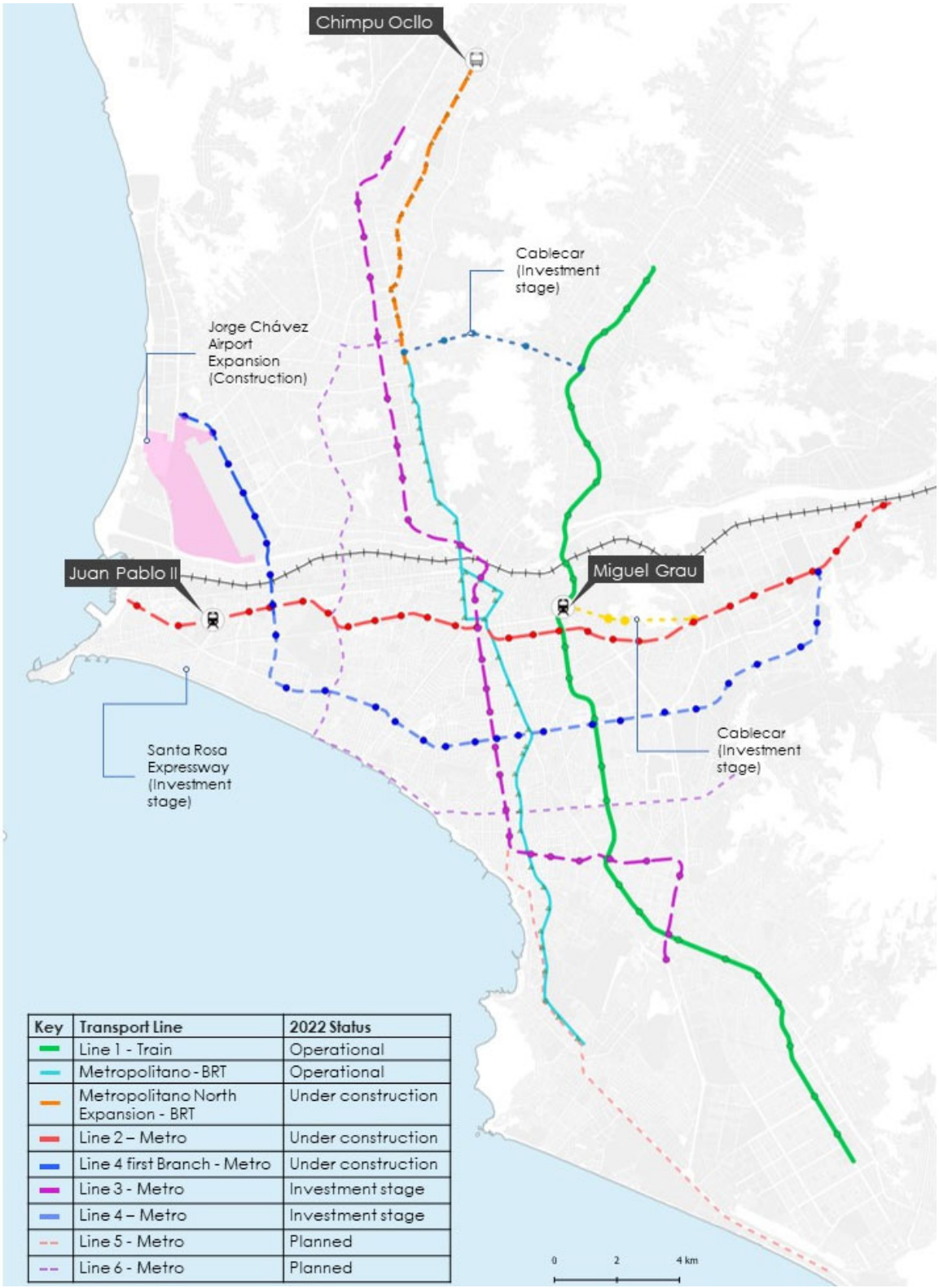
Source: JICA Expert Team

Based on the results of Activity 3-3, three pilot project sites were finally selected through IMP internal meetings and TWG discussions, and these were approved at the 2nd JCC (April 12, 2023). The approved pilot project sites are shown in Table 2-24, and the location map is shown in Figure 2-18.

Table 2-24 Approved Pilot Project Sites

Pilot Project Site		Location / Public Transport	Development Direction
Short-term	Miguel Grau	Lima Central / Line-1	・ Transportation hub ・ Traffic improvement
	Juan Pablo II	Callao / Line -2	・ Airport access ・ Revitalization of existing market
Medium-term	Chimpu Ocllo	Lima North / Metropolitano (BRT)	・ Lima northern terminal ・ Commercia core development

Source: JICA Expert Team



Key	Transport Line	2022 Status
	Line 1 - Train	Operational
	Metropolitano - BRT	Operational
	Metropolitano North Expansion - BRT	Under construction
	Line 2 – Metro	Under construction
	Line 4 first Branch - Metro	Under construction
	Line 3 - Metro	Investment stage
	Line 4 – Metro	Investment stage
	Line 5 - Metro	Planned
	Line 6 - Metro	Planned

Source: JICA Expert Team

Figure 2-18 Location Map of the Pilot Project Sites

3) Activity 3-3

The main outputs, history, and issues related to “Activity 3-3: Conduct market survey and additional surveys for the pilot project sites" are shown below.

In the current condition survey, topographic maps within a 1-km radius area around the four stations in the shortlist that passed the 2nd screening were developed initially. Originally, it was anticipated that this survey would be conducted in three pilot project sites based on the results of the 2nd screening. However, based on the results of this survey, it was agreed in the TWG to select the final pilot project sites, so this survey was conducted on the shortlist of four stations. The topographic mapping was created directly by the Project by using high-resolution satellite images purchased in the Project as a base map. Then, the current condition survey was conducted within a 500-m radius area around target stations by the local subcontractor. As a result, the current conditions of buildings, land use, roads, population, infrastructure distribution, and so on were clarified around the target four stations. The results were used for the basic information for the consideration of the concept plan in Activity 3-4.

The transport condition survey was conducted at four stations on the shortlist for the pilot project. The contents, time frame, and methodologies of the survey were set in collaboration with ATU. In particular, ATU requested video observation for the pedestrian counts, car traffic volume, and bus and rail ridership surveys to ensure the accuracy of the survey results so that the results of the count survey could be reconfirmed.

The format for organizing each traffic volume survey will be standardized so that it can be used for future surveys during the TOD approach to secure the necessary information and improve efficiency when counterparts conduct their own surveys in the future.

The market survey included information gathering from relevant reports covering the entire city and a re-commissioning study of real estate prices for the four stations on the pilot project's shortlist. The relevant reports referred to reports such as CAPECO (Camara Peruana de la Construccion). The recommissioned study examined trends in land prices in the vicinity of the four stations, as well as changes in land prices before and after related projects in the metropolitan area. Based on the results of these studies, an analysis of development demand in the real estate market was conducted. The methodology is described in the guidelines for future reference.

4) Activity 3-4

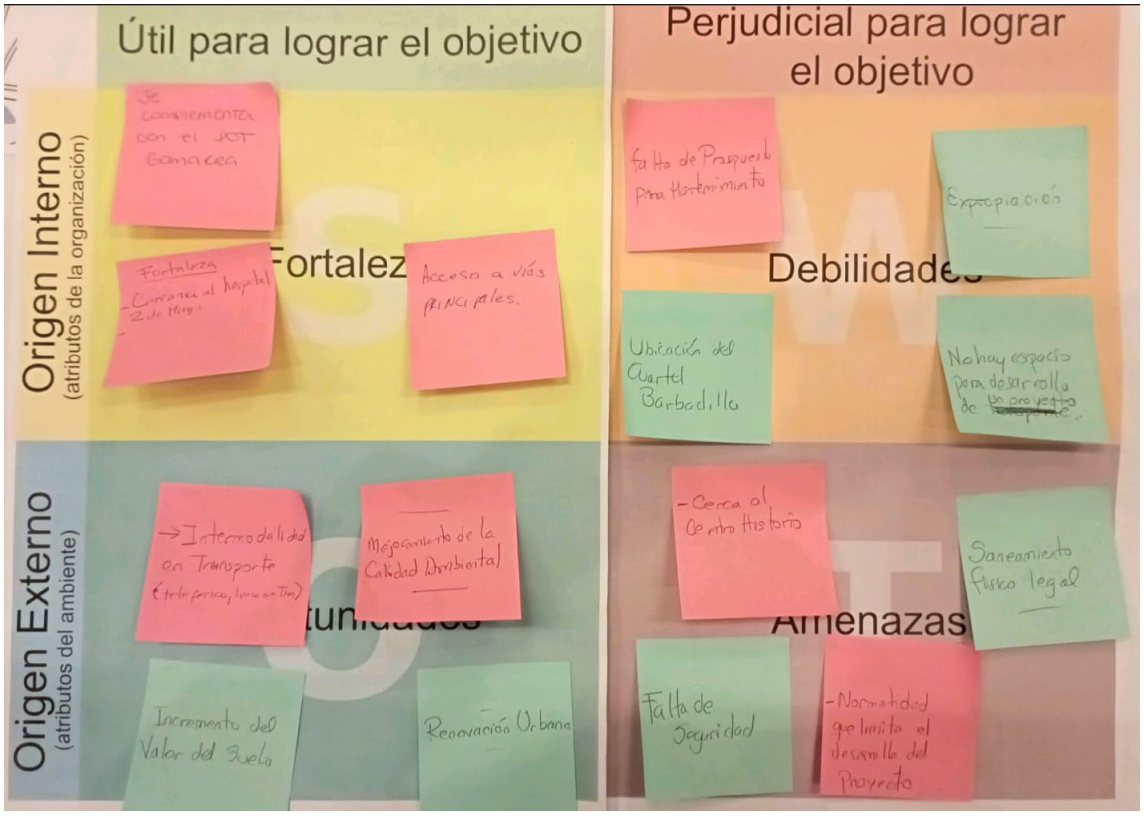
The main outputs, history, and issues related to "Activity 3-4. Develop transit-oriented development strategies for the pilot project sites from urban planning and urban transport perspective" are shown below.

In developing the TOD strategy for the pilot project sites, a vision, development strategy, and concept plan were developed based on the current situation analysis using SWOT Analysis[5]. The current situation

[5] SWOT analysis is a method of identifying and analyzing the internal and external environment of an analysis target in terms of Strength, Weakness, Opportunity, and Threat.

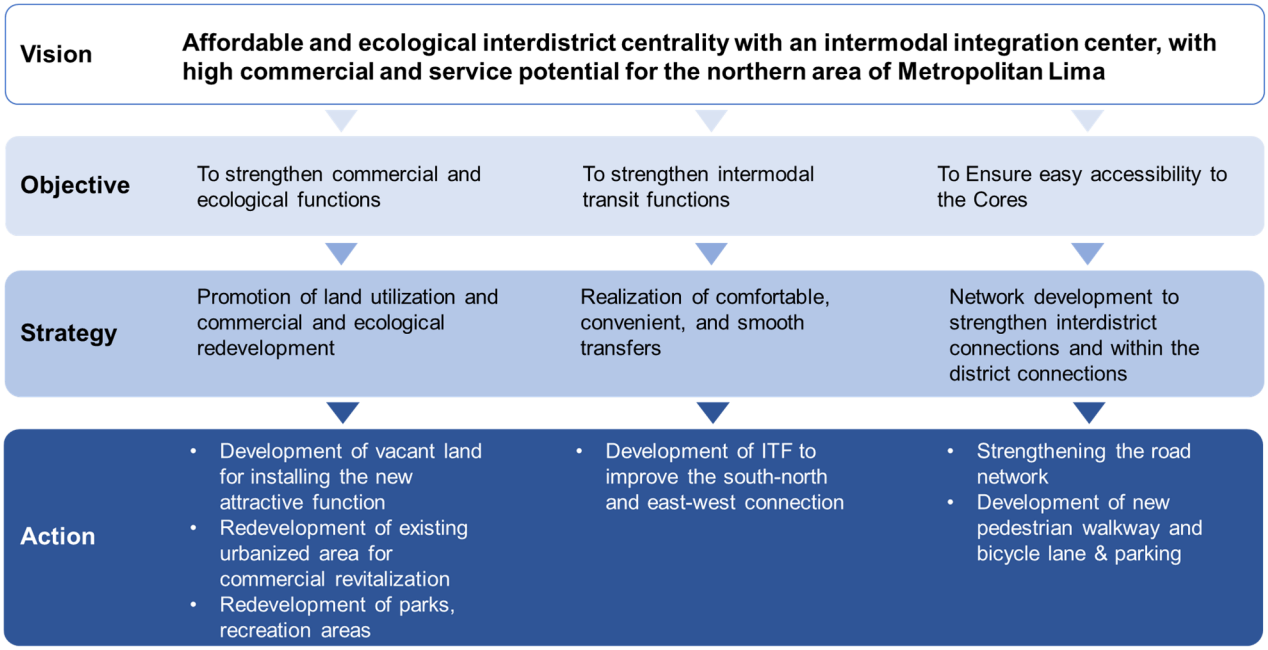
analysis, vision, and development strategy were considered in a workshop-style exercise during the second training in Peru (held on January 23 and 24, 2023) and were finalized by the TWG.

The results of the workshop in the current situation analysis are shown in Figure 2-19, and an example of the final results of the vision and development strategy is shown in Figure 2-20.



Source: JICA Expert Team

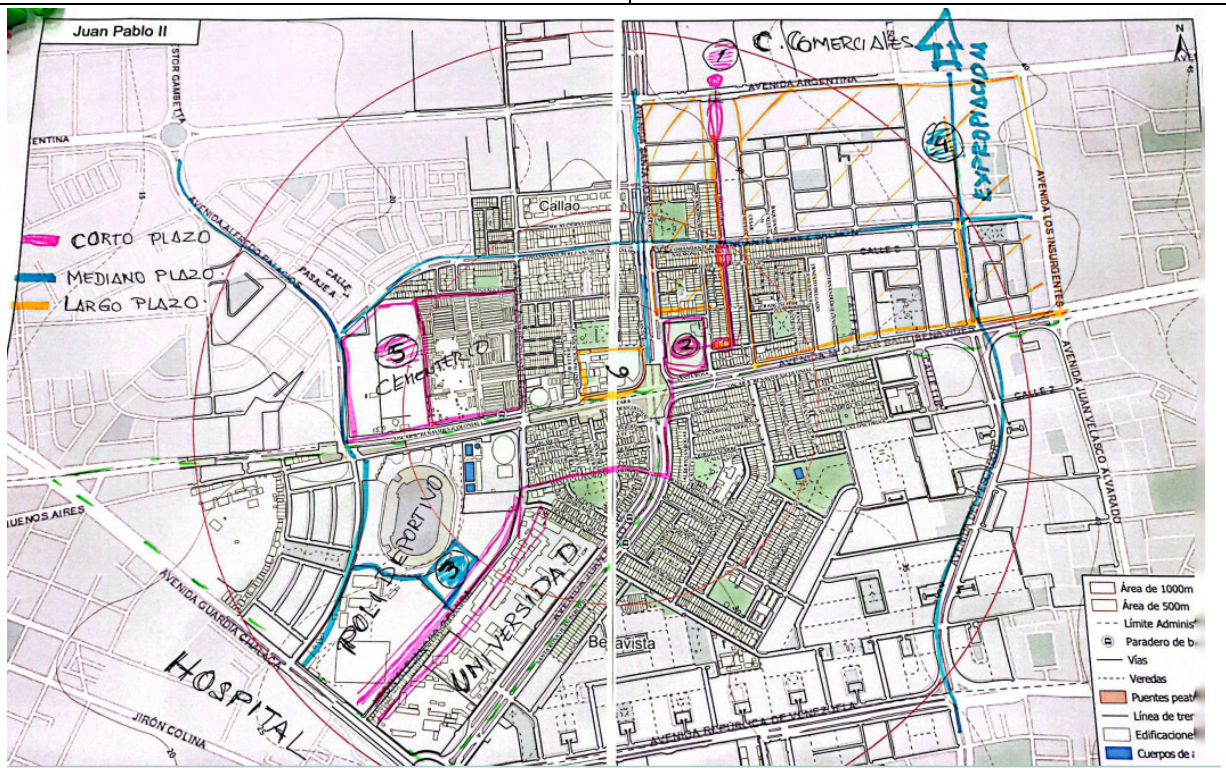
Figure 2-19 Workshops at the Second Local In-Country Training



Source: JICA Expert Team

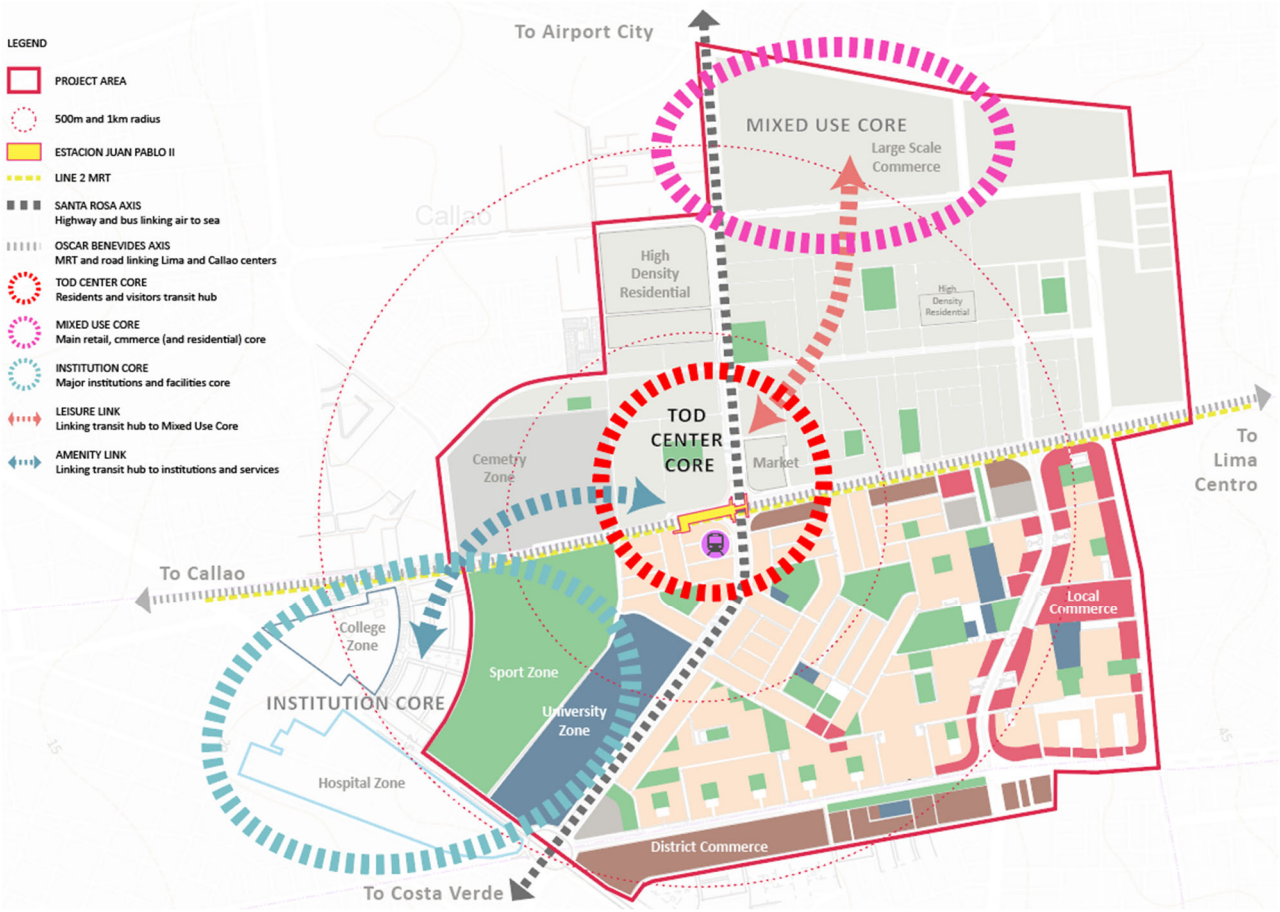
Figure 2-20 Vision and Development Strategy (Example for Chimpu Ocllo)

The concept plan preparation was conducted as a workshop-style during the third training in Peru (held on July 11 and 12, 2023) and was finalized by the TWG. The workshop result is shown in Figure 2-21, and examples of the final results of the concept plan are shown in Figure 2-22, Table 2-25, Figure 2-23, Table 2-26 and Figure 2-23.



Source: JICA Expert Team

Figure 2-21 Workshops at the Third Training in Peru



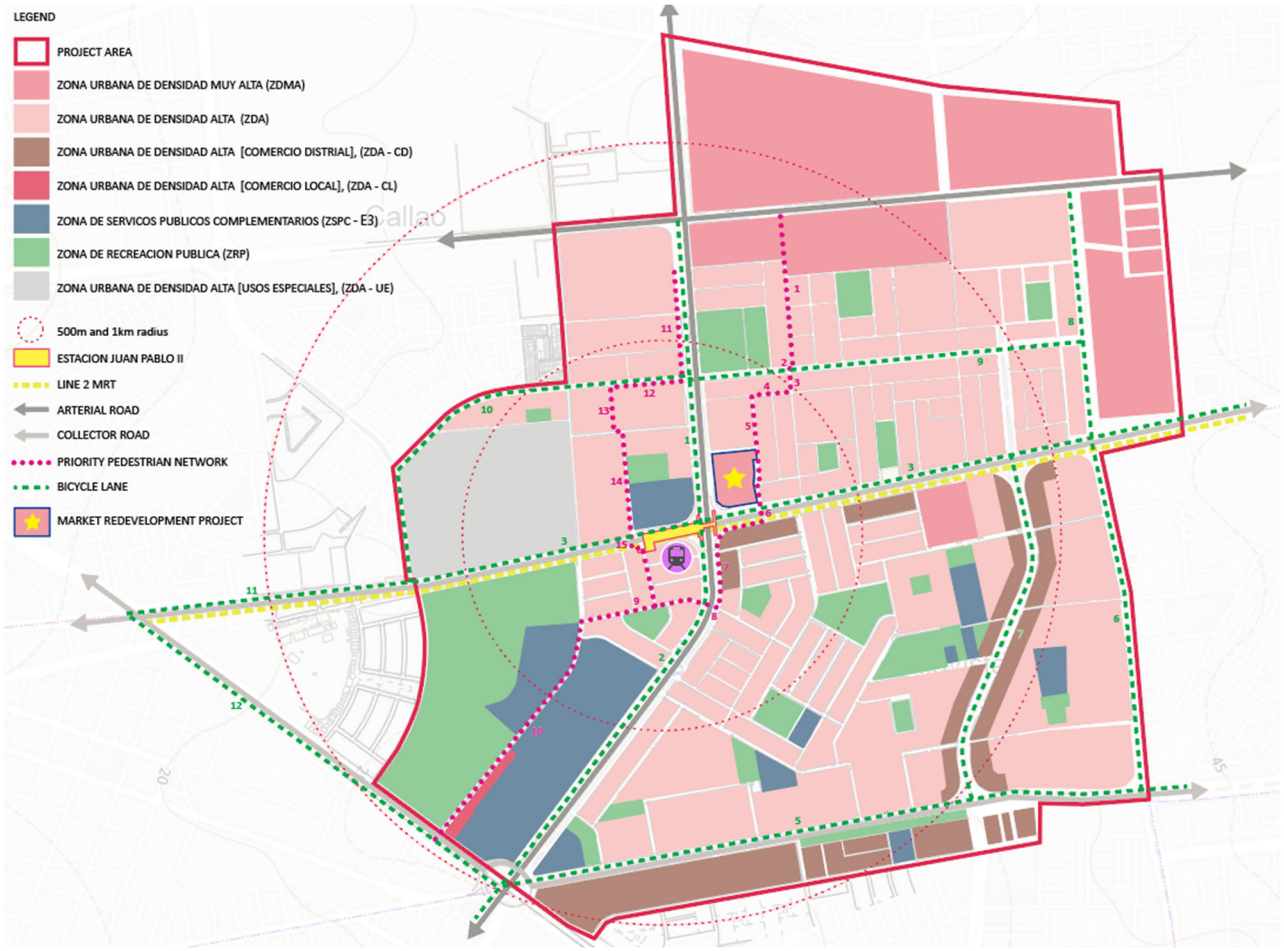
Source: JICA Expert Team

Figure 2-22 Concept Plan "Core & Link" (Example of Juan Pablo II)

Table 2-25 Approach of "Core & Link" (Example of Juan Pablo II)

TOD Center Core	TOD center core is formed around Juan Pablo II station. Enhancing transportation convenience as many people are expected to pass through and travel in this core.
Mixed-Use Core	A number of large-scale commercial/retail facilities and industrial estates are located in this core. A high-density residential complex is also located in close proximity.
Institution Core	This core comprises major institutions, including Miguel Grau Stadium, National University of Callao, a number of hospitals, as well as the San Antonio Marianistas School. A large number of users will access these institutions, especially once Juan Pablo II Station becomes operational.
Leisure Link	Av. Santa Rosa is currently a noisy and uninteresting route between the Mixed-Use Core and TOD Center Core. This link should be strengthened by creating a more pleasant and interesting walking route.
Amenity Link	Despite being the primary route between the TOD Center Core and Institution Core, Av. Juan Pablo is also a noisy and uninteresting route. A pleasant, vibrant, and inviting walking route is desired.

Source: JICA Expert Team



Source: JICA Expert Team

Figure 2-23 Concept Plan "Land Use & Network" (Example of Juan Pablo II)

Table 2-26 Approach of "Land Use & Network" (Example of Juan Pablo II)

Land Use Policy	· To introduce and enhance functions that support and enhance the current land usage and facilities with the overall TOD area, especially the revitalization of local commerce; · To promote greater use of public and non-motorized transportation; · To provide greater possibilities, flexibility, and momentum for large-scale residential and commercial developments that benefit from and support the other developments in the surrounding areas.
Network	Feeder Network · To strengthen the connection to the surrounding areas, such as the airport, Callao Historical Center, and the southern beaches. · To enhance mobility for the local residents living further from the station, i.e., the fringes of the TOD area and beyond. Pedestrian Network · Connect the TOD Center Core to the Mixed-Use Core · Provide a more pleasant and safer route to the sports facility, university, and hospitals. · Connect the TOD Center Core to the existing high-density residential development. Bicycle Network · Extend along all major arterial and collector roads, namely Av Santa Rosa and Av. Juan Pablo; · Strengthen east-west connection along Av Oscar R. Benavides and Av. Republica de Venezuela.

Source: JICA Expert Team

Based on the concept plan, TOD projects were identified in three categories: short-term, medium-term, and long-term. A detailed consideration of these TOD projects was conducted in Activity 3-6. The TOD Project List is shown in Table 2-27, and the location map of TOD projects is shown in Figure 2-24.

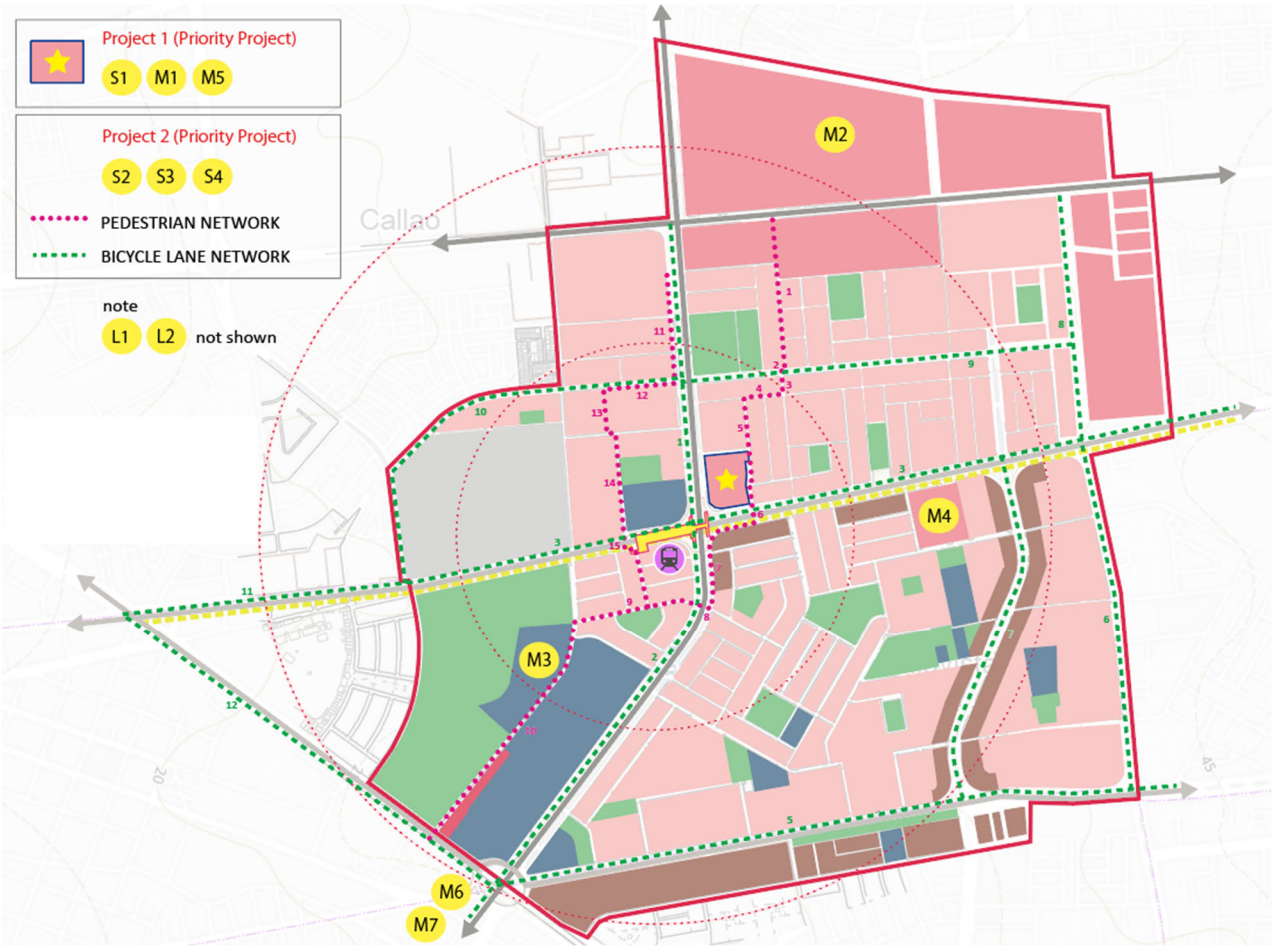
Table 2-27 TOD Project List (Example of Juan Pablo II)

Objectives		Strategies	Actions / Projects		
			Short-Term 3 years 2024 - 2027	Medium-Term 3 - 10 years 2028 - 2034	Long-Term >10 years 2034 -
1	Create a mixed-use center with retail, office, and accommodation functions, and open green recreational spaces and public amenities for the population	Create a new center by promoting optimal land utilization for viable commercial and ecological redevelopment	S1. Preliminary study and planning preparation phase for Santa Rosa Market Redevelopment Project	M1. Construction phase of Santa Rosa Market Redevelopment Project	
			S2. Encourage local commerce along prioritized smaller streets	Redevelop existing large underutilized land adjacent to the shopping centers between Santa Rosa Avenue and Argentina Avenue into public-private spaces with better access to amenities	
				M3. Redevelop the large underutilized land adjacent to the Miguel Grau Stadium into complementary spaces to the surrounding local commerce.	

Objectives		Strategies	Actions / Projects		
			Short-Term 3 years 2024 - 2027	Medium-Term 3 - 10 years 2028 - 2034	Long-Term >10 years 2034 -
				M4. Redevelop area near Colonial Avenue into attractions with better access to services	
2	Create a multimodal hub with sustainable mobility, to promote the use of public transport and NMT	Develop a station transit hub for all available public and private transport modes including NMT	S3. Development of a safe landscaped NMT network connecting key zones and developments	M5. Integrated development of a transit facility at the pilot project site and MRT station	
3	Create a road network and cultural connector that promotes tourism, and provide convenient access by airport users and visitors	Strengthen network connection between Juan Pablo II, Callao historical center, the airport, and the coast		M6. Develop a BRT/"hop-on hop-off" shuttle bus service under the Santa Rosa Hwy, joining the airport, JPII, Callao, and the M6.	
				M7. Encourage transit thru JP II by promoting 1-day or short-term tourist programs	
4	Create a safe, comfortable, and enjoyable habitat and	Provide better comfort and safety for the overall area with	S4. Activation of local streets with rejuvenated local commerce and		L1. Limit the presence of heavy industries and on-ground heavy

Objectives		Strategies	Actions / Projects		
			Short-Term 3 years 2024 - 2027	Medium-Term 3 - 10 years 2028 - 2034	Long-Term >10 years 2034 -
	destination that is more than a transit hub to improve the image of Callao	improved access to amenities	active surveillance		trucks along Santa Rosa Hwy.
					L2. Create high quality housing in the area in parallel to overall area improvement

Source: JICA Expert Team



Source: JICA Expert Team

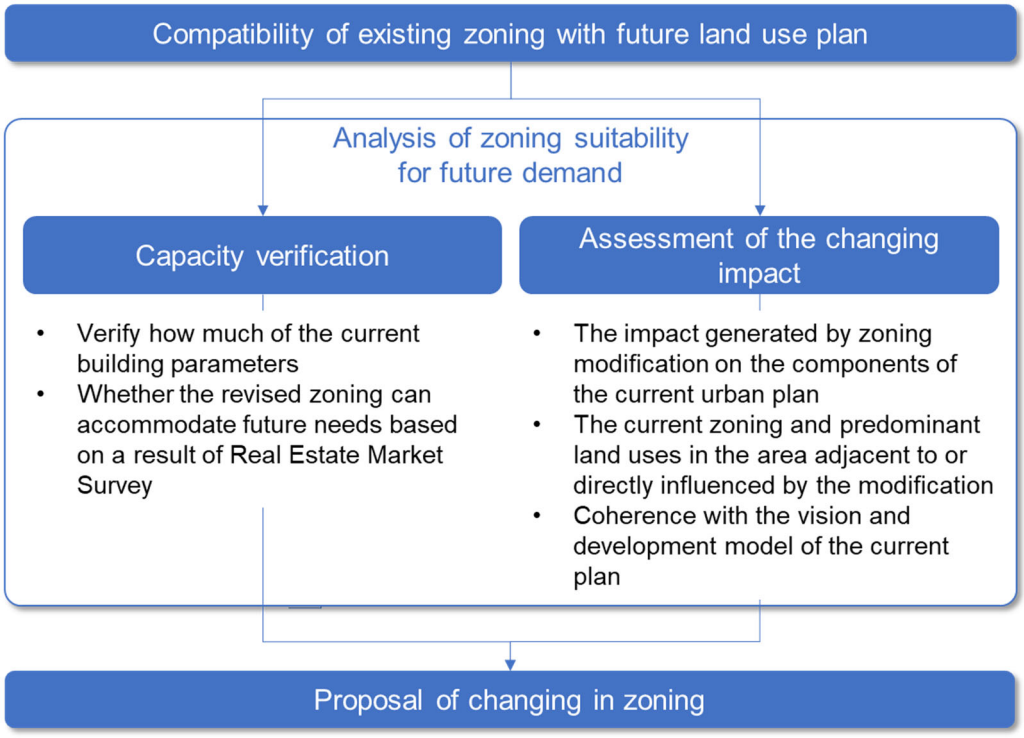
Figure 2-24 Location Map of TOD Projects (Juan Pablo II Example)

5) Activity 3-5

The main outputs, history, and issues related to "Activity 3-5. Propose any necessary modifications/changes to the zoning of the pilot project sites, based on analysis of the current zoning and regulation, paying particular attention to housing projects," are shown below.

The zoning changes were proposed based on the concept plan in Activity 3-4. The current zoning in the pilot project site is designated zoning based on the old zoning regulations (Supreme Decree No. 022-2016 - VIVIENDA). The new zoning regulations (Supreme Decree No. 012-2022 - VIVIENDA) changed the zoning classification and urban and building parameter regulations, so the proposal was based considering the new zoning regulations.

The study procedure for the zoning changes proposal is shown in Figure 2-25. The results of the real estate market survey in Activity 3-3 were used in the calculation of future floor area demand. The TWG agreed upon the urban and building parameters for future demand. The urban and building parameters were based on the zoning guidelines shared by MVCS in May 2024 and were set according to the situation in each pilot project site.



Source: JICA Expert Team

Figure 2-25 Procedures for Studying Zoning Proposals

a) Compatibility of existing zoning with future land use plan:

Since zoning plays an important role in determining land use and building capacity in these areas, it is essential for zoning to align with the direction of the vision and concept plan. Therefore, the consistency of the existing zoning with the future land use plan and the necessity of the zoning changes were confirmed.

b) Capacity verification:

The building capacity in the new zoning regulations is determined by the building coefficient (the floor area ratio (FAR) in Japan), which indicates the size of buildings allowed on the land. Based on the results of the market survey conducted in Activity 3-3, future floor demand for each use was estimated, and the study of the zoning changes proposal was conducted based on the results.

c) Assessment of the changing impact:

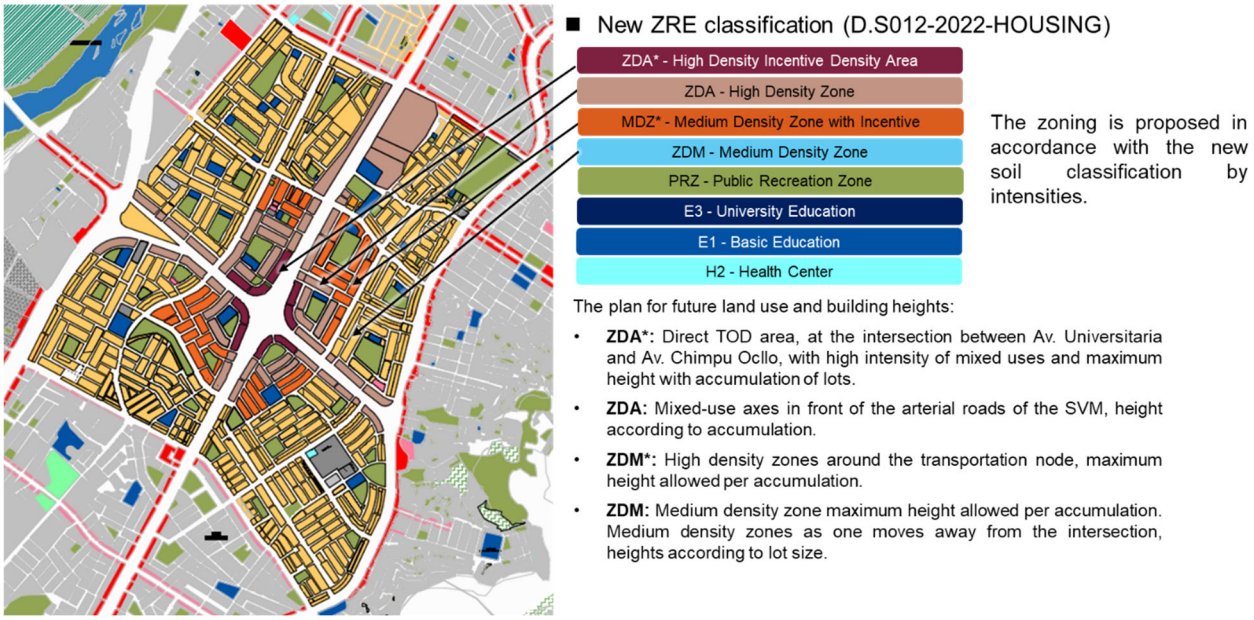
According to Supreme Decree No. 022-2022 - VIVIENDA, a request for zoning changes should be submitted to the municipality with appropriate technical assistance and an assessment of the impact on neighboring parcels in order to initiate the zoning change process. However, there is no official definition and established analysis method for the "impact." Therefore, this project analyzed the following aspects.

- The impact generated by zoning changes in the scope of study of the respective plan;
- The current zoning and predominant land uses in the area adjacent to or directly influenced by the zoning change;
- The impact of zoning changes on urban infrastructure and accessibility to the city; and
- Consistency with the vision and development model of the current plan.

d) Proposed zoning change:

Based on the above, the zoning change was proposed.

Examples of the zoning and building parameters proposed in this project are shown in Figure 2-26 and Table 2-28 .



Source: JICA Expert Team

Figure 2-26 Zoning Proposal Results (Chimpu Ocllo Example)

Table 2-28 Results of the Proposed Building Parameters (Example of Chimpu Ocllo)

Zoning / Parameter		Value
ZDA*	Minimum lot area	4500
	Buildability coefficient	12
	Maximum net density	0
	Maximum building height	20 floors
	Setback	20 m
	Minimum percentage of free area	1st to 5th floor: 22% 6th to 20th floor: 50%
	Minimum number of parking spaces	Residential: 1 lot/2family Commercial: 1 lot/50m2

Zoning / Parameter		Value
ZDA	Minimum lot area	2500
	Buildability coefficient	7
	Maximum net density	1000
	Maximum building height	14 floors
	Setback	5 m
	Minimum percentage of free area	50%
	Minimum number of parking spaces	Residential: 1 lot/2family Commercial: 1 lot/50m2

Zoning / Parameter		Value
ZDM*	Minimum lot area	1600
	Buildability coefficient	5
	Maximum net density	770
	Maximum building height	8 floors
	Setback	0 m
	Minimum percentage of free area	40%
	Minimum number of parking spaces	Residential: 1 lot/2family Commercial: 1 lot/50m2

Zoning / Parameter		Value
ZDM	Minimum lot area	200
	Buildability coefficient	3
	Maximum net density	660
	Maximum building height	5 floors
	Setback	0 m
	Minimum percentage of free area	40%
	Minimum number of parking spaces	Residential: 1 lot/2family Commercial: 1 lot/50m2

Source: JICA Expert Team

6) Activity 3-6

The main outputs, history, and issues related to Activity 3-6 "Prepare a basic development plan with the description of implementation procedure for each pilot project site" are shown below.

Based on the TOD projects for each target station developed in Activity 3-4, priority projects were selected in discussions with C/P. The perspectives for selection of priority projects are shown below.

Urgency	The necessity, criticalness, and effectiveness of the project, level of urgency in the overall project list
Ease of implementation	Relationship with stakeholders, environmental impact, and degree of changes required
Feasibility	Land ownership status, implementation cost, implementation entity structure, budget and finance and so on.

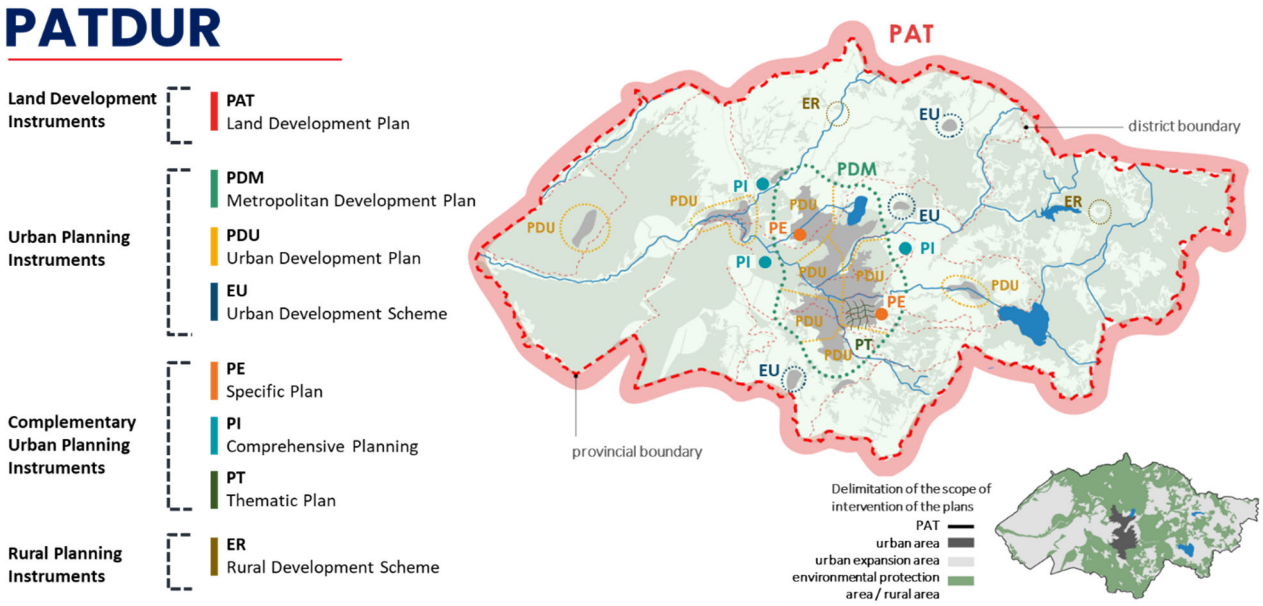
Based on the discussions in the TWG, implementation plans were formulated for the selected priority projects, including development schematic plans, implementation entities, implementation methods, and so on. An example of an implementation plan is shown in Table 2-29.

Table 2-29 Implementation Plan (Example of a Short-Term Implementation Plan in Miguel Grau)

Change Zoning and Priority Projects	Implementing Body		Stage	2024				2025				2026				2027				Remarks
	Principal	Secondary		1 Q	2 Q	3 Q	4 Q	1 Q	2 Q	3 Q	4 Q	1 Q	2 Q	3 Q	4 Q	1 Q	2 Q	3 Q	4 Q	
Change Zoning	MML	District municipality (La Victoria, El Agustino)	Concept Planning																	
			Detailed Design																	
			Implementation																	
S1: To improve the transportation operation system around Miguel Grau station	ATU	MML	Concept Planning																	
			Detailed Design																	
			Implementation																	
M6: To recover of the normative road section of Nicolás Ayllón Ave.	ATU	MML	Concept Planning																	• The detailed design will be conducted based on S1 result. • Implementation will take place over a medium-term period.
			Detailed Design																	
			Implementation																	
S6: To install security cameras and security lights.	MML	District municipality (La Victoria, El Agustino)	Concept Planning																	
			Detailed Design																	
			Implementation																	
S7: To improve area management such as local customs, beautification activities, patrols	**Inside of Historic Zone:** MML, Residents **Outside the Historic Zone:** District municipality (La Victoria, El Agustino), Residents	**Inside of Historic Zone:** - **Outside the Historic Zone:** MML	Concept Planning																	• Continued by local community
			Detailed Design																	
			Implementation																	

Source: JICA Expert Team

Initially, the activity results were envisaged to be compiled as a Ficha Tecnica or Expediente Tecnico. However, through discussions with the C/P and a review of the relevant legislation, it was concluded that these documents were only necessary for approval process of individual projects within the administration. Instead, the Specific Plan (PE) proved to be a more suitable tool for the legal approval of plans at the of district-level. Therefore, it was agreed with the C/P that the results of Activities 3-4 and 3-5, together with the entire implementation plan would be compiled into a preliminary PE, a legal urban planning document at the district-level. The position of PE within the Peruvian national urban planning system is shown in Figure 2-27, and the planning contents of PE as stipulated in Supreme Decree No. 012-2022 – VIVIENDA are detailed in Table 2-30 On the other hand, to support of Ficha Tecnica/Expediente Tecnico, the Project also assisted in filling in the required information on the priority projects according to the format of the Ficha Tecnica (05A), an administrative document within the Peruvian government. Consultations that must be coordinated within the implementing agencies, such as the budget framework, will need to be advanced by the C/P itself as the PE is finalized.



Source: Plans for Land Development, Urban Development

Figure 2-27 Positioning of PE in the Urban Planning System in Peru (Conceptual Figure)

Table 2-30 Planning Contents of PE

a)	The delimitation of the scope of intervention established in the PDM, PDU or EU.
b)	The objectives pursued by the PE, in accordance with what is established in the PDM, PDU or EU that determines its preparation.
c)	Diagnosis of the area of intervention in relation to the objectives of the PE.
d)	Intervention strategies that allow to resolve the demands of the intervention area.
e)	Zoning of the intervention area.
f)	The proposal for the implementation of the land management instruments provided for in the Law that are relevant.
g)	Risk analysis in the area of disaster risk management and adaptation to climate change, the identification of areas with environmental and ecological protection conditions; including, in addition, measures for prevention and risk reduction, as well as actions that improve environmental quality, if applicable..
h)	Location and characteristics of urban facilities and public spaces
i)	Programs and projects to be implemented and their financing
j)	PE implementation, monitoring and evaluation mechanisms

Source: Translated by JICA expert based on Supreme Decree No. 022-2022 – VIVIENDA

<Response to requests for additional support>

IMP, as responsible for PE in Lima, is coordinating the finalization of the preliminary PE created by the project. In this context, the following two requests were made to JET, and support was provided.

a) Support for incorporating the opinions of the business leaders of Damero Gamarra area regarding the finalization of Miguel Grau PE

When IMP proceeded coordination for finalization of PE in the area around Miguel Grau Station after completion of its preliminary version, IMP found that business leaders of local community organization in Damero Gamarra area, is willing to prepare PE in the area. Requested by IMP, JET assisted (1) sensibilization of TOD for the business leaders and (2) updates on the PE of Miguel Grau considering intentions of the business leaders.

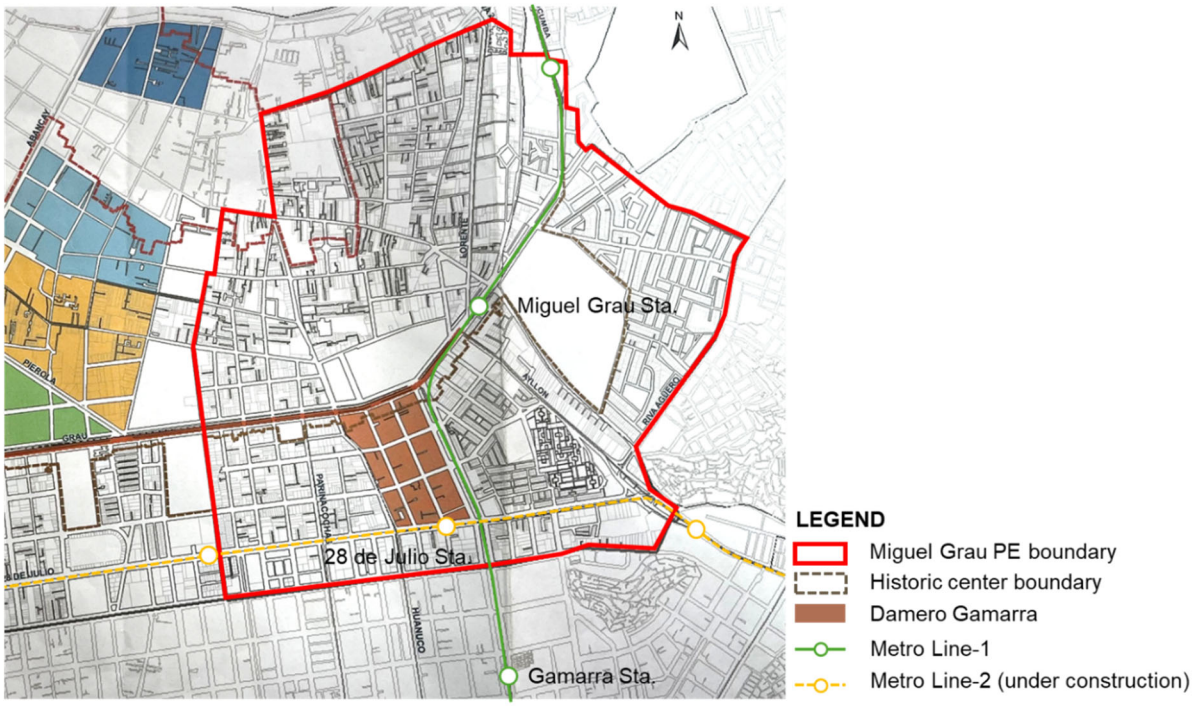
First, although IMP had carried out a hearing survey from the business leaders, following collection of information or fact-check was not realized, so that JET assisted such activities. As a result, it was clarified that, although the business leaders wants deregulation of building height and deregulation of setback regulation, the regulation of height in land use zoning is common in Lima, so that there is no specific reason to permit more height. Since it is likely that the real obstacle is not height but setback, it was recommended to IMP to find the regulation document of setback and to check if PE can modify it.

As for updates of PE, as a result of organizing the planning structure in the wide area, it is considered

that the updates of PE of Miguel Grau due to PE of Damero Gamarra is not necessary. The planning structure was organized as follows:

- The PE of Miguel Grau and the PE of Damero Gamarra will be prepared separately.
- To ensure that TOD concepts are reflected and that urban development is in organized manner, IMP will prepare a masterplan of Miguel Grau Area (tentative name).
- The masterplan will not be legally binding plan, but a conceptual plan which guides PEs in the area. Its effectiveness will be ensured by IMP, elaborating it, sharing it with stakeholders in each PE site, and referring it in approval review of PEs.

Based on the above arrangement, JET shared the TOD coordination mechanisms with not legally binding plans in Japan. Also, for sensibilization of the business leaders of Damero Gamara area about TOD, JET explained the overview of TOD in Japan, TOD coordination mechanisms with not legally binding plans, and system of private space of public access and land redevelopment.



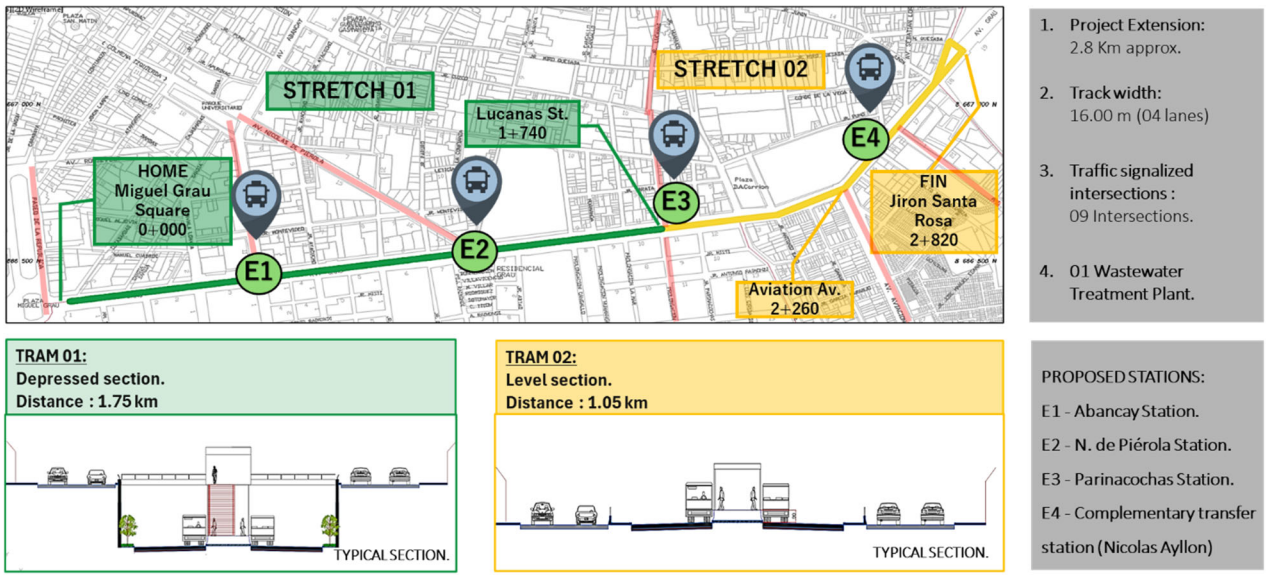
Source: Prepared by JET based on a map provided by IMP

Figure 2-28 Location of Damero Gamarra and nearby stations

b) Coordination with the Metropolitano extension plan

Regarding the extension of the Metropolitano from Centro Station to Miguel Grau Station, after the preliminary PE was created, a proposed development plan for the transfer station at Miguel Grau Station was presented by Metro line-1 concessionaire[6] and MML at the first coordination meeting held on December 27, 2024. It became clear that IMP needed to coordinate these development plans. Therefore, upon request from IMP, a review of each development plan was conducted. The outline of the extension plan is shown in Figure 2-29, and the results of the review are shown in Table 2-31 and Table 2-32.

Especially, since both plans focused on the transfer functions between Metropolitano and Metro Line-1, it was advised that consideration should be given to feeder transportation, such as local buses and taxis, for improving traffic around Miguel Grau Station. Based on these review results, the second coordination meeting is scheduled to be held.

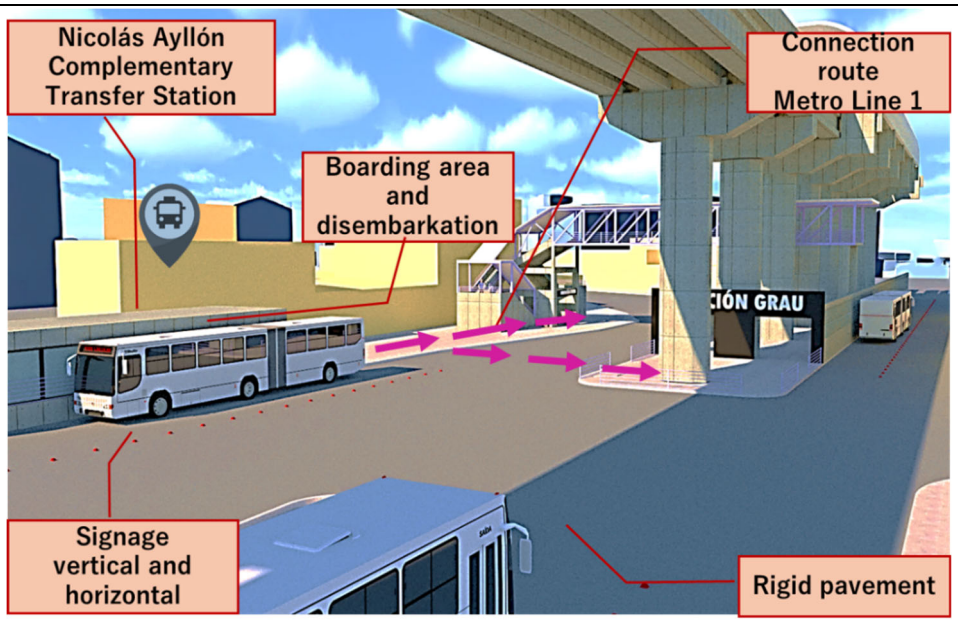
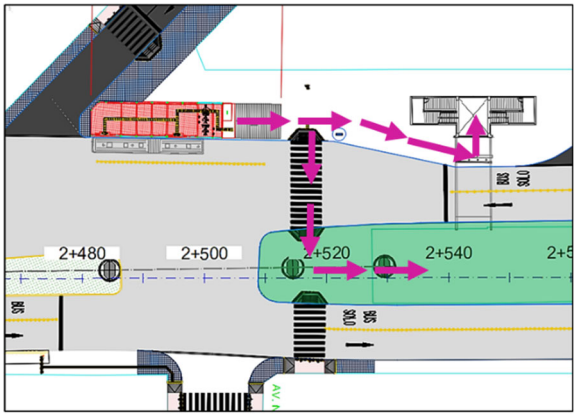
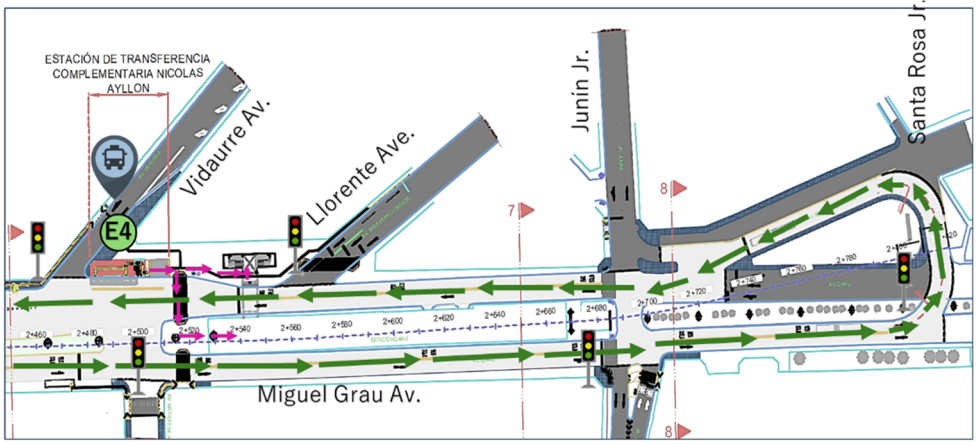


Source: Machine-translated by JET based on MML presentation material at first coordination meeting

Figure 2-29 Outline of the Metropolitano Extension Plan

[6] A package of improvements for Metro Line-1 has been prepared as the Metropolitano extension plan, and Metro Line-1 concessionaire has proposed a development plan for the transfer station at Miguel Grau Station related to this extension plan.

Table 2-31 Review Result of Transfer Station Facility Planning Proposed by MML

Outline of the plan for transfer station facility	  Pedestrian transfer flow between stations  Metropolitan flow Pedestrian transfer flow between stations Transfer station. Traffic lights Source: Machine-translated by JET based on MML presentation material at first coordination meeting

Evaluation	<Advantages of the proposal> ・ The pedestrian flow for transfer is short, and convenient (transfer walking distance is approx. 50m) ・ The development is possible within the current public land, and since it does not involve land acquisition, the plan can be realized at an early stage. <Concern of the proposal> ・ Currently, the intersection where the transfer station facility is proposed is experiencing serious congestion due to long waiting times for local buses and taxis, which is causing significant traffic jams. Therefore, improvements in operations are essential. Without such improvements, there are concerns that the traffic environment will future deteriorate. ・ The development of transfer station facilities for other feeder transportation modes, such as local buses and taxis, is additionally required. The transfer station facility is for Metropolitano and Metro Line-1, and integration with other modes has not been considered. ・ The proposed transfer station facility only has space for one train, so it is necessary to ensure alignment with the operation plan for the extended Metropolitano section. ・ Verification of the volume of user waiting space according to demand is necessary. During peak times, users cannot be accommodated within station facilities for both Metropolitano and Metro Line-1, and many users area waiting in the road space, which raises similar concerns, making the evaluation of waiting space essential.

Source: JICA Expert Team

Table 2-32 Review Result of Transfer Station Facility Planning Proposed by Metro Line-1 concessionaire

Outline of the plan for transfer station facility	
Evaluation	<Advantage of the proposal> ・ Pedestrians do not pass through the at-grade intersection and can directly access Metro Line-1 and the transfer station facility. ・ The development is possible within the current public land, and since it does not involve land acquisition, the plan can be realized at an early stage. However, as the land was used as a park, coordination with the department responsible for the park management is necessary. <Concern of the proposal> ・ Compared to the MML plan, the pedestrian flow will be longer (approx. 200m of transfer walking distance). ・ The development of transfer station facilities for other feeder transportation modes, such as local buses and taxis, is additionally required. The transfer station facility is for Metropolitano and Metro Line-1, and integration with other modes has not been considered.

	・ The proposed transfer station facility only has space for one train, so it is necessary to ensure alignment with the operation plan for the extended Metropolitano section. ・ Verification of the volume of user waiting space according to demand is necessary. During peak times, users cannot be accommodated within station facilities for both Metropolitano and Metro Line-1, and many users area waiting in the road space, which raises similar concerns, making the evaluation of waiting space essential.

Source: JICA Expert Team

7) Activity 3-7

The main outputs, history, and issues related to Activity 3-7: Analyze potential issues and challenges for implementation, as well as make some suggestions to minimize them" are shown below.

Anticipated issues and challenges in the implementation of the TOD project summarized in Activity 3-6 were compiled through discussions with the C/P. The comprehensive issues and challenges in the implementation of TOD project are shown in Table 2-33.

Table 2-33 Issues and Challenges in TOD Project Implementation

1	Planning Coordination during the TOD Planning Phase	In order to properly implement TOD projects, it is desirable to develop plans that involve a variety of stakeholders. Especially, since the land use plan defined in the TOD plan may affect land rights, it is necessary to foster understanding of the TOD plan among stakeholders and to coordinate the plan.
2	Appropriate Consensus-Building with Stakeholders	It is essential to involve the public sector, private developers, landowners, and neighborhood residents to promote understanding and consensus-building for development. In some cases, incentives need to be provided to landowners and/or a development implementer for consensus-building.
3	Smooth Financing	While it is important to attract real estate investment from the private sector, public funds are needed for infrastructure development, such as public transportation, roads, and affordable housing. Each project should consider feasible financing schemes, such as subsidies from the national government for infrastructure development, introduction of private funds through PPP, or utilization of Official Development Assistance (ODA) from other countries.
4	Update of Incentives for	In order to effectively incentivize developers and facilitate the

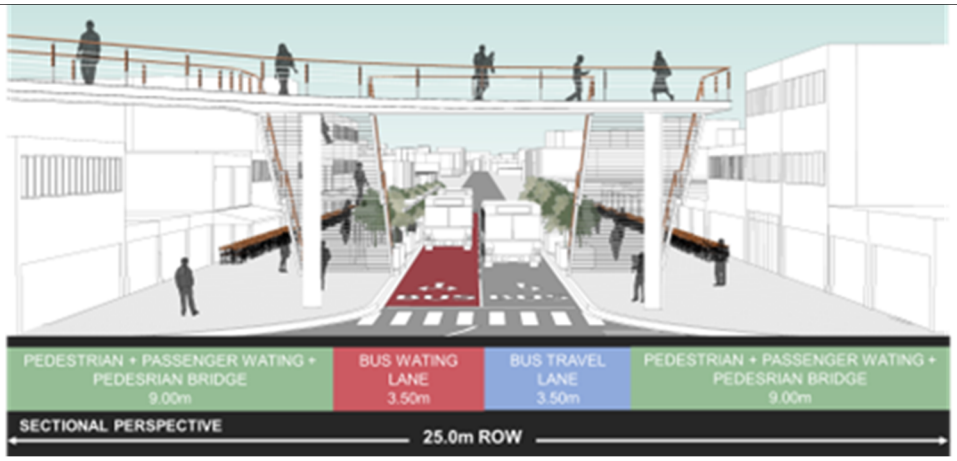
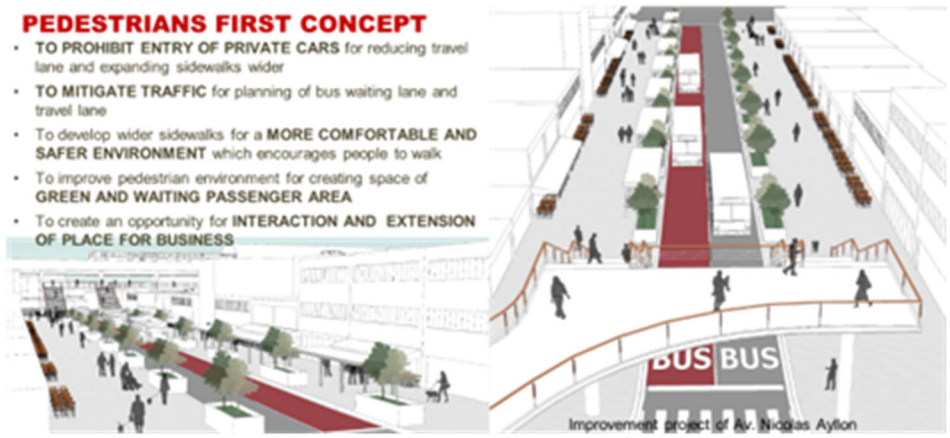
	Urban Planning System to Promote TOD	development of TOD projects, it is essential to update the urban development tools stipulated in the Sustainable Urban Development Law, since these tools have little experience in their application, they should be updated to make them user-friendly.
5	Establishment of Implementation Structure	Relevant organizations (national government, local municipalities, ATU, district municipalities, private sectors, and other beneficiaries) need to establish a structure/system that enables them to assume their respective roles and cooperate with each other regarding the realization of a TOD project and its area management for sustainable urban development. National Government: development of policies, plans, and legal system to promote TOD projects Local and District Municipalities: zoning changes, implementation of TOD projects, simplification of development procedures, provision of local taxation and non-financial incentives, and management and supervision of private development ATU: provision and management of efficient public transportation services Private sectors and other beneficiaries: implementation of real estate development in accordance with laws and regulations
6	Collaboration with Local Residents	Since TOD has a significant impact on the lives of local residents, it is necessary to provide appropriate explanations and promote consensus-building to local residents.
7	Clarification of Environmental Assessment Method	TOD is expected to involve several different components, such as roads and terminal and commercial complexes, and will be implemented by several different government agencies. Therefore, there is concern that the environmental assessment method will be unclear due to such cross sectorial and organizational characteristics. In this case, the establishment of the assessment method would be confirmed by the National Sustainable Investment Environmental Certification Service (Servicio Nacional de Certificación Ambiental para las Inversiones Sostenibles: SENACE) of the Ministry of Environment (MINAM). TOD project is most likely composed of several different sectors (ministries), such as transport and construction. Therefore, it is recommended to select coordinating agency or establish a committee to ensure consistent environmental assessments

Source: JICA Expert Team

In addition, issues of priority project implementation in each pilot project site were discussed with IMP and MPC, and shared among the relevant authorities. Examples of the issues are shown in Table 2-34 and Table 2-35.

Table 2-34 Implementation Issues in Traffic Improvement Project along Av. Nicolas Ayllon

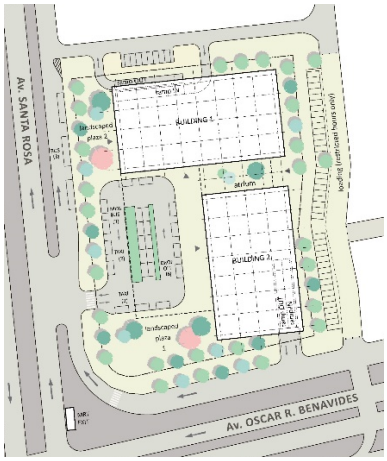
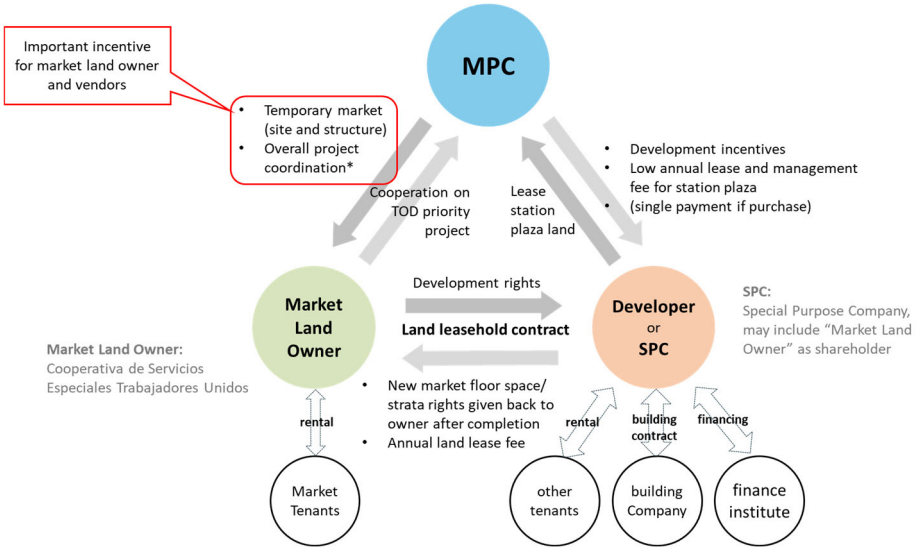
Target site	Miguel Grau (Lima)
Project name	Traffic Improvement Project along Av. Nicolas Ayllon
Current situation	· Miguel Grau is currently the fourth most used station on Metro Line 1, and is located approximately 2.5 km from the lima centro area. In addition, there are 55 local bus routes on Av. Miguel Grau, and Miguel Grau Station is a transit hub for the metro and local buses. Furthermore, under the PDM, the to-level urban plan for National Metropolis (Lima-Callao), it has been decided to extend Metropolitano (BRT) and install a cable car based on transportation node and its development potential in Miguel Grau Station Area. · Despite the fact that 55 local bus routes connect to the station on Av. Miguel Grau, and there are currently no transit facilities and designated bus stops in the area or no functioning. As a result, secondary transport, such as local buses and taxis, are not operating properly, as they can be seen stopping in the carriageway to pick up and drop off passengers and stopping for long periods of time to pick up more passengers. This is causing congestion and disrupting other traffic. In particular, on Av. Nicolas Ayllon, the carriageway is occupied by inappropriate stops by local buses. Due to these inappropriate operations, there are also issues with ensuring the safety of pedestrians. For this reason, there is a need to improve the operation of secondary transport and to develop transit facilities.
Outline of the project	· By implementing road space redesign that contributes to traffic improvements through changes to the road configuration and operation on Av. Nicolas Ayllon, a safe and smooth transit hub will be created. · Improvements to traffic congestion will be made through the establishment of bus lanes, bus stops and the appropriate operation and management of local buses. · The number of lanes will be changed (from three lanes to two lanes, restricting the entry of private cars), and the pedestrian space will be improved, as will ensure connectivity with the station, and area management will be used to improve the safety, comfort and convenience of pedestrians

Proposal images	 Planned cross-section  Visualization
Implementation issues	· Although RoW of the road has a width of 25m, due to illegal occupation of the roadside, the actual road width is approximately 15.7m, so in order to implement this project, it is necessary to resolve the illegal occupation. · Since the impact of restrictions on private cars entering the area and reduction in the number of lanes is limited to a qualitative analysis based on the current traffic volume, it is necessary to analyze and evaluate the quantitative impact. · Based on 1) and 2), a proposal has been made for a social experiment to temporarily modify the road space within the actual road width (approx. 15.7m) but it is necessary to establish a system for implementing the social experiment. · In the operation and management of local buses, it is necessary to consider operational rules, such as the management of bus stop usage, including the times of arrival and departure, and coordinate with the relevant parties. · The road administrator is MML, and ATU is in charge of managing the facilities related to local bus management and operation, so it is necessary to strengthen the cooperation between the two authorities in implementing the project.

Source: JICA Expert Team

Table 2-35 Implementation Issues in Santa Rosa Market Redevelopment Project

Target site	Juan Pablo II (Callao)
Project name	Santa Rosa Market Redevelopment Project
Current situation	· Juan Pablo II is the third station from the west terminal station on Metro Line2 and is close to Jorge Chavez International Airport. The Santa Rosa Highway, which connects the airport, Juan Pablo II Station and the coastal area with central Lima, is planned, and it is expected that this will greatly improve the transportation convenience of Juan Pablo II area. In addition, within a 1km radius of the station, there are schools, universities, stadium and other facilities that attract customers, as well as high-rise residential buildings that have been built in recent years, making it a high potential area. · Santa Rosa Market is located close to Juan Pablo II Station, but at present it is used for low-rise buildings, and given its future potential, it is an area where high density development is required. In addition, it is also necessary to improve the public transport network to the airport and surrounding urban hubs. · Basically, redevelopment projects take a long time to reach agreement with the many parties with rightsholders, but the Santa Rosa Market is owned by the association of the market, and as it is a single plot of land, so the difficulty of reaching agreement is relatively low.
Outline of the project	· While preserving the functions of the existing Santa Rosa Market, the redevelopment will promote the intensive use of the area around the station and will create commercial centrality. · By developing transit hubs between the Metro and secondary transport and reorganizing the public transport network according to the redevelopment of Santa Rosa Market, safe and smooth transit will be realized. · As this is a redevelopment project for a single plot of land, the implementation method can be a redevelopment with a leasehold agreement between MPC, market owner, and developer or SPC.

Proposal images	 Site plan  Visualization  Business scheme for redevelopment of land leasehold rights based on three-party agreement
Implementation issues	· In the proposed land leasehold rights redevelopment scheme, MPC, which is not the owner, has a difficult structure in taking the initiative, so it is necessary to consider support measures for the burden on the public side, such as project coordination, provision of various incentives, arrangement and construction of temporary market sites during construction, in promoting the project. · It is necessary to examine and evaluate the feasibility of the project based on the business scheme above (ensuring business profitability, conducting market sounding, promoting consensus building, etc.). · Coordination with Santa Rosa Highway Elevated Project and with other public transportation systems (existing bus transportation, airport shuttle bus (proposed), etc.) is necessary.

Source: JICA Expert Team

2.2 History of PDM Modification

On January 13, 2022, the three-year project activities were approved. Subsequently, JET made a proposal for the revision of the achievement indicators for each output, project purpose, and overall goal. In December 2024, after discussions with each C/P, the PDM modification policy was agreed. Finally, the revised proposal was explained to the C/P at the 4th JCC meeting and this was approved. The achievement indicators before and after the revision are as follows:

Table 2-36 Indicators of Achievement Before and After Revision

Contents		Objectively Verifiable Indicators	
		Before	After
Outputs	1. Capacity for formulation of legal framework and technical standards for the TOD approach in urban planning is strengthened.	Regulations on urban development incorporating TOD approach are proposed to the MVCS.	A proposed amendment to laws and regulations related to urban development incorporating the concept of TOD is enacted.
	2. A guideline for the implementation of TOD in the National Metropolis (Lima-Callao), which includes a roadmap, as part of urban planning and management, is developed and shared.	TOD Guideline for the National Metropolis (Lima-Callao) is accepted by the MVCS.	TOD Guideline for the National Metropolis (Lima-Callao) is approved by the MVCS.
	3. Issues and challenges in applying TOD approach in the National Metropolis (Lima-Callao) are confirmed through three pilot projects.	For each pilot project, the roles and activities of relevant organizations are decided and agreed on.	For each Pilot Project, preliminary PEs are finalized, and the roles and activity policies of relevant organizations are agreed upon.
Project Purpose	Planning and implementation capacity to realize TOD in the National Metropolis (Lima-Callao) is enhanced.	Pilot projects are approved by JCC, and the preparation works for implementation of the project are commenced.	Pilot projects are approved by JCC, and the preparation works for incorporation into legal frameworks are commenced.
Overall Goal	TOD approach is implemented as part of urban-territorial planning and management in the National	TOD approach is adopted in the urban development projects in the National	Further amendments to laws and regulations related to promoting TOD or the

Contents		Objectively Verifiable Indicators	
		Before	After
	Metropolis (Lima-Callao).	Metropolis (Lima and Callao) in addition to the pilot project.	establishment of new regulations are implemented or prepared.
			TOD Guideline for the National Metropolis (Lima-Callao) is utilized to advance the consideration of TOD, and the roadmap for promoting TOD is updated based on progress made.
			Incorporation in the PE of the TOD concept is developed in the National Metropolis (Lima-Callao) in addition to the pilot projects.

Source: JICA Expert Team

2.3 Achievements of the Project

2-3.1 Outputs and its Indicators

The achievement indicators for each output and the status are shown in Table 2-37 .

Table 2-37 Status of Achievement of Each Outcome

Expected Output	Objectively Verifiable Indicators	Status of Achievement
[Output1] Capacity for formulation of the legal framework and technical standards for the TOD approach in urban planning is strengthened.	A proposed amendment to laws and regulations related to urban development incorporating the concept of TOD is enacted.	· Comments on amendments to the Sustainable Urban Development Law and Urban Development Regulations from the perspective of TOD were drafted and submitted to the MVCS and accepted in January 2024. · In September 2024, a Legislative Decree reflecting the JET's proposed amendments to the Sustainable Urban Development Law was issued. (National Congress has passed a law granting MVCS the delegation of authority to implement amendments to the law, and the law has been effectively amended through the issuance of the Legislative Decree N°1674.)
[Output2] A guideline for the implementation of TOD in the National Metropolis (Lima-Callao), which includes a roadmap, as part of urban planning and management, is developed and shared.	TOD Guideline for the National Metropolis (Lima-Callao) is approved by MVCS.	· The TOD Guideline for the National Metropolis (Lima-Callao), developed in collaboration with the C/P, was approved at the 4th JCC meeting in January 2025, and it is planned to be published by MVCS by the end of February 2025.
[Output3] Issues and challenges in applying TOD approach in National Metropolis (Lima-Callao) are confirmed through three pilot projects.	For each Pilot Projects, preliminary PEs are finalized, and the roles and activity policies of relevant organizations are agreed.	· In the consideration of the pilot projects, a total of three domestic workshops were held to foster an understanding of the TOD approach. Through these workshops, the vision and concept plans were developed,

Expected Output	Objectively Verifiable Indicators	Status of Achievement
		and the TOD projects were identified. · Among the identified TOD projects, priority projects were selected, and implementation plans along with associated challenges were summarized for the priority projects. · The results of the above discussions were compiled into a draft of the statutory plan, PE, and the activity policies of the relevant agencies for PE approval were agreed upon. · Furthermore, Lima expresses interest in implementing this project or a follow-up project to promote the TOD plan for the pilot projects as PE.

Source: JICA Expert Team

2-3.2 Project Purpose and Its Indicators

The achievement indicators for project purpose and the status are shown in Table 2-38 .

Table 2-38 Status of Achievement of Project Purpose

Project Purpose	Objectively Verifiable Indicators	Status of Achievement
Planning and implementation capacity to realize TOD in the National Metropolis (Lima-Callao) is enhanced.	Pilot projects are approved by JCC, and the preparation works for incorporation into legal frameworks are commenced.	· The pilot projects for each of the three stations were approved at the 3rd JCC in July 2024. · A preliminary PE, which grants urban planning legal status to the pilot projects, was received by the C/P, and the work involved in the actual enactment was shared.

Source: JICA Expert Team

2.4 Others

2-4.1 Results of Environmental and Social Considerations

The Project itself does not have significant negative environmental and social impacts because it is a general capacity-building activity that does not involve construction. On the other hand, the pilot project that will be formulated by this Project may be implemented (construction) in the future. Therefore, an initial environmental examination was conducted. The occurrence of general negative environmental and social impacts, such as consideration of the historical area and noise during construction, is expected. However, these are not significant and can be mitigated or controlled appropriately by general measures.

2-4.2 Results of Considerations on Gender/Peace Building/Poverty Reduction, Disability, Disease infection, Social System, Human Wellbeing, Human Right, and Gender Equality

Peru requires public participation in the project formation and implementation stages. This process is an important opportunity to identify and reflect the needs and opinions of different types of beneficiaries, such as the disabled, the poor, and women. Public participation is required for the pilot project, however, since the pilot project formation aimed mainly to learn the TOD approach with little or unclear commitment for its implementation. For this reason, it was decided not to conduct public participation activity in order to avoid excess expectations of the beneficiaries.

A study on mobility in Lima and Callao (Reporte Urbano de Percepción Ciudadana - Edición 13) by Lima Como Vamos, a Peruvian NGO, found that residents with lower income were more likely to use public bus transportation such as Metropolitano, buses, and shared ride taxis (colectivos). The TOD approach, which improves urban functions starting from the stations and connecting points of these

modes of transportation, is in itself a consideration for the economically and socially vulnerable. In the materialization phase of the TOD plan, by incorporating barrier-free spaces that take into account the people with reduced mobility, and spaces and facilities that are designed to prevent infectious diseases and crime. The design should be prepared to be safer and more secure for the residents.

3 Results of Joint Review

3.1 Results of Review Based on DAC Evaluation Criteria

3-1.1 Relevance

The Project was appropriate and in harmony with the urban planning and urban policies of Peru, Lima, and Callao, as shown in Table 3-1. It should be noted that there were no major changes in the relevant policies of the Peruvian State that would affect the Project.

Table 3-1 Relevance

Main Viewpoints	Basis
Consistency with the partner country's development plan	In July 2021, a new Sustainable Urban Development Law No. 31313 was enacted, which sets forth a vision to promote inclusive and environmentally friendly urban development through the promotion of public transportation, and the urban planning system is being revised to realize this vision. Work is underway to revise the urban planning system to realize this vision. Furthermore, PDM in Lima (PLANMET 2040) and PDM in Callao (PDM Callao 2040) have been formulated. These urban development planning instruments have as one of their pillars the creation of a multi-polar, multi-modal city, and TOD-type development is positioned as an implementation method for this. It can be said that the project's top goal of introducing TOD in urban planning and management methods and the project's goal of introducing TOD and strengthen planning and implementation capacity to realize TOD consistently support TOD-type urban development, which is one of Peru's development plans as described above.
Consistency of development needs	In the Lima Metropolitan Development Plan 2021-2040 (PLANMET-2040) formulated by Lima, the development policies and goals for each region within the Lima-Callao Metropolitan Area, the future public transportation infrastructure plans, and the intentions of each C/P were considered in selecting the pilot project sites. These pilot project sites have not been able to utilize their development potential due to the lack of linkage between public transportation and urban development and have not been able to improve the convenience of public transportation, resulting in a situation where the expected use of public transportation is not progressing. The "results" and "activities" implemented through this project are TOD-type urban development, which is an integrated development of public transportation and urban development and are consistent with the development needs of the C/P and the community

Main Viewpoints	Basis
	and society.
Appropriateness of business plan and approach	This project was initiated based on a request from the Government of Peru to the Government of Japan for implementation as a "Technical Cooperation Project to Improve TOD Planning and Implementation Capacity of the C/P to Promote TOD in the National Metropolis (Lima-Callao)". There were no major changes[7] regarding the "Overall Goal," "Project Purpose," "Outputs," and "Activities" throughout the project, and the "Project Purpose," "Outputs," and "Activities" were achieved at a satisfactory level through the completion of all activities. In addition, the implementation of "each activity" was flexibly changed within the framework of the project period through discussions and agreements among the three parties (C/P, JICA, and JET), but these changes did not affect the achievement of the "Project Purpose" and "Outputs." It can be concluded from the above that there were no problems with the project plan and approach adopted for this project.

Source: JICA Expert Team

3-1.2 Coherence

As shown in Table 3-2, this project was aligned with the development cooperation policies of the Japanese government and JICA for Peru, coordinated with other JICA projects and support activities, and harmonized through collaboration with external organizations and international frameworks.

Table 3-2 Coherence

Main Viewpoints	Basis
Consistency with Japanese Government/JICA Development Cooperation Policy	In the Japanese Ministry of Foreign Affairs Country Development Cooperation Policy for Peru, contribution to sustainable economic development is listed as a "Basic Policy (Major Goal) of Japan's ODA. One of the "Priority Areas (Medium Objective)" is to "cooperate in the development of infrastructure such as electricity, transportation, water supply, sewage and sanitation, and agriculture, as well as in the development of economic and social infrastructure and supply chains to strengthen industrial infrastructure in order to achieve sustainable

[7] Activity 1-4 was added to the R/D signed in January 2020 at the request of the Peruvian side. Since this was an addition in the final phase of the project, it was omitted from the special specifications for this project, and it was confirmed that it will be implemented at a later date.

Main Viewpoints	Basis
	economic growth. Furthermore, the Business Development Plan establishes the "Economic and Social Infrastructure Development Program," with the program objective of "supporting the development of social infrastructure, including optimal urban transportation infrastructure, in the National Metropolis (Lima-Callao), where transportation demand is increasing. The activities of this project are consistent with the above-mentioned development cooperation policy, as it is an effort to support urban growth and transportation infrastructure improvement in the National Metropolis (Lima-Callao) as a technical cooperation project centered on TOD-type urban development that enables sustainable development.
Collaboration with other projects, support, and so on within JICA (synergies, and so on.)	JICA's previous transportation projects in Peru include the Metropolitan Area Urban Transportation Planning Study Master Plan (2005), the Metropolitan Area Urban Transportation Basic Information Collection and Verification Study (2013), and the Development of National Standards for the Seismic Structural Design of the Metro and the Lima Urban Transportation Plan (2020). This project was an effort to infuse and develop new concepts into the Public Transport Master Plan for Lima and Callao. In addition, in the public announcement of June 2024, the " Data collection study on the effects of climate change mitigation on the transformation of public transport in the metropolitan area of Lima and Callao, Peru (Study of Public Transportation System)" was posted and is currently under implementation. Since the implementing agency is ATU, one of the C/Ps of this project, and the study is being conducted with TOD in mind, it is positioned as being linked to this project.
Cooperation with organizations outside JICA and international entities Cooperation with other frameworks, and so on. (e.g., the United Nations Framework Convention on Climate Change)	The Inter-American Development Bank (IDB) provided a total of USD 750 million in loans to Metro Line 2. Part of this is a regular loan to MTC (USD 300 Million) and the rest is a non-sovereign loan to Metro Line 2 (USD 400 Million from the IDB and USD 50 Million from a Chinese Latin American fund managed by the IDB). Thus, the IDB is playing an active role in the development of public transportation. In addition, the National Platform for Sustainable Cities and Climate Change in Peru, a project co-financed by the Global Environment Facility (GEF) and the Inter-American Development Bank (IDB), was conducted. Two of the five project components include TOD concept

Main Viewpoints	Basis
	plans for multi-modal transit and urban development at the three selected stations and TOD guide focused on urban design.

Source: JICA Expert Team

3-1.3 Effectiveness

The effectiveness of the project can be considered satisfactory, since it achieved the target level for the target year as shown in Table 3-3.

Table 3-3 Effectiveness

Main Viewpoints	Basis
The degree of achievement of the target level of expected project effects in the target year.	Table 2-37 shows that each of the outputs has been achieved and that these are consistent with the project goals (Table 2-38) and led to the achievement of the target level within the target year. In addition, as described in Section 1.2 above, it is clear from the four assessment surveys conducted under the project (including Baseline Assessment) that the project has strengthened the capacity of each C/P to formulate and implement plans for the realization of TOD.

Source: JICA Expert Team

3-1.4 Efficiency

Table 3-4 shows that the project was executed efficiently and was within the planned range in terms of the project contract firm's input plan, duration, and cost. Inputs were adequate to achieve the project outcomes.

Table 3-4 Efficiency

Main Viewpoints	Basis
Input plan	For Japanese side inputs, as shown in Table 2-1, although there were changes in personnel and person-months from the start of the project, there were no significant obstacles for carrying out the activities, and resources were appropriately allocated according to the project plan., For Peruvian side inputs, as shown in On the other hand, although changes in mayors and senior directors of relevant institutions occasionally led to replacements of managerial-level C/P, there were no significant changes in the TWG members responsible for practical work. As a result, the impact on the project was minimal. Table 2-3 although there were changes in the personnel on the Peruvian side, the total number of required personnel remained unchanged from the original plan, and resources were appropriately allocated according

Main Viewpoints	Basis
	to the project plan. Based on the above, it can be said that the quantity and quality of inputs in this project were appropriate.
Project period	The project period was set for three years, from February 2022 to February 2025, and was completed as planned.
Project cost	The project was completed within the project's original planned operating cost.

Source: JICA Expert Team

3-1.5 Impact

The overall goal is "Transit Oriented Development (TOD) approach is implemented as part of urban-territorial planning and management in the National Metropolis (Lima-Callao)," and as Table 3-5 shows, by continuously implementing technology transfer in this project, there is a strong expectation of achieving the overall goal.

Table 3-5 Impact

Main Viewpoints	Basis
Prospects for achieving overall goal	Regarding the first achievement indicator of the overall goal, "Further amendments to laws and regulations related to promoting TOD or the establishment of new regulations are implemented or prepared," the recommendations made through this project have been incorporated into legal revisions, and the TOD Guideline developed in this project has been approved by MVCS. As a result, TOD-related regulations have been established or amended, and further revisions or the establishment of new regulations related to TOD are expected in the future. Regarding the second achievement indicator of the overall goal, "TOD Guideline for the National Metropolis (Lima-Callao) is utilized to advance the consideration of TOD, and the roadmap for promoting TOD is updated based on progress made." the preliminary PE are being refined for the finalization in collaboration with the C/Ps. Preparations for the development of PEs are progressing in other TOD candidate areas, and it is expected that the PEs will be approved by the respective municipalities in the future. Regarding the third achievement indicator of the overall goal, "PE incorporation of the concept of TOD is developed in the National

Main Viewpoints	Basis
	Metropolis (Lima-Callao) in addition to the pilot projects," the PDM/PDU for Lima and Callao cities are scheduled for updates, including areas covered by the PE and concept plans developed in this project. Based on the concept plans, PE, and the guideline developed in this project, TOD planning and formulation are expected to be considered and incorporated into the updated regional master plans.
Ripple effect	The establishment of a TOD JCC to coordinate the agencies involved in TOD is expected to have a ripple effect toward achieving the overall goal by providing a forum for the MVCS, which has jurisdiction over local governments, public transportation, and legal systems necessary to promote TOD, to consult on common objectives. In order to promote TOD, land readjustment, urban redevelopment, and various support projects are necessary, and it is assumed that legal enactments related to redevelopment and rezoning will become necessary in the future.
Expected medium- to long-term impact	Since this project does not include a stage where urban development itself is initiated, specific ripple effects will occur after the project is completed. Expected impacts in the medium- to long-term span include the following, which can be quantitatively evaluated through future studies of floor space, land prices, and the amount of bus throughput improvement. (1) Impact on economic development: When this pilot project is actually completed, it is expected to stimulate the economy in the target area. The potential is broad, including the expansion of commercial scale and the creation of new businesses due to the increase in the office population and residents. (2) Impact on social aspects: Positive impact: The implementation of the pilot project is expected to potentially improve public safety in the area. Furthermore, safety improvements can be expected through the development of pedestrian spaces and other measures. Negative impact: In urban development, the existence of local stakeholders is always closely watched, and it is assumed that the pilot project will be implemented after the interests of these stakeholders are reconciled and

Main Viewpoints	Basis
	a consensus is reached. No negative impacts are assumed at this point, including the above assumptions.

Source: JICA Expert Team

3-1.6 Sustainability

Table 3-6 shows that the sustainability of the project's results, both in terms of policy and institutional, organizational and systemic, and technical and financial aspects, is promising. However, frequent personnel changes, particularly among managerial staff, have occurred due to the change in administration, which may impact future project policies. In addition, it is difficult to promote infrastructure development solely from the country's own budget, and donor support and private funds must be utilized.

Table 3-6 Sustainability

Main Viewpoints	Basis
Policy and Institutional Aspects	Based on the concept plan created in this project, a TOD-type urban development system will be established as a PE, which is a legal text in Peru. In addition, Lima is in the process of revising the PDUs for each area, and the content of this project will be reflected in these revisions, thus the activities of this project will continue.
Organizational and Structural Aspects	The main C/P of this project, MVCS, as well as Lima, Callao, and ATU, all have a generally appropriate organizational structure for planning and managing urban development, including TOD. In addition, the demarcation between the C/Ps is well-defined and no major problems have been observed, as exemplified by the independence of ATU from Lima as an organization specializing in the urban transportation sector. Although the number of staff members is not sufficient, operations are generally proceeding smoothly through the use of contractual staff and other means. However, due to personnel changes associated with the change of administration, there are frequent changes in staff, especially in management, which may affect future changes in business policies. However, personnel changes and turnover in the technical staff level are rare, and therefore, if there are no changes in business policies due to changes in management, there will be little impact on the implementation of the project.

Main Viewpoints	Basis
Technical Side	Since the project purpose of "Planning and implementation capacity to realize TOD in the National Metropolis (Lima-Callao) is enhanced”., it is assumed that the C/P has the necessary technical capacity to implement the project in the future from the technology transfer through the project.
Financial Aspects	Strengthening the capacity of C/P staff itself does not require a large budget, and a certain degree of sustainability may be ensured. On the other hand, if the budget for infrastructure development to realize TOD is to be secured, it will be difficult to promote development solely from the home country's budget, and it is highly likely that donor support and private funds will be utilized. Therefore, the sustainability of TOD, including infrastructure development, cannot be said to be high, judging from the current situation.
Business Continuity Policy	In addition to the above-mentioned contents, it is important to have a long-term business continuity policy from the viewpoint of sustainable city building in implementing TOD development. It is necessary to continuously review and monitor the contents of the plans (concept plan, PE, and guideline) and monitoring indicators established in this project.

Source: JICA Expert Team

3.2 Key Factors Affecting Implementation and Outcomes

The risks and issues identified during the planning and project initiation phase and subsequent implementation phase are as follows.

3-2.1 Lack of Awareness/Knowledge of Maximizing Urban Development Potential Using Public Transportation Nodes

One of the key issues for the project's purpose of "Planning and implementation capacity to realize TOD in National Metropolis (Lima-Callao) is enhanced," is the lack of knowledge of TOD in the project's C/P agencies, which plays the role of TOD implementing agencies.

Only two lines of public transportation in the National Metropolis (Lima-Callao) have been developed: the BRT line (Metropolitano), which opened in 2010, and Metro Line 1, which opened in 2011. Since these two lines run parallel to each other without intersecting, there is currently no mass transit node in the National Metropolis (Lima-Callao). In addition, the number of users is limited due to the lack of a well-developed metro network. Currently, Metro Line 2 (subway) and part of Metro Line 4 are under construction. With such little progress in the development and expansion of public transportation network itself, interest in TOD has not been very high so far. As a result, knowledge of TOD cases and

their planning, design, and implementation methods has been less than adequate.

For the same reason as above, there was a lack of awareness that stations and their surrounding areas, which serve as nodes for public transportation, attract many users and create a bustling atmosphere and that the potential for commercial, business, and residential urban development is high. The examples of Toranomon Hills and the Akihabara redevelopment project in Japan may have deepened the understanding of this point.

3-2.2 Lack of Experience with TOD

One of the key factors related to the achievement of the goals of this project is the lack of experience with TOD. Possibly due to the common background with the above, few TOD projects have been implemented in the National Metropolis (Lima-Callao) due to the limited public transportation system in the area and the lack of nodes where multiple public transportation systems intersect. As a result, the C/P has limited practical experience in preparing, planning and designing, and implementing TOD projects.

Some examples of urban development around public transportation stations that did not necessarily aim for TOD. But have achieved a certain level of research including the location of several mid- to high-rise offices in the area surrounding the Javier Prado station on the Metropolitano line and the future Metro 4, and the planned urban development in and around the Lima Convention Center near the Cultura station in Line 1. These examples are noteworthy as examples of how to make up for the lack of experience in TOD planning in the National Metropolis (Lima-Callao).

3-2.3 Relatively Weak Japanese support for the Public Transportation Sector and Uncertainty about Future Plans

In the National Metropolis (Lima-Callao), Japanese support for the public transportation sector, such as metros, is relatively weak, and this is not the only reason, but in many cases, even when TOD plans are formulated, if there are no specific finances for the development of public transportation, the TOD plan becomes isolated, making it difficult to obtain financing for implementation.

3-2.4 Lack of Coordination Among Relevant Agencies Over TOD

In order to implement TOD, it is essential to coordinate the institutions involved, including the development of the legal system (national government), public transportation (national government, public corporations, and so on.), promotion and regulation of urban development around stations (municipalities), development of related infrastructure (national government, municipalities, and so on.), and private companies that will take the lead in urban development. In Peru, there has not been much coordination among the multiple agencies involved in organizing and coordinating what is possible in their respective roles over TOD. In addition, there are cases where public lands in the target area are not considered for TOD deployment due to different jurisdictions (e.g., military lands), even though there

are public lands in the target area. These issues need to be addressed by strengthening coordination among related organizations.

3-2.5 Replacement of Personnel

In Peru, when the head of an organization changes, it is often the case that many of the organization's senior managers who have supported the organization under the head step down. Particularly in local governments, change of the mayor often leads to a change of key personnel occupying key positions in city hall. Such events not only result in changes in the composition of the JCC and TWG, but can also impede the organizational sustainability and the accumulation of knowledge and learning necessary to promote the project.

3-2.6 Participation in Training by Non-Project Personnel

In Japan and third-country training programs, the number of participants is often limited by the funds and resource available for the training The JET were concerned that such valuable training experience would not be lost due to the participation of non-project personnel or the replacement or retirement of personnel participating in training.

3.3 Evaluation on the Results of the Project Risk Management

3-3.1 Risk Management Results

The following are the responses taken by the counterpart government and the JET to each of the risks and issues listed in 3-2.

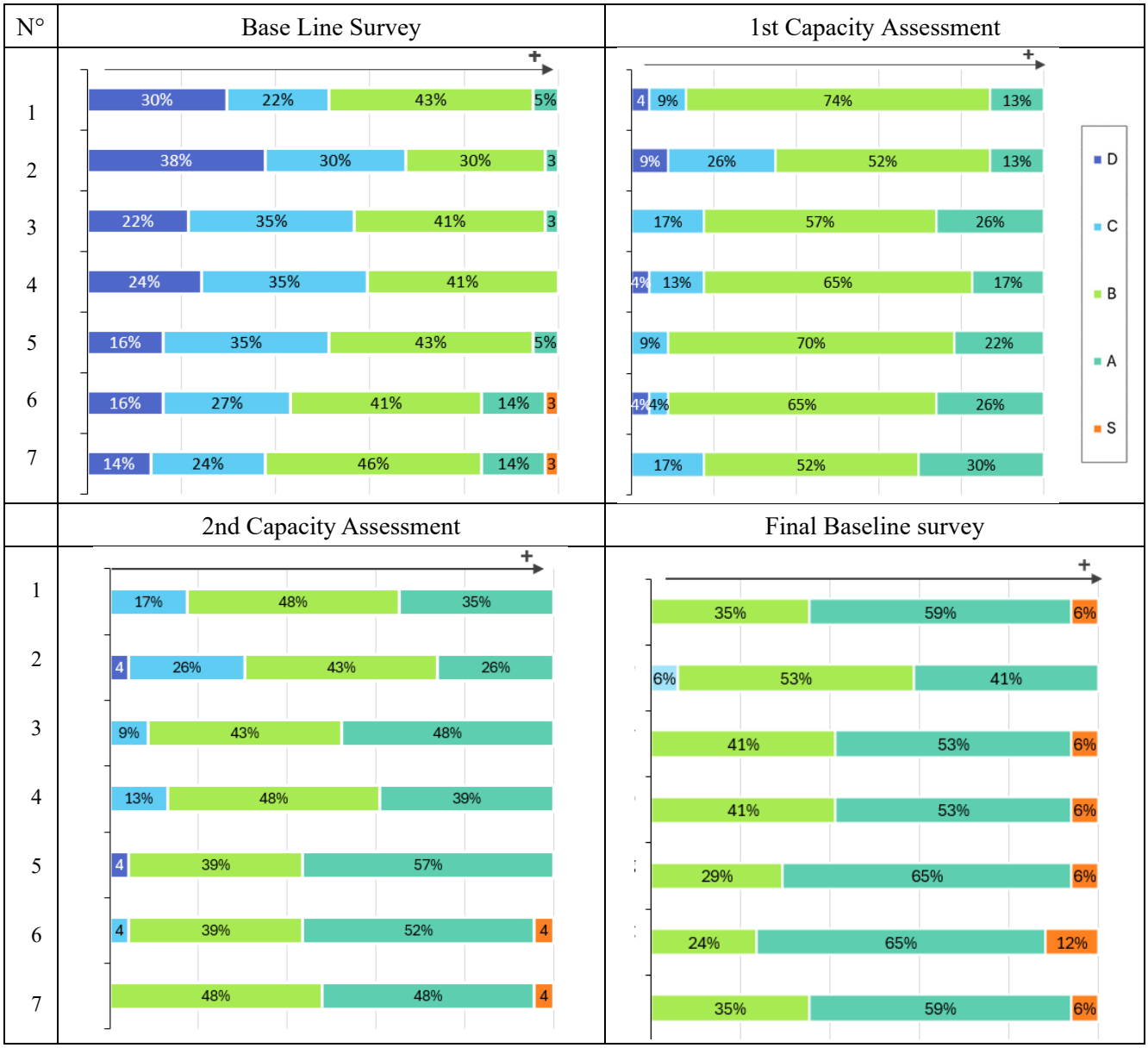
(1) Enhanced Knowledge of TOD

This project provided participants with opportunities to listen to explanations and lectures on planning, design, and implementation methods through out-of-country training, which focused on learning about TOD case studies in Japan and third countries (Colombia). Through these and other training programs, participants in this project had plenty of opportunities to gain knowledge about TOD.

The project conducted a Baseline Assessment (May/June 2022) at the start of the project, followed by a First Assessment (May/June 2023), Second Assessment (June/July 2024), and Final Baseline Survey (January/2025) as the project progressed. The results of the assessment of TOD knowledge in each survey are shown in the figure below. As shown in the figure below, when asked about their knowledge of the various phases of TOD during the Baseline Assessment, about 30% to 40% of all respondents answered that they had "no knowledge at all" or "not much knowledge." In the Final Baseline Survey, on the other hand, the majority responded that they "have some knowledge" or "have knowledge on important points" and the number of people who answered "have knowledge deeply and extensively" is increased. The JET believes that knowledge of TOD has substantially improved through this project.

In the training programs in third countries and in Japan, the JET asked each lecturer to pay attention to

the following points: "Why was the TOD project necessary? How was the project coordinated with related organizations through public-private partnerships, and so on. As a result of these preparatory activities, we were able to provide a training program with specificity, and we believe that it contributed to the improvement of knowledge on TOD.



Questions 1: Stakeholder Management, 2: Organization and Finance, 3: Design and Planning Coordination, 4: Planning Methodology, 5: TOD Case Studies, 6: Planning and Analysis Tools in Peru, 7: Legal System and Technology in Peru
Answer D: (knowledge of) nothing, C: little, B: some, A: on important points, S: deeply and extensively

Source: JICA Expert Team

Figure 3-1 Survey Results on TOD Knowledge

In each assessment, the following comments were received from C/P regarding “Enhanced Knowledge of TOD”. In particular, there are many comments about the experience of training in Japan and third country and the application of knowledge gained there, and the satisfaction level from C/P is high regarding the enhancement of their knowledge of TOD. It is hoped that after the completion of this TOD project, the lessons learned from each training will be shared within the institution and will serve as a reference when considering other TOD projects.

Table 3-7 Comments from C/P regarding enhancement knowledge of TOD

1	The knowledge acquired in the training carried out in Japan has been predominant in understanding the importance of TOD in our capital.
2	The training experience in Japan was very useful, both with the Japanese experts and the interaction with the Peruvian specialists who participated in the course.
3	We are currently actively participating in the TOD project, which will allow us to expand our knowledge of TOD.
4	We have had the experience of learning about cases in Japan, which have been explained to us in terms of methodology and their organization, about legal support.
5	It was a great cultural experience, where I was able to obtain better previous knowledge than I had.

Source: JICA Expert Team

(2) Expanding Experience with TOD

Three pilot projects were selected for this project, and preparatory and planning work was conducted based on the actual conditions of the pilot sites, including the development of TOD visions and concept plans. Even though these were simulated experiences, they were considered for metro and BRT stations that already exist or are under construction, taking into account urban functions, public facilities, and bus routes in the vicinity of the stations. The experience of preparing such TOD concept plans was considered to be a valuable experience for the project participants.

The results of the capacity assessment of the project's participants in these areas will also be presented. At baseline, more than half of the participants indicated that they had "no experience" with TOD techniques and experience, indicating a lack of experience in implementing TOD projects. This changed as they progressed through the first, second, and final baseline assessments, with the majority indicating that they had some experience.

Questions 1: Stakeholder Management, 2: Organization and Finance, 3: Design and Planning Coordination, 4: Planning Methodology, 5: TOD Case Studies, 6: Planning and Analysis Tools in Peru, 7: Legal System and Technology in Peru

Answer D: (No experience), C: 1 or 2 projects, B: 3 or 4 projects, A: 5 or 6 projects, S: 7 or more projects

Source: JICA Expert Team

Figure 3-2 TOD Technical/Experience Survey Results

For each assessment, we have received the following comments from C/P regarding the "Expanding Experience with TOD" By utilizing the knowledge gained through this TOD project, such as participation in various training programs, presentations at the TWG, and information sharing with each organizations and JET, C/P has actively engaged in tasks such as revising regulations, examining PE at pilot sites, and considering TOD approaches. As a result, C/P has expressed a high level of satisfaction with the expansion of their experience related to TOD.

Table 3-8 Comments from C/P regarding expanding experience with TOD

1	Although I have not participated directly in the execution of the development or implementation of a TOD, however, during the training process given by JICA and the group's work meetings, I have been able to obtain greater knowledge of its application and implementation, as well as being able to contribute with alternatives in the regulatory part within the process of modifying the DUS Law, so that the concepts and approaches of the TOD can be included.
2	I have experience in the development of comprehensive urban projects, and in the preparation of planning files: zoning changes and specific plans
3	It is a great experience to be part of this working group for the development of TOD pilot projects, trying to align the objectives and promote new regulations on the subject, within the limitations of the time that daily work in the office leaves us with.
4	The opportunity to work with specialists from various specialties and plan the city from another approach, where the main thing is to live in harmony with the environment, which develops multi-use urban areas, promoting innovation and the entrepreneurship of new businesses that generate meeting opportunities for diverse people. actors such as entrepreneurs, investors, government authorities, clients, etc., friendly to the environment and materializing living and working environments that require minimal transportation.
5	The opportunity to work with specialists from various specialties and plan the city from another approach, where the main thing is to live in harmony with the environment, which develops multi-use urban areas, promoting innovation and the entrepreneurship of new businesses that generate meeting opportunities for diverse people. actors such as entrepreneurs, investors, government authorities, clients, etc., friendly to the environment and materializing living and working environments that require minimal transportation.

Source: JICA Expert Team

(3) Relatively Weak Japanese Support for the Public Transportation Sector and Uncertainty About Future Plans

Delays in the development of public transportation systems, difficulties in securing financing for plan implementation, and difficulties in implementing integrated development are risks that will become clear after the completion of this project. On the other hand, in order to prevent the above-mentioned risks from emerging after the completion of the project, clarification of the roles of related agencies and preparation of a master schedule covering the candidate stations subject to TOD were conducted within the project, which were shared with the C/P through the TWG for discussion. For details, please refer to Section 4.2.

(4) Lack of Coordination of Relevant Agencies Over TOD

The MVCS, which oversees national urban planning, the ATU, which operates public transportation in the metropolitan area, and the two municipalities that make up the National Metropolis (Lima-Callao) participated in this project as C/Ps. Discussions and deliberations were held regarding the promotion of TOD. In addition, the JCC was formed as the project's decision-making body to review and approve important matters. Such cross-organizational efforts are important to resolve the lack of institutional coordination on TOD.

(5) Change in Personnel

There have been several resignations and/or changes of key personnel at the department head or section manager level due to various reasons. The replacement of personnel due to the resignation of project personnel for personal reasons is unavoidable. Therefore, in order to minimize the loss caused by the replacement of personnel, measures were taken to ensure sustainability by accumulating documents and materials related to the project for reference or by requesting personnel to ensure that they take over each other's work.

(6) Participation in training by non-project personnel

For the training in Japan and third countries, the JET attached a list of TWG and JCC members asking to select members who will participate when the letter requesting the selection of personnel for training was issued. It clearly stated that the trainee must be an active member of the TWG or JCC. However, there have been a few cases where the selected personnel did not meet the conditions.

The training participants also took measures to share information and findings from the training with TWG members through workshops, as well as to organize and accumulate learning from the training program.

3-3.2 Results of Utilization of Lessons Learned from other Projects

A project with certain similarities to this project is the Managua City Urban Development Master Plan Project (completed in December 2017) in the country of Nicaragua, Latin America. Managua is a metropolitan area of the country of Nicaragua, and in terms of regional characteristics, urbanization status, and social environment, it shows similarities with the National Metropolis (Lima-Callao), the capital of Peru, which is the target area of this study. Both metropolitan areas share common urban issues, such as the expansion of low-density urban areas and chronic traffic congestion due to the lack of public transportation, and both share similarities in terms of the necessity and effectiveness of TOD promotion. The study proposed the development of BRT as a measure to improve public transportation, which was subsequently considered for realization with IDB financing. The project also proposed TOD plans for the area along the BRT line and, as a priority project, proposed a redevelopment district to secure a concentration of commercial functions around the main BRT stations, med-rise residential areas, parks

and green spaces, transportation node functions, and pedestrian spaces, and proposed an urban planning system to realize the project.

In Nicaragua, there is no national basic law on urban planning, and urban planning and development management in Managua City are based on the city's own ordinances and guidelines. In addition, zoning and other urban development regulations are not necessarily consistent with the urban development master plan supported by JICA mentioned above, and other issues have been pointed out.

Based on the lessons learned, this project will study and propose a roadmap for TOD implementation based on the Law for Sustainable Urban Development, which is the basic law for urban development in Peru, clarifying the position of TOD in the law and utilizing the related urban development regulations, guidelines for zoning, and other systems.

3.4 Lessons Learned in this Project

3-4.1 Conducting Online Meetings with a Fixed Timeframe, Subject to Time Differences

The 14-hour time difference between Japan and Peru often makes it difficult to set up time slots for online meetings. In this project, regular meetings, such as TWG meetings, were scheduled in a fixed time slot (regular time frame) so that participants could easily find time for the meetings and communication would be smooth. Specifically, the regular time slot was set at 17:00 on Thursday, Peru time (07:00 on Friday, Japan time). These efforts resulted in active participation in the TWG.

3-4.2 Financing of TOD Implementation Phase in Parallel with Public Transportation Development

TOD development is often undertaken in tandem with public transportation development. Therefore, many successful TOD projects should have parallel financing, especially financing that is integrated with public transportation.

The project did not secure financing for the implementation phase of the TOD project. Therefore, this project provided basic study and planning support for the development of the TOD Concept Plan, focusing on institutional strengthening, including legislation and capacity-building for the realization of TOD. On the other hand, the realization of the TOD Concept Plan is expected to be financed mainly by the municipalities (Lima and Callao) or ATU, and the lack of financing for TOD implementation in the form of ODA loans or other means contributed to the lack of momentum for the realization of TOD in the project that may lead to a standstill.

To address the issues described in this section, it would be important to explore the possibility of supporting the implementation in the National Metropolis (Lima-Callao) through international financing such as yen loans after coordinating with the implementing agencies. It would also be important to promote parallel financing for capacity-building projects and implementation of TOD at major stations.

4 For the Achievement of the Project Purpose after Project Completion

4.1 Prospects for Achieving Overall Goal

4-1.1 Overall Outlook

Regarding the purpose of this project, "Planning and implementation capacity to realize TOD in the National Metropolis (Lima-Callao) is enhanced," as described in Section 3 "Result of Joint Review," the activities and outcomes of this project have contributed to a certain degree of improvement in the knowledge and experience related to TOD. A key factor in this progress has been the practical exercises conducted through various activities, such as studying case examples during the training programs in Japan and third countries, preparing and analyzing plans for pilot projects during local training and TWG sessions, and examining implementation frameworks. These activities served as a simulated approach to executing TOD projects. As for the level of achievement in strengthening implementation capacity, as mentioned above, capacity strengthening through case studies and simulated planning has been achieved, but further TOD realization will require various practical steps, such as detailed planning, coordination with relevant agencies and stakeholders, securing implementation budgets, and coordination of budget execution. Further activities are needed in these areas.

4-1.2 Improvement of the Implementation System for Urban Development Systems

As mentioned in Activity 1-2, the Peruvian legal system on urban management, which is led by the MVCS, provides for systems and mechanisms that may be useful in urban development and urban redevelopment, including TOD. On the other hand, there have been few cases of urban development that have actually utilized these systems to date. (The aforementioned San Isidro Financial Center PE is one of the few examples). There are several possible reasons for this.

First, the MVCS, which is in charge of urban development and planning in the central government, takes the lead in establishing laws and regulations, but does not formulate detailed rules and standards for technical criteria and implementation methods, so the systems and mechanisms that have been established may not have full implementation function in reality.

In many cases in Japan, when a new urban planning system is introduced, the central government (Ministry of Land, Infrastructure, Transport and Tourism (MLIT)) publicly solicits model projects, and local governments (prefectures, cities, and so on.) apply to create leading examples of implementation. In addition, when necessary, the national government often takes the initiative to study and announce rules and regulations regarding application standards and implementation methods for new systems and schemes. The establishment of such a system of initiatives for new systems and mechanisms through cooperation between the national government and local governments is worth considering for the future promotion of TOD in Peru.

In second place is financial support for projects that are considered important. Under the Peruvian legal system, matters such as urban environmental improvement are often the responsibility of local governments, and the national government is not involved in many cases. Nevertheless, it would be

worth considering the establishment of a system in which the national government provides financial support (e.g., subsidies from the national government to local governments) based on certain criteria for matters that are leading examples and will influence the future promotion and development of TOD, such as the promotion of TOD at important nodes. In the case of Japan, there is a system under which the national government or local governments subsidize land readjustment projects that meet certain requirements. Although it is unlikely to be a simple discussion, as there may be differences in attitudes toward local autonomy, it is important to consider ways to promote such important development projects through cooperation between the national and local governments.

4.2 Plan of Operation and Implementation Structure of the Peruvian Side to Achieve Overall Goal

4-2.1 Roles of Related Organizations

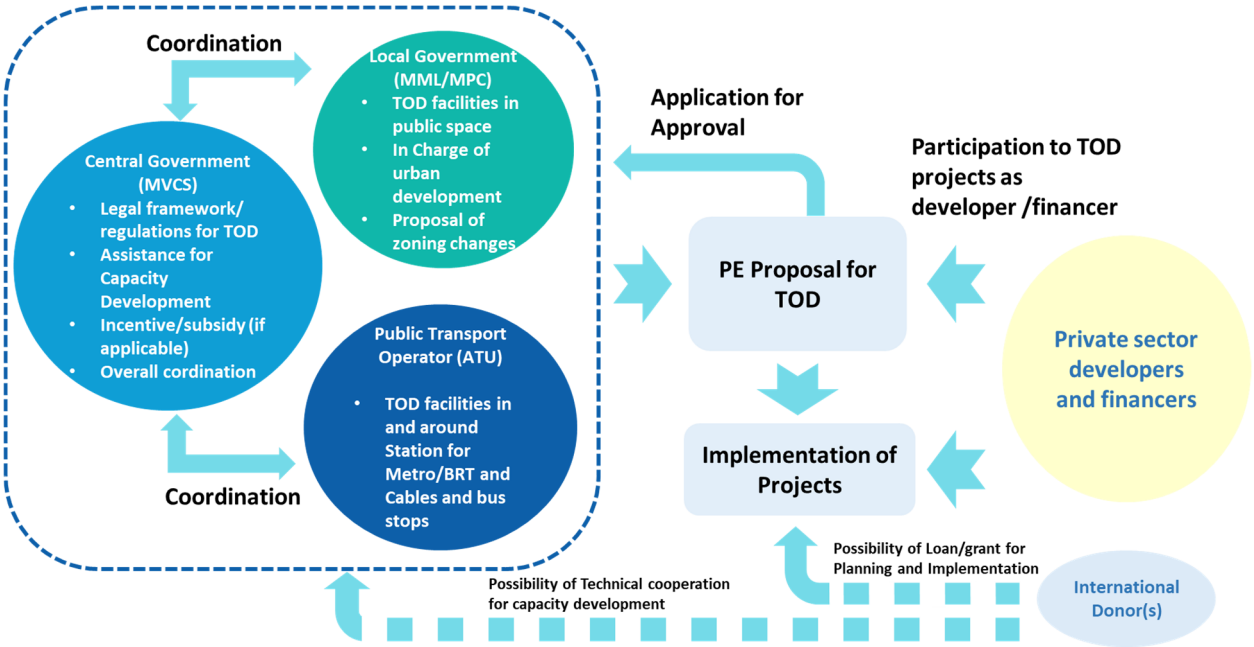
The purpose of this project, which is to "Planning and implementation capacity to realize TOD in National Metropolis (Lima-Callao) is enhanced" is guided by the roadmap that was conducted as part of the TOD Guideline. The roadmap is a compilation of what should be done, and when, by the concerned agencies, consisting of four C/Ps, for the realization and promotion of TOD.

The roadmap organizes the roles of each C/P agency with respect to the implementation of the TOD project as follows:

- Municipalities (MML, MPC): Implementation and management of TOD-related facilities on roads, parks, and, if applicable, private land, and coordination with stakeholders including landowners.
- Public Transportation (ATU): Implementation and management of TOD-related facilities such as stations at railroad and bus stations and bus stops under its jurisdiction and spaces under its direct control that are connected to these stations and bus stops.
- MVCS: Coordination of relevant agencies on TOD projects, development of implementation framework through legislation and capacity building and advice on TOD

In promoting individual TOD projects, coordination among the agencies involved is necessary. In this project, the JCC was organized with the participation of the agencies concerned and chaired by the MVCS, while coordinating the roles of local governments (MML, MPC) and public transportation agencies (ATU) in the progress of this project. It is proposed that the JCC for the Project continue to function after the completion of the Project and be reorganized as a TOD JCC.

International aid organizations are encouraged to consider requests for assistance in implementation or capacity building related to TOD.



Source: JICA Expert Team

Figure 4-1 Anticipated Roles of Each Organization in TOD Implementation

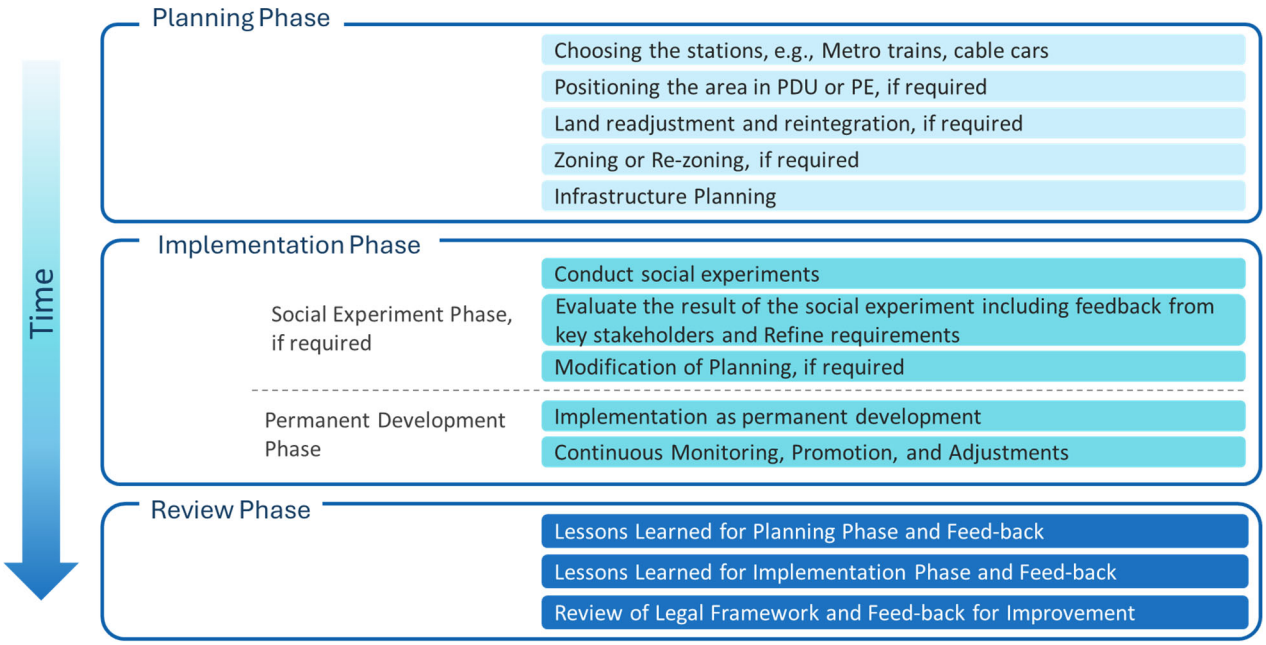
4-2.2 TOD Project Cycle

The implementation of individual TOD projects consists of three phases.

The first is the planning phase, where a question of which stations to be selected for TOD is answered and, if necessary, listed as critical nodes in PDUs, and so on, or a PE is developed. In addition, land rezoning or zoning amendments are proposed.

The second would be the implementation phase. Here, social experiments can be introduced if necessary. In this case, a part of the plan developed in the planning phase is implemented as a social experiment in a temporal manner, the results are monitored, and if necessary, the plan is revised. If social experiments are not introduced, the plan will be developed step by step based on the draft plan while coordinating with stakeholders, and the results will be monitored.

The third phase is the review phase. In this phase, the results of each of the planning and implementation phases are checked, the effects are verified, and if the intended effects were not achieved, feedback is provided on what improvements are necessary. This feedback is then accumulated and organized for reflection in the planning and implementation of the next and subsequent projects. In promoting TOD projects, it is important also to identify laws, regulations, technical standards, and so on that can be utilized, and organize and analyze points for improvement in laws, regulations, technical standards, and so on so that stronger support can be obtained.



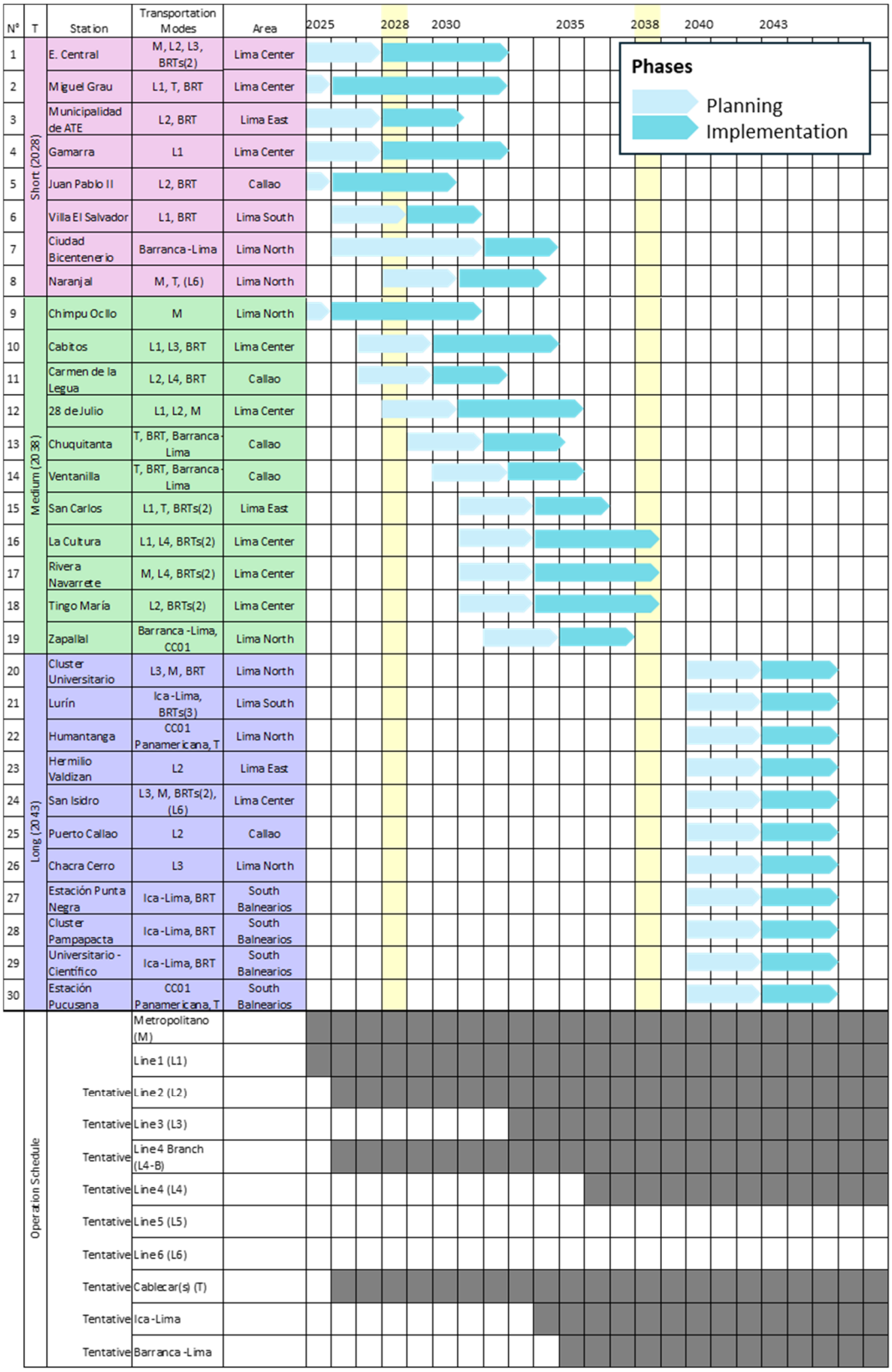
Source: JICA Expert Team

Figure 4-2 Basic Process in TOD Implementation

4-2.3 TOD Master Schedule

An example of a master schedule covering potential stations for TOD in the National Metropolis (Lima-Callao) is shown below. While there are three pilot projects planned for this project, there are several other stations that have been studied for planning with the support of other donors. The TOD Master Schedule was prepared considering the long list of stations that are candidates for TOD in other studies, including those stations with transit demand, urban development potential, and other factors.

The master schedule is subject to change depending on various factors, such as the composition of the public transportation network, the timing of its development, and the layout plan of the city center and subcenters in the urban development plan. Therefore, it is assumed that the master schedule will be revised as necessary based on changing conditions.



N°	T	Station	Transportation Modes	Area
1	Short (2028)	E. Central	M, L2, L3, BRTs(2)	Lima Center
2		Miguel Grau	L1, T, BRT	Lima Center
3		Municipalidad de ATE	L2, BRT	Lima East
4		Gamarra	L1	Lima Center
5		Juan Pablo II	L2, BRT	Callao
6		Villa El Salvador	L1, BRT	Lima South
7		Ciudad Bicentenerio	Barranca-Lima	Lima North
8		Naranjal	M, T, (L6)	Lima North
9	Medium (2038)	Chimpu Ocllo	M	Lima North
10		Cabitos	L1, L3, BRT	Lima Center
11		Carmen de la Legua	L2, L4, BRT	Callao
12		28 de Julio	L1, L2, M	Lima Center
13		Chuquitanta	T, BRT, Barranca-Lima	Callao
14		Ventanilla	T, BRT, Barranca-Lima	Callao
15		San Carlos	L1, T, BRTs(2)	Lima East
16		La Cultura	L1, L4, BRTs(2)	Lima Center
17		Rivera Navarrete	M, L4, BRTs(2)	Lima Center
18		Tingo María	L2, BRTs(2)	Lima Center
19		Zapallal	Barranca-Lima, CC01	Lima North
20	Long (2043)	Cluster Universitario	L3, M, BRT	Lima North
21		Lurín	Ica-Lima, BRTs(3)	Lima South
22		Humantanga	CC01 Panamericana, T	Lima North
23		Hermilio Valdizan	L2	Lima East
24		San Isidro	L3, M, BRTs(2), (L6)	Lima Center
25		Puerto Callao	L2	Callao
26		Chacra Cerro	L3	Lima North
27		Estación Punta Negra	Ica-Lima, BRT	South Balnearios
28		Cluster Pampapacta	Ica-Lima, BRT	South Balnearios
29		Universitario - Científico	Ica-Lima, BRT	South Balnearios
30		Estación Pucusana	CC01 Panamericana, T	South Balnearios
	Operation Schedule		Metropolitano (M)	
			Line1 (L1)	
		Tentative	Line2 (L2)	
		Tentative	Line3 (L3)	
		Tentative	Line4 Branch (L4-B)	
		Tentative	Line4 (L4)	
		Tentative	Line5 (L5)	
		Tentative	Line6 (L6)	
		Tentative	Cablecar(s) (T)	
		Tentative	Ica-Lima	
		Tentative	Barranca-Lima	

Source: JICA Expert Team

Figure 4-3 TOD Roadmap in the National Metropolis (Lima-Callao)

4.3 Recommendations for the Peruvian Side

To promote TOD, we recommend that each C/P agency take up the following actions:

4-3.1 Municipalities (MML / MPC)

(1) Participation in the Prioritizing of TOD Projects

The two municipalities that form the National Metropolis (Lima-Callao),MML and MPC, are required to strategically envision the development of public transportation and the formation and strengthening of hubs in the PDM and PDU, the comprehensive urban plans for the area, and, in close consultation with the ATU, prioritize TOD projects in the metropolitan area. The order of priority of TOD projects in the metropolitan area should be considered in close consultation with the ATU. At present, the priority of TOD projects has been organized by PMU, but periodic reviews on a multi-year basis will be necessary in response to changes in the social and economic environment.

(2) Progress of PE for TOD Projects

In the two pilot projects in Lima considered in this project, Miguel Grau and Chimpu Ocllo, TOD plans for the respective areas have been prepared as draft PEs, and meetings are being held to involve stakeholders. In Callao, a PDU including a pilot project, Juan Pablo II, is currently underway for approval in March 2025, and after the PDU is approved, a stakeholder meeting will be held to prepare for the approval of this PE.

Both municipalities will need to coordinate with ATU and MVCS to promote these PEs.

(3) Efforts to Introduce TOD Approach in other Urban Development Projects

Lima and Callao need to prepare and proceed with TOD plans other than the pilot project in a sequential manner. In addition, both municipalities may receive and review specific urban development plan proposals from the private sector, etc., and it is important to take the TOD approach into account in those proposals.

(4) Communication with Relevant Organizations

Municipalities will communicate with relevant parties in accordance with laws and regulations; it is expected that discussions over TOD will take place in the TOD-JCC in the future, and each municipality will raise issues for discussion over TOD to the TOD-JCC to obtain necessary understanding and agreement. It is also important to engage in dialogue with the private sector, so that they may participate in TOD projects.

4-3.2 Public Transportation (ATU)

(1) Participation in the Prioritizing of TOD Projects

ATU, which is responsible for public transportation in the National Metropolis (Lima-Callao), should participate in the study of the future condition and direction of mobility within the city in consideration of the contents in PMU and other plans, and participate in the prioritization of TOD projects.

(2) Implementation of Improvement in the Space Administered by ATU

In addition, the ATU is expected to work with metropolitan and district municipalities for planning and developing for the TOD project regarding improvements of station spaces (including station buildings and station buildings) located on the public transportation system (including Metro, BRT, cable cars, etc.) managed by ATU and improvements at bus stops and bus bays.

4-3.3 Ministry of Housing, Construction, and Sanitation (MVCS)

(1) Coordination among Relevant Organizations, Enhancement of Legal Framework, Advisory to Local Governments and Assistance for Capacity Development

Cooperation and coordination among local governments and organizations in charge of public transportation are essential for the promotion of TOD in the National Metropolis (Lima-Callao). MVCS, as the implementing agency of this project, is expected to play a role in coordinating relevant agencies, promoting legislation, and providing advice and capacity-building support to the local government for the promotion of TOD as the competent authority for urban planning. MVCS, as the implementing agency of this project, has been coordinating with related agencies to promote TOD. It is expected that MVCS will continue this and serve as a key player in the promotion of TOD in the National Metropolis (Lima-Callao) in the future and chair the TOD JCC, which will perpetuate the JCC for this project.

(2) Dissemination and Revision of the TOD Guideline

The TOD Guideline compiled in this project should be disseminated to relevant organizations so that they can use it as a reference book for promoting TOD projects in the future. It is also important to revise the guideline when new findings are added and to disseminate the revised version as appropriate.

(3) Dissemination of Urban Development Instruments and Increasing Application Cases

The establishment of land readjustment methods as an urban development tool is very important for the promotion of TOD in the National Metropolis (Lima-Callao). Since most of the areas around the public transportation network in the National Metropolis (Lima-Callao) are urban areas, land readjustment is not easy to be applied, but it is effective in that it can present options for consensus building. On the other hand, in the future suburban development type TOD, a large development effect can be expected from the land readjustment instrument. The land readjustment method is also proposed in the TOD project in this project. However, although land readjustment is stipulated in the Sustainable Urban

Development Act and the basic framework is in place, there are few examples of its application to date. It is necessary to establish detail regulations to support the actual implementation of the project. Therefore, it is desirable to improve and strengthen the legal framework for land readjustment to enable project implementation, taking into account the situation on the Peruvian side. In addition, redevelopment can be an effective method of reviving urban areas in the National Metropolis (Lima-Callao), where a certain level of floor space demand can be expected. Although no legal framework currently exists for urban redevelopment, it would be beneficial to consider its legal institutionalization.

4.4 Monitoring Plan from the End of the Project to Post-Project Evaluation

According to JICA guidelines, the post-project evaluation by JICA is to be conducted in principle by three years after the project completion. Since the contract for this project is due by February 2025, the post-project evaluation is expected to be conducted by February 2028. The overarching goal of this project is "the introduction of TOD as an urban planning and management tool in the National Metropolis (Lima-Callao). The TOD Guideline prepared and supported through this project has been published and utilized, the TOD concept plan and PE (preliminary version) have been developed in accordance with the PE. PE approvals have been obtained, and communications (regular meetings) among various stakeholders have been conducted. It is recommended that JICA should take the lead in monitoring and follow-up of the project to see if preparations have been made for the selection of a new project to follow the pilot projects. The following page shows the contents and items of the recommended monitoring.

Table 4-1 Draft Monitoring Plan Based on Achievement Indicators

Contents		Objectively Verifiable Indicators	Monitoring Plan	
			Midterm (or Annual) Monitoring	Post-Project Evaluation (Scheduled for February 2028)
Overall Goal	Transit Oriented Development (TOD) approach is implemented as part of urban-territorial planning and management in the National Metropolis (Lima-Callao).	Further amendments to laws and regulations related to promoting TOD or the establishment of new regulations are implemented or prepared.	· Hearings from MVCS regarding the challenges of the current legal system in promoting TOD, and the necessity for further amendments to laws and regulations or the establishment of new regulations.	· Hearings from MVCS regarding the progress of further amendments to laws and regulations related to promoting TOD, as well as the establishment and preparation of new regulations.

Contents		Objectively Verifiable Indicators	Monitoring Plan	
			Midterm (or Annual) Monitoring	Post-Project Evaluation (Scheduled for February 2028)
		TOD Guideline for the National Metropolis (Lima-Callao) is utilized to advance the consideration of TOD, and the roadmap for promoting TOD is updated based on progress made.	Hearings from MML and MPC regarding the utilization of the TOD Guideline.	Hearings from MML and MPC regarding the utilization of the TOD Guideline. Hearings from MVCS regarding the progress of the roadmap update.
		PE incorporation of the concept of TOD is developed in the National Metropolis (Lima-Callao) in addition to the pilot projects.	Hearings from MML and MPC regarding the status of the PE plan development for the pilot projects. Hearings from MML and MPC regarding the content of PE plans for new areas beyond the pilot projects (such as San Isidro, Javier Prado, and the northern Lima region).	Hearings from MML and MPC regarding the progress of project implementation in the pilot projects. Hearings from MML and MPC regarding the development status of new PE plans beyond the pilot projects.

Source: JICA Expert Team

Annex

1 Training and Seminar Achievements

1.1 International Trainings

1-1.1 First Training in Japan

The first training in Japan was conducted from April 17 to April 29, 2023, for a total of 13 days, as shown in Table 1-1.

Table 1-1 Program of First Training in Japan

Date	Time	Type	Training Contents	Location
Apr. 17 (Mon)			Flight to Japan	
Apr. 18 (Tue)	9:30 - 12:00		Briefing	Tokyo Metropolitan area
	12:00 - 14:00		Lunch	
	14:00 - 15:00	Lecture	Land readjustment projects along the Tsukuba Express Line	
	15:00 - 16:00	Lecture	Redevelopment Plan for the South and West Exits of Shinjuku Station	
Apr. 19 (Wed)	9:30 - 9:45		Transfer (JICA Tokyo → Tokyo Metropolitan Government)	Tokyo Metropolitan area
	10:00 - 12:00	Lecture	Redevelopment project utilizing land readjustment in the Akihabara Station area	
	12:00 - 13:00		Lunch	
	13:00 - 13:30		Transfer (Tokyo Metropolitan Government Office → Akihabara Station)	
	13:00 - 17:00	Inspection	Near Akihabara Station	
	17:00 - 17:30		Transfer (Akihabara Station → JICA Tokyo)	
Apr. 20 (Thu)	10:45 - 12:00		Transfer	Chiba Prefecture (Kantou area)
	12:00 - 13:30		Lunch (around Kashiwanoha Station)	
	13:30 - 16:00	Inspection	Kashiwanoha Area Urban Development (lecture and site visit)	
	16:00 - 17:15		Transfer (Kashiwanoha Station → JICA Tokyo)	

Date	Time	Type	Training Contents	Location
Apr. 21 (Fri)	9:15 - 9:45		Transfer (JICA Tokyo → Busta Shinjuku)	Tokyo Metropolitan area
	10:00 - 11:00	Lecture	Concentrated public transportation terminal (Busta Project)	
	11:00 - 12:00	Inspection	Busta Shinjuku	
	12:00 - 13:00		Lunch (Shinjuku Station area)	
	13:00 - 14:00	Inspection	Around Shinjuku Station	
	14:00 - 14:30		Transfer (Shinjuku Station → JICA Tokyo)	
	14:30 - 17:00	Discussion	Study for the direction of TOD in the Lima-Callao Metropolitan Area (1)	
Apr. 22 (Sat)			Day off	Tokyo Metropolitan area
Apr. 23 (Sun)			Day off	Tokyo Metropolitan area
Apr. 24 (Mon)	8:30 - 9:15		Transfer (JICA Tokyo → Yokohama Island Tower)	Kanagawa Prefecture (Kantou area)
	9:30 - 12:00	Lecture	Land use change in Minato Mirai and the development of the area in front of the station through collaboration among industry, government, and academia (lecture and site visit)	
	12:00 - 13:00		Lunch (around Minato Mirai Station)	
	13:00 - 13:50	Inspection	Inspection of the Minato Mirai Station area	
	13:50 - 17:30		Transfer (Yokohama → JICA Kansai)	
Apr. 25 (Tue)	9:30 - 9:45		Transfer (JICA Kansai → Kobe City Hall)	Hyogo Prefecture (Kinki area) (Hyougo)
	10:00 - 12:00	Lecture	Sannomiya Station frontage and its phased development plan	
	12:00 - 13:00		Lunch (Sannomiya Station area)	
	13:00 - 14:00	Inspection	Sannomiya Station Area	
	14:00 - 15:15		Transfer (Sannomiya Station → hotel)	

Date	Time	Type	Training Contents	Location
Apr. 26 (Wed)	10:00 - 12:00	Lecture	Station Square Redevelopment and its Planning and Implementation Process	Hyogo Prefecture (Kinki area) (Hyougo)
	12:00 - 13:00		Lunch (around Himeji Station)	
	13:00 - 15:00	Inspection	Himeji Station area	
	15:00 - 17:00	Discussion	Study (2) for the direction of TOD in the Lima-Callao Metropolitan Area	
Apr. 27 (Thu)	10:00 - 13:00		Inspection tour of Himeji City	
	13:00 - 17:00		Transfer (Himeji → JICA Tokyo)	
Apr. 28 (Fri)	09:00 - 12:00	Practice	Preparation for final presentation	Tokyo Metropolitan area
	12:00 - 13:00		Lunch	
	13:00 - 17:00	Presentation	Reflection on each plan developed in the training	
Apr. 29 (Sat)			Flight to Peru	

Source: JICA Expert Team

1-1.2 Second Training in Japan

The second Japanese training program was conducted from May 13 to May 25, 2024, for a total of 13 days, as shown in Table 1-2.

Table 1-2 Program of Second Training in Japan

Date	Time	Type	Training Contents	Location
May. 13 (Mon)			Flight to Japan	-
May. 14 (Tue)	10:00 - 12:30		Briefing	Tokyo Metropolitan area
	12:30 - 13:30		Lunch	
	13:30 - 16:30	Lecture	The effectiveness of TOD that has been implemented in Japan	
May. 15 (Wed)	9:15 - 9:45		Transfer (JICA Tokyo → Toranomon Hills)	Tokyo Metropolitan area
	10:00 - 12:00	Lecture	Overview of urban revitalization in emergency development areas and efforts related to transportation nodes and railroad development	
	12:00 - 13:30		Lunch	
	13:30 - 15:00	Lecture	Development of Toranomon Hills area	
	15:00 - 16:30	Inspection	Around Toranomon Hills Station	
	16:30 - 17:00		Transfer (Toranomon Hills → JICA Tokyo)	
May. 16 (Thu)	9:00 - 11:30		Transfer (JICA Tokyo → Utsunomiya Station area)	Tochigi Prefecture (Kantou area)
	11:30 - 13:00		Lunch	
	13:00 - 14:30	Lecture	Strategies for the formation of a compact network centered on LRT and methods of station development through public-private partnerships	
	14:30 - 15:30	Inspection	LRT ride, Utsunomiya Station area	
	15:30 - 18:00		Transfer (Utsunomiya Station area → JICA Tokyo)	

Date	Time	Type	Training Contents	Location
May. 17 (Fri)	9:00 - 9:30		Transportation (JICA Tokyo → Shibuya Station area)	Tokyo Metropolitan area
	10:00 - 12:00	Lecture	TOD commercialization measures by the Tokyu Group	
	12:00 - 13:30		Lunch	
	13:30 - 14:00		Transfer (Shibuya Station → Futakotamagawa Station)	
	14:00 - 15:30	Inspection	Around Futakotamagawa Station	
	15:30 - 17:00		Discussion on the draft implementation strategy for the pilot project (1)	
	17:00 - 17:30	Discussion	Transfer (Futakotamagawa Station area → JICA Tokyo)	
May. 18 (Sat)			Day off	Tokyo Metropolitan area
May. 19 (Sun)			Day off	Tokyo Metropolitan area
May. 20 (Mon)	08:45 - 9:15		Transfer (JICA Tokyo → Tikibune Station area)	Tokyo/ Tokyo Metropolitan Government Hiroshima Prefecture (Chuugoku area)
	09:30 - 11:00	Lecture	The Hikifune Station Area Project and the role of the Urban Renaissance Agency as the project implementing entity	
	11:00 - 12:00	Inspection	Near Hikifune Station	
	12:00 - 13:30		Lunch	
	13:30 - 14:00		Movement (Hikifune Station area → Tokyo Station)	
	14:30 - 18:30		Transfer (Tokyo Station → Hiroshima Station)	

Date	Time	Type	Training Contents	Location
May. 21 (Tue)	8:45 - 9:30		Transfer (Hiroshima Station area → Kure City Hall)	Hiroshima Prefecture (Chuugoku area)
	09:50 - 10:00		Greeting	
	10:00 - 12:00	Lecture	Bus service pattern, route reorganization, and the Transportation Terminal Improvement Project	
	12:00 - 13:30		Lunch	
	13:30 - 15:00	Inspection	Around Kure Station	
	15:00 - 15:45		Transportation (Kure City Hall → Hiroshima Station area)	
May. 22 (Wed)	9:00 - 9:45		Transfer (Hiroshima Station area → Hatsukaichi City Hall)	Hiroshima Prefecture (Chuugoku area)
	10:00 - 12:00	Lecture	Formation of an urban center through the Development of Hatsukaichi City Hall Station and the consolidation of facilities	
	12:00 - 13:30		Lunch	
	13:30 - 15:00	Inspection	Hatsukaichi Shiyakusho-mae Station area	
	15:00 - 17:00		Discussion on draft implementation strategies for the pilot project (2)	
	17:00 - 17:45		Transportation (Hatsukaichi City Hall → Hiroshima Station area)	
May. 23 (Thu)	9:00 - 9:30		Transfer (Hiroshima Station → A-bomb Dome-mae)	Hiroshima Prefecture/ Tokyo Metropolitan area
	9:30 - 10:00		Walking (around Atomic Bomb Dome)	
	10:00 - 11:00		Visit (Peace Memorial Museum)	
	11:00 - 11:30		Transfer (Atomic Bomb Dome → Hiroshima Station)	
	13:00 - 17:00		Transfer (Hiroshima Station → Tokyo Station)	
	17:00 - 17:30		Transfer (Tokyo Station → JICA Tokyo)	

Date	Time	Type	Training Contents	Location
May. 24 (Fri)	10:00 - 12:00	Practice	Preparation for final presentation	Tokyo Metropolitan area
	12:00 - 13:00		Lunch	
	13:00 - 17:00	Presentation	Reflection on each plan developed in the training	
May. 25 (Sat)			Flight to Peru	

Source: JICA Expert Team

1-1.3 Third Training in Colombia

The third training was conducted in Colombia from June 18 to 28, 2023, for a total of ten days, as shown in Table 1-3.

Table 1-3 Program of Third Training in Colombia

Jun. 19- 22, 2023 (Bogota)

Date			Time	Type	Training Contents	Location	Lecturer
1	Jun. 19	Mon.	8:20 ~ 11:25		Flight (Peru/Bogota)		
2	Jun. 20	Tue.	10:00 ~ 13:00	Lecture	Legal framework and project outcomes of urban redevelopment and land readjustment in Colombia	Conference room	National Planning Bureau
			13:00 ~ 14:00		Lunch		
			14:00 ~ 16:00	Lecture	Case study training on TOD in Colombia	Conference room	Erik Lecturer, University of the Andes
3	Jun. 21	Wed.	10:00 ~ 13:00	Lecture	Colombia's urban transportation network	Conference room	Bogota City
			13:00 ~ 14:00		Lunch		
			14:00 ~ 16:00	Inspection	Bogota's urban transportation network	BRT, International Center, etc.	
4	Jun. 22	Thu.	9:30 ~ 11:30	Inspection	Examples of re-zoning	San Rafael District	
			11:30 ~ 13:00	Lecture	MiBus Panama, the EUROCLIMA Program, and the Bike Share in Bogota	In-office Conference room	Despacio (NGO)
			13:00 ~ 14:00		Lunch		
			14:00 ~ 16:00	Discussion	Redevelopment approach in Lima Callao	Conference room	

*Local time

Jun. 23-28, 2023 (Medellín)

Date			Time	Type	Training Contents	Location	Lecturer
5	Jun. 23	Fri.	9:15 ~ 10:15		Flight (Bogota/Medellin)		
			11:00 ~ 14:00		Lunch		
			14:00 ~ 16:00	Inspection	Cable car project	Cable car	
6	Jun. 24	Sat.	~		Day off		
7	Jun. 25	Sun.			Day off		
8	Jun. 26	Mon.	10:00 ~ 13:00	Lecture	Urban transportation improvements and urban redevelopment projects in Medellín	Conference room	City of Medellín
			13:00 ~ 14:00		Lunch		
			14:00 ~ 16:00	Inspection	Urban transportation improvement and urban redevelopment project in Medellín (1)	Comuna13, Juan Bobo, escalators, green belts, etc.	
9	Jun. 27	Tue.	10:00 ~ 13:00	Inspection	Urban transportation improvement and urban redevelopment projects in Medellín (2)	Same as above	
			13:00 ~ 14:00		Lunch		
			14:00 ~ 16:00	Lecture	Urban development methods utilizing public transportation networks	Conference room	
	Jun. 28	Wed.	18:25 ~ 21:25		Flight (Medellín/Peru)		

*Local time

Source: JICA Expert Team

1.2 Domestic Seminars

1-2.1 1st Domestic Seminar

The first domestic seminar was held on June 22, 27, 28, and 30, 2022, as shown in Table 1-4.

Table 1-4 Program of the First Domestic Seminar

Jun. 22, 2022 (Small seminar)

Hours	Theme	Person in charge	Type
17:00-18:00	TOD in Japan: Its History and Practice	Prof. Norihiro Nakai (Tokyo Institute of Technology)	Online
18:00-19:00	Good examples of station plazas in Japan	Hisashi Shibata, Professor (Fukuoka University)	Online

*Local time

Jun. 27, 2022 (Day 1)

Hours	Theme	Person in charge	Type
09:00-09:30	Participant reception	JICA Expert Team	In-person and online
09:30-09:45	Opening	Koji Yamada, Project Leader	In-person and online
09:45-10:15	Legal framework and ools for sustainable urban development in Peru	Arq. Samantha Saona (MVCS)	In-person and online
10:15-10:45	TOD vision in Lima	MML	In-person and online
10:45-11:15	TOD vision in Callao	MPC	In-person and online
11:15-11:45	Urban transportation planning and TOD project in Lima Callao	ATU	In-person and online
11:45-12:15	Break		
12:15-13:00	Prospects and challenges for TOD in Metropolitan Lima-Callao	JICA Expert Team	In-person and online
13:00-14:00	Lunch		

*Local time

Jun, 28, 2022 (Day 2)

Hours	Theme	Person in charge	Type
09:00-09:30	Participant reception	JICA Expert Team	
09:30	Presentation of potential pilot project sites and selection methodology	JICA Expert Team	In-person
10:30-10:45	Break		
10:45-12:00	Discussion on the criteria for the first round of selection		In-person
12:00-13:00	Lunch		
13:00-15:00	Urban planning in Curitiba	Maria Cristina Trovao Santana, IPPUC Brazil	In-person and online
15:00-15:30	Break		
15:30-17:00	Urban development linked to BRT in Colombia	Erik Vergel Tovar Universidad de los Andes, Colombia	In-person and online

*Local time

Jun. 30, 2022 (Day 3)

Hours	Theme	Person in charge	Type
09:00-09:30	Participant reception	JICA Expert Team	
09:30-10:30	Group work: Case discussion on TOD projects	All participants	In-person
10:30-10:45	Break		
10:45-12:00	Group work: Discussion of role assignments related to TOD projects	All participants	In-person

*Local time

Source: JICA Expert Team

1-2.2 Second Domestic Seminar

The second domestic seminar was held on January 23 and 24, 2023, as shown in Table 1-5

Table 1-5 Program for the Second Domestic Seminar

Jan. 23, 2023 (Day 1)

Hours	Theme	Person in charge
14:00-14:20	Participant reception	-
14:20-14:25	Opening 1	MVCS
14:25-14:30	Opening 2	JICA Expert Team
14:30-15:00	How to address urban issues	JICA Expert Team
15:00-16:30	Group analysis of issues at each pilot project site	Each group
16:30-16:50	Break	
16:50-17:10	Preparation of presentations regarding issues at each pilot project site	
17:10-17:50	Presentation of issues at each pilot project site	Each group
17:50-18:00	Summary of Day 1 results	JICA Expert Team

*Local time

Jan. 24, 2023 (Day 2)

Hours	Theme	Person in charge
14:00-14:20	Participant reception	-
14:20-14:30	Case study on TOD vision and policy in Japan	JICA Expert Team
14:30-16:00	Group-by-group review of vision and policy at each pilot project site	Each group
16:00-16:20	Break	
16:20-16:50	Preparation of vision and policy presentations at each pilot project site	
16:50-17:50	Presentation of vision and policy at each pilot project site	Each group
17:50-18:00	Awarding of Certificate of Attendance	-
18:00-18:10	Greetings from JICA	JICA Peru

*Local time

Source: JICA Expert Team

1-2.3 Third Domestic Seminar

The third domestic seminar was held on July 11 and 12, 2023, as shown in Table 1-6.

Table 1-6 Program of the Third Domestic Seminar

Jul. 11, 2023 (Day 1)

Hours	Theme	Person in charge
8:30-8:45	Participant reception	-
8:45-8:55	Opening 1	MVCS
8:55-9:00	Opening 2	JICA Expert Team
9:00-9:45	Report on training in Colombia	Trainee (10 min * 4 C/P)
9:45-10:00	Awarding of Certificate of Attendance	JICA Expert Team
10:00-10:15	Break	
10:15-10:45	Report on training in Japan	Trainees (10 min * 3 districts)
10:45-11:00	Development vision and concept for each site	JICA Expert Team
11:00-12:00	TOD concept plan development exercise	Each group
12:00-13:30	Lunch	
13:30-14:30	TOD concept plan development exercise	Each group
14:30-14:45	Break	
14:45-16:00	TOD concept plan development exercise	Each group

*Local time

Jul. 12, 2023 (Day 2)

Hours	Theme	Person in charge
9:00-9:15	Participant reception	-
9:15-10:15	Current Survey Methodology	JICA Expert Team
10:15-10:30	Break	-
10:30-11:30	Discussion	GIS/Urban Planning Specialist
11:30-13:00	Lunch	
13:00-14:30	Preparation of group presentations	Each group
14:30-14:45	Break	
14:45-16:30	Results of group discussion (presentation and discussion)	Each group
16:30-16:45	Awarding of Certificate of Attendance	JICA Expert Team
16:45-17:00	Closing Remarks	JICA Peru

*Local time

Source: JICA Expert Team

2 TWG Presentation and Discussion Topics

The themes for each TWG's presentations and discussions from April 2022 to January 2025 are as follows. After September 22, 2022, each TWG was divided into the following groups to hold specific topics for each group.

Group 1: Legal System and Guideline

Group 2: Pilot Project in Lima

Group 3: Pilot Project in Callao

The presenters were selected from JET and C/P according to the content of each topic.

Table 2-1 Presentation and Discussion Themes for TWG

Date	Type	Theme
28/04/2022	TWG	・ Report of site visit at candidate pilot project sites
12/05/2022	TWG	・ Report of preliminary comparison of fundamental conditions among the candidate sites
26/05/2022	TWG	・ Report of the traffic condition of the candidate sites
09/06/2022	TWG	・ Approval of reorganized selection criteria
14/07/2022	TWG	・ Report of result of the 1st screening ・ Request for explanation of detailed evaluation method (carry over to next TWG)
22/07/2022	TWG	・ Approval of preliminary result of the 1st screening, including the duplicated sites with IDB/MINAM project.
11/08/2022	TWG	・ Approval of the final candidate sites short list.
22/09/2022	TWG	・ Progress of Activities for Output 1. ・ Results of the Pilot Project Selection. ・ Program of TWG
10/05/2022	TWG 2	・ Collection of economic/real estate information. ・ Collection of traffic information. ・ Collection of topographic information.
10/06/2022	TWG 3	・ Presentation of the current conditions at Juan Pablo II site. ・ Presentation of the existing conditions and plans at Juan Pablo II site.
13/10/2022	TWG 1	・ Sustainable Urban Development in Peru. ・ Legal Framework and Outcome 2. ・ Topographic survey and survey of current conditions.

Date	Type	Theme
19/10/2022	TWG 2	· Metropolitan Road System of preselected sites. · Zoning of pre-selected sites. · Existing conditions and plans in the pre-selected stations for pilot projects in Lima. · TOD Real Estate and Impact Study. · Topographic survey and survey of current conditions.
20/10/2022	TWG 3	· Market conditions near Juan Pablo II. · Topographic survey and survey of current conditions.
27/10/2022	TWG 1	· Role and Activities of a semi-public corporation in TOD - UR Agency in Japan.
10/11/2022	TWG 1	· Contributions to Regulation 2: Land management instruments.
17/11/2022	TWG 2,3	· Expressway Santa Rosa VESR. · Results of Topographic Data and TOD Components in stations. · TOD components at Juan Pablo II station.
24/11/2022	TWG 1	· Land Readjustment Projects in Japan. · Public Land Operator.
30/11/2022	TWG 2	· Components of increase in land value in sites in Lima.
01/12/2022	TWG 3	· Presentation of past projects for TOD impact assessment on land prices.
15/12/2022	TWG 2, 3	· Objectives and Schedule of the Second Training in Peru. · Training for Capacity Enhancement in TOD in Japan.
22/12/2022	TWG 1	· Comments on Regulation 3, Social Housing
12/01/2023	TWG 1,2,3	· International Good Practices of TOD. · Current issues and plans of Miguel Grau pilot project site. · Current issues and plans of Juan Pablo II pilot project site. · Current issues and plans of Miguel Grau pilot project site.
02/02/2023	TWG 1,2,3	· Table of Contents of the TOD Guide. · Recapitulation of the 2nd Training in Peru. · Regulations related to the use of transportation infrastructure.
09/02/2023	TWG 2	· Methodology and analysis for 2nd screening.
16/02/2023	TWG 1,2,3	· Progress of subcontracted Works. · Technical objectives of training in Japan. · Laboratory of Good Practices in Sustainable Mobility in Lima and Callao. · Regulation for carrying out activities other than passenger transportation in the transport and complementary infrastructure of the transportation systems managed by the ATU.

Date	Type	Theme
23/02/2023	TWG 1	· Analysis and Observations of the JICA and GEF-IDB project TOD Guidelines.
02/03/2023	TWG 1,2,3	· Work Plan for TOD guideline. · Study case for training in Japan. · About Training in Third countries.
09/03/2023	TWG1,2,3	· Setting of TOD vision and policy (1). · Comments on TOD guideline
16/03/2023	TWG 1,2,3	· Introduce case studies for Training in Japan (2) · Setting of TOD vision and policy (2).
23/03/2023	TWG 1,2,3	· Program of JCC.
30/03/2023	TWG 2,3	· Setting of TOD vision and policy (3).
11/05/2023	TWG 1,2,3	· Summary of Japan training tour. Trainees of each C/P · Report of subcontracted studies.
18/05/2023	TWG 1,2,3	· Discussion for the project outputs.
25/05/2023	TWG 2,3	· Finalization of TOD Vision
01/06/2023	TWG 2,3	· Outline of Training in Third Countries.
08/06/2023	TWG 2,3	· Discussion of TOD Area (1)
15/06/2023	TWG 2,3	· Discussion of TOD Area (2) · Report of Current Condition survey.
20/07/2023	TWG 1,2,3	· Recap of 3rd training In Peru. · Presentation of the conceptual plans of the 3 pilots. · Restarting the development of the TOD Guide.
03/08/2023	TWG 1,2,3	· Considerations of the indicator for TOD approach
17/08/2023	TWG 1,2,3	· Discussion on the indicators and monitoring system for TOD approach (1)
24/08/2023	TWG 2,3	· Finalized Concept Plan
31/08/2023	TWG1	· Comments on the TOD guideline (1) · Station plaza development in Japan
7/09/2023	TWG 1,2,3	· Transportation Master Plan under development.
14/09/2023	TWG 1,2,3	· Discussion on the indicators and monitoring system for TOD approach. · Analysis on real state demand.

Date	Type	Theme
21/09/2023	TWG 1,2,3	· Analysis of real estate demand. · Comments on TOD guideline (chapter 1) & Progress of the regulation 2.
28/09/2023	TWG 2,3	· Discussion on proposal for changes required to the zoning.
5/10/2023	TWG 1,2,3	· Consideration of the market of urban development / Example of TOD in other country.
12/10/2023	TWG 2,3	· Discussion on proposal for changes required to the zoning (2). · Selection of prioritized projects.
19/10/2023	TWG 1,2,3	· Discussion on the indicators for TOD approach. · Process for the zoning change.
26/10/2023	TWG 1	· Progress of the TOD guideline. · The Contents of Chapter 4.4 Scheme for Promotion of TOD in Peru.
9/11/2023	TWG 1,2,3	· Environmental and Social Considerations/Social Management Systems in Peru. · Metropolitan Lima Urban Development Plans.
16/11/2023	TWG 1,2	· The Contents of Chapter 4.4 Scheme for Promotion of TOD in Peru. · Development Plan at Miguel Grau St.
30/11/2023	TWG 1	· Review of TOD guideline (1).
14/12/2023	TWG 1	· Review of TOD guideline (2).
21/12/2023	TWG 1,2,3	· Discussion on implementation plan. · Discussion on TOD legal framework. · Project schedule for next year.
18/01/2024	TWG 1,2,3	· Discussion on implementation plan. · Outline of second training in Japan.
25/01/2023	TWG 1,2,3	· Discussion on roadmap (transport). · Discussion on roadmap (Urban planning).
8/02/2024	TWG 1	· Modification of Chapter 4 of Guideline and JICA Team's Comments on the SUD Law and Decree. · Progress of TOD Guideline - Status and Upcoming Tasks.
14/3/2024	TWG 1,2,3	· Key Points of PRED System · Finalization of Implementation Plan
4/4/2024	TWG 1,2,3	· Planning for Environmental and Social Consideration · Result of TOD Guideline Review & Direction for Finalization
11/4/2024	TWG 1,2,3	· Discussion on Road map (2)
18/4/2024	TWG 1,2,3	· Status of Response to the Comments from JICA team on the Regulations

Date	Type	Theme
25/4/2024	TWG 1,2,3	· Discussion on the roadmap (3) · Presentation of practical cases for the 2nd training in Japan (1)
9/5/2024	TWG 1,2,3	· Finalization of the Implementation Plan (2) · Presentation of practical cases for the 2nd training in Japan (1)
30/5/2024	TWG 1,2,3	· Presentation on the second training in Japan (participants)
6/6/2024	TWG 2,3	· Project Cost Estimate
13/6/2024	TWG 1	· Confirmation of items on the TOD Guideline
24/10/2024	TWG1	· TOD Guideline
26/12/2024	TWG1,2,3	· Roadmap
30/1/2025	TWG1,2,3	· Practices of land readjustment and real estate integration in Colombia

Source: JICA Expert Team

3 Legislative Decree on Amendments to the Law on Sustainable Urban Development (No. 1674)

Based on the proposal for legal amendments to the Law on Sustainable Urban Development implemented in the Project, the amendment of its law (No. 1674) was promulgated in September 2024. The main amendments are outlined in the table below.

Table 3-1 Contents of modification of the law on sustainable urban development

TEXT OF LAW NO. 31313, SUSTAINABLE URBAN DEVELOPMENT LAW - DUS	PROPOSED AMENDING TEXT *Red texts: proposed modification	NEW TEXT MODIFIED BY DL N°1674
Article 1.- Purpose of the Law The purpose of the Sustainable Urban Development Law, hereinafter the Law, is to establish the principles, guidelines, instruments and norms that regulate territorial development, urban planning, use and management of urban land, in order to achieve sustainable urban development, understood as the optimization of land use in harmony with the common good and the general interest. the implementation of mechanisms that promote disaster risk management and vulnerability reduction, enabling and rational land use; as well as equitable and accessible development and the reduction of urban and territorial inequality, and the conservation of the cultural patterns, knowledge and lifestyles of traditional	**Proposed by MVCS:.** **Article 1.- Purpose of the Law** The purpose of the Law on Sustainable Urban Development, hereinafter referred to as the Law, is to establish the principles, guidelines, instruments and norms that regulate territorial development, urban planning **of cities and rural planning of the country's population centers, as well as** the use and management of **land**, in order to achieve **sustainable development of cities and population centers.** understood as the optimization of land use in harmony with the common good and the general interest, the implementation of mechanisms that promote disaster risk management and the reduction of	Same as proposed.

TEXT OF LAW NO. 31313, SUSTAINABLE URBAN DEVELOPMENT LAW - DUS	PROPOSED AMENDING TEXT *Red texts: proposed modification	NEW TEXT MODIFIED BY DL N°1674
communities and indigenous or native peoples.	vulnerability, the habilitation and rational occupation of land; as well as equitable and accessible development and the reduction of urban and territorial inequality, and the preservation of the cultural patterns, knowledge and lifestyles of traditional communities and indigenous or native peoples.	
Article 4. Guiding Principles and Approaches to Territorial Conditioning, Urban Planning and Sustainable Urban Development 4.1. Territorial development, urban planning and sustainable urban development are based on the following principles: a. Equality: Sustainable urban development and access to social housing take into account the principle of equality and non-discrimination, understood as valuing differences. b. Habitability: To have a safe and healthy habitat, with respect for the dignity and collective well-being of the inhabitants of cities and population centers.		

TEXT OF LAW NO. 31313, SUSTAINABLE URBAN DEVELOPMENT LAW - DUS	PROPOSED AMENDING TEXT *Red texts: proposed modification	NEW TEXT MODIFIED BY DL N°1674
c. Spatial and territorial equity: Equal opportunities, access to services and urban conditions for a dignified life, consolidating the equitable distribution of urban benefits and burdens derived from urban planning and urban development, and urban interventions. d. Effective citizen participation: The intervention, coordination and active cooperation of civil society in decision-making and the co-production of urban plans, urban management, monitoring and accountability, at the different scales of urban planning defined by this Law. e. Diversity: Recognition and respect for the country's geographic, economic, institutional, intergenerational, social, ethnic, linguistic, linguistic Recognition and respect for the country's geographic, economic, institutional, intergenerational, social, ethnic, linguistic, gender and cultural differences or diversities in urban planning actions and in the instruments adopted in plans and proposals,	**Proposed by MVCS:.** d. Effective citizen participation: The intervention, agreement and active cooperation of civil society **in the processes of preparation and updating of the Plans for Territorial Conditioning, Urban and Rural Development, urban management, monitoring and accountability in accordance with the planning scope included in this Law.** (...)"	Same as proposed.

TEXT OF LAW NO. 31313, SUSTAINABLE URBAN DEVELOPMENT LAW - DUS	PROPOSED AMENDING TEXT *Red texts: proposed modification	NEW TEXT MODIFIED BY DL N°1674
seeking to eliminate any form of discrimination. form of discrimination. f. Sustainability: The rational management of natural resources and the quality of life of citizens, without compromising the satisfaction of needs, health and safety of future generations in an environment of no lesser quality than that of the current generation. health and safety of future generations in an environment of no lesser quality than that of the current generation. g. Resilience: The strengthening of the capacity of cities or population centers to resist, absorb, adapt and recover, in a timely and efficient manner, from the effects of hazards that could affect them, in such a way as to preserve and restore their basic structures and functions. The strengthening of the capacity of cities or population centers to resist, absorb, adapt and recover, in a timely and efficient manner, from the effects of hazards that could affect them, in such a way as to		

TEXT OF LAW NO. 31313, SUSTAINABLE URBAN DEVELOPMENT LAW - DUS	PROPOSED AMENDING TEXT *Red texts: proposed modification	NEW TEXT MODIFIED BY DL N°1674
preserve and restore their basic structures and functions. h. Disaster risk management: The rigorous observance of risk estimation, prevention and control, as well as the reduction of vulnerability to hazards in cities and population centers; as well as as preparedness, response, rehabilitation and reconstruction in the event of disasters with the participation of the . of the first response entities that have been assigned the functions of execution and coordination in risk prevention and vulnerability reduction tasks . i. Safeguarding of the heritage: The promotion, revaluation and social enjoyment of the cultural, natural and landscape heritage in all areas of the territory. i. Safeguarding of the heritage: The promotion, revaluation and social enjoyment of the cultural, natural and landscape heritage in all areas of the territory. j. Sustainable mobility: The guarantee of access to the opportunities offered by the city, through public, intermodal, accessible and		

TEXT OF LAW NO. 31313, SUSTAINABLE URBAN DEVELOPMENT LAW - DUS	PROPOSED AMENDING TEXT *Red texts: proposed modification	NEW TEXT MODIFIED BY DL N°1674
affordable transportation systems, with planned strategies and measures, adequate infrastructure that generates lower environmental costs and meets the needs of age, gender and physical condition of citizens. of age, gender and physical condition of citizens. k. Productivity and competitiveness: The promotion of urban development aimed at fostering the development of competitive cities and population centers with adequate provision of services, which become centers that attract population and generate economic activities, based on the productive Productivity and competitiveness: The promotion of urban development aimed at fostering the development of competitive cities and population centers with adequate provision of services, which become centers that attract population and generate economic activities, based on the productive vocations of the area of territory on which they are		

TEXT OF LAW NO. 31313, SUSTAINABLE URBAN DEVELOPMENT LAW - DUS	PROPOSED AMENDING TEXT *Red texts: proposed modification	NEW TEXT MODIFIED BY DL N°1674
located and on the responsible use of its natural resources. l. Social cohesion: The creation of a sense of belonging that promotes trust and bonding among citizens, in order to foster the development of local Social cohesion: The creation of a sense of belonging that promotes trust and bonding among citizens, in order to foster the development of local capacities and the organization of communities, through the search for the well-being of society as a whole, and avoiding all forms of discrimination, exclusion or marginalization. exclusion or marginalization. m. Accessibility: The condition of access provided by the urban and building infrastructure to facilitate the mobility and autonomous movement of people, in safe conditions. n. Potentialities and limitations: The occupation of territory and urban development considers it important to establish the potentialities that a Likewise, the identification of territorial limitations will require strategies to overcome these	**Proposed by JICA team:.** **m. Accessibility: The condition of access provided by the urban and building infrastructure to facilitate the mobility and autonomous movement of** **Accessibility: The condition of access provided by the urban and building infrastructure to facilitate the mobility and autonomous movement of people in safe and**	

TEXT OF LAW NO. 31313, SUSTAINABLE URBAN DEVELOPMENT LAW - DUS	PROPOSED AMENDING TEXT *Red texts: proposed modification	NEW TEXT MODIFIED BY DL N°1674
limitations. Likewise, the identification of territorial limitations will require strategies to overcome these limitations. ñ. Circular economy: Value creation is not limited to the final consumption of resources; it considers the entire life cycle of goods. Cities play a fundamental role in the circular economy as the majority of the world's population is concentrated in these urban centers. Cities play a fundamental role in the circular economy as the majority of the world's population is concentrated in these urban centers. This means that there are large quantities of materials, waste and energy produced and consumed in cities that can be used by applying the principles of the circular economy, which is why it is This means that there are large quantities of materials, waste and energy produced and consumed in cities that can be used by applying the principles of the circular economy, which is why it is important to promote a transition to	**comfortable conditions, regardless of their physical, sensory or intellectual capacity.**	m. Universal Accessibility: It consists of planning, designing, building, rehabilitating and conserving the environment in a way that takes into account the needs and requirements of any person regardless of their age, condition or ability. It seeks to facilitate the development and use of products, services, environments and applications, being easily adaptable to all people from characteristics such as comfort, condition or ability. It seeks to facilitate the development and use of products, services, environments and applications, being easily adaptable to all people from characteristics such as comfort, safety and personal autonomy; and covers the areas of construction, roads, and roads. It seeks to facilitate the development and use of products , services, environments and applications, being easily

TEXT OF LAW NO. 31313, SUSTAINABLE URBAN DEVELOPMENT LAW - DUS	PROPOSED AMENDING TEXT *Red texts: proposed modification	NEW TEXT MODIFIED BY DL N°1674
circularity in cities. o. Affordability of housing: State programs and projects should ensure the granting of subsidies and the design of other strategies for access to housing for low-income families that allow their occupants to enjoy other human rights. 4.2. Land development, urban planning and urban development should be governed by a system of governance based on the following principles: a. Public function of urban planning: The role of the State as a promoter of the urban development and planning of cities and population centers, seeking to achieve sustainable urban development, prioritizing the public interest, effective citizen participation, prioritizing the closing of gaps in infrastructure, with an impact on the quality of life of the population, and the guarantee of their rights b. Coherence and concordance: The guarantee of the issuance of	**Proposed by JICA team:.** **4.2 (...)** **(...) (add)** **g. Interinstitutional and intersectoral cooperation: The complexity of urban challenges demands a collaborative approach that transcends the boundaries of institutions and sectors. Coordination between various sectors such as transportation, housing, environment, and services is crucial for planning and implementing integrated and sustainable cities that**	adaptable to all people from characteristics such as comfort, safety and personal autonomy; and covers the areas of construction, roads and public spaces, parks and gardens, natural environment, transportation, signage, communication and provision of services. It is achieved through universal design and reasonable adjustment.

TEXT OF LAW NO. 31313, SUSTAINABLE URBAN DEVELOPMENT LAW - DUS	PROPOSED AMENDING TEXT *Red texts: proposed modification	NEW TEXT MODIFIED BY DL N°1674
normative instruments and the establishment of coherent and consistent administrative procedures, as well as the application of articulated and efficient multisectoral public policies, based on agreements between political, economic and social agents involved. c. Integrity: The progressive reduction of any parallel order of occupation, exploitation and construction of land that goes against equity and respect for authority or is based on illegality or speculation. d. Systematization: The performance of a comprehensive and multisectoral management, institutionally articulated on the basis of clear competencies, responsibilities and resources of the Public Entities, respecting the principles of transparency, efficiency, cooperation, coverage, consistency and continuity in relations with the other sectors and levels of government. e. Decentralization: A decentralizing, national and transversal policy in public	**address the needs of a growing population. In addition, cooperation of state and private sector can create synergy and In addition, cooperation of state and private sector can create synergy and leverage resources to utilize financial mechanisms for urban planning and development.**	

TEXT OF LAW NO. 31313, SUSTAINABLE URBAN DEVELOPMENT LAW - DUS	PROPOSED AMENDING TEXT *Red texts: proposed modification	NEW TEXT MODIFIED BY DL N°1674
management, which articulates and distributes competencies among the levels of government, to promote greater capacity for urban planning and urban management, which is aligned with the national policies approved by the Ministry of Housing, Construction and Sanitation. f. Principle of predictability: The authorities provide legal certainty in their urban and building actions through the protection and respect of the rights acquired in public and private investments, so that the administered can have a fairly certain awareness of what will be the final result that will be obtained in the procedures that he initiates, in order to guarantee the adequate development of the city and housing.		b. Territorial approach: Comprehensive management of the territory based on an ecological, social, productive, economic, linguistic and cultural Comprehensive management of the territory based on an ecological, social, productive, economic, linguistic and cultural understanding of the territory, allowing for urban and rural planning scales and encouraging citizens to take ownership of their habitat.
4.3. Decisions regarding land development, urban planning and sustainable urban development should be guided by the following approaches:	**Proposed by MVCS:.** **4.3 Decisions regarding land development, urban planning and sustainable urban development should be guided by the following approaches:**	

TEXT OF LAW NO. 31313, SUSTAINABLE URBAN DEVELOPMENT LAW - DUS	PROPOSED AMENDING TEXT *Red texts: proposed modification	NEW TEXT MODIFIED BY DL N°1674
a. Ecosystem approach: Integrated management of land, water and living resources promotes conservation and sustainable use in an equitable, participatory and decentralized manner. It integrates social, economic, ecological and cultural aspects in a geographic area defined by ecological boundaries. It integrates social, economic, ecological and cultural aspects in a geographic area defined by ecological boundaries**.** b. Territorial approach: A territorial management approach based on an ecological, social, productive, economic, linguistic and cultural Territorial approach: A territorial management approach based on an ecological, social, productive, economic, linguistic and cultural understanding of the territory, allowing urban planning scales and promoting citizen appropriation of their natural and urban habitat. c. Human rights approach: Comprises the set of national and international legal norms, ethical principles exercised	**(...)** b. Territorial approach: An approach to land management based on an ecological, social, productive, economic, linguistic and cultural understanding An approach to land management based on an ecological, social, productive, economic, linguistic and cultural understanding of the territory, allowing for urban **and rural** planning scales. (...)	

TEXT OF LAW NO. 31313, SUSTAINABLE URBAN DEVELOPMENT LAW - DUS	PROPOSED AMENDING TEXT *Red texts: proposed modification	NEW TEXT MODIFIED BY DL N°1674
individually and institutionally Human rights approach: Comprises the set of national and international legal norms, ethical principles exercised individually and institutionally , as well as public policies implemented by the State that involve public and private actors, empowering rights holders in the capacity to exercise and It takes the form of attitudes that put into practice the ideal of the equal dignity of all people, promoting changes in the living conditions of the most vulnerable populations. The human rights-based approach includes the guiding principles on business and human rights: protect, respect and remedy. The human rights-based approach includes the guiding principles on business and human rights: protect, respect and remedy. This approach assumes that rights are inherent to all human beings, are based on respect for the dignity of the human person and are interrelated, interdependent and indivisible. The approach is based on international norms, from		i. Transit-Oriented Development Approach: This approach seeks to generate centralities around the stations of the multimodal public transportation This approach seeks to generate centralities around the stations of the multimodal public transportation system that promote the development and concentration of mixed uses with high densities.

TEXT OF LAW NO. 31313, SUSTAINABLE URBAN DEVELOPMENT LAW - DUS	PROPOSED AMENDING TEXT *Red texts: proposed modification	NEW TEXT MODIFIED BY DL N°1674
which standards are established to operationalize their protection and promotion. The human rights-based approach emphasizes the identification of the variables or contents of rights, their holder and guarantor, and the access route that The human rights-based approach emphasizes the identification of the variables or contents of rights, their holder and guarantor, and the access route that makes them effective. Each generation has experiences, knowledge, values and cultural patterns in common that differentiate them from other groups. experiences, knowledge, values and cultural patterns in common that differentiate them from other groups. proposes mutual respect and collaboration between generations, strengthening emotional ties, overcoming myths and stereotypes attributed to age, promoting spaces for exchange, dialogue, appreciation Thus, the intergenerational approach proposes mutual respect and collaboration between		

TEXT OF LAW NO. 31313, SUSTAINABLE URBAN DEVELOPMENT LAW - DUS	PROPOSED AMENDING TEXT *Red texts: proposed modification	NEW TEXT MODIFIED BY DL N°1674
generations, strengthening emotional ties, overcoming myths and stereotypes attributed to age, promoting spaces for exchange, dialogue, appreciation and learning between generations of adults, older adults, adolescents and children. sense, the purpose of this approach is to build a society for all ages, combating inequalities based on age and improving the living conditions of vulnerable age groups. e. Disability perspective: This perspective evaluates social relationships considering the needs and interests of people with disabilities; and considers disability as the product of the interaction between the sensory, physical, intellectual or mental deficiencies of people and the different barriers imposed by society, addressing the multidimensionality of the problem of exclusion and discrimination that affects them and committing the State and society to take measures to eliminate them, in order to ensure their full participation in society, effective, without		

TEXT OF LAW NO. 31313, SUSTAINABLE URBAN DEVELOPMENT LAW - DUS	PROPOSED AMENDING TEXT *Red texts: proposed modification	NEW TEXT MODIFIED BY DL N°1674
discrimination and under equal conditions. f. Intercultural approach: Establishes the recognition of cultural differences as one of the pillars of the construction of a democratic society, based on the establishment of relations of equity and equality of opportunities and rights. The intercultural approach in public management is the process of adaptation of the different public entities, at the regulatory, administrative and civil service levels of the State to meet in a pertinent way the cultural and social needs of the different ethnic-cultural groups of the country. g. Climate change mitigation and adaptation based on urban and territorial planning: Incorporates mitigation and adaptation into urban and territorial planning at regional and local scales. It also designs and adapts infrastructure and buildings according to their level of exposure and vulnerability to extreme weather events, promoting sustainable construction processes, development of		

TEXT OF LAW NO. 31313, SUSTAINABLE URBAN DEVELOPMENT LAW - DUS	PROPOSED AMENDING TEXT *Red texts: proposed modification	NEW TEXT MODIFIED BY DL N°1674
technical and professional capacities, technological innovation and the incorporation of local technologies, for the construction of sustainable, resilient and environmentally safe cities. h. Gender approach: An analysis tool that allows the identification of the roles and tasks performed by men and women in a society, as well as the asymmetries, power relations and inequities that occur between them. It critically observes the relations of power and subordination that cultures and societies build between men and women and explains the causes that produce asymmetries and inequalities, the gender approach provides central elements for the formulation of measures (policies, mechanisms, affirmative actions, norms, etc.) that contribute to overcoming gender inequality, modifying asymmetrical relations between women and men, eradicating all forms of gender-based violence, ethnicity,	**Proposed by JICA team:.** **i. Transit-Oriented Development Approach: This approach seeks to generate centralities around the stations of the public transportation This approach seeks to generate**	

TEXT OF LAW NO. 31313, SUSTAINABLE URBAN DEVELOPMENT LAW - DUS	PROPOSED AMENDING TEXT *Red texts: proposed modification	NEW TEXT MODIFIED BY DL N°1674
socioeconomic status, age, sexual orientation and gender identity, among other factors, ensuring women's and men's access to public resources and services and strengthening their political and civic participation on equal terms.	**centralities around the stations of the multimodal public transportation system that promote multimidality and the development and concentration of mixed uses with high densities.**	
Chapter II Real Estate Readjustment Instruments		
Article 45. Land readjustment 45.1. Consists of the recomposition of urban or rustic properties of different owners, modifying the property structure for urban development purposes Consists of the recomposition of urban or rustic properties of different owners, modifying the property structure for urban development purposes, by means of the accumulation and new subdivision of lots or the separation of plots, the demolition of buildings, construction or changes in equipment and service infrastructure, and the construction, relocation or resizing of roads or public spaces.	**Article 45. Land readjustment** **Proposed by MVCS:.** Consists of the recomposition of properties **that correspond to different owners,** modifying the property structure through the accumulation and new subdivision of lots or the separation of plots for their urban development. **Land readjustment may involve the** demolition of buildings, construction or changes in equipment and service infrastructure, as well as **the construction, relocation or resizing of roads or service infrastructure, as well as the construction, relocation or resizing of roads or service infrastructure.**	It consists of the modification of the existing urban structure through the recomposition of properties belonging to different owners located on It consists of the modification of the existing urban structure through the recomposition of properties belonging to different owners located on urban or developable land for urban development, through the accumulation and new subdivision of properties or independence. It may include demolition of buildings, construction or changes in equipment and service infrastructure; as well as the construction,

TEXT OF LAW NO. 31313, SUSTAINABLE URBAN DEVELOPMENT LAW - DUS	PROPOSED AMENDING TEXT *Red texts: proposed modification	NEW TEXT MODIFIED BY DL N°1674
Its purpose is to optimize the profitability of the land and the distribution of urban development charges and benefits, establishing a new urban Its purpose is to optimize the profitability of the land and the distribution of urban development charges and benefits, establishing a new urban structure in accordance with urban planning; it is applicable in the processes of urban habilitation, urban renewal, urban regeneration, among others. The Realignment of Land may be carried out by public or private initiative by means of agreement or agreements between the owners of the properties involved, and may establish an Urban Management Unit for the urban planning and urban management of the area included in this process. The Realignment of Land may be carried out by public or private initiative by means of agreement or agreements between the owners of the properties involved, and may	**Land readjustment may involve** the demolition of buildings, construction or changes in equipment and service infrastructure**, as well as** the construction, relocation or resizing of roads or public spaces. **Proposed by JICA team:.** **Its purpose is to optimize the profitability of the land and the distribution of urban development charges and benefits, establishing a new urban Its purpose is to optimize the profitability of the land and the distribution of urban development charges and benefits, establishing a new urban structure in accordance with urban planning; it is applicable in the processes of urban habilitation, urban renewal, urban regeneration, among others. Land readjustment can be considered for a Transport Development approach near mobility infraestructure.**	relocation or It may include demolition of buildings, construction or changes in equipment and service infrastructure; as well as the construction, relocation or Its purpose is to ensure the equitable distribution of urban burdens and benefits by optimizing the urban structure in order to generate public spaces, equipment and urban infrastructure, promoting urban development in a comprehensive manner. Its purpose is to ensure the equitable distribution of urban burdens and benefits by optimizing the urban structure in order to generate public spaces, equipment and urban infrastructure, promoting urban development in a comprehensive manner. The land readjustment is carried out for the purposes of urban development, urban renewal, urban regeneration, among

TEXT OF LAW NO. 31313, SUSTAINABLE URBAN DEVELOPMENT LAW - DUS	PROPOSED AMENDING TEXT *Red texts: proposed modification	NEW TEXT MODIFIED BY DL N°1674
establish an Urban Management Unit for the urban planning and urban management of the area included in this process. Readjustment may also originate in a Specific Plan approved by the Provincial Municipality in the areas established by the Metropolitan Development Plan or the Urban Development Plan, or in a Specific Plan approved by the Provincial Municipality in the areas established by the Urban Development Plan. The Land Readjustment may also originate in a Specific Plan approved by the Provincial Municipality in the areas established by the Metropolitan Development Plan or the Urban Development Plan, as the case may be. This is done with the prior agreement of the owners involved in the project, with the approval of the owners or rights holders representing at least 60 This is done with the prior agreement of the owners involved in the project, with the approval of the owners or		others.

TEXT OF LAW NO. 31313, SUSTAINABLE URBAN DEVELOPMENT LAW - DUS	PROPOSED AMENDING TEXT *Red texts: proposed modification	NEW TEXT MODIFIED BY DL N°1674
rights holders representing at least 60 % (sixty percent) of the total area involved in the land readjustment being sufficient. 45.5. The process for the execution of the Soil Readjustment involves: (1) the execution of the Soil Readjustment, (2) the execution of the Soil Readjustment, and (3) the execution of the Soil Readjustment. a) Identification of the properties and owners subject to intervention. b) Allocation of the building lots resulting from the new division of the land to the owners of the original lots, in proportion to their initial Allocation of the building lots resulting from the new division of the land to the owners of the original lots, in proportion to their initial contribution, leaving aside the roads, public spaces and other areas for public purposes. c) Equitable distribution of benefits and burdens of the area involved in the land		

TEXT OF LAW NO. 31313, SUSTAINABLE URBAN DEVELOPMENT LAW - DUS	PROPOSED AMENDING TEXT *Red texts: proposed modification	NEW TEXT MODIFIED BY DL N°1674
readjustment. In case the Land Readjustment includes properties that are part of the Cultural Heritage of the Nation, the corresponding sectorial authorization The corresponding sectorial authorization shall also be required.		
Article 46 Real Estate Integration (definition) 46.1 This is a public or private initiative whose purpose is to achieve a new physical and spatial configuration of properties with buildings, in order to improve their social and economic quality, redistributing urban development charges and benefits. It may be executed jointly with a Land Readjustment in case a recomposition of land is necessary.	**Article 46 Real Estate Integration (definition)** **Proposed by MVCS:** 46.1 I This is a public or private initiative whose purpose is to achieve a new physical and spatial configuration of properties **located on urban land in order** to achieve a reorganization and optimization of **the land, improving the social and economic quality of the area of intervention. It is an action by public or private initiative that aims to achieve a new physical and spatial configuration**	It consists of the physical and spatial reconfiguration of properties located on urban land that belong to different owners, through the It consists of the physical and spatial reconfiguration of properties located on urban land that belong to different owners, through the accumulation and new subdivision of properties or independence, without modifying the urban structure, in order to achieve a reorganization and It consists of the physical and

TEXT OF LAW NO. 31313, SUSTAINABLE URBAN DEVELOPMENT LAW - DUS	PROPOSED AMENDING TEXT *Red texts: proposed modification	NEW TEXT MODIFIED BY DL N°1674
46.2 It requires the prior agreement of the owners involved in the project, with the approval of the owners or right holders representing at least 60% (sixty percent) of the total area involved in the real estate integration being sufficient. 46.3. It can be managed through the establishment of an Urban Management Unit. It may also originate in a Specific Plan approved by the Provincial Municipality in the areas established by the Metropolitan Development Plan or the Urban Development Plan, as appropriate. 46.4 For purposes of this mechanism, local governments may approve building projects on areas that cover more than one property at the registry or	**of properties located on urban land in order to achieve a reorganization and optimization of the land,** improving the social and economic quality of **the area of intervention. It contemplates the distribution of** urban development charges and benefits and **is executed for the purpose of urban renewal, regeneration ,~~or~~ consolidation, densification or improvement of facilities. It contemplates the distribution of urban development charges and benefits and is executed for the purpose of urban renewal, regeneration ,or consolidation, densification or improvement of facilities.**	spatial reconfiguration of properties located on urban land that belong to different owners, through the accumulation and new subdivision of properties or independence, without modifying the urban structure, in order to achieve a reorganization and optimization of the land, improving the quality of life, social and economic, of the area of intervention and its immediate surroundings. Real Estate Integration may include demolition of buildings, construction or changes in equipment and service infrastructure; as well as the construction, relocation or resizing of roads or public spaces. Real Estate Integration may include demolition of buildings, construction or changes in equipment and service infrastructure; as well as the construction, relocation or resizing of roads or public spaces.
For purposes of this mechanism, local governments may approve building projects on areas that cover more than one property at the registry or cadastral level.		

TEXT OF LAW NO. 31313, SUSTAINABLE URBAN DEVELOPMENT LAW - DUS	PROPOSED AMENDING TEXT *Red texts: proposed modification	NEW TEXT MODIFIED BY DL N°1674
46.5. Real estate integration is regulated under the provisions for Land Readjustment, as applicable.		

TEXT OF LAW NO. 31313, SUSTAINABLE URBAN DEVELOPMENT LAW - DUS	PROPOSED AMENDING TEXT *Red texts: proposed modification	NEW TEXT MODIFIED BY DL N°1674
Article 64 Public Interest Bonus (Definition) Local governments, through ordinances, may establish bonuses in buildability or covered areas or density in urban development projects and buildings that promote sustainable urban development, such as: a) the development of new buildings, b) the development of new buildings, and c) the development of new infrastructure. Local governments through ordinances, may establish bonuses in buildability or covered areas or density in urban development projects and buildings, such as: urban development projects and	**Additionally proposed by JICA team:.**	Not included in modifications

TEXT OF LAW NO. 31313, SUSTAINABLE URBAN DEVELOPMENT LAW - DUS	PROPOSED AMENDING TEXT *Red texts: proposed modification	NEW TEXT MODIFIED BY DL N°1674
buildings a. Creation of social housing. b. Increase in public spaces, and greater buildability may be granted if the real estate developer allocates a larger area as a setback or contributes it as public space. public space. c. Construction of infrastructure that promotes the use of sustainable mobility. d. Accumulation of urban lots for densification projects. Construction of infrastructure that constitutes or provides care services. f. Other purposes of social interest established by local governments in the Metropolitan Development Plans or Urban Development Plans.	**c. Construction of infrastructure that promotes the use of sustainable mobility such as bus stops, taxi bays, pedestrian walkways and decks, public bicycle parking, among others. bicycle parking, among others.**	

Source: JICA Expert Team

4 Draft Table of Contents of TOD Guideline (Before and After Revision)

TOD Guideline was drafted according to the initial table of contents by the respective JET and C/P representatives. Subsequently, during discussions with MVCS in July 2024, MVCS proposed restructuring the main text of the TOD Guideline to be more concise and moving explanatory documents to the appendices. This structure change was approved at the third JCC. The diagram below illustrates the changes made to the guideline before and after the modifications.

A. Structure Change

(2) How to reconstruct (1/5)

1.3 was moved to appendix, because upper level plans such as PDM and PDU and urban issues should be kept updated
The new 1.2 was reorganized to focus on conceptual explanation of TOD
The new 1.3 was reorganized to focus on understanding TOD with case studies

Before

Part	Chapter	Sub-chapter		contents
1. Basic Information of TOD		-		Introductory note
	1			Background and Purpose of the Guideline
		1		Purpose of the Guideline
			1	Introduction
			2	TOD Guideline
			3	Relationship with Other Guidelines
		2		What is TOD
			1	Origin and Evolution of TOD
			2	Concept of TOD
			3	Principles of TOD
			4	Contribution of TOD
		3		Planning Framework and TOD
			1	Urban Issues and TOD
			2	Urban Planning and Development System
			3	Implementation Framework of TOD
		4		Typology of TOD
			1	Three Typology of TOD
		5		Menu and Inter-Modal Transit Facilities (ITFs)
			1	Inter-Modal Transit Facilities
			2	Urban and Transport Developments in the Area Around the Station

After

	Chapter	Sub-chapter		Contents
1. What is TOD	1			Background and Purpose of the Guideline
		1		Purpose of the Guideline
			1	Introduction
			2	TOD Guideline
			3	Relationship with Other Guidelines and Documents
		2		What is TOD?
			1	Definition of TOD
			2	Principles of TOD
			3	Benefits and Effects of TOD
			4	Urban Issues and TOD
			5	Urban Structure and TOD
			6	TOD Components
		3		TOD in Practice
			1	Origin of TOD
			2	TOD in Japan
			3	Typology and Examples of TOD

*The parts in gray are deleted from the main body of guideline.

4

A. Structure Change

(2) How to reconstruct (2/5)

Chapter 2 and 3 are moved to appendix because the description about the current conditions and issues in Peru, and relevant plans are not directly related to the contents of TOD guideline.

Before

Part	Chapter	Sub-chapter		contents
1. Basic Information of TOD	2			Current Conditions and Issues for TOD
		1		Current conditions in promoting TOD
			1	Urban planning
			2	Transportation Planning
			3	Problems and Issued for Promoting TOD
		2		Legal Framework of TOD
			1	Legal Framework
			2	Tools and Instruments for TOD in Peru
			3	Scheme for Promotion of TOD in Peru
		3		Issues to be addressed
			1	Urban Planning
			2	Transportation Planning
	3			Relevant Plans for TOD in Lima/Callao Metropolis
		1		Metropolitan Planning
			1	History of Metropolitan Planning in Lima
			2	History of Metropolitan Planning in Callao
			3	Current Metropolitan Planning
		2		Transportation Planning for Metropolis
			1	Actions and Regulations Implemented
			2	Projects in Portfolio
			3	The Urban Mobility Plan - PMU

After

Moved to Appendix

*The parts in gray are deleted from the main body of guideline.

5

A. Structure Change

(2) How to reconstruct（3/5）

The basic structure is not changed
The new chapter 2 is added to explain the importance of TOD in the Metropolis

Before

	Chapter	Sub-chapter		contents
2. Planning and Implementation	4			Selection of Sites for TOD
		1		Nomination of Candidate Sites for TOD
		2		Selection Methodology of Pilot Project Sites for TOD
	5			Analysis of Conditions for TOD
		1		Objective of Analysis
		2		Formulation of Topographical Maps
		3		Current Condition Survey
		4		Existing and planned transport facilities
		5		Market survey
	6			Planning of TOD
		1		Procedure of Planning
		2		TOD vision and Development Strategies
		3		TOD Concept Plan
		4		Proposal of Changes in Zoning
		5		Implementation Plan
		6		Socio-environmental Considerations
		7		Impact Assessment

After

	Chapter	Sub-chapter	contents
2. Methodologies of TOD	2		Importance of TOD in the Metropolis
	3		Selection of Sites for TOD
		1	Nomination of **Prioritizing Strategic Sites** for TOD
		2	Selection Methodology of **Strategic Sites** for TOD
	4		Analysis of Conditions for TOD
		1	Outline of Analysis
		2	Formulation of Topographical Maps
		3	Current Condition Survey
		4	**Transport Condition Survey**
		5	Market Survey
	5		Planning of TOD
		1	Procedure of Planning
		2	TOD Vision and Development Strategies
		3	TOD Concept Plan
		4	Proposal of Changes in Zoning
		5	Implementation Plan
		6	Socio-environmental Considerations
		7	Impact Assessment

6

A. Structure Change

(2) How to reconstruct（4/5）

This part focus on a strategy and roadmap
Such as the explanation of importance of TOD chapters have been moved to the Part 2
Other detail information such as roles for each organization or required information have been moved to appendix

Before

	Chapter	Sub-chapter		contents
3. Roadmap for TOD	7			Roadmap for TOD
		1		Strategy for TOD in Metropolis
			1	Importance of TOD in Metropolis
			2	Direction of TOD Application in Metropolis
			3	Strategy for TOD in Metropolis
			4	Items on Wide-area Planning for TOD
			5	TOD in the Planning Framework for the Metropolis
		2		Roadmap of TOD in Metropolis
			1	Relevant Organizations and their Responsibilities in TOD
			2	Timeframe for Roadmap of TOD
			3	Proposal of Required Information and Roles for Evaluation of Potential TOD Stations

*The parts in gray are deleted from the main body of guideline.

After

	Chapter	Sub-chapter	contents
3. Roadmap for TOD	6		Roadmap for TOD
		1	Strategy for TOD in Metropolis
		2	Roadmap of TOD in Metropolis

A. Structure Change

(2) How to reconstruct（4/5）

Before

Chapter	Sub-chapter		contents
APPENDIX	1		Good Practice Example from Latin America, Europe and Japan
		1	Latin America
		2	Europe
		3	Japan
	2		Planning of Pilot Project Sites in the Project
		1	Candidate Sites for TOD
		2	Selection of Pilot Project Sites
		3	TOD Planning of Pilot Project Sites
	3		Related Laws and Regulations
		1	Legal Framework
		2	Tools and Instruments for TOD in Peru
		3	Zoning Changes and Building Parameters
		4	Relevant Regulations by Municipality
	4		Relevant Plans for TOD in the Metropolis
		1	Urban Planning for the Metropolis
		2	Transportation Planning for Metropolis
	5		MINAM TOD Guide

After

Chapter	Sub-chapter		contents
APPENDIX	1		Good Practice Example from Latin America, Europe and Japan
		1	Latin America
		2	Europe
		3	Japan
	2		Planning Framework and TOD
		1	Urban Issues and TOD
		2	Urban Planning and Development System
		3	Implementation Framework of TOD
	3		Current Conditions and Issues for TOD
		1	Current conditions in promoting TOD
		2	Legal Framework of TOD
		3	Issues to be addressed
	4		Relevant Plans for TOD in Lima/Callao Metropolis
		1	Metropolitan Planning
		2	Transportation Planning for Metropolis
	5		Planning of Pilot Project Sites in the Project
		1	Candidate Sites for TOD
		2	Selection of Pilot Project Sites
		3	TOD Planning of Pilot Project Sites
	6		Roadmap for TOD for reference
		1	Strategy for TOD in Metropolis
		2	Roadmap of TOD in Metropolis
	7		MINAM TOD Guide

*The parts in blue are moved from the main body of guideline.

8

Source: JICA Expert Team

Figure 4-1 Draft Table of Contents of TOD Guideline (Before and after Revision)

5 Overview of TOD Seminar

1. Introduction

1.1. General context of JICA TOD project

The Project for Strengthening the Capacity for Transport-Oriented Development (TOD) in the National Metropolis of Lima and Callao, promoted by the Japan International Cooperation Agency (JICA), has as its main objective to integrate the TOD approach in the urban planning and management of these cities. This approach seeks to articulate efficient public transport with sustainable urban development, improving accessibility, promoting responsible densification and revitalizing urban spaces along transport corridors.

Begun in 2022, the project is expected to last three years, concluding in 2025. Its expected results include:

1. Strengthen capacity to formulate legal frameworks and technical regulations that support the TOD approach.
2. Develop and disseminate a TOD implementation guide, including a strategic roadmap for Lima and Callao.
3. Validate the applicability of the approach through three pilot projects strategically located in the metropolis.

The project involves the participation of the Ministry of Housing, Construction and Sanitation (MVCS), the Urban Transport Authority (ATU), the Metropolitan Municipality of Lima (MML) and the Provincial Municipality of Callao (MPC). It also includes the technical support of a team of JICA experts, with experience in Japan, Latin America and other regions, to facilitate the transfer of knowledge and the implementation of innovative strategies.

1.2. Objectives of the seminar and relevance for Lima and Callao

The seminars held in Lima and Callao have the following specific objectives:

- Disseminate the principles and benefits of the TOD approach among key stakeholders in urban planning and public transport, including decision makers, technicians and civil society representatives.
- Present the Transit-Oriented Development Guideline, a technical document that articulates the steps necessary to implement this approach in the local context.
- Collect input and feedback from participants on the practical application of TOD strategies in both jurisdictions.
- Promote inter-institutional coordination between the MVCS, ATU, MML and MPC for a more effective implementation of the TOD approach in the metropolis.

The relevance of this seminar lies in its contribution to addressing critical challenges, such as uncontrolled urban growth, traffic congestion and fragmentation of public policies. By focusing efforts on Lima and Callao, the capacity of both jurisdictions to lead sustainable urban development initiatives is strengthened, creating a replicable model for other Peruvian cities.

1.3. Integrated approach to both events

The decision to hold separate events for Lima and Callao responds to the need to address the particularities of each jurisdiction, considering their urban, institutional and social realities. Lima, with a larger and densely populated metropolitan area, faces challenges related to urban expansion, the integration of transport systems and coordination between districts. On the other hand, Callao, as the country's main port, must balance its logistical and commercial role with sustainable urban development and the quality of life of its inhabitants.

This segmentation allowed:

- Adapt content and debates to the needs and priorities of each jurisdiction.
- Facilitate the active participation of local actors, promoting a more inclusive and contextualized approach.
- Generate specific and actionable recommendations for each municipality, strengthening its capacity to implement the TOD approach.

At the same time, the events complemented each other, sharing lessons and ensuring an articulated vision for the entire Lima-Callao metropolis, recognizing the interdependence of both jurisdictions in territorial development and urban transport management.

2. Executive Summary

The Transit Oriented Development (TOD) Seminar, held on January 20 and 21 in Lima and Callao, brought together 275 participants from various key sectors, including the public, academic, private, independent and civil society. This event marked a milestone in the dissemination of the principles of the TOD approach, promoted by the technical cooperation project between JICA and the Government of Peru, with the aim of integrating transport and urban planning towards a more sustainable and livable metropolis.

Key learnings and conclusions

1. Relevance of the TOD Approach:
    - It was recognized that TOD is a key strategy to combat uncontrolled urban expansion and reduce automobile dependence in Lima and Callao.
    - Experiences from Japan highlighted the importance of densification around transport stations and the creation of urban centralities as tools for sustainability.
2. Interinstitutional Coordination:
    - One of the challenges identified was the need for greater integration and collaboration between municipalities, ministries and other key entities.
    - It was concluded that a clear and flexible regulatory framework is essential to overcome the legal and social barriers that limit the implementation of TOD.
3. Key Projects in Lima and Callao:
    - In Lima, the transformative potential of projects such as the Tren Este and the Vía Expresa Norte was highlighted.
    - In Callao, the importance of logistics integration in the expansion of Jorge Chávez Airport and the Airport City was emphasized, along with the benefits of projects such as the Santa Rosa Expressway.

Expected impact on Sustainable Urban Planning

The seminar contributed significantly to the understanding and adoption of the TOD approach, projecting the following impacts:

- Transformation of cities: Urban densification and transport-territory integration can generate more habitable cities, with less pollution and a higher quality of life for citizens.
- Strengthening Local Capacity: The participation of local authorities and technicians in both seminars ensures that the tools and lessons learned can be implemented in local projects in the short term.
- Boosting sustainability: The implementation of the TOD promotes efficient land use, reduced emissions and better connectivity, positioning Lima and Callao as benchmarks for urban sustainability in the region.

This event is an important step towards the development of public policies and projects that prioritize sustainability and habitability, ensuring a more equitable and resilient future for the country's metropolitan areas.

3. Description of the seminars

3.1. Seminar in Lima

Date and Place

- The event took place on Monday, January 20, 2025, in the Mangomarca Room, 6th floor, Lima Convention Center, located at Av. de la Arqueología 206, San Borja.

Specific Objectives

- To present international experiences in Transport Oriented Development (TOD), especially from Japan, for analysis and adaptation to the Lima context.
- Disseminate the Transport-Oriented Development Guide, designed as a key tool for implementing the TOD approach in Lima.
- Share progress and specific proposals of the Specific TOD Plan (PE-TOD) for the city of Lima, including emblematic projects such as the Northern Expressway and the Eastern Train.
- Promote interaction between key actors in urban planning and transportation in Lima, fostering inter-institutional coordination.

Summary of Topics Covered

- Introduction to the seminar: By Arch. Hedy Monty Villón Román , director of urbanism and urban development of the Direction of Policies and Regulations in Housing and Urbanism from MVCS, highlighted the importance of the TOD approach as a solution to urban expansion and the improvement of public transport.
- TOD Experiences in Japan: Mr. Koji Yamada, leader of the JICA Expert Team presented iconic cases such as Shibuya and Minatomirai 21, detailing how the TOD approach has improved connectivity, urban development and quality of life.
- Transit Oriented Development (TOD) Guide: Arch. Gustavo Pimentel, in representation of MVCS, explained the principles of TOD, methodologies and steps to implement the approach in Lima.
- Specific TOD Plans for Lima: Architect Guillermo Malca, executive director of presented specific proposals, such as the Northern Expressway and the Eastern Train, highlighting their potential impact on traffic reduction and urban sustainability.

Interventions and questions

- A transportation planning specialist indicated that he believed it would be difficult to implement the TOD model in Lima and Callao because the transportation system was not developed in full. In his opinion, transportation should adapt to the urban structure and not the other way around. Mr. Yamada replied that he agreed with his idea that transportation system should be improved, but that urban development should go hand in hand with transportation.
- There was a question about how pedestrians could be integrated into TOD stations so that they have priority over motor vehicles, as conceptual images of pedestrian bridges were shown in the presentation, and he indicated that this was not desirable. Mr. Yamada indicated that this was a challenge at sites with high pedestrian and vehicle flow, and that bridges should ultimately be used. If possible, installation of elevator or escalator would help increase mobility of people.
- There was a question about how the commercial development of Akihabara Station in Japan had been, and which institutions had been responsible for the development and operation of these areas. Mr. Yamada indicated that in Japan the private developer is often the one in charge of developing and operating these areas, and that the Japanese institutional regime facilitates this since it is the private sector itself that is in charge of the development and operation of the transportation system. In the case of Akihabara, the local government such as Tokyo Metropolitan Government and Chiyoda Ward initiated the development in formulating a master plan in the early stage.
- There was a question about what the role of the MVCS and MTC would be in the implementation of the TOD areas. Mr. Yamada replied that the role of MVCS would be to develop the legal framework for the implementation of the TOD approach, as well as the manuals and guides necessary for the use of land management mechanisms. MTC is responsible in implementing public transport systems among others.
- A representative of the merchants in the Gamarra area commented that the specific plan, in addition to focusing on urban development, should take into account food security, considering food logistics networks and supply markets, such as those near the Miguel Grau station.

3.2. Seminar in Callao

Date and Place

- The event took place on Tuesday, January 21, 2025, at the Youth Cultural Center of the Provincial Municipality of Callao, located at Av. Manco Cápac s/n.

Specific Objectives

- Adapt the TOD approach to the specific reality of Callao, considering its importance as a logistics node of the country.
- Present progress on the Transport Oriented Development Guide and how it applies to the Callao context.
- Discuss the implementation of the TOD approach in key projects such as the Santa Rosa Expressway and the Juan Pablo II Station.
- Promote inter-institutional dialogue to coordinate efforts in urban planning and public transport in Callao.

Summary of Topics Covered

- Introduction to the seminar: Architect Hedy Monty Villón Román emphasized the strategic role of Callao as a logistics and urban center, and the need to apply the TOD approach in this context.
- TOD Experiences in Japan: Eng. Koji Yamada shared key lessons from TOD in Japan and reflected on how they could benefit Callao.
- Transit-Oriented Development (TOD) Guide: Architect Gustavo Pimentel presented the general guidelines of the guide, highlighting its applicability in local projects.
- Application of TOD in Callao: Eng. Luis Antonio Orihuela Carpio, council member of the Municipality of Callao, presented specific projects such as the Santa Rosa Expressway and the development of the Juan Pablo II Station, explaining how the TOD approach can optimize connectivity and land use in Callao.

Interventions and questions

- There was a question about how TOD projects in Japan take advantage of the land value generated by the projects. Mr. Yamada indicated that in Japan, capturing land value in the urban development is usually done through land readjustment projects, but in Peru, although this mechanism is defined in the Sustainable Urban Development Law, there are still few examples of its implementation.
- There was a question about which project would be given priority to be implemented first. Mr. Yamada replied that the TOD Guide that has been prepared as part of the project includes a

Roadmap for counterparts, and that implementation priorities should be defined according to this roadmap.

4. Event Results

4.1. Key findings by event

Event in Lima

- The implementation of the TOD approach in Lima requires effective articulation between public transport, mixed land uses and urban regeneration, as highlighted in the cases of Japan.
- Proposed projects, such as the Northern Expressway and the Eastern Train, have the potential to reduce traffic congestion, encourage non-motorized transport and improve environmental sustainability.
- The Transit-Oriented Development (TOD) Guide provides a clear technical framework for prioritizing projects that maximize accessibility and promote responsible densification around transit stations.
- The Specific TOD Plan (PE-TOD) for Lima highlights the importance of identifying urban centralities and optimizing land use in areas such as Chimpu Ocllo and the Northern Expressway, adapting to the characteristics and needs of each district.

Event in Callao

- The TOD approach is crucial to address Callao's logistical and residential challenges, considering its role as a national logistics hub.
- Projects such as the Santa Rosa Expressway and the Juan Pablo II Station were identified as strategic for improving multimodal and intermodal connectivity.
- The Jorge Chávez Airport City and the Bicentenario and APM ports represent opportunities to integrate the TOD into logistics and urban development, generating economic and social benefits.
- The proposals for Juan Pablo II Station include short, medium- and long-term improvements, focusing on densification, mixed uses and accessibility. These initiatives underline the importance of an urban design adapted to the needs of Callao.

4.2. Challenges and opportunities identified for Lima and Callao

Lime

- Challenges:
    - Urban sprawl and heavy dependence on cars represent a significant obstacle to implementing the TOD approach.
    - Limited inter-institutional coordination between municipalities and transport entities makes it difficult to integrate urban and mobility plans.
    - Large-scale projects such as the Tren Este and the Vía Expresa Norte require significant financing and efficient resource management.

- Opportunities:
    - Emblematic projects such as the Tren Este and the Vía Expresa Norte have the potential to become replicable models of sustainable development for other cities.
    - Densification around public transport stations and the identification of urban centralities can optimize land use and revitalize urban areas.
    - Lessons learned from Japanese experiences in TOD can be successfully adapted and applied in Lima.

Callao

- Challenges:
    - Traffic congestion in strategic areas, such as Santa Rosa, Faucett and Gambetta avenues, represents a critical challenge for urban mobility.
    - Integrating logistics transport with public and residential transport requires a coordinated technical and inter-institutional approach.
    - Land use management in key urban areas faces social and legal barriers that hinder its transformation.

- Opportunities:
    - The expansion of Jorge Chávez Airport and the creation of Airport City offer a unique opportunity to implement TOD in a strategic urban and logistics center.
    - Projects such as the Santa Rosa Expressway and the Periférico Vial Norte have the potential to significantly improve connectivity and reduce traffic congestion.
    - The implementation of intermodality in public transport, especially with Metro lines 2 and 4, can strengthen social cohesion and economic development in Callao.

5. Participation of participants

5.1. Joint seminars

5.1.1 Total Registrants

- Total Enrollments:
    - 259 participants.
- Gender Distribution:
    - Men: 55%.
    - Women: 45%.
- Participant Profiles:
    - Independent Professionals: 18% of total attendees.
    - Academic Sector: 20% of total attendees.
    - Public Sector: 36% of total attendees.
    - Private Sector: 11% of total attendees.
    - Others: 15% of total attendees (NGOs, civil society, international organizations).

The diverse approach of the seminars made it possible to capture the interest of key sectors such as the public and academics, ensuring a strategic balance of relevant audiences for urban development and sustainable transport.

5.1.2 Total Attendees

- Total Attendees:
    - 160 participants
- Gender Distribution:
    - Men: 66%
    - Women: 34%
- Participant Profiles:
    - Ministries: 25% of total
    - Local Governments: 29% of total
    - Public Institutions: 11% of total
    - Academia: 2% of total
    - NGOs: 5% of total
    - Private Sector: 8% of total
    - Independent Professionals: 11% of total
    - Others: 1% of total
    - TOD Project: 8% of total

5.2. Seminar in Lima

5.2.1. Registrants in Lima

- Total Enrollments:
    - 180 participants.
- Gender Distribution:
    - Men: 56%.
    - Women: 44%.
- Participant Profiles:
    - Independent Professionals: 17% of total attendees.
    - Academic Sector: 22% of total attendees.
    - Public Sector: 33% of total attendees.
    - Private Sector: 11% of total attendees.
    - Others: 17% of total attendees.

The seminar in Lima stood out for its balance between the public and academic sectors, which is key to applying TOD strategies in emblematic projects in the capital.

5.2.2. Attendees in Lima

- Total Attendees:
    - 101 participants
- Gender Distribution:
    - Men: 60%
    - Women: 40%
- Participant Profiles:
    - Ministries: 28 participants (28% of total)
    - Local Governments: 30 participants (30% of total)
    - Public Institutions: 6 participants (6% of total)
    - Academia: 1 participant (1% of total)
    - NGOs: 7 participants (7% of total)
    - Private Sector: 7 participants (7% of total)
    - Independent Professionals: 14 participants (14% of total)
    - Others: 1 participant (1% of total)
    - TOD Project: 7 participants (7% of total)

5.3. Seminar in Callao

5.3.1. Registrants in Callao

- Total Enrollments:
    - 79 participants.
    .
- Gender Distribution:
    - Men: 53%.
    - Women: 47%.
- Participant Profiles:
    - Independent Professionals: 21% of total attendees.
    - Academic Sector: 16% of total attendees.
    - Public Sector: 42% of total attendees.
    - Private Sector: 11% of total attendees.
    - Others: 10% of total attendees.

The seminar in Callao was notable for its significant representation from the public sector, in line with the logistical and urban planning needs of the country's main port.

5.3.2. Attendees in Callao

- Total Attendees:
    - 59 participants
- Gender Distribution:
    - Men: 77%
    - Women: 23%
- Participant Profiles:
    - Ministries: 13 participants (22% of total)
    - Local Governments: 17 participants (29% of total)
    - Public Institutions: 11 participants (19% of total)
    - Academia: 2 participants (3% of total)
    - NGOs: 1 participant (2% of total)
    - Private Sector: 6 participants (10% of total)
    - Independent Professionals: 3 participants (5% of total)
    - Others: 1 participant (2% of total)
    - TOD Project: 8% of total

6. Project Efforts for Dissemination

The dissemination strategy for our events in Lima and Callao was designed with a collaborative and multifaceted approach, integrating various actions to ensure high participation and broad coverage. This effort included digital tools, direct communication, and the strategic distribution of printed materials aimed at directing as many people as possible to the events and the registration link.

First, social media played a key role in our strategy. We leveraged the official platforms of our counterparts to amplify the reach of the invitation. These strategically designed posts captured the attention of our target audience and increased the project's visibility in the digital space. Additionally, clear calls to action were included, guiding interested individuals to the registration link.

As a complementary approach, direct communications were carried out with more than 230 strategic entities located in Lima and Callao. This effort extended beyond professional associations to include university-level educational institutions offering programs related to architecture and civil engineering. Additionally, invitations were sent to major real estate companies linked to the area of intervention of the PE in Lima and Callao, as well as to Japanese companies invited through JICA. This ensured that the outreach effectively reached key sectors relevant to the event topics. Furthermore, our counterparts played an active role in disseminating the event directly among their strategic partners. This personalized contact fostered partnerships with these entities, strengthening trust in the project and reinforcing its relevance for potential participants.

As part of our strategy, A2 and A4 format posters were also designed and distributed. With the support of our counterparts, these materials were placed in strategic locations across Lima and Callao, including educational institutions, public offices, and other high-traffic areas frequented by our target audience. These visual materials not only complemented digital efforts but also enhanced the event's visibility in the physical environment, reaching individuals who were not necessarily connected to social media.

The core objective of this strategy was to direct interested individuals to a single registration link. This approach allowed for the efficient organization and management of participant information and facilitated effective follow-up on registrants. Thanks to this centralized system, we successfully registered over 260 individuals interested in attending the events, a key indicator of the reach and effectiveness of our dissemination efforts.

The results were significant. Out of the more than 260 registrants, 160 participants attended, representing over 60% of those who had signed up. This conversion rate is remarkably high, considering that in similar events, attendance typically averages around 25% of registrants. This success underscores the effectiveness of the collaborative strategy implemented, which combined digital, print, and direct communication efforts, and highlights the commitment and coordination of the team in achieving outstanding results.

7. Program of seminars

Table 5-1 Program in Lima

	Theme	Duration	Time	Presentor
Opening	Introduction about the seminar	5 minutes	2:00 – 2:05	Arq. Hedy Monty Villón Román, MVCS
1. JICA Session	Experiences of TOD in Japan and reflections for Lima and Callao	45 minutes	2:05 – 2:50	Yamada, JICA Expert Team
	Q&A	10 minutes	2:50 – 3:00	
	Break	15 minutes	3:00 – 3:15	
2. MVCS Session	Presentation of the TOD Guideline	30 minutes	3:15 – 3:45	Gustavo Pimentel (MVCS)
3. IMP Session	Specific Plan with focus in TOD	45 minutes	3:45 – 4:30	Guillermo Malca Orbegozo (IMP)
	Q&A	15 minutes	4:30 – 4:45	
Closing	Closing words		4:45 – 4:50	IMP

Source: JICA Expert Team

Table 5-2 Program in Callao

	Theme	Duration	Time	Presentor
Opening	Introduction about the seminar	5 minutes	3:00 – 3:05	Arq. Hedy Monty Villón Román, MVCS
1. JICA Session	Experiences of TOD in Japan and reflections for Lima and Callao	45 minutes	3:05 – 3:50	Yamada, JICA Expert Team
	Q&A	10 minutes	3:50 – 4:00	
	Break	15 minutes	4:00 – 4:15	
2. MVCS Session	Presentation of the TOD Guideline	30 minutes	4:15 – 4:45	Gustavo Pimentel (MVCS)
3. Callao Session	Application of TOD in Callao	45 minutes	4:45 – 5:15	Luis Antonio Orihuela Carpio (MPC)
	Q&A	15 minutes	5:15 – 5:30	
Closing	Closing words		5:30 – 5:35	MPC

Source: JICA Expert Team

6 PDM, PO

6.1 Project Design Matrix (PDM)

PM Form3-2 Monitoring Sheet I

Project Monitoring Sheet II （Revision of Project Design Matrix）

Project Title: Project for Enhancing Capacity of Transit Oriented Development
Implementing Agency: MVCS, ATU, MML, and MPC
Target Group: MVCS, ATU, MML, and MPC
Period of Project: 2022 – 2025 (3 years)
Project Site: National Metropolis (Lima and Callac Model Site:

Project Completion Report
February, 2025

Narrative Summary	Objectively Verifiable Indicators	Means of Verification	Important Assumption	Achievement	Remarks
Overall Goal					
Transit Oriented Development (TOD) approach is implemented as part of urban-territorial planning and management in National Metropolis (Lima-Callao).	- Further amendments to laws and regulations related to promoting TOD or the establishment of new regulations are implemented or prepared. - TOD Guideline for National Metropolis (Lima-Callao) is utilized to advance the consideration of TOD, and the roadmap for promoting TOD is updated based on progress made. - PE incorporation the concept of TOD is developed in National Metropolis (Lima-Callao) in addition to the pilot projects.	- Interview with MVCS, ATU, MML and MPC - Interview with MVCS, ATU, MML and MPC - Interview with MVCS, ATU, MML and MPC		N/A N/A N/A	
Project Purpose					
Planning and implementation capacity to realize TOD in National Metropolis (Lima-Callao) is enhanced.	Pilot projects are approved by JCC, and the preparation works for incorporation into legal frameworks are commenced.	- Project report	- The political priority to incorporate TOD approach in urban development plan does not decline.	N/A	
Outputs					
1.Capacity for formulation of legal framework and technical standards for the TOD approach in urban planning is strengthened. 2.A guideline for the implementation of TOD in National Metropolis (Lima-Callao), which includes a roadmap, as part of urban planning and management, is developed and shared. 3.Issues and challenges in applying TOD approach in National Metropolis (Lima-Callao) are confirmed through three (3) pilot projects.	- A proposed amendment to laws and regulations related to urban development incorporating the concept of TOD is enacted. - TOD Guideline for National Metropolis (Lima-Callao) is approved by MVCS. - For each Pilot Projects, drafts of PE are finalized, and the roles and activity policies of relevant organizations are agreed.	- Project report - Project report - Project report	- Mutual consensus with stakeholders and/or interest parties are maintained. - There are no conflicts with other on-going and/or under preparation urban development projects. - Turnover and change of	No exist No exist No exist	

Activities	Inputs		Important Assumption
	The Japanese Side	The Peruvian Side	
1.1 Design and implement seminars and workshops inviting experts of TOD from Japan and Latin American countries such as Colombia and Brazil 1.2 Formulate TOD menu, measures for regulation and incentives for the realization of TOD with relevant organizations and share among stakeholders 1.3 Propose necessary amendments to the current legal framework and technical standards to promote TOD 1.4 Develop workshops to socialization and awareness about TOD approach 2.1 Develop a draft TOD Guideline referring to the global TOD examples 2.2 Develop a TOD implementation roadmap in National Metropolis (Lima-Callao), which describes the timeframe, the roles, responsibilities and actions of relevant organizations 2.3 Finalize the TOD Guideline and the roadmap through discussions among the stakeholders, and share among entities involved 2.4 Establish indicators to measure the TOD approach impact in National Metropolis (Lima-Callao) 3.1 Carry out surveys on the current situation of urban development and urban transport at potential pilot project sites, which will be proposed by the Counterpart 3.2 Select three (3) pilot project sites 3.3 Conduct market survey and additional surveys for the pilot project sites 3.4 Develop transit-oriented development strategies for the pilot project sites from urban planning and urban transport perspectives 3.5 Propose any necessary modifications/changes to the zoning of the pilot project sites, based on analyze the current zoning and regulation, paying particular attention to housing projects 3.6 Prepare a basic development plan with the description of implementation procedure for each pilot project sites 3.7 Analyze potential issues and challenges for implementation, as well as make some suggestion to minimize them.	1. Experts (1) Urban Development System and Urban Development (1) (2) Urban Development System and Urban Development (2) (3) Urban Transport, Urban Mobility (1) (4) Urban Transport, Urban Mobility (2) (5) Landuse Plan, GIS (6) Urban Design, Town Planning (1) (7) Urban Design, Town Planning (2) (8) Economic and financial Analysis (9) Socio Environmental Consideration, Social Management (9) Organization and Capacity Building/ TOD promotion (10) Training Management/ Administration 2. Trainings for counterparts including trainings in Japan, third country and Peru and/or online trainings 3. Surveys	1. Assignment of Counterpart personnel 2. Office space and facilities for the Japanese experts 3. Other local costs (e.g. water, internet, electricity bill) 4. Budget for public consultations, etc.	Pre-Conditions Counterpart fund/budget for project implementation is secured. <Issues and countermesures> No exist

Project Monitoring Sheet II (Revision of Plan of Operation)

Project Completion Report
February, 2025

Project Title: Project for Enhancing Capacity of Transit Oriented Development

Inputs	Plan/Actual	2022 I	2022 II	2022 III	2022 IV	2023 I	2023 II	2023 III	2023 IV	2024 I	2024 II	2024 III	2024 IV	2025 I	2025 II	2025 III	2025 IV	Monitoring: Issue	Monitoring: Solution
Expert																			
Team Leader/ Urban Plannning System and Urban Development (1)	Plan																		
	Actual																		
Deputy Team Leader/ Urban Plannning System and Urban Development (2)	Plan																		
	Actual																		
Urban Transport, Urban Mobility (1)	Plan																		
	Actual																		
Urban Transport, Urban Mobility (2)	Plan																		
	Actual																		
Landuse Plan, GIS	Plan																		
	Actual																		
Urban Design, Town Planning (1)	Plan																		
	Actual																		
Urban Design, Town Planning (2)	Plan																		
	Actual																		
Economic and Financial Analysis	Plan																		
	Actual																		
Socio Environmental Consideration, Social Management	Plan																		
	Actual																		
Organization and Capacity Building/ TOD promotion	Plan																		
	Actual																		
TOD promotion	Plan																		
	Actual																		
Organization and Capacity Building	Plan																		
	Actual																		
Training Management/ Administration	Plan																		
	Actual																		
Equipment																			
	Plan																		
	Actual																		
	Plan																		
	Actual																		
Training in Japan																			
Training in Japan	Plan																		
	Actual																		
In-country/Third country Training																			
Training in Peru	Plan																		
	Actual																		
Training in third country	Plan																		
	Actual																		

Activities / Sub-Activities		2022				2023				2024				2025				Achievements	Issue & Countermeasures
		I	II	III	IV	I	II	III	IV	I	II	III	IV	I	II	III	IV		
Output 1: Capacity for formulation of legal framework and technical standards for the TOD approach in urban planning is strengthened																			
1.1 Design and implement seminars and workshops inviting experts of TOD from Japan and Latin American countries such as Colombia and Brazil	Plan																	Completed	None
	Actual																		
1.2 Formulate TOD menu, measures for regulation and incentives for the realization of TOD with relevant organizations and share among stakeholders	Plan																	Completed	None
	Actual																		
1.3 Propose necessary amendments to the current legal framework and technical standards to promote TOD	Plan																	Completed	None
	Actual																		
1.4 Develop workshops to socialization and awareness about TOD approach	Plan																	Completed	None
	Actual																		
Output 2: A guideline for the implementation of TOD in National Metropolis (Lima-Callao), which includes a roadmap, as part of urban planning and management, is developed and shared																			
2.1 Develop a draft TOD Guideline referring to the global TOD examples	Plan																	Completed	None
	Actual																		
2.2 Develop a TOD implementation roadmap in National Metropolis (Lima-Callao), which describes the timeframe, the roles, responsibilities and actions of relevant organizations	Plan																	Completed	None
	Actual																		
2.3 Finalize the TOD Guideline and the roadmap through discussions among the stakeholders, and share among entities involved	Plan																	Completed	None
	Actual																		
2.4 Establish indicators to measure the TOD approach impact in National Metropolis (Lima-Callao)	Plan																	Completed	None
	Actual																		

Output 3: Issues and challenges in applying TOD approach in National Metropolis (Lima-Callao) are confirmed through three (3) pilot				
3.1 Carry out surveys on the current situation of urban development and urban transport at potential pilot project sites, which will be proposed by the Counterpart	Plan Actual		Completed	None
3.2 Select three (3) pilot project sites	Plan Actual		Completed	None
3.3 Conduct market survey and additional surveys for the pilot project sites	Plan Actual		Completed	None
3.4 Develop transit-oriented development strategies for the pilot project sites from urban planning and urban transport perspectives	Plan Actual		Completed	None
3.5 Propose any necessary modifications/changes to the zoning of the pilot project sites, based on analyze the current zoning and regulation, paying particular attention to housing projects	Plan Actual		Completed	None
3.6 Prepare a basic development plan with the description of implementation procedure for each pilot project sites	Plan Actual		Completed	None
3.7 Analyze potential issues and challenges for implementation, as well as make some suggestion to minimize them	Plan Actual		Completed	None

Duration / Phasing																					
	Plan																				
	Actual																				

Monitoring Plan		2022				2023				2024				2025				Issue	Solution
	Actual	I	II	III	IV	I	II	III	IV	I	II	III	IV	I	II	III	IV		
Monitoring																			
Joint Coordinating Committee	Plan																	None	
	Actual																		
Set-up the Detailed Plan of Operation	Plan																	None	
	Actual																		
Submission of Monitoring Sheet	Plan																	None	
	Actual																		
Monitoring Mission from Japan	Plan																	None	
	Actual																		
Joint Monitoring	Plan																	None	
	Actual																		
Post Monitoring	Plan																	None	
	Actual																		
Reports/Documents																			
Project Completion Report	Plan																	None	
	Actual																		
Public Relations																			
	Plan																		
	Actual																		
	Plan																		
	Actual																		