

INTEGRATION OF INNOVATION IN THE MUNICIPAL ENVIRONMENT: VVISDP PROJECT 4

RESEARCH REPORT: SOUTH AFRICAN REALITIES

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1. Introduction

Many parts of South African cities and towns, particularly those that formed as a result of the exclusionary apartheid spatial planning system, are still characterised by massive challenges of poverty, unemployment, low levels of service delivery, and lack of adequate infrastructure, facilities, and amenities. These areas are often located on the periphery of cities and towns, and due to urban sprawl residents generally have to travel long distances to and from their places of employment and other amenities, resulting in the further marginalisation of these areas (Figure 1, Figure 2). This has negative financial implications and impacts on the quality of life of those living in these areas. These challenges have greatly contributed to the disparities in reaping the urban dividends and has seen many areas not benefitting from key developmental prospects including access to ICT infrastructure¹. The ripple effect of this has meant that many of the residents in these areas cannot efficiently participate in the technological innovation agenda that continues to permeate the developmental trajectory.



Figure 1: Urban sprawl and fragmentation



Figure 2: Long travel distances to and from work and amenities

Much like many African cities, South Africa's cities are characterised by high growth pressures which in turn put a significant demand on service-delivery requirements. On the other hand, many rural municipalities are shrinking, together with their tax bases as well as access to capable talent¹. This has resulted in these municipalities struggling to keep the economic engines going, especially in the current economic climate. Evidently, rural municipalities are losing educated younger people which could be the main driving force in this innovation epoch. This means greater challenges ahead for these municipalities when coupled with the existing realities of poverty, unemployment, inequality, crime, local government inefficiencies, etc. These factors have a direct impact on service delivery, as discussed next.

2. Poverty

Over the past few years, South Africa has struggled to sustainably reduce its persisting level of poverty. This was further complicated and worsened by the emergence of the global COVID-19 pandemic. The existing policies, welfare programmes and social safety nets were relatively unprepared and not always effective in sustaining vulnerable groups. As a result, many have fallen even deeper into chronic poverty. The challenges that the pandemic presented cannot be overstated - especially the impact it has had on heightening poverty levels. With low economic growth and inadequate job creation, South African cities have become poverty traps for many residents, especially those living in the townships and informal settlements. According to the World Bank's Systematic Diagnostic Report, many South Africans are still excluded from the productive economy and remain locked in persistent poverty with very low chances of being fruitfully integrated into the labour market^{1,2}. The World Bank report further remarks that poverty in South Africa has remained stagnant since 2008 and continuously afflict mainly the historically disadvantaged.

Poverty negatively affects the ability of certain communities to pay for services, and it reduces the tax base to fund service delivery. It also places a higher demand on municipalities to deliver services.

"Innovative interventions should be context specific. Certain technologies may not appropriately address the priority needs of the poor, particularly the chronic poor, due to the additional financial burden they may place on them".

- Inclusive smart cities appropriate to the South African context, CSIR Report, 2021, page 14³

3. Unemployment

The World Bank's Systematic Country Diagnostic report⁴ paints a concerning picture about the state of unemployment in the country. According to the 2022 report, only 60 percent of working-age South Africans participated in the labour force, and unemployment was high, recorded at 27 percent (Figure 3). Unemployment amongst the youth is even higher, making up 50% of the total number of the unemployed. The heightened levels of unemployment were attributed to a staggering economy coupled with insufficient skill set. The country faces immense challenges with respect to job creation amidst a time of economic hardship. Against this backdrop, it could be argued that ICT related jobs, particularly those associated with Fourth Industrial Revolution (4IR) technologies, may not create job opportunities for a large proportion of the unemployed population. Reasons include the lack of appropriate knowledge and experience, and skills gaps that render upskilling of many a major challenge. The 4IR may

very well provide new employment opportunities and create jobs that do not even exist at the moment, but it may also result in the destruction of certain job types and could add to the numbers regarded as unemployable. The exclusion of poor South Africans from the economic prospects has negative implications on access to other services such as running water, electricity, and formal housing (Figure 4).

Similar to poverty, unemployment places a strain on municipal service delivery. It makes it difficult or impossible for some individuals to pay for services and prevents them from contributing financially to the municipality. It also places a higher demand on municipalities to deliver services.



Figure 3: Unemployed people waiting for grant payments



Figure 4: Inadequate housing resulting from unemployment

4. Inequality

The structure of South African cities is characterised by affluent classes living alongside the poorest of the poor - giving away a stark reality of the inequalities that exist in our cities (Figure 5, Figure 6). The urban landscape demonstrates a fragmented settlement pattern where the majority of the population live in settlements that are far from economic opportunities, making it difficult to fully reap the urban dividends. The South African Urbanization Review¹ points to two main dynamics contributing to the shortfall in the urban development dividend, namely “the persistence of fragmented urban spatial forms, combined with shortcomings in government programmes and policy”¹. Evidently, the country still battles to redress the narrative of being home to one of the most unequal societies on the globe. It is often said that the post-1994 policy interventions have at best entrenched the dispersed and segmented structure of cities which in turn complicates sustainable service delivery, undermines economic efficiency, and exacerbates unemployment and social exclusion^{1,5}. In such unjust contexts, the affluent can keep pace with globalisation and all the developments in ICT, while the poor

barely have access to the basics and continue to be digitally excluded. Addressing the digital divide therefore becomes crucial.

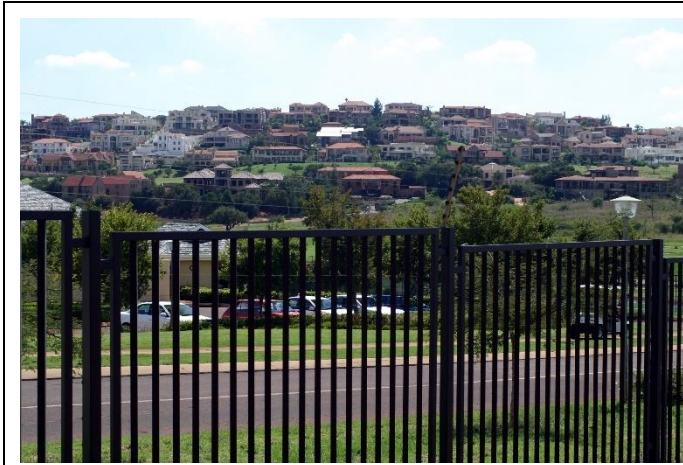


Figure 5: Inequality



Figure 6: Inequality

The Department of Cooperative Governance ⁶ raise a concern that “digital access of urban residents tends to follow current patterns of spatial fragmentation (informed by both public and private investment patterns), reinforcing social and economic inequalities”. Therefore, as municipalities espouse the innovation agenda, they need to reconcile the issue of massive spatial and economic inequalities that exist in South Africa because if left unattended, they may further entrench the digital divide. Moreover, the contrasting needs of different population groups need to be well articulated before implementing any technological interventions.

“...such high levels of inequality threaten the social fabric, increase the risks of political and economic upheaval and prevent the majority from living up to their full potential. All of these are likely to harm the country’s long-term developmental prospects”.

- Prof Murray Leibbrandt, of the Southern Africa Labour and Development Research Unit (Saldru) at the University of Cape Town *in Smart Cities Framework, 2021, page 15*⁶

Due to the inequalities in our cities and towns, municipalities face challenging conditions with respect to service delivery. The availability and quality of infrastructure, amenities and social facilities vary considerably, making it difficult to provide quality services to all communities.

5. Crime

The prevalence of crime, especially violent crime, continues to invade most parts of South Africa’s cities⁷. In many cases this has influenced the country’s urban landscape – seen by the implementation of the built environment interventions in an attempt to address concerns related to high levels of crime and fear of crime. These interventions have mainly been taking

a form of gated communities (Figure 7) where middle to high-income classes retreat to high wall enclaves (Figure 8), often supplemented by electric fences. In some cases, these developments have a substantial impact on the structure and functioning of cities and towns, and it could be argued that they do not support current planning policies and strategies aimed at promoting integration⁷.

Municipalities are increasingly required to supplement the police in addressing crime in their areas. This places an additional financial responsibility on a municipality to deliver a service that could potentially be very costly.

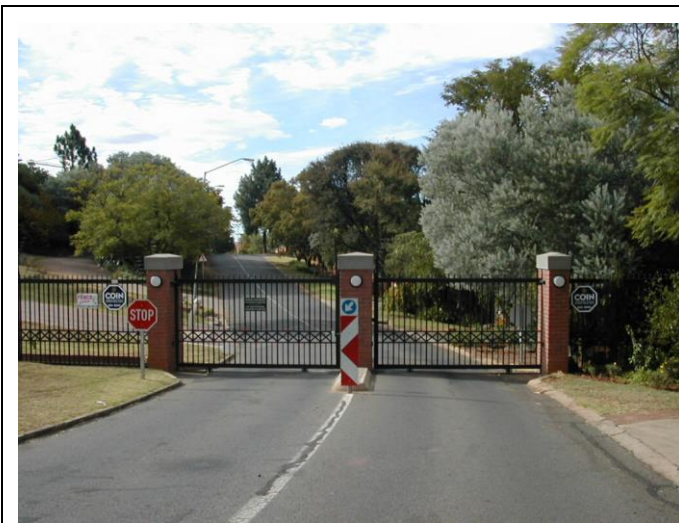


Figure 7: Gated communities

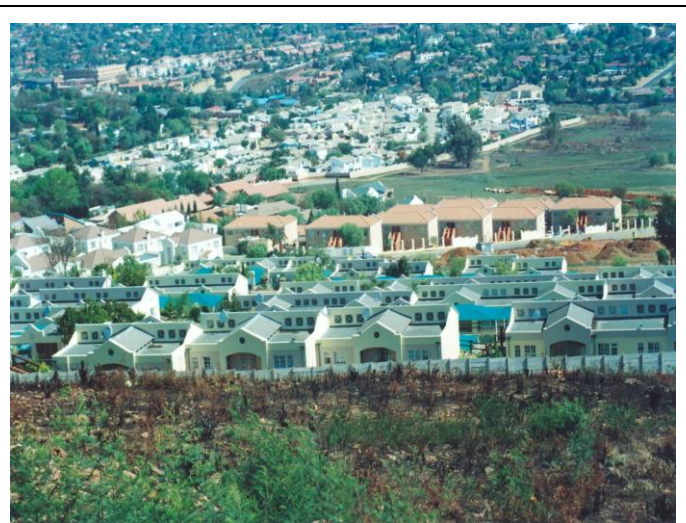


Figure 8: High wall enclaves

6. Local government inefficiencies

A weak and 'dysfunctional' local government remains a hindrance to the efficient identification and implementation of any innovation initiatives. Over the years, a number of reports have documented the state of local government which broadly point to issues of rampant corruption and maladministration, financial mismanagement, capacity, and resource constraints amongst others^{1,8}. Severe shortcomings at local government have also been highlighted by the Auditor General over several year years resulting in the majority of the municipalities receiving unqualified audit opinion⁹. This has illuminated the inefficiencies of local government to effect sustainable service delivery and shift the spatial makeup of South African cities. Local government as a key developmental agent has failed considerably in impacting sustainable service delivery. The poor alignment between municipal spatial planning, budgeting, and prioritisation has been the result of the inefficiencies and lack of capability that exist in local government. Therefore, any strides to introduce innovation in the municipalities should take the current local government context into account.

The effective and efficient delivery of municipal services require sustainable financial, human and other resources. Personnel with appropriate skills and experience are needed to ensure services and infrastructure are operating and maintained optimally (Figure 9, Figure 10).



Figure 9: Inadequate infrastructure



Figure 10: Poor maintenance

7. Conclusion

South Africa's socio-economic challenges seem to persist despite the interventions that were put in place to alleviate the situation. Both government and the private sector have made targeted efforts to address these challenges, but the impact has not been satisfactory. Unarguably, the country is in much need of a different and innovative approach to service delivery.

Employing innovative technologies and approaches to improve service delivery and to provide appropriate infrastructure and amenities would assist municipalities in implementing the New Urban Agenda ¹⁰ in South African cities and towns. This intention with this agenda is to guide national and local policies on the growth and development of cities up to 2036. It shares "...a vision of cities for all, referring to the equal use and enjoyment of cities and human settlements, seeking to promote inclusivity and ensure that all inhabitants, of present and future generations, without discrimination of any kind, are able to inhabit and produce just, safe, healthy, accessible, affordable, resilient and sustainable cities and human settlements to foster prosperity and quality of life for all."¹⁰

"Many parts of South African cities and towns – particularly those developed specifically for poor communities – are still characterised by a lack of adequate infrastructure, facilities and amenities, low levels of service and few or undesirable public spaces. In addition, the country also faces challenges regarding informality as it relates to settlement and housing form, the way income is generated and how people live in and interact with cities and towns".

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