Institutional Arrangement Approach on e-Parking Innovation in Surabaya City, Indonesia

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Abstract
The implementation of parking in the city of Surabaya is regulated by Regional Regulation (Perda) Number 3 of 2018. The purpose of introducing e-parking or a parking meter tool is to suppress the leakage of PAD in the parking sector, control parking attendants, and facilitate convenient experiences for individuals visiting the smart city of Surabaya. The meter was introduced to measure the duration of parking and facilitate electronic payment of fees. Therefore, e-parking innovation plays a crucial role in effectively managing local revenue (PAD). This study predominantly focuses on the institutional governance system for implementing innovations in the public service sector, specifically the use of e-parking to address parking-related issues. This study employed a descriptive approach with a qualitative methodology. The subjects included the Head of Surabaya Parking UPTD, employees of Surabaya City Transportation Service, attendants of Surabaya City Hall and Tama Bungkul Surabaya parking, as well as the wallet team of Surabaya City Transportation Department. Data were collected using various techniques, namely interviews, observation, and documentation, and were subsequently analyzed through a systematic process of data reduction, presentation, and verification. The results showed the Surabaya City Transportation Service successfully implemented parking meters at several points, including City Hall and Bungkul Park. The implementation of the e-parking program in the city has been progressing well, despite encountering some challenges. These challenges have been effectively resolved, ensuring the smooth operation of the parking meter tool.

Keywords: innovation; institutional arrangement; e-parking; city of Surabaya.

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INTRODUCTION

Public sector innovation is the creation and implementation of new processes, products, services, and delivery methods that significantly enhance effectiveness, efficiency, and quality (Albury, 2005). Meanwhile, innovation in government primarily focuses on public services, it can also extend to processes, planning, policies, and other activities (Sudrajat & Andhika, 2021). The main purpose of public sector innovation in public services is to improve the quality of services. This necessitates the establishment of public service standard, which serves as benchmark for providing quality services (Suwarno, 2008). When the government provide services that are in accordance with the prevalent conditions and problems of a community, the resulting innovations can successfully achieve the goals expected by the community (Narsa, 2018). The benefits of public sector innovation are reflected in the government's increasing efforts to accelerate improvements and enhance the quality of public services within agencies and governmental organizations (Pemerintah, 2014). Therefore, regional innovation is one of the suitable approach for creating new services or new ideas that effectively tackle community problems, as it is considered the key for driving change. Basically, public sector innovation serves as a means or breakthrough to overcome the constraints of an organization's thought. The rigid nature and tendency to maintain the status quo within the public sector need to be resolved by creating an innovation (Suhendra, 2018).

In general, innovations carried out by the public sector focus on governance and policies needed as means of addressing social problems. The complexity of the modern era challenges necessitates the adoption of more innovative and adaptive solutions to align with the dynamics of society (Torfing & Ansell, 2017).

One of the innovations implemented by the Surabaya City Government is e-parking. The adoption of e-parking originates from the increase in private vehicle ownership, which contributes to the classic problems in urban areas, such as traffic jams. This problem stems from the rapid pace of urbanization, which prompts individuals to appreciate the convenience of owning private transportation. Poor parking management exacerbates the problem, leading to instances of illegal parking. The occurrence of illegal parking is a result of insufficient spaces to accommodate the growing number of private vehicles, leading to vehicles being parked on the edge of public roads (TJU). The increasing number of vehicles further intensifies the demand for parking space. Due to the imbalance between the number of vehicles and the limited availability of parking space, illegal parking attendants exploit the situation by engaging in extortion activities against vehicle owners.
The following is the number of vehicle growth data in Indonesia from 2017-2019, as sourced from the Central Statistics Agency (BPS).

Table 1. Vehicle Growth Statistics in Indonesia from 2017-2019

<table>
<thead>
<tr>
<th>Type of Motor Vehicle</th>
<th>Development of Number of Motorized Vehicles by Type (Unit)</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>2017</td>
</tr>
<tr>
<td>Passenger car</td>
<td>13,968</td>
</tr>
<tr>
<td>Bus car</td>
<td>213,359</td>
</tr>
<tr>
<td>Freight cars</td>
<td>4,540.9</td>
</tr>
<tr>
<td>Motorcycle</td>
<td>100.200</td>
</tr>
<tr>
<td>Jumlah</td>
<td>118,922</td>
</tr>
</tbody>
</table>

Source: bps.go.id

The data provided above show that the high use and growth of the number of private vehicles continues to increase, while the limited land poses a challenge in accommodating these vehicles. The high level of private vehicle use is incomparable with the availability of parking spaces in Surabaya (Albi Mahardian, 2016). The significant number of vehicle users who park on the roadside can result in various issues, namely increased traffic congestion and reduced highway capacity to accommodate the volume of vehicles passing through (Gandasari et al., 2020).

The problems faced in Surabaya include traffic jams caused by limited parking space, prevalent use of private transportation, and issues related to parking budget management. These problems can be attributed to two factors, namely internal and external. The internal factor refers to the location of a special parking area. Surabaya, spanning an area of 22,306.30 hectares, has an average number of buildings for public residences, offices, schools, and malls, among others. As a result, the presence of privately owned buildings has made it challenging for the Surabaya City Transportation Service to build a special strategic parking lot (Kosasih, 2019).

Table 2. Statistics of Total Vehicle Growth in Indonesia from the Year 2017-2019

| Number of Vehicle Users Development in the City of Surabaya |
| 2017 | 2018 | 2019 |
| 118,922,708 | 126,508,776 | 133,617,012 |

Source: bps.go.id

Based on the data obtained, Surabaya City covers a total area of 22,306.30 Ha in 2018. However, this area does not align with the increasing number of vehicle users in the city. In 2017 the number of vehicle users was 118,922,708 per unit, which rose to 126,508,776 in 2018, and experienced a significant further increase to 133,617,012 in 2019. This growing number of vehicle users is the main factor contributing to problems related to limited parking space as well as congestion in the city area.

Article 25 of the Surabaya Regional Regulation Number 3 of 2018
states that local governments can build and develop off-street parking integrated with residential, office, and industrial areas. Meanwhile, the external factor arises from the reluctance of landowners, who possess SHM-certified land, to sell off their properties to the government. The community is expected to release their land for the public interest, as stated in Article 5 of Law Number 2 of 2012 concerning Land Procurement for Development in the Public Interest (Nainggolan & Nugroho, 2018). Supposedly, parking fees can contribute to the Regional Original Income (PAD) of the city, as it has bright potential and prospects in terms of the development of motorized vehicles and the increasing expansion of parking (Kosasih, 2019).

The success or failure of local government tasks, as well as the development and community services in the region greatly depends on the innovations pursued by local governments in exploring and developing various regional potentials as sources of regional income. The increase in national and regional development activities is inseparable from efforts aimed at encouraging an increase in regional income through local revenue sources (PAD), including regional tax revenues, regional retribution income, BUMD profit share income, and other investments (Sari, 2017). Regional original income shows a region's ability to collect funds for financing routine and development activities. In terms of income management, Law No. 28 of 2009 grants local governments the authority to manage specific types of income. This law, also known as the regulation on Regional Taxes and Levies, is considered crucial to support PAD because it enables regions to independently manage regional budgets through fiscal decentralization, including the right to effectively determine their taxes (Kosasih, 2019).

The culture of innovation is actually one aspect of bureaucratic culture that is crucial for the success of bureaucratic reform. However, innovation has not become the main value of the current government bureaucratic culture in Indonesia (Yohanitas, 2016). Successful innovation requires collaborative interaction when exploring innovation challenges and assessing the extent to which the institutions collaborate. The level of innovation in the public sector depends on how well institutions manage collaboration, both internally and externally, to create value, reduce barriers, and leverage organizational resources to work together (Wagner & Fain, 2018). Public sector innovation generally focuses on internal government procedures, leadership, and the characteristics of innovative employees (Bernier et al., 2015). Therefore, the central government plays a role in designing the concept of policy innovation at the national (macro) level, which is subsequently implemented at both the central and regional levels (Marzuki, 2016). Innovation involves the development and implementation of new ideas. The growing interest in public innovation raises the question of which strategies the public sector should adopt to
promote the development, implementation, and diffusion of innovative solution (Torfing, 2019).

The city of Surabaya, known as an industrial hub, experiences high mobility. Consequently, the government has implemented innovative electronic-based services to address and promptly solve the ongoing parking problems. In order to overcome these problems, the government needs to provide public facilities, specifically those related to system renewal in transportation services (Hayati & Fanida, 2018). The implementation of e-parking is a highly suitable policy for suppressing leakage of PAD in the parking sector, controlling the attendants, facilitating the ease of parking private vehicles, increasing public trust in the government, and advancing Surabaya as a smart city (Artamalia & Prabawati, 2019). Furthermore, it provides considerable benefits for both the community and the government. One of the key benefits of e-parking is the provision of proof of payment, clearly indicating the tariff and the amount in accordance with the official rates set by the Surabaya City Government. The public donot need to prepare cash payment, thereby minimizing park congestion. The implementation of the electronic-based payment system can reduce the operational costs of cash management and minimize the occurrence of extortion. In conclusion, the use of e-parking is considered very important in parking management and in enhancing public trust in the government, specifically in the quality of data and parking services, enabling efficient and effective provision (Wibisono, 2018).

Indonesia, as a developing country, differs demographically from developed countries in terms of electronic money usage. From the community's perspective, the cultural value of cash outweighs the acceptance of electronic money. However, the adoption of electronic money offers benefits for the government in terms of increasing income from taxes. It is also safer and more effective with less risk than the use of cash (Aldás-Manzano et al., 2009).

The dynamics of the public service environment change rapidly in the social, political, scientific and technological domains, often causing public services to lag behind the ever-changing demands of society (Wahyudi, 2016). One of the most prominent challenges is the provision of parking service, which is currently a new task for the Surabaya City Transportation Service. The aim is to enhance the quality of judgment and public understanding regarding parking in order to promptly resolve the problem. In response to the problems described above, the government has created an innovation, namely e-parking (electronic parking) in the form of a meter at several points in the city. The primary function of this meter is to measure the duration of parking and facilitate electronic payment of parking fees. As a result, drivers can park their vehicles at designated parking spaces. The implementation of the Electronic-Based Public Service System (SPPBE), such as e-parking, clearly demonstrates Surabaya's successful adoption of the

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smart city concept, particularly in the parking payment sector (Hayati & Fanida, 2018). The use of e-parking innovation extends beyond managing parking areas and reducing traffic density, as it also helps to manage local revenue generated from parking fees. The existence of e-parking has been proven to enhance vehicle security, reduce queues of incoming vehicles through computerized recording, and simplify parking payments for the public. It is evident that the Regional Original Income (PAD) had declined prior to the introduction of metered parking. However, with its implementation, parking revenues are automatically accounted for in the Surabaya City's Original Regional Revenue (PAD) without intermediaries, thereby reducing leakage rate in the parking sector (Artamalia & Prabawati, 2019). The introduction of new parking services, such as e-Parking, can contribute to the satisfaction of the community with the services provided by the Surabaya City Government through the Department of Transportation. Community satisfaction, in the context of service satisfaction, is defined as the results, opinions, and community assessments of the services delivered by public service providers (Wahyudianto, 2015).

This study focused on institutional governance systems for implementing innovations in the public service sector, specifically the use of e-parking to address parking-related problems. Public services, specifically in terms of transportation, play a crucial role in maintaining order and actualizing a well disciplined city in accordance with government regulations. In response to the problems mentioned above, the Head of the Surabaya City Transportation Service announced that the government in collaboration with the DPRD, had issued Regional Regulation (Perda) No. 3 of 2018 concerning the Implementation of Parking in the City of Surabaya. The regulation outlines the various improvements for the parking system or management (Surabaya., 2018). Therefore, this study aims to examine the phenomena related to the implementation of e-parking innovation in Surabaya, using an institutional arrangement approach (Hanna De Vries, Victor Bekkers, 2016).

METHODS

This study employed a descriptive qualitative approach to describe the implementation of e-parking innovation in Surabaya. The method was chosen in order to provide an in-depth description of the field situation. Therefore, study experts can gain insights into the policies governing e-parking innovation, which are organized by the Surabaya City Transportation Service. Data were collected using observation, interviews, and documentation techniques, which will serve as supporting evidence for the study. This methods ensure the results are presented validly and completely, leading to a more accurate and accountable outcome.

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RESULT AND DISCUSSION

The Surabaya City Government, in collaboration with Transportation Service, has identified electronic parking payments (e-parking) as one of the government’s efforts in realizing a smart city. The e-parking is a progressive transportation service supervised by Surabaya, aimed at curbing dishonest practice, such as cheating, among parking attendants and minimizing the leakage of parking fees.

2015 (Dwinanto, 2019). Since 2018, a total of 10 parking meter units has been installed in the City Hall area, accompanied by 23 parking attendants, and an additional 10 units at Bungkul Park, accompanied by 41 parking attendants. The selection of the meter locations is based on their accessibility to 24-hour CCTV coverage and the presence of security officers round the clock. Below is a floor plan for the installation of Meter Parking Equipment in 2 Locations (Bungkul Park and City Hall):

The number of users or vehicles using parking services with a parking meter is as follows:

Figure 1. The process of study

Parking meter is a tool used for measuring the duration of parking and facilitating fee payment. It empowers users to independently make payments and determine the duration of their parking session (when progressive rates apply). The meters also allow drivers to park designated areas. They are generally installed on the roadside by the government or parking authorities (Artamalia & Prabawati, 2019).

The implementation of parking in Surabaya is governed by Regional Regulation (Perda) No. 3 of 2018, while parking rates are regulated by social institutions, as outlined in Surabaya Mayor Regulation (Perwali) No. 37 of...
Table 3. Data for R2 & R4 Vehicles Using a Parking Meter

<table>
<thead>
<tr>
<th>Month</th>
<th>Taman Bungkul</th>
<th>Balai Kota</th>
</tr>
</thead>
<tbody>
<tr>
<td>January</td>
<td>-</td>
<td>32072</td>
</tr>
<tr>
<td>February</td>
<td>-</td>
<td>32567</td>
</tr>
<tr>
<td>March</td>
<td>53112</td>
<td>36519</td>
</tr>
<tr>
<td>April</td>
<td>52618</td>
<td>27271</td>
</tr>
<tr>
<td>May</td>
<td>52599</td>
<td>27211</td>
</tr>
<tr>
<td>June</td>
<td>49360</td>
<td>26249</td>
</tr>
<tr>
<td>July</td>
<td>54394</td>
<td>28106</td>
</tr>
<tr>
<td>August</td>
<td>48222</td>
<td>24846</td>
</tr>
<tr>
<td>September</td>
<td>46036</td>
<td>29557</td>
</tr>
<tr>
<td>October</td>
<td>44758</td>
<td>31435</td>
</tr>
<tr>
<td>November</td>
<td>40284</td>
<td>27193</td>
</tr>
<tr>
<td>December</td>
<td>37276</td>
<td>23385</td>
</tr>
</tbody>
</table>

Source: Surabaya City Transportation Service

1. The Role of Stakeholders in The Implementation of the Parking Meter

The institutional arrangement for the meter parking device involves three parties, namely the Surabaya City Transportation Service, Banking Institutions, and an Integrator. This cooperation is crucial and should be carried out effectively to ensure the parking meter achieves its target. The Surabaya City Transportation Service plays multiple roles as a supervisor, organizer, and overseer of the e-parking implementation. They have real time monitoring capabilities for daily income, enabling more stringent supervision of parking operations. E-parking provides convenience and is expected to help increase daily income, as parking revenue can be directly monitored on the Surabaya City Transportation Agency dashboard.

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Interested parties can access detailed information on daily parking fees collected (Dewi Pradita & Utomo, 2021). The role of banking in this case is to support electronic payment methods (creating e-money cards) as a means of payment for parking meters in collaboration with 5 banks, namely BRI, BNI, BCA, Mandiri, and Jatim. Although Bank Jatim does not issue electronic payment cards, as the Regional Development Bank (BPD), it has the role of managing the financial income from parking. Currently, these transactions have been further reinforced by the Decree of the Appointment of the Mayor regarding the bank that will cooperate with the Department of Transportation.

In order to facilitate the implementation, the Surabaya City Transportation Service held a socialization activity to introduce e-parking to the attendants. As the organizer, the Surabaya City Transportation Agency conducted an extensive socialization and training sessions for parking attendants either at their office or in the field. These activities not only conveyed how to operate the parking meter device, but also provided information about the planned strategies and objectives. Parking attendants are responsible for individually training each jukir who will be stationed at specific location point.

![Figure 4. Socialization of the e-parking program by the Surabaya City Transportation Service](image)

The socialization activities carried out by the Transportation Service have not only targeted the parking attendants who will be assigned to operate the parking meter, but also the conventional parking attendants who are trained on e-parking. This socialization aims to ensure that all parking attendants are well-informed about various effective parking management procedures, including the use of e-parking. The Surabaya City Transportation Agency has not only provided this socialization to parking attendants, but also extended it to the public users. The community satisfaction survey conducted after the socialization activity revealed that e-parking significantly enhanced the community’s sense of security and comfort due to its transparent and non-manipulative tariff collection process. In addition, e-parking can offer benefits for parking attendants by changing

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their bad image for the better, as the public's perception of them has often been negative and disturbing.

E-parking has proven to have a positive impact, as both the parking attendant and the community feel helped by its introduction. This is evident from the experiences of parking attendants who believe that the mere existence of the meter is enough to help avoid disputes with the community. Therefore, the public's perception has shifted from negative and unsettling thoughts for the better with the existence of a parking meter, as follow:

The community also benefits from transparent parking services, where billing is based on clear evidence containing entry and exit hours, and all information is recorded on ticket as proof. This helps prevent dishonesty by parking attendants and the leakage of parking fees.

According to the Surabaya Mayor Regulation Number 2 of 2015 regarding the procedure for awarding parking attendants' honorarium, the Surabaya City Transportation Service also distributes parking retribution income with the existence of a parking meter, as follow:

2. The Development of E-Parking Innovation in the City of Surabaya

The installation of the first parking meter took place at Surabaya City Hall. Over time, the development of the meter has proven to be highly significant, prompting the government, in collaboration with the Department of Transportation, to implement its installation at Bungkul Park. This decision was driven by the park's strategic location. In addition, Bungkul Park is also a highly sought-after tourist attraction among the entire community, including the residents of Surabaya as well as tourists from outside the city.

Prior to the installation of the parking meter, the Transportation Service assessed and calculated the potential income generated during a one-week trial period at the designated parking location. This revenue is given
in accordance with the average income to the transportation party. However, itis differentiated between weekdays (Monday-Friday) and weekends (Saturday and Sunday) due to the higher income generated on weekends. The Department of Transportation collaborated with parking attendants to ensure the proper issuance of approved parking tickets. Once all the parking meters were installed, the revenue generated from vehicles parked at the location became part of the potential Regional Original Income (PAD) of Surabaya.

Before the existence of a parking meter, there was a provision for a daily income target and only 20 parked vehicles could be used as revenue source by the parking attendant. However, with its introduction, all parked vehicles contributed to the potential local revenue (PAD) and jukir was paid by the Surabaya City Government with a contract system. Therefore, the attendants tend to be more enthusiastic than before in directing vehicle users to their respective parking locations. The introduction of the parking meter tool has generated a significantly higher income, contributing to increased local revenue (PAD) and minimizing congestion. This demonstrates that the meter provides a more structured parking system for Surabaya.

Since the reign of Mrs. Tri Rismaharini, the meter tool has remained operational without any reported issues in the implementation of e-parking. However, after the administration of Mrs. Risma, an additional payment system was introduced, incorporating the QRIS feature. This new system has made parking attendants more active in handling payments. For instance, when the parking meter is occupied, the attendant promptly approaches the driver with a QRIS barcode, making payment more convenient and eliminating the need for drivers to wait in long queues. Therefore, the users of these parking services can make payments directly by scanning the QRIS code. This method of payment aims to reduce the spread of COVID-19 by minimizing direct contact between officers and service users, while also supporting the Non-Cash National Movement (GNNT).

**Figure 5.** Parking payment using QRIS
With the QRIS payment method, residents of Surabaya can easily park their vehicles in nearby locations. The latest payment system eliminates the need of searching for a parking meter, as the attendants approach users and automatically print tickets.

However, there has been some obstacles in implementing the parking meters system. Field observations have revealed issues in the system, which experienced troubleshoot from both internal and external sources, including service users as well as parking meter. The Department of Transportation conducts routine monitoring and evaluation every two months to ensure the proper functioning of parking equipment and system. Meanwhile, from the external side, the parking attendants are guided to deliver wholehearted services to the community and work in accordance with SOPs regarding how meter officers can communicate with service users.

Another problem is the automatic engine shutdown after running for 24 hours, even when it is not in use. When the machine shutdown (lost connection), parking attendants have to resort to conventional or manual methods for collecting fees. This does not actually reduce the income since the deposit amount remains the same. Although a broken machine does not affect the number of people parking, the main issue lies in the high deposit amount, which is only based on the honesty of the parking attendant. This is because it is not recorded in the TPE machine. The Transportation Agency can directly handle any event of engine battery trouble. However, when there is damage to the component (hardware) part of the meter equipment, the repair process may take a significant amount of time as the Transportation Agency is unable to handle it directly.

The Surabaya City Transportation Service, specifically the Parking Management Section within the Traffic Sector, addresses field-related issues by conducting evaluations every six months. These evaluations cover aspects, such as income, complaints, public feedback, and more. When assessing complaints, the parking management section visits the field directly to investigate the situation. The parking meter tool has its advantages and disadvantages. One
drawback is the limited availability of human resources, since the parking meter requires users to operate the machine independently. In response to these shortcomings, Jukir is prepared to enhance its services by assisting service users without e-money, enabling them to make transactions using Jukir's e-money. Furthermore, in the event of damage to the parking meter device, the repair process may be significantly delayed due to the direct procurement of equipment from France. On the other hand, the advantage of the parking meter is that it allows the attendants to accurately track the duration of time a vehicle is parked, either through counting or real time monitoring. The installation of parking meter at City Hall and Bungkul Park in Surabaya facilitates the Department of Transportation to monitor income.

Considering the problems or deficiencies encountered in implementing parking meter innovation, it is crucial to prepare for innovation solutions that encompass three aspects. Firstly, the understanding of innovative understanding can foster the development and improvement of efficiency and coordination. Secondly, the presence of innovative leaders is essential in creating a culture of innovation among employees, and this needs to be institutionalized through regulations. Thirdly, analyzing the differences in readiness of cities or regions to implement innovations based on the Human Development Index (HDI) is necessary. The increase in HDI can serve as a conducive prerequisite for the development of regional innovation, as it holds significant importance (Aminah & Wardani, 2018).

Regarding the development plan in 2021, the e-parking payment system implements Manless Parking. This aims to eliminate face-to-face interactions between officers and users, while also educating the public to recognize and perform self-service for parking. Handheld Parking is a portable machine designed for both Public Street Parking and Special Place Parking. It facilitates electronic money payment, and ensures a non-cash transaction method. The figure below provides details on the plan to develop a parking payment system using Handheld machine:

**Figure 7. Payment flow using Handheld**

The application of e-parking is a concept of e-government. According to Presidential Decree No. 20 of 2006, e-government refers to the use of information and communication technology in government processes to improve efficiency, effectiveness, transparency, and accountability of government administration. It primarily aims to enhance public access to information without being limited by

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time and cost barriers, as well as facilitate transactions and services between the government and the community. The implementation of e-government can help improve the process of transparency and accountability of the government as well as the quality of services between the government and the community.

E-parking is one form of public sector innovation carried out by the Surabaya City Transportation Service to meet the needs of the community. The residents are required to pay parking rates in compliance with government regulations in order to receive quality service from the parking sector. The introduction of TPE signifies a renewal of the public roadside parking system from conventional to electronic. Through the TPE (electronic parking terminal) integrator, users can make non-cash payments, reducing the heavy workloads of parking attendants who can now handle transactions for all motorbikes and cars by simply facilitating the payment process. Therefore, people feel safe and at ease when using the parking facilities. The e-parking program aims to suppress the leakage of local revenue (PAD) in the parking sector, discipline parking attendants, and make the parking experience easier for the public as well as Surabaya as a Smart City. The Transportation Service is recognized for its ability to address the problems in the field, including issues related to parking attendants and revenue leakage.

**CONCLUSION**

Based on the study conducted on the institutional arrangement approach to e-parking innovation in Surabaya, it can be concluded that the successful implementation of this innovation requires effective cooperation among three parties, namely the Surabaya City Transportation Service, banking institutions, and integrator. Effective cooperation among the involved parties is essential and should be executed properly to ensure the parking meter successfully achieve its target. In order to facilitate the implementation process, the Surabaya City Transportation Service held a socialization activity to introduce e-parking to parking attendants. The agency, as an organizer, conducted extensive socialization and training for parking attendants, not only covering how to operate the parking meter device, but also providing information about the planned strategies and objectives.

The installation of the meters at two location points, namely City Hall and Taman Bungkul Surabaya, has transformed all parked vehicles into potential local revenue (PAD). Therefore, e-parking can be considered to have a positive impact, benefiting both the attendants and the community. The introduction of a parking meter has offered the public transparent parking services, with all relevant information recorded on the ticket as proof. This effectively deterred misconduct by parking attendants, hence leakage of parking fees can be

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The introduction of parking meter is considered an innovation solution for resolving all parking-related issues, properly and maximally.

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REFERENCES


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