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COOPERATION IN PREPARATION OF FULL BRT SYSTEM DEVELOPMENT PROGRAM AT BRT TRANS SEMARANG

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ABSTRACT

Urban transportation services such as Bus Repid Transit (BRT) as the main issue in the circle of transportation planning, the Semarang City Government built an urban transportation system for public services so that there is cooperation in the preparation of the Trans Semarang BRT system full development program. Understanding policy aspects at both the central and regional levels that can improve public transportation performance can provide a broader perspective among policymakers to develop and implement BRT systems, especially in developing countries. For this purpose, through cooperation in the preparation of a full BRT system development program at the Trans Semarang BRT through sustainable transportation policies and infrastructure development in line with the national urban transportation program. Using a qualitative approach, the results showed that various policy elements can help improve Trans Semarang services. Increasing changes in cooperation relationships in the public transportation management system and preparing a full BRT system development program at BRT Trans Semarang with stakeholders.

KEYWORDS *Cooperation, Development Program, Trans Semarang BRT System*

INTRODUCTION

The Bus Rapid Transit (BRT) system is one of the most popular public transportation systems in the world as a low-cost alternative to public transportation (Cervero, 2013). This is reinforced by the statement that effective road-based public transportation (buses and paratransit) is a central driver of economic growth in developing cities (Zhou, Wang, & Yang, 2019). BRT can operate in various environments without the need for expensive infrastructure

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construction and takes a long time to build (Nikitas & Karlsson, 2015). These views make the Ministry of Transportation's move to promote BRT as the main alternative to urban transportation understandable. This is based on the increasing rate of urbanization which has an impact on increasing the number and density of urban population. The increase in population numbers and density then increases the number of private motorized vehicles due to the lack of availability of alternative public transportation modes in urban Indonesia. The BRT system is considered the most financially and technically efficient step for Indonesian cities to initiate significant and much-needed changes towards sustainable urban transportation and contribute to climate change impacts (GIZ SUTRINAMA, 2016).

The next challenge is that not all local governments at the city level have sufficient capacity to actually plan in detail and implement operational steps in developing an effective BRT system (GIZ SUTRINAMA, 2016). To boost local government capacity in efforts to develop a sustainable and environmentally friendly transportation sector, the Ministry of Transportation is working with GIZ on a sustainable urban transportation development program. The big program consists of two program parts, namely SUTRINAMA (Sustainable Urban Transport) and INDOBUS (Indonesian Bus Rapid Transit Corridor Development). In both programs, GIZ is responsible for providing technical assistance to the government at the national and regional levels. The memorandum of understanding between the Ministry of Transportation and GIZ for both programs was signed on 18 December 2017 (NAMA Facility, 2018a).

The SUTRINAMA program has the goal of supporting climate change mitigation through sustainable transportation policies and infrastructure development that are in line with the national urban transportation program. This program also includes capacity building and the establishment of subsidy and investment schemes for the development of sustainable urban transport infrastructure. Meanwhile the INDOBUS Program is focused on the goal of developing special corridors for BRT in five pilot cities (Rahayu, 2019). The city of Semarang together with being one of the pilot projects appointed by the Ministry of Transportation as recipients of technical assistance from the INDOBUS Program. The involvement of the City of Semarang in the INDOBUS Program is to support preparations for the construction of a special route on the BRT Trans Semarang service corridor.

Table 1
SUTRINAMA and INDOBUS Program Details

	SUTRI NAMA	INDOBUS
Timeframe	2017 – 2022	
Total Funding – Grant	21 Million Euro (± IDR 290 Billion*)	
Technical Assistance	5.5 Mio Euro (± IDR 77 Bn)	7.1 Mio Euro (± IDR 98 Bn)
Financial Component	8.5 Mio Euro (± IDR 119 Bn)	-
Matching Fund	17 Mio Euro (± IDR 238 Bn)	-
Source of Fund	NAMA Facility: BMUB DE and BEIS UK (formerly DECC UK)	SECO (Swiss)
Implementing Partner	Ministry of Transportation Secretary General (cq. Centre for Sustainable Transport Management)	Ministry of Transportation Director General Land Transport (cq. Directorate Tranportation and Multi-modes)
Objective	Transforming urban transport in Indonesia with a mix of **investment measures** and **capacity-building** provided through a national sustainable urban transport program	Selected Indonesian Cities include in their urban transport structures **BRT as mass rapid transit backbone** and base for **integrated urban transport systems** contributing to an improvement of the cities' liveability and reduction of traffic congestion

*1 Euro = RP 14.000

Source: Beran, 2019

RESEARCH METHOD

The data used in this study is secondary data in the form of publications and regional development documents or reports from related agencies such as the central agency of the Central Ministry of Transportation, Semarang City Transportation Service and other cooperative PTs. The entire data is accessed and collected online from the available agency websites. In addition, a literature review was also carried out on relevant scientific articles, especially previous studies related to cooperation in preparing a full BRT system development program for BRT Trans Semarang.

This research is qualitative in nature, so for data processing and analysis using descriptive analysis was carried out to analyze cooperation in preparing a full BRT system development program at BRT Trans Semarang. The process of data analysis begins by examining all available data from various sources, namely through observation, interviews, and documentation. Data analysis in qualitative research is carried out when data collection takes place, after completing data collection within a certain period. Activities in analyzing qualitative data are Data Reduction, Data Presentation, and Drawing Conclusions.

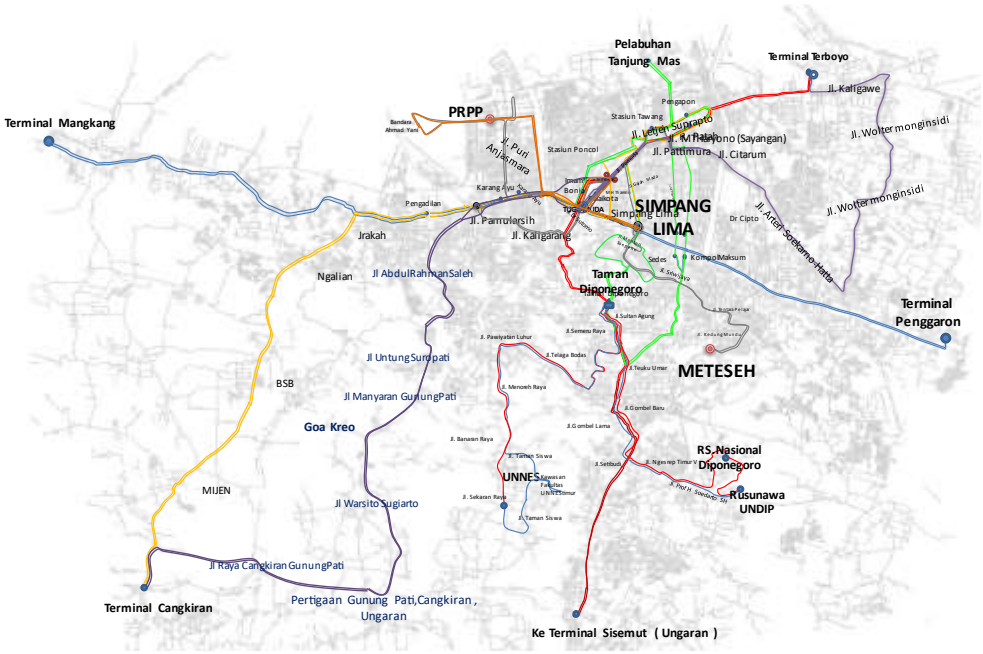
The documents collected were in the form of study documents and transportation planning that were compiled at both the central government and regional government levels. In qualitative research, emphasis is placed on the interpretation of empirical material as well as on developing an understanding of the problem being investigated. A qualitative approach was chosen to gain insight into cooperation in preparing a full BRT system development program at BRT Trans Semarang.

RESULT AND DISCUSSION

Condition of BRT Trans Semarang

The city of Semarang has a vehicle growth rate of around 16% annually, while the expansion of city roads only increases by 0.1% per year (Insani et al., 2021). Without the provision of adequate transportation services and infrastructure, the growth in the number of private and commuter vehicles becomes a burden on city traffic, causing congestion. Congestion problems and the large number of private vehicles also have an impact on the environment because carbon emissions from road transportation are one of the biggest contributors to global climate change and urban health problems (Zhao et al., 2013). The city of Semarang needs a comprehensive public transportation system that allows people's mobility to be effective and efficient and also to reduce the use of private vehicles which have the potential to produce more carbon emissions (Nugroho, 2019). The efforts made by the Semarang City Government to overcome this condition are through the development of the Trans Semarang Bus Rapid Transit (BRT) service.

BRT Trans Semarang officially operated in September 2009. The development of BRT Trans Semarang as part of the city government's agenda is also part of the Urban Public Transport Revitalization Program by the Ministry of Transportation based on Law Number 22 of 2009 concerning Road Traffic and Transportation. The program provides stimulation to local governments in the form of assistance from bus rapid transit (BRT) fleets to improve urban public transport services and the city of Semarang is one of the recipients. These fleets are then operated by the Semarang City Transportation Agency together with the designated operators through an auction process.



Information:
Koridor I: Mangkang – Penggaron
Koridor II: Terboyo – Ungaran
Koridor III: Tanjung Mas – Akpol
Koridor IV: Stasiun Tawang – Cangkiran
Koridor V: Meteseh – PRPP
Korido
r VI: Undip – Unnes
Koridor VII: Terboyo – Bangetayu – Pemuda
Koridor VIII: Terminal Cangkiran – Gunungpati – Simpang Lima

Figure 1
BRT Trans Semarang Corridor Service Route
Source: BLU Trans Semarang, 2021

At the beginning of its operation, the BRT Trans Semarang was under the management of the Mangkang Terminal Service Technical Implementation Unit, Semarang City Transportation Service in accordance with the Decree of the Mayor of Semarang No. 551.2/147 of 2010 dated May 10, 2010. After going through several changes to the management structure, finally since January 3 2017 The management of the Trans Semarang BRT is the responsibility of the Trans Semarang Public Service Agency (BLU), which is structurally under the Semarang City Transportation Agency. The appointment of the Trans Semarang BLU is based on Semarang Mayor Regulation Number 1 of 2017 concerning the Governance Pattern of the Public Service Agency for the Trans Semarang Regional Technical Implementation Unit. Until 2020, BRT Trans Semarang serves eight main BRT corridors supported by three feeder routes, all of which connect activity centers and settlements in Semarang City and its surroundings (see Fig. 1).

The problem that was later found in the implementation of BRT Trans Semarang services was the low level of use of public transportation, especially

BRT Trans Semarang (see Figure 2). The dominant use of private vehicles indicates that the purpose of BRT Trans Semarang services to reduce congestion and carbon emissions in the city of Semarang has not been achieved. According to research conducted by the Institute for Transportation and Development Policy (ITDP) Indonesia and The Institute for Global Environmental Strategies (IGES) in 2017, one of the strategies that can be implemented to improve service quality and performance of BRT Trans Semarang is through the development of a full BRT system. which implements a special lane (dedicated lane) in its corridor (ITDP Indonesia, 2019). Full BRT system means that the services and systems implemented will comply with internationally accepted integrated BRT standards.

Figure 2
Mode of Share in Semarang City in 2017
Source: ITDP Indonesia, 2019

The level of use of public transportation or mode share in the Semarang city area is still considered very low with this number, so that congestion is always a daily sight. Especially during the hours of departure and return from work in offices, companies and so on. The ideal is the mode share of public transport at least 60%. So there will be no traffic jams. "That is one of the main indicators in the Trans Semarang BRT (Bus Rapid Transit (BRT) collaboration) to facilitate public transportation in serving the community.

Collaboration in the Trans Semarang Full BRT System Development Program

Looking at the conditions and issues related to efforts to improve Trans Semarang BRT services through the development of a full BRT system, this study will discuss the institutional dimensions related to collaborative processes for the implementation of the special route development program and its supports to achieve international standard BRT services in Semarang City. Some of the things that will be discussed in this section are cooperation in program preparation, stakeholder analysis, as well as issues and opportunities for cooperation.

Preparation of the Trans Semarang Full BRT System Development Program

In mid-2017 to early 2018 the Semarang City Government has conducted a study on the development of the Trans Semarang BRT which is supported by ITDP Indonesia and IGES (ITDP Indonesia, 2019). This study is part of the collaboration between the City of Semarang as a member of the 100 Resilient Cities network which has a mobility agenda that is integrated into the resilient city development strategy compiled in 2016 (Insani et al., 2021). One of the results of the study is the direction for the development of a special lane for Corridor I BRT Trans Semarang as an effort to improve existing system services and to reduce carbon emissions generated from the transportation sector. The appointment of Semarang City as one of the pilot projects for the INDOBUS Program and supported by the results of the study then moved the Semarang City Government to seek financial support through collaboration with PT. SMI (NAME Facility, 2018b).

Through collaboration with PT. SMI, Semarang City managed to get financial assistance through the Green Climate Fund (GCF) scheme for preparing an integrated and sustainable BRT system development program (Green Climate Fund, 2018). GCF is the financial mechanism of the United Nations Framework Convention on Climate Change (UNFCCC) which was formed in 2010 with the aim of supporting climate change mitigation and adaptation projects in developing countries. GCF invests through GCF partner organizations called Accredited Entities where PT. SMI is a selected partner from Indonesia. As an Accredited Entity, PT. SMI can submit proposals to obtain funding from the GCF through two facilities, namely program or project preparation grants and project development loans. Through grants for the preparation of the full BRT system development, the funding obtained is allocated to carry out studies and analysis supporting the development of a new system which will later have a dedicated lane or special lane.

Based on the financing proposal submitted by PT. SMI (Green Climate Fund, 2018) together with the Ministry of Finance's Fiscal Policy Agency on the GCF, the total cost required for the implementation of this program is estimated at 1.258 million USD. Funding from the INDOBUS SUTRINAMA funding source will contribute USD 300,000 for financing at the preparation stage, especially for pre-feasibility studies, legal and policy reviews, gender analysis, stakeholder analysis and management, and risk analysis activities. Funding of 788,000 USD sourced from GCF and managed by PT. The SMI will be used to prepare a feasibility study covering technical, financial and operational aspects including assessment of bus technology, development of low-emission integrated mass transit plans, technical preparation of low-carbon transport program investments, non-motorised transport services, low-carbon mobility, legal review and policies, environmental and social impact assessments, gender analysis, and land acquisition and acquisition plans (LARAP). In addition, during the preparation for the development of the full BRT system, the Municipal Government of Semarang will also contribute USD 170,000 in the form of services and goods.

Figure 2
Timeline for the Preparation of the Trans Semarang Full BRT System Development
Source: processed from various sources, 2018-2021

The Semarang city government began working together and building an agreement with the SUTRINAMA Program on November 18 2017, so that from 2017 to 2018 there will be the development of BRT Trans Semarang in collaboration with IGES Japan and ITDP Indonesia for transportation in Indonesia. On December 28, 2018 there was an agreement to finance a sustainable program in the city of Semarang through the Green Climate Fund (GCF) bridged by PT. high school Trans Semarang development began in early 2019 until September 2019 with the formation of the Streeng Committee for the SUTRINAMA INDOBUS program at the national level. Agreement Signing of a memorandum of understanding in 2019 with the Ministry of Transportation with five cities in Indonesia, one of which is Semarang City. Feasibility study in five cities in 2020 to 2021 with the process of improving transportation.

With GCF financing and collaboration with PT. SMI, in early 2019, the Semarang City Government through the Transportation Service - BLU Trans Semarang began carrying out a pre-feasibility study for the development of the BRT Trans Semarang special route. Officially, technical assistance for the INDOBUS Program in Semarang City was carried out after the signing of a memorandum of understanding between GIZ, the Ministry of Transportation, and the Semarang City Government on October 8, 2019. In 2020, the feasibility study implementation process for the construction of special lanes began in stages in the five cities selected in the INDOBUS Program. Figure 2 shows all stages of the cooperation that was established in the framework of preparing the Trans Semarang full BRT system development program.

Mapping and Linkages Between Stakeholders

Stakeholder mapping or stakeholder mapping is carried out to find out the role of each stakeholder involved in the full BRT system development program for BRT Trans Semarang. Stakeholders involved are divided into three groups based on their institutional origins, namely at the international, national and local

levels. Then the involvement and roles of these stakeholders are divided into two stages, namely planning and implementation. What is meant by the planning stage here is the stage from the coordination, appointment, to the signing of the agreement. Meanwhile the implementation stage is all activities that run after the signing of the agreement is carried out until before the construction of the special route and its supporting facilities is carried out. Activities that are also included in the implementation stage are several activities that need to be prepared before construction is carried out. Table 2 shows the results of the identification and analysis of the involvement of each stakeholder.

Table 2
Stakeholder Mapping

Stakeholders	Role in the Stages of the Program	
	Planning	**Implementation**
	International	
NAMA Facility	INDOBUS SUTRINAMA Program fund provider	
State Secretariat of Economic Affairs of Switzerland (SECO)	INDOBUS SUTRINAMA Fund provider program	
Green Climate Fund (GCF)	Provider of funds for the Integrated and Sustainable BRT System Development Program in Semarang City through PT. high school	
GIZ	Responsible for the INDOBUS SUTRINAMA Program at the international level	
	Responsible for the INDOBUS SUTRINAMA Program at the international level	Technical assistance in the planning and implementation of BRT corridors with segregated bus lanes in the five pilot cities (through policy studies, gender studies and risk studies)

Stakeholders	Role in the Stages of the Program	
	Planning	**Implementation**
		Planning technical assistance and providing advice to management regarding BRT full system operations (stakeholder management)
National		
Ministry of Transportation	Person in Charge and Coordinator of the INDOBUS SUTRINAMA Program at the national level	
		SUTRINAMA Program Executor
Bappenas	Implementer of the INDOBUS SUTRINAMA Program	
The Fiscal Policy Agency (BKF) of the Ministry of Finance	National Designated Authority (NDA) untuk pembiayaan Green Climate Fund (GCF)	
PT. SMI	Accredited Entity untuk pembiayaan persiapan program melalui GCF	Provider of funds and technical assistance in implementing feasibility studies, social and environmental studies, and the LARAP process.
		Accredited Entity to finance the construction of a full BRT system through GCF and other sources.
Ministry of Public Works (PU)		Provider of National Level Road Use Permits
Local		
Semarang City Government	Person in charge and implementer of the program at the city level of Semarang, provider of financial support, provider of the regulatory framework supporting the program and building a full BRT system	
Central Java Provincial Office of Public Works		Provider of permits for use of Provincial Level Roads

Stakeholders	Role in the Stages of the Program	
	Planning	**Implementation**
Bappeda Kota Semarang	Provider of data and supporting planning products	Planners and program organizers and supporting activities for the implementation of full BRT system developers, providers of regulatory frameworks supporting programs and development of full BRT systems
		Coordinator of related offices at the city level involved in the full BRT system development program
Department of Transportation – BLU Trans Semarang	Pre-feasibility study implementing institution	Technical implementer of the INDOBUS program (including all activities within it) for BRT Trans Semarang
		Key communicator with PT SMI and the INDOBUS Secretariat
Public Works Department of Semarang City		BRT special line construction technical implementer
		Coordinator and technical implementer regarding permits for the use of cross-level government roads
		Executor in preparing the needs of road supporting infrastructure (pedestrian paths, traffic signs, and lighting)
Spatial Planning Service	Provider of spatial planning for the area around the track	Assist in the implementation of feasibility studies, social and environmental studies, and the LARAP process
environmental services		Assist in the implementation of feasibility studies, social and environmental studies, and the LARAP process

Stakeholders	Role in the Stages of the Program	
	Planning	**Implementation**
Land Procurement Committee		Executor of preparation and procurement or acquisition of land (LARAP)

Source: processed from Beran, 2019; Green Climate Fund, 2018; and analysis results, 2021

Based on the stakeholder mapping results, it is known that GIZ is an international stakeholder that has the most dominant role in the development of a full BRT system in Semarang City. As the program manager for providers at the international level as well as a provider of technical assistance to local governments, GIZ is a stakeholder that directly cooperates and interacts with stakeholders from the international, national and regional levels. At the national level, the dominant stakeholders are the Ministry of Transportation and also PT. high school As the person in charge and implementer at the national level, the Ministry of Transportation is the party whose role is to coordinate all institutional and administrative needs between stakeholders at the international level, in this case GIZ, and stakeholders at the local level, especially city governments. Meanwhile the important role of PT. SMI as a stakeholder at the national level can be seen from its role in accessing financing from the GCF and as the person in charge of the financing, as well as in its role as a cooperation partner with the Semarang City Government who also assists in technical processes during program implementation.

At the local level, Semarang City Government, Semarang City Bappeda, and also the Department of Transportation - Trans Semarang BLU have a dominant role from the planning to implementation stages. The Semarang City Bappeda acts as a planner and an extension of the Semarang City Government in charge of coordinating the relevant agencies at the city level involved in program implementation. Meanwhile, as the person in charge of operating the Trans Semarang BRT system, the Transportation Agency - Trans Semarang BLU is involved in all processes of developing a full BRT system. Other government agencies appear to have a dominant role at the implementation stage. Even though the current process is still up to the pre-feasibility study, the results of recommendations for the development of special lanes in some Corridor I lines (Fajlin, 2020) can be used as a basis for identifying processes that need to be carried out by stakeholders during the implementation stage. At the implementation stage it appears that the Office of Public Works, the Office of Spatial Planning and the Office of the Environment will be heavily involved as part of the technical implementation. The final stakeholder involved and will be more dominant in the implementation stage is the land acquisition committee which is ad-hoc in nature and will consist of the mayor and several representatives of related agencies. The formation of this land acquisition committee will be carried out based on the provisions in Government Regulation

Number 19 of 2021 concerning Implementation of Land Acquisition for Development in the Public Interest.

Based on the results of the role mapping obtained from stakeholder mapping, the interrelationships between stakeholders are identified. Considering the number of stakeholders who are interconnected and also at what stage the relationship and their roles are carried out, the linkages that are formed can be grouped into 6, namely in the form of flow of funds, indirect relationships, direct relationships, direct relationships with low levels of coordination, and direct relationships with high coordination (see Figure 3). The level of coordination is determined by whether the stakeholders in question have a role that requires them to work together within a certain period of time to complete certain activities in the program.

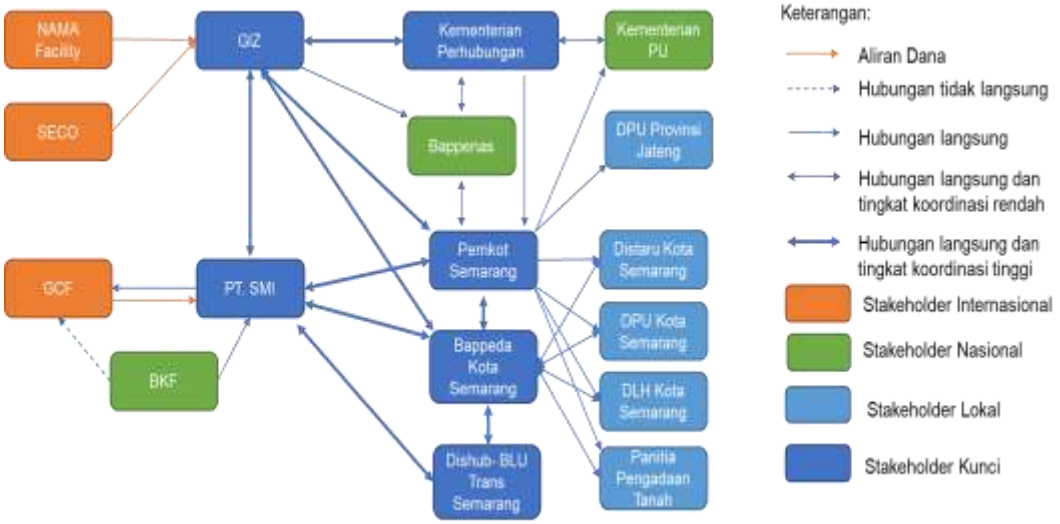


Figure 3
Linkages Between Stakeholders

This shows that Mapping the role of mapping greatly facilitates the flow of coordination with each stakeholder so that it can run according to procedures to facilitate company and government relations in transportation services in the city of Semarang.

Looking at the linkages that have been formed, it can be seen that there are 6 key stakeholders who are influential in the process of preparing for the development of the Trans Semarang full BRT system, namely GIZ, the Ministry of Transportation, PT. SMI, Semarang City Government, Semarang City Bappeda and also the Department of Transportation - BLU Trans Semarang. The six key stakeholders have a direct relationship with a high level of coordination. These stakeholders are also involved in the planning and implementation stages with tasks and roles that require support from one another. Because the processes and activities in the preparation planning stage have been carried out, the cooperation and coordination of the five key stakeholders is decisive in the success and smoothness of the implementation stage. Nonetheless, the level of coordination illustrated in Figure 3 cannot be used as a measure of the quality of

implementation and collaboration between stakeholders. A separate monitoring and comprehensive evaluation is needed to find out the performance of each stakeholder and their ability to fulfill their portion of their duties or roles.

Issues and Opportunities for Collaboration

Currently, the preparation of the Trans Semarang full BRT system development program has entered the implementation stage where the pre-feasibility study has been carried out and the results of provisional recommendations for further development have been produced. Based on the part-feasibility study process carried out, it is possible for the special BRT line to be built in Corridor I with a length of 12.8 kilometers (see Figure 4). The route will start from the Ngaliyan Intersection to the Fatmawati Intersection (Fajlin, 2020). The road section consists of roads that have the status of national roads, provincial roads and city roads so that during implementation it will require coordination across levels of government regarding permits for their use.

Figure 4
Recommendations for a Special Route for the Development of the Full BRT system
Source: Nugroho, 2021

An issue that has the potential to arise related to the varying status of roads where special lanes will be built is how the stakeholders involved can build effective and efficient communication and collaboration. This collaboration is certainly in accordance with the main tasks of each in ensuring the fulfillment of permit requirements so as not to hinder the further development process. At least there are several stakeholders involved in this issue, namely the Ministry of Public Works, especially the Directorate General of Highways as the authority holder for national roads, the Central Java Provincial Public Works Service as the authority holder for provincial roads, the Semarang City Public Works Service as the authority holder for city roads, and the Government. Semarang City as program executor.

In addition to the need for cooperation related to permits, planning and preparation processes for the construction of special BRT routes also require

cooperation between various agencies at the city level of Semarang. Cooperation between the Department of Transportation - BLU Trans Semarang as the technical implementer of the INDOBUS program with Bappeda as the coordinator at the city level and other technical agencies such as the Office of Public Works, the Office of Spatial Planning and the Office of the Environment is needed in the planning process, preparation of related regulations, land provision, and also construction of supporting facilities required by the new BRT system. The intended planning includes program and activity planning, spatial planning, policy planning, as well as planning for the required financing. Financing planning for development also requires collaboration with PT. SMI and GIZ as technical assistance and funding providers. Together with these two stakeholders, the Semarang City Government, the Semarang City Bappeda, and the Semarang City Transportation Agency need to build an agreement regarding the financing mechanism for the construction of a full BRT system in accordance with the plans and results of the feasibility study.

Tabel 3
Isu dan Peluang Kerjasama

Component	Issue	Oppoturnity
Licensing	Coordination between national, provincial and city level governments for road use permits	Formation of a special working group for the implementation of the Full BRT system Development Program
Program/Activity Planning	Coordination between city-level stakeholders in preparing activity plans, spatial planning plans, and policy plans related to the construction of BRT special lanes and the surrounding area	
Development Financing	The need for a financing mechanism for the construction of special BRT lines and supporting facilities	Preparation of an alternative financing mechanism together with PT. SMI and GIZ
	The need for a financing mechanism in the process of providing land for supporting facilities for the BRT special lane	

Based on the elaboration of the issues previously described, at least existing cooperation issues can be grouped into three components, namely licensing, program/activity planning, and development financing. Of the three components, there are two opportunities for cooperation that can be used to resolve the

identified issues. The first opportunity is the establishment of a special working group (pokja) by the Municipal Government of Semarang for the implementation of the Trans Semarang Full BRT System Development Program. The formation of this working group is based on lessons learned from Batam City which is also one of the designated cities for the INDOBUS pilot project. Through the Decree of the Mayor of Batam Number KPTS. 159/HK/I/2020 concerning the Working Group (Pokja) for the SUTRINAMA and INDOBUS Pilot Projects in Batam City, the Batam City Government determines the agencies involved in the implementation team for the SUTRINAMA INDOBUS program. Through the formation of this working group, the division of roles and tasks in the required stages becomes clearer, as well as the flow of coordination and cooperation. Referring to the Batam City Working Group, the Department of Transportation has the role of head of program implementation with the BLU as its secretary, while Bappeda is in charge of planning and coordinating related technical offices, each of which provides reports according to their respective fields. This first opportunity can be a solution for issues in the licensing component and the program/activity planning component.

The second opportunity is the preparation of an alternative financing mechanism together with PT. SMI and GIZ. This opportunity has the potential to be a solution to the issue of development financing components. The entire process of preparing the full BRT System development program for BRT Trans Semarang is a form of implementing an alternative financing scheme, namely cooperation between the government and business entities (PPP) in the context of developing transportation infrastructure. This collaboration is in accordance with Presidential Regulation Number 38 of 2015 concerning Public Private Partnership (PPP), which includes components of transportation infrastructure as financing objects. Through collaboration with international (GCF and GIZ) and national financing institutions (PT. SMI), the Semarang City Government has the opportunity to obtain technical and financial support to carry out supporting activities for the development of a full BRT system. Through alternative financing schemes such as PPP, the Semarang City Government can ensure the resources needed to carry out the program up to the development stage.

Based on the GCF proposal submitted by PT. SMI for the development of BRT Trans Semarang (Green Climate Fund, 2018), it is known that the funding for the preparation of the full BRT system development program will produce outcomes, one of which is a proposal to submit financing for the physical development of the full BRT Trans Semarang system. The development financing proposal will later be submitted again to the GCF as well as other funding sources including from PT. SMI, NAMA Facility, and also the central government (Green Climate Fund, 2018). This form of financing is one of the alternative financing schemes that can assist the Semarang City Government in realizing the plan to develop the new BRT Trans Semarang system.

The need for financing the development of a full BRT system in Semarang City is not only limited to infrastructure in the form of lanes and bus stop facilities, but also the provision of an intelligent transportation system, ticketing system and improvement of non-motorized transportation facilities such as pedestrian paths and

bicycle lanes (Nugroho, 2021). Another alternative financing scheme that can be planned is Corporate Social Responsibility (CSR). CSR is aimed at providing BRT supporting facilities in accordance with the scope of CSR as stipulated in Semarang City Regional Regulation Number 7 of 2015 concerning Partnership and Community Development Programs as Corporate Social Responsibility in the City of Semarang, specifically to improve environmental facilities and infrastructure. An example of CSR that has previously been implemented in support of BRT Trans Semarang services is the provision of BRT bus stops and also vending machines for digital ticketing by Bank BRI and also PT. Gojek Indonesia (BLU Trans Semarang, 2021; Mulyani, 2019).

Lessons Learned: Multistakeholder Cooperation as a Driver for the Development and Improvement of Public Services

The Semarang City Government cooperates with various stakeholders to improve the services of its public transportation system, namely BRT Trans Semarang. The collaboration process carried out by the Semarang City Government is implemented through a collaborative study as a member of the 100 Resilient Cities international network. The collaborative study that was carried out resulted in recommendations, one of which was the development of the Trans Semarang BRT system into a full BRT system. The resulting recommendations are then in line with the appointment of Semarang City as one of the INDOBUS Program pilot projects by the Ministry of Transportation in collaboration with GIZ. These processes continued in the expansion of the Semarang City Government partnership with PT. SMI as an effort to obtain financial support and technical assistance in the development of a full BRT system.

Various collaborations were forged by the Semarang City Government in order to develop BRT services starting from policy-oriented study activities to practical actions in preparing for the development of a full BRT system. During this process, the City of Semarang is required to be able to create a conducive environment to realize productive cooperation. Collaboration with various national and international stakeholders (multi-stakeholder) provides opportunities for the Semarang City Government to innovate and develop more effective and efficient development plans (Uji, 2015). Multi-stakeholder collaboration can help the Semarang City Government overcome technical and financial capacity limitations in carrying out development (Hendratni et al., 2021).

Multi-stakeholder collaboration is one of the approaches that is part of the Sustainable Development Goals (TPB) agenda to achieve sustainable development success (Bappenas, 2020). This kind of cooperation, as is also being done by the Semarang City Government, encourages local governments to carry out development policies, programs and investments that are more accountable and easier to account for (Bappenas, 2020). The multi-stakeholder collaboration carried out by the City Government of Semarang in the development of a full BRT system is a lesson learned which shows that this approach can assist local governments in managing the resources needed as well as the risks that may arise in the implementation of regional development agendas (Hendratni et al., 2021).

However, to ensure that the multi-stakeholder collaboration that is established runs smoothly and succeeds in achieving the planned goals, commitment and coordination between the stakeholders involved is crucial (Hendratni et al., 2021; Uji, 2015).

The involvement of stakeholders outside the government in public affairs such as the provision of public transportation services can prevent failures in responding to community needs (Uji, 2015). Moreover, the increasing complexity of community needs demands higher quality and quantity of public services to support the achievement of welfare. On the other hand, the capacity of the government in the development and delivery of public services is not always adequate. Multi-stakeholder collaboration allows for the involvement of resources from stakeholders outside the government to support the delivery of public services so that the scope of services is also wider (Uji, 2015). This is in line with regulations regarding cooperation in the provision of public services as stipulated in Law Number 29 of 2009 concerning Public Services. The achievement of efficiency and effectiveness of public services through collaboration between service providers will then have an impact on the level of public trust in the government and the stakeholders involved.

CONCLUSION

Cooperation Relations in preparing a full BRT system development program for the BRT Trans Semarang, the City Government of Semarang has collaborated with various stakeholders to improve the services of its public transportation system, namely the BRT Trans Semarang. The collaboration process carried out by the Semarang City Government is implemented through a collaborative study as a member of the 100 Resilient Cities international network. The collaborative study that was carried out resulted in recommendations, one of which was the development of the Trans Semarang BRT system into a full BRT system.

The need for financing the construction of a full BRT system in Semarang City is not only limited to infrastructure in the form of lanes and bus stop facilities, but also the provision of an intelligent transportation system, ticketing system and improvement of non-motorized transportation facilities such as pedestrian and bicycle lanes.

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