

Social Media and Service Delivery in government portals: An Analysis of how Government of Kenya uses Social Media for service delivery

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Abstract: The sustainable development goals (SDGs), which are at the heart of the 2030 Agenda for Sustainable Development, are closely interrelated. This integrated nature of the SDGs has shed new light on the need for integrated service delivery by various governments. One way for governments to achieve this integrated service delivery is through, Whole Of Government (WoG) approaches which should be accompanied by a more integrated approach to e-government and online service delivery. However, most e-government portals lack integration, interoperability and personalized service delivery. The purpose of this study was to investigate how social media technologies could be integrated into existing government portals for enhanced service delivery to citizens. The study employed design science research (DSR) research design to achieve its objectives. Purposive and census sampling techniques were used in defining the sample. The target population consisted of experts involved in managing social media and portal service in government (94) and social media accounts on the eCitizen portal (4) Kenyan's government national portal. Data was collected using automated social media analysis tool (socialbakers), questionnaires and guided interviews. The study established that while government had already incorporated social media, social media with their portals, it was mainly being used for information dissemination and not to offer other services like public participation or transactional services. The study concluded by identifying measures and features that if implemented would improve integration of social media within government portals and also facilitate enhanced service delivery through social media.

Keywords: social media; government portal; web personalized services; e-governance and social media government.

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I. Introduction

The United Nations E-government Survey for 2018 (a bi-annual survey) highlights a positive global trend towards higher levels of e-government development. The survey emphasises on the need for integrated people centred (personalized) services and highlights that such services would provide a platform for sustainable development that would serve as a catalyst for citizen engagement and in achieving the objectives of the 2030 Agenda. It further recognizes that ICT use transforms citizens' lives, communities, civil society groups and businesses from passive consumers of data and knowledge to active producers. For example, citizens are sharing ever more with each other on social media platforms and tend to consult other citizens, rather than the government, for advice [1].

United Nations E-Government Survey 2016 recognized the growing demand for more personalized services that reflect individual needs, as well as people's aspiration to be more closely engaged in the design and delivery of services. These new demands will transform the way the public sector operates [2]. These United Nations reports also emphasises the importance of having integrated services as a key success factor of any e-government initiative. According to the UN reports, another new trend in e-government is the evolution towards integrated public services online through one-stop platforms (web portals).

The main objectives of this study were:

- 1 To identify the role of social media as a tool for service delivery within government portals.
- 2 To determine the factors necessary for integration of social media into government portals.

II. Methodology

The research design adopted for this study was Design Science Research (DSR). DSR builds new or invents, innovate artifacts for problems solving or facilities improvement of artifacts to create a new reality, rather than the existing reality. The study was based on the Kenyan government official portal (eCitizen) The study's target population was composed of experts (94) and social media accounts (4) within the eCitizen portal. By the time of this study there were four (4) social media accounts on the eCitizen portal where a sample of two social media accounts (Facebook and Twitter) were purposively selected for the study because the two had the highest number of followers, 20,558 followers on Facebook and 7,731 on twitter respectively as of May 2018. The experts target and sample population for this research was composed of the teams managing social media accounts and portal servicers in all the 10 organizations which are part of eCitizen portal, Kenya's official national portal and had a total of 94 members. Census was used because the experts target population of 94 was not very large and it was possible to gather data from every member of the target population. Research instruments used in this study were automated social media monitoring and analytics tool (socialbaker) and questionnaires.

III. Review Of Literature

This paper starts with a review of existing literature to highlight the use and strengths of social media for service delivery within government portals. Hence this section describes government portals, social media technologies and how these technologies can be used to engage and delivery service to citizens.

Government portals

E-Government was introduced in the early 1990s as the means to transform government processes to more effective, efficient and transparent ones; to engage citizens in policy and decision making; and to modernize public processes in general [3]. Today, governments all over the world have embraced e-government as part of a more open, transparent and accountable government in the way it provides services to its citizens. One major component of e-government is government portals which are one-stop e-Government portals, that is, they provide a single access point to government and government services made up of official government websites, from which citizens access information and various services. Most governments are trying to leverage on the huge potential that social media has on improving citizen participation in government, policy formulation, and the way government ministries and agencies conduct business. Government that is driven by social media is called Government 2.0, do-it-yourself government, government as a platform, Social Government, or we-Government [4].

Social Media Technologies

There are several definitions of what is social media, but all of them converge around the concept social media denoted to as digital technologies emphasizing user-generated content or interaction [5]. Social media is part of the second generation of the World Wide Web (Web 2.0) that are mainly characterised by the move away from static web pages to dynamic and shareable content. This second generation of the web constitutes web applications that provide interactive information sharing, interoperability, user-centered design, and collaboration on the World Wide Web.

Examples of web-based social media include, but certainly are not limited to, weblogs, social networking platforms (such as Facebook), video/photo sharing (such as Instagram, YouTube, Vine), wikis (such as Wikipedia), discussion forums, Real Simple Syndication (RSS) feeds, podcasts, LinkedIn, microblogs (such as Twitter), and more [6]. There are four major potential strengths of social media: collaboration, participation, empowerment and time [7].

This study advances that the above mentioned features, characteristics, strengths and examples of social media technologies can transform government service delivery if properly adopted and adapted. That is Social media can play a significant role in transforming e-governance, how government engages develops and delivers services to its citizens.

E-participation through Social media in government portals a global view

Participation more specifically E-participation is one of the key strengths of social media. The United Nations defines E-participation "as the process of engaging citizens through ICTs in policy, decision making, and service design and delivery so as to make it participatory, inclusive, and deliberative. The UN noted in the 2018 e-government Survey that more and more governments are encouraging citizens and businesses to collaborate by contributing ideas and providing feedback online. One of the tools that the UN surveyed was social media as a tool that facilitated high/ better levels of E-participation. The UN recognized the use of social media as a tool towards achieving better e-participation and by extension provision of better services to citizens.

However this paper emphasizes that there is need to go further than just assessing incorporation of social media accounts into government portals and assess how are governments using social media to engage and delivery services to its citizens. Are governments just incorporating links of social media accounts to their portals or are these links active, are they being actively monitored and being used to engage and delivery services to the citizens.

E-Governance and the need personalized service delivery

Electronic government or e-Government is the use of ICTs in the governance process (e-governance). Personalization of products and services has gained much importance today. Rather than addressing the needs of a group, many successful companies have recently shifted towards targeting segments of size one, a business strategy referred to as personalization. Web personalization is defined as any action that makes web experience of a user personalized to the user's taste [8]. The next stage of Web evolution, Web 3.0, brings forth new opportunities and challenges which has the potential to transform government. According to Almeida, Santos, & Monteiro [9] Web 3.0 will change the way people interact with devices and networks, and how institutions and companies use information to market and sell their products and operate their businesses.

This study recommends that government should position itself strategically so as to take advantage of the opportunities arising from Web 3.0 technologies. This new form of government based on Web 3.0 can be referred to as government 3.0. According to the researcher personalization of digital government services is one of the key advantages that Web 3.0 can bring to government. Personalization is delivering a user content, experience, or functionality that matches their needs, with no effort from the user [8]. Personalization of digital services is not a new idea especially within the private sector. Companies like Amazon, Google, Spotify, Facebook, Netflix and many others have been making use of personalization of digital services to engage and offer services to their customers. However the idea of 'personalization' has not been fully embraced in the public sector despite the many advantages it can bring to this sector.

This paper proposes that personalized digital services from government are the future or the next phase in public sector digital transformation as pointed out by (Microsoft [19]). Also supported by Accenture [9] (one of those large consultancies firms) reports that two out of three public service leaders across nine countries think that "a personalized citizen experience is one of the top-three things they should implement when it comes to service delivery. This is acknowledged by Deloitte "there's a huge gap between the service state and provincial governments offer today and that provided by companies such as Amazon, eBay, Uber, and Airbnb" [10]. They continue to state that to provide the same seamless experience these companies do, a state government would need a robust digital platform offering the equivalent of one-stop shopping, making a range of functions available in a few clicks. This government platform would "know you" based on past transactions, and anticipate your needs. It would be able to navigate the breadth of content to connect you with the right service or the answer you seek.

Focus on Kenya

The latest E-government Development Index survey by UN indicates that Kenya has dropped compared to the previous survey conducted in 2016. According to the 2108 survey Kenya is ranked at position 122 in the world compared to position 119 in 2016 out of 193 UN member countries [1].

eCitizen (www.ecitizen.go.ke) is Kenya Government's official web portal. Through the portal Kenyan and non-Citizens can get access to a wide range of services from both National and county government. The portal currently offers services from seven national government departments/agencies and three county governments. Kenya's eCitizen portal is transforming the way the Government of Kenya provides services to its citizens. The portal was launched in 2014 by the ICT Authority of Kenya, and offers citizens access to crucial services without having to visit or call a government office [11]. The portal has incorporated social media accounts which include Facebook and Twitter.

IV. Results

This section describes the results obtained after analysing social media accounts of Kenya's national government portal (eCitizen) and also the results obtained after analysis of the data (using SPSS) collected from the experts managing social media and portal services within the eCitizen portal.

Analysis of social media accounts under the Kenyan official government portal - eCitizen

Social media has the potential to transform how government engages with citizens and how it delivers services. Government can use social media to share information and deliver service more quickly and effectively. Social Media Analytics is the art and science of extracting valuable hidden insights from vast amounts of semi-structured and unstructured social media data to enable informed and insightful decision making [4]. Hence analysis of social data is critical as government requires accurate, targeted performance

analysis based on specific Key Performance Indicators (KPI) to assess if its taking full advantage of these tools (social media) to deliver better service and engage with citizens. According to [12] there are five major digital metrics categories for both web and social analysis. These are breadth, depth, direct engagement, loyalty and customer experience. This research adopted these metrics in analysing the eCitizen Twitter and Facebook accounts. The study made use of Socialbaker as the main tool for analysing social data from the eCitizen Facebook and twitter accounts. Socialbaker was select because it provided a way of assessing the KPI indicates identified above which were considered vital in understanding how social media is being used by the Kenyan government within the eCitizen portal..The section starts by describing the analysis of social data from social media accounts of eCitizen (Kenya’s main government portal),i.e. both the twitter account (ecitizenkenya) and Facebook account (ecitizenkenya).

Breadth

The first metric that the study evaluates onto two social media accounts is breadth. Breadth is a metric for standard social media analytics that provide high-level information on the breadth of traffic to, and content usage of, a given social media activity. This metric can be analysed based on two aspects that is, community Size (number of followers) and community Growth (growth of followers). Community size refers to the total number of followers and the eCitizen twitter account has 9265 followers while the Facebook account has 22,352 as of 30th of September 2018.

The second sub-indicator of social media breadth is Community growth, which refers to the total growth of followers.ethe increase or decrease in followers of a selected accounts profile during a selected time range. For the period between 3rd April and 30th of September 2018 the total number of followers for the eCitizen twitter account grew by an average of + 0.06 per month which translates to an increase of 11 followers as illustrated by figure 2.3, while the Facebook account grow by an average of + 1.60 per month which translates to an increase of 8 followers as illustrated by figure 2.4. It is worth noting that for both account there was no growth of followers between the months of April to August.



Figure no1: eCitizen twitter account community growth

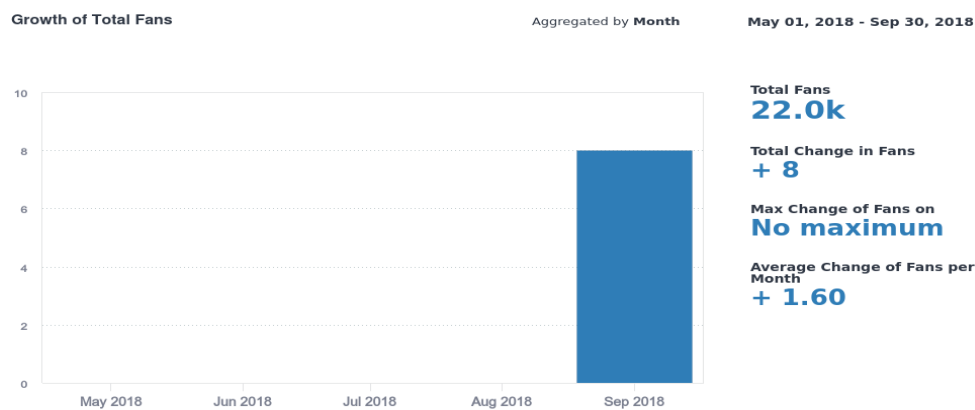


Figure no 2: eCitizen Facebook account community growth

Depth

The second metric that the study evaluates oneCitizen social media accounts on is depth. Depth is measured through high-level, standard social media analytics that measure the extent (time), outcomes and context of a visit. It provides information on the number of desired actions users complete as a result of your social media strategy, whether its engagement, access to data or registering for services. This was mainly measured through and viewings. Viewings of the tweets and Facebook posts analysed for the period between 1st May to 30th of September 2018 which include number of likes, replies, and retweets were very low for this account. As illustrated in Figure 2.5 and 2.6 the maximum number of interaction within this period was in the month of July for both accounts. There was total of 42 interactions of which the average interaction per month was 19.80 for the Twitter account while Facebook had a total of 63 reactions, 60 comments and 13 share which translated to an average interaction of 27.20.

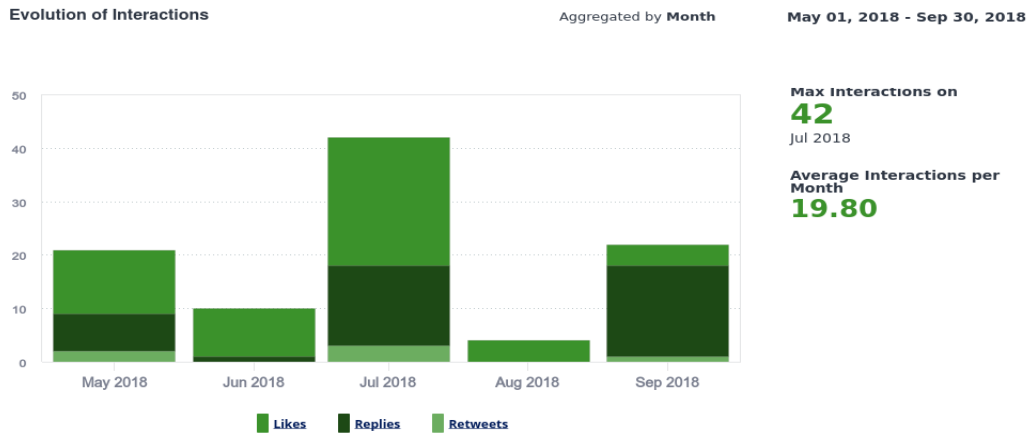


Figure no 3: Numbers of Viewings for the twitter account (likes, Replies and Retweets)

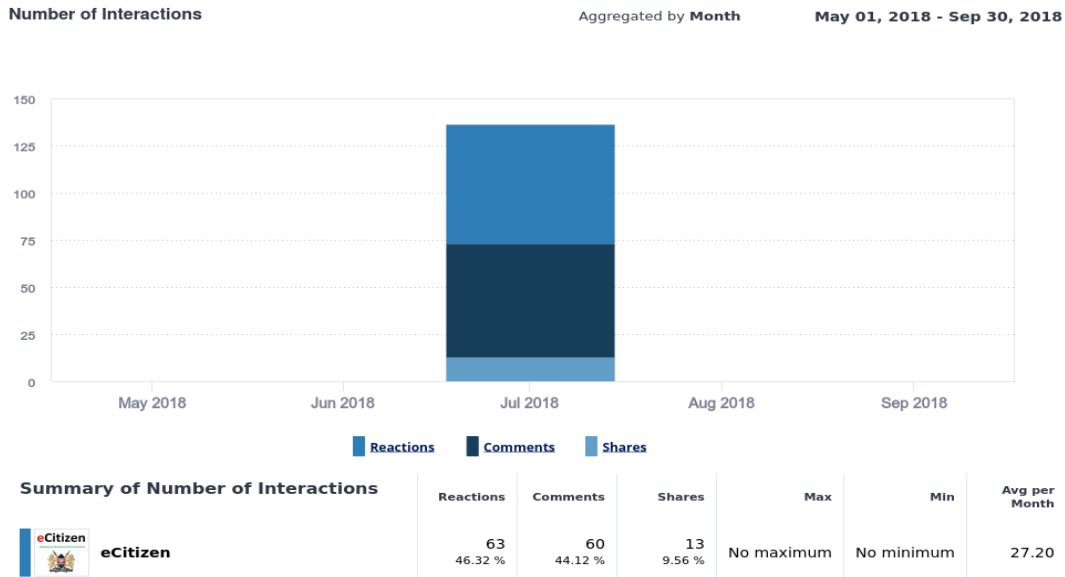


Figure no :3Numbers of Viewings for the Facebook account (likes, Replies and Retweets)

Direct Engagement

Direct engagement is the third metric which measures the extent to which a visitor uses the social media content. This is evaluated through engagement volume and engagement responsiveness. In evaluating the eCitizen social media accounts on this metric the researchers looked at engagement volumes from the perspective of question raised on these accounts. The researcher noted that only a total of 120 questions were raised for the period between 1st of April and 30th of September 2018 on the Twitter platform.

The other indicator for this metric was engagement responsiveness which refer to the average time it takes to respond to questions raised within a given time range. This indicator for the same period ie between 1st of April and 30th of September 2018 was evaluated and found to be very low at 11% which translates to only 12

question responded to out of a total 120 raised on the twitter account within that period. The average response time was 10 hours and 6 minutes. There were no questions raised of the Facebook account which is odd since it is the account with the largest number of followers

Figure 2.7 illustrates engagement volume, engagement responsiveness and the response rate to questions raised on the eCitizen twitter account between 1st of April and 30th of September 2018.

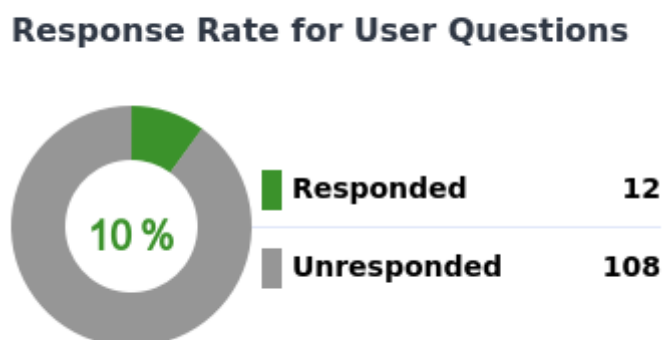


Figure n0 4: Engagement volume, Engagement responsiveness and Response rate

Loyalty

The fourth metric is Loyalty which is measured through standard social media metrics of visitor loyalty and returns. This can be seen through the number of return community. The researcher was not able to conclusively measure this metrics because of the extremely low number of interactions on both social media accounts.

Customer Experience

Customer experience is the last metric and is derived from sentiment, surveys, and high-tier social data from customer service measures. The purpose is to listen to what customers are saying about specific programs or events on social platforms so that data can then be used to improve strategies and services. This is mainly evaluated through sentiment analysis and survey feedback. To evaluate this metric the researcher evaluated sentiment analysis on the eCitizen social media accounts account. The total number of likes for the eCitizen twitter account was 208 as of 30th of September and the number of likes for the account increased by 4 within the period between 1st and 30th of September. Apart from likes the other way to measure customer experience is through the use of surveys (to measure customer experience) run within the account and current there no survey that are being run on eCitizen twitter account.

V. Government Portal Services and Social Media

The study also collected and analysed data (using SPSS) from experts who were involved in managing both social media and portal services for all the ten institutions that were part of the eCitizen portal. This was done to gain a deeper insight on how social media was being used by these institutions for service delivery from the portal and also to identify factors that would be necessary for enhance integration of social media and government portal to achieve better and personalized service delivery.

The study sort first investigates the type of services that the organizations involved in this study are offering through social media. This was necessary so as to help the researcher gain an understanding of the role of social media within these organizations which is objective one of this research.

Table 1: services offered through social media

S/NO	Service s	Strongly disagree	Disagree	Not sure	Agree"	Strongly agree
1.	Information dissemination				5.6%	94.4%
2.	Public participation	83.3%	4.2%	4.2%	5.6%	1.4%
3.	Transactional services	80.6%		6.9%	6.9%	5.6%
4.	Address customer complains			4.2%	8.3%	87.5%
5.	Campaign/ Promotions	4.2%		6.9%	34.7%	54.2%
6.	Survey	41.7%	16.7%	13.9%	15.3%	12.5%

The table 1 above reveals that most of the respondents (94.4%) use social media for information disseminations, while (87.5%) of the respondents use social media to address customer complaints and (54.2%) use social media for carrying out campaigns/ promotions. Hence Information dissemination, address customer complaints and carrying out campaigns/ promotions were the most popular services that were being delivered through social media. However social media is not being fully utilized for public participation as only 1.4% of the respondents indicated that they use social media for public participation and (5.6%) use it to carryout transactional services while 41.7% use it to carry out a survey.

The study also sought to find out which measures if implemented would improve the way organizations offers services through social media.

Table 2: Measures that would improve service deliver through social media

S/NO	Measures	Yes	I don't Know	NO
1.	Automated monitoring and management of social media accounts	84.7%	6.9%	5.6%
2.	Dedicated team for managing social media	90.3%	1.4%	5.6%
3.	Clear social media policy	77.8%	9.7%	9.7%
4.	Store citizen's social media profile details	66.7%	18.1%	12.5%
5.	Personalization	76.4%	9.7%	11.1%

Table 2 above reveals that the respondents identified five key measures that they believed if implemented would improve service delivery through social media. The five measures were; automated monitoring and management of social media accounts where (84.7%) of the respondents stated this would improve service delivery through social media, automated monitoring of these accounts would help in manage the large volume of data that is usually generated from users hence a small team of employees would be able to manage the accounts. Furthermore (90.3%) of the respondents pointed out that having a dedicated team for managing social media with their organization was necessary, 77.8% identified the need to have a clear social media policy, (66.7%) of the respondents indicated that it was necessary to capture and store citizens social media profile data as this would facilitate offering better feedback to citizens based on the bio-data captures from the citizen social media profile and (76.4%) of the respondents pointed out personalized service delivery

as key factor towards improved service delivery through social media and this would be possible through the capture and storage of profile data from citizens accounts.

The study sought to further investigate which measures if implemented would facilitate integration of social media within government portals for improved service delivery to citizens. Table 3 Below gives a summary of the response to this question.

Table 3: measures that to facilitate integration of social media within government portals

S/NO	Factors	Strongly disagree	Disagree	Not sure	Agree	Strongly agree
1.	Training		41.7%	6.9%	51.4%	
2.	Integration of government data		15.3%	13.9%	70.8%	
3.	Device independent services			5.6%	26.4%	48.6%
4.	Tools for managing social media accounts		15.3%	2.8%	26.4%	55.6%
5.	Secure services		11.1%	2.8%	33.3%	52.8%
6.	Change in Organizational culture		15.3	11.1	29.2	43.1

Table 3 above reveals that (51.4%) of the respondents agreed that training on how social media would be used for service delivery was necessary for smooth integration of social media within government portals to support delivery services. Integration of government data was also sighted by (70.8%) of the respondents as an important factor that would facilitate better integration of social media within government portals for service delivery, (48.6%) of the respondents pointed out having device independent service as a necessary factor for integration while (52.8%) acknowledged that having secure services was required form integration of social media and government portals for services delivery. Finally (43.1%) of the respondents emphasised on the need for organizational culture change to achieve enhance service delivery through social media within government portals.

VI. Discussion and Conclusion

The paper, gave a general background and theoretical foundation towards understanding the need for digital service delivery through social media by government. The paper considered social media and how social media is being used within government portals. The study has shed light on the main concepts, definitions and benefits of service delivery through government portals and use social media technologies as tools for citizen engagement and service delivery within government portals.

Most important the paper was able to demonstrate through social data analysis that the Kenyan government is not fully utilizing social media as a tool for engaging and delivering personalized services to its citizens. Social data analysis for both Facebook and Twitter accounts for the eCitizen portal was done for the period between the 1st of April 2018 and 30th of September 2018. From the results of the analysis it was evident that a substantially number of Kenyans were following, liking or are members of the eCitizen social media accounts i.e. 22,352 followers on Facebook and 9265 on Twitter followers as of 30th of September 2018. However comparing these numbers of followers to the other social media Key Performance Indicators like; depth, direct engagement, loyalty and customer experience these two social media accounts score poorly. From the analysis of social data of both Facebook and Twitter accounts it is apparent that the Kenyan Government is not taking full advantages of social media strength in engaging citizens or providing services to its citizens.

The study has pointed out and that social media technologies can improve access, convenience through 24/7 availability, savings in time, and the cost of travel to physical premises such as offices. These technologies have the potential to also open up the possibility of new types of public services for achieving the SDGs by 2030 and this is also noted by the United Nation e-government survey of 2018.

The paper further established that Information dissemination, addressing customer complaints and carrying out campaigns/ promotions were the most popular services that were being delivered through social media within the eCitizen portal. However social media is not being fully utilized to carry out services like

public participation, transactional services or conduct online survey. The study concluded by identifying measure and features that if implemented would improve integration of social media within government portals also facilitate enhanced service delivery through social media. This study postulates that if well implement social media can be used to deliver personalized digital service to citizen by government through government portals.

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