

Research article

Mentality, Systems, and Networking (MSN) Model in Semarang Smart City

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Abstract.

The fourth modern upheaval period (Industry 4.0) is an opportunity for local governments to carefully develop administrations for the general public. The presence of Semarang Smart City is intended to provide convenience and efficiency for the general public and Regional Government in obtaining a range of data about Semarang City. This review aimed to gain an overview of Semarang Smart City using the mindset, frameworks, and systems administration (MSN) model. This research examined the Semarang Regional Government's methodology of mindset, disposition, conduct, and obligation, which has a particular focus on the Semarang Smart City and the RPJMD Kota Semarang. The RPJMD contained pointers that were upheld by the city's execution. The results of the review from the frameworks approach indicated that there was support from the Semarang City Government (Pemkot) to break the old organization's way of working. The findings from the attitude frameworks and systems administration approach demonstrated the unification of the idea of manageability, availability, inventiveness, and social incorporation with the 6 Smart (6s): smart administration, smart marking, smart economy, smart living, smart society, and smart climate, to become the 10 main programs in the RPJMD of Semarang City in 2016-2021.

Keywords: model mentality, systems, networking, Semarang Smart City

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1. INTRODUCTION

In this cutting edge period, an idea called Smart City has arisen. A city is supposed to be smart assuming it can truly comprehend the situation inside the, comprehend the issue profoundly, in this way, ready to follow up on the issue. While in the book *Pengenalan dan Pengembangan Smart City*, Smart city is characterized as an idea of city improvement and the executives by using Data and Correspondence Innovation (ICT) to interface, screen, and control different assets in the city all the more successfully and proficiently to boost administrations to its residents and backing practical turn of events. (<http://smartcity.wg.ugm.ac.id/?p=5958>)(1).

The Smart City idea for the Indonesian locale is generally new in light of the fact that this idea has quite recently started to be applied in a few major urban communities in Indonesia which are accepted to have the option to tackle different sorts of


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issues that existed in metropolitan regions like blockage, resident wellbeing, public administrations, and trash collection. Likewise, to take care of issues that happened in metropolitan regions, this idea is relied upon to build public support in giving analysis, giving information, and managing the exercises of the public authority organization.

The idea of a smart city is worried about a city request that makes it simpler for individuals to get data rapidly and unequivocally. The 6 parts of a smart city incorporate Smart Administration, Smart Individuals, Smart Living, Smart Portability, Smart Economy, and Smart Climate. A few urban areas that have carried out the Smart City idea are Jakarta, Bandung, Semarang, Yogyakarta, Surabaya, and Malang.

The execution of Semarang Smart City started in 2013, which started with the marking of an Update of Comprehension (MoU) between the Chairman of Semarang, Hendrar Prihadi (Semarang Regional Government) and PT. Telkom with respect to the Usage of Innovation, Data and Correspondence to Understand the Computerized Taxpayer supported organization Program through Smart City in the Semarang City District. As a development, Telkom introduced Free Wifi.id (2,300 focuses) in a few places like schools, workplaces, public regions, etc.

The achievement of the shrewd society idea relies upon the presence of different components, including; (1). Innovative, suggests the capacity to create valuable and new works, both at the individual and authoritative levels (Schilling, 2013)(2), (2). Imaginative, infers the functional execution of a thought into another device or cycle that is gainful to people, associations, and society (Schilling, 2013; Fontana, 2011)(1). These two components should be acknowledged and incorporated into a city arranging framework.

Various models of public policy implementation have been put forward by several experts, including the Mentality, Systems, and Networking Model (MSN-Model), which synergizes the role and existence of the three dimensions of the policy of stakeholders, i.e., Government, Private Sector, and Civil Society. In this study, we look at the implementation of the Semarang Smart City Policy from the Mentality, Systems, and Networking Approach Model (MSN Approach Model).

2. LITERATURE

1. Smart City Concept

Smart city has numerous definitions seen from many examinations that have been done previously. One of the definitions is, "A Smart City is a city well acting in a forward manner examining these six qualities, based on the "shrewd" blend of gifts and exercises of self-conclusive, free and mindful residents" (Giffinger et al.

al.2007:11)(3). The definition above clarifies that a Savvy City is a city that performs well and has future objectives in the economy, society, administration, versatility, climate, and life, which is based on a brilliant mix of exercises of free and cognizant residents.

Some different meanings of brilliant city are,

"... .a city to be brilliant when interests in human and social capital and customary (transport) and current (ICT) correspondence framework fuel maintainable financial development and a great of life, with a savvy the board of regular assets, through participatory administration" (Caragliu et al, 2011:50)(4).

"A smart city is a clear cut topographical region, where high advances like ICT , calculated, energy creation, etc, collaborate to make benefits for residents as far as prosperity, consideration and investment, natural quality, keen turn of events; it is represented by an obvious pool of subjects, ready to express the principles and strategy for the regional government and improvement" (Dameri 2017:7)(4)

2. Public Policy Implementation

As indicated by Nakamura and Smallwood (in Tangkilisan 2003:17)(4), matters identifying with strategy execution are effective in assessing issues and afterward deciphered them into explicit choices. Subsequently, execution is a unique interaction that includes constant endeavors to discover what will and should be possible to tackle public issues happened. Subsequently, execution directs exercises that lead to the situation of a program to the ideal arrangement destinations.

3. Mentality, Systems, Networking Model

In the area of Good Governance, three areas are in direct contact with public arrangement and administration the executives, improvement, and society, to be specific Government, Private Area, and Common Society. Government in its reality both as the policymakers and strategy entertainers, just as the public authority as the executing contraption or strategy implementers. The private area, as a party with an interest in approach items that keep up with the soundness of financial and public activity through the creation and arrangement of business openings for laborers of useful age and having specific abilities, ought to be at the bleeding edge to take part in supporting the execution of strategies that blessing to the public interest. In the interim, common society (Colleges, Press, NGOs) as the party that ought to know that common society is presently not just the object of a strategy, yet additionally the subject. For this situation, the inclusion of society in each phase of improvement strategy, beginning from arranging, and carrying out,

observing, and no less significant is the association of the local area in getting advancement results that are genuinely in touch with the public interest.

As a legitimate result of this view, the creators offer that it is important to synergize the jobs and presence of the three components of the strategy of partners, which can be acknowledged and completed through the mindset, frameworks, and systems administration approach (or called the Arrangement Execution Model through MSN-Approach)(5) in the approach execution stage. The collaboration between the three methodologies can be delineated in the accompanying figure:

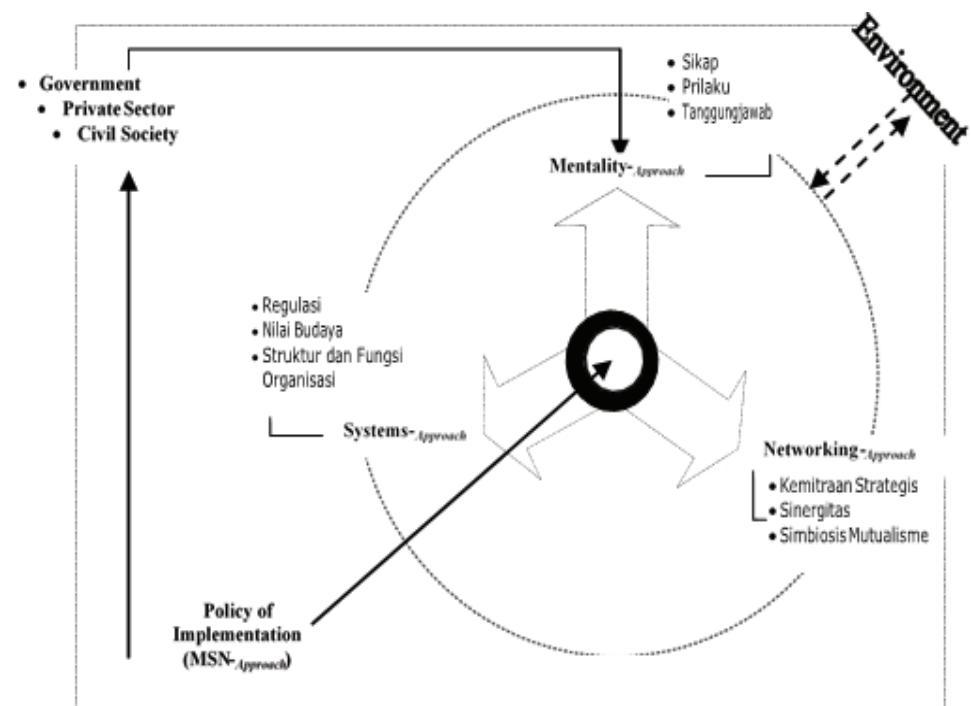


Figure 1: MSN -Approach Model in Public Policy Implementation.

Figure 1 clarifies that a public arrangement will be real and coordinated in its execution, assuming it uses or focuses on at minimum what is known as the MSN-Approach Model (Mentality Approach, Systems Approach, and Networking Approach)(5) or Mental, Frameworks, and Participation Organizations Approach between Government, Private, and Community.

4. Mentality – Approach

In the execution part of an arrangement, what should be considered is the degree to which the approach item can contact and change the conduct of the contraption (policymakers and implementers), business specialists, and furthermore the local area as the subject and object of the actual strategy. Basically this aspect shows in the center pointers:

- a) Government demeanor: profound disposition; social mentality
 - b) Government Conduct: as per the code of morals; Activities that are reliable with his qualities and convictions; follow up on qualities; follow up on esteem despite the fact that there is an extensive danger or cost
 - c) Government Obligations: do errands as per methodology; capacity to oversee time; readiness to wrap up responsibilities; capacity to face challenges
- 2) Systems Approach
 - a) Regulatory Framework: public interest; participatory; useful
 - b) Cultural esteem framework: nearby insight, family relationship, common collaboration
 - c) System design and capacity of the association: communication; relationship; uprightness
- 3) Networking Approach
 - a) Strategic association: Collaboration, equity, transparency, common advantage
 - b) Synergy: institutional perspectives, strategy and program planning, HR, information and data, checking and assessment methodologies for approaches and projects
 - c) Mutualism Beneficial interaction: the requirement for one another, benefit one another, support one another

3. RESEARCH METHODS

This review was utilizing an illustrative kind of examination by utilizing a subjective methodology. Through this strategy, the creators were attempting to get an efficient, authentic and clear image of the peculiarities that happened regarding the themes talked about. Expressive exploration is research that depicts and depicts the situation of the examination object at present as it depends on current realities (Moleong. 2008:6)(6).

The focal point of this review was Mental, System, Networking (MSN) Approach Model in Semarang Smart City.

The information wellspring of the review was the subject from which the information could be acquired. The kinds of information sources were witnesses, parties identified with the implementation of smart society policies in realizing Semarang Smart City. Witnesses in this review were:

The concentration in this examination was the Mental, System, Networking (MSN) Approach Model in Semarang Smart City.

TABLE 1: Status of Informants, Information Required, Research Methods, and Research Instruments

No	Informant Status	Information Required	Method	Instrument
1	Government	Mentality Systems Approach Approach Networking Approach	Deep interview Observation Documentation Study	Interview guidelines Observation guidelines
2	Private Sector			
3	Civil Society			

Information investigation is a movement to arrange information to get a reasonable and significant example of connections and to evaluate significant information and report it to other intrigued individuals. There are different ways of breaking down information, one of which is as depicted by Miles and Huberman, as follow (Usman 2011:85)(7):

a. Data reduction

The information acquired by specialists in the field through meetings, perceptions, and documentation are diminished by summing up, choosing, and zeroing in on information. Information assortment, information show, information decrease. End drawing/check under the examination targets. At this stage, the specialist diminished the information by arranging, sorting, and making deliberations from field notes, meetings, and documentation.

b. Data presentation

The introduction of the information is done later the information has been diminished or summed up. Information acquired from perceptions, meetings, and documentation are investigated and afterward introduced as meeting portrayal. Information that has been introduced as meeting portrayal is coded for information to arrange the information so scientists can examine the information rapidly and without any problem.

c. Conclusion drawing/verification

The last advance in the subjective information investigation of the intuitive model is finishing up confirmation. In light of the information that has been decreased and introduced, the scientist makes ends that are upheld by solid proof at the information assortment stage. Ends are replies to the detailing of issues and questions that have been communicated by scientists since the start.

4. DATA AND ANALYSIS

Semarang is one of the cities that has implemented the Semarang Smart City program, a program of the Ministry of Communication and Information that is intended to present a new way of serving the community by local governments through technology. The goal is to accelerate and facilitate public services and how to accelerate the potential that exists in each region.

In the implementation of the Semarang Smart City, there is a Semarang Smart City Master Plan (Semarang Smart City Masterplan) which has the following objectives:

- a. Accelerate the handling of priority programs in the RPJMD(8);
- b. Develop Semarang Smart City based on 6 (six) dimensions of Smart City: Smart Government; Smart Economy; Smart Society; Smart Branding; Smart Living; and Smart Environment
- c. Setting priorities for Smart City development from 2018 to 2021
- d. Manage optimal Smart City development from planning, implementation, control, monitoring, and evaluation(9).

The scope of the Semarang Smart City Masterplan refers to the 10 (ten) Mayor's policy priorities contained in the 2016-2021 RPJMD(8), including:

- a. Economic growth rate
- b. Contribution of categories related to trade and services to GRDP
- c. Contribution of the Manufacturing Industry category to GRDP
- d. Investment value
- e. Percentage of flooded area and rob
- f. Human Development Index
- g. Gender development index
- h. Poverty rate
- i. Open unemployment rate
- j. Bureaucratic reform index

The scope of the Semarang Smart City Masterplan(10) is carried out with the work program of the Regional Apparatus. Regional work programs also include those that are participatory or coordinating from stakeholders: the community; private; College; and others.

The stages of implementing Semarang Smart City are as follow:

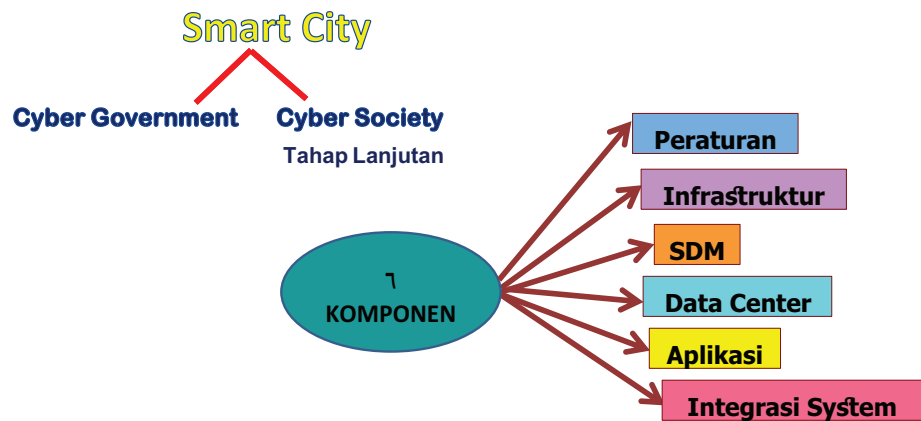


Figure 2: Implementation Phase of Semarang Smart City.

Semarang Smart City indicators are as follows:



1. Human Capital
2. Social Cohesion
3. Economy
4. Public management
5. Governance
6. Environment
7. Mobility and transportation
8. City planning
9. International outreach
10. Technology

Figure 3: Semarang Smart City Indicator.

The initial stage of implementing the Semarang Smart City is the preparation of the Semarang Smart City Masterplan. Meanwhile, the flow of the preparation of the Semarang Smart City is as follows:

There are roles of Government, Private Sector, and Civil Society actors in supporting the implementation of Semarang Smart City(11):

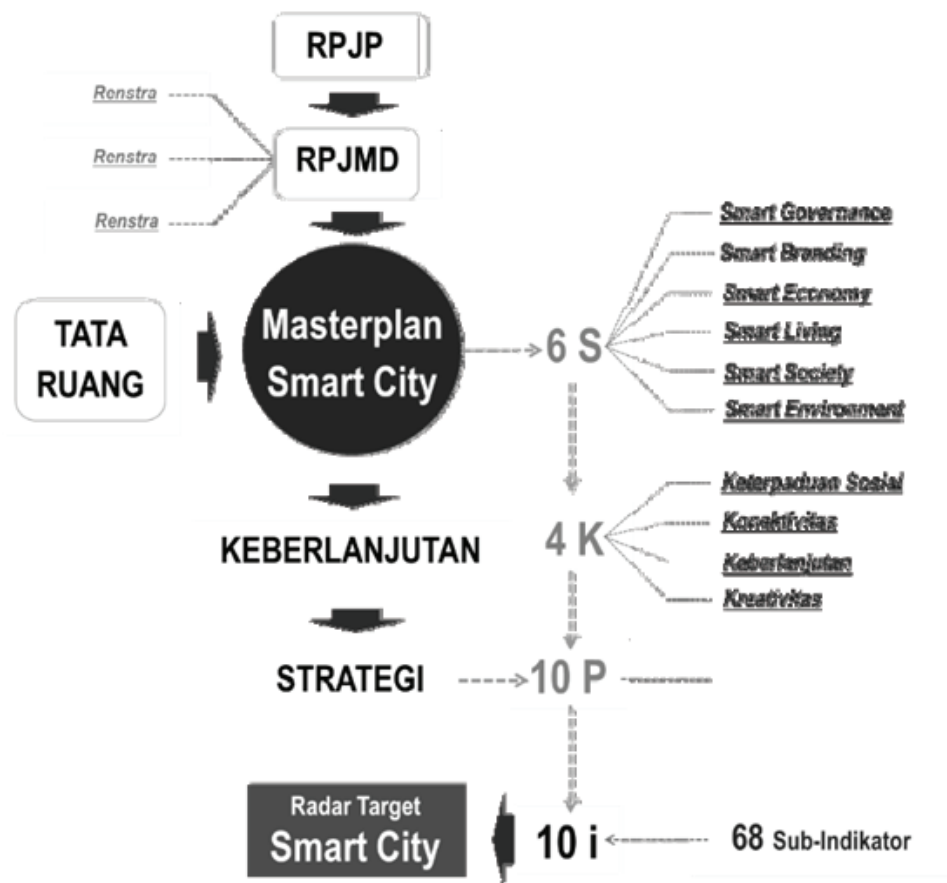


Figure 4: Flow of Semarang Smart City.

1. Involvement in Semarang Smart City policy formulation

The output of the Semarang Smart City is the Decree of the Mayor of Semarang Number 100/495 of 2017 concerning the Establishment of the Semarang Smart City Development Team. In this regulation, the Semarang Smart City development team is a team consisting of 24 government elements. The number consists of the Mayor of Semarang; Deputy Mayor of Semarang; Regional Secretary of Semarang City; Semarang City Regional Development Planning Agency; Administrative Assistant of the Regional Secretary of Semarang City; Assistant for Economic Administration, Development and People’s Welfare, Regional Secretary of Semarang City; Assistant to the General Administration of the Regional Secretary of the City of Semarang; Semarang City Communication, Information, Statistics and Encoding Office; Semarang City Personnel, Education and Training Agency; Semarang City Regional Financial and Asset Management Agency; Semarang City Regional Revenue Agency; Semarang City Spatial Planning Service; Department of Housing and Settlement Areas of Semarang City; Semarang City Public Works Department; Semarang City Transportation Office; Semarang City

Environment Service; Semarang City Culture and Tourism Office; Semarang City Cooperatives and Micro Business Office; Semarang City Investment and One-Stop Integrated Service Office; Semarang City Population and Civil Registration Office; Semarang City Social Service; Semarang City Education Office; Semarang City Health Office; and the Semarang City Manpower Office.

Meanwhile, in terms of the private sector, PT. Dian Nuswantoro Technology and Information (Dinustek), PT. Telecommunications Indonesia (Telkom), PT. State Electricity Company (PLN), and Mrs. Retno Susanti as academics.

The element of society is the last in the formulation of the Semarang Smart City policy as a policy used by the public in general.

1. Attitudes and Behavior of the Government, Private Sector, and Civil Society, in the implementation of Semarang Smart City.

2. **Government**, in this case, a team consisting of 24 regional apparatus organizations (OPD) consistently implements the Semarang Smart City, according to the Semarang Smart City Masterplan (Perwal No. 26 of 2018 concerning the Semarang Smart City Master Plan). It is proven from the inclusion of the Semarang Smart City implementation program in the RPJMD, as illustrated below:

The action plan realizes the Semarang Smart City using the 10i = 4k 6s = 10p design, with 10 smart city indicators (10i) through 4 concepts (4k) consisting of sustainability, connectivity, creativity, and social integration to realize the development of 6 smart (6s) consisting of 1. smart governance, 2. smart branding, 3. smart economy, 4. smart living, 5. smart society and 6. smart environment to realize the 10 priority (10p) programs listed in the Semarang City RPJMD 2016-2021(8).

The operational plan of Semarang Smart City is to look at the highest composition in smart governance, realizing public service transparency and fighting corruption.

1. Private Sector

The attitude and behavior of the private sector in the implementation of the Semarang Smart City, the collaboration between the Semarang city government and PT. Telkom through the signing of the MoU on the Utilization of Information and Communication Technology (ICT) to realize the Digital Government Services program through the Semarang Smart City. Besides, there is also free internet access (WIFI) by PT. Telkom at several points of the protocol road as one of the connection and information services. The Department of Communication and Informatics together with PT. Telkom also built

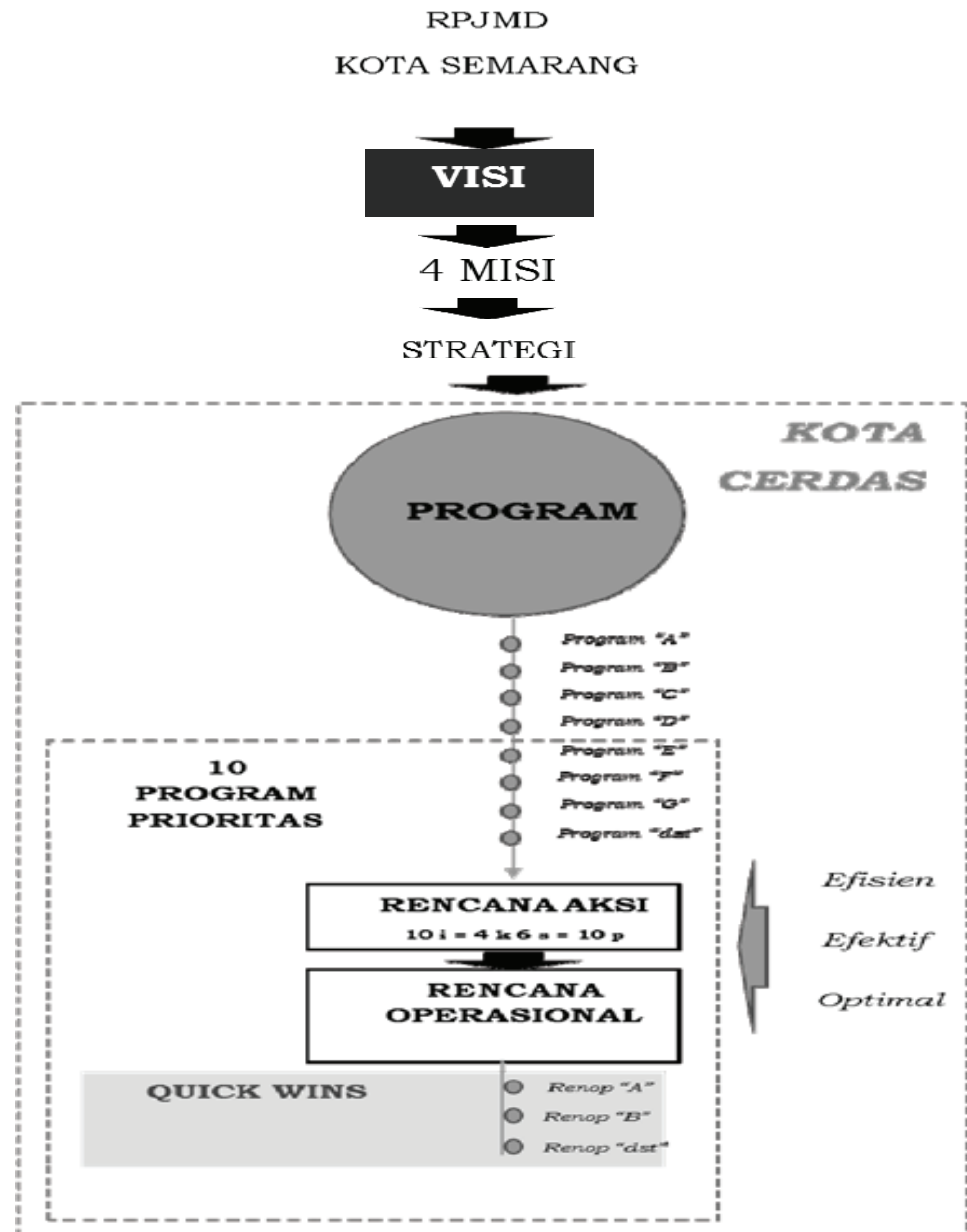


Figure 5: Semarang Smart City Implementation Program.

building facilities for e-commerce activities, where this facility was built focusing on developing MSMEs activities in the city of Semarang.

1. Civil Society

The purpose of executing Semarang Smart City is to accelerate the realization of community welfare through service improvement, empowerment, and community participation(12). The Semarang City Government in realizing smart public services, through the governance of information and communication technology, installs free

Wi-Fi of the Semarang City Government across various areas. The interaction of public reports/complaints/suggestions to the Semarang City Government can be conducted through the Lapor Hendi application (Twitter: @laporhendi).

Besides that, various technology-based service facilities have been realized by the Semarang City Government to facilitate services for the community. Services for the citizen of Semarang City, which are facilities provided by Smart Governance, in the form of Call Center 112; Emergency response; Public Service Response.

Health services :

1. *Ambulan Siaga Hebat* : Free Ambulance Service for Non-Emergency Cases, Limited access and treatment of certain criteria. For *Ambulan Siaga Hebat* Information, call 1500-132.
2. *Konter konsul dokter* : disease consultation, hospital guide; public health center guide; practicing doctor information; Health clinic information; clinical laboratory information; health tips; pharmacy services, bills, BPJS, UHC, and others
3. Free medical services for Semarang residents

The implementation of the *Kartu Semarang Hebat* for several Tapcash, Wallet, and Saving, as well as the use of Barcodes for permission to the City Plan Information, Digital Signage. For city information, applications for guiding various locations, monitoring the condition of crossroads through ATC, can be accessed in various social media for information and public communication (FB, Fanpage, Instagram, Twitter, Youtube, Tumblr, Wordpres, Path, and others).

In addition, the Semarang City Government has revitalized several sectors: Revitalizing the Old City; Market Revitalization

To increase tourism in the city of Semarang, the tourism sector has provided a *Taman Budaya Teater Terbuka* (Open Theater Cultural Park), revamping tourist attractions in the city of Semarang.

The ease of service facilities that have been provided by the Semarang City Government is well received by the residents. This is evident from the results of a survey on service aspects related to the development of Semarang Smart City, where 68% of the people of Semarang City understand the existence of digital-based services provided by the Semarang City Government; and 14% have used digital-based applications or services provided by the Semarang City Government.

5. CONCLUSION

1. The implementation of the Semarang Smart City has been running effectively, following the Semarang Smart City Masterplan, which is supported by the mayor's regulation on the Semarang Smart City Masterplan, this shows the support of the City Government to implement Semarang Smart City as well as possible.
2. There was also good cooperation between various parties who really want to prioritize smart cities as a form of public service to society. In this case, the support of PT Telkom in building various digital infrastructures (free internet, etc.), was well implemented
3. The people of Semarang City have supported and appreciated the Semarang Smart City program, especially from the aspect of digital-based services provided by the Semarang City Government. This makes the service process easier for society.

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