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Surakarta Smart City: A Public Service Transformation During The Pandemic

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Abstract. This article aims to analyze the extent of the transformation of Surakarta City public services with Smart City during the covid-19. Current direct interacting services should be limited and converse to online public services. This research used a qualitative analysis approach based on a descriptive method. This method was tracing the empirical facts in the studied discussion topic. Then the NVivo 12 Plus application is also used to manage and analyze data effectively and efficiently. Local government governance plays a critical role in forming strategic intent in Smart City Implementation. However, it hasn't shown any engagement of local governments and communities. It led to a lack of participation and collaboration. The vision of Major of Surakarta influenced both vision and mission of the Smart City program. The Surakarta City Government needs to optimize the quality of human resources and use an integration model. It provides single window network services that require public services transformation to the New Public Service during the Covid-19. A regulation reform is needed to support the public service policies in terms of increasing synergy and harmonization. Thus, there are no overlapping authorities and conflicts between institutions and the community that lead to public services delays.

Keywords: Public Service, Covid-19 Pandemic, Smart City

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INTRODUCTION

Background

Corona Virus Disease (Covid-19) pandemic has spread throughout the world since February 2020, this pandemic has a major impact on Society life around the world. The policy for implementing Lockdown and Social Distancing are enforced by countries in the world affected by the Covid-19 pandemic. The implementation of this policy causes people to not be able to interact directly with one another. This aims to reduce the risk of Covid-19 transmission, which is very easily transmitted from one person to another. This limitation of interaction causes the community to meet their needs unable to sustain conventional ways of obtaining or fulfilling their needs. People inevitably have to turn to the use of online media.

In Indonesia, the government preventing the transmission of Covid-19 has issued a policy in the form of Government Regulation No. 21/2020 concerning Large-Scale Social Restrictions (PSBB), several regions in Indonesia impose PSBB which causes schools to be closed, workplaces are restricted, religious or religious activities are restricted and activities in public places are also restricted (Government of Indonesia, 2009). This is to avoid crowds of people so that the risk of transmission of this virus can be reduced. The imposition of social restrictions in Indonesia also has an impact on the accessibility of public services. According to (Government of Indonesia, 2020), a circular issued by the Minister of Administrative Reform and Bureaucratic Reform (PANRB) Number 19 of 2020 concerning Adjustments to the Work System of State Civil Apparatus in Efforts to Prevent the Spread of COVID-19 within Government Agencies. This Circular applies Work from Home (WFH) in turn for employees in Government Agencies. This affects the accessibility of public services. Conventional services, namely face-to-face, begin to be limited in number and the rest is assisted by an online system. This online service is the result of the application of E-Government (Doramia Lumbanraja, 2020). Figure 1 shows the processing results of the Vosviewer software from 2000 journals indexed by Scopus, which states that the discussion of smart cities in the Covid-19 pandemic era is still very rare, so the author takes this theme.

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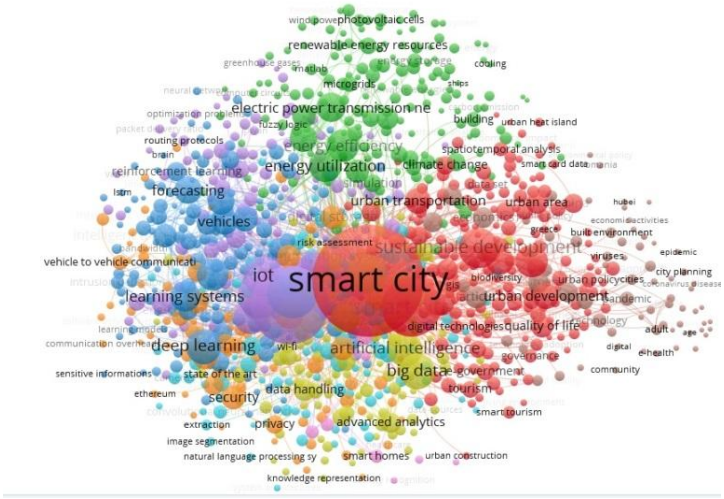
Figure 1.

Smart City sub-themes that are rarely discussed by previous writers



Source: processed from secondary data using the Vosviewer application

According to (Silcock, 2001), E-Government is the use of technology to increase access and delivery of government services to benefit citizens, stakeholders, and employees. E-Government continues to encourage to innovate and create, develop a new mode of public service where all public organizations and government agencies provide modern, integrated, and borderless services for their citizens. The relationship between the community and the government is no longer in the same direction, namely top-down, but rather builds partnerships between the government and citizens.

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Based on the explanation of e-government above, that e-government is closely related to the development of information and communication technology (ICT) in the world. One form of the embodiment of e-government is the implementation of a smart city. According to (Hadiwiono, 2020), a Smart city is a city concept that is able to serve the people in it by using ICT to increase operational efficiency, share information with the public, and improve the quality of government services and the welfare of citizens. Smart cities are expected to be able to become a link between the demands of the community in obtaining appropriate, effective, and efficient services from the city government.

In implementing smart city, it is expected that public services must be transformed by increasing the application of an electronic-based government system (SPBE) in accordance with Presidential Regulation (Perpres) No. 95 of 2018 concerning Electronic-Based Government Systems (SPBE) which aims to realize clean, effective, transparent and accountable governance as well as quality and reliable public services, especially in the era of the Covid-19 pandemic (Government of Indonesia, 2018). The application of this SPBE involves various government agencies from ministries and government agencies (Dwi Anggono, 2020)

One of the cities that implements smart city-based SPBE public services is Surakarta. This is evidenced by the implementation of Mayor Regulation Number 15 of 2015 which contains a roadmap for the development of e-government within the structure of Surakarta. Good SPBE management through e-government can support the implementation of smart city in Surakarta City. In the context of implementing SPBE through smart government to support smart cities, the Surakarta City Government needs to improve infrastructure, in this case technology, such as high-speed internet networks that connect all Regional Work Units (SKPD) of Surakarta.

This digital technology transformation aims to increase the government digitalization program to support the implementation of smart city in Surakarta, which includes the integration of people, process and technology factors that are supported by the certainty of related institutions' regulations. Measuring performance targets and smart city service innovation needs to be tested for the SPBE index and the US Index (Information Security) as evaluation materials to improve the implementation of the smart city of Surakarta City.

The Surakarta City Government has also developed an application that has been integrated with all Surakarta City SKPDs called Solo Data (SD). The JJS service was initially received by the people of Surakarta, which in the application contained: Emergencies, Information and Complaints,

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Public Services, Data and Information, and City Government Partners. Each of these services contains sub-services for Surakarta that make it easier for the government and the public to access them from anywhere.

According to (Rachmawati et al., 2018), the implementation of the Surakarta Data (SD) is still in the euphoria of e-Government 3.0 where one service is limited to one information and communication technology (ICT) ecosystem so that it is not (effective, efficient, integrated) and safe), and lack of standardization, for example the separation of Solo Data (SD) and Solo Bike services. In addition, the Government data system should be designed to be one route to the central government (Kemenkumham RI, 2019). Indonesian citizen (WNI) or demographic data as the main data, which is then complemented by supporting elements by the Indonesian citizen data user sector.

Based on the above problems, it has led to the transformation of public services towards the implementation and acceleration of e-government development by government agencies in the era of the Covid-19 pandemic. In this study, the author took a case study at the Surakarta City government agency. This research, entitled "Smart City Surakarta City: A Transformation of Public Services in the Pandemic Era" examines the application of Smart City by implementing public service transformation through e-government which presents network service technology with one-stop government service from the Old Public Administration model to the New Public. Service in the era of the Covid-19 pandemic.

Methodology

The author uses descriptive research methods with qualitative analysis. This research was conducted to explain the relationship between the object of research and the social phenomena that occurred which were obtained from literature studies and government regulations, both central and local, related to the object of research. The author uses data collection techniques using various documents and records them in concepts which are then processed through the Nvivo 12 plus software. The author uses the Napitulu theory which explains two components of e-government, namely accessibility and availability, then synergizes with four factors according to theory (Akhmadi, 2017), namely leadership, Society resources, infrastructure and budget.

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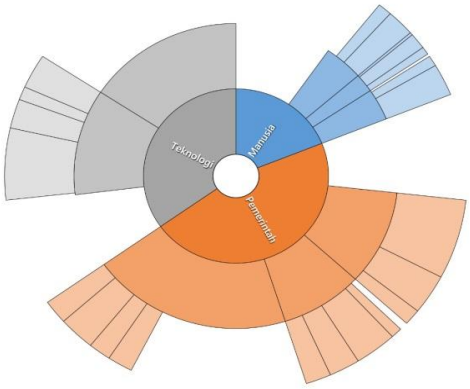
Figure 2.

Smart City Components in Public Service Transformation



Source: processed from secondary data using NVivo 12 plus software

Data analysis was carried out by aligning data sources consisting of regulatory documents (Central Government Regulation, Surakarta Mayor Regulation, and Smart City Development Masterplan and Roadmap in Surakarta City) and journal literature, then the data sources were entered into the node in the NVivo 12 plus application. According to (The Scottish Government et al., 2014) the notion of a node is an indicator that is described explicitly as a Smart City level. The theme we take is the transformation of public services in the pandemic era with a smart city system which is discussed into three major parts, namely government, technology and people. These three components can be illustrated in Figure 2.

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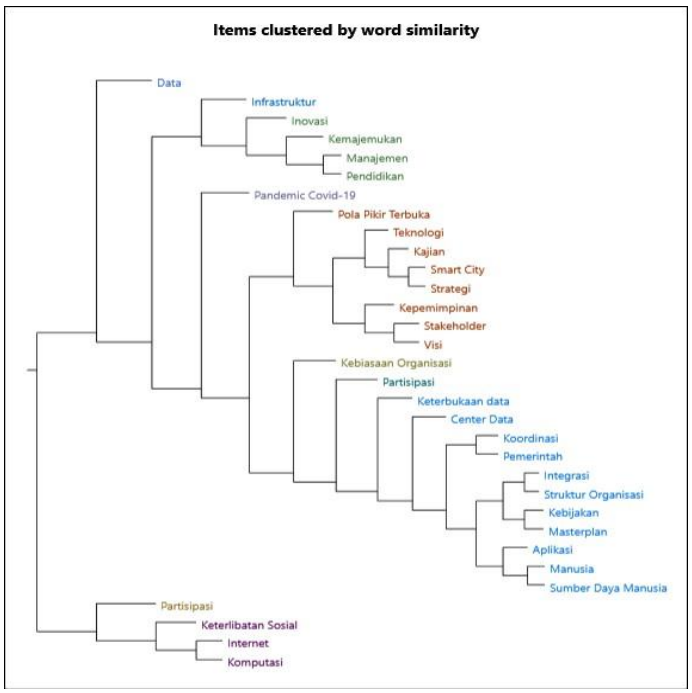
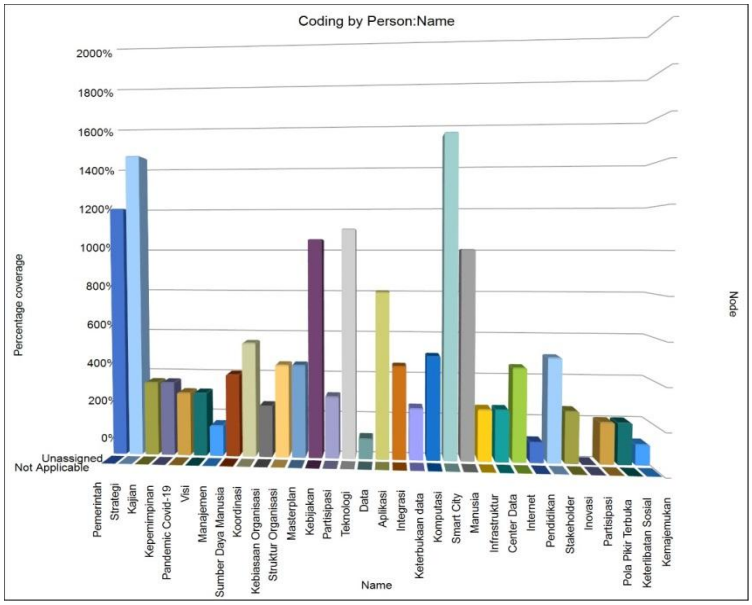
RESULT AND DISCUSSION

Figure 3.

Note and the Smart City Research Concept





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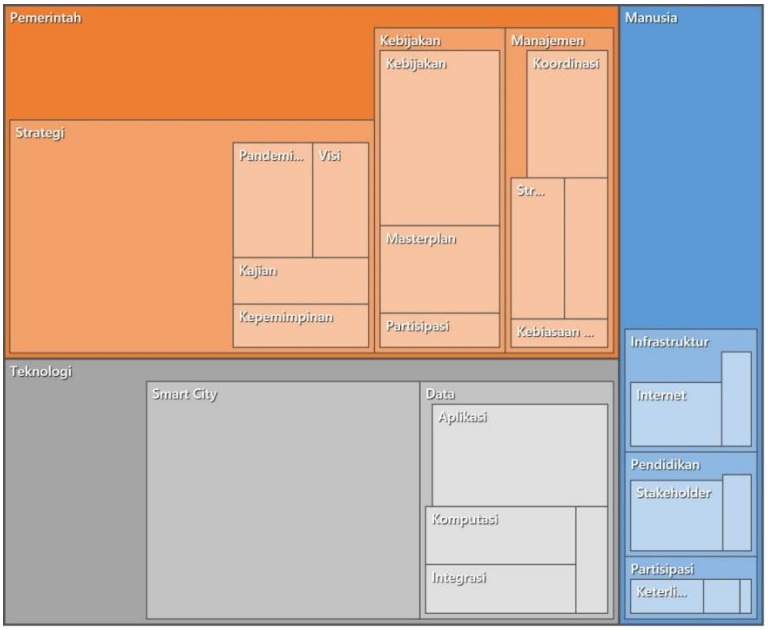

Source: processed from secondary data using Nvivo 12 plus software

The results of the discussion illustrate the application of the Smart City component in the pandemic era based on the nodes obtained based on the results of the nvivo 12 plus software data analysis as shown in Figure 3. The nodes are explained by three components, namely government, technology, and Societys in the pandemic era. The explanation refers to the node by taking the example of implementation in Surakarta, then it will be concluded that the Smart City component in the pandemic era refers to the developing concept along with its driving and weakening factors.

Government Component

The goal of the Surakarta city government in implementing Smart City in the pandemic era is because the regional government civil servants (ASN) partly carry out Work From Home (WFH) according to regulations. This step was carried out in accordance with central government policy to reduce the impact of the spread of the Covid-19 virus. The application of Smart City as a transformation of public services is an innovation to create solutions. The Surakarta City Government places Smart City to solve public service

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problems in the pandemic era in accordance with the vision and mission of City development (Surakarta City Government, 2018).

In terms of management, the local government of Surakarta implements the Smart City policy as stipulated in the Masterplan and Roadmap as well as the Mayor Regulation. Another important aspect that needs to be considered by the local government of Surakarta is that to realize a Smart City, participation with all parties or stakeholders, both the central government and local governments, the private sector, and business entities, especially to fulfill integrated basic public services, is an example of application in disaster emergency services natural or emergency. Surakarta City in handling emergency services involves hospitals, the Indonesian Red Cross (PMI), the Regional Disaster Management Agency (BPBD), and the police to work together in overcoming the emergency problem. Emergency services in Surakarta can call dial 112 or the SD (Solo Data) application. The Surakarta city government also involves administrators of public transportation services, banks, bookstores, biscops and pawn shops to support the Surakarta city SD services, so that the public can take advantage of this SD public service application from home.

Technology is not a major component in Smart City in the pandemic era, but if technology is not optimal, the goals of Smart City will not be achieved. Local governments usually place technology at the core of Smart City so that the infrastructure that supports technology looks very sophisticated and luxurious. Forms of sophisticated technological infrastructure include high-speed internet networks to the village level, tens to hundreds of closed-circuit television (CCTV) pairs with high-resolution captures, international standard data centers, large screens as city monitoring media, even visual spaces that resemble cinemas.

The NVivo 12 plus node in the development component is divided into two, namely infrastructure and technology. Infrastructure requiring affordability and availability of high-speed internet networks has been implemented by the Surakarta city government. The challenge is the installation of the right technology network that can connect the village government with the city government which has separate authority. The

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government revolution towards e-government due to the pandemic has brought very significant changes to electronic public services and is trying to develop. The data component that supports the implementation of smart city is very interesting to note.

The local government of Surakarta seeks to develop e-government policies so that information systems in public services and government administration management are increasing. The coordination component also needs to be considered so as not to cause the integration of the data obtained to be invalid and reliable and accurate so that decision making cannot be used because the data is prone to manipulation. Local governments in the pandemic era have attempted a population-based data integration process to validate public service needs. The problem of integrating information systems at the regional level is a minor problem that can be handled easily by the Office of Communication and Information Technology (Diskominfo) which is the center for the implementation of electronic systems in government, except for Surakarta. The development of smart city encourages the local government of Surakarta to develop public service applications in one hand. The platform developed makes it easier for the public to enjoy and access public services (Widiyastuti, ST., MT, 2019).

Society Components

Society have a very strategic role in the success of smart cities in the pandemic era. The regional government of Surakarta knows, pays attention to, and takes into account every action or policy that is enacted in this pandemic era. Although according to (Widiyastuti, ST., MT, 2019) the local government of the city of Yogyakata does not care about Society potential as the goal and source of smart city power. Smart city aims to create a place that is comfortable, safe, livable, and raises the productivity of its people or people. Society or Societys are a component and source of strength from a Smart City so that it can achieve the goals of a Smart City. The supporting factors of the Society component are quality of life, education, participation, and social inclusion.

The Surakarta City Government admits that the attachment to the community has not been maximal in government governance in the pandemic era. The people of Surakarta city actually have sufficient mastery of technology and are literate in accessibility so that participation is needed in improving public services. The service that Surakarta promotes to implement a smart city in the

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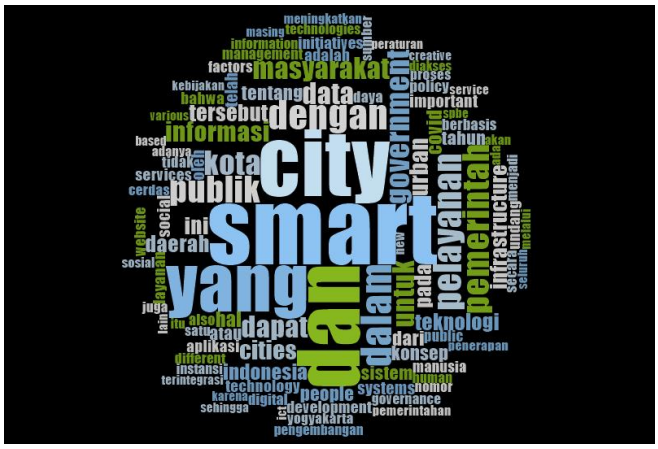
pandemic era is that the public has a channel to report complaints about city services that are monitored by the Mayor and responded to as quickly as possible by the relevant agencies through SD (Solo Data). The Surakarta City Government has also succeeded in cooperating with the community, for example, Civil Society Organizations (CSOs) to manage slum areas to be converted into areas that have increased economic value. The idea of a smart city is divided into technological and non-technological aspects as stated in the collaboration of the government and the community to always work together to manage Surakarta intelligently in the pandemic era.

Application of Smart City Components

The application of Smart City is a solution for the regional government of Surakarta in improving public services in the pandemic era. Based on nvivo processing for texts from journals and related research on Smart City collected, there is a frequency analysis of Word Cloud which is a system that creates visualization of words by emphasizing the frequency of occurrence of related words in written discourse (Qeis, 2015). In the words that predominantly appear in data about smart cities, it can be illustrated in Figure 5.From the findings in the research location, the regional government of Surakarta is still weak in strengthening the Smart City component, be it government, technology, or Society components (Widiyastuti, ST., MT , 2019).

Figure 4.

Word Cloud Implementation of Smart City in Public Service Transformation



Source: processed from secondary data using nvivo 12 plus software

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The strategic intention of local governments to implement Smart City originates and is driven by the government itself as expected (Chourabi, Hafedh, Taewoo Nam, Shawn Walker, J. Ramon Gil-Garcia, Sehl Mellouli, Karine Nahon, Theresa A. Pardo, 2012) , (Nam & Pardo, 2011a), and (Gil-garcia et al., 2015); despite the fact on the ground that local governments do not yet understand the strategies that must be taken and the goals of smart cities. This has an impact on development and development that prioritizes technology components compared to community components and other stakeholders as parties who can better manage the area. In Surakarta, there are indications that smart city is only prioritized to provide the right, fast, cheap, and quality services to the public with the presence of various kinds of public service applications in one hand. This can occur because the normative document on Smart City has not been integrated and comprehensive with regional development goals as expressed by (Gil-garcia et al., 2015) and (Utomo & Hariadi, 2016). There is an inconsistency between the master plan and government regulations regarding Smart City. This is the same as the findings (Pratama, 2018) that local governments do not yet have comprehensive strategic policies to guide their implementation. (Widiyastuti, ST., MT, 2019) explained that with policies that are not yet comprehensive, the sustainable application of smart cities to become quality areas for people in the pandemic era will be hampered.

There are indicators that can form a governance component, such as innovative leaders (Myeong, 2018), service integration, public applications, and openness of policies and strategies ((Gil-garcia et al., 2015); (Chourabi, Hafedh, Taewoo Nam, Shawn Walker, J.Ramon Gil-Garcia, Sehl Mellouli, Karine Nahon, Theresa A. Pardo, 2012); (Gil-garcia et al., 2015); (Anindra et al., 2018)), an efficient organizational structure ((Gil-garcia et al., 2015); (Chourabi, Hafedh, Taewoo Nam, Shawn Walker, J. Ramon Gil-Garcia, Sehl Mellouli, Karine Nahon, Theresa A. Pardo, 2012)), has been implemented by local governments. For example, the local government of Surakarta has successfully presented open and innovative leadership in facing change, understands the policy process, is oriented towards regional goals, and is visionary. The Surakarta city government understands the strategic value of smart city as a driving factor in achieving development goals and answering community problems in the pandemic era thoroughly with technology.

Actually, the regional government of Surakarta city still has many weaknesses in implementing data acquisition and interoperability which will encourage the formation of smart interfaces and smart computing. The development of the latest generation of technology in the

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integration of technological components, as stated by (Nam & Pardo, 2011b), will encourage real-time data concern as a catalyst for data analysis in making optimal decisions. At present, local governments have not provided a demand-driven approach in developing technology that can manage regions intelligently, as stated by (Margarita, 2015). In the Surakarta city government, this cannot be a failure because the nature of development and development is still focused on the application of technology. However, the application of smart cities in the pandemic era must be carried out in a sustainable manner, the city government of Surakarta needs to align its mindset about the goals of the smart city and the application of technology in it and evaluate the supporting components of its current smart city.

Figure 5.

Matrix Smart City in Public Service Transformation

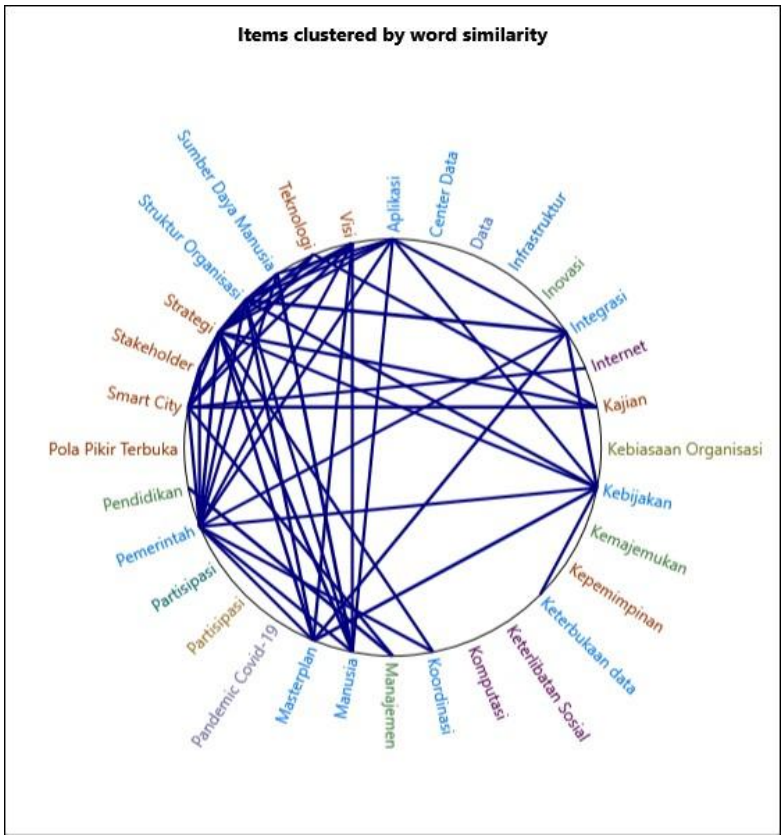

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Figure 5 explains that the transformation of public services boils down to the factors that encourage and weaken the application of smart cities for each component. Strategic intention is the main factor that will encourage and drive the implementation of smart city. Strategic intentions that drive leadership, vision, mission, strategic plans and understanding of leaders. There are things that need to be emphasized that in strategic intentions do not only focus on technology. The best way in research locations during a pandemic in Surakarta is to show that leaders must be oriented towards understanding the potential of the region, the priority scale for handling regional problems, and the strategic value of implementing smart cities compared to the leader's understanding of technology transfer. Then the availability of e-government infrastructure which will be a catalyst for the implementation of smart cities in the pandemic era. Government service electronization policies as an effort to transform public services can have an impact on their maturity in accepting technological changes for public service transformation. Therefore, the application of smart cities must be followed by policies that strengthen the transformation of public services that are oriented to the community. There is a weakening factor in the application of smart city, namely the absence of good knowledge and understanding of smart city. Local governments tend to have a view of smart governance so they forget the aspects of engagement with society and collaboration. The result of the lack of correlation between regional development plans and the implementation of smart cities is that the utilization of regional data has not been maximized. If this is not anticipated, the application of Smart City will not move from generation 1.0 where technology is the core of the movement (Widiyastuti, ST., MT, 2019).

CONCLUSION

The smart city component in the pandemic era is fundamental to achieving successful implementation if the government, technology, and Societys collaborate well and are comprehensively handled and cared for. Comprehension of components is the key to smart city sustainability, so local governments must have a good understanding of the goals and strategies towards a smart city. Technological changes should stimulate the use of looking at data trends and analyzes in the regions. This needs to be considered in order to form a strategic initiative that must be initiated by the local government. Regional leaders must start with regulations which include integration between the Master Plan and the purpose of implementing a Smart City, especially in

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improving public services in the pandemic era. The Society component is also very important, the local government's concern for Societys has not been fully acquired in policy. The community should be seen as the goal of implementing a smart city rather than just becoming a capital, especially in the pandemic era.

Apart from the three main components in a smart city, there are subcomponents that are important, such as strategic, which provide the greatest impetus for the implementation of Smart City. The Surakarta city government in its strategic intentions must be able to formulate the vision and mission of a Smart City which comes from an understanding of the potential, problems and strategic values in Surakarta. The implementation of a smart city in Surakarta has not shown the bond between the local government and the community which has resulted in a lack of participation and collaboration. In addition, the vision and mission of a smart city is still centered on the vision of regional leaders. Therefore, there is a need for public service transformation that requires joint leadership and collaboration, especially the implementation of one-stop services in the pandemic era. This joint leadership and collaboration demands vertical and horizontal integration. Cross-sectoral arrangements are also very necessary in the development of a smart city in Surakarta. Smart City has great potential in the pandemic era to be developed. The author realizes that this study still has many things that have not been discussed and analyzed, especially because of the wide coverage of each component. We suggest that this research be developed to develop writing with a focus on the Society component so that the theoretical concepts found will develop and can be adopted by other local governments, especially in the pandemic era.

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