

# Capacity-building initiatives for improved services in South African municipalities

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**Abstract:** This study was premised on building ample capacity for improved delivery of services in South African municipalities. This was based on the need to ensure that capacity-building interventions that should also include the smart city phenomena and its various practices, which are fourth industrial revolution (4IR) tools, are used to improve the effectiveness of the local government sphere of South Africa. The study was qualitative and explored challenges emerging from data gathered through literature and document review of available information. The information was assessed using document analysis. The findings explore that there are various factors that impede the effectiveness of capacity realisation in municipalities, which have been established on an array of fronts. These include the poor skills development focus of the municipality, in which some of the training being offered is way off the radar of the 4IR. The findings suggest the absence of enthusiasm among those tasked with leading capacity-building, especially technology-related, which affects the conceptualisation and execution of any capacity-building programmes. Based on the findings, the study recommends the need for strategies towards building capacity to make smart service delivery possible for effectively rendering public goods and services to the various communities under its jurisdiction. Capacity-building is one critical aspect that local government entities can use to harness the current era of the 4IR for improved service delivery. The aim of the study is to develop a need for capacity-building hence to ensure local government entities embark on 4IR capacity-building initiatives to take advantage of this era's efficiency-promoting practices. This can help municipalities expedite community development and eradicate poverty and other social ills. 4IR capacity-building is even more crucial at the local sphere of government because it is the closest to local communities. The 4IR aspects vital to the municipal entities go beyond the mere digitalisation or virtualisation of municipal service rendering and speaking to the incorporation of AI, 3D printing, blockchain technology, and many other cognate practices. The study is significant theoretically and practically in that it contributes to current scholarly knowledge regarding 4IR capacity-building in South African municipal entities and the discipline of public policy, management, and governance.

**Keywords:** capacity-building, Fourth Industrial Revolution, information and communication technologies, municipalities, qualitative, service delivery, South Africa.

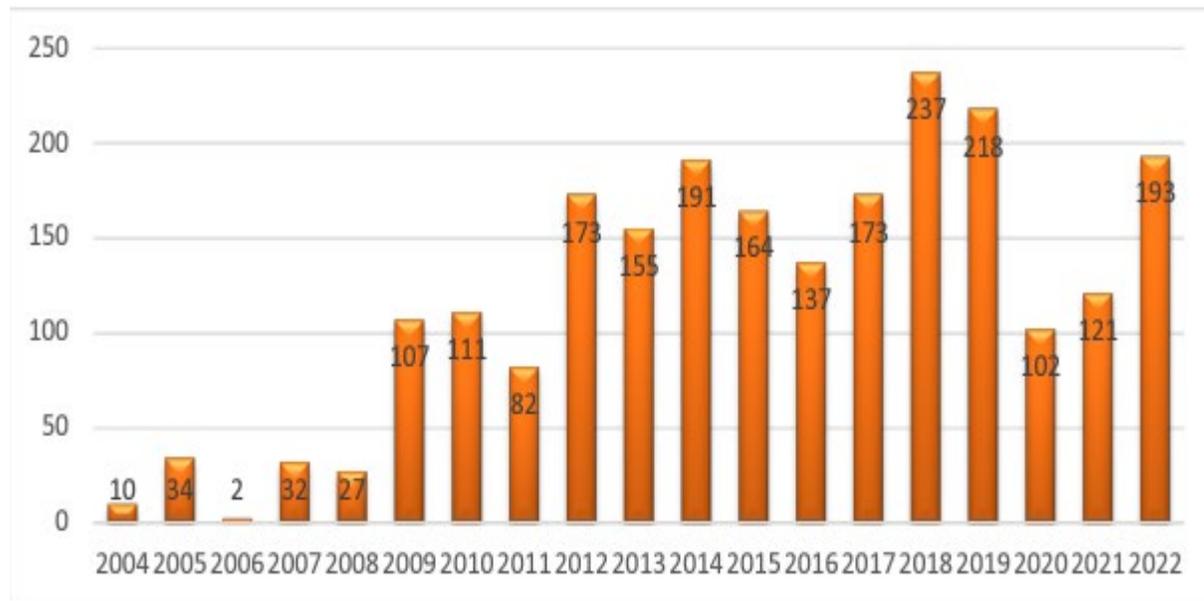
## Introduction

Capacity-building is the core of the successful delivery of municipal commodities in various local government settings across the world because of the resourcing effect it has on local governments. In this study, the discussion focuses on building capacity for smart governance in local government entities of the Republic of South Africa. Such a contextual setting is critical on two fronts: First, because local government is closest to its residents or citizens (the grassroots government), and second, because of smart governance's growing importance and transformative impact on community development. In local communities that have continued to grapple with poverty, inequality, stagnated and stunted public service delivery, and many other cognate challenges, smart governance is the game-changer that can bring about the transformation that is greatly needed at present. Further, enabling municipalities to improve and provide effective municipal service is a significant facet of local government and the rendering of municipal services in the 21st century. Moreover, the pace at which African and

South African entities have grasped, adopted, implemented, and sustained digital technologies as catalysts for public service delivery has not been good. Therefore, capacity-building is one concrete intervention that can help bring about desired change in local government. This statement is substantiated with the fact that service delivery in South African municipalities is sub-par. Community members are dissatisfied with the low quality of services and are protesting to receive effective and efficient services within their areas of jurisdiction. The service delivery protests continue.

Figure 1 shows the statistics of service delivery protests since 2014. The level of dissatisfaction is witnessed in service delivery protests recorded for the years 2004-2022 (see Figure 1) that also confirms that the challenge of poor standards of services and hence service delivery protests are not new in the country and require strategic measures to improve the service delivery standards.

Figure 1: Major service delivery protests, by year (2004 –2022)

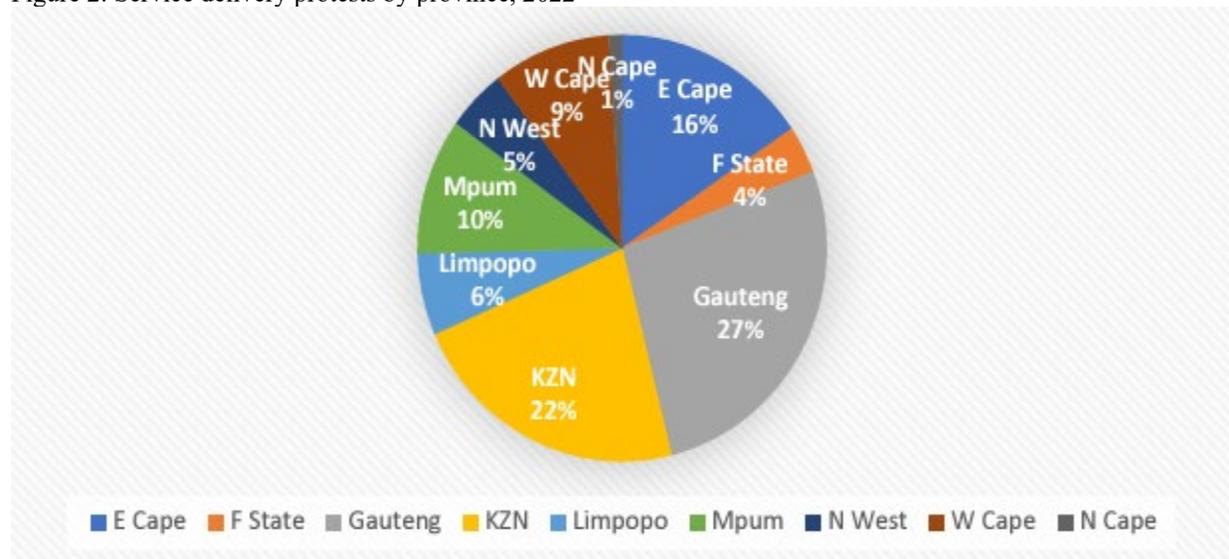


Source: Municipal IQ Municipal Hotspots Monitor 2023, in Mamokhere and Kgobe 2023: 52.

A total of 218 protests were documented in 2010. With 237 protests documented in 2011, this number rose. The figure surged to 272, indicating a massive uptick in protests in 2012. Nonetheless, there has been no improvement in the processes used to deliver services, and the public's discontent was evident in the rise in protests. A total of 480 protests were held in 2013. Both the difficulty in providing services and the ferocity of protests continued. In 2014, the figure rose to 704 (cited in Mamokhere & Kgobe 2023:52, in Vyas-Doorgapersad 2024a:841). The protests are also recorded in high numbers in various provinces, see Figure 2.

Next page

Figure 2: Service delivery protests by province, 2022



Source: Municipal IQ Municipal Hotspots Monitor 2023, in Mamokhere and Kgobe 2023: 52.

Note: The full form of provinces abbreviated in the figure is as follows (stated alphabetically):

E Cape: Eastern Cape  
 F State: Free State  
 Gauteng: Gauteng  
 KZN: KwaZulu Natal  
 Limpopo: Limpopo  
 Mpum: Mpumalanga  
 N Cape: Northern Cape  
 N West: North West  
 W Cape: Western Cape

The reason for service delivery protests, in this study, is linked to the lack of capacity-building interventions by municipal offices. The municipal personnel need to be competent and equipped to deliver the mandate of the municipality and that is to offer effective delivery of services to residents.

The study centred on building and sustaining ample capacity in South African local government entities towards effectively adopting and implementing full-fledged Fourth Industrial Revolution (4IR) initiatives and interventions. This premise is anchored on municipalities' proximity to the communities, hence the need to make them the centres for 4IR programmes. This study was motivated by the many merits that the 4IR brings to municipal service delivery, which include fewer errors or mistakes, convenient services, just-in-time provision of tailor-made public commodities, together with an omnipresent government and ethical behaviour by both municipal officials and political representatives (Shahi, McCabe & Shahi 2019:401).

### Materials and Methods

The guiding question of this study was: What factors hamper the implementation of the 4IR and how can capacity-building initiatives improve 4IR-based service delivery in South African municipalities? Research methodology denotes the mix of various approaches and methods that are used to undertake research (Patel & Patel 2019:50). These methods refer to the specific techniques which collectively create a study's methodology (Patel & Patel 2019:50). The researcher utilised a qualitative research approach. Vanderstoep and Johnston (2009:29) posit that the qualitative approach hypothesises that knowledge is out there, and the skilled researcher must discover such reality or knowledge. This approach differs from the quantitative research approach, which focuses more on quantifiable phenomena and the study of social phenomena (Saunders & Lewis 2018:183).

Information was compiled using literature review. Adler and Clark (2011:29) consider a literature review a systematic process used to sift, read, summarise, and synthesise current scholarly writings on a specific topic related to the current study research. For Leavy (2017:60), a good literature review must consider landmark studies on the topic central to the phenomena under study. The merits of conducting a holistic literature review are that it helps place the study on a pedestal to attain its set goals and identify the gaps that recent studies fill. The researcher utilised this technique to synthesise all related studies on capacity-building for 4IR smart service delivery in local government to ensure that it builds from the impetus of the findings of existing studies and expands both the existing body of knowledge and the practice of municipal service delivery. This included a review of literature from books, journal articles, monographs, and conference proceedings. These were mainly available in the University of Johannesburg library, as well as databases like Google Scholar, Emerald, Springer, and Taylor and Francis. Mogalakwe (2006:225) considers a documentary review a strategy to consult secondary documents about a research phenomenon for a given case study. This assists the researcher in diagnosing and identifying grey areas about a particular policy to undertake some interventions in future studies.

The information was assessed using document analysis. Payne and Payne (2004) posit that document or documentary analysis as a research method refers to categorising, investigating, interpreting, and identifying the limitations of existing information for the current study. Descriptively, document analysis involves sifting through and analysing records in repositories, such as reports on commissions, annual reports, and ad hoc records (Mogalakwe 2006:226). Documentary analysis helped to identify gaps and historical information on municipal 4IR capacities.

Documentary analysis was considered as it helped to identify gaps and historical information on municipal 4IR capacities. The study analysed documents from various municipalities and other related public entities. The researcher valued this method because it helped enrich the quality of research and its impact. The study reviewed e-governance, capacity-building, smart governance, and local economic development documents and records from local government authorities.

Qualitatively, the study analysed primary data using thematic data analysis.

## **Results and Discussion**

The literature compiled in this section explores the following: traditional modes of services in municipalities; and ICT-Based Services in Municipalities. Based on the literature, the study aims to provide recommendations to municipal strategic role-players and policymakers to strategise 4 IT-based capacity-building interventions for improved delivery of services.

### **Traditional Modes of Services in Municipalities**

The traditional forms of services within municipalities used in the past were paper-based, manual work procedures and processes, and governments that fail to transition into e-governance fully may face various challenges to their efficacy (Cloete 2012:128). This traditional paper-based bureaucratic municipal service delivery system has faced numerous challenges, such as the creation of service delivery bottlenecks that are laden with red tape and authority-obsessed municipal officials and political representatives (Cloete 2012:129). Thus, the public sector is ordinarily concomitant to the burden-laden and time-intensive processes that have been lambasted for inhibiting the smooth rendering of public commodities in public entities (Nisar 2017:107). Furthermore, De Oliveira and Berman (2021:1185) argue that the wholly manualised work procedures of delivering public services have been challenged by the Covid-19 pandemic and other challenges that have affected the feasibility of retaining a mechanistic style of rendering municipal public services. According to Makanyeza, Kwandayi and Ikobe (2013:4), the rendering of services by municipalities through traditional mechanistic methods has affected their ability to adequately monitor and evaluate their service delivery programmes.

Akula, Narasimha and Chandrashekar (2014:436) however, explain that although a few municipalities have made considerable inroads in both information and communication technology (ICT) infrastructure and other recognisable resources, their various communities have not had good buy-in on their dedication to the e-governance and smart city agenda on the ground. This researcher understands that e-governance in municipalities spreads across both interior and exterior municipal stakeholders. These include administration of human capital within the entity and the provision of public commodities to the private sector customers (the residents). This emphasis and the merits that smart governance has brought to public service delivery have led some municipalities to adopt and implement ICT-based service and management models. These merits include, among others, efficient, smooth, effective, and error-free expedited public service delivery.

### **ICT-Based Services in Municipalities**

The services offered through ICT platforms are commonly referred to as e-government or e-governance. E-government is regarded as the process of utilising modern technologies in public management to help the infusion, integration and streamlining of procedures, methods, and flow processes to create better information management while concurrently improving the rendering of public commodities together with augmenting the improvement of communications and empowering communities through increased engagement (United Nations (UN) 2014:22). Kumar (2015:4) views this process as the rendering of commodities using the internet, telephone networks, community nerve centres, cordless devices and 21st-century-relatable systems.

Sahu, Dwivedi and Weerakkody (2009:16) provide a demarcation that exists between the phrases ‘electronic government’ and ‘electronic governance’ by averring that the latter is broader because it includes other spectrums that move away from just the internet and the World Wide Web or the electronic email communication platforms. Sahu et al. (2009:17) additionally posits that e-governance encompasses interlinked fraternities that seek to hugely transform how the government and its entities interact with their associated environments, including civil society organisations and the business community. The UN (2014:22) states that e-government relates to utilising and adopting ICTs in public management to enhance the governing process, thus allowing for prompter, more open, transparent, and effective rendering of public commodities by municipalities. Tavares, Soares and Estevez (2016:136) substantiate that in the recent 21st-century virtual government revolution, electronic government incorporates the interventions by public entities (across all tiers) to deliver public commodities using policies towards transformed communities together with sustainable development.

Due to the benefits e-government offers, the South African Presidency has established the Presidential Commission on 4IR (PC4IR) to advance this concept and transformation towards adopting 4IR interventions for improved municipal service delivery. This reasoning is substantiated by Cloete and Moloko (2019:5) and Shava and Vyas-Doorgapersad (2021:142) who stress that the 4IR can enable the fast-paced rendering of services, improve accessibility of public and municipal services, augment citizen participation in governance activities, and improve public answerability if public entities can earnestly adopt and implement it. Shava and Vyas-Doorgapersad (2021:144) further state that within the Republic of South Africa, the government has delegated the Department of Communications and Digital Technologies (DCDT) with crafting the Presidential Commission on 4IR Strategic Implementation Plan (PC4IR SIP) to realise the recommendations of the Presidential Commission for the Fourth Industrial Revolution Report (Shava & Vyas-Doorgapersad 2021:144). This implementation is essential as the 4IR is a paradigm change in public management, advancing the sixth paradigm of ‘governance (1980–2014) towards the seventh paradigm that regards the ‘Fourth Industrial Revolution (2015 to date)’.

The influences of new, emerging, and existing public service delivery strategies must be acknowledged, especially given how technology has transformed how research into community improvement and the process of public service delivery is conducted (Parsons & Maclaran 2009:56). There is a need to acknowledge consumers’ online presence and penetrate this to ensure that businesses reap profits and above all satisfy their consumers. Farris, Bendle, Pfeifer and Reibstein (2009:264) acknowledge how the 4IR has changed and transformed marketing, noting that the web-based revolution and IoT provide a hoard of valuable opportunities to augment ancient or traditional service delivery models with interactive media when products are presented in either online catalogues or a web-based advert. The use of the 4IR in municipal service delivery has also been put forward by Gong (2016:3), who posits that the IoT is an assimilation of an array of smart gadgets and influencing human routines in a bid to create modern, effective systems such as e-health and remote monitoring for various communities or markets.

Furthermore, in South African service delivery, the 4IR facilitates smart logistics or supply chains for the transportation of goods and quick procurement and delivery of goods to citizens (Muridzi, 2019:56). Thus, the issue of the digitalised era places the business at the fore and guards against blind shotgun marketing tactics. In other words, IoT facilitates intelligent decision-making, which places the correct goods or products effectively and timeously. This is crucial in South Africa, where most consumers use smartphones (Mogoba, Phillips, Myer, Ndlovu, Were & Clouse, 2019:725). Utilising user-friendly applications to understand their behaviour preferences and utilising feedback is essential in local government electronic-based service delivery.

However, the 4IR initiatives in South African municipalities have faced equal challenges. South African residents are slow to adopt and utilise electronic governance programmes despite the recent rapid adoption of e-governance by municipal governments and others. According to Kroukamp (2005:44) some of the key factors leading to this status

quo include the opaque and somewhat strict regulation of the digital space in South Africa, risks or concerns about the safety and security of information, the rising and omnipresent digital divide, the lack of knowledge or education (especially on service users), and resistance to change (and all its associated challenges).

There is also the issue of the high costs of adopting, implementing, and maintaining smart governance equipment, systems, and infrastructure. For example, Thakur and Singh (2012:46) describe that the eThekweni Municipality's revenue management system cost a whopping R250 million (which later rose to R474 million). In this case, the municipality indicated that their government would hire an independent risk assurer to test this system's efficacy and other related information (Thakur & Singh 2012:46). This is a case of a costly smart governance project whose effectiveness is yet to be ascertained. In this case, the assimilation of ICTs becomes costly and a burden to the public funds that fuel municipal service rendering, raising the question of sustainability. This study argues that determining whether the municipal officials have the requisite skills to procure, utilise, and sustain 4IR initiatives always comes up, especially given how the local government sector also suffers from a scarcity of skills.

Additionally, it is essential to acknowledge that the literature and document reviews confirm that there are myriads of obstacles experienced in South African local government that are related to ICT and the 4IR, as discussed in this section. There is a challenge related to computer illiteracy. Subban, Nzimakwe and Pillay (2007:237) argue that computer literacy is necessary for one to function correctly in an increasingly dynamic society like South Africa, and this extends beyond the mere ability to read or write. In addition, Subban et al. (2007:237) substantiate that South Africa faces a considerable challenge in improving citizens' computer literacy skills, as this affects residents' ability to use smart solutions in municipalities.

Another challenge is related to the unavailability of free WI-FI. A study by Muridzi (2019:52) found that unavailable or poor broadband affects residents' use of smart solutions. Furthermore, some residents cannot afford mobile data due to poor living conditions, hence the need for free Wi-Fi in communities in municipalities.

Compatibility of technological gadgets is a challenge in most municipalities. In an empirical study, Mbatha and Lesame (2013:48) establish that applications, gadgets, and systems must be kept up to date to be compatible with emerging applications and portals offered by civil entities. Citizens have unstructured supplementary service data (USSD) and entry-level cell phones that are incompatible with new applications. Some old Android versions and operating systems are incompatible with new applications being developed and available in application stores.

It is worth mentioning that badly designed websites can also be an issue requiring corrective measures. Subban et al. (2007:237) note that there is an obstacle to smart consumption of services by ratepayers and residents in the form of information overload. Some websites have poor interface designs, which are not regularly updated by the responsible authorities, thereby hosting false or outdated information that can mislead stakeholders. Paulo (2016:44) also reveals that some factors affecting website use include the language used, poor design of messages and notices, and crucial information being problematic to access on a website. Thus, the process affects residents' effective use of smart solutions.

Internet access is a challenging issue in municipalities. A study of municipalities by Abrahams and Newton-Reid (2008:19) found that internet broadband penetration in South Africa is low due to the high implementation costs, income inequality, and the inability of municipalities to service all the areas under their jurisdiction. There are suggestions for establishing a municipal broadband market to enable residents to access reliable, fast, and affordable internet to mitigate the abovementioned challenges. Mbatha and Lesame (2013:49) also recommend that local government entities budget for providing reliable and fast broadband internet to their communities.

Challenges related to obsolete equipment and applications cannot be ignored. Seckel (2010:15) notes that the issues related to old and obsolete ICT infrastructure affect how smart solutions provide public commodities. Similarly, the ageing skills set in the municipal workforce further affects how new smart solutions can be developed and utilised. This study supports Seckel's (2010:15) observation that the existence of old and outdated equipment impedes the realisation of the goals of smart governance in the CoE. Sebastian and Supriya (2013:37) also note that the rapid proliferation and evolution of ICTs and the huge establishment costs of these systems make it difficult for municipalities to adopt, implement, and maintain these smart solutions and associated infrastructure. Sebastian and Supriya (2013:39) further argue that technologies are changing fast, and hence, entities need to continually upgrade and adopt prevailing systems to stay in touch with new developments in the smart city fraternity.

Challenges raised in this section demands municipalities to implement capacity-building interventions, discussed in the next section.

### **South African municipal capacity-building interventions**

This section provides different interventions for capacity building in South African municipal entities. Overall, the scourge of the unavailability of critical human capital skills, which have remained present in the entire public service, has not left out the local tier of government in terms of its impacts or effects. Therefore, there is a need for capacity-building strategies that do not exclude this equally vital sphere of government. Koch (2016:537) notes that the 4IR era presents a challenge for most public entities, which have difficulty finding perfect matches between the human capital at their disposal and the tasks at hand, leading to reduced productivity. Furthermore, the inability of entities to locate the requisite skills in employees has a global impact on the talent competition, leading to entities to settle for what is available rather than what they actually want, stemming from the need to have somebody occupying a position regardless of how competent they may be (Koch 2016:538).

Municipalities have also suffered from this dearth of skilled and competent human capital. Furthermore, the makeover agenda of the post-apartheid government in the Republic has been inhibited by various obstacles, which are all linked to the poor human capital capacity in public entities. Lodge (2021:45) adds that the residue of the pre-1994 in South Africa, which was mostly state-sanctioned segregation of the majority of Blacks, also impacted the potential to capacitate the future job market since the segregation was in all facets of life, including education and skills training. Hence, their employability, thirty years on, is still lagging, affecting municipalities in the process.

As underscored in various arguments in this thesis chapter, capacity-building is the new effective tool that municipalities need to adopt and implement for improved and effective municipal service rendering. This is due to the many positives that creating and sustaining individual, organisational, institutional and network capacity bring to delivering public commodities. South African municipalities are not faced with an option not to adopt capacity-building interventions but rather what fractions of their budget to commit to capacity-building. As argued above, the conventional capacity-building focus of individual human capacity development has been augmented by many other aspects of the practice. Municipalities, therefore, have implemented several interventions that follow the capacity-building framework for local government (Ndou 2015:40).

Werner (2021:45) notes that a capacity-building intervention includes the workplace skills development progress, staff development programmes, on-the-job training and employee development, team-building initiatives, coaching and mentorship, leadership development, budgetary allocations, change management, stakeholder engagement initiatives, and institutional management interventions. These interventions have shown to be successful in building capacity. Nonetheless, the current capacity-building initiatives in municipalities have not included, to a greater extent, the smart governance requirements that have risen to prominence just over a decade after the turn of the new millennium. Resultantly, smart governance has not been implemented in many local government entities due to limited capacity, which is the focus of this study.

Vyas-Doorgapersad (2024b:5170) stressed that municipalities should adopt technology-driven interventions because they can help them implement intelligent transportation systems like smart parking, traffic control, and public transportation optimisation. For instance, cities can use adaptive traffic signals and real-time traffic monitoring to reduce traffic and improve air quality. Microgrids, renewable energy sources, and energy-efficient building designs are all encouraged for municipalities to consider. Businesses and individuals can benefit from incentives for energy-efficient appliances or financial support for the installation of solar panels on public buildings. These agreements have the potential to transform municipalities into 'smart cities' because they establish a 'smart infrastructure' through the provision of services through e-government systems linked by technological platforms and digitalized, coordinated processes. Vyas-Doorgapersad (2024b: 5170) further suggested that municipal offices need to think about how to link talent management to the re-designed skills base required in various departments of the municipality, plan how to establish technological platforms, implement technological processes, choose personnel with digital competencies and skills, increase funding for ICT/e-government/4 IR required training programs, coordinate all digitalized processes for service integration, and train both internal and external customers. To implement the concept of a 'smart city' with 'smart services', municipalities need to have a strategic vision and plans. This suggestion corresponds with the opinions of Shava and Vyas-Doorgapersad (2022:86) emphasising that digital innovations have the potential to accelerate economic development, entrepreneurship, and prosperity across a range of economic sectors in any prosperous state. In this digitalized 4IR era, social media platforms (such as Facebook, Instagram, Twitter, WhatsApp, and websites) and modern digital innovations can be used to effectively meet citizen demands for high-quality services. While a change in global policies is essential to meet different service delivery demands using digital innovations, digital innovations can boost countries' economies as nations embrace the 17 Sustainable Development

Goals, which inform the need to reduce poverty and hunger and protect the planet (Myers 2016, in Shava & Vyas-Doorgapersad 2022:86) For the purpose of providing intelligent services, digital platforms must be established both locally and globally.

This section focused on the need for capacity-building in the municipal entities in the Republic of South Africa as well as some of the capacity-building interventions that are already in service. From this discussion, it is clear that the scarcity of human capital skills and the numerous challenges of efficacy to municipal service rendering have led to adopting this capacity-building focus for the local sphere of government.

### **Conclusion**

These challenges exist in these municipalities because of a lack of skills to lead the transformation agenda and the slow uptake of ICT-driven solutions, which has affected the local government tier in South Africa. The challenges related to capacity-building formed a significant part of the study's exploration. Municipalities require talent management to ensure personnel can operate 4IR interventions for improved service delivery.

This research was premised on the lack of ample capacity in South African municipalities to drive the adoption and sustaining of 4IR interventions and public service rendering programmes. Studies on this phenomenon have established a need to build local government capacity towards the complete and effective adoption and implementation of 4IR interventions. This absence of sufficient capacity causes the local sphere of government to lose traction on its potential and ability to benefit from the many merits that the 4IR brings for sustainable community development.

It is suggested that municipalities arrange workshops to train stakeholders on capacity-building and smart governance. Easy-to-access media platforms are needed to train stakeholders on the 4IR. The essence of this is that it is futile to do any interventions that do not take care of the relevant stakeholders. In the websites and application interfaces, the CoE must include interactive videos detailing how to use and benefit from the technology. The applications development team must develop these easy-to-use interfaces in all the languages spoken within the different areas of the municipality, including Afrikaans, Zulu, Setswana, Sepedi, Sesotho, Tshivenda, English, sign language and Xhosa. This can include YouTube videos and shorts.

There is also a need to have a comprehensive diagnosis of 4IR capacity shortfalls. The municipality needs to commission a team that creates a detailed diagnosis of the 4IR capacity-building shortfalls. This team has to provide the minutest detail and make good estimates of what resources are required to bridge the 4IR capacity gaps in the CoE. This will help detail how the municipality will move forward with creating capacity. This can also help in the 4IR funding and budgeting process, a critical aspect that has not been given attention. Such a diagnosis will ensure targeted and informed capacity-building initiatives are co-created to solve existing or emerging challenges. This team can additionally conduct, alongside its mandate, a technical skills audit in line with all local government-relevant 4IR tools such as AI, IoT, 3D printing, and others. Hence, future interventions will not be starved of budgetary support because that will result from an empirical process. This team must also learn from other best practices for 4IR capacity-building globally and regionally and derive lessons to inform decision-making in municipalities.

In the context of the local government level, with its high poverty prevalence and under-development as well as poor living standards for its residents, there is a need to build capacity towards effective 4IR-driven interventions to eradicate poverty and promote sustainable community development. This study presumed that building this much-needed municipal capacity is the missing piece to the sustainable community development puzzle for effectively creating smart cities that are fully commensurate with 21st-century globalisation living standards.

### **Note**

This article is based on an unpublished MA Minor Dissertation titled Ncamphalala, M. 2024- Capacity-building initiatives for improved 4IR services in the City of Ekurhuleni Metropolitan Municipality at UJ under the supervision of Prof S Vyas-Doorgapersad. Unpublished Minor Dissertation. Johannesburg: University of Johannesburg

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