

Investigating Urban Regeneration and Sustainable Cities Development Nexus in the City of Pietermaritzburg, South Africa

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1 ABSTRACT

The World Cities Report (2016) states that cities are the drivers of economic growth and development, but they also face numerous challenges such as urban decay which can hinder growth and negatively impact the quality of life for residents. Urban decay refers to the deterioration and decay of buildings and older areas due to various factors such as neglect, crime, and lack of economic support. Gordon (2003), as cited in Ndlebe (2017), highlights the same challenge in the city of Pietermaritzburg. The research aims to identify means of regenerating the Pietermaritzburg Central Business District while incorporating the concepts and principles of smart and sustainable cities development. The objectives include analyzing the conceptualization of smart cities, sustainable development, urban decay, and urban regeneration concepts and evaluating their impact on the urban environment, assessing the current state of the Pietermaritzburg Central Business District through urban decay and regeneration, determining the potential of community and public participation in planning for urban regeneration, and establishing a smart and sustainable regeneration strategy. The research methodology used in investigating the regeneration of the Pietermaritzburg Central Business District (CBD) is a qualitative descriptive case study approach, which enables multiple perspectives on the issue of urban decay and regeneration in the city to be incorporated. The research findings suggest that successful urban regeneration requires a planned, team-based strategy that includes community engagement and stresses social inclusion, open space, and environmentally friendly transportation. The case studies of successful regeneration programs in Singapore and Kwa-Zulu Natal highlight the importance of having a clear goal and being adaptable to changing circumstances. The study's results show that 30 municipal officials who were interviewed in October 2022 in Pietermaritzburg are aware of urban decay in the city center and suggest enforcing council ordinances, carrying out ongoing clean-up projects, raising public awareness, fostering local economic development, and coordinating between various municipal agencies as potential solutions. The officials believe that smart and sustainable city growth is necessary for urban regeneration in Pietermaritzburg, but it requires a concerted effort from multiple stakeholders. In conclusion, this study highlights the feasibility of urban regeneration in Msunduzi but underscores the need for a concerted effort from multiple stakeholders to achieve sustainable and smart city growth.

Keywords: Urban decay, Urban Regeneration, Smart City, Sustainable Development, Spatial Planning

2 INTRODUCTION

This paper focuses on the topic of urban regeneration in the context of smart and sustainable city development. The Integrated Urban Development Framework predicts a significant increase in urban migration by 2050, posing challenges for governments in supporting the growing population. To address this, industries are being decentralized from inner cities, leading to urban decay and hindered economic growth. Urban regeneration initiatives are being implemented to tackle these issues. The purpose of this research is to develop a strategy and alternatives for implementing smart and sustainable city development through urban regeneration within the Msunduzi Municipality, with a specific focus on regenerating the Pietermaritzburg Central Business District. The objectives of the study include analyzing the concepts of smart cities, sustainable development, urban decay, and urban regeneration, evaluating their impact on the urban environment through international and local case studies, assessing the current state of the Pietermaritzburg Central Business District in terms of urban decay and regeneration, determining the potential of community and public participation in urban regeneration planning using the concept of smart cities and sustainable development, and establishing a comprehensive strategy for smart and sustainable regeneration. The paper discusses various concepts related to urban decay, smart cities, and sustainable development, providing definitions and highlighting their significance. It also presents case studies of smart city initiatives in urban

regeneration, examining the efforts made by cities like Toronto and Korea to use advanced technologies and innovative strategies to improve various urban aspects. The paper concludes by focusing on the city of Pietermaritzburg in Kwa-Zulu Natal and presenting discussions on urban regeneration in the Msunduzi Municipality, incorporating insights from interviews with municipal officials regarding the existence of urban decay, its causes, and potential solutions. The concept of smart city development is also explored as a means to improve the urban decay situation in the area.

3 LITERATURE REVIEW

3.1 Refining the concept of urban decay and smart cities

Urban decay encompasses various aspects of persistent disorder within urban areas, including abandoned buildings, deteriorating infrastructure, and compromised living conditions (White, Sepe, & Masconale, 2014). This phenomenon is closely linked to social, economic, and physical changes in cities (Alias, Zyed, & Chai, 2016). It manifests through ill-kept properties, vandalism, social unrest, and economic decline, ultimately driving decentralization as people and businesses relocate to more functional areas (Clark, 2013; Alias et al., 2016). The concept of a smart city, as defined by multiple sources, involves leveraging information and communication technologies to enhance livability, sustainability, and efficiency (Roy, 2016; World cities report, 2016; British Standards Institute, 2014). Smart city development incorporates resource efficiency, innovative economies, sustainable mobility, intelligent urban planning, and improved citizen governance (Galati, 2018). The overarching goal is to create technologically advanced, inclusive urban environments that address urban challenges and promote community well-being (Moura & Silva, 2019).

3.2 Smart city initiatives in urban regeneration

The research that follows provides a comprehensive review of urban regeneration programs that have been put in place in West Don Lands project in Toronto, Dubai and Singapore as best examples for smart city initiatives in urban regeneration.

3.2.1 The West Don Lands Project in Toronto

Urban decay refers to the deterioration of urban areas due to a combination of social, economic, and environmental factors. In Toronto's case, the rapid growth of the city coupled with inadequate urban planning and development strategies has contributed to pockets of urban decay. As the largest city in Canada with a population of around 6 million, the challenges of providing sufficient housing, transportation, and infrastructure have become increasingly complex (Statistics Canada, 2016). The West Don Lands area, despite its prime waterfront location, fell victim to neglect, underutilization, and deteriorating infrastructure, reflecting broader issues in urban management.

The West Don Lands Urban Regeneration project aims to revitalize the 32-hectare area by creating residential units, mixed land uses, and job opportunities while prioritizing sustainable and smart development. One of the fundamental strategies employed is the adoption of smart growth policies, aligning with the city's commitment to sustainable development goals (OECD, 2015). Smart growth emphasizes efficient land use, transportation options, and community engagement to combat urban decay. One of the notable successes of the West Don Lands project lies in its community-wide approach to planning. The city invested two years in the initial planning stage, focusing on extensive community participation, transparency, and sustainability audits (Toronto, 2021). This inclusive approach ensured that the project addressed both opportunities and challenges, garnering support from stakeholders and minimizing potential conflicts. The project's design phase involved detailed block plans that facilitated resolution to building properties, street patterns, stormwater management, and utility services (Toronto, 2021). This comprehensive approach helped lay the groundwork for a functional and aesthetically pleasing urban environment. Furthermore, the integration of transit systems along Cherry Street highlights the emphasis on accessible and efficient transportation, a crucial aspect of smart cities.

3.2.2 Aligning with Smart City Concept

City Strategies	Alignment with Smart City Concepts	Importance and Benefits
Sustainability	Sustainable designs, stormwater management, and efficient infrastructure minimize environmental impact and optimize resource use.	Reduced carbon footprint. Enhanced urban resilience. Improved quality of life
Community Engagement	Extensive community participation and transparency align with smart city's citizen-centric approach.	Greater social cohesion. Informed decision-making. Reduced conflicts and opposition.
Transportation	Integration of transit systems addresses mobility challenges and aligns with smart city's intelligent transportation solutions.	Reduced congestion. Improved accessibility. Enhanced economic activity
Mixed Land Uses	Creation of mixed land uses supports diverse and inclusive communities, a key aspect of smart cities.	Vibrant and resilient neighborhoods. Economic diversification. Enhanced cultural exchange.
Gaps	Considerations and Mitigation	Implications and Risks
Digital Inclusion	Equitable distribution of smart technology benefits to bridge the digital divide.	Preventing socio-economic disparities. Ensuring access for marginalized communities. Fostering digital literacy

3.2.3 Korea: a case study of Seoul and Pohang cities

The phenomenon of urban decline in Korean cities, including Seoul and Pohang, can be attributed to a combination of population decline, shifts in industries, and deindustrialization. According to Lee (2019), Seoul's new town development project was a response to the failure of previous redevelopment policies and aimed to address housing decline and inadequate infrastructure. Pohang, on the other hand, witnessed a decline in its city center, necessitating revitalization efforts led by the local government and public firms (Oh, 2020; Smart City Korea, 2021). Collaborating with public firms, the local government aims to introduce information and communication technologies in the central area, alongside establishing an industry hub for young entrepreneurs and redeveloping old housing to attract more visitors. The project includes a comprehensive platform incorporating smart city technologies, such as IoT in transportation, environment, and energy sectors, as well as AI-based solutions. These efforts target improving citizen security, disaster response, and enhancing existing public facilities. Despite these ambitions, resident preferences for tourism facilities and lower evaluations of energy-related amenities indicate potential disparities in policy goals and directions between public and private entities (Oh, 2020; Smart City Korea, 2021). Both cities recognized the potential of smart technology to address urban decay and foster sustainable development. The Korean government's enactment of the "Special Act on the Promotion of and Support for Urban Regeneration Act" in 2013 marked a significant step toward urban revitalization (Kim et al., 2020). This led to a slew of urban regeneration projects, aimed at integrating technology and smart solutions to create vibrant and efficient urban areas (Kim et al., 2020). Pohang's case is particularly noteworthy, as it showcases the city's endeavor to transform into a smart city by integrating information and communication technologies into various sectors (Oh, 2020; Smart City Korea, 2021).

3.2.4 Alignment with Smart City Concepts

Strategies	Alignment with Smart City Concepts	Importance and Benefits
Sustainability and Efficiency	Integration of smart technologies and infrastructure in projects for optimized resource use, enhanced urban efficiency, and sustainable growth.	Reduced resource consumption. Improved urban efficiency. Fosters sustainable development.
Community Engagement	Use of smart solutions to encourage citizen participation and engagement, promoting inclusivity and informed decision-making.	Empowered citizenry. Increased civic participation. Nurtures community cohesion.
Innovation and Economic Growth	Embrace of technology to attract businesses, entrepreneurs, and tourists, stimulating economic growth and fostering innovation.	Enhanced local economy. Expanded entrepreneurial opportunities. Catalyses innovation.
Infrastructure Enhancement	Implementation of IoT and AI technologies to enhance city services, bolster public safety, and fortify disaster response capabilities.	Improved service delivery. Strengthened public safety. Enhanced disaster management.
Gaps	Considerations and Mitigation	Implications and Risks
Public-Private Alignment	Addressing discrepancies between public and private entities' goals through improved alignment and communication.	Misaligned priorities may hinder project success.
Equitable Development	Ensuring the equitable distribution of benefits, especially to marginalized communities, through policy interventions.	Unequal distribution could exacerbate disparities.

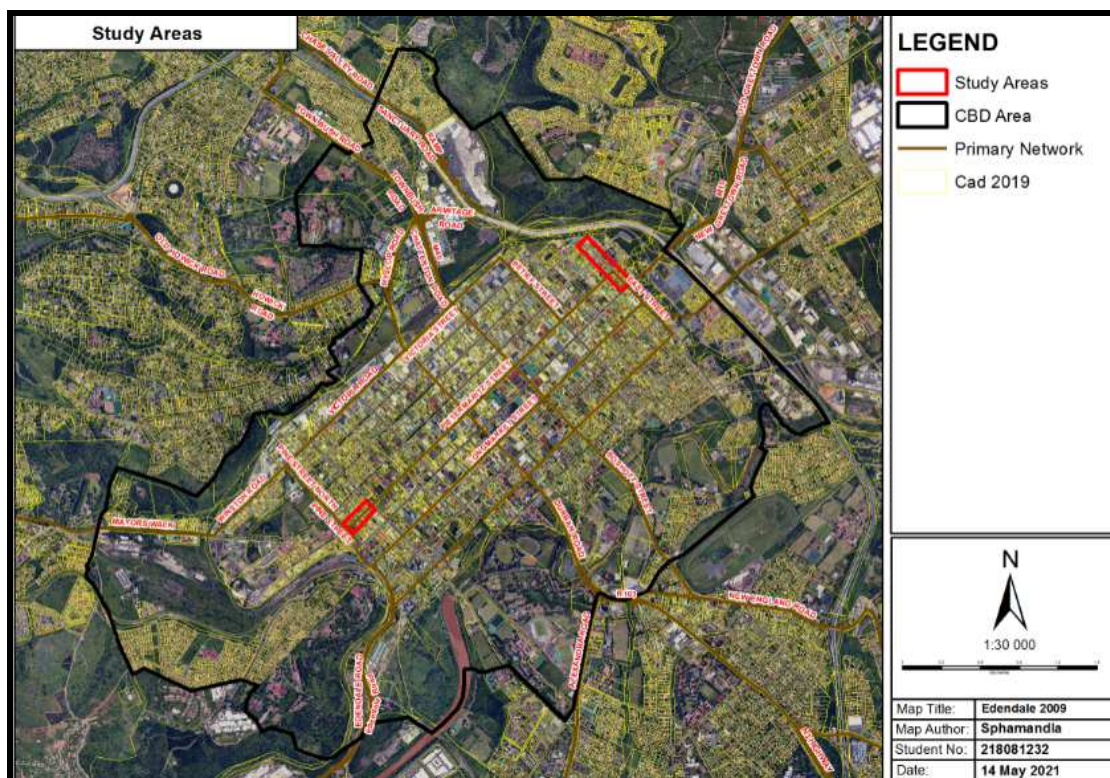
3.3 Theoretical framework

The theoretical framework underlying this study encompasses four theories: Communicative Theory, Just City Theory, Modernization Theory, and New Urbanism Theory. Grant and Osanloo (2014) define theoretical frameworks as essential components relying on formal theory and philosophical thinking. Urban regeneration, often referred to as a theory, seeks to address urban decay and changes in the urban form, influenced by planning discussions and community involvement (Roberts, 2000). Communicative Theory emphasizes communication processes in urban development, with a focus on public participation (van Ruler, 2018). Just City Theory promotes equity in spatial relations and advocates for marginalized voices (Fainstein, 2000, 2005), while Modernization Theory examines societal development and can lead to gentrification (Goorha, 2017; Yeh, 1989; Ghertner, 2013). New Urbanism Theory, emerging in the 1980s, aims to combat urban sprawl and enhance community cohesion (Dwamena, 2015), but faces challenges related to spatial disparities and private development (Fainstein, 2000). These theories shape the study's exploration of urban regeneration's impact on social inclusion, spatial disparities, and the balance between private interests and societal benefits. Below is a table indicating the theoretical framework to assess the study area:

Theoretical Framework	Key Concepts	Implications for Study Area
Communicative Theory	Public participation, democracy	Investigate community engagement in planning and decision-making processes to ensure equitable urban regeneration.
Just City Theory	Equity, spatial relations	Analyze how urban regeneration initiatives address spatial inequalities and promote social inclusion.
Modernization Theory	Social evolution, development	Examine the effects of economic growth-focused urban regeneration on social issues and property ownership patterns.
New Urbanism Theory	Community, mixed uses	Evaluate the success of new urbanism-inspired plans in creating livable, cohesive communities in the study area.

4 STUDY AREA

The city of Pietermaritzburg is located within the province of Kwa-Zulu Natal, along the N3 national road. The study area serves as the capital city in the province and sits within u-Msunduzi Municipality. Furthermore, the study area is located within the CBD of Msunduzi municipality known as the CACEN plan. The inner city of Msunduzi is dealing with challenges such as incompatible land uses regarding economic and social development (Msunduzi Spatial Development Framework, 2015). map 1 showing location of the study area within the inner city which is Pietermaritz and Downtown Street identified as experiencing high levels of urban decay.



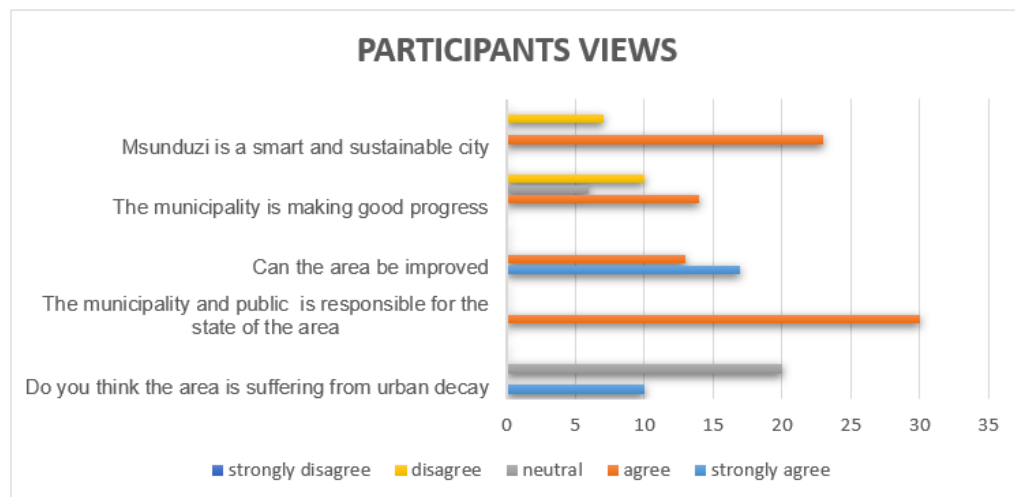
Map 1 Location of study area within Inner city of Msunduzi

5 RESEARCH METHODOLOGY

The researchers have adopted a research methodology that encompasses both exploratory and descriptive elements. This choice is driven by the scarcity of studies on urban regeneration in the city of PMB, coupled with a specific emphasis on integrating smart city and sustainability concepts. To address these gaps, the study employs a descriptive qualitative case study approach, which involves comparing how other international and local cities have tackled similar challenges. To gather relevant information and perspectives on urban regeneration in Msunduzi Municipality, the researchers employ qualitative primary data collection instruments. These include making observations and conducting open-ended interview questionnaires with 30 municipal officials during October 2022. Through these methods, the researchers have gathered valuable insights and data on the subject matter.

6 DISCUSSIONS ON URBAN REGENERATION IN MSUNDUZI MUNICIPALITY

Based on the data gathered from 30 interview questionnaires conducted in October 2022, the study collected information from various municipal departments within Msunduzi Municipality. The participants were asked about their perceptions regarding urban decay in the area, the factors contributing to this problem, and their recommendations for the municipality to address it. The participants' views were sought on whether they believed that smart city development could help improve the state of urban decay in the area.



Out of the 30 officials who responded to the questionnaires, a significant portion of 10 officials strongly agreed that the area is indeed experiencing urban decay. Their agreement indicates that they perceive several underlying problems in the area, including the violation of municipal bylaws, an alarming rise in poverty and crime rates, the presence of drug addicts residing within the city, and inadequate management of buildings. This consensus among the officials highlights their recognition of the multifaceted nature of urban decay and the various factors contributing to it. All 30 authorities unanimously acknowledged that both the municipality and the public share responsibility for the current state of the area. This collective acknowledgment emphasizes the officials' awareness of the importance of involving the general population in concerted efforts to address and resolve the concerns related to urban deterioration. It signifies their understanding that effective solutions require collaborative actions and engagement from multiple stakeholders.

Regarding the potential for improvement, 13 respondents expressed agreement, while 17 of them strongly agreed that the area has the capacity for positive change. This consensus among policymakers indicates their belief that with appropriate strategies and interventions, the situation can be improved. It highlights their optimism and confidence in the possibility of implementing effective measures to reverse the urban decay trends in the area. However, opinions among the officials were not entirely unanimous. While 14 officials expressed that the municipality is progressing well in addressing urban decay, 10 others disagreed. This discrepancy suggests the existence of divergent perspectives and varying assessments regarding the advancements being made. It also implies that there may be room for improvement in certain areas or aspects of the municipality's efforts to combat urban decay. While 7 respondents disagreed, a significant majority of 23 officials stated that Msunduzi is a wise and sustainable city. This collective viewpoint reflects the

prevailing sentiment among most elected officials who believe that Msunduzi possesses the potential to evolve into a smart and sustainable city. However, the acknowledgment of some dissenting opinions suggests that there may be specific challenges or issues that need to be addressed to translate this potential into a tangible reality.

The responses from the officials indicate their recognition of the existence of urban decay in the area, with an understanding of the underlying problems contributing to it. The unanimous agreement on shared responsibility emphasizes the importance of inclusive approaches to address urban deterioration. The varying perspectives on the municipality's progress and the majority's belief in Msunduzi potential as a wise and sustainable city highlight the need for continuous efforts, collaborative actions, and targeted resolutions to overcome the challenges of urban decay and achieve a thriving and sustainable urban environment.

The officials identified several factors that contribute to the urban deterioration in Msunduzi. These include the disregard for local ordinances, an increase in poverty and crime rates, the presence of drug users in the city, and the mismanagement of structures. Additionally, breaking ordinances can result in environmental damage, health risks, and hazardous situations. The presence of drug users exacerbates the deterioration and leads to further detrimental circumstances, while poverty and crime contribute to a pervasive sense of fear and neglect. The officials also highlighted that poorly maintained buildings, due to a lack of care and upkeep, eventually lead to deterioration and disintegration. To address these problems, the officials proposed potential solutions. One approach is the enforcement of council ordinances to ensure cleanliness, safety, and proper maintenance of the city. By strictly adhering to these regulations, the city can be kept in better condition and prevent further deterioration. Another option is the implementation of ongoing clean-up projects aimed at alleviating environmental deterioration and enhancing the overall image of the city. These projects can contribute to a cleaner and more appealing urban environment.

The officials stressed the importance of working closely with the public to promote awareness about the value of city upkeep and adherence to legislation. By fostering a sense of responsibility and involvement among the citizens, the city can experience positive changes. The officials also recommended regularly monitoring property owners and conducting annual visits to assess whether they are adequately maintaining their properties. This proactive approach ensures accountability and encourages property owners to take proper care of their buildings. According to the officials, urban regeneration in Msunduzi can be enhanced through smart and sustainable city development. However, this requires the municipality to undertake ongoing, creative infrastructure-maintenance initiatives. By embracing innovative approaches, the municipality can effectively address the challenges of urban decay and facilitate positive change.

In order to carry out urban renewal in Msunduzi, the officials provided several suggestions. One recommendation is to educate the general population about urban planning and the importance of maintaining a sustainable city. This entails raising awareness about the value of abiding by the law, taking care of one's property, and actively participating in clean-up initiatives. Additionally, promoting local economic development was highlighted as a strategy to address urban decay. This can be achieved by encouraging investment, boosting tourism, and providing support to small enterprises, ultimately leading to job creation and city expansion. The officials also emphasized the need for collaboration among different agencies to overcome the challenges of urban development in Msunduzi. This underscores the importance of coordination and cooperation between various municipal entities to ensure the effective and efficient utilization of resources. By working together, these agencies can provide comprehensive solutions to the multifaceted problems faced by the city.

7 FINDINGS AND LESSONS LEARNT

The findings from the study conducted in Msunduzi Municipality reveal that:

- (1) **Urban Decay Existence:** The study confirms the presence of urban decay in the area, as indicated by the consensus among officials, with a significant number strongly agreeing with this assessment. This finding highlights the urgent need for interventions to address the deteriorating state of the city.
- (2) **Multiple Factors Contributing to Urban Decay:** The officials identified several factors contributing to urban decay, including violations of municipal bylaws, increasing poverty and crime rates, the presence of drug users, and poorly managed buildings. These findings underscore the complex and interconnected nature of urban decay, emphasizing the importance of addressing multiple challenges simultaneously.

(3) **Shared Responsibility:** All officials unanimously recognized that both the municipality and the public share responsibility for the current state of urban decay. This finding emphasizes the need for collaboration and engagement between the local government and the community to effectively tackle the problem. It highlights the importance of inclusive approaches that involve multiple stakeholders in finding and implementing solutions.

(4) **Belief in Potential for Improvement:** The majority of officials expressed their belief in the potential for positive change in the area. This optimism suggests that officials are hopeful and motivated to implement effective strategies and interventions to reverse the urban decay trends. It underscores the importance of maintaining a positive outlook and actively seeking solutions to address urban decay challenges.

(5) **Divergent Perspectives on Progress:** While some officials expressed confidence in the municipality's progress in addressing urban decay, others disagreed. This finding reveals the existence of differing opinions and assessments regarding the advancements being made. It highlights the importance of ongoing evaluation, transparency, and continuous improvement in the municipality's efforts to combat urban decay.

(6) **Potential for Smart and Sustainable City Development:** The officials recognized the potential of smart and sustainable city development to improve the urban decay situation. This finding emphasizes the significance of adopting innovative approaches, incorporating technology, and ensuring long-term sustainability in urban planning and development initiatives.

8 ASSESSMENT OF THE STUDY AREA THROUGH THEORETICAL LENS

Theory	Key Concepts	Implications for Study Area
Communicative Theory	Community engagement, participatory planning, collaboration	The officials' unanimous agreement on shared responsibility for urban decay highlights the significance of involving the public in addressing urban deterioration. Collaborative approaches that consider citizens' voices and perspectives can lead to more effective and sustainable solutions.
Just City Theory	Equity, social inclusion, spatial relations	The officials' recognition of factors contributing to urban decay, such as poverty, crime, and mismanagement, resonates with the principles of the Just City Theory. Addressing spatial inequalities and promoting social inclusion through urban regeneration initiatives can foster a more equitable and thriving city environment.
Modernization Theory	Social evolution, economic growth, development, property ownership	The officials' identification of factors like poverty, crime, and mismanagement as contributors to urban decay reflects the complexities described by Modernization Theory. The theory's critique of economic growth-focused policies and their potential effects on social issues is relevant to the study area, where addressing urban decay requires a balance between development and social well-being.
New Urbanism Theory	Community, mixed uses, sustainable development, social cohesion	The officials' recommendations for collaborative actions, public involvement, and integration of local economic development align with New Urbanism Theory. This theory emphasizes creating cohesive, mixed-use communities through sustainable development approaches. Implementing mixed-use areas, promoting local businesses, and fostering community cohesion can contribute to urban regeneration in the study area.

9 ASSESSMENT OF THE STUDY THROUGH THE LENS OF CASE STUDIES

As per the case studies explored regrading smart technology for urban regeneration to combat the issue of urban decay, an implementation plan for Msunduzi Municipality has been established:

Urban Decay	Smart Technology	How It Addresses Urban Decay
Deteriorating Infrastructure	Smart Infrastructure Monitoring	Utilize IoT sensors and data analytics to monitor the condition of roads, bridges, and public facilities. Detect issues early, enabling prompt maintenance and reducing urban decay.
Inadequate Security	Smart Surveillance Systems	Install smart cameras with AI-powered anomaly detection for real-time security monitoring. Enhance public safety, deter crime, and create a safer urban environment.
Lack of Community Engagement	Smart Citizen Engagement Platforms	Develop mobile apps and online platforms for citizens to report issues, provide feedback, and participate in urban planning. Increase community involvement and empowerment.
Economic Decline and Unemployment	Innovation and Entrepreneurship Promotion	Create innovation hubs and incubators to support local entrepreneurs. Foster economic growth, create jobs, and attract investments to revitalize urban economy.
Poor Waste Management	Smart Waste Management Solutions	Implement IoT-enabled bins for efficient waste collection. Monitor fill levels and optimize routes, reducing litter, environmental hazards, and overall urban decay. (This should be communicated between spatial planning and waste management departments).
Neglected Public Spaces	Smart Public Space Management	Deploy sensors and smart lighting to enhance public space usability and safety. Create vibrant, well-maintained spaces that encourage community gatherings and activities.

10 CONCLUSIONS AND RECOMMENDATIONS

Urban decay is a pervasive issue plaguing Pietermaritzburg and other cities, manifesting in the deterioration of buildings and spaces within the city center. The study conducted in Msunduzi Municipality has provided valuable insights into the presence of urban decay in the area, as officials have identified a range of contributing factors. Neglect, high crime rates, and limited economic assistance are among the key drivers of

this decay. The findings emphasize the shared responsibility that both the municipality and the public bear in addressing and mitigating urban decay, emphasizing the necessity of collaborative approaches. Despite variations in opinions regarding the progress made thus far, officials exhibit a sense of optimism and hold firm belief in the potential for improvement. This research holds promise in shaping the future of urban regeneration in Pietermaritzburg and beyond. The insights gleaned provide a solid basis for informed decision-making, policy formulation, and strategic planning. In Pietermaritzburg's journey towards becoming a smart, sustainable city, the lessons learned and recommendations provided in this study serve as a roadmap for policymakers, urban planners, and community stakeholders to collaborate effectively. The officials involved in the study have put forth several recommendations to address the urban decay situation in Msunduzi Municipality. These recommendations aim to tackle the identified factors contributing to the decay and pave the way for a more sustainable and thriving urban environment.

(1) **Enforce Council Ordinances:** One of the recommendations is to strengthen the enforcement of council ordinances. By ensuring strict compliance with local regulations, the municipality can promote cleanliness, safety, and proper maintenance throughout the city. This step is essential in curbing activities that contribute to urban decay, such as violations of bylaws and disregard for regulations.

(2) **Implement Ongoing Clean-up Projects:** The officials suggest the implementation of ongoing clean-up projects aimed at addressing environmental deterioration. These projects can help improve the overall image of the city and alleviate the negative impact of decay. By actively engaging in initiatives that promote cleanliness and environmental stewardship, the municipality can create a more appealing and vibrant urban landscape.

(3) **Promote Public Awareness and Participation:** The officials emphasize the importance of working closely with the public to promote awareness of the value of city upkeep and adherence to legislation. By fostering a sense of responsibility and involvement among residents, the municipality can enhance community ownership and engagement in maintaining the city's well-being. This recommendation highlights the significance of education campaigns, public outreach programs, and community-based initiatives.

(4) **Monitor Property Owners and Maintenance:** The officials recommend regular monitoring of property owners and conducting annual visits to assess the maintenance of their properties. This proactive approach ensures accountability and encourages property owners to take proper care of their buildings. By holding property owners accountable for maintaining their properties, the municipality can prevent further decay and deterioration.

(5) **Embrace Smart and Sustainable City Development:** The officials recognize the potential of smart and sustainable city development in addressing urban decay. They suggest that the municipality should embrace innovative approaches and creative infrastructure-maintenance initiatives. By incorporating technology, sustainable practices, and long-term planning, the municipality can foster positive change and improve the overall urban environment.

(6) **Collaborate with Multiple Agencies:** To overcome the challenges associated with urban development and regeneration, the officials recommend fostering collaboration among different municipal agencies. This emphasizes the need for coordination and cooperation between various entities responsible for urban planning, infrastructure, public safety, and social services. By working together, these agencies can pool their resources, expertise, and efforts to provide comprehensive solutions to the complex issues of urban decay.

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