Assessing eThekwini Municipality's readiness to implement digital platforms to enhance public and community participation as a means to improve municipal decision-making processes

Govender, R.

Xaba, S.L.

eThekwini Metropolitan Municipality, KwaZulu-Natal, South Africa

Abstract

The role of local government is to meet the needs of the residents it serves. Furthermore, the incorporation of their feedback into municipal decision-making processes encourages robust participation, thus breaking down barriers between the municipality and its residents. With the advancement in digital technology the introduction of improved digital communication methods provides an avenue for active participation by residents. As such, eThekwini Metropolitan Municipality took a decision to move towards positioning the city as a Smart City and Smart Society enabled by technology and innovation within the context of the 4th Industrial Revolution. In this context, becoming a Smart City is more about how technology can enable smart systems, infrastructure, governance and service delivery that addresses the needs of people and society in an inclusive and affordable manner. This paper aims to investigate and assess the state of readiness for eThekwini Municipality to implement digital and e-participation tools to improve participatory governance and service delivery in this digital age. The study employed a combination of qualitative research methods, which included an extensive desktop literature review, documented publications from the municipality and providing a reflection on the piloted e-participation method during the development of the 2024/2025 Integrated Development Plan and Budget. The findings of this study are threefold. In relation to the municipality's readiness as an organisation measured against the nine pillars of the digital government assessment as defined by the World Bank, the municipality meets the majority of readiness pillars (5 out of 9). Among the four pillars that are lacking in the city include being outward facing, that is crucial for public and stakeholder engagement in the co-creation process, i.e. user-centred design and digital ecosystem. In relation to the second aspect, the digital transformation maturity level, the municipality meets the criteria for level 2 of the maturity model. Lastly, the outcome from the piloted e-participation tool indicated that the

community seems to understand the benefits of technology as it relates to their personal and social lives, but not as a strong tool that can be used to engage and influence government business. In conclusion, the municipality is making progress in implementing and realising the Smart Port City region and Smart Society as envisaged in its District Development Plan. Furthermore, the municipality must channel and sustain its efforts to use digital public engagement methods at all municipal community engagement initiatives. This will ease and facilitate community uptake of municipal digital platforms.

Keywords: digital transformation, e-participation, eThekwini Municipality, public participation, Smart City

Introduction and background

Public and community participation is the backbone of democratic and participatory governance in a democratic state. This principle is embedded in the South African government democratic statute of "the people shall govern". The Constitution of the Republic of South Africa, 1996, the White Paper on Local Government, 1998, the Municipal System Act, 2000, and the Municipal Structures Act, 1998, all make community participation a legislative necessity for local government. Despite these provisions, community participation at local government remains a challenge. Community participation, according to Jayal (2011), is the involvement of regular citizens in local planning, governance, and development initiatives. Democratic governments around the world are on a quest to improve public and community participation in government decision-making as part of improving and enhancing participatory governance.

The Fourth Industrial Revolution (4IR) technologies have created a space of automation for different institutions, including governments around the globe. The 4IR, according to Schwab (2016, 2017), is a large wave of digitisation, connectivity, and new scientific discoveries sweeping across industries to enhance efficiencies. It is a renowned fact that today's rapidly changing world, technological advancements are reshaping the way we live and work. From smartphones to artificial intelligence, technology has become an integral part of our daily lives.

Public and community participation

Public participation in public policy decision-making in South Africa has been one of the founding principles post-1994. Booysen (2006, p. 172) understood public participation in South Africa as "the direct involvement of citizens in seeking information about and making-decisions related to certain specified public issues." Within the South African democratic context, local government, is tasked with, among other responsibilities, ensuring, promoting and strengthening democracy and public participation. As stated above, the Constitution of the Republic of South Africa, 1996, and other Acts make public, community and citizen participation a legislative necessity.

Public participation provides an avenue for decision-makers and the citizenry to understand each other's' issues and viewpoints thus providing individuals with an opportunity to influence public decisions (Jones 2012). Meyer and Theron (2000, p. 1) assert that public participation goes beyond people's involvement in decision-making processes but also encompasses the implementation and evaluation aspects of programmes. Public participation is legal requirement of a plethora of legislation governing government business, including but not limited to the Constitution: Sections 152 and 195 (e); and the Municipal Systems Act, Sections 16 (1) and 29 (b). Chapter 4 of the Municipal Systems Act calls for the development of a culture of community participation. A municipality must develop a culture of municipal governance that complements formal representative government within a system of participatory governance and must for this purpose encourage and create conditions for the local community to take part in the affairs of the municipality. Not only is public participation a legal requirement, but also a critical component of planning because understanding the community's preferred outcomes helps the city to plan effectively.

Chapter 4 of the Municipal System Act No. 32 of 2000 states that local government should ensure that community participation is entrenched in municipal processes, thus leading to participatory governance. This is to take place via appropriate mechanisms, processes and procedures established by the municipality. Public participation in local government should however extend beyond mere legislative compliance. The justification for community participation is not only ensuring that people are able to influence decisions that will affect them, but also to build capacity and contribute to empowerment, thus leading to a robust civic society. Tambouris et al. (2007, p. 1) state that, "By implementing the appropriate methods/tools, participatory decision-making can lead to empowering citizens and democracy itself". Bekker (1996, p. 45) avows that the rationale for public participation is that the public should be involved in compiling development plans at the formulation stage, rather than after

municipal officials have committed to particular decisions. In addition, public participation also provides an avenue for the public to monitor and influence government processes by being provided with the information and access to decision-making processes. This is achieved through transparency and being afforded opportunities for meaningful participation.

Government digitisation

The technological revolution fundamentally alters the way we live, work, and connect to one another. There must be an integrated and comprehensive response and it must involve all stakeholders. The 4IR is building on the Third, i.e. the digital revolution. New technologies and platforms will increasingly enable citizens to engage with governments, provide their opinions and coordinate their efforts. Local government therefore needs to embrace digital transformation to increase efficiency, effectiveness, and accountability in its processes. As governments increase their effort to actively engage citizens, the use of e-participation tools is also increasing, and information and communication technology (ICT) has an important role to play in developing such tools (Bagui, Weimann and Johnston 2016).

Closely linked with the idea of the 4IR is the concept of a Smart City. Albino et al. (2015, p. 6) define a Smart City as "a high-tech intensive and advanced city that connects people, information and city elements using new technologies in order to create a sustainable, greener city, competitive and innovative commerce, and an increased life quality". In the beginning the concept of a Smart City focused on ICT and connectivity, but it has increasingly begun to also focus on the needs of people and communities (Chatwin and Arku 2017a). Smart Cities' innovations range from large-scale and costly approaches (e.g. city-wide traffic camera systems) to small-scale and relatively cheap smartphone applications for citizen engagement. Several 4IR innovations rely on data and technological improvements mean that opportunities for data collection have increased exponentially through the widespread use of smartphones. The benefits of Smart City initiatives require a governance system that develops and implements policies that utilise technology while at the same time actively involves stakeholders. This conceptualisation of a Smart City aligns with the New Urban Agenda's participatory and people-centred approach, where local governments and citizens work together to improve service delivery and generate solutions together to improve their quality of life.

Governments around the world, including South African local government, are focusing on the digitalisation of their processes and the introduction of digital services (Ilin et al. 2022). The

significance of government digitisation is not only limited to increasing administrative efficiency but also brings unprecedented ways to facilitate active communication with the public (World Bank 2020).

The Digital Government Society defines electronic government as "the use of information technology to support government operations, engage citizens, and provide government services" (Scholl 2018, p. 1).

Digital assessment framework

Digital transformation involves using technology to improve the lives and livelihoods of the citizenry. This can range from initiatives to improve municipal services to dealing with marginalisation issues such as involving citizens in municipal processes. Digital transformation will allow municipalities to improve their engagement processes with the citizenry. However, one needs to also consider the prevalent digital divide, which may prevent all people from participating equally. There is therefore a need for high-quality and better digital communication services between municipalities and their citizenry. In response to this need, the World Bank produced a model which aims to establish a "holistic digital environment and infrastructure for active citizen and business participation" (World Bank. 2020:6). The Digital Government Readiness Assessment (DGRA) Toolkit is a knowledge product developed to assess the status of a country's digital agenda and ICT sector, as well as their goals in digital development and transformation, by developing digital solutions for the benefit of the public. This comprehensive diagnostic framework is aimed at helping governments at all levels in developing countries to assess their readiness towards digital transformation. It is derived from research into international best practices and views of experts in digital government (World Bank 2020). The framework comprises a comprehensive set of 67 questions and delves into nine core foundations that build open and agile digital governments' infrastructure and operations: (i) leadership and governance, (ii) user-centred design, (iii) public administration and change management, (iv) capabilities, culture and skills, (v) technology infrastructure, (vi) data infrastructure, strategies, and governance, (vii) cybersecurity, privacy and resilience, (viii) legislation and regulation, and (ix) digital Ecosystem (Figure 1).

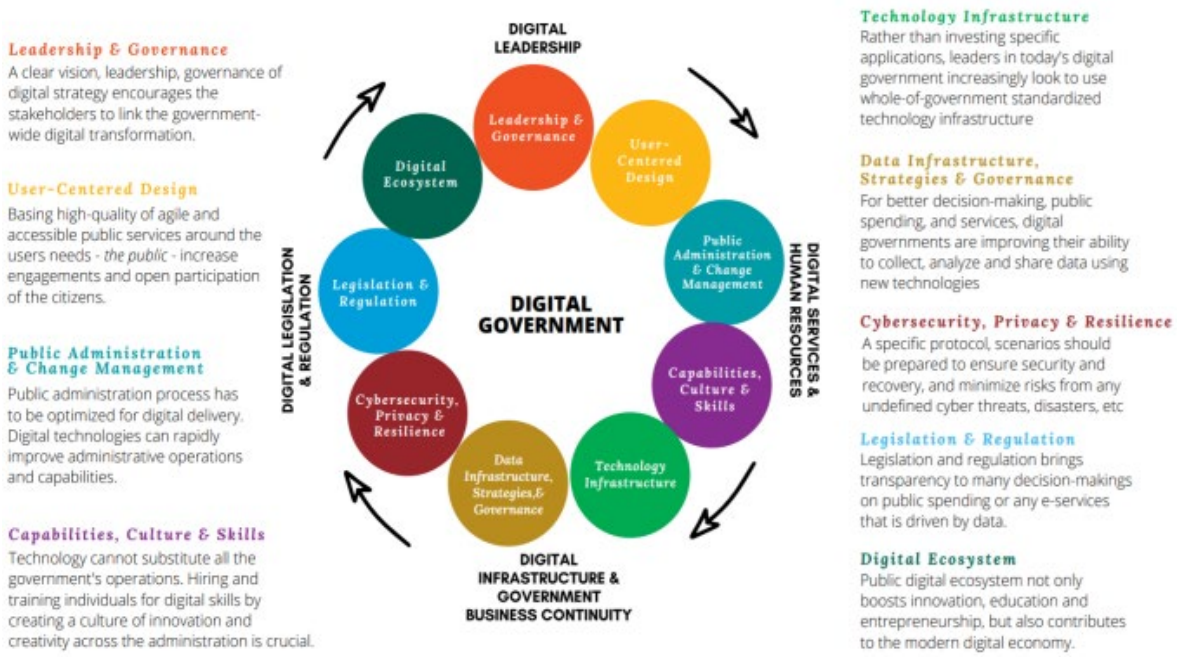

Figure 1: The Digital Government Readiness Assessment (DGRA) Toolkit

Source: World Bank 2020

- Leadership and governance

This pillar requires high-level commitment to making reforms efficiently and effectively. In addition, the digital strategies and organisational structure in place will determine the likelihood of successful digital transformation.

- User-centred design

This is an important principle underlying digital transformation and focuses on the consultation and participation of users in the design and development of proposed digital platforms.

- Public administration and change management

This pillar requires the re-engineering of processes for optimised digital delivery. Public administration reforms for digital transformation are required.

- Capabilities, culture and skills

Governments must employ highly technically skilled individuals and promote an environment of innovative and creative thinking. This assesses the human capital readiness within government for digital transformation.

- Technology infrastructure

This pillar focuses on utilising standardised technology for digital transformation.

- Data infrastructure, strategies and governance

Improved decision-making depends on the availability of data; this leads to more efficient and effective processes. Proficiency in collecting, storing, analysing and sharing data using technologies is important.

- Cybersecurity, privacy and resilience

Ensuring public trust in using digital public platforms is important. Security management is an important component of digital transformation so that citizens can entrust their data.

- Legislation and regulation

A sound regulatory environment is needed to ensure data privacy, digital identification and so on of digital citizens.

- Digital ecosystem

Digital governments can break down barriers between governments and their citizens by empowering the public voice and enabling collective action. Participation and discussion among all stakeholders will promote innovation in the digital transformation space.

Published in 2015, the Digital Transformation Maturity Model, is still the most accepted methodology for cities to assess their current Smart City maturity and set their ambitions for a smarter future. The globally accepted digital transformation maturity model is used to measure organisational or company maturity level in relation to its digital transformation. It assesses the level of digital development in relation to the organisational processes, technology, and its employees. This model presupposes five levels of digital maturity of the organisation or company, which directly depend on the maturity of the processes taking place withing the organisation (Ilin et al. 2022). The digital transformation maturity model outlines a set of requirements that an organisation should meet, and consists of six maturity levels (Figure 2).

Figure 2: Levels of digital maturity

Source: Ilin et al. (2022)

This model was also used as part of the tool to supplement and confirm the outcome of the DGRA. This model outlines a set of strong requirements that need to be met by organisations under assessment at each level in relation to its processes, technology, and its people/employees. The matrix below provides a set of requirements that must be fulfilled by the organisation at each level of the model to reach a conclusion on organisational maturity.

Table 1: Digital transformation maturity assessment matrix

Maturity level	**Processes**	**Technologies**	**Employees**
Level 5	Development of processes for autonomous decision-making by systems. Development of processes for regular forecasting and planning of future production	Integration with external data of suppliers and buyers Using artificial intelligence systems	Developing a culture of continuous improvement and innovation Implementation of responsible persons for the corresponding

			direction of predictive analytics and adaptability
Level 4	Development of audit processes for historical and current data and the use of the information obtained for optimisation Introduction of procedures for regular optimisation initiatives	Real-time implementation of activity analysis systems that automatically perform analytics, generate warnings, and recommendations Implementation of digital twins for prototyping and optimisation testing	Organisation of cross-functional sessions and data exchange sessions to work on urgent problems and optimisation methods based on new data Attracting additional data analysts
Level 3	Formalisation of data flow management processes Creation of processes for active exchange of knowledge and data between all project participants Creation of a cross-functional data exchange network	Improving data accuracy, reducing the amount of useless information Implementation of data mining systems Integration of systems for data exchange	Training employees to work with system data, various devices, and interfaces Development of 'digital' skills Development of a culture of knowledge management
Level 2	Formalisation of the implementation of the 'digital factory'. Processes for attracting external actors to ensure connectivity.	Elaboration of directions of integration of existing systems and technologies with future elements of the 'digital factory' Formation of a single information space and	Involvement of employees in the development of a target vision Separation of roles and areas of responsibility, attraction of employees with competencies in business, IT, and production

		data streams, connection of systems	
Level 1	Elimination of paper forms and media, execution of processes through system interfaces Data transfer automation	Implementation of basic production and enterprise management systems. Integration of systems for automatic data transfer	Employees trained to work with systems in their area of responsibility
Level 0	There is no direct influence on the processes	Creation of infrastructure for subsequent implementation of industrial Wi-Fi, local networks	Employees do not need additional digital competencies

Source: Ilin et al. 2022

Conceptualisation

Like any other government around the world and in line with the District Development Model approach to service delivery in local government, eThekwini Municipality, through its District Development Plan vision, aspires to be a leading Smart Port City Region that is just, safe, sustainable, socially cohesive and culturally expressive. The concept of the Smart City has been around for some time now. Becoming a Smart City is widely defined as a standard-led approach to cities development (World Bank 2015).

In 2021 eThekwini Municipality developed the Digital Strategy and Road Map. The Strategy was developed to leverage the use of Information Technology (IT) to assist the city to realise its vision of being "… Africa's most caring and liveable City, where all citizens live in harmony," while ensuring that the municipality remains relevant in the increasingly digital world. The aim is to use IT to sense, control and communicate the municipality's services. The city aspires to digitally transform itself to increase public value and optimise return on investment in public services and infrastructure.

eThekwini Municipality's Smart City journey

eThekwini Municipality's journey of becoming a Smart City commenced in 2003. The road map outlined key milestones in the journey, with the intention of becoming a full Smart City by the year 2025. Figure 3 provides a summation of key milestones that reflect eThekwini's journey from 2003 to 2025.

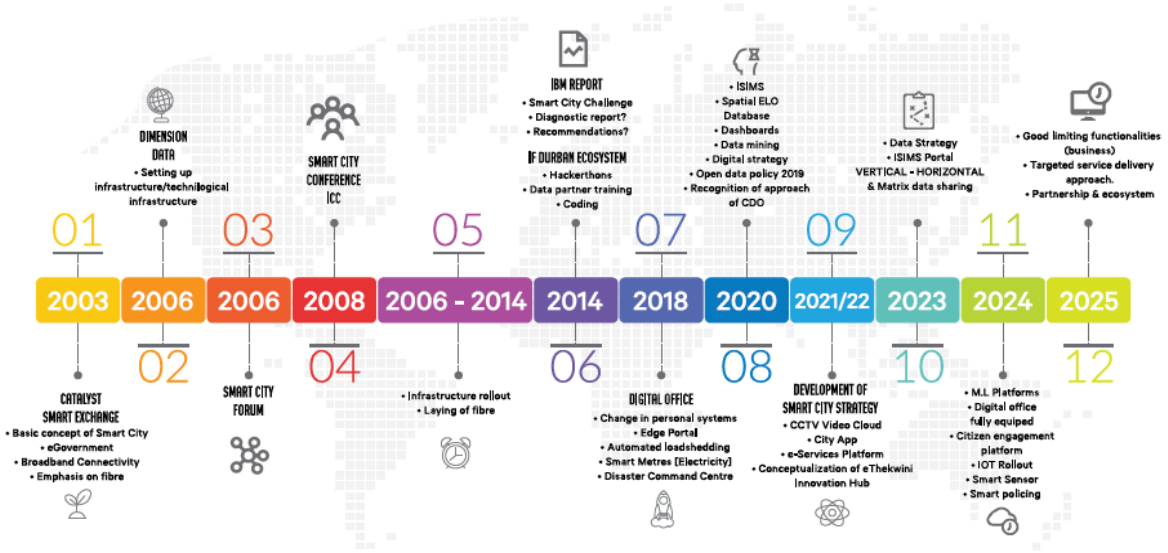

Figure 3: eThekwini Municipality's digital roadmap

Source: eThekwini Municipality

This assessment is made whilst mindful of Toots (2019) conclusion on factors affecting successfulness of e-participation tools as they relate to IT, public sector context and the democratic particpation systems. In addition to other digital initiatives undertaken by the municipality, in 2024 IDP and Budget public consultations, the City introduced a digital access to IDP and Budget documents as well as submission of comments through the Microsoft e-forms. In view of the history and nature of public participation in the City, this paper aimed at investigating and assessing the state of readiness for eThekwini Municipality to implement digital and e-community participation tools to improve participatory governance and service delivery by reflecting on this recent experience.

Methodology and approach

This study adopted a qualitative research methodology as the suitable method for data collection. According to Ugwu and Eze (2023, p. 20), qualitative research refers to the study

of the qualities of phenomena and their various manifestations, contexts in which they appear, or perspectives from which they can be perceived, but not their scope, frequency, or position in an objectively determined cause-and-effect chain. The assumptions emanating from the research are founded on the interpretive approach. Mottier (2005, p. 4) states that "Interpretive approaches share a common emphasis on the analysis of constructions of meaning, of the ways people make sense of their everyday activities and surroundings." It is the type of research method that uses words instead of numbers to collect and analyse data.

This paper utilised the qualitative method to understand ideas, opinions, and experiences from various texts of secondary data. In reviewing the literature, a hermeneutic method was employed (Gadamer 2013). According to Gadamer (2013) the hermeneutic approach deals with textual interpretation and understanding. The hermeneutic approach encourages a progressive dialogue between three aspects in the process of interpretation and understanding, namely the reader, text, and the author. In this article this has been achieved through a close analysis of the extant literature on the interplay between processes, people and technology. Using the hermeneutic method, the authors read, interpreted, and reflected on the relevant literature. The study employed a combination of qualitative research methods which included extensive desktop literature review, documented publications from the municipality as well as providing a reflection on the piloted e-participation method during development of the 2024/2025 Integrated Development Plan (IDP) and Budget.

The research adopted a desktop review methodology to explore the potential of emerging technologies in public participation. In line with Hoover and Cohen (2021), the desktop review methodology served as a valuable approach to gather information and analyse existing literature, reports, and studies related to public participation processes, people's behaviours, and technology and digital transformation. This methodology involved comprehensive research and analysis primarily through digital resources, including online databases, academic journals, government publications, and reputable research platforms (Creswell and Creswell 2017). Desktop review provided a systematic framework for synthesising existing knowledge and identifying key potential and trends of emerging technologies in the field of public particpation. This approach related to the research as it was exploratory in nature and aimed to assess the municipality's readiness to enhance citizen participation to improve municipal decision-making. The main limitation of the study was that the reflection was based on the researcher's ontological belief and hence this influenced the research process.

Discussion of findings

The findings of this study are twofold: the first aspect relates to the municipality's readiness as an organisation. Measured against the nine pillars of the digital government assessment, as defined by the World Bank (2019), eThekwini Municipality is deemed to be equipped on five of the pillars (technology infrastructure; data infrastructure, strategies and governance; cybersecurity, privacy and resilience; legislation and regulation; digital ecosystem). However, it is still required to address the remaining four pillars (leadership and governance; user-centric design; public administration and change management; capabilities, culture and skills).

Despite the arguments that the lack of technology access and digital literacy skills among lower-income groups can lead to further marginalisation and limit their ability to participate in the knowledge economy, this study further interrogates the eThekwini Municipality's readiness against the set global standards and instruments.

The five pillars that eThekwini Municipality was deemed to be equipped for are outlined below.

Leadership and governance

High-level commitment is needed in assisting local governments to make the necessary digital transformation changes in a timely and effective manner. Local governments which have made strides in digital transformation have proven to have strong leadership, a clear digital vision and strategy and effective governance structures in place.

Digital strategies should therefore have a clear vision statement that encourages leadership to implement reforms and innovations at a local level. The buy-in of leadership to the process will influence the likelihood of successful digital transformation. In essence, bold and decisive leadership, partnerships, learning and knowledge sharing, finding innovative funding sources, and showing early wins thus ensuring ongoing momentum for initiatives are critical to create a lasting digital culture.

The municipality has a Chief Digital Officer in place and the digital strategies and transformation process is led from this office. Over the years, the municipality has demonstrated visionary leadership in championing and driving its digital agenda. The Digital Strategy and Road Map was developed in 2021. The strategy aims to leverage the use of IT to assist the municipality to realise its vision of being "… Africa's most caring and liveable City, where all citizens live in harmony". The municipality aspires to digitally transform itself by

using IT to communicate the municipality's services. The strategy provides a framework which municipal departments and entities can use to plan their digital initiatives. The digital strategy is grounded around the city's governance and administration and focuses on its clients (i.e. businesses, communities, and other consumers), and productivity across the municipality, for example, service delivery and innovation.

Technology infrastructure

Rather than investing in application-specific facilities there should be a focus on increasingly utilising standardised technology. For example, the use of cloud computing is seen as a strategic tool to achieve the flexible and fast deployment capacity needed to meet digital government goals as well as a form of data consolidation centre. To this end, the municipality has made investments to standardise technology to support digital transformation, for example, roll-out of OneDrive as a cloud storage medium.

Data infrastructure, strategies and infrastructure

The ability to collect, store, analyse, and share data using technologies is critical in improving service delivery at a municipal level. This data can be used to improve decision-making, thus leading to enhanced efficiencies and generate external benefits. To assist in this respect the municipality has developed a StratHub that consists of a series of dashboards that provide insights on various functions and operations of the municipality. By making these tools available to the public, it supports the municipality's objective of becoming a responsive city and promotes co-governance. This aims to improve citizen engagement and provide communities with data which they can base their own decisions on. Evidence-based participatory governance improves the communities' ability to make decisions and contribute meaningfully to municipal processes and thereby hold them accountable.

Cybersecurity, privacy and resilience

The security of data obtained is a vital element of the digital transformation process. Measures should be in place to ensure the security and recovery of data in the event of any risks due to cyber threats, disasters, and the like. This is important as public trust of the use of digital public services is crucial when building a digital government. Local governments must invest in reliable cybersecurity systems so that communities can trust that their data is protected. The municipality has implemented robust security software on the municipal network to ensure that

municipal data is protected to the highest capability. An information security policy is also implemented in the municipality.

Legislation and regulation

Sound legal and regulatory environments are required which make provision for data privacy, consumer protection, digital signatures, and so on. These kinds of regulations also bring transparency to decision-making in any e-services that are driven by data. To assist in this regard the municipality has policies/strategies in place which include, but are not limited to, an ICT strategy, information security policy, and a corporate governance ICT framework and charter.

The four remaining pillars, that eThekwini Municipality was deemed not yet to be equipped for, are outlined below.

User-centred design

A fundamental principle of a digital government is the concept of user-centred design; that is, the focus should be on the user's needs. While the needs of citizens should be the focus in establishing an accessible and transparent digital local government, many local government authorities fail to prioritise this in their digital agenda. As local government's role is to serve all the communities, it is essential that a user-centric design principle is implemented. The consultation and participation of users in the design and development of digital services is paramount.

The tools used for the 2024/2025 IDP/Budget consultation process were developed by the municipality in collaboration with the CSIR. There was no consultation with the public in the design of the tools. Such tools need to be communicated or piloted with communities prior to implementation on a municipal-wide basis to get buy-in/acceptance of such tools. In addition, public participation in decision-making is an important component of Goal 16 of the Sustainable Development Goals (SDGs), which requires the creation of effective, accountable, and inclusive institutions at all levels. The New Urban Agenda also focuses on people-centred and participatory governments at the local level.

Capabilities, culture and skills

Local government should focus on hiring technically skilled individuals as well as training employees on digital skills. It should therefore provide an environment which allows

employees to engage in innovative and creative thinking, which in turn allows for optimal digital delivery. Human capital readiness is imperative for digital transformation.

The skills needed to undertake such initiatives should be available within the municipality so that all departments are able to access these resources rather than relying on external resources. Human capital development is critical to building a Smart City where technology is utilised to improve relations between communities and their municipality. Human capital is a necessity to make the most of the intelligence of digital technologies. The traditional delivery mechanisms are no longer sustainable. It therefore requires a mindset change to challenge conventional practices and rethink how to use new capabilities. In addition, the silo-based mentality within the municipality makes it difficult to develop solutions to problems, and there is therefore a need for the free flow of thought, viewpoints, creativity and information between municipal departments.

Public administration and change management

Digital government requires the automation of routine processing and seeks to transform processes so that they ensure enhanced digital delivery. Within the municipality there needs to be a shift in the way processes are undertaken. Change management processes need to be implemented so that the organisation can move towards digital transformation rather than it being implemented in silos.

Digital ecosystem

A digitally enabled local government can empower the public voice and foster collective action as it breaks down the barrier between the government and the public. Engagement and buy-in from municipal departments, regional stakeholders, residents, businesses and special interest groups is critical as it will encourage all stakeholders to be active participants in its implementation. In addition, open participation and discussion among the community, private sector, civil society and academia in the digital ecosystem will boost innovation and education. Just as with the user design-centred pillar, this pillar was also not addressed due to non-participation of all stakeholders in the process/initiative.

It is imperative that the outstanding four pillars be addressed, as this will enable the municipality to fully embrace the digital transformation agenda.

Digital transformation maturity level

In addition to the above findings based on the DGRA (World Bank 2020) which assessed the municipality's readiness, the Digital Transformation Maturity Model (Ilin et al. 2022) was used to assess the maturity level. In terms of the assessment of the municipality against the digital transformation maturity model, the municipality meets all the requirements of level 3 of the model. The municipality's Smart City journey commenced around 2003 with emphasis on eGovernment and connectivity. This entailed building ICT infrastructure and an innovation ecosystem. The municipality can be located at level 2 (connectivity level), with high prospects of getting to level 3 (transparency level).

In relation to the process, technology and employees nexus, as defined in the model, the municipality is currently developing various policies and strategies as a further foundational layer for Smart City approaches. This includes the cybersecurity policy, open data policy, telecommunications infrastructure mast policy, data strategy, business intelligence strategy and a Smart City strategy. Several technology initiatives currently exist, and others are being developed, inter alia e-services platforms, eThekwini Innovation Hub, eThekwini Municipal app, WhatsApp bot, Durban Edge, and eThekwini StratHub (dashboard and data mining). Although the municipality has established and is in the process of equipping the Digital Office, there are still challenges relating to people or employees, i.e. a lack of decisive leadership at influential levels such as executive, management and councillor levels, and insufficient human and financial resources for adequately realising a Smart City in eThekwini.

The piloted e-participation for the 2024/25 IDP/Budget process utilised tools whereby one could access the relevant documentation and presentation using a QR code or submit comments online using a cell phone. In addition to public comments received through various community and stakeholder engagements, the public was granted the option to submit their comments via electronic platforms. Through the call for public participation and comments, members of the community were provided with an option to scan a QR code to access the electronic submission form (Microsoft form), and 23 public comments were received via this form. During the public consultation sessions digital presentations were shared with attendees via QR codes. Approximately 25 presentation QR codes were created to access presentations in both English and IsiZulu, and records indicate that the QR codes were scanned more than 215 times. Table 2 describes the 2024/25 IDP and Budget public consultation in numbers.

Table 2: 2024/25 IDP and Budget public participation statistics

Total No. of regional consultations	14
Total No. of attendees at all session	6,274
No. of targeted sessions	4
Total verbal submissions in meetings	161
Total email comments	90
Total online submissions	23
QR codes generated	25
Total QR codes scans	215

Source: Office of Strategic Management Unit, eThekwini Municipality

The outcome of this pilot indicated that the citizenry did not view the utilisation of technology as a viable means of engagement. This could be attributed to people not believing that their input would be considered, due to their lack of trust in government as one of the most important deterrents in adopting and using the digital platform. Another factor could be the fact that free Wi-Fi was not available to download the documents or submit comments, and individuals had to use their personal data to do so.

Conclusions

As noted from the above public participation scholars, it is necessary in a democratic state like South Africa to promote public participation in local government matters to obtain citizens' inputs on matters affecting their lives. This should be reflected by local government actions and efforts to ensure continuous engagements with citizens, always involving the citizens into

the municipal structures, and allowing them to influence the service delivery policymaking processes.

Local government is mandated to develop a culture of municipal governance by creating appropriate mechanisms, processes and procedures within a system of participatory governance, in order to create conditions for the local community to take part in the local government decision-making process. Within the context of 4IR, local government needs to embrace digital transformation to increase efficiency, effectiveness, and accountability in its service delivery mandate. Digital transformation offers increased opportunities to engage citizens and to provide services.

In relation to the criteria set out in the Digital Government Readiness Assessment (World Bank 2020), which assessed the municipality's readiness, and the Digital Transformation Maturity Model (Ilin et al. 2022), which assesses the digital maturity level of organisations, the municipality is fairly ready and on a good trajectory in digitising its processes and systems (for service delivery and overall community participation).

The community seems to understand the benefits of technology as they relate to their personal and social lives, but not as a strong tool that can be used to engage and influence government business. Seeing the benefits that sharing their data can bring, people will begin to articulate more explicitly and regularly how they want their cities to develop.

Recommendations

Local governments have huge potential to realise the benefits of digital technologies. Accessibility to digital technology provides local governments with a way to enhance the joint ability of governance stakeholders to address challenges through collaboration (Lindell 2008). However, technology itself will just be another smokescreen that will get in the way of true development/participation unless it is seen as a means to an end, and not as an end itself.

Smart Cities which are to achieve growth and increased livability are those which create an environment where the input of citizens is considered and local governments utilise their knowledge and experience through the use of contextually appropriate smart technology. Therefore, local governments must realise that the success of their cities is dependent on openness and collaboration among all governance stakeholders.

Local governments are grappling with the need to rapidly develop policies and regulations as technological innovation evolves, thus disrupting traditional governance approaches. As citizens become more vocal about their needs, local governments are being forced to enhance their ability to address problems effectively through the adoption of innovative solutions in their processes. Local governments must commit to continuously reviewing existing processes, which requires a new organisational culture where an openness to collaborate achieves more innovative solutions to challenges and areas of improvement. In essence, it requires a commitment to smart and open governance.

References

Albino, V., Berardi, U. and Dangelico, R. 2015. Smart Cities: Definitions, dimensions, performance, and initiatives. *Journal of Urban Technology*, 22 (1), pp. 3-21. http://dx.doi.org/10.1080/10630732.2014.942092.

Bagui, L., Weimann, P. and Johnston, K. 2016. Characterising e-Participation in sub-Saharan Africa: A thematic review of the literature. *CONF-IRM 2016 Proceedings*. p. 57. Cape Town; University of Cape Town. https://aisel.aisnet.org/confirm2016/57.

Bekker, K. 1996. *Citizen Participation in Local Government*. Pretoria: Van Schaik Publishers.

Booysen, S. 2006. Public Policy Making in South Africa. In: Venter, A. and Landsberg, C. eds. *Government and Politics in the new South Africa*. 3rd ed. Pretoria: Van Schaik Publishers.

Chatwin, M. and Arku, G. 2017a. *Smart and Open Urban Governance in Africa*. Town: Publisher. Chapter 12.

Creswell, J.W., and Creswell, J.D. 2017. *Research design: Qualitative, quantitative, and mixed methods approaches.* Thousand Oaks, CA: Sage Publications.

Gadamer, H.G. (2013). *Truth and method*. Berlin: LIT Verlag

Hoover, G.A. and Cohen, D.K. 2021. Centring human subjects: The ethics of "desk research" on political violence. *Journal of Global Security Studies,* 6 (2), p. ogaa029.

Ilin, I., Borremans, A., Levina, A., and Esser, M. 2022. *Digital Transformation Maturity Model*. Graduate School of Business and Management, St Petersburg, Russia: Peter the Great Saint-Petersburg Polytechnic University.

Jayal, N.G. 2011. The Transformation of Citizenship in India in the 1990s and beyond. In: Ruparelia, S., Reddy, S., Harriss, J., and Corbridge, S. Eds. 2011. *Understanding India's New Political Economy*. First Edition. New York: Routledge Publishers.

Jones, B. 2012. An introduction to community development. *Community Development*, 43 (2), pp. 285-286.

Lindell, I. 2008. The multiple sites of urban governance: Insights from an African city. *Urban Studies*, 45 (9), pp. 1879-1901.

Mottier, V. 2005. The interpretive turn: History, memory, and storage in qualitative research. *Forum Qualitative Sozialforschung Forum: Qualitative Social Research*, 6 (2). https://doi.org/10.17169/fqs-6.2.456

Meyer, L. and Theron, F. 2000. *Public framework workbook for action*. Bellville: SOPMP, University of Stellenbosch.

Republic of South Africa. 1996. *The Constitution of the Republic of South Africa* Pretoria: Government Printer.

Republic of South Africa. 1998. *White Paper on Local Government.* Pretoria: Government Printer.

Republic of South Africa. 2000. *Municipal System Act 32*. Pretoria: Government Printer.

Scholl, H.J. 2018. E-government. *Oxford Bibliographies*. https://www.researchgate.net/publication/322687237.

Schwab, K. 2017. *The Fourth Industrial Revolution*. First edition. New York: Crown Business. p. 9.

Schwab, K. 2016. *The Fourth Industrial Revolution: what it means, how to respond*. Available: https://www.weforum.org/agenda/2016/01/the-fourth-industrial-revolution-what-it-means-and-how-to-respond/. [Accessed: 25 July 2024].

Tambouris, N., Liotas, K. and Tarabanis, E. 2007. A Framework for Assessing eParticipation Projects and Tools. *Proceedings of the 40th Hawaii International Conference on System Sciences, 3-6 January*. https://doi.org/10.1109/HICSS.2007.13.

Toots, M. 2019. Why E-participation Systems fail: The case of Estonia's Osale.ee. *Government Information Quarterly*, 3, pp. 546-559.

Ugwu, C. and Eze, V.H.U. 2023. Qualitative research. *IDOSR Journal of Computer and Applied Sciences,* 8 (1), pp. 20-35.

World Bank. 2015. Diagnosing Smart City Preparedness: The Standards-Based Maturity Assessment Approach. *Za Bulletin*, 3.

World Bank. 2020. *Digital Government Readiness Assessment Toolkit: Guidelines for Task Teams.* Washington, DC: World Bank. http://hdl.handle.net/10986/33674

World Bank. 2019. *Digital Government Readiness Assessment Questionnaire*. Washington, DC: World Bank.