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Reframing Smart Cities through Inclusive Innovation: The Case of Busan's Eco-Delta City

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Abstract Scientific and Technological Innovation (STI) is a major driver of urban and regional development, yet policy has traditionally been dominated by technical experts, limiting public influence despite the societal and ethical implications of technological choices. This study examines the intersection of inclusive STI and urban governance, focusing on citizen participation in shaping technological innovation and smart city development, with particular reference to Busan. A case study of Eco-Delta City highlights governance innovations—including redefined Master Planner roles, a Special Purpose Company, and joint central-local oversight—that enable effective public engagement. Findings underscore the importance of data sovereignty, collaborative governance, and structured citizen participation in fostering socially robust, democratically legitimate, and technologically responsive urban development.

Keywords STI, Inclusive Innovation, Governance, Smart City

I. Introduction

Scientific and Technological Innovation (hereinafter, STI) has long been recognised as a key driver of urban and regional development, with theoretical perspectives ranging from Schumpeterian theory (Schumpeter, 1912; 1942) and the linear model of innovation (Godin & Benoit, 2006) to the diffusion of innovation (Rogers, 1983). Traditionally, STI policy formulation has been dominated by technical experts—academics, scientists, and specialist civil servants—due to the perceived complexity of the subject matter. However, recent debates increasingly emphasise public engagement and the democratisation of decision-making, reflecting the growing recognition that scientific and technological choices—spanning genetic modification, artificial intelligence, and climate intervention—carry profound societal and ethical

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implications (Valerio et al., 2024; Storey et al., 2025). Despite this, a persistent gap remains between rhetorical commitments to public participation and its actual impact on policy outcomes, with engagement often reduced to formalistic exercises rather than genuine instruments of change.

This tension between expertise and inclusivity is also evident in the field of urban governance. Urban governance encompasses the mechanisms, processes, and institutions through which multiple stakeholders influence urban development, make collective decisions, and implement policies. Scholarship has shifted from a focus on government-led planning towards multi-level, collaborative, and networked governance models, reflecting the complexities of cities under globalisation, decentralisation, and other urban challenges (Healey, 1997; Pierre, 2005). Participatory governance, in particular, is widely regarded as a means to democratise planning processes and empower marginalised communities (Arnstein, 1969; Fung, 2006).

Against this backdrop, this study addresses the intersection of inclusive STI and urban governance, with a focus on understanding how citizen participation shapes technological innovation and urban development. In particular, it seeks to explore the following research questions:

- How can inclusive innovation be effectively integrated within governance frameworks?
- How can inclusive innovation be conceptualised and operationalised in urban contexts?
- To what extent has inclusive STI influenced the implementation and delivery of smart city initiatives, particularly in Busan?

By examining these questions, this study aims to contribute to both theoretical discussions on inclusive innovation and practical debates on participatory urban governance, providing insights into how STI can be leveraged to achieve socially robust and democratically legitimate urban development. This research adopts a case study approach to interpret and apply the aforementioned theories. The subsequent sections of the paper are structured as follows: (1) a review of the theoretical background; (2) the research framework; (3) the case study; and (4) the conclusion.

II. Theoretical Backgrounds

1. Scientific and Technological Innovation

Historically, the academic literature on Scientific and Technological Innovation (hereinafter, STI) primarily viewed innovation as a key driver of economic growth and productivity (OECD, 2025), often focusing on high-tech industries in developed economies—a dynamic frequently termed Schumpeterian growth (Schumpeter, 1912; 1942).

A significant shift has occurred over the last two decades, challenging this traditional pro-innovation bias. A growing body of scholarship argues that conventional STI frameworks frequently exacerbate inequality, leading to exclusive growth. In this model, the benefits of technological change are disproportionately captured by elites, while the associated costs (e.g., job automation, environmental degradation) are often borne by marginalized populations (Asamoah Adu, Figari & Vezzulli, 2021).

This critique gave rise to the concept of Inclusive Innovation. This is broadly defined as innovation that seeks to provide equitable opportunities for all citizens, particularly the Base of the Pyramid (low-income segments) and disenfranchised groups, to interact with and benefit from the innovation economy (Helka et al., 2024).

A seminal framework in this domain is the Ladder of Inclusive Innovation. This model categorizes inclusivity into hierarchical levels, progressing from passive engagement to active empowerment (Heeks et al., 2014), as shown in Figure 1. The literature indicates that, while numerous initiatives are marketed as inclusive, the majority remain situated at the lower levels of this ladder, primarily reflecting consumption-based inclusion. Crucially, these initiatives often fail to achieve structural empowerment—the capacity to shape, control, or derive systemic benefits from the innovation—which is characteristic of the higher rungs.

Specifically, scholars such as Seyfang and Smith (2007) and Kumar and Bhaduri (2014) define grassroots innovation as community-led initiatives aimed at advancing sustainable development, exemplified by efforts such as local energy cooperatives. They contend that these initiatives are often politically motivated, seeking33 to establish alternative, localized systems of production and consumption. This article takes this political and systemic perspective on grassroots innovation as its point of departure and situates it within the broader body of urban governance literature.

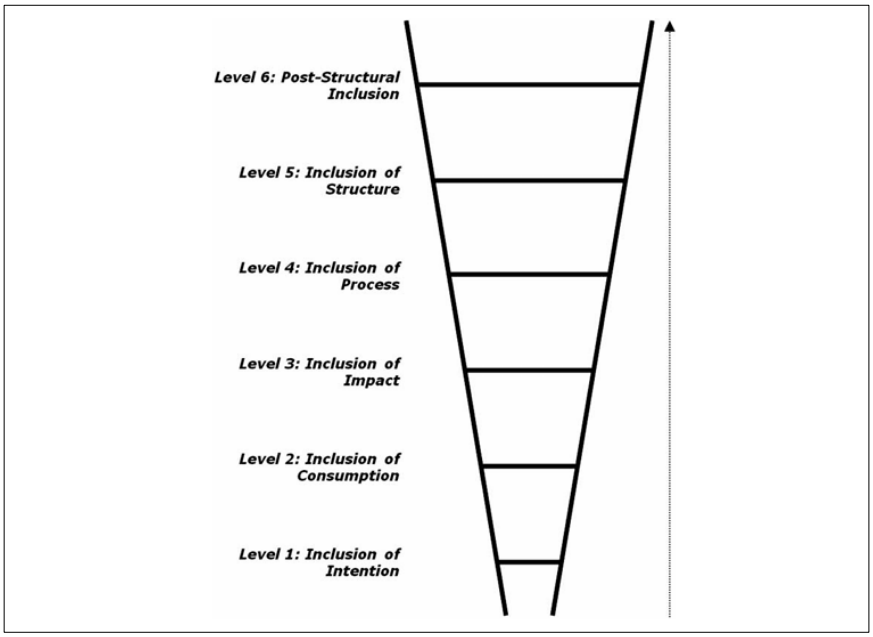

Figure 1. the Ladder of Inclusive Innovation

Source: Heeks *et al.* (2014).

2. From Government to Governance

The academic discourse on urban planning has undergone a fundamental conceptual shift, transitioning from a focus on government (state-centric authority) to governance (multi-stakeholder networks) (Mathur, 2008). While this transition was initially anticipated to promote greater democratization, a substantial body of literature now questions the extent to which this network-based governance genuinely empowers citizens. Many scholars express concern that the term governance may simply obscure emerging forms of elite control rather than dismantle deeply entrenched power asymmetries (Koeswayo, Handoyo, and Abul Hasyir, 2024).

In particular, contemporary scholarship analyzes public participation not merely as a procedural step but as a site of political struggle. This struggle is frequently framed as a tension between neoliberal efficiency—which views the citizen primarily as a customer—and radical democracy—which views the citizen as a political agent (Flyvbjerg, 2013; Moini, 2017).

2.1 The Ladder of Participation as a Metric

Discussions of public participation in governance literature typically begin with the foundational Ladder of Citizen Participation (Arnstein, 1969; Figure 2). It categorizes participation into eight rungs, grouped into three tiers: (1) Non-Participation: Manipulation, Therapy; (2) Tokenism: Informing, Consultation, Placation; and (3) Citizen Power: Partnership, Delegated Power, Citizen Control.

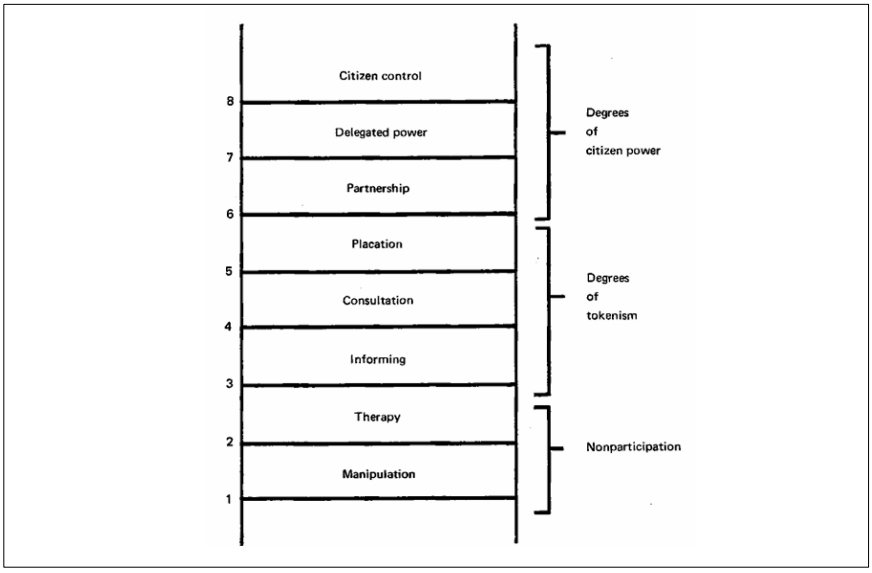

Figure 2. Eight Rungs on a Ladder of Citizen Participation
Source: Arnstein (1969).

Although modern scholars critique the ladder for being excessively linear and failing to account for informal political processes (Varwell, 2022: Kenny et al., 2014), it remains the primary metric for evaluating whether public engagement is substantive or merely performative.

2.2 Collaborative Planning and Digital Critiques

During the 1990s and 2000s, the concept of collaborative planning gained prominence (Healey, 1997). This framework assumes that public participation in planning processes is valuable not only for shaping policy outcomes but also for fostering social capital, trust, and shared understanding among diverse stakeholders. Despite persistent critiques that collaborative planning often overlooks entrenched power asymmetries (Innes and Booher, 2004), the approach continues to attract significant scholarly support in contemporary planning debates.

To foster active public engagement, some scholars advocate for the adoption of advanced technologies. For instance, the digital turn in urban governance has introduced tools such as e-participation platforms, enabling online forms of public engagement (Legard and Hovik, 2022). These technologies are intended to integrate citizens into decision-making processes by facilitating real-time feedback loops.

Other scholars, however, contend that smart city governance frequently regresses to the lower rungs of Arnstein's ladder, ultimately positioning citizens as data sources rather than political subjects (Cardullo & Kitchin, 2019). Critical perspectives on public participation also argue that it has increasingly functioned as a governmental technology designed to manufacture consent for policy decisions already predetermined by political elites—a condition often described as the post-political (Swyngedouw, Moulaert, and Rodriguez, 2002). Within this critique, Mouffe (2013) contends that meaningful public participation must entail the creation of spaces in which conflict and agonism can be expressed and negotiated rather than suppressed for the sake of consensus.

3. Convergence: STI embedded in governance

The critical perspective on participation continues in research concerning the convergence of STI and urban governance. Early smart city literature, particularly concerning public participation, often framed urban governance as a control room problem dominated by large corporate visions (e.g., IBM and Cisco)—focused primarily on optimizing traffic, energy, and waste via sensor networks (Cardullo and Kitchin, 2019). Kitchin et al. (2019) critique this approach as algorithmic governance, where complex social and political problems are reductively treated as technical data points. In this context, innovation often exacerbates social gaps, benefiting those with easy access to and literacy in new technologies while marginalizing others.

Thus, attention has increasingly shifted towards achieving genuinely inclusive innovation—a conceptual shift from a smart city to a smart citizen approach (Jakonen, 2023; Lepore, Testi and Pasher, 2023). This reframes the smart city not as a hardware-intensive infrastructure project but as a platform for Digital Rights and Data Sovereignty. Scholars propose governance structures like data trusts or data commons, where communities collectively own the data generated within their urban environment, rather than allowing ownership to reside with private technology vendors. This framework posits that true inclusive innovation requires Co-Creation (citizens defining the problem) rather than merely Co-Design (citizens testing predetermined solutions) (Calzada, 2021; Scassa, 2020).

While a substantial literature exists on the necessity of public participation within STI and urban governance frameworks, there remains a critical lack of empirical work on the spatial mechanics of their interaction. Specifically, there is limited investigation into the extent to which urban planners translate the abstract principles of inclusive innovation into concrete and measurable outcomes related to public space in the built environment. This article begins with this research question and explores it through a smart city case study in Busan, South Korea.

III. Research Framework

1. Methodology

This research adopts a qualitative case study methodology (Yin, 2018). This approach is well-suited to the investigation of a contemporary, semi-independent planning phenomenon—specifically, the implementation of the national pilot smart city—embedded within the rigid institutional framework of Korean urban development. Within this context, the boundaries between the planning intervention and the broader socio-spatial environment are often blurred, necessitating an in-depth, contextually informed methodological approach.

To ensure methodological rigor, the study employs data triangulation by integrating multiple sources of evidence, including newspaper articles, policy documents, semi-structured interviews, and spatial observations. This convergence of diverse data sources enhances the validity and robustness of the findings. The research aims for analytic generalization, seeking to replicate and extend existing theoretical insights on STI and urban governance literatures, rather than to claim statistical representativeness across all urban contexts.

Furthermore, the study incorporates a narrative literature review, an approach particularly appropriate given the interdisciplinary and theoretically grounded nature of urban planning. This method allows for the integration of varied forms of knowledge—ranging from planning documents to theoretical treatises and empirical policy evaluations—that cannot be fully captured through a rigid systematic review protocol.

The review follows a thematic synthesis structure. Relevant literature was identified through academic publications as well as grey literature, including government reports. These materials were critically analyzed to trace the evolution of public participation in relation to emerging smart city technologies, to identify competing theoretical interpretations, and to reveal persistent gaps and unresolved tensions within contemporary urban planning discourse.

2. Introduction of Case Study

Busan city government started the smart city programme under the name of U-City (ubiquitous city) in 2005 to attract next-generation technology into the city's major infrastructure, encompassing port transportation, tourism and convention sectors. In the second phase, which began in 2012, the Metropolitan City government planned to develop and implement 31 ubiquitous urban services. However, due to both the national and local governments' decision, the four-year project was provisionally cancelled.

In 2017, a new smart city project managed by the Korea Water Resources Corporation (a governmental agency), named the Eco-delta City project, was implemented (Figure 3; Table 1). Based on a European virtual city, the redevelopment project aims to create an international water-friendly culture city, developing a future-oriented industrial and logistics network in the western area of Busan. The project will be a mixed-use development including residential, commercial, international business, and high-tech industrial areas. As of 2019, the construction of the urban infrastructure was partly completed.

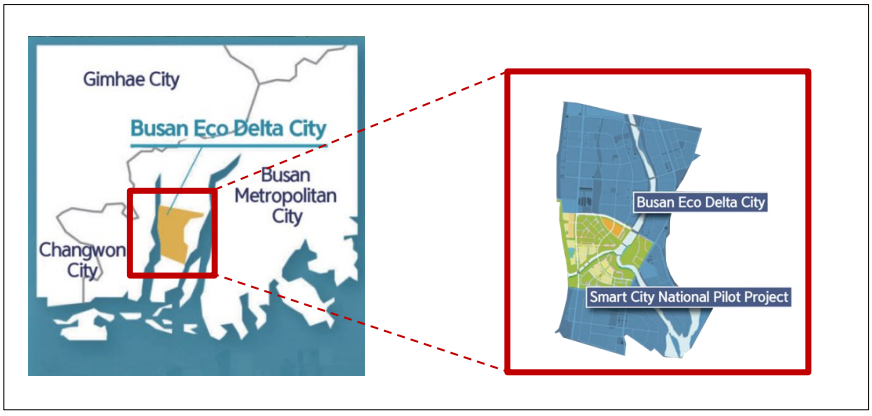

Figure 3. Location of Eco-delta City

Source: The Author, based on K-water (2018) data.

Table 1. Summary of Eco-delta City

· Eco-delta City		· Eco-delta City: National Pilot Project	
· Location	· Gangseo-gu, Busan, South Korea		
· Area	· 11.8 ㎢	· Area	· 2.8 ㎢
· Period	· 2012 ~ 2028 (expected)		
· Expected Population	· 76,000 (30,000 households)	· Population (aim)	· 8,500 (3,380 households)
· Land use	· Housing, Commercial, Research and Development, Logistics	· Facilities	· Multi-functioning area including major city features such as housing, commercial and Research and Development, ideal for application of cutting-edge technologies
· Developers	· K-water, Busan Metropolitan Corporation		

Source: The Author, based on K-water (2018) data.

IV. Inclusive innovation story within the development of smart city, Busan

1. Innovative technology in Eco-delta City

1.1 Smart City 1st Avenue

Under the auspices of the Ministry of Environment (Currently, the Ministry of Climate, Energy and Environment), Republic of Korea, the Korea Water Resources Corporation (hereinafter, K-water) sought to incorporate a wide range of public opinions and innovative ideas in line with the fundamental vision of the Busan Eco-Delta City as a 'citizen-led city'. To this end, in September 2018, it launched an online platform entitled 'Smart City 1st Avenue (Figure 4)', through which it invited public submissions on everyday convenience services and innovative technologies desired for introduction into the Busan Eco-Delta City. Proposals for business initiatives from private enterprises and research ideas from academia were also solicited. The collected ideas and proposals were subsequently reviewed by an evaluation committee comprising members of the public and subject-matter experts, and the outcomes were reflected in the master plan of the Busan Eco-Delta City.

Figure 4. Smart City 1st Avenue advertisement poster (left) and the main webpage of the Smart City 1st Avenue (right)

Source: K-water (2018)

Furthermore, to develop the proposed innovative technologies into services for residents, a consultative meeting was convened to discuss strategies for private-sector participation in smart cities, attended by approximately 300 representatives from around 150 small- and medium-sized venture firms and large corporations engaged in smart-city-related activities (Figure 5; Table 2). This initiative was undertaken with the expectation that, by moving beyond traditional government-led urban development, it would serve as a model case in which residents, prospective inhabitants and businesses could participate in every stage of city building and jointly create the urban environment.

Figure 5. Consultation (session) with private firms
Source: K-water (2018)

Table 2. List of participants at the MOU signing ceremony and consultation

MOU signing ceremony	· K-water with five specialised research institutions and start-ups · **(Smart LID Living Lab)** Pusan National University (Green Infrastructure & Low Impact Development Centre) · **(3D Printing)** Korea Institute of Civil Engineering and Building Technology · **(ICT-based Public Services)** National Information Society Agency · **(Weather and Fine Dust)** Korea Environmental Industry & Technology Institute; Korea Meteorological Industry Technology Institute; Busan Metropolitan City Institute of Health & Environment · (Water Sector) Water-related start-ups
Consultation (session) with private firms	· Relevant associations and firms interested in participating in the smart-city project (approximately 300 participants)

Source: K-water (2018).

1.2 Smart Village (Living Lab Network)

The Ministry of Land, Infrastructure and Transport recruited residents for Eco-Delta City, a national pilot smart city, which is being operated as a testbed. The resident cohort consists of 54 households, totaling approximately 200 individuals. These comprise six management households (responsible for leading the operation of pilot services and mediating conflicts among stakeholders), twelve special households (including youth, newly married couples, older persons, and persons with disabilities—groups considered

vulnerable in housing), and thirty-six general households. Approximately forty innovative technologies to be implemented in the national pilot city—covering areas such as robot-based lifestyle innovation; integrated learning–work–play environments; intelligent urban administration and management; smart water; zero-energy urban systems; smart education and living; smart healthcare; smart mobility; smart safety; and smart parks—are being applied to these households on a priority basis. The area thus functions as a living-lab-type demonstration district in which residents may experience future lifestyles and emerging technologies in advance.

Figure 6. How the health monitoring system works
Source: K-water (2018)

The district is being jointly developed by K-water, Samsung C&T, and Shin Dong-A Construction. Residents live on site and directly experience the pilot services, thereby allowing for feedback and subsequent refinement of the technologies. For example, in the case of the health monitoring system, residents periodically check their health status using personal smart bands or smart mirrors (Figure 6) installed in each home; data collected from these devices are then used to predict potential diseases and support the management of residents' health.

Moreover, the AI Sports Centre offers personalised, data-driven exercise programmes, and the eco-friendly smart farm—optimised for resource efficiency—provides services related to the cultivation of produce such as leafy vegetables and tomatoes. For the five-year duration of the living lab's operation, residents are exempt from both rental deposits and monthly rent; however, they are required to participate in the demonstration and verification of the diverse technologies to be deployed in the smart city. The feedback and information generated through the living lab are utilised by project implementers to support the expansion of the national pilot city, the development of public services by local governments, and the technological advancement of domestic small and medium-sized enterprises.

Figure 7. A security robot is patrolling in Eco-Delta City
Source: Kim (2025).

2. Governance system in Eco-delta City

2.1 At the beginning of the project

At the beginning of the Eco-delta City project, two national smart city master planners completely managed the master plan of this project on behalf of K-water and the central government, as main developers.

The internal master planner is engaged in K-water, whilst the external master planner was hired by the Presidential Committee on the Fourth Industrial Revolution (hereinafter, PCFIR), the South Korean government. The external master planner, in particular, worked actively through the delivery of the smart city project. Since the internal master planner is an employee of K-water (which is a main investor as well as developer), he focused on creating urban infrastructures, including relevant technologies and policies.

On the other hand, the external master planner usually concentrated on the ultimate aim and concept of the project by introducing the Eco-delta City project to citizens, private firms and public organisations. He encouraged citizens to participate in the policy-making process online and persuaded private firms and public organisations to invest in the project. The PCFIR hired the external master

planner because he has a lot of experience and knowledge regarding a smart city. He runs a business incubator firm in London as a British accelerator by supporting Fintech and smart city tech companies. He has many years of experience in training start-ups regarding Fintech within smart city sectors, particularly in Singapore, Hong Kong and London. Based on such a profile, the South Korean government expected that he could suggest the next generation city model, which can limit risks that usually occur during the implementation of urban regeneration projects. He attempted to import some initiatives (programmes and policies) for citizen participation and private firms (start-ups) within smart city industries.

The organogram of the Eco-delta City project (Figure 8) describes the unique position that the master planners held over the smart city project. Seeking to achieve the aims and objectives set by the Special Committee on the Smart City under the PCFIR, the master planners supervise all practices within a smart city. Moreover, they attempt to reach a compromise between ideal suggestions and practical suggestions. Master planners share such ideas through a number of consultations among several branches of national governments (for regulations and restrictions), academia and research institutes (for the cutting-edge technology and theories).

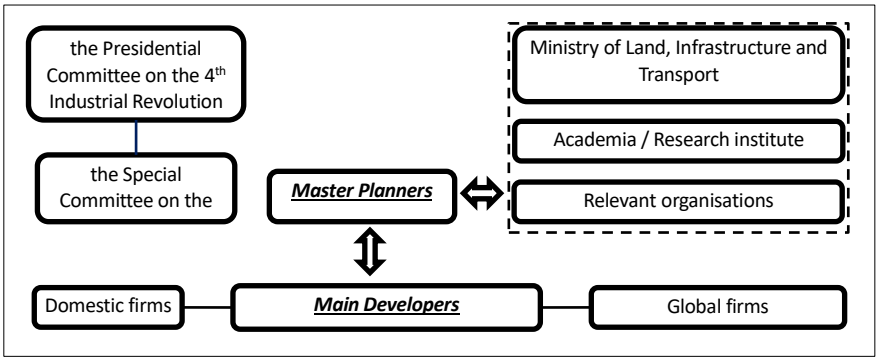

Figure 8. Organogram which describes how Eco-delta City was delivered at the earlier stage

Source: The Author, based on Jeon (2020) data

Furthermore, master planners play a role as facilitators who can support the main developers' delivery of the Eco-delta City project. Main developers concentrate on making contracts with private firms in order to construct the new urban space physically, particularly concerning the establishment of the next-generation industrial cluster based on specific technologies. The developers build a relationship with not only domestic firms but also with

global firms through the master planner's suggestion.

2.2 At the change of the Master Planner

In 2020, however, PCFIR decided to change the role of master planners into a type of consultant (Master Adviser). The role has been considerably reduced over 18 months. The master advisor plays a role as a consultant by suggesting smart city technologies, policies and programmes, and as a brand ambassador by introducing Eco-delta City to citizens and foreigners. The Ministry of Land, Infrastructure and Transport announced that the change of the role of master planner should be needed due to the collision of authority between the ministry and the master planner (Figure 9).

It took a huge amount of time to compromise if they had completely different opinions. There were problems if the main developers had to conduct business urgently. The change of the role of master planner could resolve such issues (Jeon, 2020).

Consequently, the national pilot smart city project will become another government-led regeneration project. The shrinkage of the role of master planners would limit the delivery of the national pilot smart city project. Thereby, initiatives and interventions – global leading smart city policies and technologies – from another context were not well adopted in Korean society.

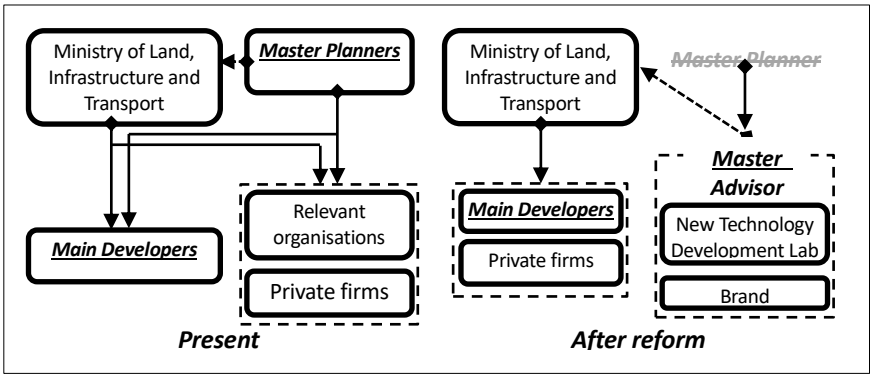

Figure 9. Change of the role of Master Planner for a national pilot smart city project
Source: The Author, based on Jeon (2020) data

2.3 From the establishment of SPC

The Eco Delta City project was designated as a National Pilot Smart City in 2018; however, it subsequently experienced a period of stagnation due to the withdrawal of successive consortiums commissioned to implement the scheme. Specifically, the first-ranked consortium abandoned the project in 2021, and the

second-ranked consortium also failed to sign the agreement in October of the same year. Consequently, a new operator was sought through a second public competition, and a consortium led by LG CNS was selected as the preferred bidder in May 2022. Nonetheless, the establishment of the Special Purpose Company (SPC), which was to serve as the project implementer, was continuously delayed amid ongoing controversies regarding its economic viability. Ultimately, an implementation agreement was reached in June 2024 between the private sector partners, the Ministry of Land, Infrastructure and Transport (MOLIT), Busan Metropolitan City, and the Busan Urban Development Corporation. The SPC was finally incorporated in December 2024 under the name of Smart City Busan Co., Ltd.

Smart City Busan Co., Ltd. is responsible for overseeing the development and operation of the Smart City zone within Eco Delta City. Its establishment signifies the full provision of the legal framework necessary to advance the National Pilot Smart City project, which had been delayed for several years. Since its incorporation, the company has commenced the implementation and demonstration of innovative Smart City services, including the application of digital twin technology and the deployment of robotics.

Smart City Busan Co., Ltd. is characterised as a public-private joint venture or Public-Private Partnership (PPP). The public sector participants include Busan Metropolitan City, Korea Water Resources Corporation (K-water), and the Busan Urban Development Corporation. The private sector is represented by 'The Consortium,' spearheaded by LG CNS, with eleven major shareholders, including Shinhan Bank, Hyundai Engineering & Construction, and SK ecoplant. A distinctive feature of this collaborative business model is that all profits generated by the corporation are fully reinvested into the advancement of existing smart services and the development of new offerings, thus ensuring that the private sector's creative business models are incorporated into the city's operational framework.

The business model of Smart City Busan Co., Ltd. is a PPP where the public sector is responsible for project support and public interest, whilst the private sector is accountable for technology and operations. Public institutions, such as Busan Metropolitan City, K-water, and the Busan Urban Development Corporation, are tasked with securing the public nature and stability of the venture, including providing the project site and establishing urban infrastructure. They are also responsible for the overall provision of administrative and policy support—working closely with central government (such as MOLIT) and local authorities—to ensure the project proceeds without undue complication.

Conversely, the eleven private companies, including LG CNS, Shinhan Bank, and Hyundai Engineering & Construction, contribute their specialised expertise

in implementing cutting-edge technology, delivering services, and managing operations. They are developing a diverse range of smart services spanning key urban domains such as transportation, energy, healthcare, living, and culture, and will directly manage these services for the subsequent five years. Leveraging their specialised knowledge, they are introducing state-of-the-art IT solutions and technologies, including robotics innovation (e.g., patrol, barista, luggage-carrying, and cleaning robots), a digital twin platform, and network security systems. The ultimate objective is to ensure the sustainability of the project by identifying and generating profitable business models through the deployed smart services.

V. Conclusion

In Eco-Delta City, citizen participation has been actively encouraged through diverse programmes such as Smart City 1st Avenue and Living Labs. Although the specific online platform for these initiatives is paused as of 2025, various agendas generated by these programmes have been successfully integrated into the Eco-Delta City master plan (K-water, 2018). The city currently functions as a prominent example of a Living Lab, where inhabitants' daily activities generate substantial data, subsequently employed to enhance urban operations.

The question of how many nations have successfully established Living Labs—where residents employ Information and Communication Technologies (ICT) to experimentally resolve daily life issues—is highly pertinent. While one might intuitively assume such initiatives are widespread, the adoption of the Living Lab model remains uncommon globally. This scarcity is primarily due to the complexities associated with data privacy and reliability, obstacles that the Eco-Delta City aims to overcome.

The meaning of public participation in this Smart City project has been amplified through structural changes, specifically the redefined role of Master Planners and the establishment of a Special Purpose Company (SPC). A critical feature underpinning the Eco-Delta City Living Lab is the joint supervision and governance by both central and local authorities.

Interestingly, the dissolution of the Presidential Committee on the Fourth Industrial Revolution reduced the complexity previously caused by overlapping government arms and public corporations. Furthermore, the reduced scope of the Master Planner's role has streamlined the delivery of the Eco-Delta City. By reverting to a system where government agencies have clear, traditional lines of responsibility, the project has resolved the complications of an evolved governance system, effectively balancing efficient delivery with the collaborative governance model required for citizen

participation.

In terms of operations, data is centralised within the Smart Village Platform Centre Overall Management System, operating under stringent contractual agreements between residents, governmental bodies, and private firms (Kim, 2024). Significantly, this platform serves as a foundation for digital rights and data sovereignty, ensuring that Eco-Delta City residents collectively own the data generated through their domestic and urban environments. Consequently, this proprietary data circulates within the *Smart City Busan Co., Ltd.* consortium to facilitate the development of customised, evolving smart city services.

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