

**Republic of Mozambique
The Project for Improvement of
Urban Public Transport System
in Maputo
(METRAP-Maputo)**

Project Completion Report

July 2026

Japan International Cooperation Agency (JICA)

Oriental Consultants Global Co., Ltd.

PADECO Co., Ltd.

Eight-Japan Engineering Consultants Inc.

UR Linkage Co., Ltd.

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**Republic of Mozambique
Maputo Municipal Council**

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Abbreviation

Abb	Portuguese/others	English
AfDB	African Development Bank	African Development Bank
AMT	Agência Metropolitana de Transporte de Maputo	Maputo Metropolitan Transport Agency
ASF	Arquitectos Sem Fronteiras	Architecture without borders
ATROMAP	Associação dos Transportadores de Maputo	Maputo Association of Transport Operators
BRT	Bus Rapid Transit	Bus Rapid Transit
CDR	Call Detail Record	Call Detail Record
CFM	Caminhos de Ferro de Moçambique	Mozambique Railways Company
CMM	Concelho Municipal de Maputo	Maputo Municipal Council
DMMF	Direcção Municipal de Mercados e Feiras	Municipal Department of Markets and Fairs
DMTT	Direcção Municipal de Mobilidade Transito e Transporte	Municipal Department of Mobility Transit and Transport
DMIU	Direcção Manutenção de Infra-estruturas Urbanas	Municipal Department of Urban Infrastructure
GADU	Gabinete Municipal de Desenvolvimento Urbano	Municipal Cabinet Office of Urban Development
GTFS	General Transit Feed Specification	General Transit Feed Specification
EMME	Empresa Municipal de Mobilidade e Estacionamento	Municipal Company of Mobility and Parking of Maputo
EMTPM	Empresa Municipal de Transportes Públicos de Maputo	Municipal Public Transport Company of Maputo
FEMATRO	Federação Moçambicana das Associações dos Transportadores Rodoviários	Federation of Road Transport Associations of Mozambique
IFPELAC	Institute for Vocational Training and Labor Studies Alberto Cassimo	Institute for Vocational Training and Labor Studies Alberto Cassimo
INCM	Instituto Nacional das Comunicações de Moçambique	National Institute of Communications of Mozambique
INE	Instituto Nacional de Estatística	National Institute of Statistics
JCC	Joint Coordinating Committee	Joint Coordinating Committee
KPI	Key Performance Indicator	Key Performance Indicator
MMAUMP	Maputo Metropolitan Area Urban Mobility Project	Maputo Metropolitan Area Urban Mobility Project
MNO	Mobile Network Operator	Mobile Network Operator
MOU	Memorando de Entendimento	Memorandum of Understanding
MTC	Ministério dos Transportes e Comunicações	Ministry of Transport and Communication

Abb	Portuguese/others	English
OMT	Observatório da Mobilidade e de Transportes de Moçambique	Observatory of Mobility and Transport of Mozambique Association
OD	Origin – Destination	Origin – Destination
PEUMM	Plano de Estructura Urban do Municipio de Maputo	Maputo Municipal Urban Structure Plan
PUTM	Projeto de Transformação Urbana de Maputo	Maputo Urban Transformation Project
TOD	Transit Oriented Development	Transit Oriented Development
T-SUM	Transitions to Sustainable Urban Mobility	Transitions to Sustainable Urban Mobility
TWG	Technical Working Group	Technical Working Group
SMW	Sustainability Mobility Week	Sustainability Mobility Week
SUMP	Plano de Mobilidade Urbana Sustentável	Sustainable Urban Mobility Plan
UEM	Universidade Eduardo Mondlane	Eduardo Mondlane University
VIU	Vereação de Infraestruturas Urbanas	Councilor of Urban Infrastructure
VOTAC	Vereação de Ordenamento Territorial, Ambiente e Construção	Councilor of Territorial Planning, Environment and Construction
NEX	Next EMTPM eXtension for Future	Next EMTPM eXtension for Future

Chapter 1 Basic Information on the Project

1.1 Country

The Republic of Mozambique

1.2 Title of the Project

The Project for Improvement of urban Public Transport System in Maputo

1.3 Duration of the Project

Planned: 20th January 2023 to 30th January 2026

Actual: 20th January 2023 to 30th July 2026

1.4 Background

1) Efforts are underway to improve public transportation services in the metropolitan area, which is home to over 2.5 million people.

Maputo, the capital of Mozambique, is the country's largest city, with a population of approximately 1.12 million (2017 census) spread across an area of about 348 km². Furthermore, the total population of the Maputo metropolitan area, which includes Maputo City and the three adjacent administrative districts (Matala City, Boane District, and Marracuene District) reaches 2.6 million. While the metropolitan population is expected to grow further, particularly in the suburbs, traffic congestion is already becoming severe in downtown Maputo, where urban functions are concentrated, as well as on major roads leading to the city center.

To address the transportation challenges in the Maputo metropolitan area, the Maputo City Council (CMM), with the cooperation of JICA, formulated the "Maputo Metropolitan Area Transportation Master Plan" (hereinafter "M/P 2014") in 2014. Following the formulation of M/P 2014, 28 projects were implemented, including road improvements and traffic management, and in 2018, the Maputo Metropolitan Transport Agency (AMT) was established under the Ministry of Transport and Communications (MTC) to coordinate traffic measures across multiple administrative agencies in the Maputo metropolitan area. In 2020, it was decided to introduce a BRT system on the section from Baixa to Missão Roque in Maputo's central business district, with AMT as the implementing agency, funded by a grant from the World Bank.

2) While initiatives based on the Urban Transportation (Master Plan 2014) are in place, there is a lack of capacity to formulate plans, including updates.

Although numerous projects have been implemented in accordance with M/P 2014, an update to the plan is required to address the growing demand for urban transportation driven by population growth and the anticipated shifts in transportation modes resulting from the introduction of BRT.

Furthermore, in light of the impact of the spread of COVID-19 on socially vulnerable groups and the continued growth in the use of private transportation such as private cars, enhancing public transportation services as outlined in M/P 2014 has become an urgent priority. Implementation of these measures requires collaboration with private operators of buses, chapas (shared taxis), taxis, and commuter rail, as well as appropriate regulations; however, the Government of Mozambique and the City of Maputo lack the necessary systems and capacity. In light of these circumstances, the Government of Mozambique requested technical cooperation aimed at updating the M/P 2014 and strengthening capacity regarding public bus operations, services, and regulatory management.

1.5 Overall Goals, Project Purposes, Activities, and Their Indicators

The Overall Goal and Indicators established at the start of the project (PDM Version-0) are listed below. Based on the results of the current status analysis conducted through project activities, each performance indicator underwent significant revisions at the 3rd Joint Coordinating Committee (JCC) meeting held in September 2024. Details regarding the revision history are provided in Section 2-5 of Chapter 2.

1.5.1 Overall Goal

The use of urban public transport is promoted in Maputo city and Maputo metropolitan area.

Indicator 1 : Number of implementing projects based on SIMPUT-Maputo

Indicator 2 : SIMPUT-Maputo proposals which applied to policies and plans in Mozambique or Maputo municipality

Indicator 3 : Implementing actions addressed in business improvement plan for EMTPM

Indicator 4 : Number of private operators who applied KPIs or referred to guidelines proposed by METRAP-Maputo

Indicator 5 : The satisfaction ratings of public transportation services are improved to more than 3 points on average.

Indicator 6 : The percentage of modal share for public transportation between Maputo metropolitan area and Maputo municipality is increased.

1.5.2 Project Purpose

The urban public transport services are improved in Maputo city.

Indicator 1 : The number of officers who learned fundamental theories about urban transportation planning and operation is increased to five (5) persons. CMM promotes and disseminates the SIMPUT-Maputo with stakeholders of urban transport agencies and other municipalities.

Indicator 2 : Twelve key performance indicators (KPIs) on the EMTPM bus services and operations are improved.

Indicator 3 : At least one or more bus operators in Maputo Metropolitan Area applies one or more KPIs set by METRAP-Maputo.

1.5.3 Output Purpose

Output 1: The Comprehensive Urban Transport Master Plan for the Greater Maputo (Master Plan 2014) is reviewed and utilized.

Indicator 1 : The Strategic Implementation Master Plan, as a result of reviewing the Master Plan 2014, is proposed.

Indicator 2 : Number of reviews on urban public transport plans using the Dashboard by each stakeholder at least once.

Note: Stakeholders refer to relevant organizations, such as transportation departments, in municipalities other than Maputo municipality.

Output 2: The capacity of EMTPM as a public bus operator and regulators for bus operation and management is enhanced.

Indicator 1 : More than 10 recommendations on improving EMTPM's bus operations are proposed, and more than half are implemented.

Indicator 2 : The KPIs of bus services and operations of EMTPM are set and monitored.

Indicator 3 : The challenges analysis on CMM (DMTT)'s role and responsibilities is analyzed, and an action plan for improvement is developed.

Indicator 4 : The activities to enhance public transport convenience are analyzed and evaluated through pilot projects (bus terminal operation improvement and GTFS development) and a further action plan is prepared.

Indicator 5 : The guideline on bus operation and maintenance is formulated.

Output 3: The urban development controls and incentives toward the transit-oriented development (TOD) are enhanced.

Indicator 1 : Guidelines on intermodal transport hubs and guidelines on transit mall are formulated.

Indicator 2 : Seminars for TOD, with the guidelines on intermodal transport hubs and transit mall, are convened once.

Indicator 3 : A taskforce for enhancing TOD is established.

1.6 Implementing Agency

Implementing Organizations

- Maputo Municipal Council (CMM)
- Direccao Municipal de Mobilidade Transito e Transporte (DMTT)

Related Organizations

- Empresa Municipal de Transportes Públicos de Maputo (EMTPM)
- Empresa Municipal de Mobilidade e Estacionamento (EMME)
- Ministério dos Transportes e Comunicações (MTC)

- (In January 2025, during this project period, it was reorganized into the Ministry of Transport and Logistics (MTL). The telecommunications sector was transferred to the newly established Ministry of Communications and Digital Transformation.)
- Agência Metropolitana de Transporte de Maputo (AMT)

Chapter 2 Results of the Project

2.1 Input by Japan Side

2.1.1 Expert Dispatch

Table 2.1 Overview of Activities by Experts in the Project

No	Expert Name	Major Activities	Site MM	Domestic MM	Total MM
1	Yoshida ASADA	Project Manager/ Urban Public Transport Policy	10.33	0.75	11.08
2	Takeshi MATSUNUMA	Deputy Project Manager/ Traffic Management & Digital Transformation (DX)	9.03	0.55	9.58
3	Hirohisa KAWAGUCHI	Urban Transport Planning/ Traffic Survey	6.20	0.50	6.70
4	Koji UZAWA	Bus Operation Management	6.37	0.00	6.37
5	Masayuki TOKUDA	Bus Business Management (1)	5.20	0.00	5.20
6	Yukari FUCHI	Bus Business Management (2)	0.70	0.00	0.70
7	Yasushi OoWAKI	Terminal Operation/ Management (1)	1.40	0.00	1.40
8	Ikumasa KAWASAKI	Terminal Operation/ Management (2)	2.60	0.00	2.60
9	Satoshi MIZUNO	Bus Terminal Basic Plan	0.50	0.00	0.50
10	Jun KATSUMI	Urban Planning Legal System	3.93	0.03	3.96
11	Erio TACHIARA	Urban Development Planning (Guideline Formation)	4.00	0.03	4.03
12	Masouleh FATEMEH	Pilot Project Operation & Public Relation	4.40	0.00	4.40
13	Lucas ALVES	Capacity Assessment & Capacity Development Planning	4.17	0.20	4.37
14	Kumi OKAYAMA	Capacity Assessment & Capacity Development Planning/ Monitoring	0.00	0.67	0.67
15	Nobuyoshi FUJIWARA	Traffic-Related Survey & Analysis	1.73	0.27	2.00
16	Toshiya YASAKU	Urban Transport Data Analysis & Coordination	2.07	0.00	2.07
17	Natsuki NAGASAKA	Urban Transport Data Analysis & Coordination	1.56	0.30	1.86
		Total	64.19	3.30	67.49

Source: JICA Expert Team

2.1.2 Acceptance of Training Participants

The following training programs were conducted during the project period.

Table 2.2 Training Participants Outline

No	Title	Duration	Participants	Purpose
1	Training in Japan	8 th June 2024 to 22 nd June 2024	DMTT: 2 officials EMTPM: 2 officials DMOTC: 1 official DMIU: 1 official AMT: 2 officials	Each participant will share the knowledge and experience gained through the training with colleagues and relevant stakeholders within their respective organizations, corresponding to each of the three deliverables of this project.
2	Training in third country (South Africa)	21 st July 2025 to 30 th July 2025	DMT: 3 officials DMIU: 1 official GADU: 1 official EMME: 1 official EMTPM: 1 official	To deepen our understanding of initiatives and considerations specific to Africa related to each of the METRAP-Maputo outcomes through interviews with officials from the City of Cape Town - which has prior experience in this area - on-site visits, and opportunities to experience the BRT system firsthand.

Source: JICA Expert Team

In addition, during the project period, the counterparts participated in the following topic-specific training sessions. The results of the training were presented at the JCC, and after returning Mozambique, the participants began taking the initiative in their respective activities.

Comprehensive Urban Transportation Planning

- Mr. Lara Popinsky (CFM Director of Passenger Services)
- Mr. Vasco (DMTT chief): 2nd October 2024 ~ 1st November 2024

Urban Public Transport

- Mr. Loide (ex-Deputy Director, DMTT): 30th October 2023 ~ 10th November 2023
- Mr. Nelson (ex-Director, DMTT): 20th January 2025 ~ 14th February 2025
- Mr. Viriato (Head of the EMTPM Operations Management Department): 20th January 2025 ~ 14th February 2025
- Mr. Figueiredo (EMTPM Zimpeto and Kanyaka Operation Units Coordinator): 16th November 2025 ~ 6th December 2025

Urban Solutions

- Ms. Helena (DMTT, METRAP-Maputo Project Manager): 6th November 2023 ~ 1st December 2023
- Ms. Luchia / Ruchia (Deputy Director of DMTT): 23rd September 2025 ~ 23rd October 2025
- Mr. Jose (Director of DMOTC): 3rd November 2025 ~ 6th December 2025

2.1.3 Equipment Provision

The equipment procured and delivered for this project is as follows.

Table 2.3 Equipment List

Name	Model number	Unites
Laptop PC	HP ProBook 450 G9	1
Projector	DSV 1844	1
Video camera	HC-W590MS-W	10
Note PC	Lenovo Ideapad Flex5 14ITL05	1
IT server	PowerEdge R750 Server and Components	1
Tools	Gedore Toolkits	17
Tools	Prinnacle Toolkit	1
Sleeping board	Creeper	8
Laptop PC	HP 15-Fd0005dx	1
Desktop PC	HP Protower i5/290G9/13	1
Microsoft office	Office 2024	2

Source: JICA Expert Team

2.2 Input by Mozambique Side

2.2.1 Counterpart Assignment

Each member was selected as follows:

1) Project Director

Mr. Alexandre Xavier MUIANGA of CMM (resigned in February 2024)

Mr. Fernando Uache, VMTT, Councilor of CMM (took over in February 2024)

(In February 2026, he was appointed CEO of EMTPM by the mayor.)

2) Adviser to Project Director

Mr. António Matos, President of AMT (resigned in July 2025)

Mr. Fernando Andela, President of AMT (took over in July 2025)

3) Project Manager (approved by 4th JCC)

Mr. Nelson Massango, Director of DMTT (resigned in February 2023)

Ms. Loide Massangaie Deputy Director of DMTT (resigned in August 2024)

Ms. Helena Tito, Technician, Dept. Transport Operations (studies and projects), DMTT, CMM (took over in August 2024)

4) JCC members (excluding the Project Director, Advisor to the Project Director, and Project Manager)

Leader of TWG of Output 1: Ms. Helena Tito, Technician, Dept. Transport Operations (studies and projects) DMTT, CMM

Leader of TWG of Output 2: Mr. Lourenço Albino, President of EMTPM, CMM (resigned in February 2026)

Leader of TWG of Output 2: Mr. Fernando Uache, President of EMTPM (took over in March 2026)

Leader of TWG of Output 3: Ms. Helena Tito, Technician, Dept. Transport Operations (studies and projects), DMTT, CMM

2.2.2 Working Group Members

The WG members for each output are listed in the table below. Note that the membership list shown below is current as of the conclusion of the survey.

Table 2.4 Members of each WG

WG	Department	Name/Position
WG-1: Review and Utilize Comprehensive Urban Transport Master Plan for the Greater Maputo (Master Plan 2014)	DMTT	Ms. Catarina Chicuava , Technician, Dept. Transport Operations (inspection and supervision)
		Ms. Márcia Muianga , Technician Dept. License. (IT)
	AMT	Mr. Felisberto Mondlane , Technician, Technical Department
	EMME	Mr. Atanásio Tembe , Administrator, Operations Dept.
	INCM	Mr. Afonso Mbata Madivadua Júnior , Chief of Department, Service Quality Department
	Matola	Mr. Ramiro Lopes Artur , Head of the Mobility Section, Mobility Section
	Marracuene	Mr. José Bata Tinga , Technician, Department of Public Works, Infrastructure and Equipment
	Boane	Mr. Daniel Comeque , Head of the Department, Department of Communications, Transport and Transit
WG-2: Enhance capacity of public bus operators and regulators for bus operation and management	DMTT	Mr. Jossefa Isaias , Technician, Dept. Public Transport
	DMTT	Mr. Vasco Nhanquila , Technician, Dept. Public Transport
	AMT	Mr. Armando Bembele , Administrator, Technical Department
	EMTPM	Mr. Camilo Ibraimo , Director, Operation Department
	FEMATRO	Mr. Domingos Machava , Executive Director, Member of Board of Directors
	ATROMAP	Mr. Edino da Conceição Harilal , Financial Director, Member of the Board of Directors
WG-3: Enhance urban development controls and incentives toward the transit-oriented development (TOD)	DMTT	Ms. Helena Tito , Technician, Dept. Transport Operations (studies and projects)
	AMT	Mr. Anulávio José Máximo , Technician, Technical Division within Operations Department
	GADU	Ms. Teresa Chissequere , Director, Urban Development Office
	GADU	Mr. José Ricardo , Chief. Dept. Urban Development Project
	DMOTC	Ms. Neila Uamusse , Technician, Urban Planning Department
	DMI	Mr. Sérgio Sebastião , Chief, Dept. Road

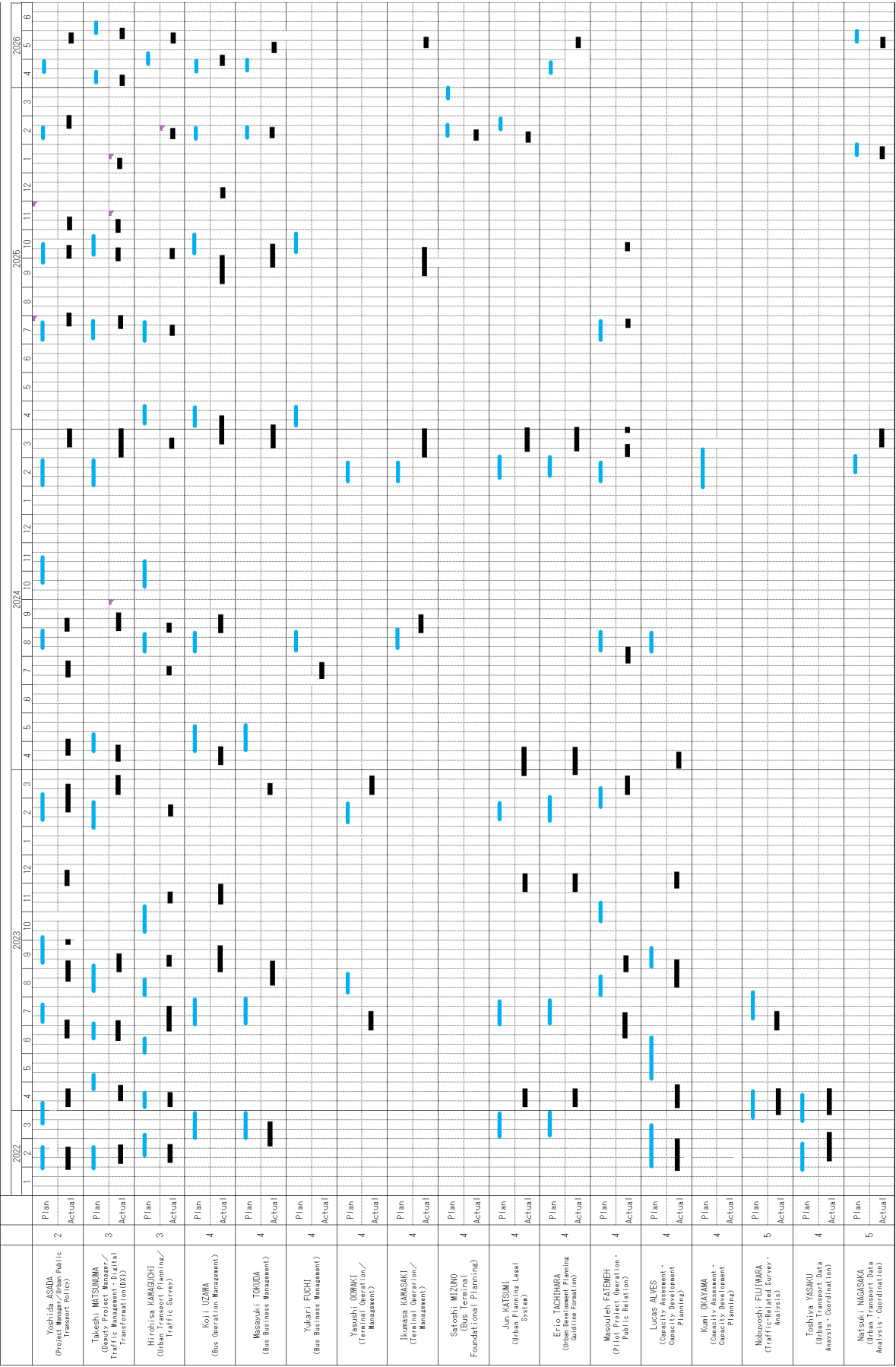
Source: JICA Expert Team

2.3 Activities

2.3.1 Implementation Schedule for Entire Project and Each Activity

Following tables depict the records of activities during the Project.

Activities		2023			2024			2025			2026		
Output 1	1-1. Review the implementation status of the Master Plan (2014)												
	1-2. Review the socio-economic framework												
	1-3. Conduct a transport survey												
	1-4. Develop the Dashboard as a planning and monitoring tool												
	1-5. Review and identify project candidates in the Master Plan												
	1-6. Coordinate the implementation of the projects identified by utilizing the planning and monitoring tool												
Output 2	2-1. Analyze the issues of bus service operations and management.												
	2-2. Conduct the training of EMTPM managers and administrative staff to develop and implement the business plans.												
	2-3. Conduct the training of EMTPM staff, such as drivers and technical staff, to improve bus services and maintenance.												
	2-4. Develop the key performance indicators (KPIs) for evaluating bus services and operations												
	2-5. Develop the bus operation and maintenance guidelines of EMTPM operators												
	2-6. Carry out pilot projects on bus services and operations by bus operators and regulators												
Output 3	2-7. Promote the bus operation and maintenance guideline of public and private operators in Maputo metropolitan area.												
	3-1. Review the urban development regulations and guidelines in facilitating transit-oriented development (TOD) together with private finance involvement												
	3-2. Develop the guideline on “intermodal transport hubs” to promote new urban cores												
JCC	3-3. Develop the guideline on “transit mall” to promote smooth transfer of public and private buses, chapas, and trains together with urban development												



2.3.2 Activities under Output 1

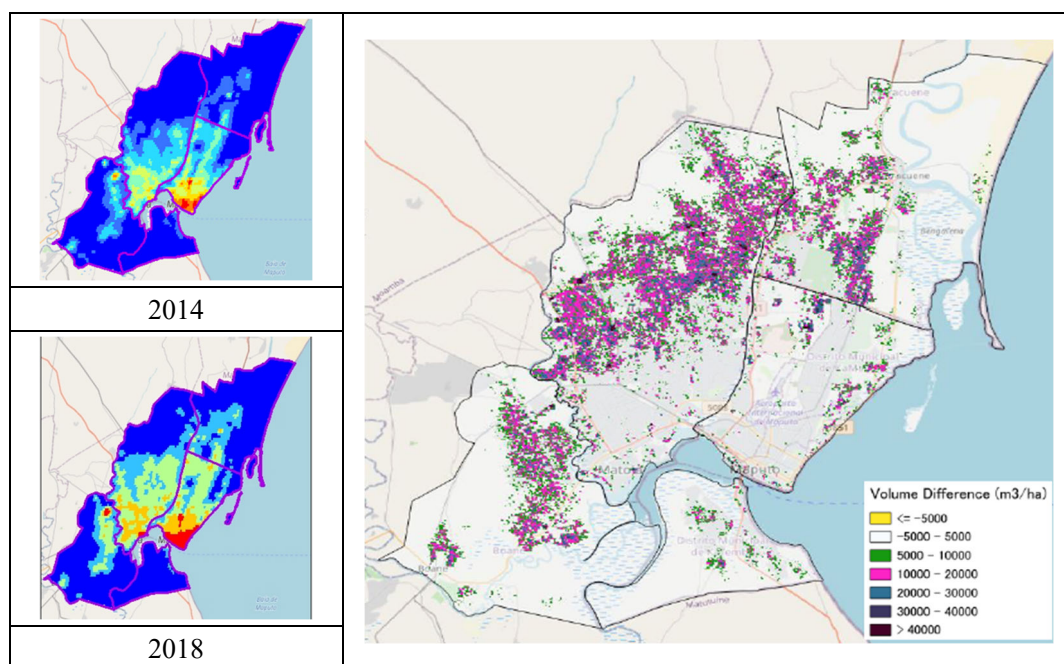
The Comprehensive Urban Transport Master Plan for the Greater Maputo (Master Plan 2014) is reviewed and utilized.

[Activity 1.1] Review the implementation status of the Master Plan (2014)

- After conducting interviews with local governments to investigate the current status of implementation and the reasons why certain projects had not yet been implemented, we compiled an overview of these findings into Version 0.0 of the SIMPUT-Maputo (Strategic Implementation Plan for the Maputo Metropolitan Area Transport System) and sought further confirmation from relevant stakeholders.

[Activity 1.2] Review the socio-economic framework

- Project team collected open socioeconomic data and census population data provided by the National Institute of Statistics (INE) and analyzed changes in population and land use.
- An analysis of nighttime light data derived from satellite imagery of the Maputo metropolitan area revealed an expansion of nighttime light between 2000 and 2020, primarily in the northern region, suggesting increased industrial activity and urbanization (Figure below).



Source: JICA Expert Team

Figure 2.1 Socio-economic Analysis for SIMPUT-Maputo

[Activity 1.3] Conduct a transport survey

- By February 2024, screen line surveys had been completed at 20 locations.
- Bus-related survey was conducted in collaboration with OMT (Mozambique Transport and Mobility Observatory). Collected data was analyzed and compiled to the resulting data.
- For the first phase of the CMM, JICA, and CDR analyses, the data was anonymized and stored on INCM's virtual server.



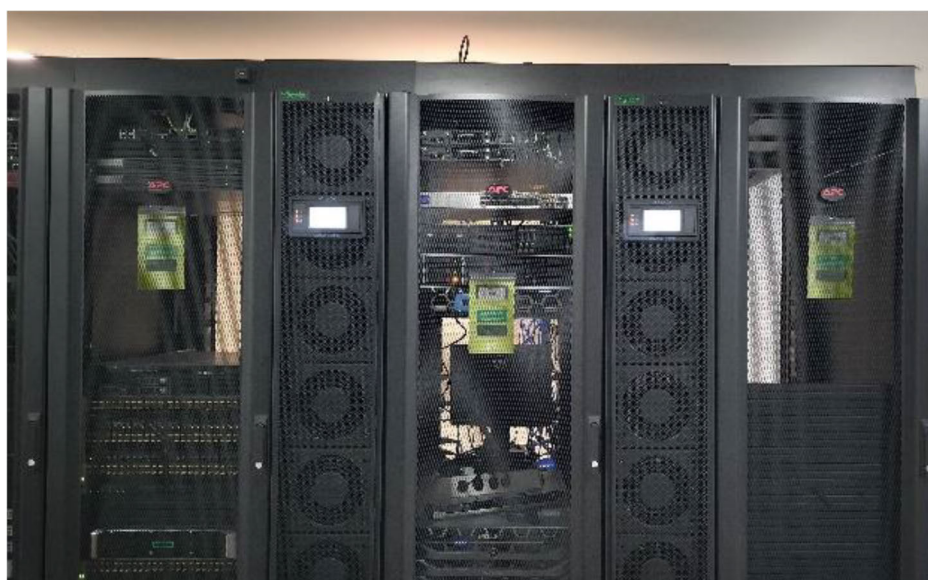
Bus Terminal Site Survey

Source: JICA Expert Team



Pilot Survey

Figure 2.2 Site Survey in Maputo

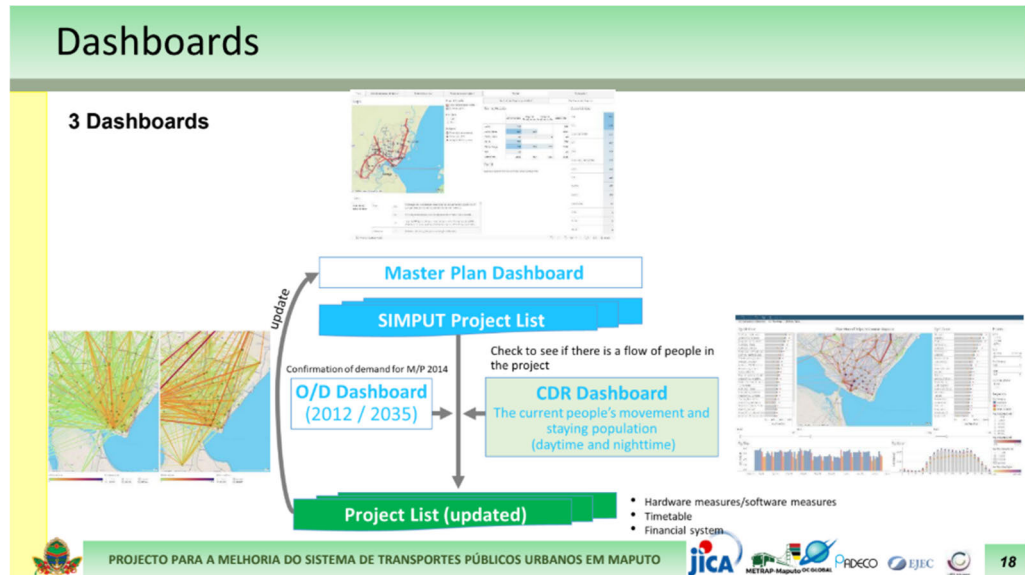


Source: JICA Expert Team

Figure 2.3 IT Server in INCM

[Activity 1.4] Develop the Dashboard as a planning and monitoring tool

- Project team developed a prototype dashboard to visualize the projects and OD data from the master plan formulated in M/P 2014.



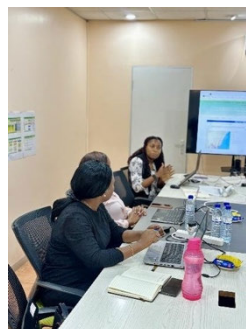
Source: JICA Expert Team

Figure 2.4 Concept and visual of Dashboards

- Project team developed a CDR dashboard for data visualization after improving the analysis of three months' worth of call, SMS, and USSD data provided by three mobile network operators (MNOs).
- To enable detailed analysis, Project team updated the functionality of the existing CDR dashboard and developing an automated pipeline for CDR data processing.
- After completing the dashboard development, we conducted ongoing practical training sessions on usage and data updates to ensure local institutions could independently maintain and consistently utilize the system.
- Specifically, we conducted more than 10 training sessions on the Master Plan (SIMPOT-Maputo) and OD dashboard for DMTT, AMT, and others, and more than 20 training sessions on CDR dashboard analysis and maintenance for INCM and DMTT (as of March 2026, these sessions are still held weekly).



Master Plan Dashboard Training
14th May 2025



SIMPOT-Maputo Dashboard Training
26th August 2025



CDR Seminar and Lecture by Prof. Shibasaki 7th October 2025

Source: JICA Expert Team

Figure 2.5 Practical Training on Using Dashboards

[Activity 1.5] Review and identify project candidates in the Master Plan

- Project team developed SIMPUT-Maputo, which outlines the vision, strategy, conceptual framework, and potential projects for the next 10 years.
- On September 12, 2024, Project team held the dissemination seminar to announce SIMPUT-Maputo and established a coordination mechanism based on the proposals outlined in Chapter 5 of the document.
- In January 2025, Project team briefed the DMIU on SIMPUT-Maputo and exchanged information regarding planned road projects in the CMM. The shared information has also been incorporated into SIMPUT-Maputo.



Source: JICA Expert Team

Figure 2.6 METRAP-Maputo and SIMPUT-Maputo Seminar (24th Jan 2025)

- On September 12, 2024, Project team held the dissemination seminar, which included a workshop on SIMPUT-Maputo. Approximately 100 participants gathered to exchange views among local governments and stakeholders on sustainable initiatives for monitoring and updating the project.



Source: JICA Expert Team

Figure 2.7 The Dissemination Seminar (12th September 2024)

[Activity 1.6] Coordinate the implementation of the projects identified by utilizing the planning and monitoring tool

- Throughout the project period, Project team held a total of five meetings of the Technical Working Group on Outcome 1 (TWG1) and completed individual interviews with TWG members from each local government, thereby establishing a coordination mechanism and progress management system for updating the master plan and dashboard.



#1 (14th April 2023)



#2 (12th September 2023)



#3 (14th November 2023)



#4 (16th July 2025)



#5 (15th October 2025)

Source: JICA Expert Team

Figure 2.8 TWG on Output 1

- To ensure a robust system for the ongoing maintenance of the CDR Dashboard, Project team provided legal support and other assistance for the revision and conclusion of a Memorandum of Understanding (MOU) between INCM and CMM.
- Of the five TWG meetings, three were conducted using the dashboard. At the third meeting, the dashboard was used to review the 2014 Master Plan. At the fourth and fifth meetings, held after the SIMPUT-Maputo was formulated, the dashboard was used to review progress.

2.3.3 Activities under Output2

The capacity of public bus operators and regulators for bus operations and management is enhanced.

[Activity 2.1] Analyse the issues of bus services and management

- After investigating the status of EMTPM's bus operations and identifying areas for improvement, several meetings were held between JICA experts and EMTPM staff.



Bus Driver Interview Survey

Source: JICA Expert Team



Bus Passenger Satisfaction Survey

Figure 2.9 Bus Service Survey

- Project team reviewed the EMTPM's FY2024 business plan and submitted a questionnaire regarding the plan to EMTPM via JICA Expert Team (JET).
- Within the TWG on Output 2, we established a sub-working group on the Zimpeto Bus Terminal. The sub-working group held two meetings (in-person and online) to discuss current challenges and directions for intervention.



Source: JICA Expert Team

Figure 2.10 Sub TWG (Face to face meeting)

[Activity 2.2] Conduct the training of EMTPM managers and administrative staff to develop and implement business plans

- Project team attempted to visualize operational status on major bus routes and compiled performance data and analysis results to improve operations.
- Project team conducted training on the operation of the passenger counting system and introduced passenger counting to facilitate visualization.
- Project team analyzed data based on a presentation given at the EMTPM Annual General Meeting.
- To increase revenue, Project team planned and proposed revisions to the operating schedule, including adjustments to idle time during the day.
- JICA experts drafted recommendations for improving EMTPM operations.

[Activity 2.3] Conduct the training of EMTPM staff, such as drivers and technical staff, to improve bus services and maintenance

- A system for conducting regular inspections of EMTPM buses using cloud-based data-sharing software was introduced, and intermittent monitoring was carried out by JICA experts. As a result of these efforts, the practice of conducting regular inspections based on mileage has become firmly established.
- Mechanics who contributed to ensuring proper periodic inspections and reducing costs were recognized at the EMTPM annual general meeting. The project also loaned them tools to boost on-site motivation and help establish a proper maintenance system through the correct use of tools.



Award for EMTPM Maintenance Technicians
 Source: JICA Expert Team



EMTPM Certificate of Appreciation to JICA Expert

Figure 2.11 EMTPM Year-end Ceremony

- Conducted training for drivers and maintenance technicians focused on improving daily inspections.



Maintenance Technicians Training

Source: JICA Expert Team



Bus Driver Training

Figure 2.12 Training in EMTPM

- To improve EMTPM maintenance operations, JICA experts ultimately submitted five recommendation reports. Through these five sets of recommendations, a total of 38 specific improvement actions were proposed.
- The specific details are as shown in the table below.

Table 2.5 The Outlines of Five Recommendation Reports

Recommendation Reports	Outlines of Recommendations
First Report November 2023	Multi functionalization of operations and maintenance work and productivity Consideration of long-term handling (sale or disposal) of buses that have been unused for an extended period
Second Report February 2024	Proposals for improvements to maintenance training
Third Report June 2024	Specific action plans for continuous monitoring of appropriate operational services and maintenance status
Fourth Report September 2024	Guidance on the proper operation of a Cloud-based scheduled inspection management system and spare parts inventory management Sharing of records and improvement of formats for inventory management Progress evaluation against KPI targets for scheduled inspections
Fifth Report April 2025	Proposals for improving efficiency in maintenance work through the “introduction of air impact wrenches” and “upgrades to the PREMAVERA financial management system”

Source: JICA Expert Team

- Project team moved forward with the implementation of a system to centralize the management of bus operation and maintenance data.

[Activity 2.4] Develop the key performance indicators (KPI) for the evaluating bus services and operations

- This initiative was revised based on the current situation where AMT has not established KPIs and was approved at the 3rd JCC meeting.
- To monitor progress in operational improvements after assessing the actual conditions of EMTPM’s business environment, we initially proposed 11 KPIs related on EMTPM’s operation and maintenance. Subsequently, following discussions through TWG 2 and other channels, we ultimately revised and finalized 12 KPIs.
- Specifically, the company set a target of at least 90% for the proportion of vehicles undergoing regular inspections at 12,000 km or less, and a target of 8.50 MZN per kilometer for maintenance costs.
- A cloud-based system for managing regular bus inspections and an inventory management system for spare parts were introduced and put into operation. These systems were suspended from December 2024 onwards due to political demonstrations but were resumed in February 2025.

[Activity 2.5] Develop the bus operation and maintenance guideline of EMTPM operators

- Monitored AMT’s activities related to new regulations concerning buses and shuttles.
- Conducted a review of the existing EMTPM bus maintenance procedures by JET and following consultations with the section chief of EMTPM’s bus maintenance department and others, completed and submitted the revised “Bus Maintenance Manual.”

- In this Activity, the experts team focused on practical content that on-site technicians could directly apply in their work, addressing the maintenance challenges faced at EMTPM sites. As a result, they developed and finalized the “Bus Maintenance Manual.”

Therefore, the “Bus Maintenance Manual” created through this activity is a deliverable that corresponds to the “Guidelines for Bus Operation and Maintenance” specified in OVI 2-5.



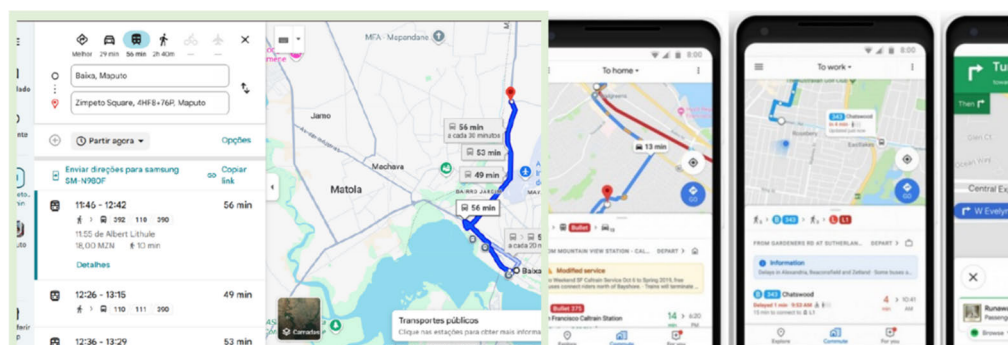
Source: JICA Expert Team

Figure 2.13 EMTPM Mechanic Chiefs Meeting (18th September 2025)

- Project team developed and implemented a cloud-based centralized management system that integrates bus operation and maintenance data, and provided technical guidance to enable EMTPM staff to continuously enter and analyze data.

[Activity 2.6] Carry out pilot projects on the service and operation of buses by bus operators and regulators

- Based on the actual realities of regulatory and supervisory authorities including AMT and private bus operators (such as relevant systems and data environments not being sufficiently established) identified through the current status survey after the launch of the project, a proposal to modify the title and content of this activity was submitted and approved at the 3rd JCC meeting in order to focus on practical support aligned with on-site needs.
- The GTFS data for EMTPM buses was finalized. The joint working group, which included representatives from EMTPM, DMTT, and AMT, collaborated with experts from the contracted NGO to process the GTFS data, specifically digitizing bus routes using GIS, identifying bus stop locations, and creating timetables.
- Project team applied for and registered with Google Transit to have our information listed on the EMTPM website and on Google Maps, making it searchable on Google Maps.



Source: JICA Expert Team

Figure 2.14 GTFS Development for EMTPM

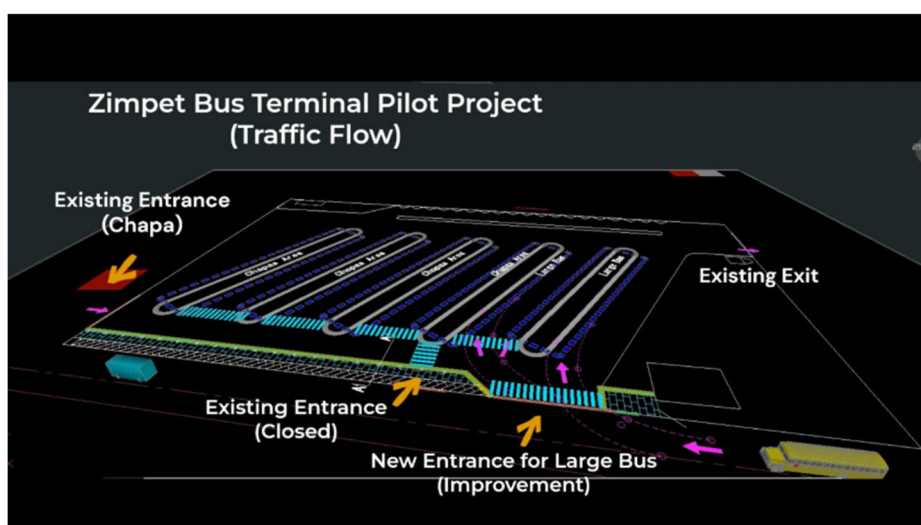
- To enable EMTPM to independently update data in the future, Project team conducted a three-day hands-on training session on the GTFS database for EMTPM staff and engineers from 10th to 12th March 2025.



Source: JICA Expert Team

Figure 2.15 March 2025 EMTPM GTFS Training

- Discussions were held within a Sub-Technical Working Group composed of EMME, DMTT, EMTPM, AMT, and other transportation-related organizations regarding improvements to bus terminal operations, particularly a pilot project at the Zimpeto Terminal.



Source: JICA Expert Team

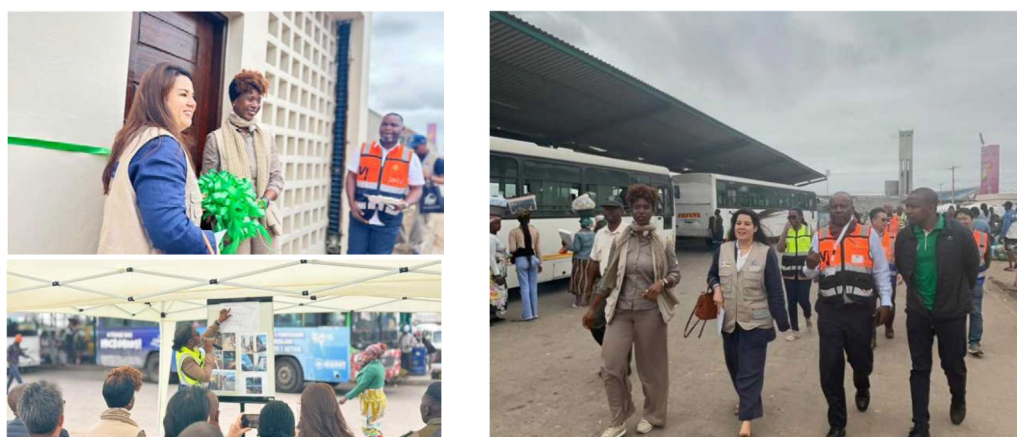
Figure 2.16 Improvements to Bus Service and Review of Buses Routes



Source: JICA Expert Team

Figure 2.17 Zimpeto Sub-Technical Working Group Site Visiting
(16th December 2024)

- On October 3, 2025, a completion ceremony was held to celebrate the completion of the Zimpeto Terminal pilot project (small-scale infrastructure improvement works).
- In December, a site survey was conducted at the Zimpeto Bus Terminal, and interviews were held simultaneously with potential bidders for the pilot construction project.



Source: JICA Expert Team

Figure 2.18 Completion Ceremony for the Zimpeto Terminal Pilot Project
(3rd October 2025)

[Activity 2.7] Promote the bus operation and maintenance guideline of public and private operators in Maputo metropolitan area

- Based on the current situation where AMT had not yet sufficiently developed and applied operation guidelines for private operators, a proposal to change the title of this activity was submitted and approved at the 3rd JCC meeting. This change clarified the project's strategic direction to widely disseminate and expand the knowledge and guidelines formulated under this project to private transport operators and other relevant entities in the Maputo Metropolitan Area.

- JET conducted interviews with the Marracuene bus company regarding bus operations and maintenance, and performed a comparative analysis of fuel consumption.



#1 (4th -5th July 2023)



#2 (13th September 2023)

Note: TWG #3 meeting was held on April 26, 2024, but no photos are available, so none are included here.

Source: JICA Expert Team

Figure 2.19 TWG on Output 2

- By February 2025, the Technical Working Group (TWG) for this deliverable had held three meetings, and the Sub-Technical Working Group had held two meetings. Based on the findings of the expert review, JET submitted three recommendations regarding operation and maintenance and one recommendation regarding operations and project management.

2.3.4 Activities under Output 3

The urban development controls and incentives toward the Transit-Oriented Development (TOD) are enhanced.

[Activity 3.1] Review and analyse Maputo's urban planning regulations and guidelines to promote TOD and private funding engagement

- After collecting and analyzing information on urban planning laws, regulations, and existing plans, a development concept centered on public transportation was shared among the working group members during the meeting.



12th April 2023 Meeting with CEDH



13th April 2023 Meeting with VIU/DMIU



13th April 2023 Meeting with GADU

Source: JICA Expert Team

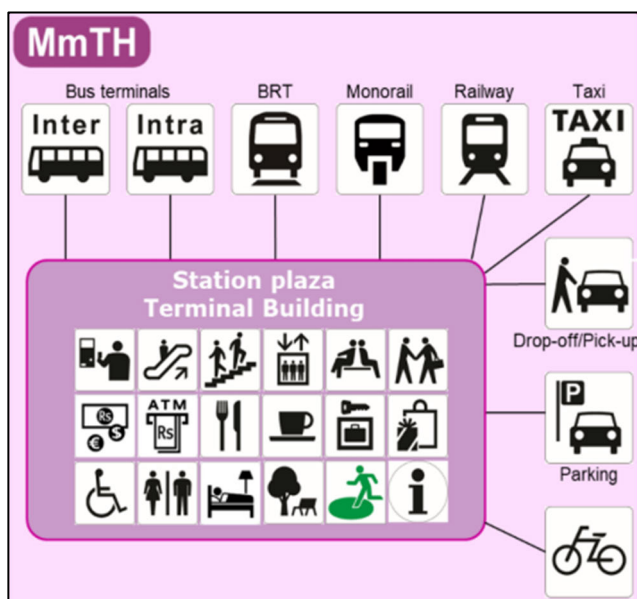


14th April 2023 Meeting with VDEL

Figure 2.20 Meetings with each Organization

[Activity 3.2] Develop a guideline for “Multimodal Terminals (Multi-modal Transport Hub: MmTH)” that promote new centripetal in the city through case studies

- The content was shared among TWG members and reviewed in light of the specific circumstances in Mozambique.
- The legal framework regarding DUAT (land use rights) was examined.
- The MmTH development guidelines were finalized based on feedback from TWG members.



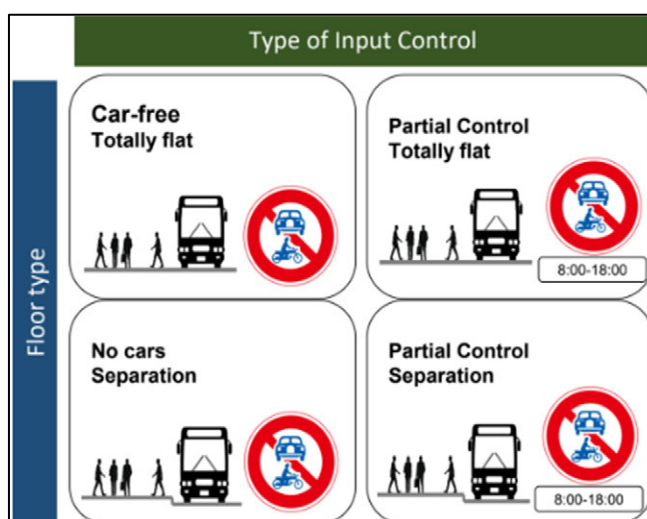
Source: JICA Expert Team

Figure 2.21 Concept of Multimodal Transport Hub (MmTH)

- A task force composed of TWG3 members was established to consider measures for promoting and raising awareness of the guidelines

[Activity 3.3] Develop a guideline for “Transit Malls” through case studies to facilitate bus and train connections and promote urban development

- The content was shared among TWG members, reviewed, and revised to reflect the specific circumstances in Mozambique.



Source: JICA Expert Team

Figure 2.22 Four Basic Types of Transit Malls

- Collected feedback on the “Transit Mall Design Guide” already distributed to TWG members.
- Finalized the Transit mall design guide in conjunction with feedback from TWG members.



#1 (21st April 2023)



#2 (30th August 2023)



#3 (7th December 2023)



#4 (17th April 2024)



#5 (19th March 2025)

Source: JICA Expert Team

Figure 2.23 TWG on Output 3

- Project team explored measures to promote and raise awareness of the guidelines. Additionally, regarding these guidelines - which were developed through this activity and Activity 3.2 – Project team held a results presentation seminar (the second session) on 26th March 2025, inviting relevant stakeholders, and began introducing the guidelines and making them publicly available via QR codes.



Source: JICA Expert Team



Figure 2.24 The Dissemination Seminar (26th March 2025)

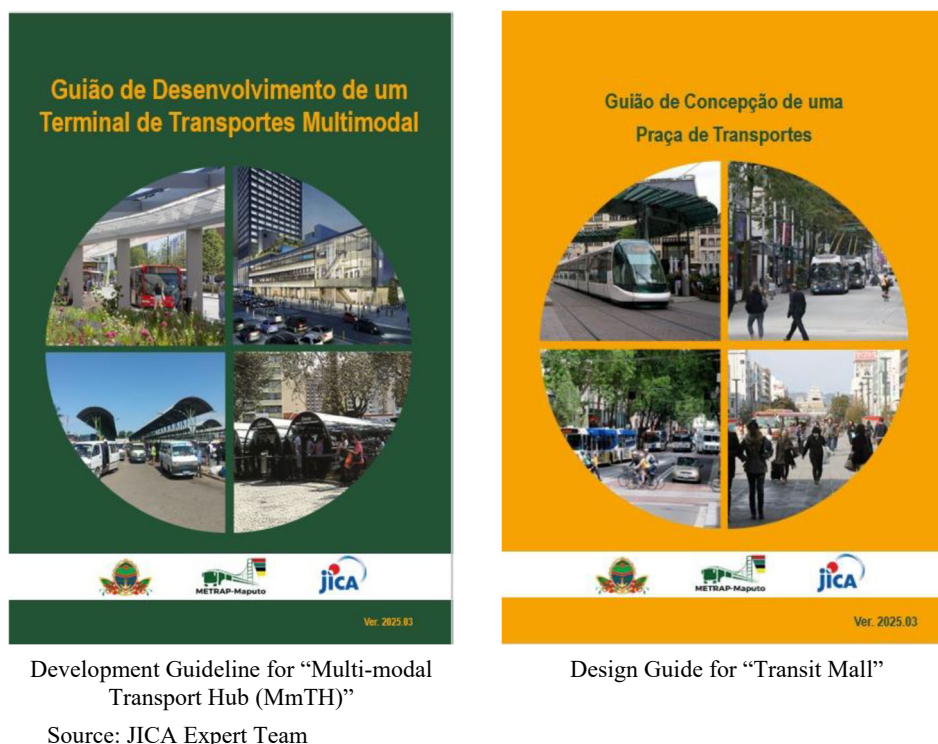


Figure 2.25 Developed Guidelines

2.3.5 Activities related to Training

In addition to training programs held in Japan and other countries, this project provided support for participation in KCCP (Knowledge Co-creation Program by JICA). The training in Japan was designed for staff from Maputo City and related agencies (DMTT, DMIU, DMOTC, EMTPM, and AMT). Its objectives were to provide trainees with practical knowledge regarding urban transportation planning in Japan, the operation of bus terminals, the practical application of data (including GTFS and location data), and the operation and maintenance of bus companies (Tokyo, Nagoya and Niigata).

The third-country training was held in Cape Town, South Africa, with the aim of gaining insights and lessons regarding the planning, introduction, and operation of public transportation; building relationships with non-bus associations; and the utilization of ICT/ITS. An overview of the training is shown in the table below.

Table 2.6 Outline of Trainings in Japan and Third Country

No	Title	Duration	Purpose
1	Training in Japan	2024/6/10~6/20	Learning about terminal operations, data utilization (such as location data), and practical aspects of bus operations and maintenance
2	Third country training	2025/7/22~7/25	Planning, implementation, and operation of BRT and similar systems; building relationships with minibus associations; and learning about the use of ICT / ITS

Source: JICA Expert Team

(1) Training in Japan

1) Participants

The following eight participants were selected for this training program based on the ownership demonstrated by the partner organizations.

Table 2.7 List of Trainees

Name	Organization	Position / TWG
Mr. Josefa Isaias	DMTT	Technician [TWG-2 member]
Ms. Catarina Chicuava	DMTT	Technician [TWG-1 member]
Mr. Lourenço Albino	EMTPM	President [TWG-2 member]
Mr. Camilo Ibrahimio	EMTPM	Director [TWG-2 member]
Ms. Neila Gonçalo Uamusse	DMOTC	Technician [TWG-3 member]
Mr. Sergio Sebastiao	DMIU	Chief [TWG-3 member]
Mr. Armando Bembele	AMT	Administrator [TWG-1 member]
Mr. Anulavio Joaquim	AMT	Technician [TWG-3 member]

Source: JICA Expert Team

2) Training Contents

The training schedule and content are outlined below.

Table 2.8 Training Schedule and Contents (in Japan)

Date	Place	Contents
2024/6/10	JICA Tokyo	JICA Briefing Program Orientation JICA's Initiatives in the Urban Transportation Sector Introduction of Trainees
2024/6/11	Shinjuku Bus Terminal	Site Visit and Lecture on Terminal Operations and Management at a Transportation Hub (Shinjuku Bus Terminal)
	University of Tokyo, Prof. Hironori KATO	Lecture on the General Characteristics and Challenges of Public Transportation in the Tokyo Metropolitan Area and Other Regions
2024/6/12	JICA Tokyo	Lecture on the Use of ICT in Transportation Planning (LocationMind) Lecture Comparing European Urban Transportation Planning Case Studies with the Situation in Japan (Prof. Ryusuke TAKEUCHI) Lecture on Case Studies of GTFS Implementation in the Bus Industry (MoDiP LLC)
2024/6/13	Meisei University Prof. Sadatsugu NISHIMURA	Lecture on Japan's New Town Policies, Plans, History, and Characteristics
	Tama New Town	Study Tour of Transit-Oriented Development (Case Study: Tama New Town)
2024/6/14	Eagle Bus (Kawagoe, Saitama)	Lecture on Improving Bus Management and Operations Using Data from Bus Operators (such as GTFS and passenger counters) Inspection of Bus Depots and Tourist Buses
2024/6/17	JICA Chubu, Nagoya	Lecture on Nagoya City's Transportation Plan (including coordination among stakeholders and the introduction of trunk bus routes)
	Oasis 21 Bus Terminal, Nagoya City	Tour and test ride at the Oasis 21 Bus Terminal and Nagoya Guideway Bus Station, and experience transferring to other modes of transportation

The Project for Improvement of Urban Public Transport System in Maputo (METRAP-Maputo)
Project Completion Report

Date	Place	Contents
2024/6/18	Niigata Municipal Office	Lecture on Niigata City's Transportation Plan, Including the Introduction of a New Public Transportation System Utilizing Articulated Buses
2024/6/19	Niigata City	Tour of the new public transportation system and other transportation systems (including a ride on an articulated bus from the Niigata Station Bus Terminal, a bus shelter integrated with a commercial facility, and a tour of the bus operations control center and maintenance facility)
2024/6/20	JICA Tokyo	Final Presentations by Trainees Evaluation Session and Closing Ceremony (Awarding of Certificates)

Source: JICA Expert Team



Orientation



Receiving a briefing on the information system
(Shinjuku Bus Terminal)



Tour of the Terminal Control Center
(Shinjuku Bus Terminal)



the Trainees, JICA officer, the Expert Team, and Mr. Saruwatari, Deputy Director of Shinjuku Bus Terminal



Lecture by Prof. Kato (Tokyo Univ.)



University of Tokyo (Hongo Campus)

The Project for Improvement of Urban Public Transport System in Maputo (METRAP-Maputo)
Project Completion Report



Technical Explanation about CDR data
 (JICA Tokyo)



Lecture by Prof. Nishiura
 (Meisei Univ., Tama Campus)



Explanation of the Urban Planning history for Tama
 New Town



Presentation about Eagle Bus
 (Private bus company)



Riding on EV Bonnet Bus (Tour Bus) operated by
 Eagle Bus



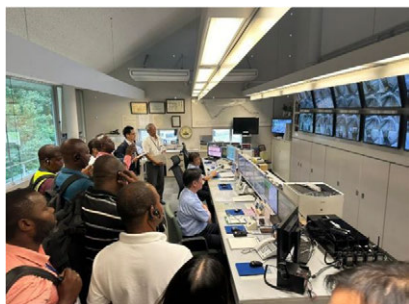
Observation of drivers' pre-trip inspections (breathalyzer
 tests) and an overview of pre-shift safety checks (Eagle
 Bus)



Explanation of the Characteristics of Nagoya's
 Transportation Plan



Tour of the information system
 (Oasis 21 bus terminal, Nagoya)



Tour of the Guideway Bus Control Center (Nagoya City)



The Trainees and Niigata City officers



Test Drive of an Articulated Bus
(Niigata City)



Waiting Area inside the shopping mall at Aoyama Terminal (Niigata City)



Group photo after the graduation ceremony: with certificates (JICA Tokyo)
 (Trainees, JICA Headquarters staff, and the JICA expert team)

Source: JICA Expert Team

Figure 2.26 Training in Japan

3) Training Outcomes and Curriculum Evaluation

The curriculum for this training program was designed to cover the full range of themes outlined in Project Outcome 1 through 3. Its objective was to provide trainees with the opportunity to learn about Japanese Urban Transportation Planning, data utilization, improvements in public transportation operations and management, as well as transportation hubs and urban development all of which are critical to advancing this project. The program also aimed to provide trainees with opportunities to apply this knowledge to their own project activities in their own countries.

A key feature of this curriculum is that it was designed to allow trainees to compare and learn about the realities of urban transportation planning and public transportation services in a practical context. This was achieved not only through academic perspectives in Tokyo Metropolitan Area but also by arranging field visits to Nagoya and Niigata, cities with different project scales and user demands compared to Tokyo. By visiting multiple bus operators in these different locations, trainees deepened their understanding of the realities of diverse bus operations and maintenance.

Furthermore, incorporating lectures on digital technologies (DX) such as CDR (cell phone location data) and GTFS helped clarify the significance of the data visualization efforts currently underway in a part of the project (such as dashboard development) and greatly contributed to boosting the trainees' motivation. At the final evaluation session, each team presented how they would share and utilize the knowledge gained within their respective organizations to achieve the goals of METRAP-Maputo. The trainees' presentations addressed not only technical aspects but also the importance of political coordination among relevant agencies and building consensus among citizens. Consequently, the outcomes of this training program can be evaluated as having fully achieved its original objectives.

(2) Third-Country Training

1) Participants

The following seven participants were selected for this training program based on the ownership demonstrated by the partner organizations.

Table 2.9 List of Trainees

Name	Organization	Position
Ms. Nora Alói	DMTT	Director
Ms. Helena Tito	DMTT	Technician, Architect. Studies & Projects Dept. [Project Manager of METRAP-Maputo]
Ms. Marcia Muianga	DMTT	Technician [TWG-1 member]
Mr. Amândio Guiongo	DMIU	Head of Road Department, Technician [TWG-2 member]
Mr. Justino Maposse	GADU	Urban Planning Technician [TWG-3 member]
Mr. Fernando Salomão	EMME	Head of Rotating Parking Department [TWG-2 member]
Mr. Camilo Ibrahimio	EMTPM	Director of the Operation Directorate [TWG-2 member]

Source: JICA Expert Team

2) Training Contents

The training schedule and content are outlined below.

Table 2.10 Training Schedule and Contents (Third-Country Training)

Date	Place	Contents
2025/7/22	Cape town Municipal Office (Traffic Control Center)	Lecture on the Overview, Challenges, and Future Development of the BRT System (MyCiTi) Lecture on the Advertising Revenue Model for the BRT System Overview of the Public Transportation System Development Plan
2025/7/23	Cape town Municipal Office (Traffic Control Center)	Lecture on the Current Status and Future Developments of AFC (Automatic Fare Collection) Tour and Lecture on the Transportation Management Center, including the Operations Management System and Call Center Lecture on Transportation Innovation and Operational Challenges in Public Transportation Systems
2025/7/24	Cape town Municipal Office	Lecture on MyCiTi Operations Management Lecture and Site Visit on Measures for Phase 2A Development (e.g., Dedicated Elevated Tracks)
2025/7/25	Cape town Municipal Office Cape town	Lecture on Cost Analysis and Operational Challenges Associated with the Transition to Electric Buses Lecture on Integration and Consensus Building with the Informal Sector (Taxi Operators)
2025/7/26 ~ 27	Cape town	Test ride and site visit of public transportation in Cape town (MyCiTi boarding, alighting, and transfer tour)
2025/7/28	Cape town University	Lecture on monitoring and operational improvements using digital technologies (such as LOOP)
2025/7/29	Cape town	A meeting to refine group reflections and discuss future activities

Source: JICA Expert Team



Visiting Transport Management Centre, Cape town municipal office



Discussion with MyCiTi-VOC



MyCiTi Bus Test Ride



Site Visit to the BRT Flyover Construction Site for the MyCiTi Bus



Lecture at Cape town University
 Source: JICA Expert Team



Wrup-up session

Figure 2.27 Third Country Training in Cape Town

3) Training Outcomes and Achievements

The curriculum for this training program was carefully designed to cover all aspects of the main project, particularly measures to address urban transportation challenges specific to the African region and the practical aspects of BRT operations. Trainees had the opportunity to gain valuable

insights into Cape town's initiatives, which are essential for effective project management and the introduction of sustainable public transportation services in Maputo.

This training program served as a valuable learning platform that connected trainees with various project activities. For example, in addition to detailed lectures covering everything from the planning to the operation and maintenance of MyCiTi, the curriculum included site visits to a variety of infrastructure facilities, such as the Operations Control Center, the VOC (operating company) depot, and the construction site of a BRT-dedicated elevated roundabout. Furthermore, the inclusion of lectures on financial management and public relations strategies by the Cape town City, as well as a lecture by the Cape town University on monitoring informal transport using digital technology, underscored the importance of addressing challenges from multiple perspectives.

At the wrap-up session on the final day, each trainee presented strategies for implementing ideas within the project framework (such as reporting to MOVE-Maputo stakeholders, planning and conducting sessions at Sustainable Mobility Week, and the disseminating results as a "team" of trainees). As trainees shared their individual insight and the direction for their respective organizations and the trainee team upon their return became clearer, the program was evaluated as an extremely meaningful opportunity.

2.3.6 PR Activities

Overall Activities

This project aims to strengthen the organizational and operational capacities of CMM and related agencies in order to improve urban public transportation services in Maputo City and promote the use of public transportation in the Maputo metropolitan area. At the same time, it is important to raise public awareness and understanding of public transportation by widely publicizing the project's significance, activities, and achievements.

We collaborated with CMM's public relations department and others to actively promote awareness of sustainable mobility and publicize the project's achievements through various channels, including outreach to local media and the publication of information on online platforms such as the official Facebook pages of CMM and EMTPM. In Japan, a project page was created on the JICA project website (OD site), where information on the project's activities and achievements was regularly posted in both English and Japanese.

This project implemented a multi-layered public relations strategy to reach diverse target audience in Mozambique and Japan. The table below summarizes the public relations activities carried out by this project, their respective target audiences, and the content distributed.

Table 2.11 PR Activities

Method, Medium	Target Audience	Contents	Frequency
Local Media (TV, Radio, Newspaper, Web news, etc.)	Maputo and Mozambique Citizens	Inviting media outlets and handling media coverage at key milestones	When METRAP organizes major events (e.g., JCC, results dissemination seminars, Sustainable Mobility Week, etc.)
EMTPM Company Newsletter	C/P, EMTPM employee	Articles that share and promote the results of the project's technical guidance (such as the establishment of regular inspections and the recognition of outstanding mechanics) within the organization	as appropriate
JICA Project News (ODA Website)	Japanese citizens / ODA stakeholders, etc.	Publication of reports (in Japanese and English) on project activities and progress on the website	as appropriate (25 news articles were published during the project period)
The official Facebook, YouTube, and other social media accounts of CMM and EMTPM	Residents of the Maputo metropolitan area, relevant agencies, NGOs, etc.	CMM and EMTPM will share project information (such as logo contests, traffic safety classes, GTFS training sessions, and interview videos) on their own	as appropriate
Public relations materials such as brochures, videos, and podcasts	The general public, other donors, relevant organizations, etc.	Creation and distribution of various digital content and promotional materials designed to clearly communicate project overviews and activities (including collaboration with the World Bank's MOVE- Maputo)	as appropriate

Source: JICA Expert Team

Local media outlets, including television stations, radio stations, newspapers, and online platforms, covered key milestones such as the three results dissemination seminars held during the project period and the final session of the JCC.



Source: JICA Expert Team

Figure 2.28 News Article about the dissemination seminar

In addition, activities organized by this project and CMM/EMTPM for the general public and children-such as a project logo design contest, traffic safety workshops for children (at a traffic park) during Sustainable Mobility Week (SMW), and bicycle ride events-were widely publicized through multiple local channels.

The table below lists local media outlets that covered this project's activities. While previous coverage often focused on public transportation challenges, inviting the media to this project's seminars and other events created opportunities for journalists to cover topics of greater social significance-such as evidence based planning and concrete improvement initiatives- that help raise public awareness.

Table 2.12 Major media outlets that have covered this project's activities

 Jornal Notícias	 O País	 Radio Mozambique
 Folha de Maputo	 Carta de Moçambique	

Source: JICA Expert Team

In addition, the EMTPM's internal newsletter (Boletim Informativo) was used as a means of sharing the project's results within the relevant departments. No.120, published in December 2024, featured a report on the awards ceremony held at EMTPM's annual general meeting to honor outstanding mechanics. This ceremony was held in recognition of successful implementation of

mileage-based periodic inspections-a result of the technical guidance provided by this project-and served to promote the initiative throughout the organization and boost morale.

JICA Project News

Those News serve as a key platform for delivering information to Japanese readers interested in ODA. Project reports are regularly published on the website in both Japanese and English. To date, approximately 20 news articles have been published, covering topics such as JCC meetings, training programs in Japan and Third Country, and progress on various project outcomes.

Table 2.13 JICA Project News

No.	Contents	Web News Sites
1	1 st JCC Meeting	https://www.jica.go.jp/oda/project/202108532/en_news/1543669_55710.html
2	The METRAP-Maputo Team Participates in “Sustainable Mobility Week 2023”	https://www.jica.go.jp/oda/project/202108532/en_news/1543809_55710.html
3	Participation in the City’s Bicycle Event	https://www.jica.go.jp/oda/project/202108532/en_news/202308_01.html
4	Discussion on the Introduction of a Multimodal Terminal	https://www.jica.go.jp/oda/project/202108532/en_news/202308_02.html
5	Report on the Progress of Technical Cooperation Projects and the Results of the Review of the Urban Transportation Master Plan	https://www.jica.go.jp/oda/project/202108532/en_news/202309_01.html
6	Review of Urban Transport Master Plan 2014 and Discussion on Future Prospects	https://www.jica.go.jp/oda/project/202108532/en_news/202309_02.html
7	Discussion on the Current Situation and Issues Regarding Operation and Maintenance of Bus Services in Maputo City	https://www.jica.go.jp/oda/project/202108532/en_news/202309_03.html
8	Preparation of Discussion Points for the Review of Urban Transport Master Plan 2014	https://www.jica.go.jp/oda/project/202108532/en_news/20231114.html
9	Collaborative Strategies and Legal Frameworks Discussed	https://www.jica.go.jp/oda/project/202108532/en_news/20231207.html
10	METRAP-Maputo Introductory Meeting for the New JCC Members	https://www.jica.go.jp/oda/project/202108532/en_news/20240311.html
11	Discussion on Key Performance Indicators for Bus Operation and Maintenance and Progress of Pilot Project	https://www.jica.go.jp/oda/project/202108532/en_news/1540165_55710.html
12	Discussion on the Guidelines for Multi-modal Transport Hub Development and Transit Mall	https://www.jica.go.jp/oda/project/202108532/en_news/1546992_55710.html
13	METRAP-Maputo Counterparts Gain Insights from Japan's Transportation Expertise (Training in Japan)	https://www.jica.go.jp/oda/project/202108532/en_news/1546993_55710.html
14	METRAP-Maputo at Sustainable Mobility Week 2024 in Maputo	https://www.jica.go.jp/oda/project/202108532/en_news/1547602_55710.html
15	3rd JCC Meeting; Report on the Progress of METRAP-Maputo Project and approval of Revised PDM and Indicators	https://www.jica.go.jp/oda/project/202108532/en_news/1552877_55710.html
16	SIMPOT-Maputo Dissemination Seminar (Workshop)	https://www.jica.go.jp/oda/project/202108532/en_news/1554072_55710.html

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No.	Contents	Web News Sites
17	METRAP-Maputo Video on Bus Fleet Maintenance Improvement Activities	https://www.jica.go.jp/oda/project/202108532/en_news/1567771_55710.html
18	GTFS Training at EMTPM	https://www.jica.go.jp/oda/project/202108532/en_news/1567773_55710.html
19	CDR and SIMPUT-Maputo Dashboard Training	https://www.jica.go.jp/oda/project/202108532/en_news/1567775_55710.html
20	4th JCC Meeting; Report on the Progress of METRAP-Maputo Project and Next Steps	https://www.jica.go.jp/oda/project/202108532/en_news/20250327.html
21	METRAP-Maputo Third Country Training on Public Transport in Cape Town	https://www.jica.go.jp/oda/project/202108532/en_news/1572966_55710.html
22	Zimpeto Bus Terminal Pilot Project	https://www.jica.go.jp/oda/project/202108532/en_news/1577229_55710.html
23	Seminar on Suitability of CDR for SIMPUT-Maputo Dashboard	https://www.jica.go.jp/oda/project/202108532/en_news/1577231_55710.html
24	METRAP-Maputo Visit of Universidade Eduardo Mondlane on CDR Applications	https://www.jica.go.jp/oda/project/202108532/en_news/1577235_55710.html
25	METRAP-Maputo Dissemination Seminar	https://www.jica.go.jp/oda/project/202108532/en_news/1577240_55710.html
26	METRAP-Maputo Project Proposal Reflected in EMTPM's Annual Plan at the Annual Meeting	https://www.jica.go.jp/oda/project/202108532/en_news/1583340_55710.html
27	Final JCC Meeting Marks Successful Completion of METRAP-Maputo Project	https://www.jica.go.jp/oda/project/202108532/en_news/1583342_55710.html
28	METRAP-Maputo Project Participates in Sustainable Mobility Week in Boane Municipality	https://www.jica.go.jp/oda/project/202108532/en_news/1583344_55710.html
29	EMTPM Awards Certificate of Recognition to METRAP-Maputo Project and Recognizes Outstanding Mechanics at Year-End Event	https://www.jica.go.jp/oda/project/202108532/en_news/1583347_55710.html
30	EMTPM Establishes Independent GTFS Data Update System and Publishes Operation Map	https://www.jica.go.jp/oda/project/202108532/en_news/1583350_55710.html
31	Capacity Building on CDR Use for Urban Transport Planning	https://www.jica.go.jp/oda/project/202108532/en_news/1583352_55710.html
32	Training on Route Planning Dashboard utilizing CDR Data for EMTPM Officers	https://www.jica.go.jp/oda/project/202108532/en_news/1583355_55710.html
33	Closure Meetings of the METRAP-Maputo Project with Counterparts	https://www.jica.go.jp/oda/project/202108532/en_news/1583715_55710.html

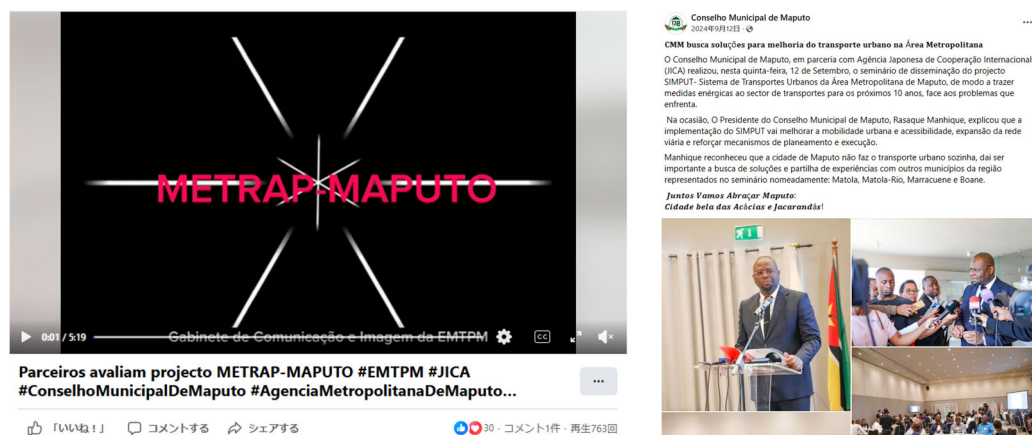
Source: JICA Expert Team

The official Facebook for CMM and EMTPM

Those official accounts are widely used platforms where local media and citizens gather information. This project has leveraged these platforms to directly share information about various project activities aimed at raising mobility awareness and improving public transportation. For example, we have continuously posted and published content such as calls for entries for a contest to design the project logo, video streams of traffic safety events for elementary school students, footage of training of trainers (ToT) sessions on GTFS data, and interview videos regarding maintenance training at EMTPM.

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Through these public relations efforts, the initiative has significantly strengthened the autonomy and continuity of communication between CMM, EMTPM, and the public.



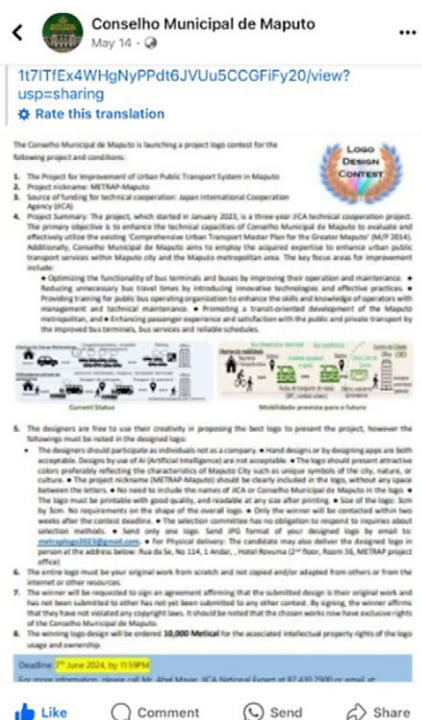
Source: JICA Expert Team

Figure 2.29 PR on CMM and EMTPM Official Facebook

Logo Design Contest

A call for entries was issued to design a logo to serve as the project's symbol.

- **Call for Entries:** In May 2024, an announcement regarding the reopening of the logo design contest was posted on Maputo City's official Facebook and other channels, resulting in 6 submissions.



PR on the official Facebook account

Source: JICA Expert Team



Distributing Flyers

Figure 2.30 Logo Contest

- **Selection Process:** A vote was held among local stakeholders and the expert team regarding the six submitted designs. Based on the results, and following consultations with our counterparts (such as DMTT), the design that received the most votes was selected as the final winner after some minor revisions.
- **Awards and Promotion:** After the designer completed the rights transfer procedures, the selected logo was officially adopted and the designer was honored. This logo has since been used in subsequent results dissemination seminars and official promotional materials.
- The project experienced impacts from political transitions and elections, which necessitated schedule adjustments. Specifically, due to the influence of the Maputo mayoral election in October 2023, the Communication Department of Maputo Municipal Council was initially reluctant to engage in activities such as those concerning the project logo, causing a delay in the full-scale launch of public relations. Subsequently, readjustments were promoted under the new administration, leading to schedule changes including the formal launch of the logo design competition in May 2024.



Source: JICA Expert Team

Figure 2.31 Selected Project Logos

Awareness-raising activities at SMW

- **Bicycle Ride Event**

At SMW held in August 2023, we participated in “Maputo Pedalando,” a community-based cycling event, and distributed traffic safety items such as reflective bands to participants on behalf of the project team.



Source: JICA Expert Team



Figure 2.32 Distributing Reflective Bands

- **Traffic Safety Park for Children**

In collaboration with DMTT and EMTPM, we held a “Traffic Safety Park” event at an elementary school in Maputo on 31st July 2024. Approximately 50 children participated in the event, which featured mock roads, traffic lights, and signs set up on the school grounds, along with lectures and hands-on workshops on traffic safety and traffic rules.



Lecture

Source: JICA Expert Team



Traffic Park

Figure 2.33 Traffic Safety Education for Children

- **Outcome 1: Raising Awareness of the Project and Fostering a Sense of Community**

First of all, through a citizen-participatory logo contest, an official logo was adopted to symbolize Maputo City’s efforts to improve urban transportation. This established a unified project identity for subsequent JCC meetings, outcome dissemination seminars, and various promotional materials, significantly increasing awareness of the project among citizens and stakeholders.

- **Outcome 2: Implementing Effective Educational Activities for the Next Generation and Raising Awareness of Mobility**

Second, through interventions such as traffic safety park events and bicycle rides at elementary schools, awareness -raising activities were conducted for children who will lead the next generation and the general public regarding traffic rule compliance and sustainable mobility. The provision of hand-on workshops directly contributed to raising awareness among young people, who will become the future leaders and users of these systems.

- **Outcome 3: Enhance Proactive Public Relations Capabilities and Establishing a Foundation for Communication with Citizens**

Third, the fact that staff members from DMTT and EMTPM served as instructors to educate children and continuously shared updates on these activities via official Facebook and YouTube channels led to greater initiative among the participating organizations in their public relations efforts. This established a foundation for direct and ongoing communication between the implementing organizations and the local community and citizens, resulting in increased public acceptance of the mobility initiative.

Dissemination Seminars

Numerous major local media were invited to the result dissemination seminars, and the project's evidence-based approach and specific improvement measures were widely covered on television and in newspapers.

- 1st Dissemination Seminar (SIMPOT-Maputo Launch): 12th September 2024

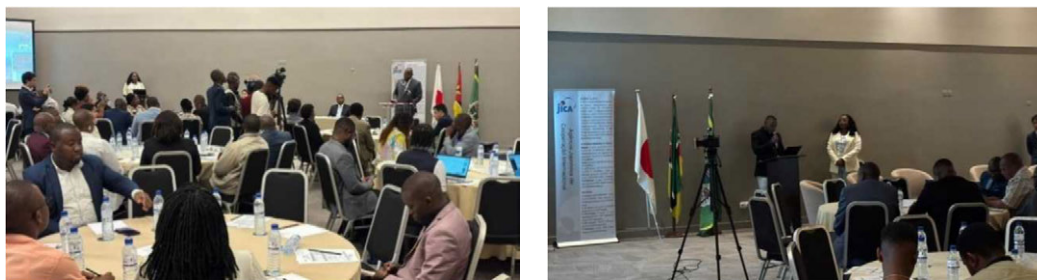
A result dissemination seminar was held to present the outcomes of SIMPUT-Maputo. Approximately 100 participants, including JCC members, relevant government agencies, academics, NGOs, donors, and the media, attended the event, which featured a speech by the mayor and coverage by local media. Additionally, participants exchanged views on establishing a coordination mechanism for the continuous monitoring and updating of the plan.

- 2nd Dissemination Seminar (Promote Guidelines): 26th March 2025

Held a seminar to disseminate the “Development Guideline for MmTH” and the “Guideline for Transit Mall,” which are related to Outcome3. We invited relevant stakeholders to introduce the guidelines and made them publicly available via QR codes. We also highlighted the need for TOD development in Maputo metropolitan area by presenting case studies from Tama New Town, which were covered during the training program in Japan.

- Final Dissemination Seminar (Final Presentation): 8th October 2025

A final seminar was held to share and promote the outcomes of the entire project. Approximately 70 participants, including the Mayor of Maputo, representatives from relevant organizations, and transportation operators, attended the event. Presentations focused on the project's deliverables, covering the results of activities related to each outcome, searches using the three dashboards and GTFS, and an introduction to TOD-related guidelines. Finally, a panel discussion and exchange of views were held with panelists including the Maputo City Councilor in charge of transportation, the Director General of DMTT, the EMTPM Administrator, Professor Shibasaki, and the Project Manager of JICA expert team.



Source: JICA Expert Team

Figure 2.34 Final Dissemination Seminar

Activities and Outreach for Local Media

Project team conducted activities aimed at widely disseminating information on initiatives to improve urban public transportation to local media outlets, which serve as a bridge between the project and the public. Furthermore, we have continued communication through diverse media channels including the production and release of promotional videos related to technical guidance for the EMTPM and coordination for the production of a public transportation themed podcast in collaboration with the World bank to further strengthen public awareness and acceptance of mobility improvement activities.

2.4 Achievements of the Project

2.4.1 Project Purpose and Indicators

OVI 1: The number of officers who learned fundamental theories about urban transportation planning and operation is increased to five persons. CMM promotes and disseminates the SIMPUT-Maputo with stakeholders of urban transport agencies and other municipalities.

The dissemination seminar on the SIMPUT-Maputo with stakeholders of urban transport agencies and other municipalities was organized by CMM and JET.

Therefore, the target of this indicator has been successfully met (rated as 100%).

OVI 2: Twelve key performance indicators (KPIs) on the EMTPM bus services and operations are improved.

The key performance indicators (KPIs) on the EMTPM bus services will be monitored, and reported at 5th JCC.

Therefore, the target of this indicator has been successfully met (rated as 100%).

OVI 3: At least one or more bus operators in Maputo Metropolitan Area applies one or more KPIs set by METRAP-Maputo.

The KPIs for bus operation and maintenance proposed by JET were submitted to EMTPM. After discussing details of the KPIs with EMTPM, these KPIs would be disseminated to other bus operators in Maputo Metropolitan Area.

Since it was announced at the final JCC meeting that NEX (Next EMTPM eXtension for the future) had been established within EMTPM to conduct outreach activities, **the achievement rate for this indicator was assessed at 75%.**

2.4.2 Outputs and Indicators

Achievements of the project are summarized in the table below according to the results of the objectively verifiable indicators which are defined in the Project Design Matrix (PDM).

Since each Objectively Verifiable Indicator (OVI) and its target values are not determined yet in the last monitoring period, consultation was conducted internally. It was found that some indicators and measurement methods were not insufficient to acquire and apply to realistic manners. Therefore, as stated in Section 2.5, in this monitoring sheet and JCC, its revisions of OVI, Target and Indicators were proposed. At the 3rd JCC meeting, it was confirmed that JCC members approved these revisions of OVIs for further monitoring of activities.

The following table shows that results evaluation and achievement rate for each Outcomes' Target and Indicators.

Table 2.14 Outputs and Achievement Levels

Output	Indicators		Achievement	
	Target	Achieved	Review Result	Achievement
Output 1 The Comprehensive Urban Transport Master Plan for the Greater Maputo (Master Plan 2014) is reviewed and utilized.	1-1. SIMPUT-Maputo (Strategic Implementation Master Plan), as a result of reviewing the Master Plan 2014, is proposed. (confirmed by the SIMPUT-Maputo)	- Done	- The Strategic Implementation Master Plan, as a result of reviewing the Master Plan 2014, is proposed. - SIMPUT-Maputo ver. 0.0 was formulated in September 2024. SIMPUT has been updated as ver. 1.0 in October 2025. DMTT, other relevant agencies and surrounding municipalities shall maintain.	100%
	1-2. Number of reviews on urban public transport plans using the Dashboard by each stakeholder at least once. (confirmed by Project monitoring sheet)	- Training of MP Dashboard for reviewing and updating of projects will be conducted in March 2025 with relevant stakeholders.	- Three (3) times. The progress of 2014 master plan was reviewed by the Dashboard in the TWG-1 #3 meeting. After formulation of the SIMPUT-Maputo, progress was reviewed by the Dashboard in the TWG-1 #4 and TWG-1 #5 meetings.	100%
	2-1. More than 10 recommendations on improving EMTPM's bus operations are proposed, and more than half are implemented.	- 13 recommendations on improving EMTPM's bus operations (O&M and Operation and Business) are proposed.	- Five recommendation reports were submitted, containing a total of 38 proposed actions. Among these, 20 proposals were fully implemented (52.3%).	100%
Output 2 The capacity of public bus operators and regulators for bus operation and management is enhanced.	2-2. The KPIs of bus services and operations of EMTPM are set and monitored.	- The KPIs of bus services and operations of EMTPM are proposed by JET and discussing the applicability.	- Proposed 11 KPI items, and re-proposed 6 KPIs for which implementation and monitoring methods had been established.	100%
	2-3. The challenges analysis on CMM (DMTT)'s role and responsibilities is analyzed, and an action plan for improvement is developed.	- The roles and responsibilities of CMM (DMTT) is analysing and start discussing the action plan for improvement under progress.	- Analyzed DMTT's role and developed an operational checklist for corporate buses. Guidance for chapas using this checklist is expected.	50%
	2-4. The activities to improve public transport services are analysed and verified through pilot projects (bus terminal operation improvement and GTFS development) and a further action plan is developed. (confirmed by Action plan on CMM's activities)	- The activities to improve public transport services are analysed and verified through pilot projects (bus terminal operation improvement and GTFS development) is underway.	1: Zimpeto Bus terminal improvement - Implemented proper gate width, separated routes, and improved safety. Operational discipline still remains a challenge. Technical note prepared for future terminal development. 2: EMTPM GTFS Development - Publication on Google Maps was completed, and EMTPM acquired the capability for regular updates. Addressing discrepancies with actual operations remains a future challenge.	100%

Output	Indicators		Achievement	
	Target	Achieved	Review Result	Achievement
Output 3 The urban development controls and incentives toward the transit-oriented development (TOD) are enhanced.	2-5. The guideline on bus operation and maintenance is developed. (confirmed by Guideline on bus operation and maintenance)	- The existing EMTPM guideline on bus operation and maintenance is currently under review.	- Prepared a “Bus Maintenance Manual” for EKTPM mechanics, approved at the 2025 Section Chiefs’ Meeting.	100%
	3-1. The guideline on multimodal transport hubs and Transit mall development guide are being finalized. (confirmed by Development guidelines on intermodal transport hubs and Transit mall development guide)		- Two guidelines were formulated, and a system for regular updates was established	100%
	3-2. Seminars for TOD, with the guidelines on intermodal transport hubs and transit mall, are being planned in March.		- Dissemination seminar was held on March 27 to disseminate the information to stakeholders from 21 organizations	100%
	3-3. A taskforce for enhancement of TOD will be discussed in the TWG for output3.		- Task force was appointed and committed to engaging in future dissemination activities	100%

Source: JICA Expert Team

2.5 History of PDM Modification

[Project Purpose]

Since OVI 1 (users' satisfaction) cannot be envisioned just after completion of METRAP-Maputo because of required time for users, this OVI 1 shall move to OVI for overall goals and was considered another indicator. The target value of OVI 2 was set during the findings of last activities. OVI 3 (travel time) had some considerations which replaced more suitable indicators directly related to project outcomes. Following OVIs are proposed for further monitoring.

Original OVI	Revised OVI approved by 3 rd JCC
• OVI1: The satisfaction ratings of the passengers using the urban public transport services, such as waiting time, safeness, cleanness, fare, convenience, gender issues, etc., exceed XX on average. • OVI2: The key performance indicators (KPI) of bus operators on the bus services and operations are improved by XX%. • OVI3: Travelling time is reduced from XX to XX minutes on average in the selected routes in Maputo city.	• OVI 1: The number of officers who learned fundamental theories about urban transportation planning and operation is increased to five (5) persons. CMM promotes and disseminates the SIMPUT-Maputo with stakeholders of urban transport agencies and other municipalities. (by Questionnaire survey to Counterparts) • OVI 2: Twelve (12) key performance indicators (KPIs) on the EMTPM bus services and operations are improved. (by Self-assessment results by EMTPM) • OVI 3: At least one or more bus operators in Maputo Metropolitan Area applies one or more KPIs set by METRAP-Maputo. • (Project monitoring sheet)

[Overall Goal]

Regarding Overall Goal, both sides consulted the OVIs of overall goals and propose following new OVIs for more realistic, feasible and measurable indicators. Note that these OVIs should be prepared after 3 years of the Project (METRAP-Maputo), therefore, OVIs shall be carefully set with sustainability done by DMTT/MMC.

Original OVI	Revised OVI approved by 3 rd JCC
• OVI 1: The number of passengers per 100,000 citizens using urban public transport in Maputo city is increased. • OVI 2: The percentage of modal share for public transport mode from Maputo metropolitan area into Maputo city is increased.	• OVI1: Number of implementing projects based on SIMPUT-Maputo • OVI2: SIMPUT-Maputo proposals which applied to policies and plans in Mozambique or Maputo municipality • OVI3: Implementing actions addressed in business improvement plan for EMTPM • OVI4: Number of private operators who applied KPIs or referred to guidelines proposed by METRAP-Maputo • OVI5: The satisfaction ratings of public transportation services are improved to more than 3 points on average. • OVI6: The percentage of modal share for public transportation between Maputo metropolitan area and Maputo municipality is increased."

[Outputs]

Since each Objectively Verifiable Indicator (OVI) and its target values are not determined yet in last monitoring period, consultation was made internally. It was found that some indicators and measurement methods were not insufficient to acquire and apply to realistic manner. In this monitoring sheet and JCC, both sides jointly propose its revisions of OVI and target values as follows. During 3rd JCC meeting, it was confirmed and agreed by JCC members to be used in further monitoring of its activity.

Regarding Output2, during the activities to EMTPM for capacity improvements and prepared by Pilot Projects, more concreted, feasible and measurable indicators were proposed as follows.

Output	Indicators	
	Original OVI	Revised OVI approved by 3 rd JCC
Output 1 The Comprehensive Urban Transport Master Plan for the Greater Maputo (Master Plan 2014) is reviewed and utilized.	• OVI 1-1: XX projects in the Master Plan are implemented. • OVI 1-2: The number of reviews on urban public transport plans by using the Dashboard exceeds XX times.	• OVI 1-1: SIMPUT-Maputo (Strategic Implementation Master Plan), as a result of reviewing the Master Plan 2014, is proposed. (by SIMPUT-Maputo) • OVI 1-2: Number of reviews on urban public transport plans using the Dashboard by each stakeholder at least once. (by Project monitoring sheet)
Output 2 The capacity of public bus operators and regulators for bus operation and management is enhanced.	• OVI 2-1: XX action plans proposed of EMTPM management and operation are implemented. • OVI 2-2: XX% of bus operators recognize the bus service and operation guideline.	• OVI 2-1: More than 10 recommendations on improving EMTPM's bus operations are proposed, and more than half are implemented. (by Annual report of EMTPM or annual review by the Project) • OVI 2-2: The KPIs of bus services and operations of EMTPM are set and monitored. (by Questionnaire survey to seminar participants) • OVI 2-3: The roles and responsibilities of CMM (DMTT) are analysed and the action plan for improvement is developed. (by Action plan on DMTT's activities) • OVI 2-4: The activities to improve public transport services are analyzed and verified through pilot projects (bus terminal operation improvement and GTFS development) and a further action plan is developed. (by Action plan on CMM's activities) • OVI 2-5: The guideline on bus operation and maintenance is developed. (by Guideline on bus operation and maintenance)
Output 3 The urban development controls and incentives toward the transit-oriented development (TOD) are enhanced.	• OVI 3-1: The seminars for TOD with the guidelines on intermodal transport hubs and transit mall are convened XX times. • OVI 3-2: Taskforce for the enhancement of TOD is established.	• OVI 3-1: Development guideline on intermodal transport hubs and Transit mall development guide are formulated. (by Development guidelines on intermodal transport hubs and Transit mall development guide) • OVI 3-2: Seminars for TOD, with the guidelines on intermodal transport hubs and transit mall, are convened once. (by Project monitoring) • OVI 3-3: A taskforce for enhancement of TOD is established. (by Project monitoring)

2.6 Others

2.6.1 Results of Gender Considerations

As a gender-integrated project, this project actively promoted the development of a transportation environment that accommodates a diverse range of users - including women, the elderly, and children - through improvements to public transportation and pedestrian spaces.

Specifically, during user interviews at the bus terminal, we collected data on gender as a user attribute, along with information regarding satisfaction, safety, comfort, and sources of anxiety (including experiences of harassment) when using public transportation. This allowed us to identify the mobility challenges and sources of anxiety faced by female users. Furthermore, we analyzed these survey results in conjunction with SUMP-related data collected by AFD to attempt to organize gender-related issues in the urban transportation sector. Furthermore, the questionnaire was designed to serve as a template for future continuous monitoring by EMTPM and other entities.

In addition, a pilot project at the Zimpeto Terminal included the installation of bollard-equipped sidewalks and crosswalks, as well as the renovation of a police box within the terminal. These measures aimed to improve the walking and waiting environment so that women, children, and the elderly could use the facility with greater peace of mind, with the goal of establishing a model for future bus terminal development.

Furthermore, the GTFS data developed for EMTPM enables users to search for timetables and transfer routes via smartphones and other devices. It is expected to support efficient mobility for user groups - particularly women - who are often constrained by time due to household chores, work, or school.

Furthermore, the Transit Mall Guidelines and Multimodal Guidelines formulated in this project incorporate concepts such as pedestrian-centered spatial design, improved public transportation punctuality, and the creation of safe and comfortable public spaces. Consequently, these guidelines were organized to promote gender mainstreaming and consideration for transportation-disadvantaged groups.

Chapter 3 Results of Project Review

3.1 Review Based on six DAC Evaluation Criteria

The Organization for Economic Co-operation and Development/ Development Assistance Committee (OECD-DAC) evaluation criteria comprises six criteria used to evaluate the development assistances. This section reviews the implementation results of the Project based on these six DAC evaluation criteria, as summarized in the table below.

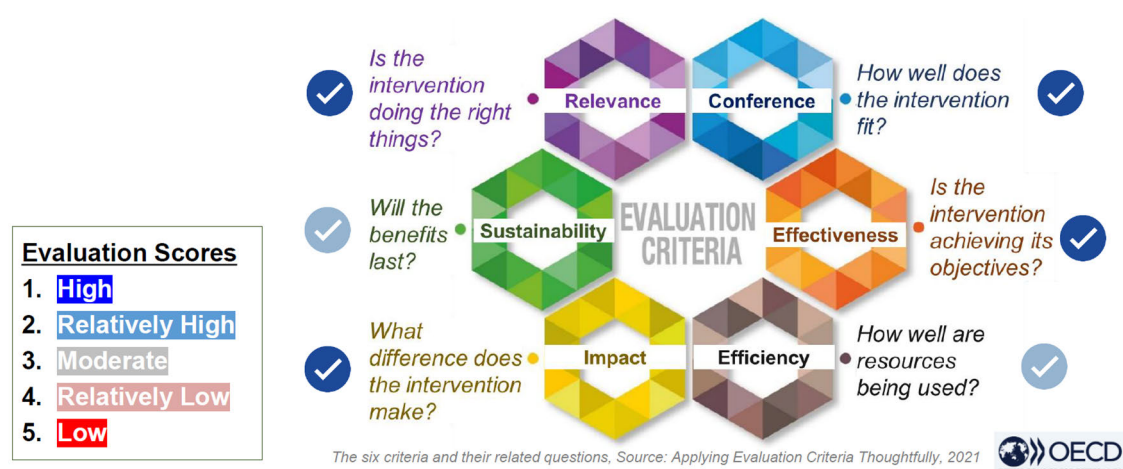
Table 3.1 DAC's Six Criteria for Evaluating Development Assistance

Evaluation Criteria	Evaluation Perspectives and Definitions
Relevance	- Validity with project implementation (development needs) - Focus on "Beneficiary." Consideration for inclusiveness and equity - Validity of the Project Plan and Approach
Coherence	- Coordination with other projects (JICA and other donors) - Consistency with global framework (international targets, initiatives, standards, etc.)
Effectiveness	The degree of achievement of target level in target year of expected project purpose (different results across the groups)
Impact	Positive and negative indirect and long-term effects (systems and norms, people's well-being, human rights, gender equality, and the environment)
Efficiency	Comparisons of planned and actual projects inputs, project period, and project cost.
Sustainability	Outlook on sustainability of effects that are realized by the project for aspects of policy/political, institutional/organizational, technical, financial, social & environment, risk and operation & maintenance

Source : <https://www.jica.go.jp/english/activities/evaluation/about.html>

Each of the criteria has been evaluated using a five-point scale -1) High, 2) Relatively High, 3) Moderate, 4) Relatively Low and 5) Low. The overview of the evaluation results are described with following Figure 3.1 and Table 3.2.

In addition, evaluations on each criteria describe in detail in Section 3.1.1 ~ 3.1.6.



Source: JICA Expert Team

Figure 3.1 Evaluation Results Based on six DAC Evaluation Criteria

Table 3.2 Summary of the Joint Review of the Project based on six DAC Evaluation Criteria

Evaluation Criteria	Review Result
Relevance	The relevance of the project is High as: • Consistency with Development Policies is High • Consistency with Development Needs is High • Appropriateness of project plan and approach was confirmed
Coherence	The coherence the project is High as: • Collaboration with other projects (JICA and others) • Consistency with global frameworks
Effectiveness	The effectiveness of the project is High as: • Established public transport system development by using the three dashboards • Reformed to restructure the organizational framework for operational improvements within EMTPM and to promote these improvements to bus operators in other cities • Promotion for new concepts with Guidelines through Building the Guideline
Impact	The impact of the project is considered as High as: • To achieve the Overall Goal, it was confirmed that this project's outcome will contribute. • As Ripple Effects, gained a wide range of insights during the course of the project
Efficiency	The efficiency of the project is Relatively High as: • No need additional resources despite several difficult periods • Continually hard works together with national experts who were well-trained by remote works by Japan, and achieved activities
Sustainability	The sustainability of the project is considered as Relatively High as: • MMC will be able to collaborate with the municipalities of the metropolitan area • Continued capacity building of human resources in all institutions • Technical difficulties may arise that could affect the sustainability of the project • DMTT will seek additional sources of funding for activities to ensure sustainability • It is important that CMM and other municipalities make efforts to promote community engagement with a view to ensuring the sustainability of the project.

Source: JICA Expert Team

3.1.1 Relevance—High

Consistency with Development Policies

National development Strategy (ENDE) 2025-2044 and Government Five-Year Program (PQG) 2025-2029 advocate the promotion of public transport for sustainable urban growth and encourage the adoption of clean and energy-efficient means of transport described in Pillar 3 of ENDE and Article 96 of PQG.

Consistency with Development Needs

METRAP-Maputo matches the needs for Maputo and neighboring municipalities as well as AMT, which SIMPUT-Maputo would be a reference and utilized in PEU's Mobility Plan and metropolitan transport plan.

In response to the rapid population growth in Maputo area, there is a significant shortage of public transportation services, including buses. This has led to severe traffic congestion and longer wait times, and the lack of seamless transfers due to policy discrepancies among local governments has

also become a major challenge. This project aims to address these issues by formulating transportation plans based on actual data and improving the operations of public transportation operators, and it is highly aligned with local development needs.

Furthermore, SIMPUT-Maputo, developed under this project, is expected to serve as the official reference framework for Maputo City's PEU and the Greater Maputo Metropolitan Area Transportation Plan, ensuring full alignment with key local plans.

Validity of the Project Plan and Approach

The technical insights and capabilities gained through the collaborative process of formulating SIMPUT-Maputo's vision, strategy, programs, and projects - as well as building a dashboard to continuously monitor population mobility - serve as a critical foundation for developing an integrated urban transportation plan for the Maputo metropolitan area. These align with development needs and are highly relevant to addressing the urban transportation challenges faced by the Maputo metropolitan area.

3.1.2 Coherence - High

Consistency with Development Needs

It is clear that Maputo Metropolitan Area faces the same transportation challenges identified in SIMPUT-Maputo, including chronic traffic congestion, increasing private vehicle traffic, poor public transportation services, an inadequate road network, and road flooding during the rainy season. There is a need for support from the development partners listed below, as well as for the formulation and revision of PEU for each municipality following the establishment of new cities. It is expected that the activities of METRAP-Maputo will serve as a forum for discussion regarding these development needs, not only for Maputo City but also for neighboring municipalities, and that its outcomes (SIMPUT-Maputo) will serve as a guideline for addressing the development need (urban transportation challenges) that the city must tackle in the future.

Coordination with other projects (JICA and other donors)

We shared information and exchanged views with AMT regarding the MOVE-Maputo project (supported by MTL) and the PUMS/SUMP project (supported by AFD), and generated synergies through cooperation on EMTPM's annual business plan and Sustainable Mobility Week. Additionally, regarding other JICA projects, we have identified potential for collaboration with the Flood Control Project and the SHEP Project.

Consistency with global frameworks

The Project is aligned with SDG 11: Sustainable Cities and Communities, particularly Target 11.2 on access to safe, affordable, accessible and sustainable transport systems and Target 11.3 on inclusive and sustainable urbanization.

3.1.3 Effectiveness - High

Output 1: Establishment of public transport system plan development

SIMPOT-Maputo was formulated, leading to the establishment of the capacity and structure to advance public transport system development of the capacity and structure to advance public transport system development while continuously utilizing and updating the three dashboards.

Output 2: EMTPM Improving Organizational Capabilities and Restructuring

This led to improved EMTPM capacity, creating a structure for appropriate maintenance works and proper business management, as well as a structure of special members aimed at disseminating our results to other bus operators.

Output 3: Promotion of new transport hub concepts with two Guidelines

Guidelines for promoting new concepts for transport hub facilities (MmTH and Transit Malls) were formulated, and a task force was organized to disseminate their implementation.

3.1.4 Impact - High

Prospects to achieve the overall goal

Three years after the completion of METRAP-Maputo, the evaluation will be conducted based on predefined indicators, such as the number of projects implemented under SIMPUT-Maputo and the actions carried out in accordance with EMTPM's business improvement plan. DMTT is confident that the overall objective of the METRAP-Maputo Project will be achieved.

The involvement of other municipalities and the participation of the community in decision-making related to urban mobility will help ensure the relevance and acceptance of future actions, reducing the risk that implementation may fail to achieve its objectives.

Ripple Effects

Inter-institutional collaboration, the way we process information, and especially the range of knowledge acquired through the training to solve daily challenges are the main spillover effects that METRAP-Maputo will bring.

3.1.5 Efficiency - Relatively High

Cost Performance

Political and social disruptions following October 2024 election - including riots and demonstrations that led to a deterioration of public order - resulted in experts postponing their trips to the field for an extended period. However, by maintaining close collaboration with national experts and thoroughly implementing remote guidance, we were able to efficiently advance our activities within a limited timeframe and achieve our objectives.

Human Resources

Counterpart (CMM and EMTPM officials) had continually hard works together with national experts who were well-trained by remote works by Japan.

Training program in Japan and Cape town (Third Country) under METRAP-Maputo and JICA's KCCP could help their capacity development.

3.1.6 Sustainability - Relatively High

Policy, Law and regulation

MMC will collaborate with the municipalities of the metropolitan area to ensure the implementation of the projects proposed in SIMPUT-Maputo.

Institutional and Organizational

It is necessary to continue building human resources capacity across all organizations involved in this project. However, at present, due to limit of budget at the city and AMT, there are limitations on staffing and funding for activities, and it appears that support from some project stakeholders is limited. This can be considered a challenge for the future.

Technical

The engineers involved in the project have received sufficient training to carry it out. However, potential technical challenges that could impact the project in the future include a shortage of IT specialists needed to maintain and manage the cloud system and dashboards; a lack of capacity to renew server licenses and respond to system failures; and hurdles involved in continuously obtaining CDR data from MNOs via INCM.

Financial

DMTT will seek additional sources of funding to ensure sustainability.

Social and Environmental

CMM and other municipalities have to make efforts to promote community engagement with a view to ensuring the sustainability of the project.

3.2 Key Factors Affecting Implementation and Outcomes

The following summarizes the main factors that influence project implementation and outcomes:

Political and Social Unrest

Following the mayoral election in October 2023 and the presidential and parliamentary elections in October 2024, nationwide general strikes, road blockades, and clashed between demonstrators and police-led by opposition supporters-occurred, causing a temporary deterioration in public

order. As a result, Japanese experts were forced to cancel their trips and local staff were compelled to work from home, leading to disruptions in activities such as the inability to contact counterparts and the postponement of meetings.

Additionally, direct issues and delays arose, including the postponement of training sessions for city office employees due to the turmoil and heavy workload, attacks and vandalism of EMTPM buses by demonstrators, and incidents of equipment and supplies being stolen by vendors.

Frequent Organizational Changes

Following the post-election transition to a new administration, there was a change in Maputo City councilor in charge of transportation (who served as the project director for this initiative).

At the counterpart organization, DMTT, deputy Director Royde, who had been serving as project manager, left the organization, resulting in a period without a project manager until Ms. Helena (who had been serving as TWG 3 leader) was appointed as his successor.

Administrative and Coordination Issues

Regarding the use of CDR data, the three parties (Maputo City, INCM, and JICA) signed a MOU. During the data storage and analysis phases, negotiations were conducted in response to new requests from INCM by presenting training plans and other proposals for the project period.

Additionally, Minister Magala of the MTC requested changes to and improvements in the implementation structure during the project period, including the establishment of a Strategic-Level Coordination Committee at the initiative of the local government. As a result of these discussions, it was decided not to alter the framework of the technical cooperation project based on the RD. Instead, the MTC was instructed to consider and promote, with regard to its subordinate organization, the AMT, the establishment of a high-level coordination body as expected by the Minister, the coordination of opinions led by central government ministries, and the dissemination of programs and projects presented through SIMPUT-Maputo. Although these measures were not subsequently implemented, we believe that they helped foster ownership among the staff of DMTT, which in turn led to more effective technical cooperation projects.

3.3 Evaluation on the Results of the Project Risk Management

Risk management was partially effective. While some risks (such as the temporary suspension of activities due to travel restrictions on Japanese experts) were mitigated, political turmoil surrounding the election and the absence of key counterparts (PMs) affected the project schedule and the achievement of deliverables. Details are provided below:

Political Risks

Public order deteriorated following two elections (the mayoral election in October 2023 and the presidential and parliamentary elections in October 2024) due to protests, general strikes, and other

disturbances. In response to travel restrictions on Japanese experts, we implemented measures such as remote guidance via telework and the utilization of local experts (National Experts), thereby maintaining a certain degree of project continuity. However, damage and schedule delays, such as the attack and destruction of EMTPM buses by demonstrators and theft of materials at pilot construction sites.

Human Resources Risks

After the transition to the new management structure with the election, there were changes in key positions, as well as the departure of a project manager from the DMTT team and a period of vacancy.

Financial Risks

It became clear that Maputo City faced budgetary constraints, leading to the conclusion that the purchase of 100 large buses (as originally planned) would not proceed. To address this financial risk, the project introduced cloud-based data management and KPI setting to reduce bus operation and maintenance costs. By incorporating these measures into EMTPM's five-year strategic plan (2024-2028) and the next business plan, the project provided support to ensure the project's sustainability.

Coordination Risks

In the pilot project to improve operations at the Zimpeto Bus Terminal, it was necessary to address and coordinate with the informal sector occupying the roadways. This required complex coordination with the DMMF, the municipal police, and private contractors, which took time and caused delays in the commencement and progress of construction work. Additionally, coordination with projects funded by other donors (such as the World Bank and AFD) and the conclusion of an MOU for data sharing with INCM also required significant time. These issues must be continuously managed through information exchange via regular JCC meetings and various TWGs and sub-working groups.

3.4 Lessons Learnt

Organizational Collaboration

To address transportation challenges in the Maputo metropolitan area, it is necessary to overcome complex conflicts of interest among multiple relevant agencies. For example, in the pilot project to improve operations at the Zimpeto Bus Terminal, numerous stakeholders were involved (including DMTT, DMIU, AMT, EMTPM, bus companies from surrounding municipalities, and even informal vendors) resulting in significant delays in reaching consensus and implementing the project. Through consultations with the DMFF and local police, careful coordination and consensus-building were carried out to ensure the smooth operation of buses and safe pedestrian routes, while taking into consideration the livelihoods of street vendors.

Furthermore, the signing of MOU for data sharing with INCM also required lengthy coordination due to legal procedures and other factors.

During this project period, a TWG structure was established, and practical coordination among relevant organizations was carried out effectively. However, even after the project's conclusion, these mechanisms have not been "institutionalized" as formal administrative procedures capable of functioning autonomously. Therefore, to avoid implementation bottlenecks and ensure the smooth progress of urban transport projects, it is essential to institutionalize frameworks for early and continuous inter-organizational collaboration, such as the establishment of sub-working groups and regular coordination mechanisms based on the "SIMPUT-Maputo."

Formulation of Vision and Guidelines

To sustainably improve the urban transportation environment, it is essential to formulate a clear master plan and guidelines, and to establish a framework for implementing them. In this project, we reviewed the 2014 master plan and formulated "SIMPUT-Maputo" as a new set of guidelines. Furthermore, to promote TOD, we formulated the "Development Guideline for Multimodal Transport Hub" and the "Development Guideline for Transit Malls."

It was demonstrated that these policies and guidelines are not simply a one-time effort; rather, it is essential to establish a formalized, ongoing operational framework to organize task forces and ensure their actual dissemination and application in future urban development and transportation infrastructure projects.

Appropriate Resources Allocation

Financial challenges have come to light, such as the inability to proceed with the purchase of new large buses as originally planned due to budgetary constraints faced by the Bus Corporation (EMTPM) and the City of Maputo. To maintain and improve public transportation services within a limited budget, data-driven, efficient cost management and resource allocation are essential. The project introduced a system for managing regular inspections based on bus mileage and a parts inventory management system, and worked to reduce maintenance costs by analyzing bus repair expenses. Furthermore, KPIs (Key Performance Indicators) were established to evaluate these results, and support was provided to incorporate them into EMTPM's next strategic plan and annual plans.

In future business operations, it is necessary to base management on data-driven revenue analysis and appropriate resource allocation, rather than relying on experience or intuition.

A New Approach to Public Transportation Infrastructure

This project went beyond traditional hardware-centric infrastructure development to introduce a new software-based approach leveraging digital technology (DX). The development of a dashboard that visualizes human mobility using CDR data, and the publication of route and schedule data on Google Maps using GTFS, were groundbreaking achievements for Maputo. However, sustaining these new technologies requires a long-term operational plan, and an integrated approach that combines infrastructure implementation with organizational capacity building is essential.

Chapter 4 For the Achievement of Overall Goals after the Project Completion

4.1 Prospects to Achieve Overall Goal

4.1.1 Overall Goal and Indicators

Overall Goal and each Indicators for this project were established in the minutes of the initial discussion (R/D) and, following the revisions outlined in section 2.5, are defined as follows.

- **Overall Goal:**

The use of urban public transport is promoted in Maputo city and Maputo metropolitan area.

- **Indicator:**

Indicator 1 : Number of implemented projects based on SIMPUT-Maputo

Indicator 2 : SIMPUT-Maputo proposals which applied to policies and plans in Mozambique or Maputo municipality

Indicator 3 : Implementing actions addressed in business improvement plan for EMTPM

Indicator 4 : Number of private operators who applied KPIs or referred to guidelines proposed by METRAP-Maputo

Indicator 5 : The satisfaction ratings of public transportation services are improved to more than 3 points on average.

Indicator 6 : The percentage of modal share for public transportation between Maputo metropolitan area and Maputo municipality is increased.

4.1.2 Activities Necessary to Achieve Overall Goal

This project aimed to strengthen the urban public transportation planning, operation, and management capabilities of Maputo City and related agencies (such as DMTT and EMTPM) and achieved multiple outcomes. The following some outcomes had achieved during this project.

- Strengthened the capacity of staff at DMTT and other agencies to visualize passenger movement using CDR data and dashboards, and to formulate and monitor evidence-based transportation plans (SIMPUT-Maputo)
- Migrated bus operation and maintenance data at EMTPM to the cloud for centralized management, establishing an efficient business management and maintenance system using KPIs
- Through multiple pilot projects, partner organizations gained practical experience in opening up buses' transportation data and improving bus terminal operations involving multiple stakeholders
- Developed guidelines to promote TOD and established a foundation to foster coordination between urban development and transportation infrastructure

These results reflect the mechanisms behind recent improvements in public transportation services in Japan - specifically, the use of data to enhance the convenience and efficiency of public transportation, including the opening of transportation data and the adoption of data-driven planning and operations management. Given the similarities with Japan's experience, it is reasonable to expect that similar positive impacts will be realized in the Maputo metropolitan area as well, in terms of promoting public transportation use.

To achieve the Overall Goal continuously, the Project established several mechanisms to enable the counterparts to carry forward the knowledge, skills, and experience acquired through the Technical Cooperation Project. Since all of these outcomes were developed with the counterparts, they are expected to be sustained and further utilized after the Project concludes.

Examples of Key Achievements and Activities to Achieve Overall Goal:

- Traffic Monitoring: Development of SIMPUT-Maputo, a revised version of the Metropolitan Area Traffic Master Plan; development of CDR and OD dashboards and provision of training to relevant agencies; establishment of a system for the ongoing operation and updating of the dashboards
- Bus Operations Management and Maintenance: Introduction of a cloud-based bus periodic inspection management system and a parts inventory management system; guidance on methods for analyzing maintenance costs per bus (per kilometer); formulation of a bus maintenance manual and introduction of a mechanic recognition program; establishment of the specialized team NEX (Next EMTPM eXtension for Future) to ensure sustainable data management and updates
- Providing data on public transportation services to citizens and improving bus terminal operation for public transportation services (pilot project): Provision of route and schedule information to users through the preparation of GTFS data and public release on Google Maps; Implementation of infrastructure and operational improvements at the Zimpeto Bus Terminal, including the installation of dedicated gates and traffic guidance
- Coordination between urban development and transportation: Formulation of MmTH development guidelines and transit mall design guidelines; Promotion and implementation of guidelines through a task force composed of relevant agencies

4.1.3 Prospects for Achieving Overall Goal and Necessary Conditions

As noted in Section 3.1.5, "Impact," effectively achieving the overarching objectives requires collaboration and coordination not only with the DMTT but also with related organizations, including the AMT, DMIU, EMTPM, INCM, and surrounding municipalities. The anticipated roles are as follows:

- AMT/EMME: Under the technical guidance of DMTT, maintain coordination on data collection and project management, and promote the development of road and transportation infrastructure in line with urban development plans.

- EMTPM: As a public bus operator, implement data-driven route optimization, safety management, and human resource development through the specialized team NEX, serving as a model and driving force for other private bus operators.
- INCM: Responsible for the long-term data hosting and maintenance of the CDR dashboard, performing quarterly updates and verifying mobility data
- Surrounding Municipalities: Synchronize their municipal plans with SIMPUT-Maputo and continuously provide the latest information on projects implemented in each city to the dashboard

To sustain DMTT's transportation planning and coordination activities and EMTPM's service improvements, it is essential to secure additional funding sources in addition to internal budgets. In particular, mechanisms to promote private-sector involvement (such as PPPs) are needed for the development of transportation hubs and transit malls. Furthermore, to increase public acceptance and mitigate the risk of failing to meet targets, it is necessary to encourage community participation in decision-making regarding urban mobility and to continuously raise public awareness through public relations activities. In this project, we provided support for the renewal of the MOU between INCM and Maputo City aimed at the continued utilization of CDR data; however, to ensure long-term impact, it is strongly recommended that such frameworks for data sharing and monitoring between these institutions be fully institutionalized.

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

4.2.1 Implementation Structure

As described in Section 3.1.6, "Sustainability," a dedicated team called NEX was established within EMTPM to ensure the sustainable utilization of this project's outcomes and to transfer and disseminate technical knowledge and practical methodologies both internally and to other bus operators. These organizational enhancements have systematized data-driven schedule optimization, proper vehicle maintenance, and human resource development, leading to more efficient business operations.

Practical lessons learned from the pilot project – such as infrastructure and operational improvements at the Zimpeto Bus Terminal involving relevant agencies, and the publication of GTFS data on Google Maps along with its ongoing updates – should be shared within DMTT and EMTPM and institutionalized as part of daily operations.

Furthermore, the insights gained from training in Japan and third-country training in Cape Town, South Africa, should continue to be utilized in urban development and transportation planning through ongoing initiatives.

After the project concludes, CMM and related agencies will lead the continuation of activities to ensure the achievement of the overall goal of promoting the use of urban public transportation in

Maputo metropolitan area through urban public transportation planning, data management, and improvements to public transportation services. Implementation will be primarily supervised by DMTT, with DMIU, EMTPM, and INCM each playing their respective roles.

Through NEX, EMTPM will continue to operate the cloud-based bus inspection management system and parts inventory management system, update GTFS data, and implement management improvement programs based on KPIs. INCM will maintain and manage the CDR dashboard server, perform quarterly data update, and validate mobility data. Additionally, under the technical guidance of DMTT, DMIU will continue to develop infrastructure in line with the urban development plan.

The progress management and coordination mechanism for SIMPUT-Maputo, led by DMTT, will serve as a platform for coordinating with other stakeholders (including AMT, surrounding municipalities, and development partners such as the World Bank) to ensure synergies and policy coherence. All activities will be integrated into the frameworks of Maputo City's Five-Year Development Plan to secure funding and enhance sustainability.

4.3 Recommendations for the Mozambique Side

Considering the above, the following actions are recommended.

[Output 1] Review and Utilize Comprehensive Urban Transport Master Plan for the Greater Maputo

- Centered on the DMTT, formally institutionalize a coordination mechanism, which was established during the METRAP-Maputo project period, with the city and stakeholders to manage and update the progress of SIMPUT-Maputo, and strengthen collaboration with the AMT and surrounding municipalities.
- Within INCM, maintain the server maintenance and operation system for the CDR dashboard, and conduct quarterly data updates and verification of mobility data (including the conclusion and renewal of MOUs).

[Output 2] Enhance capacity of public bus operators and regulators for bus operation and management

- Continuously operate NEX to promote data-driven optimization of operating schedules, safety management, human resource development, and the deployment of standard models to other operators and local governments.
- For EMTPM, utilize personnel trained through ToT programs to sustainably update GTFS data published on Google Maps, thereby maintaining a system capable of independently responding to new route additions and changes.
- In EMTPM's business operations, continuously utilize cloud-based systems for periodic inspection management, parts inventory management, and repair / mileage record management to maintain a system capable of independently responding to new route additions and changes.

- In the management of EMTPM's operations, we will continuously utilize cloud-based systems for periodic inspections, parts inventory management, and repair and mileage record management to reduce maintenance costs and improve efficiency based on KPIs.

[Output 3] Enhance urban development controls and incentives toward the transit-oriented development (TOD)

- Promote the dissemination, application, and updating of the “Multimodal transport Hub (MmTH) Development Guidelines” and the “Transit Mall Design Guide” in future urban development, led by a task force composed of TWG members.

[Overall Activities (Public Relations and Crosscutting of Projects)]

- Continuous efforts to implement and support citizen-participatory events, such as “Sustainable Mobility Week (SMW),” as part of our regular awareness-raising activities.

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

For approximately three years, the Maputo Municipal Council and related agencies (DMTT, EMTPM, INCM, etc.) have been collaborating with a team of JICA experts who have provided ongoing technical cooperation. During this period, the Mozambican side has come to fully recognize the value and significance of data-driven urban transportation planning and bus operation management utilizing digital technologies such as CDR data, GTFS, and cloud-based management systems. However, to fully institutionalize these systems and ensure their self-sustaining development, it remains essential to accumulate further experience and develop internal human resources through initiatives such as NEX. Therefore, it is in the best interest of all stakeholders for JICA to continue providing the Mozambican side with opportunities for issue-specific training and regular forums for exchanging views with Japanese experts on practical improvements.

Furthermore, the “New Zimpeto Bus Terminal Development Project” and the “Introduction of Medium-Sized Buses and Operation Systems Project,” which JICA is currently considering as future grant aid projects, directly build upon the results of this project's pilot initiatives and data analysis. Consequently, JICA can maintain regular dialogue and partnership with relevant Mozambican agencies through the formulation process of these upcoming projects.

The following outlines JICA's proposed cooperation activities.

Future Examples of Potential Cooperation Activities

- Monitoring quarterly and annual updates to SIMPUT-Maputo and various dashboards (CDR, Master Plan, etc.), and ensuring JICA representatives attend relevant TWG meetings
- Continuous human resource development through JICA's KCCP (Comprehensive Urban Transport, Urban Solutions, etc.), and follow-up on the implantation status of action plans by returnee trainees

- Participation and cooperation by JICA Mozambique Office and Japan Overseas Cooperation Volunteers (JICA Volunteers) in urban transport and awareness-raising events such as “Sustainable Mobility Week (SMW)”
- Support for Maputo city and EMTPM in securing funding for their own initiatives and implementing small-scale infrastructure improvements, utilizing schemes such as JICA Mozambique Office’s counterpart funding scheme

Furthermore, considering JICA’s involvement in additional surveys for the aforementioned grant aid projects (bus terminal development and introduction of medium-sized buses), incorporating this specialized expertise in transportation planning and bus operations management into future urban mobility projects is expected to help sustain collaboration with Maputo Municipal Council and strengthen efforts to improve public transportation. These activities serve as both follow-up measures and monitoring mechanisms, expecting opportunities for ongoing dialogue regarding progress toward achieving overall goals.

ANNEX

ANNEX1 : All Versions of Project Design Matrix(PDM)

Project Design Matrix

Version 1.0
Dated March, 24, 2023

Project Title: The Project for Improvement of Urban Public Transport System in Maputo

Implementing Agency: Maputo Municipal Council (CMM)

Target Group: Urban public transport users in Maputo city and Maputo metropolitan area

Period of Project: Jan. 2023 – Dec. 2025 (36 months)

Project Site: Maputo city and Maputo metropolitan area

Narrative Summary		Objectively Verifiable Indicators	Means of Verification	Important Assumption	Achievement	Remarks
Overall Goal The use of urban public transport is promoted in Maputo city and Maputo metropolitan area.	1. The number of passengers per 100,000 citizens using urban public transport in Maputo city is increased. 2. The percentage of modal share for public transport mode from Maputo metropolitan area into Maputo city is increased.		1-1. Record of fare box revenue from bus operators 1-2. Electronic Fare Collection Systems 2-1. Vehicle counting at toll gates from CMM 2-2. Electronic Fare Collection Systems			
	1. The satisfaction ratings of the passengers using the urban public transport services, such as waiting time, safety, cleanliness, fare, convenience, gender issues, etc., exceed XX on average. 2. The key performance indicators (KPI) of bus operators on the bus services and operations are improved by XX%. 3. Travelling time is reduced from XX to XX minutes on average in the selected routes in Maputo city.		1. Questionnaire survey to the passengers using the urban public transport services 2. Assessment results of bus regulators 3. Project Monitoring	The directions of the national and municipal policy on urban public transport are continuously retained by the Mozambican Government.		
Outputs 1. The Comprehensive Urban Transport Master Plan for the Greater Maputo (Master Plan 2014) is reviewed and utilized. 2. The capacity of public bus operators and regulators for bus operation and management is enhanced. 3. The urban development controls and incentives toward the transit-oriented development (TOD) are enhanced.	1-1. XX projects in the Master Plan are implemented. 1-2. The number of reviews on urban public transport plans by using the Dashboard exceeds XX times. 2-1. XX action plans proposed of EMTM management and operation are implemented. 2-2. XX% of bus operators recognize the bus service and operation guideline. 3-1. The seminars for TOD with the guidelines on intermodal transport hubs and transit mall are convened XX times. 3-2. Taskforce for the enhancement of TOD is established.		1-1. Project list 1-2. Project monitoring 2-1. Annual report of EMTM or annual review by the Project 2-2. Questionnaire survey to seminar participants 3-1. Project monitoring 3-2. Project monitoring			

Activities	Inputs		Important Assumption
	The Japanese Side	The Mozambique Side	
1-1Review the implementation status of the Master Plan (2014). 1-2Review the socio-economic framework. 1-3Conduct the transport-related survey. 1-4Develop the Dashboard as a planning and monitoring tool. 1-5Revise and identify the project candidates in the Master Plan. 1-6Coordinate the implementation of the identified projects by utilizing the planning and monitoring tool. 2-1Analyze the issues of bus service operations and management. 2-2Conduct the training of EMTPM managers and administrative staff to develop and implement the business plans. 2-3Conduct the training of EMTPM staff, such as drivers and technical staff, to improve bus services and maintenance. 2-4Review the key performance indicators (KPI) for the assessment of bus services and operations. 2-5Review the bus service and operation guideline of public and private operators, including chapas and bus cooperatives, in collaboration with AMT. 2-6Conduct the pilot projects on bus service and operation by bus operators and regulators. 2-7Promote the bus service and operation guideline of public and private operators. 3-1Review the urban development regulations and guidelines in facilitating transit-oriented development (TOD) together with private finance involvement. 3-2Develop the guideline on "intermodal transport hubs" to promote new urban cores. 3-3Develop the guideline on "transit mall" to promote smooth transfer of public and private buses, chapas, and trains together with urban development.	1. Dispatch of experts • Team Leader /Urban Public Transport Policy • Deputy Team Leader/Traffic Management · Digital Transformation(DX) • Urban Transport Planning/Traffic Survey • Bus Operation Management • Bus Business Management • Terminal Operation · Management • Urban Planning Legal System • Urban Development Planning (Guideline Formulation) • Pilot Project Operation · Public Relation • Capacity Assessment · Capacity Development Planning • Traffic-Related Survey · Analysis • Urban Transport Data Analysis · Coordination	1. Assignment of counterpart (C/P) personnel • Project Director • Project Manager • C/P personnel 2. Provision of the project office and facilities 3. Expenses necessary for the project implementation • Local traveling costs and daily subsistence allowance for C/P personnel in Mozambique • Operation and maintenance costs for the machinery and equipment provided • Others	The staff of DMITT, AMT, EMTPM, etc. capacitated by the Project continues working for their respective positions. Pre-Conditions Understanding from the organizations concerned with urban public transport is obtained. <Issues and countermeasures>

Project Design Matrix

Version 2.0
Dated December, 11, 2023

Project Title: The Project for Improvement of Urban Public Transport System in Maputo

Implementing Agency: Maputo Municipal Council (CMM)

Target Group: Urban public transport users in Maputo city and Maputo metropolitan area

Period of Project: Jan. 2023 – Dec. 2025 (36 months)

Project Site: Maputo city and Maputo metropolitan area

Narrative Summary	Objectively Verifiable Indicators	Means of Verification	Important Assumption	Achievement	Remarks
Overall Goal The use of urban public transport is promoted in Maputo city and Maputo metropolitan area.	1. The number of passengers per 100,000 citizens using urban public transport in Maputo city is increased. 2. The percentage of modal share for public transport mode from Maputo metropolitan area into Maputo city is increased.	1-1. Record of fare box revenue from bus operators 1-2. Electronic Fare Collection Systems 2-1. Vehicle counting at toll gates from CMM 2-2. Electronic Fare Collection Systems			
Project Purpose The urban public transport services are improved in Maputo city.	1. The satisfaction ratings of the passengers using the urban public transport services, such as waiting time, safeness, cleanliness, fare, convenience, gender issues, etc., exceed XX on average. 2. The key performance indicators (KPI) of bus operators on the bus services and operations are improved by XX%. 3. Travelling time is reduced from XX to XX minutes on average in the selected routes in Maputo city.	1. Questionnaire survey to the passengers using the urban public transport services 2. Assessment results of bus regulators 3. Project Monitoring	The directions of the national and municipal policy on urban public transport are continuously retained by the Mozambican Government.		
Outputs 1. The Comprehensive Urban Transport Master Plan for the Greater Maputo (Master Plan 2014) is reviewed and utilized. 2. The capacity of public bus operators and regulators for bus operation and management is enhanced. 3. The urban development controls and incentives toward the transit-oriented development (TOD) are enhanced.	1-1. XX projects in the Master Plan are implemented. 1-2. The number of reviews on urban public transport plans by using the Dashboard exceeds XX times. 2-1. XX action plans proposed of EMTPM management and operation are implemented. 2-2. XX% of bus operators recognize the bus service and operation guideline. 3-1. The seminars for TOD with the guidelines on intermodal transport hubs and transit mall are convened XX times. 3-2. Taskforce for the enhancement of TOD is established.	1-1. Project list 1-2. Project monitoring 2-1. Annual report of EMTPM or annual review by the Project 2-2. Questionnaire survey to seminar participants 3-1. Project monitoring 3-2. Project monitoring			

Activities	Inputs	The Mozambique Side	Important Assumption
1-1Review the implementation status of the Master Plan (2014). 1-2Review the socio-economic framework. 1-3Conduct the transport-related survey. 1-4Develop the Dashboard as a planning and monitoring tool. 1-5Revise and identify the project candidates in the Master Plan. 1-6Coordinate the implementation of the identified projects by utilizing the planning and monitoring tool. 2-1Analyze the issues of bus service operations and management. 2-2Conduct the training of EMTPM managers and administrative staff to develop and implement the business plans. 2-3Conduct the training of EMTPM staff, such as drivers and technical staff, to improve bus services and maintenance. 2-4Review the key performance indicators (KPI) for the assessment of bus services and operations. 2-5Review the bus service and operation guideline of public and private operators, including chapas and bus cooperatives, in collaboration with AMT. 2-6Conduct the pilot projects on bus service and operation by bus operators and regulators. 2-7Promote the bus service and operation guideline of public and private operators. 3-1Review the urban development regulations and guidelines in facilitating transit-oriented development (TOD) together with private finance involvement. 3-2Develop the guideline on "intermodal transport hubs" to promote new urban cores. 3-3Develop the guideline on "transit mall" to promote smooth transfer of public and private buses, chapas, and trains together with urban development.	The Japanese Side 1. Dispatch of experts • Team Leader /Urban Public Transport Policy • Deputy Team Leader/Traffic Management • Digital Transformation(DX) • Urban Transport Planning/Traffic Survey • Bus Operation Management • Bus Business Management • Terminal Operation • Management • Urban Planning Legal System • Urban Development Planning (Guideline Formulation) • Pilot Project Operation • Public Relation • Capacity Assessment • Capacity Development Planning • Traffic-Related Survey • Analysis • Urban Transport Data Analysis • Coordination	The Mozambique Side 1. Assignment of counterpart (C/P) personnel • Project Director • Project Manager • C/P personnel 2. Provision of the project office and facilities 3. Expenses necessary for the project implementation • Local traveling costs and daily subsistence allowance for C/P personnel in Mozambique • Operation and maintenance costs for the machinery and equipment provided • Others	The staff of DMTT, AMT, EMTPM, etc. capacitated by the Project continues working for their respective positions. Pre-Conditions Understanding from the organizations concerned with urban public transport is obtained. <Issues and countermeasures>

Project Design Matrix

Version 3.0
Dated September, 30, 2024

Project Title: The Project for Improvement of Urban Public Transport System in Maputo
Implementing Agency: Maputo Municipal Council (CMM)
Target Group: Urban public transport users in Maputo city and Maputo metropolitan area
Period of Project: Jan. 2023 – Dec. 2025 (36 months)
Project Site: Maputo city and Maputo metropolitan area

Narrative Summary		Objectively Verifiable Indicators	Means of Verification	Important Assumption	Achievement	Remarks
Overall Goal The use of urban public transport is promoted in Maputo city and Maputo metropolitan area.	Project Purpose The urban public transport services are improved in Maputo city.	1. Number of implementing projects based on SIMPUT-Maputo 2. SIMPUT-Maputo proposals which applied to policies and plans in Mozambique or Maputo municipality 3. Implementing actions addressed in business improvement plan for EMTPM 4. Number of private operators who applied KPIs or referred to guidelines proposed by METRAP-Maputo 5. The satisfaction ratings of public transportation services are improved to more than 3 points on average. 6. The percentage of modal share for public transportation between Maputo metropolitan area and Maputo municipality is increased.	1. Questionnaire survey to each responsible agency and municipalities 2. Questionnaire survey to each responsible agency and municipalities 3. Questionnaire survey to each responsible agency and municipalities or annual report in EMTPM 4. Questionnaire survey to private bus operators 5. Questionnaire survey to passengers at bus terminals 6. Screen line survey with bus occupancy	The directions of the national and municipal policy on urban public transport are continuously retained by the Mozambican Government.		
		1. The number of officers who learned fundamental theories about urban transportation planning and operation is increased to five (5) persons. CMM promotes and disseminates the SIMPUT-Maputo with stakeholders of urban transport agencies and other municipalities. 2. Twelve key performance indicators (KPIs) on the EMTPM bus services and operations are improved. 3. At least one or more bus operators in Maputo Metropolitan Area applies one or more KPIs set by METRAP-Maputo.	1. Questionnaire survey to Counterparts 2. Self assessment results by EMTPM 3. Project Monitoring			
Outputs 1. The Comprehensive Urban Transport Master Plan for the Greater Maputo (Master Plan 2014) is reviewed and utilized. 2. The capacity of EMTPM as a public bus operator and regulators for bus operation and management is enhanced. 3. The urban development controls and incentives toward the transit-oriented development (TOD) are enhanced.		1-1 The Strategic Implementation Master Plan, as a result of reviewing the Master Plan 2014, is proposed. 1-2 Number of reviews on urban public transport plans using the Dashboard by each stakeholder at least once. 2-1 More than 10 recommendations on improving EMTPM's bus operations are proposed, and more than half are implemented. 2-2 The KPIs of bus services and operations of EMTPM are set and monitored. 2-3 The challenges analysis on CMM (DMTT)'s role and responsibilities is analyzed, and an action plan for improvement is developed. 2-4 The activities to enhance public transport convenience are analyzed and evaluated through pilot projects (bus terminal operation improvement and GTFS development) and a further action plan is prepared. 2-5 The guideline on bus operation and maintenance is formulated. 3-1 Guidelines on intermodal transport hubs and guidelines on transit mall are formulated. 3-2 Seminars for TOD, with the guidelines on intermodal transport hubs and transit mall, are convened once. 3-3 A taskforce for enhancing TOD is established.	1-1 SIMPUT-Maputo 1-2 Project monitoring 2-1 Annual report of EMTPM or annual review by the Project 2-2 Questionnaire survey to seminar participants 2-3 Action plan on DMTT's activities 2-4 Action plan on CMM's activities 2-5 Guideline on bus operation and maintenance 3-1 Guidelines on intermodal transport hubs and Guidelines on transit mall 3-2 Project monitoring 3-3 Project monitoring			

Inputs	The Japanese Side	The Mozambique Side	Important Assumption
1-1 Review the implementation status of the Master Plan (2014). 1-2 Review the socio-economic framework. 1-3 Conduct the transport-related survey. 1-4 Develop the Dashboard as a planning and monitoring tool. 1-5 Revise and identify the project candidates in the Master Plan. 1-6 Coordinate the implementation of the identified projects by utilizing the planning and monitoring tool. 2-1 Analyze the issues of bus service operations and management. 2-2 Conduct the training of EMTPM managers and administrative staff to develop and implement the business plans. 2-3 Conduct the training of EMTPM staff, such as drivers and technical staff, to improve bus services and maintenance. 2-4 Develop the key performance indicators (KPI) for the assessment of EMTPM bus services and operations. 2-5 Develop the bus operation and maintenance guideline of EMTPM. 2-6 Conduct the pilot projects on bus service and operation by bus operators and regulators. 2-7 Promote the bus operation and maintenance guideline of public and private operators in Maputo metropolitan area. 3-1 Review the urban development regulations and guidelines in facilitating transit-oriented development (TOD) together with private finance involvement. 3-2 Develop the guideline on "intermodal transport hubs" to promote new urban cores. 3-3 Develop the guideline on "transit mall" to promote smooth transfer of public and private buses, chapas, and trains together with urban development.	1. Dispatch of experts • Team Leader /Urban Public Transport Policy • Deputy Team Leader/Traffic Management and Digital Transformation (DX) • Urban Transport Planning/Traffic Survey • Bus Operation and Management • Bus Business Management • Terminal Operation and Management • Urban Planning Legal System • Urban Development Planning (Guideline Formulation) • Pilot Project Operation and Public Relation • Capacity Assessment and Capacity Development Planning • Traffic-Related Survey and Analysis • Urban Transport Data Analysis and Coordination	1. Assignment of counterpart (C/P) personnel • Project Director • Project Manager • C/P personnel 2. Provision of the project office and facilities 3. Expenses necessary for the project implementation • Local traveling costs and daily subsistence allowance for C/P personnel in Mozambique • Operation and maintenance costs for the machinery and equipment provided • Others	The staff of DMTT, AMT, EMTPM, etc. capacitated by the Project continues working for their respective positions. Pre-Conditions Understanding from the organizations concerned with urban public transport is obtained. <Issues and countermeasures>

Project Design Matrix

Version 4.0
Dated March 15, 2025

Project Title: The Project for Improvement of Urban Public Transport System in Maputo
Implementing Agency: Maputo Municipal Council (CMM)
Target Group: Urban public transport users in Maputo city and Maputo metropolitan area
Period of Project: Jan. 2023 – Dec. 2025 (36 months)
Project Site: Maputo city and Maputo metropolitan area

Narrative Summary		Objectively Verifiable Indicators	Means of Verification	Important Assumption	Achievement	Remarks
Overall Goal	The use of urban public transport is promoted in Maputo city and Maputo metropolitan area.	1. Number of implementing projects based on SIMPUT-Maputo 2. SIMPUT-Maputo proposals which applied to policies and plans in Mozambique or Maputo municipality 3. Implementing actions addressed in business improvement plan for EMTPM 4. Number of private operators who applied KPIs or referred to guidelines proposed by METRAP-Maputo 5. The satisfaction ratings of public transportation services are improved to more than 3 points on average. 6. The percentage of modal share for public transportation between Maputo metropolitan area and Maputo municipality is	1. Questionnaire survey to each responsible agency and municipalities 2. Questionnaire survey to each responsible agency and municipalities 3. Questionnaire survey to each responsible agency and municipalities or annual report in EMTPM 4. Questionnaire survey to private bus operators terminals 5. Questionnaire survey to passengers at bus terminals 6. Screen line survey with bus occupancy	The directions of the national and municipal policy on urban public transport are continuously retained by the Mozambican Government.		
Project Purpose	The urban public transport services are improved in Maputo city.	1. The number of officers who learned fundamental theories about urban transportation planning and operation is increased to five (5) persons. CMM promotes and disseminates the SIMPUT-Maputo with stakeholders of urban transport agencies and other 2. Twelve key performance indicators (KPIs) on the EMTPM bus services and operations are improved. 3. At least one or more bus operators in Maputo Metropolitan Area applies one or more KPIs set by METRAP-Maputo.	1. Questionnaire survey to Counterparts 2. Self assessment results by EMTPM 3. Project Monitoring			
Outputs	1. The Comprehensive Urban Transport Master Plan for the Greater Maputo (Master Plan 2014) is reviewed and utilized. 2. The capacity of EMTPM as a public bus operator and regulators for bus operation and management is enhanced.	1-1 The Strategic Implementation Master Plan, as a result of reviewing the Master Plan 2014, is proposed. 1-2 Number of reviews on urban public transport plans using the Dashboard by each stakeholder at least once. 2-1 More than 10 recommendations on improving EMTPM's bus operations are proposed, and more than half are implemented. 2-2 The KPIs of bus services and operations of EMTPM are set and monitored. 2-3 The challenges analysis on CMM (DMTT)'s role and responsibilities is analyzed, and an action plan for improvement is developed. 2-4 The activities to enhance public transport convenience are analyzed and evaluated through pilot projects (bus terminal operation improvement and GTFS development) and a further action plan is prepared. 2-5 The guideline on bus operation and maintenance is formulated. 3-1 Guidelines on intermodal transport hubs and guidelines on transit mall are formulated. 3-2 Seminars for TOD, with the guidelines on intermodal transport hubs and transit mall, are convened once. 3-3 A taskforce for enhancing TOD is established.	1-1 SIMPUT-Maputo 1-2 Project monitoring 2-1 Annual report of EMTPM or annual review by the Project 2-2 Questionnaire survey to seminar participants 2-3 Action plan on DMTT's activities 2-4 Action plan on CMM's activities 2-5 Guideline on bus operation and maintenance 3-1 Guidelines on intermodal transport hubs and Guidelines on transit mall 3-2 Project monitoring 3-3 Project monitoring			
	3. The urban development controls and incentives toward the transit-oriented development (TOD) are enhanced.					

Inputs	The Japanese Side	The Mozambique Side	Important Assumption
1-1 Review the implementation status of the Master Plan (2014). 1-2 Review the socio-economic framework. 1-3 Conduct the transport-related survey. 1-4 Develop the Dashboard as a planning and monitoring tool. 1-5 Revise and identify the project candidates in the Master Plan. 1-6 Coordinate the implementation of the identified projects by utilizing the planning and monitoring tool. 2-1 Analyze the issues of bus service operations and management. 2-2 Conduct the training of EMTPM managers and administrative staff to develop and implement the business plans. 2-3 Conduct the training of EMTPM staff, such as drivers and technical staff, to improve bus services and maintenance. 2-4 Develop the key performance indicators (KPI) for the assessment of EMTPM bus services and operations. 2-5 Develop the bus operation and maintenance guideline of EMTPM. 2-6 Conduct the pilot projects on bus service and operation by bus operators and regulators. 2-7 Promote the bus operation and maintenance guideline of public and private operators in Maputo metropolitan area. 3-1 Review the urban development regulations and guidelines in facilitating transit-oriented development (TOD) together with private finance involvement. 3-2 Develop the guideline on "intermodal transport hubs" to promote new urban cores. 3-3 Develop the guideline on "transit mall" to promote smooth transfer of public and private buses, chapas, and trains together with urban development.	• Dispatch of experts • Team Leader /Urban Public Transport Policy • Deputy Team Leader/Traffic Management and Digital Transformation(DX) • Urban Transport Planning/Traffic Survey • Bus Operation and Management • Bus Business Management • Terminal Operation and Management • Urban Planning Legal System • Urban Development Planning (Guideline Formulation) • Pilot Project Operation and Public Relation • Capacity Assessment and Capacity Development Planning • Traffic-Related Survey and Analysis • Urban Transport Data Analysis and Coordination	1.Assignment of counterpart (C/P) personnel • Project Director • Project Manager • C/P personnel 2.Provision of the project office and facilities 3.Expenses necessary for the project implementation • Local traveling costs and daily subsistence allowance for C/P personnel in Mozambique • Operation and maintenance costs for the machinery and equipment provided • Others	The staff of DMTT, AMT, EMTPM, etc. capacitated by the Project continues working for their respective positions. Pre-Conditions Understanding from the organizations concerned with urban public transport is obtained. <Issues and countermeasures>

ANNEX2 : Monitoring Sheets

Monitoring Sheet Ver.1

To Chief Representative of JICA Mozambique Office

Project Monitoring Sheet

Project Title: The Project for Improvement of Urban Public Transport System in Maputo

Version of the Sheet: Ver.1.0 (Term: January, 2023 – March, 2023)

Name: Mr. Alexandre Muianga

Title: Project Director, Councilor of CMM

Name: Mr. ASADA Yoshihisa

Title: Team Leader/Urban Public Transport Policy

Submission Date: 7th April 2023

I. Summary

1 Progress

1-1 Progress of Inputs

Mozambique side:

(1) Personnel

- Each member was selected as follows:

1) Project Director

Mr. Alexandre Muianga, Councillor of CMM

2) Adviser to Project Director

Mr. Antônio Matos, President of ATM

3) Project Manager

Ms. Loide Massangaie, Vice Director of DMTT, CMM

4) JCC members

- Project Director : **Mr. Alexandre Muianga**, Councillor of CMM
- Advisor to Project Director : **Mr. Antônio Matos**, President of ATM
- Project Manager: **Ms. Loide Massangaie**, Vice Director of DMTT, CMM
- Leader of TWG of Output1: **Ms. Loide Massangaie**, Vice Director of DMTT, CMM
- Leader of TWG of Output2: **Mr. Lourenço Albino**, President of EMTPM, CMM
- Leader of TWG of Output3: **Ms. Loide Massangaie**, Vice Director of DMTT, CMM

5) Working group (WG) members

WG	Department	Name/Position
WG-1: Review and Utilize Comprehensive Urban Transport Master Plan for the Greater Maputo (Master Plan 2014)	DMTT	Ms. Catarina Chicuava , Technician, Dept. Transport Operations (inspection and supervision)
		Ms. Marcia Muianga , Technician Dept. License. (IT)
	AMT	Mr. Idelson Mindo , Transport Data Analyst, Technical Department
	EMME	Mr. Atanásio Tembe , Administrator, Operations

		Dept.
	INCM	Mr. Afonso Mbata Madivadua Junior , Chief of Department, Service Quality Department
	Matola	Mr. Ramiro Lopes Artur , Head of the Mobility Section, Mobility Section
	Marrancuene	Mr. José Bata Tinga , Technician, Department of Public Works, Infrastructure and Equipment
	Boane	Mr. Daniel Comeque , Head of the Department, Department of Communications, Transport and Transit
WG-2: Enhance capacity of public bus operators and regulators for bus operation and management	DMTT	Mr. Jossefa Isaias , Technician, Dept. Public Transport
	AMT	Mr. Armando Bembele , Administrator, Technical Department
	EMTPM	Mr. Camilo Ibraimo , Director, Operation Department
	FEMATRO	Mr. Domingos Machava , Executive Director, Member of Board of Directors
	ATROMAP	Mr. Edino da Conceição Harilal , Financial Director, Member of the Board of Directors
WG-3: Enhance urban development controls and incentives toward the transit-oriented development (TOD)	DMTT	Ms. Helena Tito , Technician, Dept. Transport Operations (studies and projects)
	AMT	Mr. Anulavio Jose Maximo , Technician, Technical Division within Operations Department
	GADU	Ms. Teresa Chissequere , Director, Urban Development Office
	GADU	Mr. Jose Ricardo , Chief. Dept. Urban Development Project
	DMOTC	Mr. Carlos Muamba , Head of Section, Urban Planning Department
	DMIU	Mr. Sergio Sebastião , Chief, Dept. Road

(2) Facility and equipment

- Office space in DMTT as liaison office to communicate with DMTT was installed

(3) Expense for project activities

- N/A in this period

Japan side:

(1) Expert

- Total experts' input (Man-Month) has been allocated at 59.00 Person-Months according to the Contract. 4.8 Person-Months has been completed as of end of March 2023, which accounts for 8.1%.

(2) Counterpart training

- Training in Japan
- N/A in this period
- Training in third country
- N/A in this period

(3) Facility and Equipment

- Equipment required for the project office such as furniture, monitor and printer machine was installed.

- N/A in this period

- Project office was launched at Rovuma hotel on 10th February 2023.

(4) Expense for project activities

- N/A in this period

1-2 Progress of Activities

[Activities for Overall]

- The first JCC had held on 20th February 2023.
- Draft of Work Plan had presented to DMTT at JCC meeting and it was submitted on 3rd March 2023.

[Activities for Output 1]

The Comprehensive Urban Transport Master Plan for the Greater Maputo (Master Plan 2014) is reviewed and utilized.

1.1 Review the implementation status of the Master Plan (2014)

- Started information and data collection about Master Plan (2014)

1.2 Review the socio-economic framework

- Started data collection about socio-economic framework of the Master Plan (2014) and other sources

1.3 Conduct the transport-related survey

- Drafting TOR for transport-related survey
- Understanding transport-related survey on SUMP

1.4 Develop the Dashboard as a planning and monitoring tool

- Drafting specification and TOR for sub-consultant service.

1.5 Revise and identify the project candidates in the Master Plan

- N/A in this period

1.6 Coordinate the implementation of the identified projects by utilizing the planning and monitoring tool

- N/A in this period

[2 Activities for Output 2]

The capacity of public bus operators and regulators for bus operation and management is enhanced.

2.1 Analyse the issues of bus service operations and management

- Started information and data collection though financial report, monthly operation

report, and interview EMTPM.

- Started discussion about the issues of bus service operations and management with DMTT and EMTPM.

2.2 Conduct the training of EMTPM managers and administrative staff to develop and implement the business plans

- N/A in this period

2.3 Conduct the training of EMTPM staff, such as drivers and technical staff, to improve bus services and maintenance

- N/A in this period

2.4 Review the key performance indicators (KPI) for the assessment of bus services and operations

- N/A in this period

2.5 Review the bus service and operation guideline of public and private operators, including chapas and bus cooperatives, in collaboration with AMT

- N/A in this period

2.6 Conduct the pilot projects on bus service and operation by bus operators and regulators

- N/A in this period

2.7 Promote the bus service and operation guideline of public and private operators.

- N/A in this period

[3 Activities for Output 3]

The urban development controls and incentives toward the transit-oriented development (TOD) are enhanced.

3.1 Review the urban development regulations and guidelines in facilitating transit-oriented development (TOD) together with private finance involvement

- Started information collection about law/regulation and existing plan for urban planning

3.2 Develop the guideline on “intermodal transport hubs” to promote new urban cores.

- N/A in this period

3.3 Develop the guideline on “transit mall” to promote smooth transfer of public and private buses, chapas, and trains together with urban development.

- N/A in this period

1-3 Achievement of Output

Each Objectively Verifiable Indicator (OVI) has been set as PDM (Project Design Matrix), however the target values are not determined yet, they will be prepared based on

baseline survey.

1-4 Achievement of the Project Purpose

- N/A

1-5 Changes of Risks and Actions for Mitigation

- N/A

1-6 Progress of Actions undertaken by JICA

- N/A

1-7 Progress of Actions undertaken by DMTT

- N/A

1-8 Progress of Environmental and Social Considerations (if applicable)

- N/A (This project is categorized as "C")

1-9 Progress of Considerations on Gender/Peace Building/Poverty Reduction, disability, disease infection, social system, human wellbeing, human right, and gender equality (if applicable)

- As stated in the project purpose "The urban public transport services are improved in Maputo city", it is important to proceed project activities with attention to ensure that the said services are equitably distributed between men and women, and that women can use public transportation services with peace of mind.
- As an objectively verifiable indicator of the project purposes, passenger satisfaction with urban public transportation services will be measured from gender perspectives by adding questions on routes, travel time, and safety (danger perception, crime prevention measures, victimization experience, etc.), and by including a certain percentage of women in the base-line survey.
- In the various surveys and activities of the project, gender-disaggregated data will be obtained for each item as much as possible for the analysis of needs and issues faced by women.
- Also, based on the analysis of needs and issues for gender mainstreaming, activities focused on specific measures to promote public transportation use will be implemented.

1-10 Other remarkable/considerable issues related/affect to the project (such as other JICA's projects, activities of counterparts, other donors, private sectors, NGOs etc.)

(1) World Bank : Maputo Metropolitan Area Urban Mobility Project (PMUAMM)

- PMUAMM aims to develop the BRT (Baixia- Missão Roque) and other infrastructure around the bus route and strengthen the urban transportation coordination function in the metropolitan area.
- Regarding Output 2, DMTT and Japan Expert Team (JET) will keep a watchful eye on the progress and collaborate with AMT and World Bank.

(2) World Bank : Maputo Urban Transformation Project (PTUM)

- PTUM aims to improve the urban environment in Maputo, including walkability improvements in informal settlements and road infrastructure improvements in the Katembe area.
- Regarding Output 3, DMTT and JET will communicate with them and collaborate if necessary

(3) AFD : Sustainable Urban Mobility Planning for the Maputo Metropolitan Area (SUMP)

- Conducting surveys and other studies related to urban transportation. The surveys were supposed to be completed by the end of February 2023.
- JET will consider items of transport-related survey to avoid duplication of the surveys in SUMP.

(4) KOICA : Project of Road Safety Improvements and Capacity Enhancement

- Technical Assistance for (1) M/P formulation for traffic safety, (2) introduction of traffic control system (in part), and (3) human resource development, with INATRO (Instituto Nacional de Transportes Terrestres) as the main counterpart.
- DMTT and JET will understand the activities for the progress of the project in Mater Plan 2014.

(5) The Mobility and Transport Observatory of Mozambique (OMT) : Transitions to Sustainable Urban Mobility in Sub-Saharan Africa (T-SUM)

- T-Sum is an interdisciplinary and cross-sector collaborative project that aims to identify the conditions under which pathways to sustainable and inclusive transport and land use development.
- DMTT and JET will understand the activities and consider whether they can collaborate with Output 2 and Output3 activities.

2 Delay of Work Schedule and/or Problems (if any)

2-1 Detail

- N/A

2-2 Cause

- N/A

2-3 Action to be taken

- N/A

2-4 Roles of Responsible Persons/Organization (JICA,DMTT)

- N/A

3 Modification of the Project Implementation Plan

3-1 PO

- N/A

3-2 Other modifications on detailed implementation plan

- N/A

(Remarks: The amendment of R/D, Project Description, and PDM (title of the project, duration, project site(s), target group(s), implementation structure, overall goal, project purpose, outputs, activities, input, and change of Environmental category) should be authorized by JICA HDQs. If the project team deems it necessary to modify any part of R/D, Project Description, and PDM, the team may propose the draft.)

4 Current Activities of Gov. of Mozambique to Secure Project Sustainability after its Completion

- N/A

II. Project Monitoring Sheet I & II as Attached

Monitoring Sheet Ver.2 (April 2023 - December 2023)

To Chief Representative of JICA Mozambique Office

Project Monitoring Sheet

Project Title: The Project for Improvement of Urban Public Transport System in Maputo

Version of the Sheet: Ver.2.0 (Term: April, 2023 – December, 2023)

Name: Mr. Alexandre Muianga

Title: Project Director, Councilor of CMM

Name: Mr. ASADA Yoshihisa

Title: Team Leader/Urban Public Transport Policy

Submission Date: 11th December 2023

I. Summary

1 Progress

1-1 Progress of Inputs

Mozambique side:

(1) Personnel

- Each member was selected as follows:

1) Project Director

Mr. Alexandre Muianga, VMTT, Councillor of CMM

2) Adviser to Project Director

Mr. António Matos, President of AMT

3) Project Manager

Ms. Loide Massangaie, Vice Director of DMTT, CMM

4) JCC members

- Project Director : **Mr. Alexandre Muianga**, VMTT, Councillor of CMM

- Advisor to Project Director : **Mr. Antó**

nio Matos, President of AMT

- Project Manager: **Ms. Loide Massangaie**, Vice Director of DMTT, CMM

- Leader of TWG of Output1: **Ms. Loide Massangaie**, Vice Director of DMTT, CMM

- Leader of TWG of Output2: **Mr. Lourenço Albino**, President of EMTPM, CMM

- Leader of TWG of Output3: **Ms. Loide Massangaie**, Vice Director of DMTT, CMM

5) Working group (WG) members

WG	Department	Name/Position
WG-1: Review and Utilize Comprehensive Urban Transport Master Plan for the	DMTT	Ms. Catarina Chicuava , Technician, Dept. Transport Operations (inspection and supervision)
		Ms. Márcia Muianga , Technician Dept. License. (IT)
	AMT	Mr. Felisberto Mondlane , Technician, Technical

Greater Maputo (Master Plan 2014)		Department
	EMME	Mr. Atanásio Tembe , Administrator, Operations Dept.
	INCM	Mr. Afonso Mbata Madivadua Júnior , Chief of Department, Service Quality Department
	Matola	Mr. Ramiro Lopes Artur , Head of the Mobility Section, Mobility Section
	Marrancuene	Mr. José Bata Tinga , Technician, Department of Public Works, Infrastructure and Equipment
	Boane	Mr. Daniel Comeque , Head of the Department, Department of Communications, Transport and Transit
WG-2: Enhance capacity of public bus operators and regulators for bus operation and management	DMTT	Mr. Jossefa Isaias , Technician, Dept. Public Transport
	AMT	Mr. Armando Bembele , Administrator, Technical Department
	EMTPM	Mr. Camilo Ibraimo , Director, Operation Department
	FEMATRO	Mr. Domingos Machava , Executive Director, Member of Board of Directors
	ATROMAP	Mr. Edino da Conceição Harilal , Financial Director, Member of the Board of Directors
WG-3: Enhance urban development controls and incentives toward the transit-oriented development (TOD)	DMTT	Ms. Helena Tito , Technician, Dept. Transport Operations (studies and projects)
	AMT	Mr. Anulávio José Máximo , Technician, Technical Division within Operations Department
	GADU	Ms. Teresa Chissequere , Director, Urban Development Office
	GADU	Mr. José Ricardo , Chief. Dept. Urban Development Project
	DMOTC	Ms. Neila Uamusse , Technician, Urban Planning Department
	DMIU	Mr. Sérgio Sebastião , Chief, Dept. Road

(2) Facility and equipment

- Office space in EMTPM for the Experts to work was provided by EMTPM

(3) Expense for project activities

- N/A in this period

Japan side:

(1) Expert

- Total JICA experts (JET) input (Man-Month) has been allocated at 59.00 Person-Months according to the Contract. 25 Person-Months has been completed as of end of March 2023, which accounts for 42.4%.
- As for the national experts, the following staffs have been recruited so far:
 - Support Personnel for Output 1 Transport Planning, **Ms. Conjo, Nicole Lord**
 - Support Personnel for Output 2 Public Transport, **Ms. Guerra, Letícia Simão**
 - Support Personnel for Output 3 Urban Planning, **Ms. Boane, Heike Melani da**

Silva

- 4) Support Personnel for CDR data analysis, **Mr. Cumbane, Silvino Pedro**
- 5) Support Personnel for overall project coordination, **Mr. Mavie, Abel Alberto**
- 6) Secretary, **Mr. Munjovo, Edmilson Xavier**
- 7) Secretary Assistant, **Ms. Banze, Anatórcia Melita Paulo**

(2) Counterpart training

- Training in Japan
- Concept notes of the training including program for visits was prepared and discussed.
- Nomination letter will be issued in December 2023 to each WG members.
- Training in third country
- Options for visits with potential contents of training were prepared.
- Started internal discussions on visit places between DMTT and JET.

(3) Facility and Equipment

- Equipment required for the project office such as furniture, monitor and printer machine were installed.
- Traffic Survey equipment such as video cameras and laptop computers were procured.
- Physical server for CDR data analysis was installed in INCM.

(4) Expense for project activities

- A sub-consultant firm for conducting the one of transport-related survey, such as Screen Line survey was signed and an advance payment was made in July 2023.
- Some surveyors and coordinators for the bus-related survey were hired between July and October 2023.

1-2 Progress of Activities

[Activities for Overall]

- The second JCC was held on 6th September 2023.

[Activities for Output 1]

The Comprehensive Urban Transport Master Plan for the Greater Maputo (Master Plan 2014) is reviewed and utilized.

1.1 Review the implementation status of the Master Plan (2014)

- Organized a list and location map of the project proposed in M/P2014
- Investigating into the current implementation status and the reason why some projects have not been implemented based on interview for involved municipalities.

1.2 Review the socio-economic framework

- Collected open data related to the socio-economics and analysed changes of population and land use.
- Collected and visualized the census data from INE and analysed difference between 2007 and 2017.
- Analysed the current and future population using the available data to develop the socio-economic framework.

1.3 Conduct the transport-related survey

- Conducting the screen survey at 20 locations and will be completed by December 2023.
- Carried out the bus-related survey in collaboration with OMT (OBSERVATÓRIO DE MOBILIDADE E TRANSPORTES DE MOÇAMBIQUE) and the output data is currently being analysed.
- Collected and analysed the household survey data provided by SUMP/PUMS.

1.4 Develop the Dashboard as a planning and monitoring tool

- Developed proto type dashboard for visualizing the proposed projects, and OD data developed in M/P2014.
- The MoU about CDR utilization between INCM, CMM, and JICA was signed.
- System architecture for CDR data visualization is currently being developed.

1.5 Revise and identify the project candidates in the Master Plan

- Prepared discussion points such as vision, strategies, conceptual images and potential projects for the next M/P (Strategic Implementation Master Plan for Urban Transport in Maputo Metropolitan Area 2024, tentatively proposed as new name of the next M/P) and discussing the contents at JCC and TWG meetings.
- Exchanging information with SUMP/PUMS team to see the same align for sustainable transportation planning.

1.6 Coordinate the implementation of the identified projects by utilizing the planning and monitoring tool

- Starting discussion from December.

[2 Activities for Output 2]

The capacity of public bus operators and regulators for bus operation and management is enhanced.

2.1 Analyse the issues of bus service operations and management

- Investigated into the bus operation of EMTPM to identify areas to be improved
- Interviewed the bus terminal operators such as EMTPM and EMME to identify areas to be improved.

- Collected and investigated into financial statements of EMTPM
- Analysed working records for operation and maintenance.

2.2 Conduct the training of EMTPM managers and administrative staff to develop and implement the business plans

- Considering training program based on challenges observed by expert.

2.3 Conduct the training of EMTPM staff, such as drivers and technical staff, to improve bus services and maintenance

- Guided improvement for EMTPM bus periodic inspection implementation system using cloud data sharing software.
- Conducted the training for the drivers and the maintenance technicians, focused on training on improving daily inspections.

2.4 Review the key performance indicators (KPI) for the assessment of bus services and operations

- Understood the actual situation regarding the frequency of bus services of EMTPM.
- Aggregating analysis of bus interview surveys and bus access surveys

2.5 Review the bus service and operation guideline of public and private operators, including chapas and bus cooperatives, in collaboration with AMT

- Collected laws and regulations related to buses and collected information on revisions of laws and regulations (AMT degree and Regulation of Transport in Automobile Vehicles: RTA) which is prepared by AMT.

2.6 Conduct the pilot projects on bus service and operation by bus operators and regulators

- Collected old GTFS data developed by World Bank in 2019 and understand background of the development of GTFS at that time.
- Obtain the latest GIS data on bus routes, bus stops, etc. from AMT (2021 version) Gather information on bus location system using GPS in 2019 developed by the World Bank (not working now).

2.7 Promote the bus service and operation guideline of public and private operators.

- N/A

[3 Activities for Output 3]

The urban development controls and incentives toward the transit-oriented development (TOD) are enhanced.

3.1 Review the urban development regulations and guidelines in facilitating transit-oriented development (TOD) together with private finance involvement

- Collected and analysed information about law/regulation and existing plan for

urban planning.

- Gathered basic data used for case studies.
- Discussed context and condition regarding urban development regulation among the members of the TWG3.

3.2 Develop the guideline on “intermodal transport hubs” to promote new urban cores.

- Developing drafts and preparation of guideline structure regarding “intermodal transport hubs”.

3.3 Develop the guideline on “transit mall” to promote smooth transfer of public and private buses, chapas, and trains together with urban development.

- Developing drafts and preparation of guideline structure regarding “transit mall”.

1-3 Achievement of Output

In regards for each Objectively Verifiable Indicator (OVI), the target values are not determined yet as of 7th December 2023, they will be prepared based on baseline survey. However, the following has been done.

Output 1: The Comprehensive Urban Transport Master Plan for the Greater Maputo (Master Plan 2014) is reviewed and utilized.

- OVI 1-1 XX projects in the Master Plan are implemented.
 - The project implementation status in M/P 2014 were checked.
 - New potential projects are collected based on the interview for Maputo city, surrounding municipalities and other related project such as SUMP/PUMS and PTUM.
- OVI 1-2 The number of reviews on urban public transport plans by using the Dashboard exceeds XX times.
 - The prototype Dashboards for M/P and OD were developed.
 - Reviews on urban public transport plans will be done at the TWG meeting.

Output 2: The capacity of public bus operators and regulators for bus operation and management is enhanced.

- OVI 2-1 XX action plans proposed of EMTPM management and operation are implemented.
 - The letter which was described nine comments on O&M issues and improvement ideas were issued by JET in October.
 - Training session for drivers, mechanics have been started. The contents are focused on Pre-Operation Inspection and Periodic Service.
- OVI 2-2 XX% of bus operators recognize the bus service and operation guideline.

- None. AMT is revising new regulation “Regulation of Transport in Automobile Vehicles (RTA) “.

Output 3: The urban development controls and incentives toward the transit-oriented development (TOD) are enhanced.

- OVI 3-1 The seminars for TOD with the guidelines on intermodal transport hubs OVI 3-1 and transit mall are convened XX times.
 - None. JET are developing guidelines of “Intermodal transport hub” and “Transit Mall” in collaboration with TWG3 members.
- OVI 3-2 Taskforce for the enhancement of TOD is established.
 - N/A

1-4 Achievement of the Project Purpose

- OVI1: The satisfaction ratings of the passengers using the urban public transport services, such as waiting time, safeness, cleanness, fare, convenience, gender issues, etc., exceed XX on average.
 - Bus passenger and driver interview surveys were conducted and got satisfaction rate for 14 items.
- OVI2: The key performance indicators (KPI) of bus operators on the bus services and operations are improved by XX%.
 - Interview survey for EMTPM mechanics was conducted and got issues such as lack of training, lack of spare parts procurement.
 - KPIs of bus operation are considering.
- OVI3: Travelling time is reduced from XX to XX minutes on average in the selected routes in Maputo city.
 - N/A. Traveling time survey will be conducted by using Google API data.

1-5 Changes of Risks and Actions for Mitigation

- Traffic survey was delayed due to the unnormal situation under the Mayor’s election, however, the survey was resumed to conduct.

1-6 Progress of Actions undertaken by JICA

- N/A

1-7 Progress of Actions undertaken by DMTT

- N/A

1-8 Progress of Environmental and Social Considerations (if applicable)

- N/A (This project is categorized as “C”)

1-9 Progress of Considerations on Gender/Peace Building/Poverty Reduction, disability, disease infection, social system, human wellbeing, human right, and gender equality (if applicable)

- To understand the current condition, questionnaire for gender (experience with sexual harassment on chapa) was asked in bus passengers survey and shared the result with TWG2 members.
- JET and national expert joined the discussion on gender related issue on the meeting of MOVE-Maputo.

1-10 Other remarkable/considerable issues related/affect to the project (such as other JICA's projects, activities of counterparts, other donors, private sectors, NGOs etc.)

(1) Overall of the Project, Administration

- Since new Mayor and new administrative organization of CMM will start in February 2024. DMTT and JET need to wait until new administrative arrangements to take place on 7th February 2024.
- The third JCC shall be planned on mid-March 2024 advised by Project Director.
- The dissemination seminar will be held by the owner of CMM, after prepared the next M/P and CDR analysis on March or April depending on its progress.

(2) CDR data

- Although it took time to sign MOU about CDR data utilization among INCM, CMM and JICA, finally it was signed on 6th September 2023.
- Upon the need and request of INCM to collaborate for the Project, the IT server was procured and set up in INCM and the capacity development for INCM staff has been provided by JET.
- The installation/configuration of the server to obtain and analyse the CDR data is ongoing and the data will be available soon. JET has been closely communicating with INCM to expedite the process to get the data as soon as possible.

(3) Transport-related survey

- During the screen line survey being implemented by the local recommissioned company and the bus-related survey implemented by JET, JET have involved DMTT staffs in the various steps such as procurement, surveyor's training, and onsite supervision for the capacity building.

(4) M/P 2014/2023 project list

- There are some projects in M/P 2014 which are hard to identify the location from the report. Though JET has been working closely with the counterparts for its identification, there could be some limitations.
- In addition to the M/P 2014 projects, JET has been contacting each municipality and visiting to each office to get potential projects proposed by those municipalities. The compiled project list is subject to the evaluation to select priority projects.

(5) World Bank : Maputo Metropolitan Area Urban Mobility Project (PMUAMM)

- PMUAMM aims to develop the BRT (Baixa- Missão Roque) and other infrastructure around the bus route and strengthen the urban transportation coordination function in the metropolitan area.
- The project is called “MOVE-Maputo”.
- DMTT and Japan Expert Team (JET) are discussing the progress with AMT and World Bank team.

As one of the contents, they are considering to revise AMT degree and Regulation of Transport in Automobile Vehicles (RTA). Since this revision will significantly affect bus registration and operation, DMTT and JET will watch the contents.

(6) World Bank : Maputo Urban Transformation Project (PTUM)

- PTUM aims to improve the urban environment in Maputo, including walkability improvements in informal settlements and road infrastructure improvements in the Katembe area.
- Regarding Output 3, DMTT and JET will communicate with them and collaborate if necessary.

(7) AFD : Sustainable Urban Mobility Planning for the Maputo Metropolitan Area (SUMP/PUMS)

- In November 2023, JET had a catch-up meeting with the team member of SUMP to understand their project status and considered.
- Data of transport survey conducted by SUMP was shared with METRAP-Maputo and the data is analysing for review of M/P.

The SUMP will come up with action plan for sustainable transport by April 2024, so JET will refer to that to incorporate into next M/P.

(8) KOICA : Project of Road Safety Improvements and Capacity Enhancement

- Technical Assistance for (1) M/P formulation for traffic safety, (2) introduction of traffic control system (in part), and (3) human resource development, with INATRO (Instituto Nacional de Transportes Terrestres) as the main counterpart.

- DMTT and JET discussed with KOICA project team and understood the activities.
- (9) The Mobility and Transport Observatory of Mozambique (OMT) : Transitions to Sustainable Urban Mobility in Sub-Saharan Africa (T-SUM)
- T-Sum is an interdisciplinary and cross-sector collaborative project that aims to identify the conditions under which pathways to sustainable and inclusive transport and land use development.
 - JET collaborated with them to conduct bus-related survey (to train surveyor, advice to survey way under Maputo context, etc.)
- (10) Sustainable Mobility Week (SMW)
- DMTT organized the SMW during 11th till 24th June 2023 with the seminar, event and forum. In addition, the “Maputo Pedalando”, which promotes the Active Transport, especially bicycle modes in urban transport” was conducted by MCC on 19th August 2003. DMTT applicated the JICA’s involvements to supports Maputo Pedalando, and hope to discuss the further activities next year jointly involved by METRAP-Maputo Team.

2 Delay of Work Schedule and/or Problems (if any)

2-1 Detail

- CDR data for reviewing M/P2014 has not been available yet.
- Screen survey results for validating CDR data has not been available yet.

2-2 Cause

- INCM requested that MOU for its collaboration with JICA / CMM shall be signed for sharing the CDR data, and it took months to get the MOU signed by all the stakeholders.
- Delays of the screen surveys are attributed to three factors: 1. To avoid the survey during school holidays, 2. insufficient securing power supply for video recording, and 3. faced traffic disruptions by political protest after the election, all of which affects the quality of survey results.

2-3 Action to be taken

- JET investigated into motivation and capabilities of INCM for its collaboration and shared it with JICA, helping JICA’s arrangement for the MOU to be signed by INCM. (Already solved)
- JET closely followed up the progress of the screen survey and supported technically the recommissioned company for the power supply issues. JET also gave the recommissioned company multiple reminders about the agreed schedule to ensure the result to be provided as soon as possible.

2-4 Roles of Responsible Persons/Organization (JICA,DMTT)

- JICA arranged for MOU to be signed by INCM and CMM.

3 Modification of the Project Implementation Plan

3-1 PO

- Due to the delay for obtaining the CDR data, the dashboard using the data will be deployed around March/April 2023. (Activity 1-4)
- M/P (2023) initially planned to be completed in December 2023 will be renamed to Strategic Implementation Urban Transport Plan 2024 and the draft version will be presented in Feb 2023 and the final version will be completed by May 2023. Thus, Activity 1-6 where the implementation of the identified project by utilizing the planning and monitoring tool will be initiated after that.

3-2 Other modifications on detailed implementation plan

- N/A

(Remarks: The amendment of R/D, Project Description, and PDM (title of the project, duration, project site(s), target group(s), implementation structure, overall goal, project purpose, outputs, activities, input, and change of Environmental category) should be authorized by JICA HDQs. If the project team deems it necessary to modify any part of R/D, Project Description, and PDM, the team may propose the draft.)

4 Current Activities of Gov. of Mozambique to Secure Project Sustainability after its Completion

- The Project Manager, Ms. Loide Massangaie (Vice Director of DMTT), and a DMTT staff in charge of Output 3, Ms. Helena Tito (Technician, Dept. Transport Operations) have joined The Knowledge Co-Creation Program (KCCP) in Japan where they have learned about various topics such as transport planning and TOD. The knowledge obtained will be shared in their organization and utilized in their activities.

II. Project Monitoring Sheet I & II as Attached

Project Design Matrix

Project Title: The Project for Improvement of Urban Public Transport System in Maputo

Implementing Agency: Maputo Municipal Council (CMM)

Target Group: Urban public transport users in Maputo city and Maputo metropolitan area

Period of Project: Jan. 2023 – Dec. 2025 (36 months)

Project Site: Maputo city and Maputo metropolitan area

Version 2.0

Dated December, 11, 2023

Narrative Summary	Objectively Verifiable Indicators	Means of Verification	Important Assumption	Achievement	Remarks
Overall Goal The use of urban public transport is promoted in Maputo city and Maputo metropolitan area.	1.The number of passengers per 100,000 citizens using urban public transport in Maputo city is increased. 2.The percentage of modal share for public transport mode from Maputo metropolitan area into Maputo city is increased.	1-1.Record of fare box revenue from bus operators 1-2. Electronic Fare Collection Systems 2-1.Vehicle counting at toll gates from CMM 2-2.Electronic Fare Collection Systems			
Project Purpose The urban public transport services are improved in Maputo city.	1.The satisfaction ratings of the passengers using the urban public transport services, such as waiting time, safeness, cleanness, fare, convenience, gender issues, etc., exceed XX on average. 2.The key performance indicators (KPI) of bus operators on the bus services and operations are improved by XX%. 3.Travelling time is reduced from XX to XX minutes on average in the selected routes in Maputo city.	1.Questionnaire survey to the passengers using the urban public transport services 2.Assessment results of bus regulators 3.Project Monitoring	The directions of the national and municipal policy on urban public transport are continuously retained by the Mozambican Government.		
Outputs 1.The Comprehensive Urban Transport Master Plan for the Greater Maputo (Master Plan 2014) is reviewed and utilized. 2.The capacity of public bus operators and regulators for bus operation and management is enhanced. 3.The urban development controls and incentives toward the transit-oriented development (TOD) are enhanced.	1-1XX projects in the Master Plan are implemented. 1-2The number of reviews on urban public transport plans by using the Dashboard exceeds XX times. 2-1XX action plans proposed of EMTPM management and operation are implemented. 2-2XX% of bus operators recognize the bus service and operation guideline. 3-1The seminars for TOD with the guidelines on intermodal transport hubs and transit mall are convened XX times. 3-2Taskforce for the enhancement of TOD is established.	1-1Project list 1-2Project monitoring 2-1Annual report of EMTPM or annual review by the Project 2-2Questionnaire survey to seminar participants 3-1Project monitoring 3-2Project monitoring			

Activities	Inputs		Important Assumption
	The Japanese Side	The Mozambique Side	
1-1Review the implementation status of the Master Plan (2014). 1-2Review the socio-economic framework. 1-3Conduct the transport-related survey. 1-4Develop the Dashboard as a planning and monitoring tool. 1-5Revise and identify the project candidates in the Master Plan. 1-6Coordinate the implementation of the identified projects by utilizing the planning and monitoring tool. 2-1Analyze the issues of bus service operations and management. 2-2Conduct the training of EMTPM managers and administrative staff to develop and implement the business plans. 2-3Conduct the training of EMTPM staff, such as drivers and technical staff, to improve bus services and maintenance. 2-4Review the key performance indicators (KPI) for the assessment of bus services and operations. 2-5Review the bus service and operation guideline of public and private operators, including chapas and bus cooperatives, in collaboration with AMT. 2-6Conduct the pilot projects on bus service and operation by bus operators and regulators. 2-7Promote the bus service and operation guideline of public and private operators. 3-1Review the urban development regulations and guidelines in facilitating transit-oriented development (TOD) together with private finance involvement. 3-2Develop the guideline on “intermodal transport hubs” to promote new urban cores. 3-3Develop the guideline on “transit mall” to promote smooth transfer of public and private buses, chapas, and trains together with urban development.	1.Dispatch of experts ▪ Team Leader /Urban Public Transport Policy ▪ Deputy Team Leader/Traffic Management · Digital Transformation(DX) ▪ Urban Transport Planning/Traffic Survey ▪ Bus Operation Management ▪ Bus Business Management ▪ Terminal Operation · Management ▪ Urban Planning Legal System ▪ Urban Development Planning (Guideline Formulation) ▪ Pilot Project Operation · Public Relation ▪ Capacity Assessment · Capacity Development Planning ▪ Traffic-Related Survey · Analysis ▪ Urban Transport Data Analysis · Coordination	1.Assignment of counterpart (C/P) personnel ▪ Project Director ▪ Project Manager ▪ C/P personnel 2.Provision of the project office and facilities 3.Expenses necessary for the project implementation ▪ Local traveling costs and daily subsistence allowance for C/P personnel in Mozambique ▪ Operation and maintenance costs for the machinery and equipment provided ▪ Others	The staff of DMTT, AMT, EMTPM, etc. capacitated by the Project continues working for their respective positions.
			Pre-Conditions Understanding from the organizations concerned with urban public transport is obtained.
			<Issues and countermeasures>

Tentative Plan of Operation

Version 2.0
Dated December, 11, 2023

Project Title: The Project for Improvement of Urban Public Transport System in Maputo

Inputs													Year	1st Year				2nd Year				3rd Year				Remarks		Issue		Solution												
														1~3	4~6	7~9	10~12	1~3	4~6	7~9	10~12	1~3	4~6	7~9	10~12																	
														I	II	III	IV	I	II	III	IV	I	II	III	IV																	
Expert																																										
Yoshihisa ASADA Team Leader/Urban Public Transport Policy													Plan																													
													Actual																													
Takeshi MATSUNUMA Deputy Team Leader/Traffic Management・DX													Plan																													
													Actual																													
Hirohisa KAWAGUCHI Urban Transport Planning/Traffic Survey													Plan																													
													Actual																													
Koji UZAWA Bus Operation Management													Plan																													
													Actual																													
Masayuki TOKUDA Bus Business Management													Plan																													
													Actual																													
Yasushi OOWAKI Terminal Operation・Management													Plan																													
													Actual																													
Jun KATSUMI Urban Planning Legal System													Plan																													
													Actual																													
Erio TACHIHARA Urban Development Planning（Guideline Formulation）													Plan																													
													Actual																													
Fatemeh MASOULEH Pilot Project Operation・Public Relation													Plan																													
													Actual																													
Lucas ALVES Capacity Assessment・Capacity Development Planning													Plan																													
													Actual																													
Nobuyoshi FUJIWARA Traffic-Related Survey・Analysis													Plan																													
													Actual																													
Toshiya YASAKU Urban Transport Data Analysis・Coordination													Plan																													
													Actual																													
Equipment																																										
CDR Server for INCM													Plan																													
													Actual																													
													Plan																													
													Actual																													
Training in Japan																																										
													Plan																													
													Actual																													
													Plan																													
													Actual																													
In-country/Third country Training																																										
													Plan																													
													Actual																													
Activities													Year	1st Year				2nd Year				3rd Year				Responsible Organization		Achievements		Issue & Countermeasures												
Sub-Activities														1~3	4~6	7~9	10~12	1~3	4~6	7~9	10~12	1~3	4~6	7~9	10~12																	
														I	II	III	IV	I	II	III	IV	I	II	III	IV	Japan	GOM															
Output 1:																																										
1-1 Review the implementation status of the Master Plan (2014).													Plan																													
													Actual																													
1-2 Review the socio-economic framework													Plan																													

[illegible]

Monitoring Sheet Ver.3 (January 2024 - June 2024)

To Chief Representative of JICA Mozambique Office

Project Monitoring Sheet

Project Title: The Project for Improvement of Urban Public Transport System in Maputo

Version of the Sheet: Ver.3.0 (Term: Jan, 2024 – June, 2024)

Name: Mr. Fernando Uache

Title: Project Director, Councilor of CMM

Name: Mr. ASADA Yoshihisa

Title: Team Leader/Urban Public Transport Policy

Submission Date: 11th July 2024

I. Summary

1 Progress

1-1 Progress of Inputs

Mozambique side:

(1) Personnel

- Each member was selected as follows:

1) Project Director

Mr. Fernando Uache, VMTT, Councillor of CMM

2) Adviser to Project Director

Mr. António Matos, President of AMT

3) Project Manager

Ms. Loide Massangaie, Vice Director of DMTT, CMM

4) JCC members

- Project Director : **Mr. Fernando Uache**, VMTT, Councillor of CMM
- Advisor to Project Director : **Mr. Antó Matos**, President of AMT
- Project Manager: **Ms. Loide Massangaie**, Vice Director of DMTT, CMM
- Leader of TWG of Output1: **Ms. Loide Massangaie**, Vice Director of DMTT, CMM
- Leader of TWG of Output2: **Mr. Lourenço Albino**, President of EMTPM, CMM
- Leader of TWG of Output3: **Ms. Loide Massangaie**, Vice Director of DMTT, CMM

5) Working group (WG) members

WG	Department	Name/Position
WG-1: Review and Utilize Comprehensive Urban Transport Master Plan for the Greater Maputo (Master Plan 2014)	DMTT	Ms. Catarina Chicuava , Technician, Dept. Transport Operations (inspection and supervision)
		Ms. Márcia Muianga , Technician Dept. License. (IT)
	AMT	Mr. Felisberto Mondlane , Technician, Technical Department
	EMME	Mr. Atanásio Tembe , Administrator, Operations

		Dept.
	INCM	Mr. Afonso Mbata Madivadua Júnior , Chief of Department, Service Quality Department
	Matola	Mr. Ramiro Lopes Artur , Head of the Mobility Section, Mobility Section
	Marrancuene	Mr. José Bata Tinga , Technician, Department of Public Works, Infrastructure and Equipment
	Boane	Mr. Daniel Comeque , Head of the Department, Department of Communications, Transport and Transit
WG-2: Enhance capacity of public bus operators and regulators for bus operation and management	DMTT	Mr. Jossefa Isaias , Technician, Dept. Public Transport
	AMT	Mr. Armando Bembele , Administrator, Technical Department
	EMTPM	Mr. Camilo Ibraimo , Director, Operation Department
	FEMATRO	Mr. Domingos Machava , Executive Director, Member of Board of Directors
	ATROMAP	Mr. Edino da Conceição Harilal , Financial Director, Member of the Board of Directors
WG-3: Enhance urban development controls and incentives toward the transit-oriented development (TOD)	DMTT	Ms. Helena Tito , Technician, Dept. Transport Operations (studies and projects)
	AMT	Mr. Anulávio José Máximo , Technician, Technical Division within Operations Department
	GADU	Ms. Teresa Chissequere , Director, Urban Development Office
	GADU	Mr. José Ricardo , Chief. Dept. Urban Development Project
	DMOTC	Ms. Neila Uamusse , Technician, Urban Planning Department
	DMIU	Mr. Sérgio Sebastião , Chief, Dept. Road

(2) Facility and equipment

- Office space in EMTPM for the Experts to work was provided by EMTPM

(3) Expense for project activities

- N/A in this period

Japan side:

(1) Expert

- Total JICA experts (JET) input (Person-Month) has been allocated at 59.00 Person-Months according to the Contract. 36.5 Person-Months has been completed as of end of June 2024, which accounts for 60.9%.
- As for the national experts, the following staffs have been recruited so far:
 - Support Personnel for Output 1 Transport Planning, **Ms. Conjo, Nicole Lord**
 - Support Personnel for Output 2 Public Transport, **Ms. Guerra, Letícia Simão till end of May 2024, Ms. Mercília Lombe started her assignment from May 2024**
 - Support Personnel for Output 3 Urban Planning, **Ms. Boane, Heike Melani da**

Silva

- 4) Support Personnel for CDR data analysis, **Mr. Cumbane, Silvino Pedro**
- 5) Support Personnel for overall project coordination, **Mr. Mavie, Abel Alberto**
- 6) Secretary, **Mr. Munjovo, Edmilson Xavier**
- 7) Secretary Assistant, **Ms. Banze, Anatórcia Melita Paulo**

(2) Counterpart training

- Training in Japan
- Training was held during 10 to 20 June 2024 in Tokyo, Nagoya City and Niigata City with 8 trainees from DMTT (6 officials), EMTPM (2 officials) and AMT (2 officials).
- During this period, trainee had intensive discussions and exchanging with lecturers, and had many experiences of different types of public transport services, such as buses (City cooperation bus, private bus operator, articulated buses and guideway buses), metro train (subway), urban railway, super express train (Shinkansen).
- Details are summarized in the report submitted to DMTT.
- Reporting session to wider audience of stakeholder of MMC and AMT will be held on 18th July 2024 chaired by Project Director, VMTT.
- Training in third country (tentatively Q2 2025)
- Options for visits with potential contents of training were prepared. Cape town is the candidate of site for this program.
- Started internal discussions on visit places between DMTT and JET. Initial arrangement for this program has been started.

(3) Facility and Equipment

- Equipment required for the project office such as furniture, monitor and printer machine were installed since the beginning of the Project.
- Traffic Survey equipment such as video cameras and laptop computers were procured. 12 Tablets (10 inches) are procured for use of interview survey and digital tool for lecture material and hotspots for training in Japan.
- Physical server for CDR data analysis was installed in INCM with function of remote access to INCM server from Japan (virtual server licensed by VMware).

(4) Expense for project activities

- A sub-consultant firm for conducting the one of transport-related survey, such as Screen Line survey was signed, and an advance payment was made in July 2023. After conducting all of survey and checked its quality by JET, the final payment was released in April 2024. The methodology of survey, such as video shooting and counting various types of vehicles by recorded video was established and transferred to DMTT for further use. These data were used for review of MP 2014

to compare the one which was conducted in MP 2014. Reports on this survey will be submitted on Q2 2025.

- Bus related survey, such as interview survey for passenger and driver, and video counting survey at gate of bus terminals for analysis of enter/exit of buses were conducted by surveyors and coordinators hired by JET between July and October 2023. These results were used for terminal improvement pilot project to understand bus users' perception and terminal usage. After the technical transfer to this survey methodology to DMTT, the reports on this survey will be submitted on Q2 2025.
- GTFS data preparation has been started since April 2024 by the direct order to the Associação Mapeamento do Bairro (#MapeandoMeuBairro) which has a capability of geospatial data collection and the organization which had involved the AMT's geodata preparation of bus routes and stops in 2019.
- Drone video capturing work was procured in April 2024 for monitoring current buses and passengers' movements within Zimpeto bus terminal to compare the improvement for future interventions.

1-2 Progress of Activities

[Activities for Overall]

- The introductory meeting with new JCC members was held on 11th March 2024
- The third JCC will be held on 18th July 2024.

[Activities for Output 1]

The Comprehensive Urban Transport Master Plan for the Greater Maputo (Master Plan 2014) is reviewed and utilized.

1.1 Review the implementation status of the Master Plan (2014)

- After investigating into the current implementation status and the reasons of the project which has not been implemented through interview with municipalities, the summary was made into SIMPUT-Maputo (Strategic implementation master plan for urban transport system in Maputo metropolitan area).
- Continuous communications among municipalities about their new idea for future projects.

1.2 Review the socio-economic framework

- After collection of the socio-economic open data as well as census population data from INE and analyse on population and land use changes, summary was described in SIMPUT-Maputo.

1.3 Conduct the transport-related survey

- Screen survey at 20 locations was completed by February 2024.

- Bus-related survey was conducted in collaboration with OMT (OBSERVATÓRIO DE MOBILIDADE E TRANSPORTES DE MOÇAMBIQUE) and the output data was analysed and summarized.
- Collected and analysed the household survey data provided by SUMP/PUMS.
- CDR (Call detailed record) data was saved into INCM virtual server after anonymized for the first step of CDR analysis as data quality check under MOU among CMM, JICA and INCM.

1.4 Develop the Dashboard as a planning and monitoring tool

- Developed proto-type dashboards for visualizing the master plan projects, and OD data developed in M/P2014.
- CDR dashboard for visualization will be developed after checking of CDR data quality.

1.5 Revise and identify the project candidates in the Master Plan

- Prepared SIMPUT-Maputo to describe the vision, strategies, conceptual images and potential projects for next 10 years.
- Conducted roadshow to each municipality for sharing the contents of SIMPUT-Maputo to get feedback from TWG members.
- Exchanging information with SUMP/PUMS team to know their progress and main ideas for urban transport planning.

1.6 Coordinate the implementation of the identified projects by utilizing the planning and monitoring tool

- Drafting of implementation scheme in SIMPUT-Maputo and starting discussion with municipalities and AMT in 3rd JCC, which will be finalized on end of August 2024.
- Technical transfer on how to use of dashboards (master plan, OD and CDR) after completion of development.
- Until June 2024, 3 times of the technical working group meeting (TWG) on this output-1 were held and separate meetings to TWG member in person at municipalities were arranged.

[2 Activities for Output 2]

The capacity of public bus operators and regulators for bus operation and management is enhanced.

2.1 Analyse the issues of bus service operations and management

- After investigated into the current bus operation of EMTPM and identified the challenges to be improved, several discussions were made among JICA experts and EMTPM officials.
- Reviewed on annual business plan of EMTPM in 2024.

- After interviewed the bus terminal operators such as EMTPM and EMME to identify areas to be improved, terminal operation improvement ideas, especially at Zimpeto terminal were discussed.

2.2 Conduct the training of EMTPM managers and administrative staff to develop and implement the business plans

- Starting bus operation visualization trials in major bus routes with working records and sifts to improve its operation.

2.3 Conduct the training of EMTPM staff, such as drivers and technical staff, to improve bus services and maintenance

- Started EMTPM bus periodic inspection implementation system using cloud data sharing software, and continuous monitoring by JICA experts
- Conducted the training for the drivers and the maintenance technicians, focused on training on improving daily inspections.
- Three (3) recommendation proposals issued by JICA experts to improve EMTPM maintenance works.

2.4 Review the key performance indicators (KPI) for the assessment of bus services and operations

- Proposed new KPIs for EMTPM operation and maintenance to monitor their business improvement after understood the actual situation regarding the EMTPM business environments.

2.5 Review the bus service and operation guideline of public and private operators, including chapas and bus cooperatives, in collaboration with AMT

- Monitored AMT's activities for new regulation (decree) on buses and chapas.

2.6 Conduct the pilot projects on bus service and operation by bus operators and regulators

- Start processing GTFS data of EMTPM buses based on previous GIS data developed by World Bank. The co-working members of EMTPM, DMTT and AMT officials for GTFS processing with procured NGO as experts, especially GIS bus route digitizing and bus stop location identification.
- Received the lecture of GTFS backgrounds and application in Japan during the training in Japan on June. Trainee brought back to Maputo and let colleague know how the GTFS plays a role of bus service improvements.
- Improvement of bus terminal operation was tried under new Mayors initiatives, and started discussion among EMTPM and DMTT for further plans for improvement of operation in Zimpeto as pilot project.

2.7 Promote the bus service and operation guideline of public and private operators.

- N/A

Until June 2024, 3 times of the technical working group meeting (TWG) on this output-2 were held. 3 recommendation letter for Operation and Maintenance from JET based on the results of the expert's findings.

[3 Activities for Output 3]

The urban development controls and incentives toward the transit-oriented development (TOD) are enhanced.

3.1 Review the urban development regulations and guidelines in facilitating transit-oriented development (TOD) together with private finance involvement

- After collected and analysed information about law/regulation and existing plan for urban planning, images of transit-oriented development were shared among TWG members through the meeting.

3.2 Develop the guideline on “intermodal transport hubs” to promote new urban cores.

- Through series of TWG meetings, first draft of development guideline of “intermodal transport hubs” was prepared in English version.
- Started sharing among TWG members to confirm and blush up its contents to meet Mozambique contexts.

3.3 Develop the guideline on “transit mall” to promote smooth transfer of public and private buses, chapas, and trains together with urban development.

- Through series of TWG meetings, first draft of “transit mall development guide” was prepared in English version.
- Started sharing among TWG members to confirm and blush up its contents to meet Mozambique contexts.

1-3 Achievement of Output

Since each Objectively Verifiable Indicator (OVI) and its target values are not determined yet in last monitoring period, consultation was made internally. It was found that some indicators and measurement methods were not insufficient to acquire and apply to realistic manner. In this monitoring sheet and JCC, both sides jointly propose its revisions of OVI and target values as follows. During 3rd JCC meeting, it will be confirmed and agreed by JCC members to be used in further monitoring of its activity.

Output 1: The Comprehensive Urban Transport Master Plan for the Greater Maputo (Master Plan 2014) is reviewed and utilized.

Original OVIs are as follows;

- OVI 1-1: XX projects in the Master Plan are implemented.

- OVI 1-2: The number of reviews on urban public transport plans by using the Dashboard exceeds XX times.

Since target numbers, “xx” is difficult to set as target value, the revised OVIs, and means of verification are proposed as follows;

- OVI 1-1: SIMPUT-Maputo (Strategic Implementation Master Plan), as a result of reviewing the Master Plan 2014, is proposed. (by SIMPUT-Maputo)
- OVI 1-2: Number of reviews on urban public transport plans using the Dashboard by each stakeholder at least once. (by Project monitoring sheet)

Output 2: The capacity of public bus operators and regulators for bus operation and management is enhanced.

Original OVIs are as follows;

- OVI 2-1: XX action plans proposed of EMTPM management and operation are implemented.
- OVI 2-2: XX% of bus operators recognize the bus service and operation guideline.

During the activities to EMTPM for capacity improvements and prepared by Pilot Projects, more concreted, feasible and measurable indicators were proposed as follows;

- OVI 2-1: More than 10 recommendations on improving EMTPM's bus operations are proposed, and more than half are implemented. (by Annual report of EMTPM or annual review by the Project)
- OVI 2-2: The KPIs of bus services and operations of EMTPM are set and monitored. (by Questionnaire survey to seminar participants)
- OVI 2-3: The roles and responsibilities of CMM (DMTT) are analyzed and the action plan for improvement is developed. (by Action plan on DMTT's activities)
- OVI 2-4: The activities to improve public transport services are analyzed and verified through pilot projects (bus terminal operation improvement and GTFS development) and a further action plan is developed. (by Action plan on CMM's activities)
- OVI 2-5: The guideline on bus operation and maintenance is developed. (by Guideline on bus operation and maintenance)

Narrative summary of Output 2: In the 3rd JCC, revision of the title of Output 2 shall be proposed for concrete sentence of narrative description as, “The capacity of EMTPM as public bus operators and regulators for bus operation and management is enhanced”.

Activities of Output 2: METRAP-Maputo has been passed almost one and half year since the commencement, METRAP-Maputo understand that the KPIs of bus operation and

maintenance are prepared by the component 1 of MOVE-Maputo. However, still it is not yet shared. Therefore, the activities of 2-4 and 2-5 shall be modified slightly from “review” of KPIs by MOVE-Maputo to “develop” by us. In addition, activity 2-7 would be revised accordingly. The revised words highlighted by underline as follows;

2-4 Develop the key performance indicators (KPI) for the assessment of EMTPM bus services and operations.

2-5 Develop the bus operation and maintenance guideline of EMTPM.

2-7 Promote the bus operation and maintenance guideline of public and private operators in Maputo metropolitan area.

Output 3: The urban development controls and incentives toward the transit-oriented development (TOD) are enhanced.

Original OVIs are as follows;

- OVI 3-1: The seminars for TOD with the guidelines on intermodal transport hubs and transit mall are convened XX times.
- OVI 3-2: Taskforce for the enhancement of TOD is established.

To measure the achievement of output 3, visible guidelines shall be added into OVIs. Therefore, following OVIs are proposed for further monitoring.

- OVI 3-1: Development guideline on intermodal transport hubs and Transit mall development guide are formulated. (by Development guidelines on intermodal transport hubs and Transit mall development guide)
- OVI 3-2: Seminars for TOD, with the guidelines on intermodal transport hubs and transit mall, are convened once. (by Project monitoring)
- OVI 3-3: A taskforce for enhancement of TOD is established. (by Project monitoring)

1-4 Achievement of the Project Purpose

Original OVIs are as follows;

- OVI 1: The satisfaction ratings of the passengers using the urban public transport services, such as waiting time, safeness, cleanness, fare, convenience, gender issues, etc., exceed XX on average.
- OVI 2: The key performance indicators (KPI) of bus operators on the bus services and operations are improved by XX%.
- OVI 3: Travelling time is reduced from XX to XX minutes on average in the selected routes in Maputo city.

Since OVI 1 (users satisfaction) is not able to envisioned just after completion of METRAP-Maputo because of required time for users, this OVI 1 shall move to OVI for overall goals

and was considered another indicator. The target value of OVI 2 was set during the findings of last activities. OVI 3 (travel time) had some considerations which is replaced more suitable indicator directly related to project outcomes. Following OVIs are proposed for further monitoring.

- OVI 1: The number of officers who learned fundamental theories about urban transportation planning and operation is increased to five (5) persons. CMM promotes and disseminates the SIMPUT-Maputo with stakeholders of urban transport agencies and other municipalities. (by Questionnaire survey to Counterparts)
- OVI 2: Twelve (12) key performance indicators (KPIs) on the EMTPM bus services and operations are improved. (by Self-assessment results by EMTPM)
- OVI 3: At least one or more bus operators in Maputo Metropolitan Area applies one or more KPIs set by METRAP-Maputo. (Project monitoring sheet)

For reference, both sides consulted the OVIs of overall goals and propose following new OVIs for more realistic, feasible and measurable indicators. Note that these OVIs should be prepared after 3 years of the Project (METRAP-Maputo), therefore, OVIs shall be carefully set with sustainability done by DMTT/MMC.

Original OVIs;

- OVI 1: The number of passengers per 100,000 citizens using urban public transport in Maputo city is increased.
- OVI 2: The percentage of modal share for public transport mode from Maputo metropolitan area into Maputo city is increased.

Proposed OVIs;

- OVI 1: 1. Number of implementing projects based on SIMPUT-Maputo. (by Questionnaire survey to each responsible agencies and municipalities)
- OVI 2: SIMPUT-Maputo proposals which applied to policies and plans in Mozambique or Maputo municipality. (by Questionnaire survey to each responsible agencies and municipalities)
- OVI 3: Implementing actions addressed in business improvement plan for EMTPM (by Questionnaire survey to each responsible agencies and municipalities or annual report in EMTPM)
- OVI 4: Number of private operators who applied KPIs or referred to guidelines proposed by METRAP-Maputo (by Questionnaire survey to private bus operators)
- OVI 5: The satisfaction ratings of public transportation services are improved to more than 3 points on average. (Questionnaire survey to passengers at bus terminals)

- OVI 6: The percentage of modal share for public transportation between Maputo metropolitan area and Maputo municipality is increased. (by Screen line survey with vehicle occupancy rates)

1-5 Changes of Risks and Actions for Mitigation

- Due to the presidential election on October 2024, JICA decided the prohibition of dispatching JICA experts to Maputo by November at least. It may affect the schedule of activity in Maputo.

1-6 Progress of Actions undertaken by JICA

- N/A

1-7 Progress of Actions undertaken by DMTT

- Close communication will be made among stakeholders, such as municipalities, AMT and other relevant organizations for finalization and bush-up of SIMPUT-Maputo, which will be disseminated at the Seminar on early September.
- Coordination and arrangement with CFM for acquiring their plans and current issues for SIMPUT-Maputo preparation.

1-8 Progress of Environmental and Social Considerations (if applicable)

- N/A (This project is categorized as “C”)

1-9 Progress of Considerations on Gender/Peace Building/Poverty Reduction, disability, disease infection, social system, human wellbeing, human right, and gender equality (if applicable)

- To understand the current condition, questionnaire for gender (experience with sexual harassment on chapas) was asked in bus passengers survey and shared the result with TWG2 members.
- JET and national expert joined the discussion on gender related issue on the meeting of MOVE-Maputo.

1-10 Other remarkable/considerable issues related/affect to the project (such as other JICA's projects, activities of counterparts, other donors, private sectors, NGOs etc.)

(1) Overall of the Project, Administration

- Due to new Mayor and new administrative organization of CMM until 7th February

2024, Expert team and activities were slow-down.

- The third JCC was renamed as introductory meeting with new mayors on 11th March 2024 after discussion of new Project Director.
- The dissemination seminar will be held by the owner of CMM, after prepared the SIMPUT-Maputo and CDR analysis, therefore, it might be on early September 2024 as tentative schedule.

(2) CDR data

- After reported 2nd Monitoring sheet, anonymized CDR data was saved for 3 months for one operator into virtual server in INCM in April. However, unexpected licence trouble of VMware happened in early May. It was stopped accessing virtual server and it resumed on 20th June. Currently, 3 months CDR data with 3 operators were saved and quality check process has been started.

(3) Transport-related survey

- During the screen line survey being implemented by the local recommissioned company and the bus-related survey implemented by JET, JET have involved DMTT staffs in the various steps such as procurement, surveyor's training, and onsite supervision for the capacity building.

(4) M/P 2014/2023 project list

- SIMPUT-Maputo is now ready after series of discussion among municipalities. During May and June, roadshow was made to communicate separately with municipality for reporting the contents of SIMPUT-Maputo and receiving feedback from them.
- For finalization of SIMPUT-Maputo, the implementation process described in Chapter 5 shall be consulted by municipality as well as AMT.
- After finalized, it is expected to disseminate in Dissemination Seminar on early September.

(5) World Bank : Maputo Metropolitan Area Urban Mobility Project (PMUAMM) , MOVE-Maputo (BRT project)

- PMUAMM aims to develop the BRT (Baixa- Missão Roque) and other infrastructure around the bus route and strengthen the urban transportation coordination function in the metropolitan area. The project is called "MOVE-Maputo".
- DMTT and JICA Expert Team (JET) are discussing the progress with AMT and World Bank team.
- As one of the contents, they are considering revising AMT degree and Regulation of Transport in Automobile Vehicles (RTA). Since this revision will significantly affect bus registration and operation, DMTT and JET will watch the contents.
- Since last April, communication with MOVE-Maputo is less, therefore the progress

are not informed timely.

(6) World Bank: Maputo Urban Transformation Project (PTUM)

- PTUM aims to improve the urban environment in Maputo, including walkability improvements in informal settlements and road infrastructure improvements in the Katembe area.
- Regarding Output 3, DMTT and JET will communicate with them and collaborate if necessary.

(7) AFD: Sustainable Urban Mobility Planning for the Maputo Metropolitan Area (SUMP/PUMS)

- In November 2023, JET had a catch-up meeting with the team member of SUMP to understand their project status and considered.
- Data of transport survey conducted by SUMP was shared with METRAP-Maputo and the data is analysing for review of M/P.
- The meeting was held on 23rd May 2024 to receive their progress, which was the stage of Phase-3 as vision, strategy and scenario setting. It was announced that the Phase-4 as detailed scenario setting together with action plans will be finished by September or October 2024.

(8) KOICA: Project of Road Safety Improvements and Capacity Enhancement

- Technical Assistance for (1) M/P formulation for traffic safety, (2) introduction of traffic control system (in part), and (3) human resource development, with INATRO (Instituto Nacional de Transportes Terrestres) as the main counterpart.
- DMTT and JET discussed with KOICA project team and understood the activities.

(9) The Mobility and Transport Observatory of Mozambique (OMT) : Transitions to Sustainable Urban Mobility in Sub-Saharan Africa (T-SUM)

- T-Sum is an interdisciplinary and cross-sector collaborative project that aims to identify the conditions under which pathways to sustainable and inclusive transport and land use development.
- JET collaborated with them to conduct bus-related survey (to train surveyor, advice to survey way under Maputo context, etc.)

(10) Sustainable Mobility Week (SMW)

- DMTT organized the SMW during 11th till 24th June 2023 with the seminar, event and forum. In addition, the “Maputo Pedalando”, which promotes the Active Transport, especially bicycle modes in urban transport” was conducted by MCC on 19th August 2003. DMTT applicated the JICA’s involvements to supports Maputo Pedalando, and hope to discuss the further activities next year jointly involved by METRAP-Maputo Team.
- JET participates the preparation works for SMW 2024, especially introduced the

concept of “Children’s traffic park” in Japan. The small-scale activities related to traffic park will be happened in early August at primally school by DMTT initiatives.

(11) UN-Habitat (Dissemination and appropriation of Global Urban Monitoring Framework, the Urban Observatory and the DEGURBA methodology within the scope of the implementation of the Mozambique Urbanization Policy: PUEI)

- UN-habitat initiated new assistance for urban development under new law (Boletim 31/2024) of Urbanization. It is related to urban development, which is closely related to Output-3. JET will monitor their activities and communicate with UN-Habitat.

2 Delay of Work Schedule and/or Problems (if any)

2-1 Detail

- CDR data analysis for reviewing M/P2014 has not been available yet.
- SIMPUT-Maputo finalization is delayed against original schedule.

2-2 Cause

- As for CDR data analysis, followings are factors on its delay.
 - Time taken before signing of MOU: It was required that the several discussion and explanation to directors of INCM to understand the objective of MOU.
 - Response to additional request for servers: Due to the insufficient hardware within INCM to handle Mobipack for analysis CDR, additional financial resources was arranged by JICA’s budget. It also needs procurement, delivery and setting.
 - Virtual server licence (VMware): In the stage for data quality check, the license issue had been encountered by VMware company’s issue. It was more than one month has been taken for resuming.
- The original schedule of SIMPUT-Maputo preparation is planned to use CDR analysis for reviewing of projects of M/P 2014. After recognized the delays of CDR data, preparation of SIMPUT-Maputo is based on reviews by OD 2014 and interviews to municipalities. The CDR data will be utilized for development of CDR dashboard as monitoring and planning tool, after CDR data quality check and processing trials for dashboard.

2-3 Action to be taken

- Close communications between JET and INCM are made in order to accelerate each step for CDR analysis. As of preparation of this monitoring sheet, it is well coordinated and started to handle CDR data.
- JET has prepared SIMPUT-Maputo draft version and will start coordination with

municipality to get the feedback for chapter 5. In addition, in order to bluish up the contents of urban passenger railway program and projects, JET and DMTT will communicate with CFM closely.

2-4 Roles of Responsible Persons/Organization (JICA,DMTT)

- JICA and DMTT communicate with CFM.

3 Modification of the Project Implementation Plan

3-1 PO

- After consultation of current progress of activities, dashboard preparation (1-5) and coordination with stakeholder for SIMPUT-Maputo (1-6) will be extended as shown in PO. It will be targeted by September.

3-2 Other modifications on detailed implementation plan

- As shown in 1-3 and 1-4 in this monitoring sheet, the narrative summary of Output 2 and name of activity of 2-4, 2-5 and 2-7 has been modified and will be made a consensus in 3rd JCC.
- Objectively variable indicators and means of verifications are examined and finetuned to be realistic, feasible and measurable indicators as shown in 1-4.

4 Current Activities of Gov. of Mozambique to Secure Project Sustainability after its Completion

- As much as possible, not only DMTT officials but other officials related to METRAP-Maputo shall be joined to the Knowledge Co-Creation Program (KCCP) in Japan where JICA plans to three (3) different topics such as transport planning, TOD and public transport. The knowledge obtained will be shared in their organization and utilized in their activities.

II. Project Monitoring Sheet I & II *as Attached (shall be authorized in JCC#03)*

Monitoring Sheet Ver.4 (July 2024 - February 2025)

To Chief Representative of JICA Mozambique Office

Project Monitoring Sheet

Project Title: The Project for Improvement of Urban Public Transport System in Maputo

Version of the Sheet: Ver.4.0 (Term: July, 2024 – February, 2025)

Name: Mr. Fernando Uache

Title: Project Director, Councilor of CMM

Name: Mr. ASADA Yoshihisa

Title: Team Leader/Urban Public Transport Policy

Submission Date: 15th March 2025

I. Summary

1 Progress

1-1 Progress of Inputs

Mozambique side:

(1) Personnel

- Each member was selected as follows:

1) Project Director

Mr. Fernando Uache, VMTT, Councillor of CMM

2) Adviser to Project Director

Mr. António Matos, President of AMT

3) Project Manager (tentative to be approved by 4th JCC)

Ms. Helena Tito, Technician, Dept. Transport Operations (studies and projects), DMTT, CMM (replaced Ms. Loide Massangaie, Vice Director of DMTT due to her resignation in August 2024.)

4) JCC members

- Project Director : **Mr. Fernando Uache**, VMTT, Councillor of CMM
- Advisor to Project Director : **Mr. António Matos**, President of AMT
- Project Manager: **Ms. Helena Tito**, Technician, Dept. Transport Operations (studies and projects), DMTT, CMM
- Leader of TWG of Output1: **Ms. Helena Tito**, Technician, Dept. Transport Operations (studies and projects) DMTT, CMM
- Leader of TWG of Output2: **Mr. Lourenço Albino**, President of EMTPM, CMM
- Leader of TWG of Output3: **Ms. Helena Tito**, Technician, Dept. Transport Operations (studies and projects), DMTT, CMM

5) Working group (WG) members

WG	Department	Name/Position
WG-1: Review and Utilize Comprehensive Urban Transport Master Plan for the Greater Maputo (Master Plan 2014)	DMTT	Ms. Catarina Chicuava , Technician, Dept. Transport Operations (inspection and supervision)
		Ms. Márcia Muianga , Technician Dept. License. (IT)
	AMT	Mr. Felisberto Mondlane , Technician, Technical Department
	EMME	Mr. Atanásio Tembe , Administrator, Operations Dept.
	INCM	Mr. Afonso Mbata Madivadua Júnior , Chief of Department, Service Quality Department
	Matola	Mr. Ramiro Lopes Artur , Head of the Mobility Section, Mobility Section
	Marrancuene	Mr. José Bata Tinga , Technician, Department of Public Works, Infrastructure and Equipment
	Boane	Mr. Daniel Comeque , Head of the Department, Department of Communications, Transport and Transit
WG-2: Enhance capacity of public bus operators and regulators for bus operation and management	DMTT	Mr. Jossefa Isaias , Technician, Dept. Public Transport
	DMTT	Mr. Vasco Nhanquila , Technician, Dept. Public Transport
	AMT	Mr. Armando Bembele , Administrator, Technical Department
	EMTPM	Mr. Camilo Ibraimo , Director, Operation Department
	FEMATRO	Mr. Domingos Machava , Executive Director, Member of Board of Directors
	ATROMAP	Mr. Edino da Conceição Harilal , Financial Director, Member of the Board of Directors
WG-3: Enhance urban development controls and incentives toward the transit-oriented development (TOD)	DMTT	Ms. Helena Tito , Technician, Dept. Transport Operations (studies and projects)
	AMT	Mr. Anulávio José Máximo , Technician, Technical Division within Operations Department
	GADU	Ms. Teresa Chissequere , Director, Urban Development Office
	GADU	Mr. José Ricardo , Chief. Dept. Urban Development Project
	DMOTC	Ms. Neila Uamusse , Technician, Urban Planning Department
	DMI	Mr. Sérgio Sebastião , Chief, Dept. Road

(2) Facility and equipment

- Office space in EMTPM for the Experts to work was provided by EMTPM

(3) Expense for project activities

- N/A in this period

Japan side:

(1) Expert

- Total JICA experts (JET) input (Person-Month) has been allocated at 59.00 Person-Months according to the Contract. 41.1 Person-Months has been completed as of end of February 2025, which accounts for 69.7%.
- As for the national experts, the following staffs have been recruited so far:
 - 1) Support Personnel for Output 1 Transport Planning, **Ms. Conjo, Nicole Lord**
 - 2) Support Personnel for Output 2 Public Transport, **Mr. Hipolito Olin Sales Patricio as of February**
 - 3) Support Personnel for Output 3 Urban Planning, **Ms. Boane, Heike Melani da Silva**
 - 4) Support Personnel for overall project coordination, **Mr. Mavie, Abel Alberto**
 - 5) Secretary, **Mr. Munjovo, Edmilson Xavier**
 - 6) Secretary Assistant, **Ms. Banze, Anatórcia Melita Paulo**

(2) Counterpart training

- Training in Japan
 - Training was held during 10 to 20 June 2024 in Tokyo, Nagoya City and Niigata City with 8 trainees from DMTT (2 officials), DMIU (1 official), DMOTC (1 official), EMTPM (2 officials) and AMT (2 officials).
 - During this period, trainee had intensive discussions and exchanging with lecturers and had many experiences of different types of public transport services, such as buses (City cooperation bus, private bus operator, articulated buses and guideway buses), metro train (subway), urban railway, super express train (Shinkansen).
 - Details are summarized in the report submitted to DMTT.
 - Reporting session to wider audience of stakeholder of MMC and AMT will be held on 18th July 2024 chaired by Project Director, VMTT.
- Training in third country (tentatively Q2 2025)
 - Options for visits with potential contents of training were prepared. Cape town is the candidate of site for this program.
 - Started internal discussions on visit places between DMTT and JET. Initial arrangement for this program has been started.

(3) Facility and Equipment

- Equipment required for the project office such as furniture, monitor and printer machine were installed since the beginning of the Project.
- Traffic Survey equipment such as video cameras and laptop computers were procured. 12 Tablets (10 inches) are procured for use of interview survey and digital tool for lecture material and hotspots for training in Japan.
- Physical server for CDR data analysis was installed in INCM with function of remote

access to INCM server from Japan (virtual server licensed by VMware).

(4) Expense for project activities

- A sub-consultant firm for conducting the one of transport-related survey, such as Screen Line survey was signed, and an advance payment was made in July 2023. After conducting all of survey and checked its quality by JET, the final payment was released in March 2024. The methodology of survey, such as video shooting and counting various types of vehicles by recorded video was established and transferred to DMTT for further use. These data were used for review of MP 2014 to compare the one which was conducted in MP 2014.
- Bus related survey, such as interview survey for passenger and driver, and video counting survey at gate of bus terminals for analysis of enter/exit of buses were conducted by surveyors and coordinators hired by JET between July and October 2023. These results were used for terminal improvement pilot project to understand bus users' perception and terminal usage. After the technical transfer to this survey methodology to DMTT.
- GTFS data preparation started from April 2024 by the direct order to the Associação Mapeando meu Bairro (#MapeandoMeuBairro) which has a capability of geospatial data collection and the organization which had involved the AMT's geodata preparation of bus routes and stops in 2019. After submitting the report and checked its quality by JET in September 2024, the final payment was released in October 2024.
- The mapping and updating public transport data was started from July 2024 by #MapeandoMeuBairro, which collected and digitized geographical data, and updated and created new GIS data to accurately reflect EMTPM's current operations. The final payment was released in October 2024. For the sustainable maintenance of GTFS data, the training will be held in March.
- Drone video capturing work was procured in April 2024 for monitoring current buses and passengers' movements within Zimpeto bus terminal to compere the improvement for future interventions. The contract period has been extended by the end of July 2025.
- Functional updates to the developed CDR dashboard for in-depth analysis and hands-on training for counterparts will be ordered by LocationMind in Japan.

1-2 Progress of Activities

[Activities for Overall]

- The 3rd JCC was held on 5th September 2024.
- The SIMPUT-Maputo dissemination seminar was held on 12th September 2024, to

share SIMPUT-Maputo version 0.0 with the attendance with President of MCC.

- Output 3 dissemination seminar (Multi-modal transport hub development guideline and Transit mall design guide) will be held on 26th March 2025.
- The 4th JCC will be held on 27th March 2025.

[Activities for Output 1]

The Comprehensive Urban Transport Master Plan for the Greater Maputo (Master Plan 2014) is reviewed and utilized.

1.1 Review the implementation status of the Master Plan (2014)

- After investigating into the current implementation status and the reasons of the project which has not been implemented through interview with municipalities, the summary was made into SIMPUT-Maputo (Strategic implementation master plan for urban transport system in Maputo metropolitan area) as version 0.0 for further confirmation among stakeholders.

1.2 Review the socio-economic framework

- After collection of the socio-economic open data as well as census population data from INE and analyse on population and land use changes, summary was described in SIMPUT-Maputo.

1.3 Conduct the transport-related survey

- Screen line survey at 20 locations was completed by February 2024.
- Bus-related survey was conducted in collaboration with OMT (OBSERVATÓRIO DE MOBILIDADE E TRANSPORTES DE MOÇAMBIQUE) and the output data was analysed and summarized.
- Collected and analysed the household survey data provided by SUMP/PUMS.
- CDR (Call detailed record) data was saved into INCM virtual server after anonymized for the first step of CDR analysis as data quality check under MOU among CMM, JICA and INCM.

1.4 Develop the Dashboard as a planning and monitoring tool

- Developed prototype dashboards for visualizing the master plan projects and OD data developed in M/P2014.
- CDR dashboard for visualization was developed after improving of CDR data analyses for three months of calls, SMS, and USSD data from three companies of Mobile Network Operators (MNOs)
- Functional updates to the developed CDR dashboard for in-depth analysis and the development of an automated pipeline for CDR data processing are underway.
- The training related CDR will be coordinated and prepared.

1.5 Revise and identify the project candidates in the Master Plan

- Prepared SIMPUT-Maputo to describe the vision, strategies, conceptual images and potential projects for next 10 years.
- The dissemination seminar was held to show SIMPUT- Maputo on 12th September 2024 as well as establishment of coordination mechanism based on the proposed in Chapter 5.
- In January 2025, Explained SIMPUT-Maputo to DMIU and exchanging information on the planned road projects in CMM to incorporate them into it.

1.6 Coordinate the implementation of the identified projects by utilizing the planning and monitoring tool

- A dissemination seminar, including a workshop on SIMPUT-Maputo, was organized on 12th September. About 100 participants attended the seminar and exchanged opinions on a sustainable mechanism for monitoring and updating the project among municipalities and stakeholders.
- Training program will be held in March for technical transfer on how to use of dashboards (master plan, OD and CDR) after completion of development.
- Until February 2025, 3 times of the technical working group meeting (TWG) on Output 1 were held and separate meetings to TWG member in person at municipalities were arranged.

[2 Activities for Output 2]

The capacity of public bus operators and regulators for bus operation and management is enhanced.

2.1 Analyse the issues of bus service operations and management

- After investigated into the current bus operation of EMTPM and identified the challenges to be improved, several discussions were made among JICA experts and EMTPM officials.
- Reviewed on the annual business plan of EMTPM for 2024 and submitted the questionnaire for the plan to EMTPM via JET.
- A sub-working group on the Zimpeto bus terminal was established under the TWG for Output 2, and two meetings (both in-person and online) were held to discuss the current challenges and directions for interventions.

2.2 Conduct the training of EMTPM managers and administrative staff to develop and implement the business plans

- Conducted bus operation visualization trials in major bus routes with working records and sifts to improve its operation.
- Conducted the training on the operation of the passenger counting system, implementation of passenger counting for visualization.

- Analyzed data based on the presentation at the EMTPM annual meeting.
- Planned and proposed for revising the operation plans (blank time during the day) to increase revenues.
- Recommendation proposal was issued by JICA experts to improve the EMTPM operation.

2.3 Conduct the training of EMTPM staff, such as drivers and technical staff, to improve bus services and maintenance

- Conducted EMTPM bus periodic inspection implementation system using cloud data sharing software, and continuous monitoring by JICA experts. Its achievement for proper maintenance is underway based on the instruction.
- Conducted the training for the drivers and the maintenance technicians, focused on training on improving daily inspections.
- Three (3) recommendation proposals were issued by JICA experts to improve EMTPM maintenance works.
- Started a unified management system for bus operation and maintenance data.

2.4 Develop the key performance indicators (KPI) for the assessment of bus services and operations

- This activity was changed based on the current condition (AMT hasn't prepared the KPI) and approved in 3rd JCC.
- Proposed new KPIs for EMTPM operation and maintenance to monitor their business improvement after understood the actual situation regarding the EMTPM business environments.
- Conducted and monitored the cloud system for regular bus inspection management and inventory system for spare parts management. However, these systems has been suspended due to political demonstrations since December 2024, and already be resumed in February.

2.5 Develop the bus service and operation and maintenance guideline of EMTPM operators

- Monitored AMT's activities regarding the new regulation (decree) on buses and chapas.
- Started the reviewing the existing EMTPM bus maintenance procedure by JET and will revise the manuals based on the discussions between JET and EMTPM officials.
- Conducting the establishment of a unified management system for bus operation and maintenance data.

2.6 Conduct the pilot projects on bus service and operation by bus operators and regulators

- The title of this activity has been proposed to be changed in 3rd JCC meeting and it was approved this title change.
- Finalized the GTFS data for EMTPM buses. The co-working members, including EMTPM, DMTT, and AMT officials, collaborated with the procured NGO experts on GTFS processing, particularly GIS bus route digitizing, bus stop location identification, and timetable creation.
- Prepared transit map for publication on the EMTPM website and submission of GTFS to Google.
- Prepared the further GTFS training in March 2025.
- Improvements in bus terminal operation, especially pilot project in Zimpeto terminal, were discussed among sub-working group which are member of EMME, DMTT, EMTPM, AMT, and other transport associations.
- Conducted the onsite survey at Zimpeto bus terminal and interviewed potential bidding companies for the pilot construction in December.

2.7 Promote the bus operation and maintenance guideline of public and private operators in Maputo Metropolitan Area.

- The title of this activity has been proposed to be changed in 3rd JCC meeting and it was approved this title change.
- JET conducted an interview with Marracuene bus company about bus operation and maintenance and analyzed the comparison of fuel consumption.

By February 2025, three times of the technical working group meeting (TWG) and two sub-working group meetings on this Output 2 were held. Three recommendation letters for Operation and Maintenance and one recommendation for Operation and Business Management were issued by JET based on the results of the expert's findings.

[3 Activities for Output 3]

The urban development controls and incentives toward the transit-oriented development (TOD) are enhanced.

3.1 Review the urban development regulations and guidelines in facilitating transit-oriented development (TOD) together with private finance involvement

- After collected and analysed information about law/regulation and existing plan for urban planning, images of transit-oriented development were shared among TWG members through the meeting.

3.2 Develop the guideline on “multimodal transport hubs” to promote new urban cores.

- Shared among TWG members to confirm and refine its contents to meet contexts of Mozambique.

- Studied on the legal framework related to DUAT (land use rights).
- Finalized the MmTH development guideline in conjunction with feedback from TWG members.
- Considered measures for promoting and disseminating the guidelines, through the creation of a task force composed by TWG3 members.
- Planned the dissemination seminar in March 2025.

3.3 Develop the guideline on “transit mall” to promote smooth transfer of public and private buses, chapas, and trains together with urban development.

- Shared among TWG members to confirm and bluish up its contents to meet Mozambique contexts.
- Collected feedback on the Transit Mall Design Guide already distributed to TWG members.
- Finalized the MmTH development guideline in conjunction with feedback from TWG members.
- Considered measures for promoting and disseminating the guidelines.
- Planned the dissemination seminar in March.

1-3 Achievement of Output

Since each Objectively Verifiable Indicator (OVI) and its target values are not determined yet in the last monitoring period, consultation was made internally. It was found that some indicators and measurement methods were not insufficient to acquire and apply to realistic manners. In this monitoring sheet and JCC, both sides jointly propose its revisions of OVI and target values as follows. At the 3rd JCC meeting, it was confirmed that JCC members approved these revisions of OVIs for further monitoring of activities.

Output 1: The Comprehensive Urban Transport Master Plan for the Greater Maputo (Master Plan 2014) is reviewed and utilized.

Revised OVIs approved in 3rd JCC are as follows;

- OVI 1-1: SIMPUT-Maputo (Strategic Implementation Master Plan), as a result of reviewing the Master Plan 2014, is proposed. (confirmed by the SIMPUT-Maputo)
- OVI 1-2: Number of reviews on urban public transport plans using the Dashboard by each stakeholder at least once. (confirmed by Project monitoring sheet)

Current progress:

- OVI 1-1: Done.
- OVI 1-2: Training of MP Dashboard for reviewing and updating of projects will be conducted in March 2025 with relevant stakeholders.

Output 2: The capacity of public bus operators and regulators for bus operation and management is enhanced.

Revised OVIs approved in 3rd JCC are as follows;

- OVI 2-1: More than 10 recommendations on improving EMTPM's bus operations are proposed, and more than half are implemented. (confirmed by Annual report of EMTPM or annual review by the Project)
- OVI 2-2: The KPIs of bus services and operations of EMTPM are set and monitored. (confirmed by Questionnaire survey to seminar participants)
- OVI 2-3: The roles and responsibilities of CMM (DMTT) are analysed and the action plan for improvement is developed. (confirmed by Action plan on DMTT's activities)
- OVI 2-4: The activities to improve public transport services are analysed and verified through pilot projects (bus terminal operation improvement and GTFS development) and a further action plan is developed. (confirmed by Action plan on CMM's activities)
- OVI 2-5: The guideline on bus operation and maintenance is developed. (confirmed by Guideline on bus operation and maintenance)

Narrative summary of Output 2: In the 3rd JCC, revision of the title of Output 2 was approved for concrete sentence of narrative description as, “The capacity of EMTPM as public bus operators and regulators for bus operation and management was enhanced”.

Current progress:

- OVI 2-1: 13 recommendations on improving EMTPM's bus operations (O&M and Operation and Business) are proposed.
- OVI 2-2: The KPIs of bus services and operations of EMTPM are proposed by JET and discussing the applicability.
- OVI 2-3: The roles and responsibilities of CMM (DMTT) is analysing and start discussing the action plan for improvement under progress.
- OVI 2-4: The activities to improve public transport services are analysed and verified through pilot projects (bus terminal operation improvement and GTFS development) is underway.
- OVI 2-5: The existing EMTPM guideline on bus operation and maintenance is currently under review.

Output 3: The urban development controls and incentives toward the transit-oriented development (TOD) are enhanced.

Revised OVIs approved in 3rd JCC are as follows;

- OVI 3-1: The guideline on multimodal transport hubs and Transit mall development guide are being finalized. (confirmed by Development guidelines on intermodal transport hubs and Transit mall development guide)
- OVI 3-2: Seminars for TOD, with the guidelines on intermodal transport hubs and transit mall, are convened once. (confirmed by Project monitoring)
- OVI 3-3: A taskforce for enhancement of TOD is established. (confirmed by Project monitoring)

Current progress:

- OVI 3-1: Development guideline on intermodal transport hubs and Transit mall development guide are formulated.
- OVI 3-2: Seminars for TOD, with the guidelines on intermodal transport hubs and transit mall, are being planned in March.
- OVI 3-3: A taskforce for enhancement of TOD will be discussed in the TWG for output3.

1-4 Achievement of the Project Purpose

Revised OVIs approved in 3rd JCC are as follows;

- OVI 1: The number of officers who learned fundamental theories about urban transportation planning and operation is increased to five (5) persons. CMM promotes and disseminates the SIMPUT-Maputo with stakeholders of urban transport agencies and other municipalities.
- OVI 2: Twelve key performance indicators (KPIs) on the EMTPM bus services and operations are improved.
- OVI 3: At least one or more bus operators in Maputo Metropolitan Area applies one or more KPIs set by METRAP-Maputo.

Current progress:

- OVI 1: The dissemination seminar on the SIMPUT-Maputo with stakeholders of urban transport agencies and other municipalities was organized by CMM and JET.
- OVI 2: The key performance indicators (KPIs) on the EMTPM bus services will be monitored, and reported at 5th JCC.
- OVI 3: JET proposed KPIs for bus operation and maintenance was proposed to EMTPM. The KPIs will be discussed with EMTPM and after that they will be disseminated to other bus operators in Maputo Metropolitan Area.

1-5 Changes of Risks and Actions for Mitigation

- Due to the presidential election on October 2024, JICA instructed not to enter any JICA experts in Maputo until February 2025 due to the security and safety concerns. If the situation worse, it may affect the whole schedule of METRAP-Maputo activities.

1-6 Progress of Actions undertaken by JICA

- N/A

1-7 Progress of Actions undertaken by DMTT

- Close communication was made among stakeholders, such as municipalities, AMT and other relevant organizations for finalization and bush-up of SIMPUT-Maputo, which was disseminated at the Seminar on 12th September 2024.
- Coordinated and arranged with CFM passenger services department for acquiring their plans and current issues for SIMPUT-Maputo preparation.

1-8 Progress of Environmental and Social Considerations (if applicable)

- N/A (This project is categorized as “C”)

1-9 Progress of Considerations on Gender/Peace Building/Poverty Reduction, disability, disease infection, social system, human wellbeing, human right, and gender equality (if applicable)

- To understand the current condition, questionnaire for gender (experience with sexual harassment on chapas) was asked in bus passengers survey and shared the result with TWG2 members, and DMTT is using these results to improve its campaigns against harassment on public transport.
- JET and national expert joined the discussion on gender related issue on the meeting of MOVE-Maputo.

1-10 Other remarkable/considerable issues related/affect to the project (such as other JICA's projects, activities of counterparts, other donors, private sectors, NGOs etc.)

(1) Overall of the Project, Administration

- JET explained new deputy director of DMTT, Ms. Ruchia Salvador about summary METRAP-Maputo project and current progress on 14th February.

(2) CDR data

- Currently, 3 months CDR data with 3 operators were saved and quality check process has been analysed. For the continuous data acquiring, the development of automating pipeline is needed. Currently JET will start the negotiation to INCM.

(3) M/P 2014/2023 project list

- After receiving feedback from municipalities and AMT, SIMPUT-Maputo version 0 was finalized and was disseminated in Seminar on 12th September, after that followed up absent in the seminar.

(4) World Bank : Maputo Metropolitan Area Urban Mobility Project (PMUAMM) , MOVE-Maputo (BRT project)

- PMUAMM aims to develop the BRT (Baixa- Missão Roque) and other infrastructure around the bus route and strengthen the urban transportation coordination function in the metropolitan area. The project is called “MOVE-Maputo”.
- DMTT and JICA Expert Team (JET) are discussing the progress with AMT and World Bank team.
- As one of the contents, they are considering revising AMT degree and Regulation of Transport in Automobile Vehicles (RTA). Since this revision will significantly affect bus registration and operation, DMTT and JET will watch the contents.
- Since last April 2024, communication with MOVE-Maputo is less, therefore the progress are not informed timely due to the political demonstration.

(5) World Bank: Maputo Urban Transformation Project (PTUM)

- PTUM aims to improve the urban environment in Maputo, including walkability improvements in informal settlements and road infrastructure improvements in the Katembe area.
- Regarding Output 3, DMTT and JET will communicate with them and collaborate if necessary.

(6) AFD: Sustainable Urban Mobility Planning for the Maputo Metropolitan Area (SUMP/PUMS)

- In November 2023, JET had a catch-up meeting with the team member of SUMP to understand their project status and considered.
- Data of transport survey conducted by SUMP was shared with METRAP-Maputo and the data is analysing for review of M/P.
- The meeting was held on 23rd May 2024 to receive their progress, which was the stage of Phase-3 as vision, strategy and scenario setting. It was announced that the Phase-4 as detailed scenario setting together with action plans was supposed to be finished by September or October 2024 but not yet completed.

(7) KOICA: Project of Road Safety Improvements and Capacity Enhancement

- Technical Assistance for (1) M/P formulation for traffic safety, (2) introduction of traffic control system (in part), and (3) human resource development, with INATRO (Instituto Nacional de Transportes Terrestres) as the main counterpart.
 - DMTT and JET discussed with KOICA project team and understood the activities.
- (8) The Mobility and Transport Observatory of Mozambique (OMT): Transitions to Sustainable Urban Mobility in Sub-Saharan Africa (T-SUM)
- T-Sum is an interdisciplinary and cross-sector collaborative project that aims to identify the conditions under which pathways to sustainable and inclusive transport and land use development.
 - JET collaborated with them to conduct bus-related survey (to train surveyor, advice to survey way under Maputo context, etc.)
- (9) Sustainable Mobility Week (SMW)
- DMTT organized the SMW during 11th till 24th June 2023 with the seminar, event and forum. In addition, the “Maputo Pedalando”, which promotes the Active Transport, especially bicycle modes in urban transport” was conducted by MCC on 19th August 2003. DMTT applicated the JICA’s involvements to supports Maputo Pedalando, and hope to discuss the further activities next year jointly involved by METRAP-Maputo Team.
 - JET participates in SMW 2024, especially introduced the concept of “Children’s traffic park” in Japan. The small-scale activities related to traffic park was conducted in at primally school by DMTT initiatives.
- (10) UN-Habitat (Dissemination and appropriation of Global Urban Monitoring Framework, the Urban Observatory and the DEGURBA methodology within the scope of the implementation of the Mozambique Urbanization Policy: PUEI)
- UN-habitat initiated new assistance for urban development under new law (Boletim 31/2024) of Urbanization. It is related to urban development, which is closely related to Output-3. JET will monitor their activities and communicate with UN-Habitat.

2 Delay of Work Schedule and/or Problems (if any)

2-1 Detail (Same as monitoring sheet No.3)

- CDR data analysis for reviewing M/P2014 has not been available yet.
- SIMPUT-Maputo finalization is delayed against original schedule.
- After submission of SIMPUT-Maputo, there is no delay.

2-2 Cause

- As for CDR data analysis, followings are factors on its delay.
 - Time taken before signing of MOU: It was required that the several

discussion and explanation to directors of INCM to understand the objective of MOU.

- Response to additional request for servers: Due to the insufficient hardware within INCM to handle Mobipack for analysis CDR, additional financial resources was arranged by JICA's budget. It also needs procurement, delivery and setting.
- Virtual server licence (VMware): In the stage for data quality check, the license issue had been encountered by VMware company's issue. It was more than one month has been taken for resuming.
- The original schedule of SIMPUT-Maputo preparation is planned to use CDR analysis for reviewing of projects of M/P 2014. After recognized the delays of CDR data, preparation of SIMPUT-Maputo is based on reviews by OD 2014 and interviews to municipalities. The CDR data will be utilized for development of CDR dashboard as monitoring and planning tool, after CDR data quality check and processing trials for dashboard.

2-3 Action to be taken

- Close communications between JET and INCM are made in order to accelerate each step for CDR analysis. As of preparation of this monitoring sheet, it is well coordinated and started to handle CDR data.
- JET has prepared SIMPUT-Maputo draft version and start coordination with municipality to get the feedback for chapter 5. In addition, in order to blush up the contents of urban passenger railway program and projects, JET and DMTT will communicate with CFM closely.

2-4 Roles of Responsible Persons/Organization (JICA,DMTT)

- JICA and DMTT communicate with CFM.

3 Modification of the Project Implementation Plan

3-1 PO

- The international experts were not to come to Maputo, but since close communication with counterparts by national experts with remote instruction, there is no delay.

3-2 Other modifications on detailed implementation plan

- As shown in 1-3 and 1-4 in this monitoring sheet, the narrative summary of Output 2 and name of activity of 2-4, 2-5 and 2-7 has been modified and were made a consensus in 3rd JCC.
- Objectively variable indicators and means of verifications were revised after

approved in 3rd JCC.

4 Current Activities of Gov. of Mozambique to Secure Project Sustainability after its Completion

- As much as possible, not only DMTT officials but other officials related to METRAP-Maputo shall be joined to the Knowledge Co-Creation Program (KCCP) in Japan where JICA plans to three (3) different topics such as transport planning, TOD and public transport. The knowledge obtained will be shared in their organization and utilized in their activities.
- DMTT technicians who have been part of the KCCP in Japan in recent years have been making internal presentations to find solutions learned in Japan, group them together and adapt them to the Mozambique`s reality, It should be noted that the training actions played a fundamental role in the success of this project, and there is a need to continue these initiatives.

II. Project Monitoring Sheet I & II *as Attached (shall be authorized in JCC#04)*

ANNEX3 : List of Equipment in the Last Monthly Report

貸与物品リスト

業務名称 (Name of Project) : モザンビーク国マプト市都市公共交通改善支援プロジェクト
対象国 (Country) : モザンビーク

(2026年6月)
(As of June, 2026)

[illegible]

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注6 「事業終了後の取扱ひ」欄は、「実施機関」に譲与/「事務所・支所」に返還の選択肢で事業終了後の取扱ひを記載するとともに、譲与/返還手続きの完了日付を記載してください。これらの取扱ひは、事業終了時点で発生するため、それまでは「事業終了後の取扱ひ」に係る想定として、「実施機関」に譲与/「事務所・支所」に返還で記載してください。

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