

Article

# Exploring the impact of social media technology on public service efficiency: A case study of Indonesian local government

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**Abstract:** In recent years, information technology and social media has developed very rapidly and has had an impact on government services to the public. Social media technology is used hugely by several developing countries to provide services, information and promote information disclosure in its government to improve its performance. This study aims to build role of social media technology concept as a public service delivery facilitator to the public. Furthermore, it discusses the potential impact of social media use on government culture. To achieve the goal, this study combines two theories, namely government public value theory and green smart city with four variables, namely quality of public services, user orientation, openness, and greenness. These variables are used as the foundation for data collection through in-depth interviews and group discussion forums. In-depth interviews are utilized as data search and direct observation. The informants consist of several government elements, including heads of regional apparatus organizations, heads of public service malls and Palembang city government employees. The study revealed that the Palembang government has several social media-based public services that have quality of services, user-orientation, openness, and environmental friendliness.

**Keywords:** social media; public service; e-government; Palembang; IT governance

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## 1. Introduction

Information technology (IT) has been used as a change tool in organizations and government agencies (OPD). This is because IT is currently used as the key to success to provide public services which has caused many changes in public services such as transparency and information disclosure in provincial, city, and district governments in Indonesia (Antoni and Bidar et al., 2017; Ariana et al., 2020). In addition, IT improves the government's ability to manage, channel, and distribute information and services to the public (Hasmawaty et al., 2022). It's great to realize local governments implementing information technology to provide services to the public. Palembang city government is a great example of this, with a range of website-based and mobile-based applications available to access various services such as tax services, libraries, open data, online auctions, and more. These services can be accessed through the official website of the city of Palembang or through the downloadable mobile applications available on the Play Store for Android and the IOS-based application app store.

Currently, the city of Palembang is established to implement an electronic-based government system (SPBE) as per the regulations of the President of the Republic of Indonesia No. 95 of 2018 and the Republic of Indonesia Presidential Regulation No.

132 of 2022. SPBE serves as a blueprint and requirement for all city, district, and provincial governments in Indonesia. It is a planning document for information technology infrastructure development for public services and stakeholders. The preparation of this SPBE is based on the national SPBE architecture and regional medium-term planning that optimizes the use of advances in information and communication technology. With the implementation of this SPBE, it is hoped that public services in Palembang will become more efficient, effective, and accountable to whole the people of the city.

Social media is a digital platform that facilitates users to communicate with each other or share content in the form of photos, videos and writing (Criado and Sandoval-Almazan et al., 2013). Social media also provides a digital platform for its users to carry out social activities and interact without being limited by distance and time (Najmudin et al., 2021). As technology continues to evolve, social media has become an integral part of our lives. It has transformed the way we interact with each other and has a significant impact on the dissemination of information (Al-Oraiqat et al., 2022). The use of social media has become a crucial tool for governments around the world, including local governments, to provide public services and communicate with their citizens (Mansoor, 2021). With the rise of social media, it has become easier to reach out to people and share information, making it an essential platform for all community activities (Bertot et al., 2010; Carlo Bertot et al., 2012). Social media is more than just a channel of communication (Díaz-Díaz and Pérez-González, 2016) when used effectively, communication could drive beyond just improving interactions between public sector organizations and their audiences. It can actually create new opportunities to develop community-based partnerships by facilitating engagement with the public. This means that we can now maintain interactions and relationships that were previously constrained by time and distance barriers (Lovari and Valentini, 2020). In particular, social media can help local governments to be more responsive to their citizens, engage with communities and promote accountability and transparency (Höttecke and Allchin, 2020). It can also offer cost savings and flexibility for both local governments and citizens who use it while providing opportunities to improve service delivery and gain community feedback in an effective and efficient manner (Kumar et al., 2020).

Meanwhile, according to the report from the Association of Indonesian Internet Service Providers (APJII) regarding Indonesia's internet profile in 2022, it shows that the behavior of internet users mostly uses social media as much as 89.15% and chat online 73.86% and numerous internet users access the internet using data access from cellular operators and use mobile phones or tablets as much as 89.03%. Meanwhile, only 4.72% of internet users access local government services. It means that the social media is more widely used by citizen from whole levels of society because of the convenience and complete features and thus the citizen in Indonesia currently spend a lot of time on social media. According to Dewi et al. (2022), most people in Indonesia currently spend a lot of time on social media. This can be seen from the 10% increase in internet users in Indonesia in 2019 with around 64.8% or 171 million Indonesians being active internet users (APJII, 2022). Most of them are active on social media, as is evident from the fact that the average Indonesian internet user spends about 3 h and 26 min a day online, primarily on social media platforms. Facebook and WhatsApp

are the most popular social media platforms, with about 4 out of 10 Indonesians being active users. It's also worth mentioning that India ranks fourth in terms of Instagram users, with 56 million accounts, behind the United States, Brazil, and India (APJII, 2022).

Numerous previous studies have developed the concept of social media technology-based public services. Criado and Sandoval-Almazan et al. (2013) argue that social media technology can be seen as a tool in the government to increase the government's capacity to innovate in interacting and communicating with the public. In addition, social media is used as a goal of the government which is related to how to manage relations with the community (Henman, 2020; Lapuente and Van de Walle, 2020). It is also used for the publication and dissemination of information that is used for big data analysis that leads to local government decision-making processes (Henman, 2020). Thus, it can be concluded that previous research only focused on investigating interactions, communications between the government and the public with the aim of managing and improving government and community relations. Based on previous research and considering the research gap above, this study develops a social media-based public service concept for the Palembang government by identifying public services that will be associated with existing capabilities in social media using the approach or concept developed by Karunasena and Deng (2012) (Hasmawaty et al., 2022). This concept consists of the quality of public services, user orientation, openness of public organizations and greenness. It contributes by inducing certain environmental, organizational, and technological factors that can impact social media adoption decisions in public sector organizations. It also contributes to encouraging interaction between the factors identified as local government organizations adopting social media.

In this paper, firstly, this study reviews the existing literature and identify research gaps before addressing previous technology adoption research. Next is to describe the method, present our findings, and highlight the managerial implications before discussing limitations and future research directions.

## **2. Literature review**

### **2.1. Public services in Palembang**

Palembang City, the capital of South Sumatra Province, boasts an impressive array of public services for its more than 1.66 million residents (Badan Pusat Statistik Kota Palembang, 2024). With an area of 400.61 km<sup>2</sup>, this bustling metropolis is the second largest city on the island of Sumatra, after Medan City. In 2019, the city saw an economic growth rate of 5.94 percent, driven by the wholesale and retail trade sector, as well as the repair and construction of automobiles and motorcycles. These sectors contributed 31.26 percent, 17.51 percent, and 17.19 percent respectively to the city's overall economic growth in 2020. As Palembang City continues to thrive, it is estimated that its population will reach 2.5 million by 2030 (Badan Pusat Statistik Provinsi Sumatera Selatan, 2021). In line with the increase in economic growth, the number of poor in Palembang City remains quite high. However, there is a great information to note that the proportion of poor people in the total population has decreased over the years. In 2014, the number of poor people was 202.31 thousand

people, which accounted for 12.98 percent of the total population. The number then decreased in 2019 to 180.70 thousand people, which accounted for 10.90 percent of the total population (Badan Pusat Statistik Kota Palembang, 2021). It's clear that one of the main causes of poverty is the high unemployment rate, which stood at 7.93% of the total workforce in 2019 (Badan Pusat Statistik Kota Palembang, 2020). The poverty rate is unevenly distributed among the 18 sub-districts in Palembang City. Four sub-districts in the Seberang Ulu area, namely Kartapati, Seberang Ulu 1, Seberang Ulu 2, and Plaju Districts, are the highest contributors to the poverty rate. Persistent high poverty rate in the area is due to low education levels, swampy conditions, and lack of infrastructure development, especially in information technology. Consequently, the low information technology capabilities of the community can be attributed to the increasing number of poor people, low education levels, and uneven development of IT infrastructure (Garcia-Mora and Mora-Rivera, 2023; Kaplinsky and Kraemer-Mbula, 2022; Mossberger et al., 2006).

To address the issues above and improve services to the public, the Palembang Government is currently unable to maximize the use of e-government applications either those developed by the Palembang Government or applications provided by the Central Government, such as the Palembang City website Portal, Hallo Palembang, Palembang City Information and Documentation Management Officer, SIRUP LKPP for Palembang City, Palembang City LPSE, Investment Service and One-Stop Integrated Services, Check Palembang City SPPT PBB bills, Report, BRT Trans Musi, Palembang Tourism and the Office of Population and Civil Registry. The reason is that it does not align with the primary aim of implementing e-government, which is to facilitate smoother communication and transactional processes for citizens, businesses, and governmental agencies (OPD), including their personnel. This is intended to ensure that the government can achieve greater efficiency, effectiveness, transparency, and accountability in serving the public (Almarabeh and AbuAli, 2010; Chaerowati and Ibrahim, 2019; Charliyan, 2023).

In addition, Palembang government has integrated information systems through websites, mobile, and social media platforms such as Telegram, WhatsApp, TikTok, Facebook, Twitter, and Instagram to deliver services and communicate with the public. Social media allows for community and citizen feedback to ensure accurate information is received and understood and provides opportunities for engagement with public sector organizations. Marthasari (2021) conducted a survey of 34 Indonesian provincial government websites registered at <https://www.indonesia.go.id/province>. Each website's performance was measured using Google page speed. The study found that 38% of provincial government websites were in the good category, while 62% were not due to the one-way interaction design. Only a few local governments promote social media applications on their websites to interact with the public.

The development of social media-based public services is similar with the development of ICT in general where the government requires organizational changes to culture, people, structures, and processes to maximize service performance (Jia et al., 2019). According to Wukich (2021), local governments need to have a clear social media strategy to ensure the success of social media initiatives. Thus, to harness the full potential of social media, a systematic approach is needed to identify the key

determinants that influence successful adoption.

Although many studies (Carlo Bertot et al., 2012; Lovari and Valentini, 2020) have focused on the use of social media to enhance service delivery and the benefits they can offer, there is consensus among researchers that their adoption across local governments remains insufficiently explored. Limited research has been found that concentrates on identifying the capabilities and roles of social media in developing the concept of public service to enhance engagement between the government and the public. Almaiah and Nasereddin (2020) explored factors influencing the adoption of social media by local governments in Jordan. Meanwhile, Lian and Dong (2021) focused on exploring the benefits, risks, and barriers to the use of social media in local government and healthcare services. Feeney and Welch (2016) outlined several explorations of social media use and e-government management to enhance public services. Gao and Lee (2017) explored social media adoption by local governments and investigated the relationship between existing public services and social media platforms such as Facebook and Twitter in Nebraska state. Criado and Villodre (2021) focused on exploring the adoption of social media by local governments in disseminating information and services.

While this study focuses on the types and patterns of social media that can be used in local governments, including the benefits and challenges of using such technology, it overlooks the factors that can drive the adoption of social media in these organizations. This represents a gap in existing knowledge, considering the unique characteristics of social media and the differences with ICT and web technologies in general. Therefore, a more in-depth investigation is needed to understand the role of social media capabilities and characteristics in developing the concept of public service that encourages local governments to adopt technology for generating public service values through the provision of quality public services, user-friendly applications, and operational efficiency.

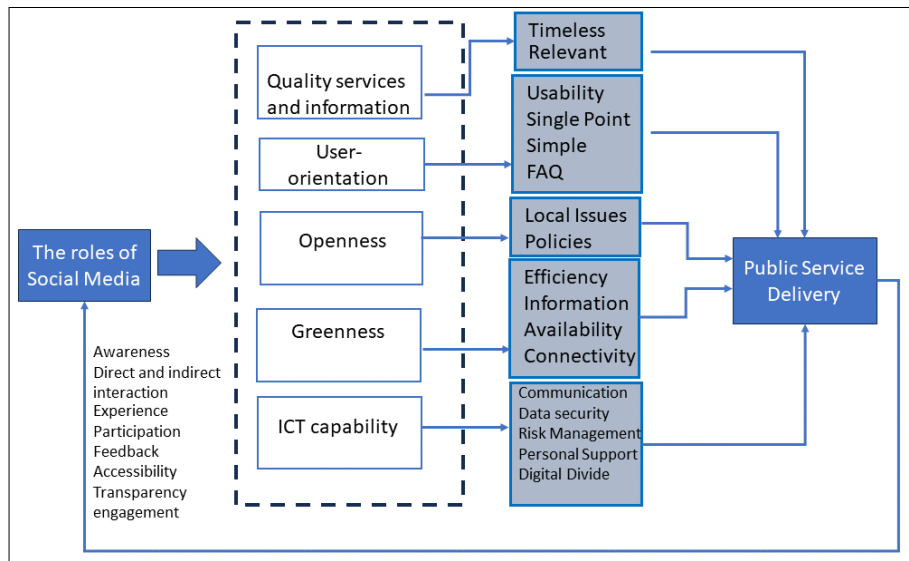
As numerous studies have shown, using social media to improve service delivery can have several benefits (Carlo Bertot et al., 2012; Linders, 2012; Lovari and Valentini, 2020), however it seems that there is still a lack of research on how local governments can adopt these technologies. Sharif et al. (2015) have explored the factors involved in social media adoption for local Australian governments, as well as the benefits, risks, and barriers of using social media in local government and health services (Lian and Dong, 2021). There have also been studies that examine the use of social media and e-government management to improve public services and explore the adoption of social media in local government for delivering information and health services (Feeney and Welch, 2016). Jiang and Tang (2023) state that social media is an efficient and low-cost tool to assist local government agencies in China to achieve public administration objectives during crises, and its efficacy is largely dependent on regional socioeconomic status. Cervi et al. (2023) reveal that government websites as the nerve center of the cities' communication strategy in the world of travel and tourism. These studies study tend to focus on the types and patterns of social media that can be used and the benefits and challenges of using such technologies (Criado and Villodre, 2021; Gao and Lee, 2017; Wigand, 2010). However, the studies disregard the whole factors and do not consider unique characteristics and capabilities of social media that can drive social media adoption in local governments. It is

important to understand the unique characteristics and capabilities of social media to develop public service concepts that encourage local governments to adopt technology and produce public service values through the delivery of quality public services, user-friendly applications, and operational efficiency of public services.

## **2.2. Concept of public services through social media**

The Republic of Indonesia launched the SPBE program as an effort to enhance public services since 2018. This program is supported by Presidential Regulation No. 95 of 2018 on the electronic-based government system and Presidential Regulation No. 132 of 2022 on the national architecture of the electronic-based government system. SPBE serves as a benchmark and a mandatory initiative implemented by all city, district, and provincial governments in Indonesia. This has led local governments to take the initiative to develop various e-government applications. The development of e-government in local governments, including Palembang city, however, is still far from mature. In 2022, the United Nations survey results indicated that Indonesia's e-government readiness ranked 77th globally in the development and implementation of the SPBE (Nations, 2022). Additionally, numerous city and district governments in Indonesia have limitations in information technology infrastructure to support public services to the community. One of the reasons is the budgetary constraints faced by local governments in enhancing SPBE infrastructure (Manoharan and Ingrams, 2018). This study considers the maturity level of e-government in the Republic of Indonesia and the budget allocation limitations faced by local governments in building information technology infrastructure to support SPBE. Based on the aforementioned issues, this research proposes a conceptual framework to investigate the role of social media in producing public service values. **Figure 1** illustrates the proposed framework, indicating that social media contributes to public values in the implementation of SPBE in local governments. This can be explained by public service delivery through social media and the efficiency of public organizations. The study utilizes concepts developed by Karunasena and Deng (2012) and Hasmawaty et al. (2022). The research by Karunasena and Deng (2012) developed a model of public service value and information delivery to the public as shown in **Figure 1**.

The quality of services and information from social media-based e-government is measured through accuracy, timelessness, relevance (Oliyichenko and Ditzkowska, 2023), precision, and level of detail of information, service interaction (Saylam and Yıldız, 2022), facility of download form, and ability to pay online (Karunasena and Deng, 2012). Governments are committed to improve public service delivery by introducing e-government initiatives. User orientation approach is necessary to provide people-centered e-government services. To achieve effective delivery of e-government services, it is essential to adopt a citizen-centric approach. As a result, citizens' perception of government websites' user-friendliness (Al-Sakran and Alsudairi, 2021), the simplicity of website addresses, the provision of all information from one website with links to other websites (Malodia et al., 2021), the look and feel of all government websites, and frequently asked questions are all important factors for measuring the citizen-centricity of e-government service delivery (Stefanovic et al., 2021).



**Figure 1.** Proposed framework of social media in public service delivery.

The openness dimension refers to the transparency of public services. It indicates the extent to which the organization discloses its decision processes and procedures, and performance information in a timely manner (Tsybulnyk et al., 2020). Public organizations have the characteristic of being open by publishing what must be disclosed, for example, public policies and budget information. Publishing draft public policies online by governments for public consultation, online disclosure of public organizations’ budgets and expenditures to demonstrate their accountability (Karunasena and Deng, 2012), issuing online tenders by public organizations to increase transparency, the ability of citizens to file complaints online, and presence of organizational charts and official contact information online public is a key indicator of openness (Tejedo-Romero et al., 2022).

Greenness of public organizations is a key indication of public value through e-government as measured by organizational efficiency, openness, responsiveness, and environmental sustainability. e-Government is used to increase the efficiency of public organizations by cutting processing costs, creating strategic relationships between government agencies (OPD), and creating empowerment. In this context, the efficiency of public organizations is determined by developing better ICT infrastructure, redesigning public functions, sharing public information, empowering public sector staff, and trimming redundant staff. Since public organizations are run with taxpayers’ money, citizens appreciate the increased efficiency of public organizations through e-government which results in savings. In addition, the use of IT infrastructure and applications can save operational costs in providing services to the public. It was also added that the infrastructure and applications used have a usability level so that they do not require training and training costs in using these applications and infrastructure. Furthermore, stewardship products, applications and IT infrastructure have the capacity to integrate and access all components of public services. The last factor is clean technology, namely e-Government applications can bring many environmental benefits by saving energy, limiting duplication of effort and resources, sharing data and resources, reducing paper usage, and recycling consumable equipment. **Table 1** shows the public service indicators developed based on

Karunasena and Deng (2012) and Hasmawaty et al. (2012) study.

**Table 1.** Public service items.

No.	Public Service Items	Indicators	References
1	Quality of information and services	Timeless	(Karunasena and Deng, 2012; Oliychenko and Ditkovska, 2023; Saylam and Yıldız, 2022)
		Relevances	
		Precision	
		Download form	
		Pay online	
2	User-orientation	Usability of website	(Al-Sakran and Alsudairi, 2021; Karunasena and Deng, 2012; Malodia et al., 2021; Stefanovic et al., 2021)
		Single entry point	
		Simple	
		Freq. asked question	
3	Openness	Policies	(Karunasena and Deng, 2012; Tsybulnyk et al., 2020; Tejedo-Romero et al., 2022)
		Disclosure	
		Expense online	
		Complaint online	
		Contact information OPD	
4	Greenness	Redesign	(Hasmawaty et al., 2022; Karunasena and Deng, 2012)
		Integrated services	
		Contact points	
		IT infrastructure	
		Public servant/ICT skill	

### 3. Research methodology

This study uses qualitative research methods and focus group methods based on post-positivism philosophy, which is used to study the natural conditions of objects, and researchers as the main instrument. The sampling of data sources was carried out purposively, the collection technique was carried out by triangulation (combination), the data analysis was inductive, and the results emphasized meaning rather than generalization.

The object of this research is the Palembang city public service mall which is located on Jalan Governor H.A Bastari 15 Ulu Jakabaring, Palembang, South Sumatra. Furthermore, this study also collected data from several OPDs related to the implementation of social media in public services. This study used in-depth interviews with informants for data search and direct observation from September 2021 to February 2022. The number of informants who were used as research respondents consisted of several government elements such as heads of offices and employees as implementers of public services as shown in **Table 2**. They will be selected to be interviewed based on their roles in their respective organizations involved in strategic planning and processes while building and implementing social media for public services. The questions that the researchers asked the informants varied according to the capacity of the informants. The interviews are exploratory in nature, consisting of open-ended questions that focus on participants' perceptions of the process and role



of social media in public services for the city government of Palembang in relation to the four dimensions developed by Karunasena and Hasmawaty. For the heads of public service malls, interviews focused on their perceptions of the role of social media in being adopted for public services to improve service quality and efficiency of IT infrastructure in operational activities and clearly defined roles, responsibilities, accountability, and control for the city of Palembang. For informants from related OPDs, they questioned the development of standards for using social media in all government agencies and offices and to what extent the city of Palembang has adopted social media for public services. Furthermore, in terms of the role of OPD employees, the emphasis is on issues in social media operations in public services. In addition, informants are interviewed to see the relationship between OPD employees and the adoption of social media such as the supporting technology infrastructure environment in the use of social media.

**Table 2.** List of people interviewed.

No.	Code of interviewee	Date	Informants	Duration	Total	Status Informants
1	01	20/09/2021	Heads of public service mall	60 min	1	Head of Public Service Mall, to obtain information about public service policies and technology used.
2	02 and 03	11/10/2021 and 21/10/2021	Head of Government Organisations	60–90 min	2	The head of the regional apparatus organization service, looks in general about the use of social media in OPD
3	14–23	17/01/2022 to 18/02/2022	Staffs of Government organisation	330 min	10	Employees or staff of OPD and Palembang City Public Service Mall, to obtain information and obstacles encountered in using social media as a means of public service
Total					13	

To enhance objectivity and precision in this research, the researcher sought additional information through field observations. **Table 2** delineates the particulars of the informants involved in this study. The data analysis in this research adopts a PR-based communication planning model developed by Cultic and Center. This model serves as the framework for identifying and analyzing strategies employed by the OPD in the city of Palembang in the implementation of social media initiatives towards realizing a smart city. The subsequent phase involved the use of Focus Group Discussions (FGD). It is used as a secondary data collection method because its outcomes will complement and support the results from in-depth interviews. The FGD involved ten participants consisting of staff from government agencies. During the pre-FGD phase, preparations began with the formation of a team comprising a moderator, assistant, note-taker, participant liaison, logistics coordinator, documentation team, and others. The next step in the pre-FGD phase involved determining the location and timing of the FGD, which was scheduled for 18 February 2022 in the meeting room at the school of Public Administration Bala Putra Dewa, Palembang. Following this, logistical arrangements were made, including incentives and souvenirs for FGD participants. The number of FGD participants was established at ten individuals from government departments in Palembang. After determining the number of participants, the next step involved recruiting participants representing four groups based on their respective government departments. The final step in the pre-

FGD phase was the preparation of a question list. This process considered the research objectives, the purpose of the FGD, the type of information to be gathered, and the use of simple, clear language. The questions were tested for ease of comprehension by participants. During the implementation phase, the FGD focused on the topic of the role of social media in public services, aiming to gather feedback from participants with diverse backgrounds. The structure of the FGD comprised an opening, an introduction to the discussion, a core discussion on the role of social media in public services, challenges and opportunities, advantages and disadvantages of social media, strategies to improve public services, and the role of the public in social media usage. The final stage involved summarizing key points from the discussion, producing a verbatim transcription, and analyzing the data. This study contributes to a deeper understanding of four key dimensions and anticipated data outcomes from focus groups: 1) articulated data, where participants express their thoughts in response to direct questions; 2) attribution data, wherein moderators subtly provoke discussion; and 3) emergent data, signifying normative understanding.

#### **4. Results and discussion**

Presently, the municipal government of Palembang exhibits suboptimal engagement with information technology in public services, primarily focusing on the utilization of websites and mobile applications to facilitate information distribution and enhance transparency in governance. Additionally, the Palembang city government integrates social media platforms, namely Facebook, Instagram, TikTok, and Twitter, which are linked to the official website of the city. However, the official social media accounts of the Palembang city government frequently share the routine activities of the mayor and the head of the OPD (Regional Apparatus Organization), such as village visits, meetings, environmental cleanup initiatives with residents, among others. These activities are extensively disseminated through the Palembang city government's official social media accounts. By harnessing the features of social media, the government ought to be capable of promoting strategies, planning initiatives, and the implementation of public services to the community. The subsequent section provides the outcomes of interviews conducted with informants, aiming to gauge the extent to which the adoption of social technology and social media has impacted the enhancement of public services in the city of Palembang.

##### **4.1. Quality of information and services**

Timelessness in public services refers to the ability of the Palembang city government in providing public services to remain relevant, and accessible, and provide long-term benefits to the community. This is because social media can provide ongoing information that is continuously updated. Furthermore, social media is a media that is currently trending and provides up-to-date and multimedia-based content (videos and images) that are of interest to the public, especially young people. Indeed, social media currently has limitations and will be abandoned by society in its time. One example is Friendster and Blackberry which have been abandoned by their users. However, even though Friendster and Blackberry have been abandoned by their users, new social media have emerged that have the latest features and are adapted to the

wants and needs of the community. Instagram and TikTok are examples of social media that have advanced features that can attract people to use them. This means that social media will continue to develop continuously, and the latest version of social media will come out which is tailored to user needs.

One employee from the OPD stated that, "... We previously used Facebook to inform the public about service activities, whether it was from their personal account or the OPD account. However, they now use Instagram to interact with the community, and in the future, they may use TikTok for this purpose. This is because young people are starting to abandon Instagram and become addicted to TikTok."

Being relevant to social media-based public services means ensuring that the content, information, and services provided through social media platforms are in accordance with the needs, interests and demands of the public served. This was confirmed by the head of the public service mall who stated:

*"... To maintain the relevance of public services, currently we (public service malls) understand that the public has used social media a lot to communicate and interact with friends, family and business partners. Additionally, social media is a means for the community to record all their daily activities which causes dependence on social media. So, we as public services must evolve in providing public services to the community by adopting several social media."*

Furthermore, being relevant also means that social media has a content format that suits the trends and needs of the community by combining information, sound, video, and other multimedia. So, as a public servant, social media-based public services must present content in a format that suits people's preferences. For example, using short videos to educate about public issues, infographics to explain data or statistics, and short, easy-to-understand posts for important messages.

Additionally, relevance also means responding to actual issues currently being faced by society. For example, providing up-to-date information and guidance on emergency events, disaster situations, or disease pandemics, so that people can feel supported and well-informed. Presenting solutions to community issues: social media-based public services must actively seek solutions to issues faced by the community. For example, by providing step-by-step guidance or connecting communities with relevant resources to address specific issues.

It can be concluded that public services using social media platforms can produce quality services and information through timeless (long-term benefits, updating and sustainability) and relevant (latest content formats, multimedia, infographics and providing fast information). This is in line with research conducted by Chun and Reyes (2012) which says that innovation and transformation in public administration through social media as new communication channels between governments and citizens as well as among citizens through users generate social content, social networks, collaboration, and cross-platform data sharing that allows presenting up-to-date and ongoing information. thus, this study proposes that social media can play an important role in public service delivery by providing timeless information technology and relevant contents.

**Proposition 1:** Social media can play an important role in public service delivery by providing timeless information technology and relevant contents.

## 4.2. User-orientation

Usability is the ability of a product, service, or user interface to be used easily and efficiently by users. Social media, on the other hand, refers to online platforms that allow users to interact, share content, and connect with others virtually. The relationship between usability and social media is very close. In the context of social media, good usability is an important factor to attract users, maintain their participation, and create a positive experience. One employee of the Palembang city public service mall stated:

*“Social media has good navigation that allows users to use its features quickly and easily. Plus, having an intuitive layout and clear menus will help users find the information they need and interact with others.”*

*“... (process) Simple sign-up and login, an easy sign-up and sign-in process is an important aspect of usability in social media, however, if people encounter difficulties trying to create a new account or log in to their account, they may lose interest or leave the platforms.”*

Another employee stated that “...social media has a responsive design, social media has the ability to adjust size and design depending on various devices, including desktop computers, smartphones and tablets so that people can access it comfortably wherever they are ...”.

*“In addition, social media that has consistency in design, layout, and the icons used will make it easier for users to adapt and use new features quickly. Social media has clear and responsive feedback features for users, for example, providing notifications about new messages, responding to user actions, or providing timely support in case of technical problems. So that people experience interactive social experiences and build user involvement in public services.”*

Therefore, it can be concluded that the use of social media in public services is by providing a platform that can be accessed by numerous youths, and there is good navigation, and the public can quickly find official accounts and pages of government or public service institutions. This facilitates access to information, services, and programs provided by the government which will ultimately increase community participation through interaction and communication between the community and the Palembang city government (Ansari et al., 2022). Next is the social media single entry point (SEP) which refers to the concept where government agencies provide one service point or official account that is integrated on social media platforms to serve the needs of public services and e-government. According to the head of the Palembang integrated service mall, SEP's role in social media emphasizes user orientation as an information centre.

*“One of the social media that is used as a SEP is Instagram. SEP on social media is an integrated information centre for the community. By providing an integrated official account, government agencies can publish various information related to policies, programs, public services, and e-government. This makes it easier for people to access the latest and most reliable information through one centralized source.”*

*“In addition, SEP on social media allows government agencies to respond directly to questions, comments, or complaints from the public. The public could*

*send messages or comments through the official account, and the government can provide the answers or solutions needed. This accelerates communication and increases interaction between the government and the public.”*

From SEP perspective, social media has several roles in public service, firstly, information Dissemination: social media has the potential to reach a wider and more diverse audience. By using SEP, government agencies can convey information to the public more effectively. The public can follow the official account to get updates regarding public policies, programs, or services. This helps in disseminating relevant information to a larger audience.

According to Chun and Reyes (2012) social media can be used to promote government programs and initiatives. The government can upload content related to health, education, environment, or other development programs. This helps the public to know and understand better about the programs offered by the government and promotes active participation in these programs. Secondly, SEP on social media can empower the community by providing a place to participate in the public decision-making process. Government agencies can use polling, survey, or open discussion features to get public input and opinions about certain policies or programs. This provides space for citizens to contribute to decision-making and increases active participation in e-government.

Overall, Single Entry Point (SEP) on social media has an important role in public service and e-government. This enables government agencies to become integrated information centres, respond to interactions with the public, disseminate information more extensively, promote programs and initiatives, and empower communities in decision-making processes. By using SEP on social media effectively, governments can increase citizen engagement, transparency, and efficiency in public services.

A Simple Media Social is a term that refers to a simplified or streamlined version of social media specifically designed for public services and government purposes. The role of social media in public service and government can be described such as, communication and engagement, dissemination of information, public awareness and education, service delivery and feedback, and crisis management and Emergency Communication (Wukich, 2021).

Communication and engagement: it can serve as a platform for effective communication and engagement between government agencies and the public. It provides a channel for the government to share updates, announcements, and important information about public services, policies, and programs. Additionally, it enables citizens to interact with government officials, ask questions, provide feedback, and express their concerns or suggestions.

Another benefit of a simple platform of social media is dissemination of Information. It allows government agencies to distribute information about public services in a simple and accessible manner. It can be used to provide details about available services, eligibility criteria, application procedures, and relevant contact information. By utilizing social media, the government would ensure that citizens have easy access to accurate and up-to-date information, reducing confusion and enhancing transparency.

In term of public awareness and education, social media can be leveraged to raise public awareness about government initiatives, campaigns, and important issues. It

can be used to share educational content, such as videos, infographics, or articles, to inform citizens about various aspects of public services, government policies, and civic responsibilities.

Service delivery and feedback, a simple social media can facilitate the delivery of government services by providing a platform for citizens to access and request services online. Citizens can submit applications (whatsApp), track the progress of their requests, and receive updates through social media. Moreover, it allows citizens to provide feedback on the quality of services received, report issues, and suggest improvements, enabling government agencies to be more responsive and accountable.

To Conclude, a simple social media platform can play an important role in public services and governance by providing effective communication channels, responding quickly to community needs, encouraging community participation, empowering communities, and increasing collaboration between agencies (Pennycook et al., 2020). By using this platform effectively, government agencies can strengthen relations with the public, increase transparency, and improve the quality of public services provided.

There are many social media such as Instagram, Facebook and WhatsApp that are used as FAQs by government institutions to improve public services. This is in line with the opinion expressed by one of the heads of districts (subdistricts) in the city of Palembang.

*“FAQs on social media platforms in digital government provide a convenient and efficient way to disseminate information about public services. By addressing commonly asked questions, government agencies can proactively provide answers and solutions to citizens’ concerns, reducing the need for individuals to seek information through other channels. This helps streamline the process of accessing relevant information, making public services more accessible.”*

*“In addition, FAQs on social media platforms serve as a user-friendly support system for citizens engaging with digital government services. By providing answers to frequently encountered issues or queries, FAQs can guide individuals through the service delivery process. This empowers citizens to navigate digital platforms, understand procedures, and resolve common problems independently, improving their overall user experience.”*

FAQs on social media platforms can significantly reduce the time and resources spent by government agencies in responding to repetitive queries. By compiling and publishing commonly asked questions, government agencies can highlight address citizen concerns, minimizing the need for individuals to contact customer support or submit individual queries. This allows agencies to allocate their resources more efficiently and focus on handling more complex or unique inquiries. Furthermore, FAQs on social media platforms encourage citizen engagement by providing a platform for interaction and information sharing. Citizens can actively participate by asking questions or seeking clarification on public services, while government agencies can respond promptly and transparently. This fosters a sense of openness and collaboration, strengthening the relationship between the government and citizens.

For example, improved customer service: According to Maecker et al. (2016), 37% of customers prefer to contact businesses via social media for customer service inquiries and service complaints. By providing automatic FAQs on social media (chatbot), government agencies can address common questions proactively, reducing

the need for individual inquiries and improving customer service efficiency. A case study from the Government of Alberta, Canada, showed that FAQs on their social media channels resulted in a 40% reduction in calls to their call center. This reduction in inquiries allowed the government to allocate more resources to handle complex issues, leading to an improved user experience for citizens.

In summary, FAQs on social media platforms play a crucial role in digital government and public services. The social media facilitates efficient information dissemination, provide user-friendly support, save time and resources, enhance citizen engagement, and contribute to continuous service improvement. By leveraging FAQs effectively, government agencies can improve the citizen experience, promote transparency, and deliver more effective and accessible public services (Bertot, Jaeger and Hansen 2012).

Proposition 2: user orientation of social media has important role in public service delivery by providing usability, single point, simple and FAQ.

### **4.3. Openness**

The third factor is openness, wherein every OPD in the city of Palembang is obliged to report or be accountable for every activity to the public. Based on interview results and FGD with heads of departments and OPD employees, the study successfully revealed several roles of social media in supporting openness in public services in the city of Palembang.

According to a staff member at the integrated service mall in Palembang, "... Similar to the roles of social media in previous activities, social media has the ability to support openness in disseminating local issues, policies and regulations to the entire community."

Furthermore, he stated that, "... Before policies and regulations are enacted, most of these policies are posted on social media to gather feedback and perceptions from the public." From the public's perspective, they mentioned that "the current use of social media is very effective in enforcing laws and regulations by recording incidents in the field and posting them on social media." Therefore, it can be concluded that the roles mentioned above represent a form of social media-based community participation in public services, allowing local governments to collect feedback, suggestions, and aspirations directly from the public. Openness policies play a crucial role in ensuring that this participation is genuinely accommodated and that public opinions are considered in decision-making. Another role of social media is that local governments can enhance transparency in the policymaking and regulation process. Social media provides an effective tool to monitor and oversee public services. The community can use this platform to voice complaints, provide feedback, or report non-compliance with established policies or standards. By implementing openness policies, government institutions are expected to provide more transparent access to information and processes related to public services.

Based on the FGD results with several OPD employees in Palembang regarding the role of social media in information openness in public services, it can be concluded that:

Live and stories features: social media often provides live streaming and stories

features that the government can use to convey information directly to the public. These features enable direct interaction between the government and the community, providing an opportunity to answer questions in real-time.

**Hashtag:** The government can create specific promotions or campaigns using relevant hashtags to increase awareness and community participation. Such campaigns can encourage the community to share information, voice opinions, or provide feedback on policies and laws.

**Invited influencers and collaborations:** The government can collaborate with influencers or notable figures on social media to help convey messages and expand the reach of public awareness campaigns. Such collaborations can attract more attention and interest from the public. To summarize, with social media, local government can improve their commitment to openness of local issues and policies and regulation awareness of community, the indirect and direct interaction to citizen.

**Proposition 3:** openness of social media encourages the local government to build openness in public service delivery by providing live and story, hashtag, invited influencer and posting as a community control.

**Proposition 4:** the role of social media has important role in public service delivery by providing live and stories, hashtag, invited influencer, and posting.

#### **4.4. Greenness**

The efficiency or restructuring of public services and e-government through the utilization of social media involves a strategic sequence of steps. Several measures can be undertaken in the process of reconfiguring public services using social media. According to an official from the district office, "... The efficiency of public services is carried out by identifying the goals and objectives to be achieved. Thus, the benefits derived from the redesign of social media-based public services include enhancing accessibility, strengthening community engagement, or improving the government's responsiveness to public input. These objectives will guide the entire redesign process." Additionally, a staff member from the Palembang integrated service mall added, "Before incorporating social media into public services, the study analyzes user needs by identifying segments or groups of the population targeted by public services and e-government. Understand their habits and preferences in using social media, as well as the challenges or obstacles they face in accessing public services. Thus, information about public services targets a specific community." Choosing diverse social media platforms, considering factors such as user numbers, demographics, possible interactions, and available features, is essential. Commonly used social media platforms include Facebook, Twitter, Instagram, or YouTube. **Content Design:** Develop content that aligns with the selected social media platform and user needs. The content should be crafted to provide clear, useful information easily comprehensible to users. Consider the use of multimedia such as images, videos, or infographics to enhance attractiveness and understanding. Furthermore, the redesign of social media-based public services should consider interaction and responsiveness elements such as comments, private messages, or polls to enhance user engagement and participation. Government agencies must have a dedicated team responsible for monitoring and responding to questions, input, or complaints from the public promptly



and accurately. This team should also possess a profound understanding of social media management principles, ethics, and the ability to respond promptly and professionally to user interactions. It is crucial to remember that redesigning public services and e-government using social media is an ongoing process. Continuous evaluation and sustainable improvements are necessary based on feedback, changing user needs, and the developments in technology and social media trends. Lastly, evaluation is employed to measure the success of social media implementation in public services and e-government. Data analysis and user feedback are utilized to evaluate service effectiveness and efficiency. Employ this information to continually refine and adjust the redesign that has been implemented.

The municipal government of Palembang can undertake various initiatives to redesign public services based on social media. Firstly, the local government should conceptualize social media as a platform for rapidly updating information to the public compared to traditional methods such as print and electronic media. Secondly, the government should configure social media as a means to receive requests, complaints, or queries from the public through direct messages or comments on their official government accounts, a process that previously required filling out forms at local government offices. Thirdly, the government can utilize social media to inform the public about events, seminars, public meetings, or other activities relevant to public services. This aids in enhancing public participation and awareness of government initiatives. Fourthly, Community Education: social media can be harnessed by the government to provide education to the public on various social, environmental, or specific policy issues. They can share articles, videos, or infographics to impart a better understanding to the community. Fifthly, Public Consultation: The government can leverage social media for public consultations or gathering input from the community regarding specific policies or projects. They can seek opinions, conduct polls, or collect feedback through social media platforms. Sixthly, Emergency Services: social media can serve as an emergency communication channel during crisis situations. The government can provide real-time information about natural disasters, pandemics, or other emergency situations through their official accounts. Seventhly, Collaboration and Partnerships: social media can be employed by the government to collaborate with non-governmental organizations, local communities, or other institutions in delivering public services. For instance, supporting SMEs in promoting their products or services through social media by sharing engaging posts, customer reviews, and special offers. Additionally, providing digital marketing tips and strategies to SMEs to help them expand their reach and increase sales. This enables the exchange of information, synergy, and joint efforts in achieving improved public service objectives. Lastly, Monitoring and Responsiveness: The government can utilize social media to monitor public issues, identify problems requiring prompt responses, and provide appropriate feedback to the public.

The aforementioned redesign of public services indicates that the municipal government of Palembang not only engages in service redesign but also addresses the broader service ecosystem to reduce energy consumption. The findings of this research align with those of Hasmawaty et al. (2022) and Karunasena and Deng (2012), revealing that service redesign is imperative for environmental change through innovative public service business process approaches such as the adoption of

WhatsApp, Telegram, and other social media technologies, which can assist the city government in promoting a green smart city. Furthermore, the redesign emphasizes that restructuring public services can be underscored by a focus on reducing operational costs within the organization. For example, the use of video calls and video conferencing applications such as WhatsApp, Telegram, and others can enhance cost efficiency in transportation, potentially prompting the government to transition towards environmentally friendly office spaces. Integrated service systems refer to systems that integrate various aspects and components within an organization or institution with the goal of enhancing efficiency, connectivity, and coordination among different units or departments. This system may encompass information technology, operational procedures, and organizational structures. On the other hand, social media pertains to online platforms that enable users to interact, share information, and communicate messages to a large audience. Examples of popular social media platforms include Facebook, Twitter, Instagram, TikTok, and LinkedIn.

According to the head of one of the City Departments (OPD) in Palembang, “Currently, we have a data centre, and one of the data sources is derived from social media. This is because social media provides abundant data on the preferences, issues, and expectations of the community. By integrating sophisticated analytical systems into integrated systems, the government can analyze data from social media to assess the sentiment or perception of the public towards the current administration and gain a more effective understanding of the needs and interests of the community. This information can be used to guide better and more relevant public service policies.” Analytical systems in public services refer to the utilization of technology and data analysis methods to collect, process, analyze, and leverage information to improve effectiveness, efficiency, and decision-making in public services. This system enables the government or public service institutions to harness existing data for valuable insights and take more informed actions.

Numerous instances illustrate the implementation of analytics systems in public services. Firstly, in citizen satisfaction analysis, government agencies can garner insights into citizens’ contentment levels regarding various public services by collecting and analyzing data from surveys, feedback forms, or social media. This information proves invaluable for identifying areas necessitating improvement and prioritizing resource allocation effectively. Secondly, concerning service demand forecasting, an analysis of historical data on service usage and trends empowers government agencies to anticipate future service demand. This facilitates enhanced resource allocation and meticulous planning, ensuring the efficient and effective provision of services. Thirdly, with regard to fraud detection and prevention, analytics systems can scrutinize data for patterns and anomalies, enabling the detection of potential cases of fraud or misuse of public funds. Through the monitoring of financial transactions, procurement processes, or social welfare programs, government agencies can pinpoint suspicious activities and take requisite actions. Fourthly, performance monitoring involves tracking and measuring key performance indicators (KPIs) associated with public services. This empowers government agencies to monitor and evaluate their performance, pinpoint areas for improvement, and make data-driven decisions to augment service quality and efficiency. The subsequent example involves sentiment analysis on social media. Social media platforms generate copious data that,

when analyzed, provide insights into public sentiment towards specific policies, programs, or public events. Sentiment analysis aids government agencies in gauging public opinion, identifying emerging issues, and adjusting their strategies accordingly. Sixthly, in traffic management and optimization, analytics systems leverage real-time data from traffic sensors, GPS devices, or social media to analyze traffic patterns, predict congestion, and optimize traffic management strategies. This contributes to the reduction of traffic congestion, enhancement of transportation efficiency, and overall improvement of urban mobility. These examples underscore how the application of analytics systems in public services empowers government agencies to make informed decisions, optimize resource allocation, and elevate the overall delivery of public services to citizens.

The utilization of social media in public services in the city of Palembang has the potential to enhance efficiency in the field of information technology infrastructure. The following are the results of a Forum Group Discussion (FGD) with several City Government Agencies (OPD) in Palembang regarding the role of social media in public services. Computer Networking, a fundamental infrastructure used to connect various devices and systems in the public service environment, encompasses Local Area Networks (LAN) within government offices, Wide Area Networks (WAN) linking various public service locations, and internet connections for access to online services and information. Subsequently, the Data Center, a facility used to store, manage, and process large-scale data. In public services, the data center is employed to store sensitive and critical data such as population information, tax data, or health data. The data center also provides the infrastructure to run public service applications and systems. Fourthly, the reduction in server usage in public services. These servers, hardware devices managing resources and providing services to users, are employed in the context of public services to offer online applications and services, such as e-government portals, online application systems, or document management systems. Servers are also used to store and manage databases used by government agencies. Fifthly, Applications and Software. With the advent of social media, Palembang City Government Agencies reduce the development of applications that are promotional, educational, and supervisory in nature. Information technology infrastructure in public services also involves the development and use of applications and software supporting operational and service aspects. This encompasses financial management systems, archiving systems, document management systems, personnel management systems, online service systems, and other specialized applications used in various public service domains.

Sixthly, Security Systems. The security of systems and data is a crucial aspect of information technology infrastructure in public services. This includes security policies, firewalls, data encryption, access controls, and privacy protection mechanisms to safeguard personal information and sensitive data managed by government agencies. Seventhly, Cloud Infrastructure. The use of cloud infrastructure is becoming increasingly common in public services and e-government. Cloud computing enables data storage and application operation in centralized data centers, thereby reducing the need for extensive physical infrastructure at public service locations. This can enhance efficiency and flexibility in service delivery. Eighthly, Reduction in the Use of Hardware and Peripherals. Information technology

infrastructure also encompasses hardware such as computers, servers, network devices, and peripherals such as printers, scanners, or biometric devices (such as fingerprint scanners). This hardware is used in the day-to-day operations of public services and e-government.

Furthermore, the city government of Palembang currently relies exclusively on social media in public services, rendering several information technology infrastructure-based services obsolete. The first is the Call Center. In many instances, governments or public service agencies have a dedicated call center to receive telephone calls from the public. If the government shifts entirely to social media, the call center may be reduced or deemed unnecessary, as communication can occur directly through social media platforms. The second is Telephone and PABX Infrastructure. The use of social media in public services can diminish the need for traditional telephone infrastructure, such as Private Automatic Branch Exchange (PABX) systems and physical telephone lines connected to government agencies. Communication can take place through direct messages or comments on social media platforms. Thirdly, Correspondence Facilities. Social media replaces the need for traditional correspondence in most interactions with the public. Consequently, correspondence facilities such as incoming and outgoing mail, mail processing, and the maintenance of related physical infrastructure may be reduced or unnecessary. Fourth is the Conventional Complaint System. In some cases, governments have a conventional complaint system that involves filling out physical forms or sending complaint letters. If social media is used to directly receive complaints from the public, the conventional complaint system may be replaced or reduced. The last is the use of Print Media and Traditional Advertising. Governments often use print media and traditional advertising to convey information and promote public service programs or activities. If social media is actively used, the government can reduce the use of print advertising and transition to more efficient online promotions.

Proposition 5: the role of greenness of social media has important role in public service delivery.

#### **4.5. Information communication technology capability**

Social media has indeed influenced various aspects of our lives, including public services. Although social media provides a platform for interacting with the government and obtaining information, it does not directly eliminate the need for government employees in public services. Based on observations on several social media accounts owned by the city government of Palembang, which are used to support technology-based public services, this research found that there is an agency or government organization formed as the coordination of public relations for the city of Palembang. This organization is located in the Department of Communication and Informatics of Palembang and has the task of collecting information and issues, covering the activities of the mayor, deputy mayor, and regional government agencies (OPD), creating and designing content, editing, managing the web and social media, uploading and posting information to official social media and the website. This organization consists of information communication technology (ICT) human resources and non-ICT human resources collaborating to distribute information about

the activities of the mayor, deputy mayor, and OPD. Furthermore, the following are the results of observations and FGDs that show several points that need to be considered in the use of social media and IT human resources in public services. Firstly, direct communication; social media allows the government to communicate directly with citizens, but government employees are still needed to answer questions or provide more detailed and specific information. Government employees have broader knowledge and experience in carrying out their tasks, which cannot be fully replaced by social media platforms. Secondly, data security: In some cases, public services involve the exchange of sensitive personal information. In this regard, trained government employees play a crucial role in maintaining the confidentiality and security of such data. While social media can be used for communication, there are security risks that need to be considered. Therefore, the presence of government employees remains necessary. Thirdly, risk management: several public services involve complex cases that require in-depth understanding. Trained government employees have specialized knowledge and skills to handle such situations. Social media may not provide the same level of understanding as that which can be offered by government employees. Fourthly, personal support: There are situations where citizens need specific personal support and guidance. Government employees can provide guidance tailored to individual needs, while social media tends to be more general. Fifthly, limitations of access and the digital divide: Despite the increasing use of social media, there is still a portion of the population that lacks adequate internet access or does not possess sufficient technological skills. These limitations can delay their participation in accessing public services through social media platforms. Government employees remain an essential channel for those who cannot leverage technology effectively.

Proposition 6: the role of ICT capability of social media has important role in public service delivery.

In conclusion, despite the transformative impact of social media on the way interactions with the government and public services occur, it cannot entirely eliminate the need for government employees. Their role in providing information, addressing inquiries, handling complex cases, and offering personalized support remains crucial in ensuring effective and efficient public services as shown in **Table 3**.

**Table 3.** Research findings.

No.	Variables	The role of social media	Indicators
1	Quality of information and services	Timeless	Usefulness
			Update
		Relevant	Sustainability
			Appropriate contents
		Multimedia	
		Infographics	

**Table 3.** (Continued).

No.	Variables	The role of social media	Indicators
2	User Orientations	Usability	Interactions
			Sharing contents
		Single entry points	Virtual
			Navigation
3	Openness	Policy	Simple
			Simple communication
		Efficiency	Simple engagement
			Simple delivery
4	Greenness	Information Availability	Simple education
			Highlight
		Connectivity	Frequently asked questions (FAQs)
			Clarification
5	ICT capabilities	Management Capabilities	Chatbot
			Feedback
			Fitur live
			Story
5	ICT capabilities	Management Capabilities	Hashtag
			Centralised Information
			Community Education
			Consultation
5	ICT capabilities	Management Capabilities	Emergency
			Collaboration
			Citizen satisfaction analysis
			Allocation and planning
5	ICT capabilities	Management Capabilities	Prevention
			Performance Monitoring
			Traffic Management
			Internet Connectivity
5	ICT capabilities	Management Capabilities	Data center
			Software Applications
			Information Security
			Information and communication technology infrastructure
5	ICT capabilities	Management Capabilities	Communication
			Risk Management
			Procedural and operational standards

Based on the findings of the above research, in term of timelessness, social media technologies are crucial in bridging the gap between service providers and consumers,

thereby fostering relationships and improving public service quality. Budz and Starosta (2018) highlight that social media serves as an intermediary, enabling efficient communication and high-quality information dissemination. This enhanced communication has a significant impact on public services, allowing for timely interactions and a more responsive approach to meeting consumer needs. Similarly, Wilantika and Wibisono (2021) discuss how social media influences people's decisions and interactions with local governments, suggesting that its real-time nature helps public agencies maintain a connection with citizens. In terms of relevance, social media is also key to ensuring relevance in public service communication. Wilantika and Wibisono (2021) examine how social media is used in public services in India, focusing on various forms of content, including multimedia and infographics, to enhance both the quality of services and their reach. This approach reflects the diverse ways that social media can engage audiences and deliver information that resonates with them, ultimately contributing to more effective public service delivery. These studies demonstrate that social media's ability to provide timely and relevant information plays a significant role in shaping public services, fostering engagement, and enhancing service quality. By acting as a bridge between service providers and consumers, social media platforms not only improve communication but also contribute to a more responsive and user-friendly approach to public services.

User Orientation in Public Service through social media. Social media has significantly contributed to enhancing user orientation in public service delivery, leading to improved communication and increased accessibility. Gola et al. (2018) highlight that social media platforms provide interactive features that foster greater engagement, content sharing, and ease of navigation, ultimately improving communication between public agencies and citizens. This user-oriented approach makes public services more accessible and responsive to citizens' needs. Khan et al. (2019) discuss how social media plays a crucial role within public organizations by facilitating information sharing and virtual interaction among employees. They find that social media contributes to streamlined communication processes through easy navigation and simplicity, helping public organizations operate more efficiently. Babaoglu and Akman (2022) focus on public service platforms with integrated social media capabilities, noting that these systems promote information integration and simplify access. They find that this approach to public service encourages greater public service information disclosure, promoting responsiveness and participation through single entry points. Criado and Villodre (2021) explore the use of social media in European local governments, demonstrating that it enhances communication, engagement, and the delivery of public services. According to their research, social media fosters transparency, participation, and collaboration in public service delivery, aligning with the interpretative framework that emphasizes these values. Prakasam et al. (2023) showcase a practical application of social media in public services by designing an AI-powered healthcare WhatsApp chatbot. This chatbot allows users to book, cancel, or reschedule doctor appointments efficiently, illustrating the potential of chat.

Openness, transparency, and public participation are key elements in the role of social media in public services. Brajawidagda and Chatfield (2014) demonstrate how social media enables citizen-sourcing initiatives, providing platforms for independent

applications and fostering open data environments. Furthermore, Gola et al. (2018) emphasize that social media offers interactive elements such as feedback, hashtags, and live features, fostering enhanced communication, engagement, and service delivery.

Social media technologies are essential in providing centralized information during emergencies, aiding in effective communication and collaboration among stakeholders. Twitter, in particular, plays a crucial role in disseminating information during crises, allowing users to connect with appropriate authorities for assistance. Anand et al. (2022) discusses how social media, especially Twitter, is used for intergovernmental collaboration in emergency management, particularly during preparedness and planning stages. They highlight that Twitter is a popular platform for establishing connections between various agencies. However, the challenge of information overload and multimedia content during emergencies requires efficient classification methods to extract valuable situational awareness information for emergency services. Anand et al. (2022) underlines this need, emphasizing the critical role social media plays in providing timely and accurate information. Bonfanti and Stefanucci (2018) indicate that security agencies utilize social media platforms for crisis management, policing, and intelligence activities, contributing to enhanced public safety through information sharing and communication in security-related initiatives. Social media serves as an essential tool for community education and fostering collaboration in emergencies. It provides a platform for authorities to educate the public about safety measures, emergency preparedness, and response plans. Furthermore, social media can promote intergovernmental collaboration, as seen in its use for coordinating emergency management efforts among various agencies. Brajawidagda and Chatfield (2014) highlight the role of social media in enabling citizen-sourcing initiatives, allowing communities to contribute to open data environments. This engagement can enhance collaboration and provide valuable insights during emergencies.

Social media also plays a role in assessing public service quality and capturing civic satisfaction. Aliguliyev and Iskandarli (2022) demonstrate that Twitter data can be used to analyze civic satisfaction with public services, providing insights into public opinions and sentiments. This analysis can help governments understand and improve service delivery. Wilantika and Wibisono (2021) discuss how social media platforms like Twitter can be utilized for evaluating public service quality through sentiment analysis and topic classification. This approach aids in monitoring the performance of public services, enabling authorities to make data-driven decisions. Social media is also instrumental in promoting public health by encouraging preventive behaviors and fostering social connectivity. Jafar et al. (2023) emphasize that social media plays a crucial role in delivering timely health information and connecting individuals to reliable health resources. This connectivity can lead to better public health outcomes by promoting preventive behaviors and increasing awareness of health-related issues. Furthermore, social media's internet connectivity facilitates communication, socializing, and complaint handling in public services, contributing to enhanced effectiveness and innovation in service delivery. Jafar et al. (2023) note that this connectivity promotes communication among citizens, allowing them to share experiences and report issues more efficiently. Overall, these findings underscore the



importance of social media in centralized information sharing, community education, collaboration, public service quality assessment, and public health. The ability of social media to disseminate information quickly and connect various stakeholders makes it a critical tool for effective public service delivery, especially during emergencies and crises. The further step involves developing a conceptual framework to map each supported process in the public services of Palembang city, as illustrated in **Table 4** below.

**Table 4.** The role of social media in public services.

No.	Roles	Messenger	Instagram	Facebook	YouTube	TikTok	Tweeter
1	Information delivery	☑	☑	☑	☑	☑	☑
2	Communications & Interactions	☑	☑	☑	☑	☑	☑
3	Program Promotion	☑	☑	☑	☑	☑	☒
4	Education	☒	☑	☑	☑	☑	☒
5	Complaint	☑	☑	☑	☑	☑	☑
6	FAQ	☑	☑	☒	☒	☑	☑
7	Participation	☑	☑	☑	☑	☑	☑
8	Portal Government	☒	☑	☑	☑	☑	☒
9	Enrolment and Registration	☑	☒	☒	☒	☒	☒
10	Polling	☑	☑	☑	☑	☑	☑
11	Evaluation	☑	☑	☑	☒	☑	☒
12	Work Collaborations	☑	☑	☑	☑	☑	☒
13	Prediction	☒	☒	☒	☒	☒	☑

**Table 4** explains that the information delivery process in public services based on instant messengers such as WhatsApp and Telegram can be carried out by broadcasting information to all community contacts in the OPD database. Similarly, with Instagram, Facebook, YouTube, and Twitter, government information will be disseminated to all followers, friends, and subscribers using different algorithms on each platform. In the case of TikTok, which uses a slightly different algorithm, public information will reach users even if they are not friends or followers. Communication and interactions in public services across all social media platforms can be conducted using features such as messaging, comments, replies, and posting content. Promoting work programs and OPD activities to enhance public services can be done through social media with the assistance of third parties such as influencers and online media like newspapers. This is useful for expanding the reach of these social media platforms and increasing the number of followers. As for TikTok, expanding the reach of information can be achieved by using popular sounds or songs attached to the relevant picture and information. Similarly, educating the public about public services is often done through platforms like YouTube and TikTok, where there is already a wealth of educational content available. This is because these platforms already host a variety of educational content. Complaints, FAQs, and participation involve three approaches taken by the public. The first is by sending messages through official messengers to the relevant OPD. The second is by creating live streaming and stories about incidents in the community, and the last is by using hashtags to collect news or events that

should be brought to the government's attention. Another feature that can be used for this service is an AI-based chatbot to answer all public questions about public services. The Government Portal serves as the interface used by local governments as the gateway to information in public services.

Messenger and Twitter are still minimally used as government portals. Enrollment and registration refer to how the public can submit documents or fill out forms to obtain government services. Among these, only Messenger has the necessary features, such as form filling and document uploading/sending. Polling and evaluation involve how OPDs or local governments assess the performance of public services by conducting polls on social media, a feature that is almost universal across social media platforms. Collaboration and Partnership: social media can be utilized by the government to collaborate with non-governmental organizations, local communities, or other institutions in providing public services. For example, assisting SMEs in promoting their products or services through social media. This may involve sharing engaging SME posts, customer reviews, or special offers. Additionally, providing tips and digital marketing strategies to SMEs to help them expand their reach and increase sales enables the exchange of information, synergy, and joint efforts to achieve better public service goals. Prediction involves service demand forecasting, where analyzing historical data on service usage and trends helps government agencies predict future service demand. This facilitates improved resource allocation and planning, ensuring that services are delivered efficiently and effectively. Furthermore, fraud detection and prevention entail the use of analytics systems to analyze patterns and anomalies in data, identifying potential cases of fraud or misuse of public funds. By monitoring financial transactions, procurement processes, or social welfare programs, government agencies can pinpoint suspicious activities and take appropriate action. Lastly, performance monitoring is accomplished through analytics systems that track and measure key performance indicators (KPIs) related to public services. This allows government agencies to monitor and evaluate their performance, identify areas for improvement, and make data-driven decisions to enhance service quality and efficiency.

## **5. Conclusion and limitations**

This paper identifies the role of increasingly popular social media technology in Indonesia in supporting public services. A comprehensive analysis based on interviews and focus group discussions explores the role of social media from various perspectives, including quality information and services, user orientations, openness, and greenness. Through in-depth interviews, the number of variables has evolved into five: quality information and services, user orientations, openness, greenness, and human resources. The research findings also indicate that several indicators or items have been removed, and new indicators have been added, as shown in **Table 3**. These variables and indicators should serve as guidelines for the city of Palembang in identifying the role of social media in public services. In the quality information and services variable, social media in public services plays a role in aspects such as timeliness and relevance, with indicators including usefulness, information updates, sustainability, current format, multimedia, and infographics. The second variable, user

orientations, encompasses four dimensions: usability, a single-entry point, simplicity, and frequently asked questions. The third variable is openness, with the dimension of disclosure policy. In this dimension, the role of social media is identified through feedback, live features, stories, and hashtags. The next variable is greenness, which includes redesign, integrated systems, efficient IT infrastructure, and the last variable is human resources with dimensions of management and ICT capability.

In conclusion, it is important to acknowledge several limitations in this study and suggest potential avenues for further research. Firstly, the generalizability of the research findings is constrained by the limited number of cases and interviews, which focused solely on public services in selected OPDs in Palembang. Secondly, this study concentrated on identifying the role of social media technology and its environment using models or concepts developed by Karunasena and Deng (2012) and Hasmaway and Darius (2022). Despite recognizing these limitations, there is still much work to be done to develop the concept of the role of social media in public services in other cities in Indonesia or other developing countries, from different perspectives and approaches. Future research should also explore broader issues and approaches, involving more provinces to better understand how social media-based public services are implemented. Additionally, investigations could delve into the extent to which social media-based public services can be applied in districts and cities in the province of South Sumatra or others, aiming to provide the best services to the community.

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