



Mebidangro Sustainable
Urban Mobility Plan

MobiliseDays

22-23 October 2020

Medan, North Sumatra, Indonesia

Implemented by



In partnership with



More information

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Authors: Egis Rail

Contributors:

- Alexandre AZEVEDO DA CRUZ - Team Leader
- Ferdinand Parulian MARTERER - Local Coordinator
- Sarah DARMAWAN - Financial & Institutional Expert
- Benoit GUILLOT - Modeler
- Martina Cecilia ADRIANA - Urban Transport Planning Expert
- Rémy LAGACHE - Environment Expert
- Kendra TANDEGA - Senior Transport & Environment Engineer
- Rizki HERDIAN - Data Manager
- Rizqa HIDAYANI - Urban Planner Expert

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Abbreviations and symbols

The table below list abbreviations and symbols that are used in the context of the SUMP Mebidangro, their language of origin (Indonesian/English) and their translation. In some cases, the Indonesian version is equivalent to the English one by familiarity.

Abbreviation	Language	Definition	Translation (English/Indonesian)
APBD	Indonesian	Anggaran Pendapatan dan Belanja Daerah	Regional Revenue and Expenditure Budget
APBN	Indonesian	Anggaran Pendapatan dan Belanja Negara	State budget
APM	English	Automated People Mover	
BAPPEDA	Indonesian	Badan Perencanaan dan Pengembangan Daerah	Planning and Development Regional Entity
BAPPENAS	Indonesian	Badan Perencanaan dan Pengembangan Nasional	Planning and Development Ministry
BRT	English	Bus Rapid Transit	
CAPEX	English	Capital Expenditure	Biaya Investasi
DISHUB	Indonesian	Dinas Perhubungan	Transportation Agency
EV	English	Electric Vehicles	Kendaraan Listrik
GHG	English	Greenhouse Gases	Gas Rumah Kaca
GRK	Indonesian	Gas Rumah Kaca	Greenhouse Gases
h	English	Hour	Jam
HSL	English	High-Speed Line	Jalur Kereta Api Cepat
HSR	English	High-Speed Rail	Kereta Api Cepat
KADIS	Indonesian	Kepala Dinas	Head of Agency
Kemenhub	Indonesian	Kementerian Perhubungan	Ministry of Transportation
Kemenhub	Indonesian	Kementerian Perhubungan	Ministry of Transportation
Km	English	Kilometer	Kilometer
KNO	Indonesian	Kualanamu (Airport)	Kualanamu Airport
KPBU	Indonesian	Kerjasama Pemerintah Dengan Badan Usaha	Public-Private Partnership
LRT	English	Light Rail Transit	
Mebidang	Indonesian	Medan – Binjai – Deli Serdang	
Mebidangro	Indonesian	Medan – Binjai – Deli Serdang – Karo	
MOT	English	Ministry of Transportation	Kementerian Perhubungan
MRT	English	Mass Rapid Transit	
Munibond	English	Municipal Bond	Pinjaman Kota

Abbreviation	Language	Definition	Translation (English/Indonesian)
NMT	English	Non-Motorized Transport	
NUMP	English	National Urban Mobility Plan	Perencanaan Mobilitas Perkotaan Nasional
OPEX	English	Operational Expenditure	Biaya Operasional
Pax	English	Passenger	Penumpang
Pemda	Indonesian	Pemerintah Daerah	Regional Government
Pemkot	Indonesian	Pemerintah Kota	Municipal Government
Pemprov	Indonesian	Pemerintah Provinsi	Provincial Government
Perda	Indonesian	Peraturan Daerah	Regional Decree
Pergub	Indonesian	Peraturan Gubernur	Governor Decree
Perpres	Indonesian	Peraturan Presiden	Presidential Decree
PPP	English	Public-Private Partnership	Kerjasama Pemerintah Dengan Badan Usaha
PT	English	Public Transport	Angkutan Umum
PU	Indonesian	Pekerjaan Umum	Public Works
PUPR	Indonesian	Pekerjaan Umum dan Pekerjaan Rakyat	Public Works and Community Activities
PV	English	Private Vehicle	Kendaraan Pribadi
RPJMD	Indonesian	Rencana Pembangunan Jangka Menengah Daerah	Regional Medium-Term Development Planning
RPJMN	Indonesian	Rencana Pembangunan Jangka Menengah Nasional	National Medium-Term Development Planning
SOP	English	Standard Operational Procedure	
SU	Indonesian	Sumatera Utara	North Sumatra
SUMP	English	Sustainable Urban Mobility Plan	Perencanaan Mobilitas Perkotaan Berkelanjutan
SUMUT	Indonesian	Sumatera Utara	North Sumatra
TOD	English	Transit Oriented Development	
UMP	English	Urban Mobility Plan	Perencanaan Mobilitas Perkotaan
vkt	English	Vehicle kilometer traveled	Kendaraan kilometer terjal

1. Objective

This report gathers takeaways and early analyses of the preparation of the Sustainable Urban Mobility Plan for Medan Metropolitan Area (Mebidangro) in Indonesia, especially from the MobiliseDays event that was conducted with local stakeholders in late October 2020.

Under the MobiliseYourCity initiative, the SUMP aims at preparing guidelines and recommendations for the development and implementation of sustainable mobility measures in Mebidangro. This SUMP process and elaboration is led by the North Sumatra province government, with the financial and technical support of AFD, and assisted by the consultant Egis.

The MobiliseDays event is a full part of the SUMP preparation, allowing the consultation of stakeholders and providing them the opportunity to express concern on mobility issues in the region. This also gives the opportunity for the development partner and the consultant to provide input and early roadmap and principles of the completion of the SUMP, in order to increase stakeholders awareness and ownership of the plan, which is necessary for its further implementation.

For Mebidangro SUMP, these MobiliseDays took place with the high-level kick-off of the project, which saw the participation of the central government to support the provincial initiative. The cities and regencies of Mebidangro also actively participated, in a comprehensive manner.

The key elements of the mobility context, success factors, consultation, and suggestions of way forward for the SUMP preparation and further – that were presented to and discussed with the stakeholders, are presented in this document.

2. Necessity for mobility planning in Mebidangro

2.1. Brief state of mobility in Indonesia

■ Fast urbanization and direct consequences on mobility

Indonesia rapid urban growth in economic centers has rapidly put cities public infrastructure under strong development in the last decades. Urban planning and transport planning have not always been the foundations of developments – and combined with the growth of the middle-class, urban facilities are under peak pressure. Today, we can witness important socio-economic consequences of poor urban mobility in the six main Indonesian cities, including the Medan area.

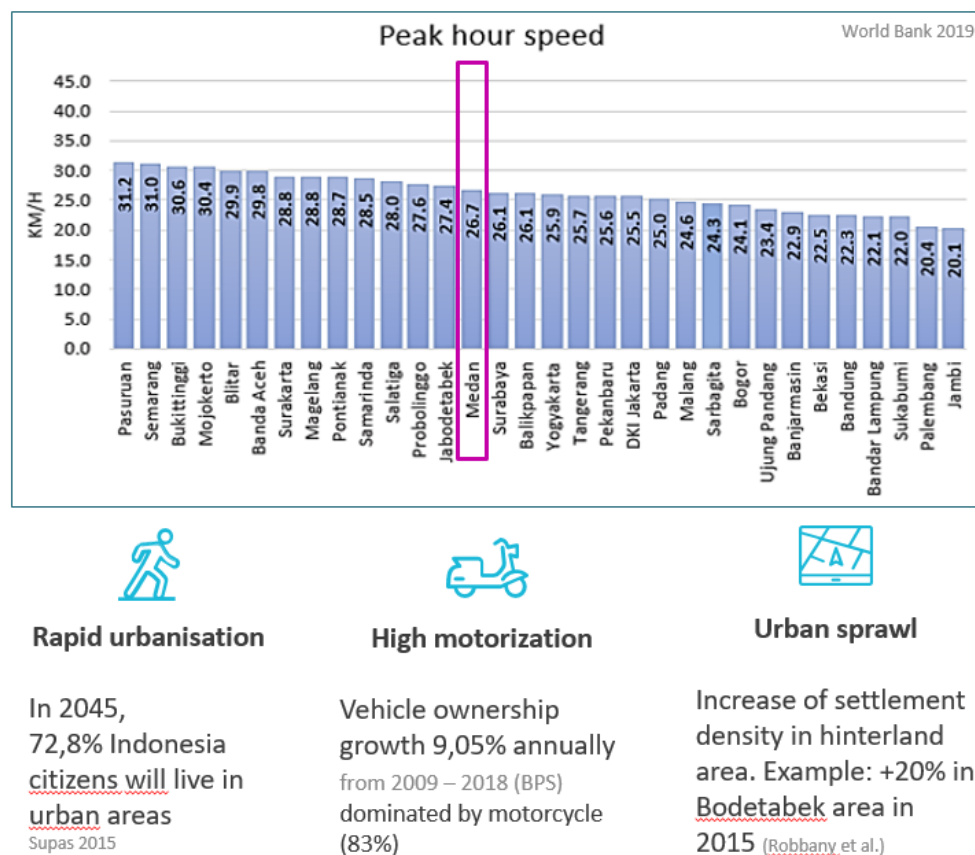


Figure 1. Low traffic speed in Indonesian cities due to vehicle density. (Egis adaptation from various sources)

For the main six cities of Jabodetabek (Jakarta wider area), Bandung, Surabaya, Semarang, Medan and Makassar, the World Bank has evaluated between 2016 and 2019 the following consequences :

- 2,2 million liters of excess fuel used per day;
- 6 million person hours lost per day;
- USD 5,1 billion economic loss per year in excess fuel and time in 6 metropolitan areas;
- 1% urbanization only resulted in 4% GDP growth far below India (13%) and Thailand (7%).

While projects and efforts have been put to develop public transport in Indonesia, the situation remains in need for development of mobility networks. The adhesion of the population to public transportation must also be increased in order to observe an effective shift of behaviors.

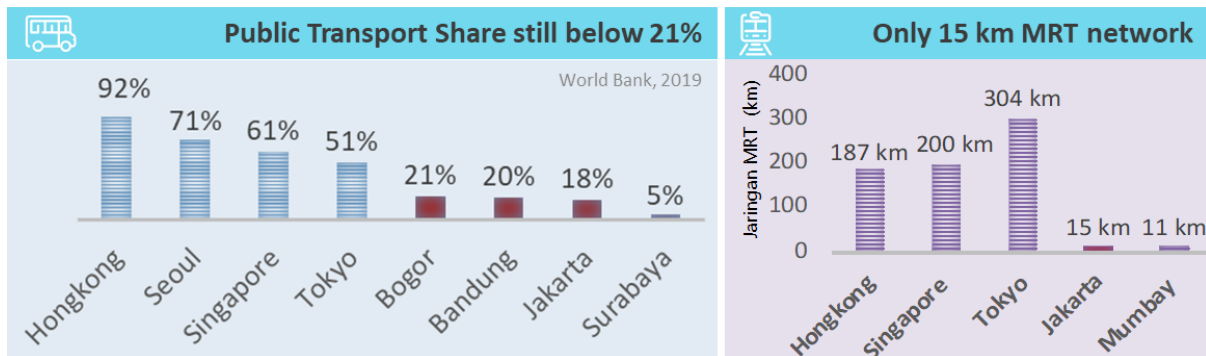


Figure 2. The lack of mass urban transport infrastructure and adhesion in main cities of Indonesia. (World Bank)

■ Challenges in institutional and fiscal capacity in metropolitan areas

Cities have little support to face the financing challenge and they are not yet ready. Besides the capital, no other Indonesian city is able to develop mass rapid transit infrastructure by only relying on regional funds (APBD). This calls for alternative ways of financing projects, but other obstacles remain :

- Inexistent metropolitan transportation authority that manages public transportation as a whole in an integrated manner not just based on administrative boundaries;
- Insufficient fiscal capacity to implement mass transit systems;
- Inadequate technical expertise to plan, design, implement and operate public transport systems;
- Lack of policies or mobility plan in Indonesian cities;
- Lack of funding schemes support from central government to tackle the limited fiscal capacity;
- Lack of integration between transport and spatial planning.

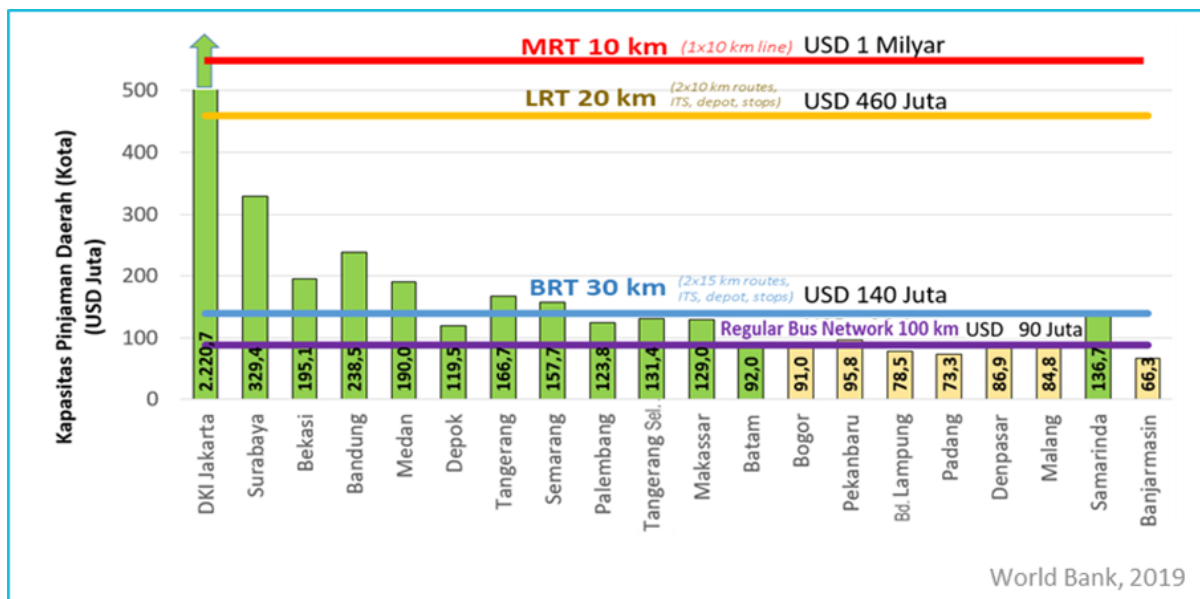


Figure 3. Lack of capacity for Indonesian cities and regions to finance mass transit. (World Bank)

2.2. Growing pressure on transport infrastructure in Mebidangro

■ Strong demographics of Mebidangro

According to the Statistics National Entity (BPS), North Sumatera province is the fourth most populated province of Indonesia, with 14,7 million inhabitants in 2020 and a 4% forecasted growth for each of the next five years.

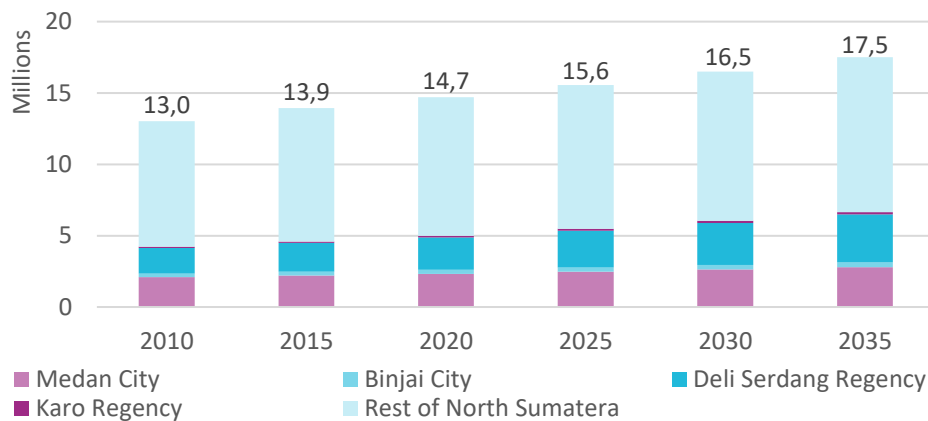


Figure 4. North Sumatera Province Medium-Term Population Growth (BPS)

In parallel, traditional public transportation (minibuses and buses) saw their ridership decrease sharply over the years. Facilitated financial access to private vehicles (2 and 4-wheels) and the booming middle-class put a growing pressure on the need for public transit infrastructure, as to allow the region for sustainable economic opportunities and pursue its development. The graph below shows occupancy of main minibuses routes of Medan city.

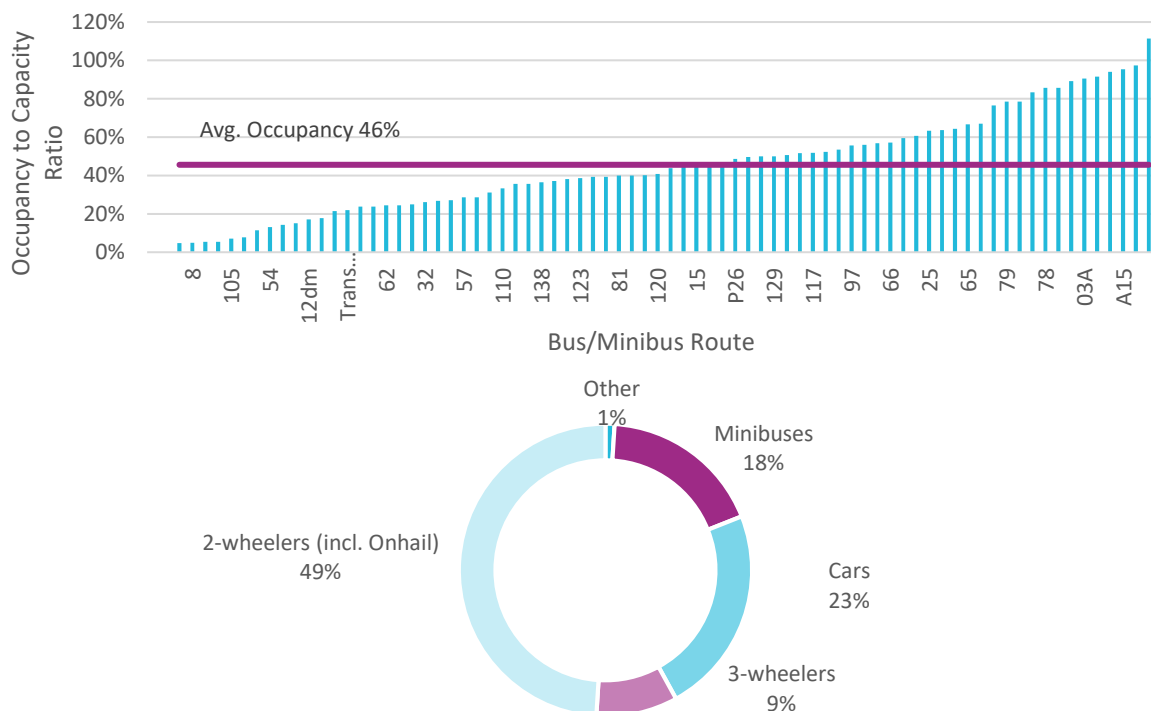


Figure 5. Minibus and bus occupancy in Medan area in 2018, and modal share. (Egis adaptation from ITDP)

■ Mobility planning background in Mebidangro

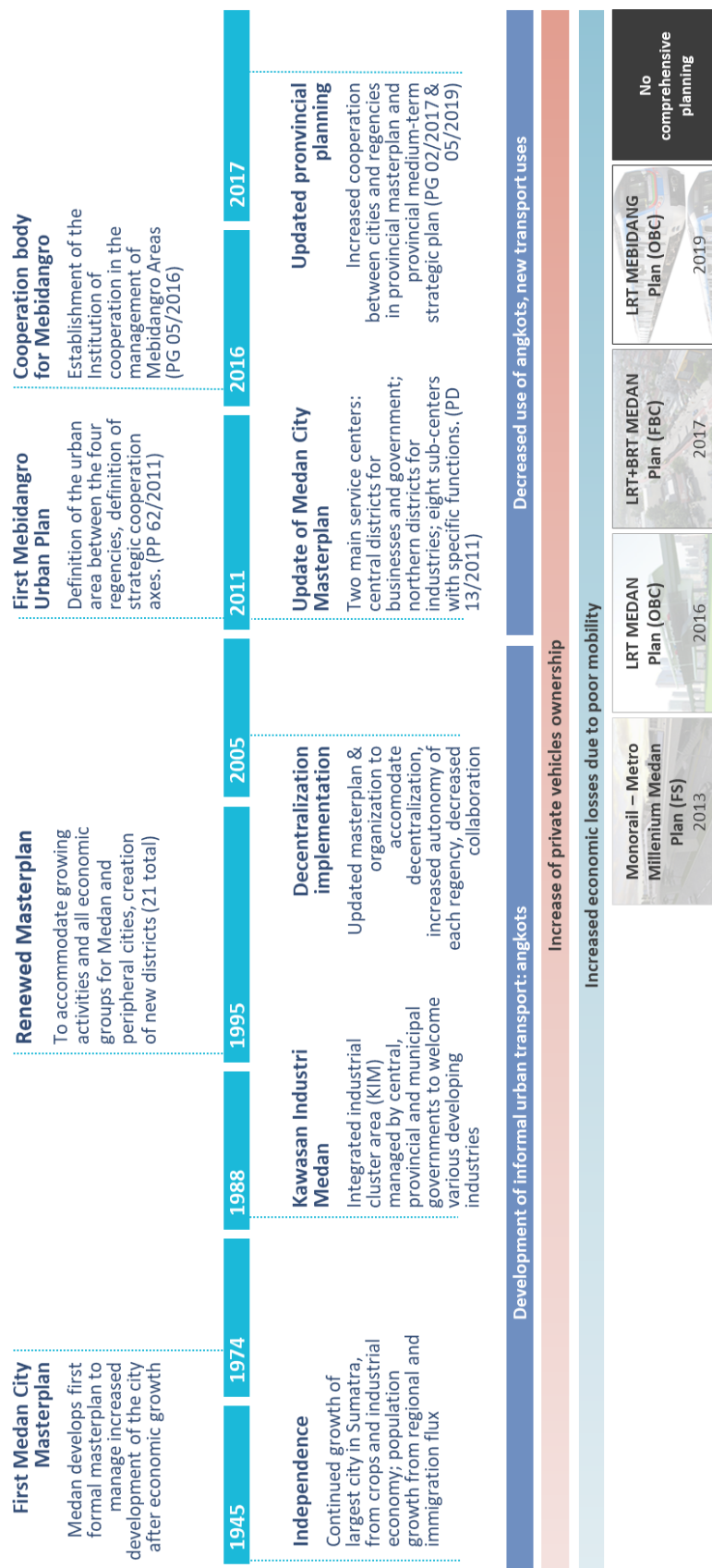


Figure 6. Transport planning and frameworks evolution through the years in Mebidangro. (Egis)

As the figure above shows, mobility planning in Mebidangro has been reflected through various Medan-city wide masterplan, that have been shown incomprehensive in terms of planning (adequate visions and conclusions) and scope (limited by administrative boundaries on Medan city).

The lack of strength of the masterplans established for Medan are witnessed in the repetitive failures to reach conclusive mass transit studies and implementation. First undertaken by the Medan city itself, early transit line studies have then been taken to central government level as lines grew longer and beyond Medan city administrative borders.

This did not follow the prescribed decentralization in planning but have been judged necessary for the central government to provide assistance for the development of the projects. In parallel, the framework for collaboration on projects developments between central and provincial administrations has been set out in the different related central regulations (Strategic National Plans, BAPPENAS frameworks).

As the need for mobility infrastructure grew, the necessity to involve all stakeholders in the planning process is inevitable and concluded in the province led initiative for the comprehensive Sustainable Urban Mobility Plan at Mebidangro level.

■ Political alignment for mobility development in Mebidangro and emergence of the SUMP

The province and regency agencies involved (Medan, Binjai, Deli Serdang and Karo) have recognized the challenges of sustainable urban transport. Its development has become a top priority at provincial and even national level: the implementation of a mass transit line is a Project of National Priority by the Strategic Development Plan 2020-24 (RPJMN, i.e. Presidential Regulation 18/2020).

This alignment was necessary as the bureaucratic and administrative aspects of the past initiatives for project development have been the most important obstacles for their implementation. The establishment of a SUMP is a first step towards understanding mobility patterns and priority measures; inclusive of all transport actors of the area.

3. MobiliseYourCity initiative in Mebidangro

3.1. Definition of the initiative

MobiliseYourCity is a multi-partnership initiative that brings together AFD, CEREMA, ADEME, GIZ and CODATU, with the financial support of the French, German and European governments and the European Commission. This program aims, by 2020, to support 100 cities in 20 developing or transition countries in their approach to planning sustainable urban mobility. The initiative was launched in December 2015 at COP21.

It is available at the local level with cities and at the national level by supporting the authorities in charge of urban mobility. The objective of these policies is to improve urban mobility in the cities - in particular to reduce congestion, air pollution, road mortality and CO₂ emissions linked to urban transport - to make them more pleasant to use, living, more inclusive and economically competitive.

The MobiliseYourCity initiative is therefore a catalyst for action which should enable cities to improve urban mobility while offering low-carbon solutions. The approach favored by the initiative is to adjust the support offered to beneficiaries according to their state of progress and their level of maturity.



3.2. Participation of North Sumatra province

The Province of North Sumatra, in coordination with the four cities and regencies involved, applied to MobiliseYourCity initiative in February 2020 and expressed an interest in the implementation of a Sustainable Urban Mobility Plan. Steering Committee of MobiliseYourCity approved the application in March 2020. AFD then proposed to North Sumatra Province to fund the elaboration of a SUMP in Mebidangro, as a first concrete measure undertaken in Indonesia under the framework of MobiliseYourCity.

This study is funded by a grant made available by AFD to support MobiliseYourCity programs in Asia. The SUMP should include the development of first urban mass transit corridors, which is a priority for both local and national governments.

It will also allow to consolidate the existing public transport network and to improve intermodality. As part of its efforts to improve air quality, the city wants to encourage the development of non-motorized transport and to restrict the growing number of private vehicles. To make these changes sustainable, North Sumatra province is seeking to involve all stakeholders and to improve the coordination between these actors.



4. Identification of success factors to develop mobility in Mebidangro

4.1. North Sumatra province leading the development of mobility

■ Ongoing decentralization

■ Main dynamics

Decentralization in Indonesia means the transfer of responsibilities for developing transportation infrastructure, and is rarely accompanied by sufficient financial support. Therefore, it takes creativity and a new approach from regional governments, to find financial instruments to finance public transportation. The central government remains a key player acting directly or through financial institutions. It channels funds into regional government budgets in various ways, such as the allocation of global grants, equipment subsidies, distribution of proceeds from part or all of certain taxes such as property transaction taxes. Central entities also directly participate in funding specific projects in partnership with other public players, or cities and regions.

Funding can be done on a case-by-case basis or it can be part of a special program aimed at developing urban transport modes, with the flow of funding being managed by the ministry of finance or financial institutions. In Indonesia, the choice is made in the Ministry of Finance based on projects submitted by the Ministry of Transportation which has pre-selected projects presented by cities, and gets recommendations by BAPPENAS. It also plays a role in direct funding of projects as well as the introduction of new funding sources, which require changes to regulations or the passing of new laws; and in obtaining loans, especially from international funding agencies because guaranteeing their loans is an important requirement as well as managing foreign debt.

With the metropolitan city development plan, the role of regional level institutions has expanded, especially in terms of coordination with the central level and local governments. The following is a list of local institutions that play a role in the collective regional transportation system

Key Regional Institutions

- Transport Agency
- Public Works Agency
- Spatial Agency
- Investment and Promotion Agency (BPMP)
- Regional Development Planning Agency
- Regional Financial Management
- Regional Environment Management Agency
- Communications and Information Technology Agency
- Traffic Police
- Civil Service Police
- National Transportation Safety Committee



Direct responsibility in developing transport

- Mobility implies local management
- Towns responsible for organizing public transport
- The creation of a transit authority ensures greater coherency since the contributions of all players can be coordinated
- The territory concerned by the movement of people and goods
- The transit authority to fulfil its role completely
- With regard to funding

Figure 7. The growing role of regional authorities. (Egis)

The decentralization has been associated with several decrees at central government, and translated by provincial decrees. This allows for the adequate and required reinforcement of provincial and municipal authorities over the development of public infrastructure as depicted below.

■ Efforts need to be formalized to obtain central government support

To benefit from government funding support, BAPPENAS currently elaborates a program to regulate funding to regions, with a number of criteria. The main requirements are the availability of an integrated urban mobility plan and the existence of urban transportation authority institution that goes beyond administrative boundaries. Furthermore, the Direction closing the RPJMN recommends the strengthening of ties between cities/regencies and provincial governments to develop Mebidangro.

As a key entity in unlocking central government financial and technical support in the development of mobility in Mebidangro, BAPPENAS has shown its support to the province and governor for the SUMP during the high-level kick-off. This carried several implications for the development of the project:

- The responsibility of the province in establishing its transportation development plan;
- The reinforcement of the province leadership in the planning and implementation of public transportation infrastructure in Mebidangro, including the authority on large scale projects development over cities and regencies;
- The confirmation and validation of the criteria that are required by the central government to unlock its support to the regions;
- The adequate decentralization executed following related presidential decrees;
- The commitment of the central government to provide framework, monitoring and support of the development of the plan, including its validation and follow-up when it is achieved, and the identification of BAPPENAS as the entity responsible for this action within the central government.

The stakes thus emphasized for a deep collaboration between the province and central government, as well as between the province and cities and regencies of Mebidangro, in order to effectively deliver comprehensive planning and implementation of public transportation and mobility.

■ Pursuit of the legal foundations for Mebidangro development

■ Presidential decree 62/2011: Spatial Planning of the Urban Area of Mebidangro

The presidential decree No. 62 of 2011 established the formation of the wider urban area of Medan, Binjai, Deli Serdang and Karo as the stepping stone for further legal developments on the area. In line with the decentralization movement, it states in which fields must the provincial and municipal governments cooperate: mainly on the development of public service and infrastructure. Regarding mobility, it already provides basic principles of cooperation between the administrations, but does not yet clearly define the role of local entities nor province.

■ Provincial decree 05/2016: Mebidangro urban management

The provincial decree No. 5 of 2016 by the governor of North Sumatera lays ground for an inter-city cooperative management agency for Mebidangro urban area (Medan, Binjai, Deli Serdang, Karo) in the fields of transportation, water supply, drinking water, sanitation and flood control. In this decree, the steering and executive committees are defined, and it relays the presidential one by giving a framework for further field-specific instructions.

The decree is one of the founding stone for cooperation between the administrations of Medan City, Binjai City, Deli Serdang Regency and Karo Regency. It stands at high-level and refers to further agreements for actual implementation and budgeting of measures and organization. Nonetheless, this sets a clear and explicit base for a cooperative transportation management agency across the administrative frontiers, and under the lead of the governor of North Sumatera. This is an explicit requirement of BAPPENAS in order to benefit from the prioritization program for mass transit development, the other requirement being the existence of a comprehensive urban mobility plan (SUMP in preparation).

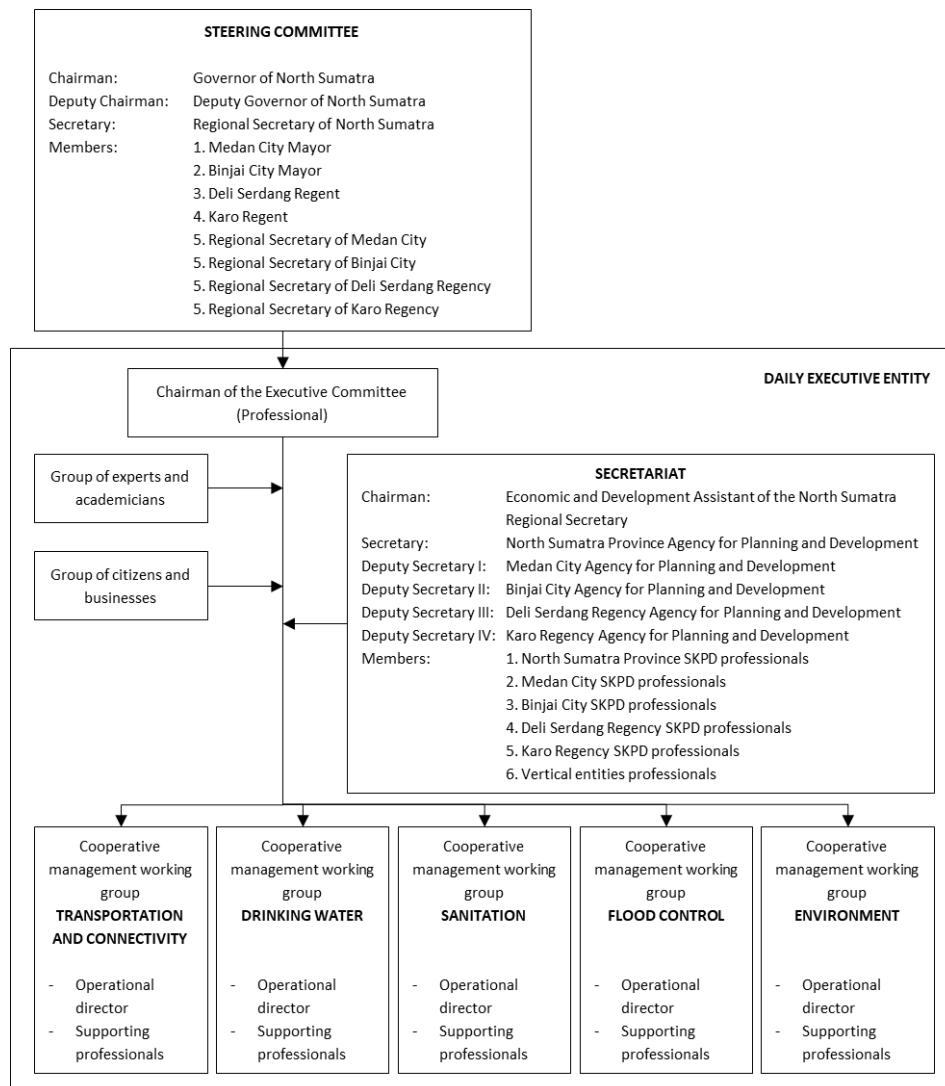


Figure 8. Organisational structure of the Cooperative Management Agency of Mebidangro Urban area (Translated From Governor Regulation 5 / 2016).

A requirement to obtain financial support from the central government for mass transit development is the existence of a transport authority at urban area level. This provincial decree shall be the base for the further study and instruction of a Mebidangro transport authority under the province.

As confirmed by stakeholders during MobiliseDays, all mobility investments can only be effectively plan if managed and monitored by a body with authority beyond city borders but focused on Mebidangro (see related section). Elements were discussed and agreed on this topic to better understand the goals and functions of such a body. Efficient transport authority (or coordinating body) needs to be:

- Multi-modal scope
- Multi-sector
- Metropolitan area-wide jurisdiction
- Strong role in capital investment project selection and priority setting
- Strong role in operating subsidy policy making and allocation

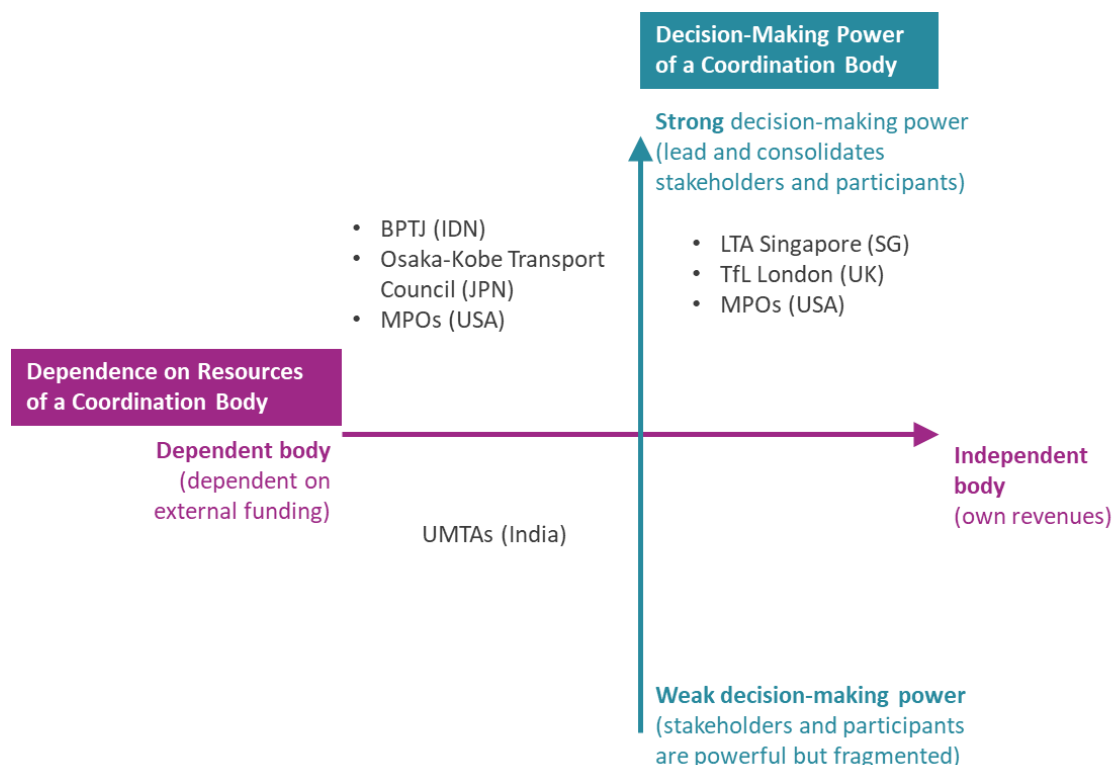


Figure 9. Coordination body mapping. (Egis adaptation from Kawaguchi et al.)

■ Provincial decree for SUMP coordination

Further to facilitate the completion of the Sustainable Urban Mobility Plan for Mebidangro, the provincial decree No. 188.44/412/KPTS/2020 sets out the coordination structure of administrations from the province and the municipalities, by designating entities and their roles in the SUMP preparation. This decree was presented and described in the high-level kick-off, to the main interested parties, and was followed by a commitment by the city and regencies to support the province in the SUMP preparation.

This is a key factor for the success of the project, as leaders, contributors, reviewers and directors of the study are designated and agree to their roles. This can often be a main obstacle in the completion of projects. It is suggested to regularly follow-up and provide updates to the technical committee and steering committee in order to ensure that the roles are embraced.



Figure 10. Composition and roles of the teams of the SUMP. (Egis adaptation from Governor decree)

■ How the SUMP supports the province lead

In provincial regulation No. 5 of 2016 regarding the Development of the Mebidangro Area, namely articles 6 and 9 regulate the cooperation in the field of transportation. For this reason, it is necessary to deepen regulations constituting the technical and derivative regulations needed for updating / upgrading the Mebidangro Area Transportation Development.

A transit authority that manages the general organization of transport instruction and development has yet to be established, hence it is important to have a channel for consultation between national and local levels, for institutions responsible for urban transportation. The SUMP will support regional development allowing the planning and implementation of an efficient transportation system.

It is recommended to use the SUMP preparation and meetings as forums and means for the province to implement its authority over mobility planning. Through the different discussions and workshops of the preparation of the SUMP, the province leadership should be shown and extended beyond this sole activity.

4.2. Mebidangro needs integration at different levels

Integration in transport planning is crucial not only to accommodate movement, but also to increase the economic and social benefits of the city by providing efficiency of all modes. Integrated transport should be able to be beneficial to all passengers, transport operators, government, and the environment itself.



Figure 11. Benefits of an integrated approach in mobility planning. (Egis)

There are many integration scales in the transport depending on the detail of the study. In the planning context, there are three success factors in integration.

■ Passengers

Putting people satisfaction at the center of planning so that it can compete with private vehicle encouraging people to shift to public transport. Wider network will generate more passengers because it will allow more destination, more access, more transport packages options, and journey continuity fulfilling the needs of the passengers. Further, the high ridership will also be beneficial for transport operators because it can increase financial sustainability.

TransJakarta experience shows the proof that by expanding the network (multimodal and adding routes), the number of passengers tend to increase significantly.

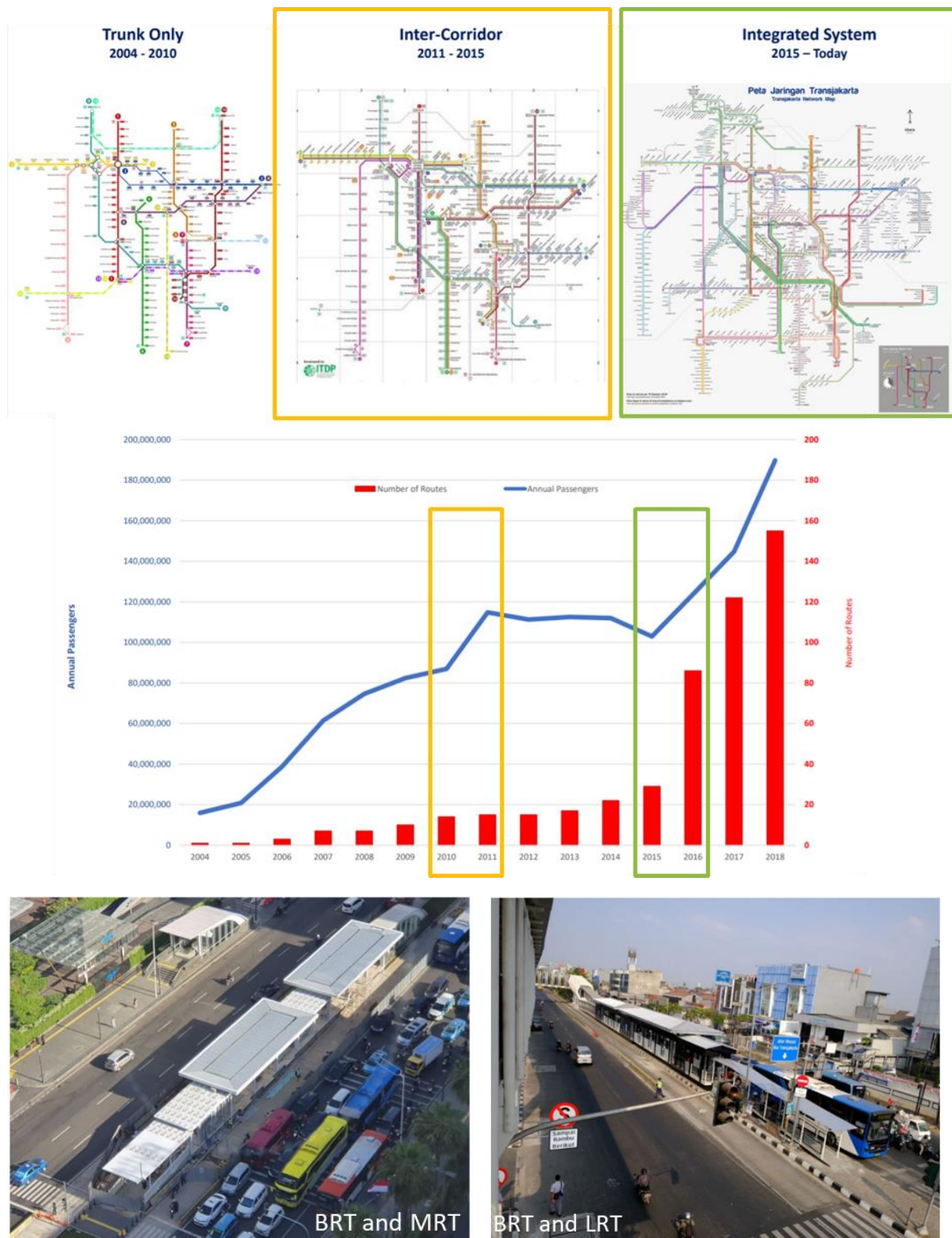


Figure 12. Example of Transjakarta BRT network integration with other mods and the effect on ridership. (Egis adaptation from ITDP)

The multimodal nature of transport of BRT TransJakarta increases the passengers number by providing the continuity for commuter trip or “door to door service”. It is thus important to think of the transport development as interdependent with parallel measures and systems, and take those considerations within the planning of such lines, involving all necessary actors.

- **Network:** expanding the network through wide network and multimodal nodes. Transport is a complex dimension across region, sectors, services, modes which require high capital investment.

Public transport system as **unified networks** rather than individual routes

can generate higher level of ridership

because of the high demand elasticities that are unleashed by seamless ubiquitous interconnected networks

offering a much wider array of transfer based trips.

(Adapted from Mees, 2010)

Network Integration focus on coverage area and multimode which allows:

- ✓ more access to potential customers
- ✓ more destination for passenger
- ✓ more options to transport packages
- ✓ and journey continuity

Figure 13. Network effect definition and benefits. (Egis adaptation from Mees)



Figure 14. Network chain effect. (Egis)

- **Institutional:** the need of coordinating body for integrated transport due to the complex dimension of transport project. It is necessary for the cities to have one authority that can accommodate all those aspects and able to manage the priorities and financial allocation. Due to its complexity and different governing system around the world, various type of authorities exists depends on its decision-making power and resources management. It is even more so in the case of Mebidangro, most of the past projects having not been taken to the implementation stage because of the lack of administrative clarity and ownership of the projects.

This aspect was described with more detail in the related previous section.

- **Other participatory factors:** SUMP will support the integrated transport planning because it focuses in all aspect in mobility including people-centric, all transport modes, all functional urban area as well as involving the stakeholders and citizens in the process

Main takeaways from sharing these principles during the workshops are that the SUMP preparation shall focus on three success factors:

- People-centric approach through consultations, surveys, and sounding
- Comprehensive study on network and multimodal
- Identification of best institutional and financial arrangements

■ SUMP as a comprehensive tool for a coverage of projects of all scales

The SUMP, as a mobility planning tool, covers small and large scales measures to improve mobility. The principles of trips and their nature is presented in order to show the connection to the measures, and their classification. Trunk lines and networks such as BRT, LRT and MRT lines depend on the last kilometer of passengers for their success, as well as transversal mobility management measures.

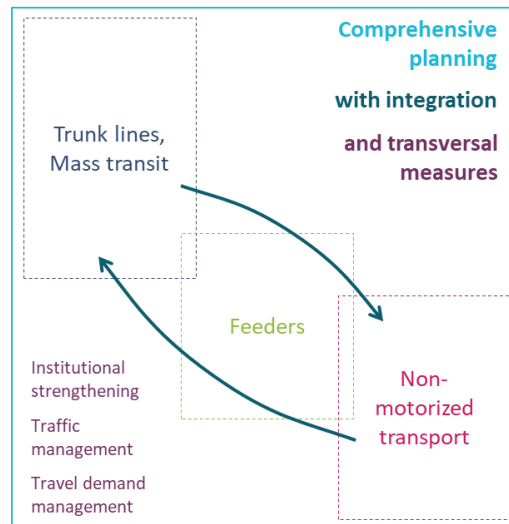


Figure 15. Human scale projects are success factors of mass transit. (Egis)

In Mebidangro and Indonesia in general, the lack of integration in transport planning lead to the idea that a single mass transit project can alleviate the consequences of traffic congestions. With current plans of LRT, the cities, regencies and province of North Sumatra need to embrace the necessity to plan beyond a single line. This concept also highlights the importance of the roles of agencies involved in the last kilometer. It is hence critical for cities to participate actively to the SUMP preparation process, in order to have ownership in future planning and implementation, in an integrated manner.

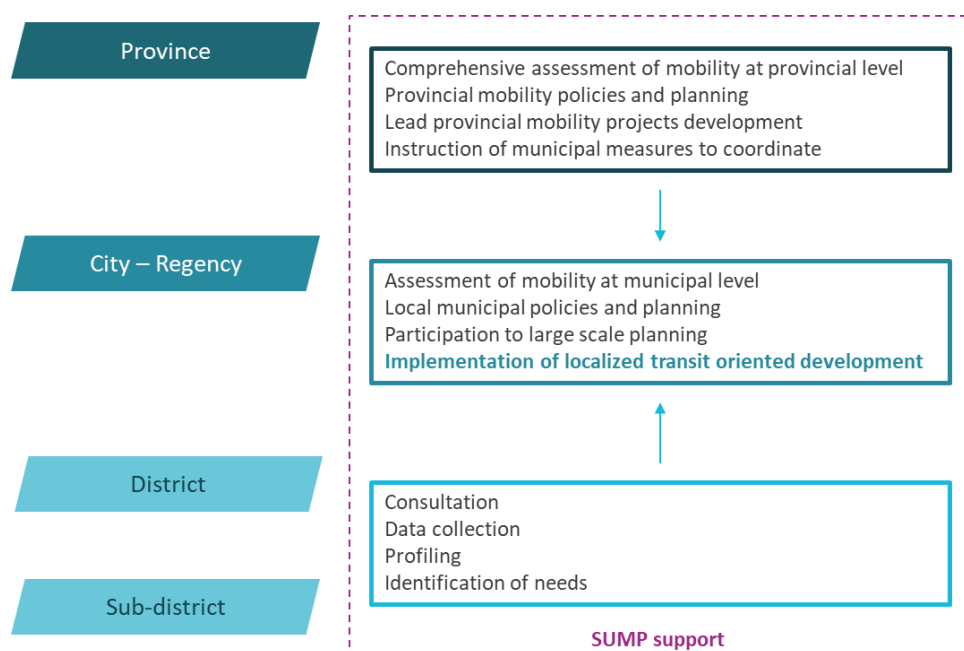


Figure 16. The actors of the implementation of the last kilometer. (Egis)

5. Conclusions and way forward

The MobiliseDays event with stakeholders of Mebidangro allowed to confirm several critical points in transport and mobility planning for the SUMP and beyond (details in appendix):

- **Necessary collaboration between all entities for the success of mobility projects:** cities, regencies, province and state must fully collaborate in order to follow a single vision for the development of transport infrastructure in Mebidangro. The benefits of a main transit lines being integrated with parallel small-scales measures and other lines is demonstrated to be beneficial to passengers. Parties agree that the interdependency of the systems can only be strengthened and insured through integration of planning and institutional cooperation. A transport authority help in that regard, providing a clear leadership under the province, as explained below. The start of a better collaboration and organization between actors was signed by the province and cities and regencies at the kick-off of the SUMP, as attached in appendix.

- **The urgency for the formation of a transport authority:** It is recommended, as soon as possible, to start the preparation of the formation of a Mebidangro transport authority body, in order to not lose the momentum of the legal foundation in place and SUMP initiative launched. The conclusions of the SUMP will contribute to the needed preparation, but legal and institutional work should be initiated in parallel to counter administrative obstacles that are likely to be encountered, as well as securing a transport oriented body free of other affiliations.
While the authority will ensure integrated implementation at various scales of the projects, it will also fulfill the central government requirement in order to unlock financial assistance for the regional project. Political mandates should also be taken into account, so that the alignments between central, provincial and municipal policies remain until the actual implementation of projects (ground breaking).

- **Inclusion of the wider territory beyond Medan for a functional and comprehensive urban area:** the integration and inclusion of the Binjai, Deli Serdang and Karo territories is necessary as to plan for a comprehensive and functional systems for the coherent urban area of Mebidangro. While expressed by the consultation of MobiliseDays, it also confirms the limits of previous plans and justifies and strengthens the authority of the province. Only a wider region assessment can bring the most benefits to the society in terms of mobility.
Since the full territory of Mebidangro does not constitute a completely comprehensive urban area (case of Karo regency), and as confirmed by stakeholders during the workshops, it is recommended to consider included Karo on medium and long term mobility rather than short term, in order to ensure coherent mobility development suggestions for the short term.

- **Workplan:** the following is the tentative workplan for the SUMP preparation, which started with the MobiliseDays. Each activity takes into account stakeholders feedback and views in order to reach after Component 4 a consensual plan for the North Sumatra province to quickly move forward in the instruction of its projects and the monitoring of mobility in Mebidangro.

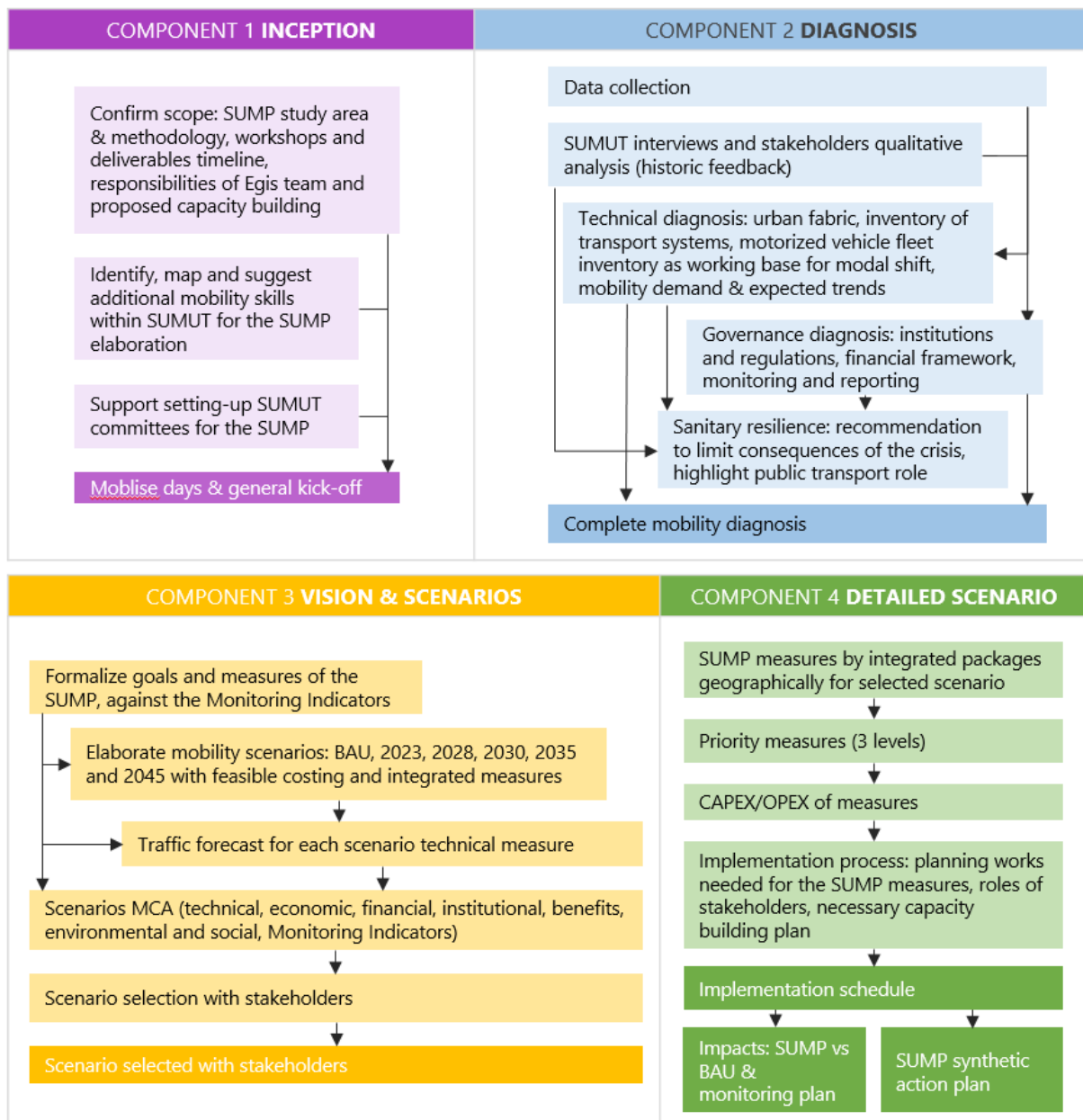


Figure 17. Synthetic tentative work plan of the SUMP preparation. (Egis)

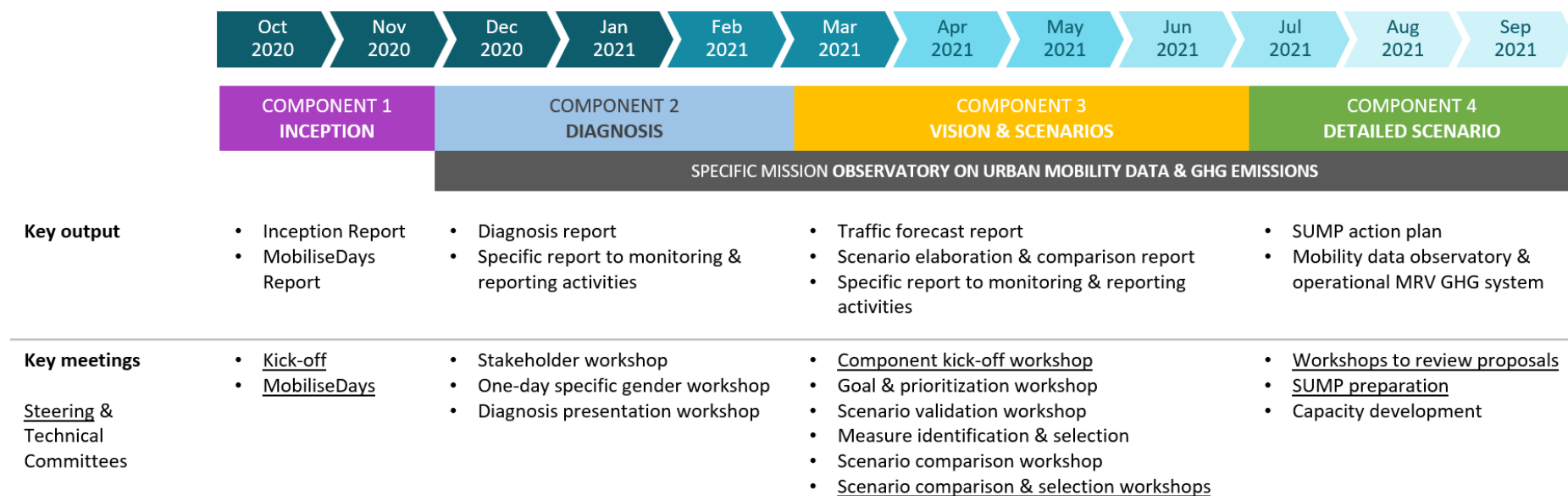


Figure 18. Tentative timeline for the SUMP preparation. (Egis)

6. Appendix: Summary of MobiliseDays

The MobiliseDays occurred between the 22 and 23 October 2020 in Medan city. Its goal was to bring Mebidangro mobility stakeholders together (steering committee, technical committee, other stakeholders) to kick start the Sustainable Urban Mobility Plan preparation, as well as conduct an early consultation on major concerns about mobility from the various parties invited. It was segmented in three main events, which are described in this section.

- High-level kick-off: SUMP for Mebidangro Framework and Strategy
- Workshop 1: Unlocking the potential of urban mobility for dynamic cities
- Workshop 2: Building Efficient and Comprehensive Urban Mobility Plans

The bilingual (English/Indonesian) presentation materials are available in the following links:

No	Moment	English materials	Indonesian materials
1.1	AFD experience and expertise in fostering sustainable urban mobility planning & projects	https://www.slideshare.net/secret/2UbwEIQi4PWCBB	https://www.slideshare.net/secret/xuGhbG7McNeRZX
1.2	Egis, a key player in transport engineering in Indonesia	https://www.slideshare.net/secret/tgl1xWHO3NORD	https://www.slideshare.net/secret/j4t3XgoVZcSDfV
2.1	Mobility as the city structure	https://www.slideshare.net/secret/kFMbPtvc3kuxT	https://www.slideshare.net/secret/gcicJuS2ENIIIW
2.2	Growing role of Local Authorities in Transport Infrastructure	https://www.slideshare.net/secret/6BbqAyPrhfQa4c	https://www.slideshare.net/secret/zVh1qemzje9oSI
2.3	SUMP: a comprehensive tool for a coverage of projects of all scales	https://www.slideshare.net/secret/MsJe0WY0BUxmbe	https://www.slideshare.net/secret/FC8o1ArFxPXrJt
2.4	Transport financing schemes, PPP and other private finance solutions	https://www.slideshare.net/secret/Awy7hxmdJbAela	https://www.slideshare.net/secret/n34gzcNuNn5q1n
3.1	The stakes of transport integration at different levels	https://www.slideshare.net/secret/1vTcjOA32J5bVv	https://www.slideshare.net/secret/fE2oXNyQCPuMVJ
3.2	Mobility and climate	https://www.slideshare.net/secret/dMA4yhmjVuQPE	https://www.slideshare.net/secret/7wXkemT2rHEbkk
3.3	SUMP geographical scope and function	https://www.slideshare.net/secret/MoUTQy9cS8zMcm	https://www.slideshare.net/secret/7I3J4z8Z8cwuuA
3.4	SUMP approach and next steps	https://www.slideshare.net/secret/GH4DT4EFQjrTiy	https://www.slideshare.net/secret/yXMrJts59cQXK0

6.1. High-Level Kick-Off: SUMP for Mebidangro Framework and Strategy

Summary of exchanges

■ Participants

The Mebidangro Sustainable Urban Mobility Plan preparation was officially kicked off at the Governor's office in the presence of the top level of the provincial administration, namely the Governor of North Sumatra, his deputy and regional secretary. The representatives of the four cities and regencies were also in attendance: the Mayors and Regents (or their delegates) for Medan, Binjai, Deli Serdang and Karo; as well as the development partner AFD, and the consultant Egis.

■ Provincial leadership and identification of roles

The importance and symbolism of the event was shown in its venue and attendance. Taking place in the residential office of the Governor, it gathered high-level representatives of the cities and regencies of Mebidangro and North Sumatra, showing the clear leadership taken by the province in the initiative.

The province leadership for mobility planning in Mebidangro was legally translated in the provincial decrees (*Mebidangro Urban Area Management* No. 5 of 2016 and *Mebidangro SUMP Coordination* No. 188.44/412/KPTS/2020) and confirmed during the kick-off: by the identification of roles of the high-level stakeholders (under the province) and the directions of the governor for the elaboration of the SUMP: taking into account in the planning of mobility the necessity for socio economic development in Mebidangro, as well as future projects, to allow for the region to reach international level.

■ Adhesion of the cities and regencies

To allow for integrated and effective planning of transportation, and ensure a political alignment and effective collaboration between the provincial, the commitment to support the SUMP preparation from the cities and regencies was secured by the province (fulfillment of stated roles, active participation for the completion of the SUMP). This commitment is attached in appendix.



Figure 19. SUMP of Mebidangro Kick-Off Meeting course. (Egis)



Figure 20. Photography of signature of commitment of SUMP support of by the steering committee. (Egis)

Agenda

Event	Sustainable Urban Mobility Plan (SUMP) for the Medan urban metropolitan area (Mebidangro) Framework and Strategy		
Date	Thursday 22 October 2020 08:00		
Time	Sustainable Urban Mobility Plan for Mebidangro Framework and Strategy	Duration	Speaker(s)
09:05 09:20	DISHUB program and initiative to improve urban mobility in Mebidangro [Speech] Head of the transportation agency of North Sumatra introduces the partners and the initiative, its progress and its goals, as well as the importance of the support of the cities and regencies of Mebidangro following the SUMP provincial decree.	15 min	Transport Agency SU Haris Lubis Head of Agency
09:25 09:40	Support of central government to develop urban transport in the regions [Speech] Video and/or speeches of representatives from BAPPENAS and MOT supporting the initiative of DISHUB SU for the development of urban transportation.	15 min	BAPPENAS Transport Directorate
09:45 10:00	AFD experience and expertise in fostering sustainable urban mobility planning & projects [Presentation] AFD action in Asia and Indonesia, and its experience and expertise to support urban transport development. <ul style="list-style-type: none"> - Pillars of urban mobility, implemented sustainable mobility policies in ASEAN cities, Results of an increased sustainable mobility for the city and its inhabitants - AFD experience 	15 min	AFD Martin LEMENAGER Senior program manager
10:05 10:25	Egis, a key player in transport engineering in Indonesia [Presentation] Its global presence, expertise and services, and its Indonesian successes make Egis the best partner to improve urban mobility in Mebidangro. <ul style="list-style-type: none"> - Egis Group, Egis Rail, transport activities - Asia-Pacific presence and Indonesia successes - Egis readiness to support SUMP and high-level work plan 	20 min	Egis Olivier RIVALTA Director APAC
10:30 10:45	SU Governor directions [Speech] The Governor of Sumatra Utara closes the event with directions for the establishment of the SUMP, and highlighting the importance of the projects to come.	15 min	Government SU Edy Rahmayadi Governor SU
10:45 11:00	Signature of commitment and group photo	15 min	All

6.2. Joint commitment of Mebidangro leaders to support SU in SUMP preparation (bilingual Indonesian/English)

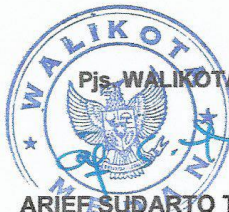


**KOMITMEN BERSAMA
PERENCANAAN MOBILITAS PERKOTAAN BERKELANJUTAN
(SUSTAINABLE URBAN MOBILITY PLAN)
DI KAWASAN PERKOTAAN MEDAN - BINJAI - DELI SERDANG - KARO
(MEBIDANGRO)
PROVINSI SUMATERA UTARA**

KOMITMEN BERSAMA
PERENCANAAN MOBILITAS PERKOTAAN BERKELANJUTAN
(SUSTAINABLE URBAN MOBILITY PLAN)
DI KAWASAN PERKOTAAN MEDAN - BINJAI - DELI SERDANG - KARO
(MEBIDANGRO) PROVINSI SUMATERA UTARA

1. Mendukung kebijakan dalam penanganan emisi mobilitas perkotaan untuk mewujudkan transportasi rendah karbon yang berkelanjutan di kawasan Perkotaan Mebidangro.
2. Mewujudkan akses yang aman ke system transportasi massal rendah karbon, selamat, bersih, handal dan terjangkau sebagai salah satu kebutuhan dasar di kawasan perkotaan Mebidangro.
3. Memprioritaskan system mobilitas perkotaan berkelanjutan di kawasan perkotaan Mebidangro, yang mengintegrasikan transportasi publik, pengguna sepeda, pejalan kaki, dan solusi rendah karbon dalam perencanaan dan pengembangan kebijakan alokasi anggaran publik.
4. Memperkuat perencanaan dan implementasi mobilitas perkotaan yang partisipatif, melalui koordinasi kelembagaan antara pemerintah pusat dan daerah, sektor swasta dan masyarakat dan peningkatan kapasitas sumber daya manusia.
5. Melakukan penyelarasan dan pengintegrasian program dan kegiatan dalam dokumen perencanaan daerah, untuk mewujudkan system transportasi massal rendah karbon yang berkelanjutan di kawasan perkotaan Mebidangro.

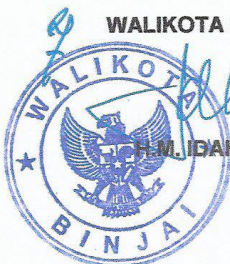
Medan, 22 Oktober 2020



ARIEF SUDARTO TRINUGROHO



H. ASHARI TAMBUNAN



H.M. IDAHAM



TERKELIN BRAHMANA



EDY RAHMAYADI



**JOINT COMMITMENT
SUSTAINABLE URBAN MOBILITY PLAN (SUMP)
IN MEDAN, BINJAI, DELI SERDANG AND KARO (MEBIDANGRO)
URBAN AREA - NORTH SUMATERA PROVINCE**

JOINT COMMITMENT
SUSTAINABLE URBAN MOBILITY PLAN (SUMP)
IN MEDAN, BINJAI, DELI SERDANG AND KARO (MEBIDANGRO)
URBAN AREA - NORTH SUMATERA PROVINCE

1. Support policies in handling urban mobility emissions to achieve sustainable low-carbon transportation in Mebidangro urban area.
2. Realizing safe access to a low-carbon, safe, clean, reliable and affordable mass transportation system as one of the basic needs in Mebidangro urban area.
3. Prioritizing sustainable urban mobility systems in Mebidangro urban area, which integrate public transportation, bicycle users, pedestrians, and low carbon solutions in planning and developing public budget allocation policies.
4. Strengthen participatory planning and implementation of urban mobility, through institutional coordination between central and local governments, the private sector and the community and developing human resources capacity.
5. Align and integrate programs and activities in local planning documents, to realize a sustainable low-carbon mass transportation system in Mebidangro urban area.


Medan, October 22, 2020

Act. MAYOR OF MEDAN

ARIEF SUDARTO TRINUGROHO


REGENT OF DELI SERDANG

H. ASHARI TAMBUNAN

MAYOR OF BINJAI

H.M. IDAHAM

REGENT OF KARO

TERKELIN BRAHMANA

Knowing,
GOVERNOR OF NORTH SUMATERA

EDY RAHMAYADI

6.3. Workshop 1: Unlocking the potential of urban mobility for dynamic cities

Summary

Gathering most numerous stakeholders of the mobility in Mebidangro, Workshop 1 formed around Egis presentation on the key principles that are factors of success for mobility measures implementation. The goal was to convey key messages in an open presentation format, in order to gather simultaneously the reactions and opinions of the participants. Topics tackled were:

- Mobility as the city structure: emphasizing the role of mobility in the urban planning and its benefits to the socio-economy of the city, beyond the traveling considerations. As a general introduction to the workshop, several international benchmarks are introduced in order to showcase what is possible to accomplish through adequate mobility planning.
- The growing role of local authorities in transport infrastructure projects
- SUMP: a comprehensive tool for a coverage of projects of all scales
- Transport financing schemes, PPP and other private solutions

Exchanges

Comments	<p>Universitas Sumatera Utara:</p> <ul style="list-style-type: none"> ■ The public transport system in Jakarta is managed by a separate institution which is the Jakarta Transportation Management Agency (BPTJ). Before the establishment of BPTJ, the management of the Jakarta transportation system has been inefficient. <ul style="list-style-type: none"> ➔ USU hopes that the study will also describe and elaborate the effectiveness of an urban transportation institution in managing a public transport system (such as BPTJ). ■ To elaborate more about how a city should manage the land value capture mechanism. Based on the Jakarta case, the land value capture does not included under the authority of BPTJ.
Comments	<p>Mr. Thomas (Dinas Perhubungan Provinsi Sumatera Utara):</p> <ul style="list-style-type: none"> ■ SUMP provides an opportunity for Mebidangro to rethink of the metropolitan transportation plan. To date, there have been more than 10 transportation studies and plans in Mebidangros. But so far, there has been no implementation undertaken. The SUMP shall design a more comprehensive plan that provides steps towards implementation. ■ To reflect back, the Dutch designed our cities quite well. As for Medan, they designed a transportation system with corridors connected by trains. The Dutch have also well-predicted the direction of urban development, where Binjai will become a big city and Deli Serdang will become a thriving plantation. But we develop roads instead of maximizing the existing rail networks. ■ SUMP is an opportunity for us to review and include railroad transportation in the RPJM. There are an existing network, but it needs revitalization. To shift is the priority, not just rely on the road network. The SUMP will be one of the opportunity to improve the transportation system in Medan and its surroundings, by making improvements to mass infrastructure that is efficient, environmentally friendly, and not polluting.
Comments	<p>Mr. Saiful Ansar (Operator Kereta Api Bandara):</p> <ul style="list-style-type: none"> ■ The government has built an excellent transportation infrastructure, but the public's interest is still very low to use public transportation. For example, the airport railway is very well built where the travel time for Medan - Kualanamu is significantly reduced from one hour by road to only 28 minutes by train. However, very few people use this facility. The occupancy rate of Damri (bus) are also very low.

	<ul style="list-style-type: none"> ■ Medan society and culture generally are very consumptive (using private vehicle due to door to door service) and this culture factor is very difficult to change. Therefore, an accurate strategy and policy is needed to encourage people to shift the way they perceive public transportation. ■ Integrated transport system between two industrial areas in Medan: Tanjung Rawa and the one in the harbor, shall be consider. These industrial areas are one of the big transport attractors in the region. It would be good if the development of Mobility Plan will also consider these areas.
Comments	<p>Mr. Frans Simbolon (Chairman Organda Deli Serdang):</p> <ul style="list-style-type: none"> ■ High hopes for SUMP study in Mebidangro, due to the absence of proper transportation regulation that has been implemented in Mebidangro. For example, regarding online transportation, there are regulations, but they are not implemented very well, and that has caused a disadvantaged to public transportation operators such as microbus (angkot). ■ To also include the existing transporta operators in the study, not just only the development of the new modes. Legal procedures and licensing need to be carried out properly.
Comments	<p>NN:</p> <ul style="list-style-type: none"> ■ Currently, the occupancy rate of public transport are still too low. However, one of the goals of a new public transport system like BRT is to change the passengers' behaviour. For example, with a bus stop, the bus will stop at the dedicated stopping points. But in reality, this scenario does not happen, thus making the initial objective to shift people behaviour is not achieved. ■ Public Work Department is currently developing a tourism road, where the street is a tourist attraction. It is located in Medan – Berastagi section. The road needs to be maintained as a tourism potential. ■ In implementing SUMP, the team should take into consideration at the previous studies that have been carried out by the different institution. ■ With AFD experience, the people of Mebidangro hope that this mobility plan will have a clear implementation pathway.
Response	<p>Soegeng Poernomo (Egis):</p> <ul style="list-style-type: none"> ■ Our problem is in the first mile and the last mile. People want to have a door to door transportation service. Transportation is a paradigm that we need to change: not just infrastructure but behavior. ■ In Jakarta, with the transit oriented development (TOD), people have started to change their mindset: people started walking. It is also important to think about an effective incentive-disincentive model that helps people to shift: i.e. how to regulate tarrifs for parking, incentives for the use of public transportation, etc.



Figure 21. Photography of Workshop 1: Unlocking the potential of urban mobility for dynamic cities. (Egis)

Agenda

Event	Unlocking the potential of urban mobility for dynamic cities Workshop 1		
Date	Thursday 22 October 2020 13:30		
Time	Unlocking the potential of urban mobility for dynamic cities	Duration	Speaker
14:00 14:05	Official opening [Speech] The Master of Ceremony opens the event by greeting the participants and starting the momentum of the SUMP.	05 min	Master of ceremony
14:05 14:30	Mobility as the city structure (2.1) [Presentation] Mobility is presented not only as to move people but as a full component of city structures. Urban planning and mobility, Impacts and socio-economic benefits of urban mobility	25 min (incl. 5 mn Q&A)	Egis Rizqa HIDAYANI Urban Planning Expert
14:35 15:00	The growing role of local authorities in transport infrastructure projects (2.2) [Presentation] Instruction process of projects and how it has been facilitated by the decentralization until recent years, by the help of sub-national, national and international actors. It highlights the importance of the regional stakeholders. <ul style="list-style-type: none"> - An ongoing decentralization, The growing role of regional authorities - The example of Land Value Capture, How the SUMP supports the region 	25 min (incl. 10 min Q&A)	Egis Sarah DARMAWAN Institutional and financial expert
15:20 15:45	SUMP: a comprehensive tool for a coverage of projects of all scales (2.3) [Presentations] The SUMP is described as the comprehensive tool for the province to lead integrated projects and regencies to promote investment measures allowing the success of large scale projects. For example, the renovation of a railway station, the implementation of a pedestrian plaza, etc. <ul style="list-style-type: none"> - Scales of mobility, The importance of the last kilometer - SUMP activities, and AFD experience 	25 min (incl. 10 min Q&A)	Egis Ferdinand Marterer Coordinator & Planning AFD François CARCEL Transport task team leader South-East Asia
15:50 16:15	Transport financing schemes, PPP and other private solutions (2.4) [Presentations] Egis describes different financing schemes for transportation infrastructure in Indonesia, and proposes a new perspective on PPP showing that subtleties and other solutions exist. A guest from PT. SMI is invited to describe their activity. <ul style="list-style-type: none"> - Infrastructure financing in Indonesia and the central government strategy - The need for private capital in public infrastructure, The role of the SUMP 	25 min (incl. 5 min Q&A)	Egis Sarah DARMAWAN Institutional and financial expert
16:20 16:25	Official closing [Speech] Closing speech for Day 1 by the SU Transport agency.	05 min	Transport Agency SU Haris Lubis Head of agency

6.4. Workshop 2: Building Efficient and Comprehensive Urban Mobility Plans

Summary of exchanges

Workshop 2 was mainly attended by members of the technical committee of the SUMP in order to tackle more technical and actual topics that will compose the SUMP. The objective was to propose key aspects of efficient mobility planning and their integration within the SUMP activities. Topics tackled were:

- The stakes of transport integration at different levels
- Mobility and climate
- SUMP geographical scope and function
- SUMP approach and next steps

Input	<p>Dishub Provinsi Sumatera Utara:</p> <p>The result of the survey conducted by ITDP a few years ago indicated that the people in Mebidangro area needs a flexible movement transport system. In this study also, it is concluded that the passengers generally choose motorcycle or taxis as it is easily accommodates their mobility needs (door to door movements). Such as, online-based services are currently more successful than conventional public transportation due to its price and passenger needs. Therefore, the SUMP study shall also consider the passenger mobility pattern, behaviour, and culture in the development of future mobility plan.</p>
Input	<p>Dinas Perhubungan Deli Serdang:</p> <ul style="list-style-type: none"> ■ Information regarding human mobility in Mebidangro, that most of the commuters to Medan are from Deli Serdang regency, with an average number of commuters of 570.000 per day. ■ Regarding the study area, the delineation of study area should be considered carefully. In the previous programs/study, the name of the program always use the term Mebidangro Area, but in fact, the implementation is only focused at Medan City. ■ To assess the existing BRT line as a lesson learnt, since its features are not well-function, especially the timeliness.
Comments	<p>BAPPEDA Kota Binjai:</p> <p>The development of LRT is expected and the alignment shall span to reach the city area of Binjai, not only the area bordering with Medan (Deli Serdang Regency).</p>
Input	<p>BAPPEDA Kota Medan:</p> <ul style="list-style-type: none"> ■ Medan is the 3rd largest city in Indonesia with a strategic location and a close proximity to other countries. With this status, the government hope that Medan will continuously improve the public transportation system, to the point where it will have a reliable, well-functioning urban mass transportation system. A recent survey from ITDP and SMI show that if Medan does not improve the public transportation system in the near future, the city will become stagnant. It is necessary to design a reliable mobility plan that also accommodates feeders to residential areas to increase the commuter flow from Deli Serang and Binjai to Medan City. ■ It is also important to highlight the upcoming strategic projects in the region such as PON 2024 in North Sumatra. This activity will require a good transportation system, and full support from the National Government.
Comments	<p>Lantas Polda Sumut:</p>

	<ul style="list-style-type: none"> ■ Polda Sumut hopes that this Mobility Plan can actually be implemented in Mebidangro, as it is also intended to improve safety and security in the region, especially improving the mobility flow at Mebidangro. ■ The current transportation system in Mebidang is also continues to improve, as now there are public transportation routes from Binjai to Medan, Medan to Deli Serdang. In the near future, there will be an additional with a total of 70 public transport units for 5 routes: Tuntung to Merdeka, Merdeka to Amplas, Merdeka to Belawan, etc.
Discussion	<p>Dishub:</p> <ul style="list-style-type: none"> ■ <u>Question:</u> To what extent will this SUMP study shall be carried out? Is the output of SUMP going to be in the form of recommendations (for example, what are the suggested transport modes or what routes are recommended), or does the team also looking forward to finding opportunities to implement the recommended output? ■ Regarding the public transport challenges, one of the things that becomes an obstacle is the tariff. For example in Binjai, the train will cost up to IDR 30.000 back and forth per-trip, whereas by private vehicle, the cost is only IDR 60.000 for fuel per week. It also concerns the destination of the trip, where with private vehicle it can go anywhere, whereas by public transportation it can only go to a certain spot. In conclusion, to emphasize on the fare and affordability of the people, because it is something that can contribute to the success or failure of the public transport system. <p>Ferdinand Marterer (Egis):</p> <ul style="list-style-type: none"> ■ SUMP is not a feasibility study (FS) or Pre-FS but more like a masterplan, in the sense that the output will be in the form of recommendations of strategies for the sustainable urban mobility for Mebidangro area. ■ From the recommendations, it will also develop an implementation pathway. A more comprehensive set of strategies and measures will be formulated for a longer implementation period. However, it will also try to break down recommendations based on the implementation stage. It will not just stop at the survey, but we will also emphasize and elaborate on the <i>“how to implement the set of strategies and measures.”</i>
Input	<p>Mr. Thomas (Dinas Perhubungan Provinsi Sumatera Utara):</p> <ul style="list-style-type: none"> ■ Based on a study from the World Bank, there is a maximum amount to determine public transportation tariffs, which is approximately 10% from total household revenue. Talking about transportation there are always two contradictions between efficiency and effectiveness. ■ For surveys, data collection must be carried out carefully, because the determination of the right sample will affect the quality of the data which of course affects our decision-making process (formulation of strategies). ■ One of our shared responsibility is how to persuade people to switch from private vehicles to public transportation modes, because based on our previous experience, this is the most difficult part.
Comments	<p>Mr. Daniel (Dinas Perhubungan Provinsi Sumatera Utara):</p> <ul style="list-style-type: none"> ■ In determining the study area, will it include the entire area of Mebidangro, or it will only includes areas in the outskirts of Medan? In this case, the growth center in Karo is Berastagi, while in Deliseradang the center is in Lubuk Pakam and Tembung. Deli Serdang itself consists of 22 sub-districts, will all of them be included or only those in the outskirts of Medan City? ■ Is the hinterland area (border of Medan City) going to be studied? This area was once an agricultural area that is now transformed into a settlement areas?
Comments	<p>Mr. Zulfan (PUPR)</p> <p>Determination of study area needs to be mutually agreed, whether to use a sub-district or sub-district as a smaller sampling unit.</p>

Input	<p>Mr. Thomas (Dinas Perhubungan Provinsi Sumatera Utara):</p> <ul style="list-style-type: none"> ■ Mebidangro is one metropolitan region. However, in terms of land use Karo, have a very different land uses. The spatial relationship is even stronger towards the East and West towards Tebing Tinggi, rather than to Karo. Land use in Karo Regency is mostly used as an agricultural function. ■ The study should divide its focus into two different parts: (1) Mebidang Area and (2) Karo Area. The consideration was that if Karo was put together, the result is going to be very different. As for information, 71% of the population of North Sumatra is in Mebidang, not including Karo Regency. ■ The unit for the survey should use kelurahan as the administrative unit, as it is more detail rather than using kecamatan as the lowest administrative unit. We hope that household surveys can be carried out carefully so that mobility patterns can be identified in more detail. ■ Conducting the survey during a pandemic situation can be a challenge, as this situation is an abnormal situation. The transport load factor is decreased by 30% during a pandemic.
Comments	<p>Dishub Karo:</p> <ul style="list-style-type: none"> ■ The characteristics of Karo is different from other cities within Mebidangro Area. It is necessary to look at the main function of Karo Regency within the metropolitan region, whether it serves as a supporting function (agriculture, tourism, etc), or other functions. ■ So far, freight transportation is the most common type of transportation between Medan-Karo. Commuting activities are very limited. So far, the tourism sites in Karo is also one of the attraction factors. It is also necessary to see the regional development vision in the future.



Figure 22. Official closing of Workshop 2. (Egis)

Agenda

Event	Building Efficient and Comprehensive Urban Mobility Plans Workshop 2		
Date	Friday 23 October 2020 08:00		
Time	Building Efficient and Comprehensive Urban Mobility Plans	Duration	Speaker
08:30 08:40	Official opening & introduction [Speech] The Master of Ceremony opens the event by greeting the participants and starting the momentum of the SUMP.	10 min	Master of ceremony
08:40 09:10	The stakes of transport integration at different levels (3.1) [Presentation] The priorities of transport planning and putting people at the center. It should integrate a variety of projects around trunk lines, to allow adequate integration. The integration should also be at governance level. <ul style="list-style-type: none"> - What is integration? Success factors of transport integration - The TransJakarta illustrated case - Integration within the SUMP 	30 min (incl. 10 min Q&A)	Egis Martina ADRIANA Urban Transport Expert
09:15 09:40	Mobility and climate (3.2) [Presentation] The stakes of climate change on cities and infrastructure, as well as the impact that transport has on climate, highlight that mobility is a strong vector to act against GHG emissions. <ul style="list-style-type: none"> - Climate urgency and the impact of transport emissions - Mobility as a vector for emissions reduction - Integrating climate and environmental considerations within the SUMP 	25 min (incl. 5 min Q&A)	Egis Kendra TANDEGA Senior Transport & Environment Engineer
10:00 10:30	SUMP geographical scope and function (3.3) [Presentation] The area is analyzed at high-level in order to define a coherent urban area for the SUMP preparation. During this presentation, it is expected that participants react and share their opinions on how the geographical area should be defined. <ul style="list-style-type: none"> - Definition of an urban functional area - Overview and application to Medan metropolitan area - What is next? 	30 min (incl. 10 min Q&A)	Egis Rizqa HIDAYANI Urban Planning Expert
10:35 11:00	SUMP approach and next steps (3.4) [Presentation] Goal is to brush the full SUMP elaboration process and when the stakeholders will be solicited again, allowing the partners AFD and Egis to gain their trust and manage their expectations. The session aims at closing MobiliseDays with high interest and direct involvement and engagement, until the next activities. <ul style="list-style-type: none"> - Emergence of the SUMP, an active platform for collaboration - Activities and work plan - Milestones and next steps 	25 min (incl. 10 min Q&A)	Egis Ferdinand MARTERER Coordinator & Planning
11:05 11:15	Official closing [Speech] The transport agency closes officially the last day of the MobiliseDays.	10 min	Transport agency SU Haris Lubis Head of agency

6.5. List of participants (compiled between events)

No	Name	Position	Institution
1	Edy Rahmayadi	Governor	Province of North Sumatra
2	Arief Sudarto Trinugroho	Act. Mayor	Medan City
3	H.M. Idaham	Mayor	Binjai City
4	H. Ashari Tambunan	Regent	Deli Serdang Regency
5	Terkelin Brahmana	Regent	Karo Regency
6	Abdul Haris Lubis	Kadis	DISHUB SU
7	Astrid Wulan	Kasubbid	BAPPEDA SU
8	Darwis	Kabid	BAPPEDA Binjai City
9	Amiruddin Lubis	Kasubbid	BAPPEDA Binjai City
10	Astrid Wiken	Kasubbid	BAPPEDA Binjai City
11	Sigit P	Kabid	BAPPEDA Deli Serdang Regency
12	Nasib S.	Kepala	BAPPEDA Karo Regency
13	Evalit.....	Kabid	BAPPEDA Karo Regency
14	Ferri Ichsan	Kabid	BAPPEDA Medan City
15	Fadlan Nasution	Kasubbid	BAPPEDA Medan City
16	Ihsan		BAPPEDA SU
17	Rey K.		BAPPEDA SU
18	Ardhianto	Kasubbid	BAPPEDA/PU Deli Serdang Regency
19	Tukkot E.F. Hutapea		Binamarga SU
20	Sarjiyana	Kasi	Binjai City
21	Djoko		Binjai City
22	H.M.A. Yusuf Siregar	Wakil Bupati	Deli Serdang Regency
23	Wisnu Y. Prabowo	Staff	Agency SDA CK TR SU
24	Dody S.	Staff	Agency SDA CK TR SU
25	Yunus P		DISHUB
26	Syahrial	Kadis	DISHUB Binjai City
27	Irwan T	Kabid	DISHUB Binjai City
28	MP Sagala	Kabid	DISHUB Deli Serdang Regency
29	Jannes Manurung	Kadis	DISHUB Deli Serdang Regency
30	Mawardi Nur	Kasi	DISHUB Deli Serdang Regency
31	Taufik Israd	Sekdis	DISHUB Deli Serdang Regency
32	Gelora Fajar	Kadis	DISHUB Karo Regency
33	A.H. Ginting	Kabid	DISHUB Karo Regency
34	Iswar	Kadis	DISHUB Medan City
35	Ami Kholis		DISHUB Medan City
36	Agustinus	Kabid	DISHUB SU
37	Umar K	Kasi	DISHUB SU
38	Junita P.		DISHUB SU
39	Michael Perangin-Angin		DISHUB SU
40	Benry S		DISHUB SU
41	Rosmerry N		DISHUB SU
42	Dominikus E. Widjanarko	Kasubag	DISHUB SU
43	Lisda Hariani	Staff	DISHUB SU
44	A. Chandra		DISHUB SU
45	Erwin E		DISHUB SU
46	Syahnidawati		DISHUB SU
47	Bambang		DISHUB SU
48	Rosmawaty	Kasi	Ditlantas Medan City
49	Egia Surbakti		Ditlantas Medan City

50	Agustinus Tarigan		Ditlantas Polda
51	Frans Simbolon		DPC Organda Deli Serdang Regency
52	Aditya Sebayang	Ketua	DPC Organda Karo Regency
53	Montgomery Munthe	Ketua	DPC Organda Medan City
54	Rizky Hermanu	Protokoler	DPRD Deli Serdang Regency
55	Zakky Shanri	Ketua	DPRD Deli Serdang Regency
56	Iriani	Ketua	DPRD Karo Regency
57	Darlina Tanjung		FT UISU
58	Burhan Batubara		HPJI SU
59	Kamaruzaman	Kabid	Humas Deli Serdang Regency
60	Mirza Dian Harahap	Staff	Humas Deli Serdang Regency
61	Lusius P	Kasubbid	Karo Regency
62	J. Sitanggang		Lantas Karo Regency
63	Hendra Kesuma		MTI SU
64	Hery		Nasional
65	Haposan S		Organda
66	M. Vaya		Organda
67	Salamuddin		Organda SU
68	Sri Rejeki	Staff	Provincial Government SU
69	Gunawan	Manager	Perum Damri
70	Suprihatin		Perum Damri
71	Damriza	Ka.UPT	PSPP Kabanjahe
72	Muchsin Harahap	Ka.UPT	PSPP P. Siantar
73	Vicky Laily		PT. KAI
74	Lucyana E.		PT. KAI
75	M.G. Munther		PT Rahayu Medan City Ceria
76	Zulfan		PU Binjai City
77	John Eriksen Purba	Kabid	PU Deli Serdang Regency
78	Zulfansyah	Kadis	PU Medan City
79	Yulius Ares	Kasi	PU Medan City
80	Mukhyar	Kabid	PU Medan City
81	Zulfan	PO	PUPR Binjai City
82	Edward P.	Kepala	PUPR Karo Regency
83	Hendra Mitcon Purba	Kabid	PUPR Karo Regency
84	David Girsang	Kabid	PUPR Karo Regency
85	Syaiful Azhar	JM	PT. Railink
86	Winta	JM	PT. Railink
87	Yusria Herawan		Satlantas
88	Prio Achmad P.		Satlantas
89	Ita Ginting		Satlantas Karo Regency
90	Eben O. Z.	Dosen	UHN Medan City
91	Bartholomeus	Dosen	Univ HKBP Nommensen Medan City
92	Desfrizal	Kasie	UPT GUSIT
93	Evi Nurhayati	Kepala	UPT Langkat
94	Thomas Andrian	Kepala	UPT PSP Dolsanggul
95	Medis S		USU
96	Reza	Asisten 2	Mayor Office Binjai City