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URBAN PLANNING INNOVATION TO DRIVE THE DIGITAL ECONOMY

Putri Anggraini[1]* , Ikram Muharril[2] , Annisa Khoiri[3] , Ema Nur Syahfitri[4] , Ataina Zulfa Nasution[5]
Universitas Islam Negeri Sumatera Utara
putrihutasuhut0303@gmail.com[1] , imuharril@gmail.com[2] , annisaakhoiri@gmail.com[3] , emanursyahfitri1@gmail.com[4] , atainazulfa@gmail.com

ABSTRACT: Innovation in digital technology-based urban planning is a key strategy for driving digital economic growth in urban Indonesia. Integrating technologies such as the Internet of Things (IoT), artificial intelligence (AI), and big data into urban planning accelerates public services, manages urban resources, and creates a productive and inclusive digital economy ecosystem. The development of adequate digital infrastructure, digital-based urban planning concepts and strategies, human resource capacity building, and the impact of urban planning innovation on the digital economy and public services are key focuses. Despite facing challenges such as data security and digital system management readiness, digital urban planning innovation is expected to be the foundation for realizing adaptive, inclusive, and sustainable cities in the era of the global digital economy.

Keywords: *Urban Planning Innovation, Digital Economy, Smart City Technology, Digital Transformation of Government*

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INTRODUCTION

The development of digital technology has had a significant impact on various aspects of life, including urban governance. Innovation in urban planning is crucial to supporting digital transformation, which in turn drives the growth of a technology-based economy. Modern cities are not only centers of conventional social and economic activity, but also spaces for the rapid digitalization of services, technology investment, and the development of digital businesses. Therefore, innovative urban planning that adapts to technological advances is key to creating a productive and inclusive digital economic ecosystem(Purba et al., 2025).

Urban planning based on digital technology currently widely adopts the smart city concept, which prioritizes the use of information and communication technology (ICT) to improve the quality of public services and the efficiency of city resource management. By integrating digital technologies such as big data, the Internet of Things (IoT), and artificial intelligence (AI), cities can maximize functions such as traffic management, energy management, and empowering communities and digital entrepreneurs. This transformation positively contributes to local economic development through easier access and more effective and efficient digital transactions.

Innovation in urban planning also includes the provision of adequate digital infrastructure and equitable access to information technology. This is a crucial foundation for businesses, particularly micro, small, and medium enterprises (MSMEs), to capitalize on digital economic opportunities. As the backbone of the economy, MSMEs significantly benefit from digital services in the form of online marketing, digital financial management, and easy access to capital through fintech platforms. With well-planned spatial planning and equitable digital infrastructure, the digital economy across various urban areas can grow sustainably and inclusively.

Beyond technological aspects, planning innovation must also provide governance and regulations that are responsive to digital developments. City governments need to develop policies that support the digitalization of the economy by providing ease of doing business, simplifying online licensing, and encouraging collaboration between the public and digital private sectors. This digitalization also accelerates bureaucracy, increases transparency, and opens up new opportunities for innovation in city management. Cities that have implemented this digital strategy, such as Surabaya and Bandung, have demonstrated improved public service quality and strong creative economic growth.

Furthermore, urban planning innovation in the digital era encompasses more than just technical aspects but also considers social and environmental aspects. A well-designed smart city can create a digital economic ecosystem while prioritizing environmental sustainability and social inclusivity. The use of technology for waste management, renewable energy, and inclusive digital public spaces can create cities that are not only economically viable but also environmentally and socially friendly. Thus, digital urban planning innovation

also supports sustainable development in line with long-term development goals(Jamil et al., 2023).

Digital technology development also provides opportunities to strengthen urban economic resilience. Through big data analysis and the use of AI, urban planning can respond to changing economic dynamics more quickly and accurately, enabling cities to mitigate risks and optimize existing resources for digital economic growth. This mechanism is crucial in facing the simultaneous challenges of urbanization and technological disruption. Therefore, integrating technological innovation into urban planning is a vital strategy for maximizing the potential of a city's digital economy effectively and efficiently.

In both global and national contexts, urban planning innovations that promote the digital economy have become part of the strategic development agenda. The Indonesian government, for example, has initiated a digital transformation strategy framework through the smart city program as a key indicator for improving public services, developing the digital economy, and empowering communities. This initiative aims to ensure that digital transformation has a broad positive impact, both in terms of social welfare and sustainable economic growth at the regional and national levels.

Innovation in urban planning is no longer limited to physical aspects and infrastructure development, but also encompasses the creation of a digital ecosystem that connects communities, businesses, and government within a mutually supportive system. Cities that adopt digital concepts can address the dynamics of the times by utilizing technology as a primary means of driving modern economic growth, particularly the digital economy, which is the driving force of future development. Therefore, developing creative, flexible, inclusive, and sustainable urban planning is crucial to addressing the challenges of the Industrial Revolution 4.0 and the current era of digital transformation.

LITERATURE REVIEW

Innovation in urban planning is a key factor in driving the development of the increasingly dominant digital economy in today's modern era. The concept of smart cities is beginning to receive serious attention due to its ability to integrate digital technology into city management, creating an efficient and productive ecosystem. This innovation relates not only to the physical aspects of spatial planning, but also to how city management and services can be optimized through digital technology to encourage new digital-based economic activities.

Innovative urban planning integrates the concept of the smart economy, one of several pillars of a smart city, which focuses on optimizing the economy through information and communication technology. A smart economy enables efficiency in transactions, the creation of new jobs in the digital sector, and increased regional competitiveness. The implementation of this smart economy strengthens the sustainability of a city's economy and supports the growth of a productive digital ecosystem by adopting digital transformation in various aspects of urban planning, such as public services, infrastructure management, and the development of the digital MSME sector(Hesthria et al., 2024).

One innovation in urban planning is the use of Artificial Intelligence (AI) and Geographic Information System (GIS) technology to improve the precision of urban planning and management. This technology can accurately predict urban growth patterns, thus anticipating environmental, social, and economic impacts. These innovations make urban planning more adaptive, responsive, and sustainable, ultimately supporting the development of the digital economy by creating urban spaces that are more conducive to business activities and technology start-ups(Anwar & Sakti, 2024).

In the Indonesian context, the implementation of the smart city concept, with a focus on digital-based governance, has begun in several cities. For example, the smart city programs in Semarang and Makassar integrate digital public services and the development of a technology-based creative economy. This model increases the number of new businesses and simplifies the licensing process for MSMEs, thereby stimulating digital-based local economic growth. It also demonstrates how urban planning innovation can promote ease of doing business and strengthen regional digital ecosystems(Setiawan & Aindita, 2022).

Urban planning strategies to promote the digital economy also prioritize the development of adequate digital infrastructure. Infrastructure such as fast internet networks (fiber optic), satellite technology, and the availability of a uniform signal are crucial to ensuring fast and stable access to information. This is the main foundation for various digital innovations to run smoothly in urban areas. With robust digital infrastructure, the integration of data and digital systems between government, business, and community sectors becomes smoother, thus supporting the efficiency and effectiveness of services and digital economic activities(Sinulingga, 2025).

In addition to infrastructure, urban planning innovations that support the digital economy must also include participatory aspects in development planning. Participatory digital transformation in regional development planning enables the involvement of the wider community, including local businesses, in developing digital economy programs and policies. This approach increases transparency, accountability, and the relevance of policies to local needs and potential, thus encouraging inclusive and sustainable digital economic growth.

The success of urban planning in fostering the digital economy is also measured by its ability to enhance urban innovation. Studies using panel data from various cities show that the digital economy significantly strengthens cities' innovation capabilities in the short and long term. This progress depends on a supportive external environment and policies that optimize the impact of digital technology across various urban sectors. Therefore, urban planning must consider the dynamics and needs of innovation as crucial factors in driving digital economic growth(Zhao et al., 2024).

Urban planning innovation that integrates digital economic development also contributes to sustainable and environmentally friendly urban development. The digitalization of the economy and the use of technologies such as blockchain contribute to more transparent and efficient capital flows, while improving resource allocation between cities and regions. This model enables the utilization of green energy and the reduction of overdevelopment, thus supporting low-

carbon development goals that are increasingly relevant in the modern era. Thus, urban planning innovation not only serves as a driver of the digital economy but also supports environmental sustainability. The implementation of innovative urban planning for the digital economy can also be seen in concrete programs such as the Smart City program in Bandung, which focuses on developing digital MSMEs. This program utilizes business information systems and communication technology to help businesses transform to digital business models. The success of programs like this demonstrates that collaboration between city management and digital technology is vital to creating an inclusive and productive digital ecosystem for the local economy(Sunarso et al., 2025).

Overall, this literature review confirms that innovative urban planning that integrates digital technology, adequate infrastructure, public participation, and innovative policies is the primary foundation for driving the digital economy. A holistic smart city approach creates an adaptive and dynamic urban ecosystem that adapts to technological developments while simultaneously providing added economic and social value to urban communities. The sustainability of digital urban planning innovation needs to be continuously encouraged to optimally contribute to future digital economic growth.

METHODOLOGY

Qualitative research using a literature review approach is an effective method for examining and understanding the phenomenon of innovation in urban planning to promote the digital economy. Through this approach, researchers collect, read, and in-depth analyze relevant literature sources, including journal articles, research reports, and other academic documents covering the topics of urban planning, technological innovation, and the digital economy. The goal is to provide a conceptual understanding and identify patterns in existing findings related to how urban planning innovation can strengthen digital-based economic transformation in cities.

The literature review process begins with a literature search using related keywords, such as "urban planning innovation," "smart city," "digital economy," and "digital city planning," in trusted scientific databases. Once the literature is collected, articles are selected and selected that meet quality and relevance criteria, such as articles focusing on digital technology-based urban planning and its contribution to the economy. Analysis is conducted by critically reading the articles' content, identifying important variables, key concepts, planning innovation models, and digital economy development strategies advocated in previous studies. The qualitative approach allows for in-depth exploration of the context and phenomena through descriptive and interpretive means.

The results of this literature review analysis were then synthesized to provide a comprehensive overview of innovation trends in urban planning that support digital economic growth. Researchers also identified research gaps and potential areas for further study. This method facilitates a holistic understanding without the limitations of primary data and provides a strong scientific basis for developing innovations in urban planning and the digital economy.

References from relevant previous research serve as the primary reference for ensuring the credibility and evidence-based nature of the literature review

analysis. Examples of research using qualitative literature review methods on similar topics include a study on the use of business information systems in city management, which demonstrates the need to strengthen technological infrastructure and digital literacy to support urban economic transformation. Furthermore, research on digital economic management in smart cities also uses a systematic literature review approach and qualitative methods to formulate a digital economy strategy development model. Another study related to digital system innovation in Surabaya's urban governance uses descriptive analysis and literature review as the primary methods for understanding the contribution of digital innovation to urban growth(Qatrunnada et al., 2022).

RESEARCH RESULT AND DISCUSSION

RESEARCH RESULT

1. Development of Digital Infrastructure and Smart City Technology

The development of digital infrastructure and smart city technology is a key pillar in the urban planning revolution oriented towards the digital economy. With increasingly rapid urbanization, particularly in Indonesia, which has now entered an era where 56% of the population lives in urban areas, digital transformation has become a strategic necessity to improve the quality of life while driving inclusive and sustainable economic growth. The development of adequate digital infrastructure and the integration of smart technology across various city sectors can open up significant opportunities for the digital economy to grow rapidly and provide maximum benefits to all levels of society.

This digitalization of urban planning includes the use of information and communication technology to accelerate public services, optimize resource management, and build efficient connectivity between regions. A concrete example of this innovation is the application of Internet of Things (IoT), big data, and artificial intelligence (AI) systems to manage transportation, energy, healthcare, and waste management in a digital and integrated manner. This enables spatial planning that is adaptive and responsive to citizen needs while increasing city competitiveness in the context of the global digital economy. Such transformation requires cross-sector collaboration between the government, the private sector, and communities to produce effective and sustainable solutions(Nasir & Yuslinaini, 2024).

One key innovation in urban planning is the development of a digital and AI-based spatial planning system that can assess the suitability of investment locations and optimize resource allocation. This system accelerates the licensing and decision-making process by basing evaluations on accurate, real-time spatial data. This digitalization has streamlined previously cumbersome bureaucracy, opening up greater space for investment and innovation in the digital economy. Furthermore, it helps the government ensure sustainable and environmentally friendly use of space, in line with the principles of smart city development that support the Sustainable Development Goals (SDGs).

Increasing digital infrastructure capacity also plays a crucial role in the success of the Indonesian government's 100 smart cities initiative to welcome the digital era by 2045. This infrastructure includes high-speed internet networks, data centers, and digital platforms that support the digital economy ecosystem,

including MSMEs, the creative industry, and digital services. The government is striving to expand technology access to remote areas to ensure equitable access to the digital economy, while simultaneously increasing the efficiency and transparency of government services. This significant investment in infrastructure development also lays the foundation for encouraging innovation and economic mobility that is more agile and adaptive to global change(Judijanto & Santosa, 2025).

In the context of smart cities, the integration of digital technology focuses not only on technical aspects but also on digital and data-driven governance to improve the quality of decision-making and public participation. Digital transformation in public services enables faster, more transparent, and more accessible service processes for the public. For example, the use of digital applications for permits, reporting, and urban space management is now increasingly widespread, reducing bureaucratic hurdles and increasing accountability. This governance model is essential for creating a conducive and innovative digital economy climate in urban areas.

Furthermore, the development of digital infrastructure and smart city technology must be designed holistically and sustainably. A development framework that combines technology, regulations, and collaboration between stakeholders provides a strong planning foundation. For example, the ICT infrastructure design in the new Indonesian capital emphasizes green and smart city development with the integration of data management systems, renewable energy, and environmentally friendly mobility solutions. This strategy ensures that urban planning innovation not only supports short-term digital economic development but also maintains long-term environmental and social sustainability.

In conclusion, innovation in urban planning through the development of digital infrastructure and smart city technology is a crucial strategy for driving the digital economy. Through the integration of technologies such as IoT, AI, big data, and the digitization of public services, Indonesian cities can improve efficiency, competitiveness, and the quality of life of their citizens. Planning based on real-time data and multi-sectoral collaboration will strengthen cities' positions as centers of inclusive and sustainable digital economic growth. Therefore, the digital transformation of urban planning is not merely a technological shift, but also a revolutionary planning innovation for the future of the Indonesian economy.

2. Development of Digital-Based Urban Planning Concepts and Strategies

Developing digital-based urban planning concepts and strategies is a crucial step in addressing the challenges of rapid urbanization and the need for efficient and sustainable city management. Digital urban planning, or smart cities, integrates technology and communications (ICT) to strengthen urban governance, improve public services, and support inclusive and adaptive development. This concept encompasses not only the modernization of physical infrastructure but also the comprehensive digital transformation of the city's social, economic, and environmental aspects.

Essentially, digital-based urban planning focuses on the integration of various advanced technologies such as the Internet of Things (IoT), big data, Artificial Intelligence (AI), and digital twins to improve the efficiency of resource management and public services. A digital twin, for example, is a real-time digital representation of a city that enables interactive monitoring, simulation, and prediction of various aspects of urban spatial planning and activities. The use of this model simplifies spatial planning, traffic management, disaster mitigation, and green infrastructure development with a high degree of accuracy.

The strategy for developing digital urban planning concepts must be based on a structured roadmap and synergize with policies and regional governments. In Indonesia, smart city implementation is driven through a master plan encompassing a vision, mission, targets, and the application of technology integrated into city governance. A concrete example is the development of smart cities in the Indonesian archipelago, which aims to create a dynamic and inclusive new capital city supported by multi-utility tunnel (MUT) technology and the digitalization of MSMEs as drivers of the local digital economy.

In its implementation, Indonesian cities such as Bandung and Cirebon have adopted digital-based strategies with an emphasis on ICT infrastructure development, the establishment of smart city management bodies, and the development of implementation roadmaps. The main pillars emphasized include smart governance for transparent and participatory governance, a smart economy to encourage a technology-based economy, and smart living, which ensures the quality of life for citizens through accessible and efficient services(Wahyudi et al., 2022).

Utilizing data as a primary planning resource is an essential strategy in smart cities. Integrated data collection systems from various sources and city sensors support evidence-based decision-making (evidence-based policies), from environmental monitoring and transportation management to healthcare and public safety services. This makes city planning more responsive to the dynamic needs of the community and allows for the prediction of potential future issues.

The success of digital-based city planning also depends heavily on the readiness of human resources (HR) and public awareness of these digital changes. Therefore, developing digital competencies, promoting awareness, and engaging the community in the digital planning process are key strategies for effectively adopting technology and maximizing benefits for all elements of the city(Salmah et al., 2022).

3. Increasing the Capacity of Human Resources and Digital Economy Actors

Improving the capacity of human resources (HR) and digital economy players is a key factor in driving economic growth and competitiveness in the current era of digital transformation. With the rapid development of information and communication technology, the main challenge facing Indonesia is ensuring that existing human resources are able to adapt, master, and optimally utilize digital technology. The Indonesian government has prioritized HR capacity development as a strategic priority in supporting the development of an inclusive and sustainable digital economy ecosystem. With adequate HR capacity, digital economy players can increase business effectiveness, innovation, and

productivity, thereby enabling them to compete in an increasingly competitive global market.

An effective digital HR capacity development strategy includes providing technology-based training and education tailored to the needs of the industrial sector and the digital labor market. Training in technology, digital marketing, and managerial skills development are key focuses to enable MSMEs and young digital entrepreneurs to broaden their horizons and acquire relevant skills. Furthermore, intensive, ongoing mentoring by instructors and mentors is key to the success of HR development programs. Cross-sector collaboration between the government, universities, industry players, and the digital community is necessary to create an integrated education and training ecosystem that can meet dynamic market needs(Aditya, 2025).

The government is specifically encouraging the transformation of the education and training system to prepare work-ready digital talent through digital platforms and professional certification. Programs such as the Pre-Employment Card (Kartu Prakerja) have become one of the government's innovative steps in expanding access to digital training to the wider community, especially informal groups and micro-entrepreneurs. Furthermore, equitable digital infrastructure development is a key foundation for ensuring widespread access to digital training and education without geographical barriers. The development of digital centers of excellence in universities and professional training institutions is also a long-term strategy to support human resource capacity building.

The digital human resource development approach focuses not only on technical aspects but also on changing organizational culture and innovation management that supports sustainable technology adoption. Management change programs and the socialization of the benefits of digital transformation are necessary to ensure that digital economy players recognize the importance of innovation and the sustainability of business digitalization. Universities and industry are expected to synergize in designing curricula that are responsive to current technological needs and market developments. Nationally and internationally recognized certifications also make it easier for digital actors to gain competency recognition, strengthening their position in the job market and in business.

Improving the digital human resource capacity of digital economy actors, especially MSMEs, has a significant impact on competitiveness and productivity. Training in digital marketing, the use of social media, marketplaces, and online promotional techniques helps businesses expand their market network and increase sales. Improved digital literacy also opens up opportunities for businesses to innovate products and services that align with digital consumer preferences. With appropriate capacity development, MSMEs can transform into more adaptive and sustainable businesses, thus supporting inclusive national economic growth(Indrastuti et al., 2025).

Finally, the biggest challenge in improving digital human resource capacity is the digital access gap, especially in remote areas, and the limited time for businesses to participate in training. Therefore, flexible programs such as online

learning (e-learning), microlearning, and mobile learning that can be accessed anytime and anywhere are needed. The government and private sector are also expected to increase investment in digital infrastructure and provide interactive and user-friendly educational platforms. By strengthening human resource capacity and facilitating access to technology, Indonesia can accelerate an inclusive and competitive digital transformation in the era of globalization.

4. The Impact of Urban Planning Innovation on the Digital Economy and Public Services

Urban planning innovation is a strategic step in managing and developing cities that focuses not only on physical and territorial aspects but also integrates digital technology to support economic growth and improve the quality of public services. This transformation is often embodied in the concept of a smart city, where the use of digital technology is a key foundation of modern city governance. The impact of urban planning innovation on the digital economy is significant because it can create an ecosystem that supports the emergence of technology startups, creative industries, and other digital features that boost productivity and expand business opportunities. Through the development of digital infrastructure, such as fast internet networks and equitable connectivity, cities can attract investment and increase competitiveness nationally and globally, thereby driving inclusive and sustainable economic growth.

Furthermore, digital innovation in urban planning streamlines various public service processes that have been considered slow and bureaucratic. The use of smart technologies such as integrated information systems, artificial intelligence (AI), and integrated data management systems enables city governments to provide faster, more transparent, and more responsive services. An example is the online-based permitting system that reduces processing time from several days to just a few hours. This digital transformation also increases accountability because all processes are electronically documented and publicly accessible, thus reducing corruption and abuse of authority. The result is a significant increase in the public satisfaction index and a decrease in public complaints about services(Yanto et al., 2025).

The direct impact of urban planning innovation on the digital economy is also evident in the increased productivity of small, medium, and micro enterprises (MSMEs), which are now able to easily access digital platforms for marketing and distributing their products. Smart cities facilitate expanded market access through increasingly practical and secure e-commerce and digital payment services. This opens up new business opportunities and expands economies of scale, especially for local businesses previously limited by geographic constraints and traditional infrastructure. Furthermore, the digital economy accelerates job creation in the technology and innovation sectors and strengthens the startup ecosystem, which is spearheading the growth of the knowledge-based economy in cities.

Equally important is the role of urban planning innovation in improving the quality of public services such as education, healthcare, and security. With the adoption of digital technology, distance learning services can be run effectively, telemedicine health consultations are becoming more accessible, and

sensor- and camera-based surveillance systems can enhance public safety. This innovation not only provides efficient services but also inclusive services because access can be distributed equitably, thereby reducing social disparities in urban areas. The government can also respond more quickly and precisely to the dynamics of community needs through real-time data analysis obtained from digital urban planning systems.

Beyond its positive impacts, digital urban planning innovation also presents challenges that must be anticipated, such as the need to increase human resource capacity to manage complex digital systems and maintain data security and citizen privacy. However, with a well-thought-out strategy and collaboration between stakeholders, innovative urban planning can become a driving force for national digital transformation, bringing broad impacts to the economy and the quality of life of the community. Overall, the implementation of innovative urban planning not only accelerates the modernization of public services but also strengthens the foundation of a digital economy that is adaptive to technological developments and the needs of modern society(Salauddin & Laurens, 2024).

DISCUSSION

Innovation in digital technology-based urban planning is key to driving digital economic growth in Indonesian cities. Urban planning that integrates technologies such as the Internet of Things (IoT), artificial intelligence (AI), and big data not only accelerates public services and urban resource management but also creates a productive and inclusive digital economy ecosystem. This is crucial given the accelerating urbanization and economic shift toward digital transformation, which require adaptive and responsive infrastructure and governance systems.

First, the development of digital infrastructure and smart city technology is a key foundation for the digital urban planning revolution. With fast and equitable internet connectivity and real-time data-driven government systems, cities can improve the efficiency of public services, expedite licensing processes, and foster a competitive and transparent digital economy. This has a positive impact on the empowerment of digital MSMEs, the establishment of technology startups, and the expansion of digital markets, supporting inclusive and sustainable economic growth.

Second, digital-based urban planning concepts and strategies that emphasize the integration of advanced technology facilitate the monitoring, simulation, and prediction of various urban aspects, such as infrastructure development, traffic management, and disaster mitigation. This approach enables more targeted and adaptive policies to the city's socio-economic dynamics. This strategy also requires participatory community involvement in the planning process, so that the resulting policies are relevant to local needs and potential.

Third, developing the capacity of human resources (HR) and digital economy actors is both a challenge and key to the success of this planning innovation. Improving digital skills through training, education, and equitable access to technology is crucial for MSMEs and the workforce to adapt and compete in the ever-evolving digital economy ecosystem. Government programs

such as the Pre-Employment Card (Kartu Prakerja) are examples of innovative steps in expanding access to digital-based training for various segments of society.

Fourth, the impact of urban planning innovation on the digital economy and public services is significant. Digital urbanization is triggering new business opportunities, accelerating job creation in the technology sector, and increasing public satisfaction through faster and more transparent public services. However, challenges related to data security, privacy, and digital system management readiness require ongoing attention to ensure this innovation can be implemented optimally and sustainably.

Overall, innovation in digital urban planning is not simply a technological transformation, but a revolution in urban governance that requires multi-sectoral collaboration between the government, the private sector, and the community. The success of this innovation is expected to become a key foundation for developing adaptive, inclusive, and sustainable Indonesian cities in the era of the global digital economy.

CONCLUSION AND RECOMENDATION

Innovation in digital technology-based urban planning is a crucial strategy for driving digital economic growth in Indonesian cities. Transforming urban planning by integrating technologies such as the Internet of Things (IoT), artificial intelligence (AI), and big data not only accelerates public services and urban resource management but also creates a productive and inclusive digital economy ecosystem. The development of adequate digital infrastructure and smart city technology is a key foundation for the digital urban planning revolution. With fast and widespread internet connectivity and a government system based on real-time data, cities can improve the efficiency of public services, expedite licensing processes, and foster a transparent and competitive digital business climate.

Furthermore, digital-based urban planning concepts and strategies enable more accurate monitoring, simulation, and prediction of urban aspects, resulting in more adaptive policies to socio-economic dynamics. Improving the capacity of human resources and digital economy actors is also a key factor in the success of this innovation. Through training, education, and equitable access to technology, MSMEs and the workforce can adapt and compete in the ever-evolving digital economy ecosystem. The impact of urban planning innovation on the digital economy and public services is significant, evident in the increase in new business opportunities, accelerated job creation in the technology sector, and increased public satisfaction through faster and more transparent services.

However, challenges such as data security, privacy, and readiness for digital system management must be continuously anticipated so that these innovations can be implemented optimally and sustainably. Overall, innovation in digital urban planning is not simply a technological transformation, but rather a revolution in urban governance that prioritizes multi-sector collaboration between the government, the private sector, and the community. The success of this innovation is expected to be the main foundation for the development of

adaptive, inclusive, and sustainable Indonesian cities in the era of the global digital economy.

The government needs to continue developing fast, stable, and equitable digital infrastructure, including high-speed internet networks and digital data centers. This infrastructure must be designed holistically with the integration of green and environmentally friendly technologies to support sustainable development goals.

Technology-based training and education must be expanded and adapted to the needs of the industry and the digital labor market. Competency improvement programs through digital platforms and professional certification need to be supported to increase the competitiveness of digital economy actors, especially MSMEs.

Regulations are needed to ensure data security, privacy, and ease of doing business in the digital realm. Public participation in digital planning and policymaking processes must be increased to ensure policies are more relevant and widely accepted.

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