Effectiveness of the Online Service Management Information System (SIMPONIE) Application in Online Business Licensing Services

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Abstract
This research discusses the effectiveness of the SIMPONIE application in improving public services in South Tangerang City according to the information system success measurement developed by William H. Delone and Ephraim R. Mclean (2016). This application is the result of a joint initiative between the Department of Investment and One Stop Integrated Services (DPMPTSP) and the Department of Communication and Information (Diskominfo) of South Tangerang City. SIMPONIE is designed with a number of features that aim to support the licensing process digitally, with the main aim of providing easy access for the public in obtaining business permits, increasing efficiency in the licensing process, and increasing the capability of government departments in serving the public. The features offered by SIMPONIE include the ability to register and apply for business permits online, tracking application status, payment of licensing fees online, notifications and communication between applicants and authorities, as well as electronic data archiving for documentation and reporting. According to research results, the SIMPONIE application has received a positive response from the people of South Tangerang City for many years. This positive reception reflects success in overcoming the challenges faced in business licensing services at the regional level. This success provides a concrete example of how information technology innovation can be used to improve efficiency, transparency and service to the community.

Introduction
The bureaucratic conditions in a country have a significant impact on the effective implementation of public services. Service quality and bureaucratic responsiveness have a direct impact on the level of public satisfaction with public services. A slow or unresponsive bureaucracy can result in public dissatisfaction, while an efficient and responsive bureaucracy can increase public satisfaction. Bureaucratic conditions also influence the government's ability to formulate and implement policies that support effective public service delivery. A strong and competent bureaucracy can be an effective partner in policy implementation. In Indonesia, the delivery of public services still faces many challenges, with quality not yet reaching high
standards. Therefore, innovation is very important in efforts to develop and improve the quality and quality of public services.

Through Law Number 25 of 2009 concerning Public Services (2009), the Indonesian Ombudsman uses its authority to evaluate the government's performance in providing quality public services to the community. This evaluation involves monitoring various aspects, including efficiency, transparency, accountability, fairness and the quality of services provided. The Indonesian Ombudsman (2019) has carried out an evaluation of government implementation at the ministry/institution level, provincial government, and district/city governments throughout Indonesia as part of its role as a public service supervisory institution. Public dissatisfaction with public services in Indonesia, especially in the licensing sector, is reflected in the report received by the Ombudsman of the Republic of Indonesia in 2019. The report shows that the problem of prolonged delays is the main issue with a percentage of 40.2%, followed by procedural deviations of 40.2%, 32.3%, and failure to provide services was 15%. According to Styareni & Fanida (2021), they found that there was dissatisfaction felt by some people regarding the quality of government services.

Of course, if these complaints are not handled, they will have a negative impact on the government. Furthermore, this can create distrust from the public. Therefore, it is important for all government employees, especially those working in institutions that provide public services, to give serious attention and handling to these complaints. This is a responsibility and function inherent in every employee in the ministry/institution. The quality of public service performance has a broad impact on various aspects of life, especially in efforts to achieve community welfare and as a guide for ministries/agencies to evaluate the implementation of public services. It is also a tool that can be used to improve the performance of public services. Therefore, improvements to public services must be carried out continuously and continuously.

To realize improvements in public services, the government, both at the central and regional levels, is currently advocating the application of technology-based information in the delivery of public services through an initiative known as Electronic Government (e-government). This initiative is regulated through Presidential Regulation Number 95 of 2018 concerning Electronic-Based Government Systems (2018), which emphasizes the importance of electronic-based government systems (SPBE) or e-government to create a clean, transparent, effective, quality, accountable and reliable government. For example, DPMPTSP South Tangerang City in Indonesia is an agency that can implement e-government, especially in the licensing sector.

The South Tangerang City Government has succeeded in achieving first place in all of Banten in the 2022 Public Service Standards Compliance evaluation issued by the Indonesian Ombudsman. This evaluation involved 9 local governments, 8 resort police forces, and 8 land offices. The South Tangerang City Government managed to achieve a score of 88.83. Realizing the smart city concept has become the main focus in every region, and currently, the government under the leadership of Drs. H. Benyamin Davnie as Mayor of South Tangerang is strongly committed to turning South Tangerang City into a smart city.

In line with the motto of South Tangerang City, 'Smart, Modern, Religious', the South Tangerang City Government has created innovation by utilizing technology as one of the keys to its success. The South Tangerang City Investment and One Stop Integrated Services Service (DPMPTSP), as part of the City Government, has launched the SIMPONIE application as an effort to support public services in the city. This step shows concrete evidence of the innovation carried out by the South Tangerang City Government. On this basis, the South Tangerang City
DPMPTSP aims to maximize efficiency and transparency in serving the public interest regarding the processing of any permits.

The SIMPONIE application, which was first implemented in South Tangerang City in 2018 and is based on South Tangerang Mayor Regulation Number 35 of 2019 concerning Online Licensing Management Information Systems (2019), is a web-based application initiated by DPMPTSP and Diskominfo South Tangerang City. This application is designed to facilitate public access and increase the government's role in providing good public services, especially various licensing services, starting from the process of registering files by the applicant, verifying files by the review team, accepting files from the department, to signing which can be done online by head of Department.

This application offers a variety of features that support various parties in the digital licensing service process, which really helps the community as service recipients and facilitates service providers, namely the government, in providing services. According to South Tangerang Mayor Regulation Number 35 of 2019 concerning Online Licensing Management Information Systems (2019). The main objectives of implementing the SIMPONIE application are; (1) Make it easier for citizens to obtain permits and non-permit services; (2) Providing efficiency in the process of obtaining permits and non-licensing services for the community; (3) Improving the capability of regional agencies and institutions in providing licensing and non-licensing services to the community.

In this way, SIMPONIE aims to improve accessibility, efficiency and quality of licensing and non-licensing services to the public and facilitate the process of obtaining permits. The SIMPONIE application is also equipped with several additional supporting features, such as SMS Gateway, which allows sending notifications via text message to the public regarding the certainty of the timing of the ongoing licensing process digitally. The result of public services through this application is a digital certificate that guarantees product authenticity and a valid licensing process according to the ITE Law, and is equipped with a QR Code.

Currently, South Tangerang City DPMPTSP has implemented online licensing services through SIMPONIE, as part of the use of e-government and an effort to make it easier for the public to apply for permits. The licensing service process, which was previously centralized in one location, has now turned into an online service by utilizing internet access (Tamara & Widiyarta, 2023). This application allows the public or applicants not to have to come directly to the office to submit files; they can upload administrative requirements documents directly via SIMPONIE. This service can be accessed by applicants via the site https://simponie.tangerangselatankota.go.id/, making it easier to submit licensing applications because SIMPONIE can be accessed from anywhere.

The SIMPONIE application has been well received by the people of South Tangerang City from year to year, this can be seen from the Community Satisfaction Survey data conducted by the South Tangerang City DPMPTSP below. The SIMPONIE website offers various types of services including licensing and non-licensing, which are managed by the South Tangerang City DPMPTSP. This service covers various fields such as development permits, people's welfare, economics, employment, social culture and capital investment. The licensing services served by the SIMPONIE application total 41 licensing services, which can be seen through the following service type data.
These various new features and developments in licensing services indicate that DPMPTSP is well prepared to achieve the goal of fast licensing services. SIMPONIE has integrated 17 SKPD with its center at DPMPTSP, aiming to provide online services to the community that are better, faster and more economical. In general, the SIMPONIE concept is an application operated by DPMPTSP, with support from Diskominfo. This application is supported by an application server and database server owned by Diskominfo, which acts as a provider or supporter and developer for DPMPTSP.

The SIMPONIE application also has a complaint list feature to motivate the government to focus more on the quality of their services. With the possibility of public complaints, the government tends to put more effort into maintaining quality and efficiency standards in the implementation of licensing services. The existence of a complaint list in the SIMPONIE application provides many significant benefits, to make the service of this application better. This complaint list allows application users to report problems, complaints or problems they experience in applying for permits or using the application. When public problems or complaints can be reported directly through complaint channels, the government can respond and resolve these problems quickly. This increases public satisfaction with public services. This creates a high level of transparency in interactions between government and society, as issues can be discussed openly.
With the complaint list, the SIMPONIE application is not only a tool for processing permits online, but also an interactive tool that allows the public to actively participate in the delivery of public services and contribute to improving the quality of these services. This is a positive step in the direction towards a more responsive and transparent government.

Previous research related to this research includes research by Gea Tamara and Agus Widiyarta (2023) which analyzes the implementation of e-government in online licensing services through SIMPONIE at DPMPTSP Serang Regency, the results show that the implementation of SIMPONIE at DPMPTSP Serang Regency has been successful, with good support clear in the form of vision, mission, regulations and socialization. Furthermore, Friandi’s (2019) research results show that the implementation of a website-based online licensing service management information system has helped facilitate the licensing process in South Tangerang City and overcome several problems that previously existed with the manual system.

Based on the background of this problem, researchers are interested in conducting research with the title "Effectiveness of Online Service Management Information System Applications (SIMPONIE) in Online Business Licensing Services at DPMPTSP South Tangerang City in 2022", with this the researcher will examine the extent of effectiveness and level of convenience Licensing services are provided through the SIMPONIE application which has been implemented by the South Tangerang City Investment and One Stop Integrated Services Service (DPMPTSP).

Researchers will analyze the extent to which the SIMPONIE application has facilitated the licensing process, measure the extent to which efficiency has been improved, and evaluate the level of ease of access provided to licensing applicants. Apart from that, researchers also want to develop an innovative system to address obstacles and problems in licensing services and transparency of public information currently faced by the community.

**Literature Review**

**Regional Innovation**

Regional innovation is defined as a form of renewal in the implementation of regional government. The main aim of regional innovation is to increase the effectiveness of regional government so that it can improve people's welfare. The regulation also emphasizes the importance of innovation in increasing the competitiveness of a region. Christiansen & Bunt (2012) emphasized that in the current era of globalization, there is a demand for innovation, not only in public services but also in comprehensive bureaucratic administration systems.

In an effort to provide more optimal and effective services, the government has taken the initiative to adopt innovations supported by technology to reduce process duration (Fitrianti et al., 2021). Innovation is not just a concept or thought, but also includes implementation, integration into systems, and continuous assessment. It is important for Regional Governments to incorporate aspects of innovation into their operations as a crucial element. The presence of Government Regulation Number 38 of 2017 reflects the Central Government's dedication to encouraging Regional Governments to be more creative in developing innovation in their regions.

**Public Service**

Everyone has the right to obtain goods, services or administrative services offered by public service providers. Public services are defined as a series of activities intended to meet service needs in accordance with statutory regulations. This is in line with the idea that government-managed public services are intended to advance the welfare of society as a whole. The
government is responsible for providing public services needed by the community with a
democratic approach and affirming the rights of every citizen (Margareta, 2022).

Public service is the process of helping others in certain ways and requires tact and strong
interpersonal bonds to be successful. Both goods and services are produced by each service.
Law Number 25 of 2009 concerning Public Services (2009), which defines public services as
a series of activities aimed at meeting the needs of every citizen and resident regarding goods,
services and/or administrative services provided by public service providers, is now a guideline
fundamental in the implementation of public services.

Information System Success Model

A framework for evaluating the success of information technology implementation has been
developed by DeLone & McLean (2003). This evaluation framework for information
technology systems focuses on six main factors. The DeLone & McLean model is used to
measure the success of information systems, which is also known as the D&M IS Success
Model. The function of information systems has changed significantly over the last ten years.
Updated D&M IS Success Model is the name Delone & Mclean gave to their model after
updating it (DeLone et al. 2016).

![Information System Success Model](source: Information System Success Model, Delone & McLean (2016))

Significant relationships to success are illustrated through arrow symbols, but do not display
the positive or negative value of these relationships in the context of cause and effect. There
are three variables in this process, namely: (1) system formation which includes information
quality, system quality, and service quality, (2) system utilization which involves user use and
satisfaction, and (3) the results of system utilization, known as net benefits (Nugroho et al.
2018)

Based on the results of a study from Primadian (2019) regarding the Information System
Success model which measures the success of information systems based on 6 (six) indicators,
namely; (1) System quality, which measures how well the system can meet user needs,
including adaptability, availability, reliability, response time, and usability; (2) Information
quality, which measures how good the information produced by the system is, including
completeness, ease of understanding, personalization, relevance, and security; (3) Service
quality, which measures how well the support is provided by the system, including reliability,
empathy, and responsiveness; (4) Intention to use, which measures how likely a user is to use
the system in the future; (5) User satisfaction, which measures how satisfied users are with the
system; (6) Usage, which measures how often and for how long the system is used.
The factors above are related to each other, the quality of the system and information will increase user interest and use. User satisfaction will increase if there is high interest in using the system. Users will benefit from high user satisfaction, both as individuals and organizations.

To assess the efficiency of SIMPONIE in online Business Licensing Services at DPMPTSP South Tangerang City in 2022, this theory is very relevant. This theory can show areas that need improvement and ensure that online business licensing services continue to function well, in accordance with the demands and expectations of service users.

**Methods**

The data collection method used in this research is a qualitative descriptive approach. According to Moleong (2017), qualitative research uses a holistic and descriptive approach, using language, in a special natural context and by utilizing various scientific methods to understand the phenomena experienced by research subjects, for example behavior, perception and motivation.

The qualitative descriptive approach used in this research is very relevant to research on the Effectiveness of Online Service Management Information System Applications (SIMPONIE) in Online Business Licensing Services at DPMPTSP South Tangerang City in 2022. This is because the qualitative approach allows researchers to understand the phenomenon in more depth and contextual, such as how the SIMPONIE application is used by licensing applicants, their perception of its effectiveness, and their motivation for using it.

To explore and describe the situation through in-depth analysis and arrive at conclusions relevant to the research objectives, a qualitative approach was used in this research. Documentation studies and literature reviews are two data collection techniques used. This technique is used to collect data from reports, laws and regulations, and journals which are then used as secondary data sources in the data analysis process.

In addition, a qualitative descriptive approach will allow researchers to describe in detail certain aspects of SIMPONIE use, such as success in increasing efficiency, challenges faced by applicants, or the impact on public services. Thus, a qualitative approach will help explore in-depth and contextual information that can be used to evaluate the effectiveness of the SIMPONIE application in the context of licensing services in South Tangerang City.

**Results and Discussion**

Measuring the Effectiveness of the Online Service Management Information System Application (SIMPONIE) in Online Business Licensing Services at DPMPTSP South Tangerang City in 2022 was carried out according to the information system success measurement model developed by William et al. (2016) which measures system success information based on 6 (six) indicators, namely:

**System Quality**

This system quality measures how well the system can meet user needs, including adaptability, availability, reliability, response time, and usability. This system quality indicator is a parameter or metric used to measure how well the SIMPONIE Application in Online Business Licensing Services at DPMPTSP South Tangerang City in 2022 can meet the needs of service users. This indicator helps in evaluating the extent to which the system can function as expected and provide maximum value for users.
The first is how the adaptability of the SIMPONIE application can include the system's ability to adapt to changes in regulations or policies related to business licensing. With the launch of the Online Licensing Management Information System (SIMPONIE) through the Integrated Licensing Services Agency (BP2T). This online licensing program aims to provide TDP SIUP licensing services that can be completed in one working day (One Day Clear). SIMPONIE shows fast adaptability in implementing licensing services in South Tangerang City. Previously, the TDP SIUP licensing process was carried out manually and took around 14 working days. But with the SIMPONIE program, people who want to take care of permits can complete it in one day.

The convenience of this online service allows people to adapt quickly, so that this program can run optimally. Thus, registration of permits, especially SIUP TDP, can be done flexibly anywhere and at any time, without being limited by location or time limit. The quality of this system can also be seen from the SIMPONIE response time measurement which includes the time required for the system to respond to user requests regarding business licensing. This includes the time to submit the application, processing the application, and delivery of the permit to the applicant. Faster response times will improve user experience.

The service time for this application is determined to be a maximum of 14 (fourteen) working days, starting from registration, assuming that the required documents submitted are complete and correct, from the time the required documents are received in a complete and appropriate condition. This system quality indicator has been met because SIMPONIE functions well, provides licensing services efficiently, and significantly reduces the time required to complete the TDP SIUP licensing process which previously took around 14 working days, while now it can be completed in one working day.

This indicates that SIMPONIE has succeeded in adapting and integrating the changes required in the implementation of licensing, increasing the availability of online services, and increasing reliability and faster response times, thus enabling the public to easily adapt to this system, accessing licensing services anywhere, and increase efficiency and affordability in processing their permits.

**Quality of Information**

Information quality measures how good the information produced by the system is, including completeness, ease of understanding, personalization, relevance, and security. This information quality indicator is a parameter used to measure how good the information produced by the information system is, namely how the SIMPONIE application meets user needs.

One of the indicators of the quality of this information is how easy it is to understand, referring to the extent to which the information presented by the SIMPONIE application is easy for users to understand. This includes the use of clear language, good guidance, and adequate explanation of the licensing process. The SIMPONIE application is an application that is very easy for the public to understand, because its features are easy to use. This can be seen from figure 5.
From this data, it can be concluded that the SIMPONIE application provides a clear step-by-step guide on how to submit a permit application, process stages, and required documents. This guide will help users to understand the steps that must be followed properly. Information in SIMPONIE is well presented through text and graphic elements, such as icons or flowcharts, which help users understand the licensing process better.

With different types of information support, users have a variety of ways to understand the information provided. Next, is personalization performance to measure SIMPONIE's ability to provide information that suits individual user needs, including providing guidance or information that is relevant to the type of permit being applied for by the user. This application can send notifications or alerts to users based on their needs. This may include notifications about the progress of their application, changes in licensing-related rules or regulations, or reminders about licensing due dates.

SIMPONIE also has a personalization settings feature that allows users to adjust their preferences. In this application, service users can choose to receive notifications via email or text message, or they can choose to save preferences about the types of permissions they are interested in.

Thus, this information quality indicator has been met, because SIMPONIE is an application designed according to the needs of each service user. This helps in increasing user engagement, reducing the potential for confusion, and ensuring that the information provided is more relevant to individual situations and needs, making personalization indicators well met in online business licensing services at DPMPTSP South Tangerang City.

Service Quality
In an effort to improve the quality of licensing services in South Tangerang City, the Government has developed the SIMPONIE application. From a service quality perspective, the SIMPONIE application, which was developed by the South Tangerang City Government, shows a commitment to improving the quality of licensing services. Although these
applications offer innovative web-based solutions and responsive features such as SMS Gateway, there are some barriers to reliability and empathy, especially regarding accessibility and onboarding.

Regarding indicators of service readiness, safe transactions, and in accordance with user needs. The analysis findings show that the SIMPONIE application, created by DPMPTSP South Tangerang City, has several challenges in its implementation, including; (a) The licensing features are not yet fully perfect (including lost files, canceled files and frozen permits) and some of them are not yet equipped with SOPs (providing copies of permits and legalization). Furthermore, there needs to be clarification regarding the limits of permits that require a recommendation by the technical service and do not require a recommendation by the technical service; (b) Procedures still require standardization, simplification and automation through information technology to facilitate the management of the licensing process, as well as the need for delegation of permit signing authority that is adapted to conditions to increase the volume and speed of services provided. This includes issues related to accessibility and the absence of explicit information regarding time limits.

However, this application still functions as a public tool that is beneficial to the community and improves licensing service standards in South Tangerang City.

**Interest in Using**

Interest in using/using refers to several essential indicators that must be considered, including user dependence on the system, frequency of use, and tendencies to use the system.

Based on an evaluation of the SIMPONIE application used for the licensing process in South Tangerang City, it can be concluded that people's dependence on this application has decreased. This is due to the presence of another application from the Ministry of Investment/BKPM, namely OSS, which is now the dominant alternative in processing permits. Even though SIMPONIE was initially an exclusive platform for this purpose, now the application is only used for specific services in South Tangerang City.

However, it should be noted that even though the frequency of use of SIMPONIE has decreased, this application still has relevance in meeting the specific needs of people in the area.

**User Satisfaction**

User satisfaction is a measure of the success of a system or application. In the context of the SIMPONIE application implemented in South Tangerang City as an innovation in public services, user satisfaction plays a crucial role in determining the effectiveness and efficiency of licensing services. There are several obstacles that can affect the level of user satisfaction.

Issues such as mechanisms regarding work relations and coordination, especially with technical SKPD related to granting permits, especially in the function of control/control over service duration, are important considering that one of the aspects in the DPMPTSP SOP (Standard Operating Procedure) is related to the time aspect. Currently, the process duration is longer because DPMPTSP does not have control over the time when the permit process has moved to another Technical OPD, so that files that have been entered in the SIMPONIE application experience delays in issuing permits.

**Frequency of Use**

The SIMPONIE application emerged as an innovative solution from DPMPTSP to improve public services in South Tangerang City. With society's increasing need for fast and efficient
services, applications such as SIMPONIE are becoming increasingly relevant. SIMPONIE as a single application has been implemented since 2018 so the frequency of use of the application is very high in managing online licensing services and digital archiving features. The SIMPONIE application operates through a system connected to a data communications network and can be accessed by all authorized users who create an account to process permits in South Tangerang City.

The high use of the application indicates that SIMPONIE has become an essential tool in the licensing process because licensing applicants can monitor in real time the position of the files being processed. This application has the potential to continue to develop and become a new standard in public services in South Tangerang City. This can be seen from the services provided by the South Tangerang City DPMPSTP since the SIMPONIE application was introduced, which has also become better along with the number of licensing services provided, this can be seen from Figure 5 below.

![Figure 5. DPMPTSP Licensing Files per Year 2023](image)

Source: DPMPTSP South Tangerang City, (2023)

So it can be concluded, according to this data, that the frequency of use indicators have been met well, this can be seen from the number of service users who actively use the SIMPONIE application, where there are a total of 969 file positions that have been submitted by applicants as users of the SIMPONIE application.

**Conclusions**

Based on theory, Measuring the Effectiveness of Online Service Management Information System Applications (SIMPONIE) in Online Business Licensing Services at DPMPTSP South Tangerang City in 2022 is carried out according to the information system success measurement model developed by William et al., (2016) which measures The success of the information system is based on 6 (six) indicators, the indicators of interest in using and user satisfaction are met, which indicates that the existence of this application is effective, but the indicators have not been met.

Failure to meet the indicators of interest in use and user satisfaction can indicate that there are challenges for the South Tangerang City Government in encouraging users to continue using SIMPONIE and that there needs to be improvement efforts to improve the user experience and ensure that this application can better meet their expectations and needs. By overcoming this
problem, the government can increase the adoption and effectiveness of SIMPONIE in providing online business licensing services in South Tangerang City.

To overcome these challenges, several recommendations can be proposed: (1) Develop or improve an integrated information system between DPMPTSP and technical SKPD. This system allows each agency to monitor the progress of granting permits in real-time; (2) With an integrated system, DPMPTSP can provide reminders or notifications to technical SKPD if a permit process is approaching the deadline; (3) Develop an integrated SOP between DPMPTSP and technical SKPD which includes aspects of service time and create a feedback mechanism where DPMPTSP can provide input to technical SKPD regarding obstacles faced in the permit granting process.

References


