Suwon Research Institute
Anniversary International Conference

2026 Suwon Smart Inclusive Transition Forum

Friday, April 3, 2026 | 14:00

Suwon Convention Center, Event Hall

SRI 수원시정연구원
SUWON RESEARCH INSTITUTE

2026 Suwon Smart Inclusive Transition Forum

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April 3, 2026 | 14:00 Suwon Convention Center, Event Hall

MC : Kang Eun-ha, Research Fellow, Suwon Research Institute

13:30~14:00 Registration

14:00~14:02		**Opening**
14:02~14:12		**Opening Remarks & Welcome Address**
14:12~14:15		**Congratulatory Video Message**
14:15~14:20		**Commemorative Photo Session**
14:20~14:45	Presentation 1	**Smart Inclusive Transitions for an Equitable Urban Future in Suwon** Song Jae-min, Professor, Seoul National University
14:45~15:00	Presentation 2	**AI and bigdata for architecture, urban planning, and community design** Yoshimura Yuji, Professor, The University of Tokyo
15:00~15:15	Presentation 3	**Planning & Development of a Transnational Cooperative Industrial Town : A Case of China-Singapore Suzhou Industrial Park** Chen Qining, Chairman, SCP China

BREAK

15:30~16:20	Panel Discussion	**Smart Inclusive Transition for Cities : Implications for Suwon** Moderator Kim Joon-sik, Professor, Xi'an Jiaotong-Liverpool University Panelists Sophie Sturup, Professor, Xi'an Jiaotong-Liverpool University Chen Bing, Professor, Xi'an Jiaotong-Liverpool University Fernando ORTIZ-MOYA, Professor, Waseda University Park In-kwon, Professor, Seoul National University Choi Seok-hwan, Research Fellow, Suwon Research Institute

※ The discussion order and schedule are subject to change depending on the circumstances.

Opening Remarks

As we mark the 13th anniversary of the Suwon Research Institute, we gather today to open the “2026 Suwon Smart Inclusive Transition Forum”, a meaningful occasion that sets a new milestone for our city. Under the theme “Beyond Change, Toward Coexistence,” this forum reflects our shared aspiration for a more inclusive and sustainable urban future.

Over the past 13 years, the Suwon Research Institute has dedicated itself to documenting the city’s transformation and advancing pathways toward a better quality of life for its citizens. Throughout this journey, we have been guided by a fundamental question: “Is life in Suwon really getting better for people?” This question has remained at the heart of our work and commitment.

The theme of today’s forum, “Smart and Inclusive Transition,” represents our answer to that enduring question. The future city we envision is not one defined solely by advanced technologies. Rather, it is a city where technology serves people—bridging divides rather than deepening them—and where innovation and humanity coexist in harmony.

Our collaboration with UN-Habitat and the participation of distinguished experts from Korea, China, and Japan underscore a shared understanding: the challenges faced by Suwon are not unique, but are common to cities around the world. It is our sincere hope that the insights, case studies, and strategies discussed today will serve as guiding benchmarks not only for Suwon, but also for cities worldwide striving toward sustainable and inclusive development.

Looking ahead, the Suwon Research Institute will continue to listen closely to voices from the field, combining data-driven analysis with a deep commitment to people. Building upon the foundation of the past 13 years, we will take another step forward in realizing a “Smart and Inclusive Suwon,” where every citizen is at the center of progress.

Finally, I would like to express my heartfelt gratitude to all distinguished guests, speakers, and participants, both from Korea and abroad, for taking the time to join us today. I wish you all continued success, good health, and happiness.

Thank you.

Kim Sung Jin

President , Suwon Research Institute

Congratulatory Remarks

Distinguished Mayor Jae Joon Lee, esteemed representatives of Suwon City, colleagues, partners, and participants,

It is a pleasure to be here in Suwon, to be part of the 2026 Suwon Smart Inclusive Transition Forum, on this occasion of the 13th anniversary of the Suwon Research Institute.

Our theme today 'Smart Inclusive Transitions' provides us with an opportunity to consider with Suwon, how to implement the opportunities of smart technology, in a way that truly supports this community and its future.

I am very pleased that Xi'an Jiaotong-Liverpool University (XJTLU) has been able to contribute to this timely topic for Suwon through collaborative research with Suwon Research Institute, Seoul National University and UN-Habitat.

This forum, which brings that research into the public domain, opening up public discussion about this important topic, is a critical and rare opportunity.

It speaks to the core purpose of the Suwon Research Institute which is not only to develop practical alternatives, and solutions, but to do so with the creative inclusion of Suwon citizens. This approach to producing field oriented, creative and inclusive solutions is at the heart of XJTLU Design School's approach both to teaching and research.

In holding this meeting here in Korea, inviting lessons from Japan and China, there is an exciting opportunity to examine this theme of Smart and Inclusive Transitions from an Asian perspective. As arguably the leaders in uptake of smart technology, these three countries are learning lessons at a rapid rate. At the same time there is real value in taking the time to drive these broad level lessons down toward implementable suggestions at the local level.

It is really exciting to be part of that collaborative process, and I look forward to learning from all the participants at this event and further collaboration with Suwon City.

Marc Aurel Schnabel

Dean, School of Design, Xi'an Jiaotong-Liverpool University

Congratulatory Remarks

Launch of Suwon SIT report in Suwon

Distinguished Mayor Jae Joon Lee, esteemed representatives of Suwon City, colleagues, partners, and participants,

Good afternoon.

It is a pleasure to join you virtually for this important occasion. I would like to congratulate the City of Suwon and all partners on the successful completion of the Smart Inclusive Transition, or SIT, report. This achievement reflects the strong collaboration between UN-Habitat, Suwon City, Xi'an Jiaotong-Liverpool University, and Seoul National University, and it highlights the city's commitment to data-driven urban development.

At UN-Habitat, through the Data and Statistics Unit of the Knowledge and Innovation Branch, we continue to support cities worldwide in advancing evidence-based planning, monitoring, and decision-making. Our work is anchored in the Global Urban Monitoring Framework, which transforms global commitments into actionable strategies at the local level. It provides a way to track progress, identify gaps, and guide sustainable urban development.

I would like to emphasize that this work aligns closely with the UN-Habitat Strategic Plan, particularly its emphasis on housing, land, and basic services. The SIT framework strengthens the foundation for monitoring these critical components, enabling cities like Suwon to ensure that policies are informed by reliable, timely, and actionable data, and that local actions are consistent with global priorities.

The Smart Inclusive Transition framework builds on this foundation, adapting the Urban Monitoring Framework to the realities of modern cities, integrating digital transformation, smart city approaches, and inclusive growth. It demonstrates clearly how global frameworks can be meaningfully embedded within local planning systems, turning data into practical tools for policy and action.

Suwon stands out as a leading example. Over the past decade, the city has shown strong commitment to monitoring, reporting, and aligning with sustainable development goals. The SIT report reflects not only technical achievement, but also leadership in applying data to guide

planning, decision-making, and inclusive urban development.

As we approach global platforms such as the World Urban Forum, experiences like Suwon's will play a vital role in informing international discussions on how cities can successfully navigate transitions toward more sustainable, inclusive, and smart futures. By sharing lessons learned, Suwon helps other cities understand how evidence-based approaches can drive meaningful change.

Looking ahead, the potential to scale this approach is strong. More cities can adopt similar frameworks, integrating new forms of data, including big data, geospatial information, and citizen-generated data, into urban monitoring systems to guide policies and actions for the benefit of all urban residents.

In conclusion, I congratulate all partners involved in this important initiative. UN-Habitat looks forward to the outcomes of the dialogue on the sustainable urban development of Suwon, ahead of the report's official launch at the UN-Habitat World Urban Forum (WUF). We also look forward to continuing this collaboration and learning from Suwon's experience as we collectively support cities in achieving sustainable, inclusive, and smart urban futures.

Thank you, and I wish you a successful and engaging forum.

Robert Ndugwa

Chief, Data and Statistics Section,
Knowledge and Innovation Branch, UN-Habitat.

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Smart Inclusive Transition for Cities : Implications for Suwon

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Moderator **Kim Joon-sik** | Professor, Xi'an Jiaotong-Liverpool University

Panelists **Sophie Sturup** | Professor, Xi'an Jiaotong-Liverpool University
Chen Bing | Professor, Xi'an Jiaotong-Liverpool University
Fernando ORTIZ-MOYA | Professor, Waseda University
Park In-kwon | Professor, Seoul National University
Choi Seok-hwan | Research Fellow, Suwon Research Institute

Suwon Research Institute Anniversary International Conference

Presentation 1

Smart Inclusive Transitions for an Equitable Urban Future in Suwon

Song Jae-min, Professor
Seoul National University

Smart Inclusive Transitions for an Equitable Urban Future in Suwon

Seoul National University: Jaemin Song, In Kwon Park, Saerom Lee, Heewan Kim, Hyeran Lee, Jiwon Back
Xi'an Jiaotong-Liverpool University: Juhyun Lee, Joon Sik Kim, Sophie Sturup, Kon Kim

INTRODUCTION

What is Smart Inclusive Transition?

UN-Habitat's People-Centered Smart Cities

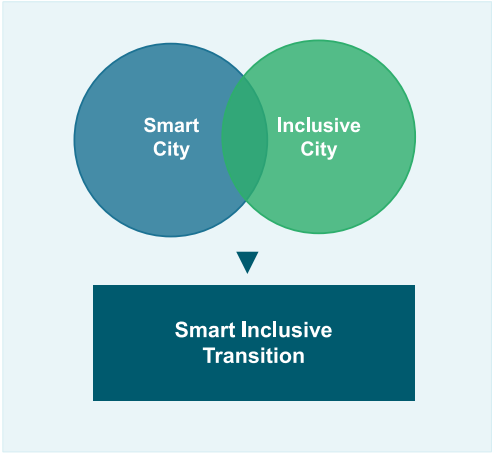
The core of socio-technological innovation lies in "people" — citizens as beneficiaries, producers, and consumers of innovation.

Smart Inclusive Transition (SIT)

An integrated approach combining smart city and inclusive city concepts — leveraging data and digital technologies to expand service access and participation for all, toward a more equitable future.

Suwon: Asia's First SIT Piloting City

Long history of people-centered smart inclusive policies, combining technology, history, and civic engagement. Regular SDG-based monitoring has laid the foundation for SIT assessment.



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INTRODUCTION

SIT Monitoring Framework

Aligned with the Global Urban Monitoring Framework (GUMF) and SDGs

5
Strategic Pillars

Grounded in the essential and core strategies of SIT

20
Focus Areas

Key areas of concentration to achieve pillar goals

53
Indicators

GUMF-based indicators for comprehensive assessment

- **P1** Infrastructure & Essential Services for All
- **P2** Effective Urban Management through Co-Production
- **P3** Social Justice for Vulnerable Residents
- **P4** Digital Innovation for Collaborative Solutions
- **P5** Sustainable Production & Consumption of Resources

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INTRODUCTION

Why Suwon & How We Measured

Why Suwon?

- Dedicated to people-centered sustainable development since 2012
- Localized SDGs with 10 goals, 57 targets, 141 indicators since 2017
- Annual SDG monitoring reports published since 2018
- Vision: “Smart Inclusive City: History, Technology, People” (since 2021)
- Comprehensive data enabling systematic GUMF-based SIT analysis

How We Measured

Normalization: Min–Max on 0–100 scale

Three comparison groups:

- Global — all available cities worldwide
- OECD — cities in 38 OECD member countries
- Benchmark — cities with population ±35% of Suwon (1.23M)

Performance Rating Scale:

Poor	Moderate	Good	Very Good
0–40	40–60	60–75	75–100

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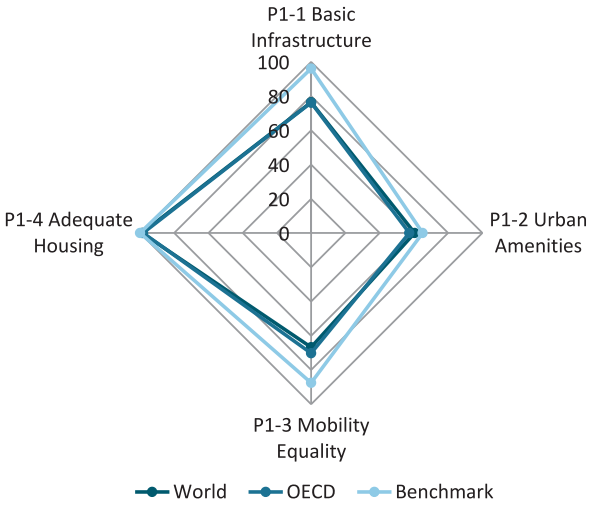
PILLAR RESULTS

P1 Infrastructure and Essential Services for All

75.6
Global



Key Findings

Strength: Adequate housing near 100 across all comparisons. Safe water/sanitation at 100%. 83.6% report easy medical access.

Good: Basic infrastructure (76–96) and mobility access (82.3% public transport coverage) are rated "very good."

Gap: Urban amenities access is moderate (57–65). Public transport trips share is relatively lower 44.9%.

Context: New DRT(Demand Responsive Transit) "TtokBus" service improving last-mile coverage. Vulnerable populations face longer commutes (up to 45 min).

World: 75.6 **OECD: 75.5** **Benchmark: 87.2**

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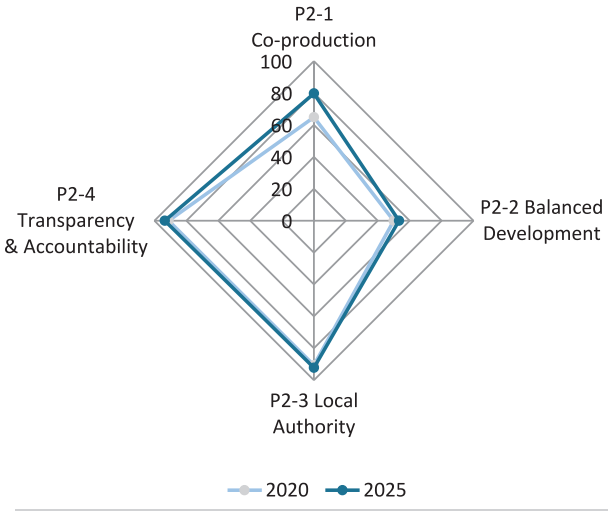
PILLAR RESULTS

P2 Effective Urban Management through Co-production

79.7
2025



Key Findings

Strength: Transparency (93.5) and local authority empowerment (92.2) are very high. Document disclosure rate: 77.7% (national avg: 61.5%).

Improving: Co-production through participation improved from 64.8 (2020) to 81.8 (2025). Governance body participants grew from 437 to 1,555. 72% feel positive about engagement opportunity in policy decision-making.

Gap: Balanced urban/regional development scored only 53.3 (moderate). Local fiscal space scored 30 (poor), reflecting weak local fiscal capacity.

Context: Despite special city designation (2022), actual transfer of fiscal authority remains limited.

2020: 74.1 **2025: 79.7** *Performance against target*

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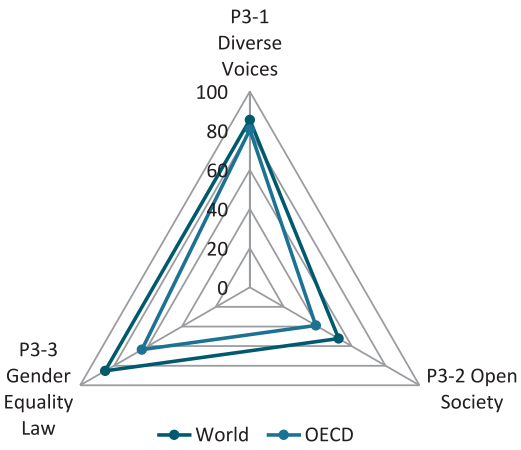
PILLAR RESULTS

P3 Social Justice for Vulnerable Residents

73.8
Global



Key Findings

Strength: Women hold 38% of council seats (above national 30% and OECD 33% averages). Full freedom of civic association.

Gap: Open society for diversity scored lowest: 52.4 global / 38.9 OECD. Gender equality awareness (52.9%) below global average (61%). Interpersonal trust only 26%.

Legal vs. Practice: Strong legal frameworks exist, but cultural practice lags. Acceptance of diverse groups drops sharply at the "family" level (e.g., refugees: 49.1% colleague → 10.8% spouse).

LOWEST PILLAR: Largest gap vs. OECD among all pillars. This is the key area for strategic improvement.

World: 73.8 **OECD: 61.0** *P3-4 Migrant policies: N/A (excluded)*

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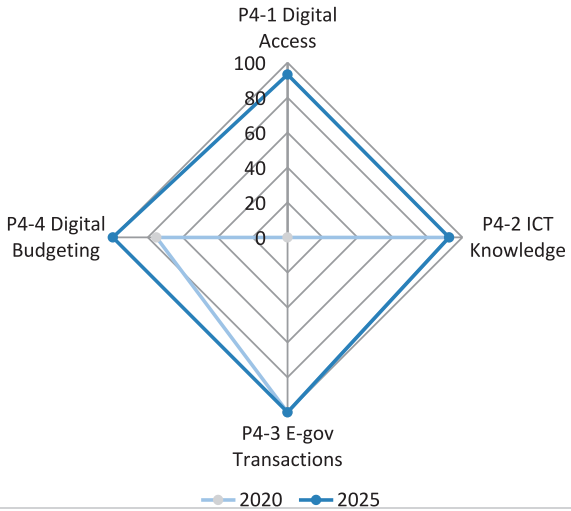
PILLAR RESULTS

P4 Digital Innovation for Collaborative Solutions

96.3
Global



Key Findings

HIGHEST PILLAR: 96.3 — Very Good across all comparisons. E-government and digital participatory budgeting are fully operational.

Strength: 96.5% internet usage, 90.2% broadband. Full digital budgeting via Saebit TokTok app.

Remaining gap: 40% of citizens report communication costs as a burden. Digital literacy gap persists for older adults and migrants.

Context: 2025 AI Innovation Governance launched with three offices: AI Citizen, AI Industry, AI Administration.

2020: 88.9 **2025: 96.3** *Mixed method (target + standardized)*

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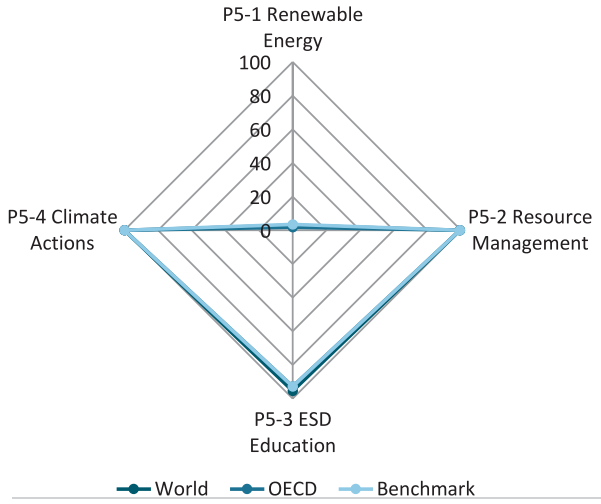
PILLAR RESULTS

P5 Sustainable Production & Consumption of Resources

74.5 Global



Key Findings

Strength: Waste: 100% collection, 85% recycling. Wastewater treatment 99.3%. Education for Sustainable Development 92.8%.

CRITICAL GAP: Renewable energy share: only 3.4% — scored POOR (3.0). This is the LOWEST of all 53 indicators across all pillars.

Context: Limited land, high urbanization constrain renewable deployment. Solar capacity grew 5x (2021–2022), but from a low base.

World: 74.5 **OECD: 73.5** **Benchmark: 67.6**

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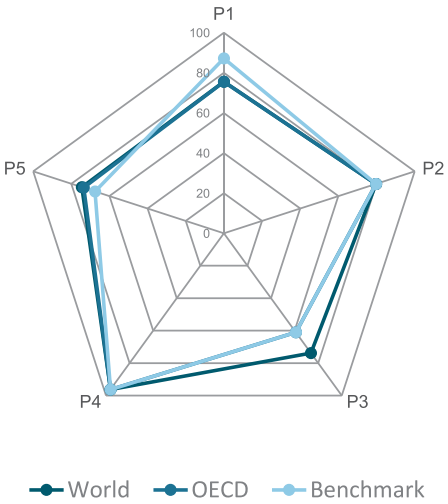
OVERALL PERFORMANCE

Suwon's Comprehensive SIT Performance



Poor 0–40	Moderate 40–60	Good 60–75	Very Good 75–100

Strategic Pillar	World	OECD	Bench.
P1 Infrastructure & Services	75.6	75.5	87.2
P2 Co-production	79.7	79.7	79.7
P3 Social Justice	73.8	61.0	61.0
P4 Digital Innovation	96.3	96.3	96.3
P5 Sustainable Resources	74.5	73.5	67.6
Overall	80.0	77.2	78.3

Overall SIT performance: Good to Very Good — a strong foundation with clear areas for improvement.

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CROSS-PILLAR SYNTHESIS

Digital Innovation Powers Co-production

P4: Digital Innovation

E-government, digital budgeting, data portals

→

P2: Co-production

Citizen participation, governance, transparency, accountability

> **Key Synergy:** Suwon's digital infrastructure is not technology for its own sake — it is the operating system for collaborative governance. Digital platforms enable citizens to manage personal data, access documents, make payments, participate in procurement, and engage in participatory budgeting. Combined with education efforts ensuring accessibility regardless of socioeconomic status or migrant background, this creates a foundation for meaningful co-production.

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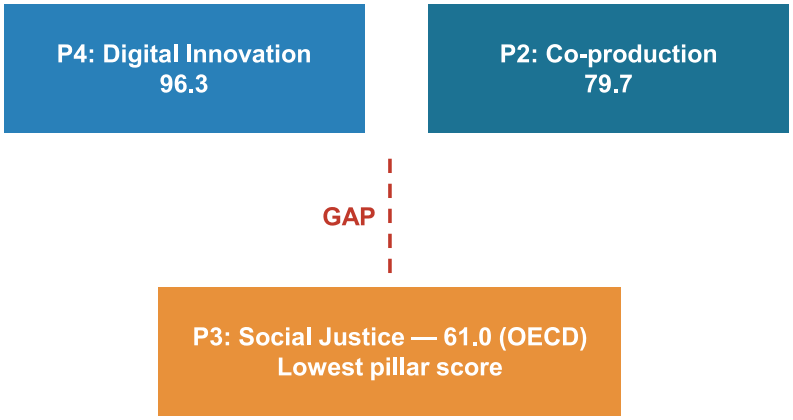
CROSS-PILLAR SYNTHESIS

Systems Alone Don't Guarantee Equity



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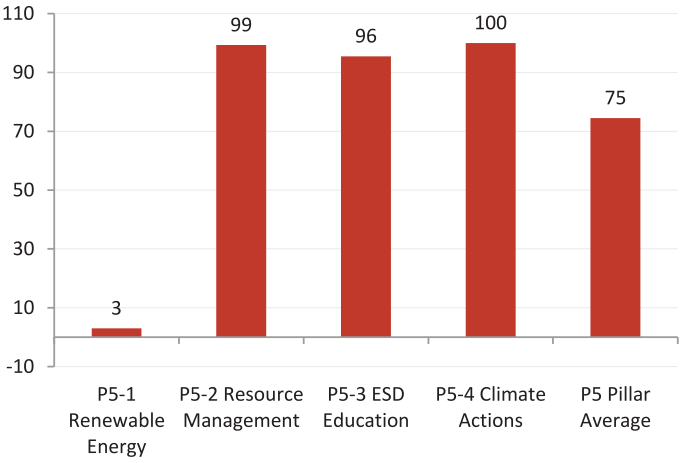
CROSS-PILLAR SYNTHESIS

The Hidden Weakness Behind Aggregated Scores



Renewable energy: 3.4%

Lowest of ALL 53 indicators

Aggregated pillar scores can mask critical vulnerabilities.

Structural constraints:

- Limited flat land
- High urbanization density
- Competing land-use demands

Requires citizen engagement to negotiate trade-offs for context-sensitive energy transitions.

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CROSS-PILLAR SYNTHESIS

Cross-Pillar Alignment: The Path Forward

P4 Digital Innovation | **P2 Co-production**

▼ ▼

Redirect strengths toward…

P3 Social Justice | **P5 Sustainable Resources**

P1 Infrastructure & Essential Services — the foundation for all pillars

Priority: Not expansion of new initiatives, but better alignment across pillars

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PRIORITY POLICY PATHWAYS

Pathway 1 Foster Inclusive Co-production & Social Justice

Linking P2 Co-production and P3 Social Justice

1. **Establish Dedicated Governance Cells for Vulnerable Groups**
   Formally embed youth, migrant, and older adult representation within existing planning and decision-making structures, rather than creating parallel systems.

2. **Institutionalize a Citizen Awareness Strategy**
   Develop a long-term strategy for social trust, gender equality, and multicultural sensitivity — areas where Suwon lags behind global benchmarks.

3. **Build Competence in Community-Making**
   Create practical opportunities (e.g., community gardens, civic projects) that counter individualism, rebuild social trust, and help citizens rediscover their capacity to build community.

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PRIORITY POLICY PATHWAYS

Pathway 2 Implement Fine-Grained SIT for Urban Equity

Addressing spatial disparities across all pillars at the neighborhood level

1. **Introduce a Neighborhood-Level SIT Scorecard**
   Deploy Dong-level diagnostics to identify resource allocation imbalances and service access gaps between downtown, periphery, new towns, and aging centers.

2. **Connect Data Systems and Welfare Systems for Targeted Intervention**
   Integrate Scorecard outputs with AI-powered welfare detection to proactively identify underserved populations — especially low-income, migrants, and older adults (P4 → P3).

3. **Develop Integrated Family Support Packages**
   Combine housing relief (P1), comprehensive care and education (P3), and demographic planning (P5) to support young households and long-term urban stability.

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PRIORITY POLICY PATHWAYS

Pathway 3 Build an Integrated Digital-Human System

Ensuring digital innovation (P4) translates into inclusive outcomes (P2)

1. **Upgrade Digital Participation to Co-Design**
   Evolve Saebit TokTok and digital budgeting from information-sharing tools to collaborative solution-building platforms where citizens actively shape policy.
2. **Mediate Digital-Human Tension with Community Mediators**
   Institutionalize local human intermediaries who bridge the digital divide through face-to-face guidance, co-learning, and trust-building — essential for older adults and migrants.
3. **Expand Targeted Digital Literacy and Access**
   Systematically implement localized digital/AI education and introduce multilingual features in key public platforms to empower marginalized communities (P4 → P3).

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PRIORITY POLICY PATHWAYS

Pathway 4 Advance Just & Sustainable Resource Governance

Expanding P2 to enhance P5 while ensuring a socially equitable Just Transition (P3)

1. **Establish Catchment-Based Regional Collaboration**
   Build multi-level, multi-actor partnerships with 5 neighboring municipalities, businesses, and residents for coordinated water and renewable energy governance.
2. **Lead Integrated Catchment Management Planning**
   Develop a catchment-unit plan integrating water health, land use, flood/drought response, and ecological restoration for simultaneous P5 and balanced regional development.
3. **Implement Renewable Energy Profit Sharing for Just Transition**
   Ensure financial and environmental benefits of renewable energy are equitably distributed, especially to vulnerable and energy-poor communities (P5 → P3).

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PRIORITY POLICY PATHWAYS

Pathway 5

Institutionalize SIT as a Cross-Pillar Governance Framework

The foundational engine: transforming SIT as a governance system

1. **Formalize and operate the SIT System Cycle**
   Annual Broad Scans for service performance diagnostics + Twice-Annual Deep Scans gathering citizen input and field-level learning. This Scan–Learn–Adapt cycle becomes the governance backbone.

2. **Establish a SIT Data Hub and Data Governance System**
   Centralized platform integrating administrative, regional, and citizen-generated data with standardized protocols for collection, access, sharing, and interdepartmental collaboration.

3. **Establish Protocols for Scenario Planning**
   Actively use data to predict trajectories and consider alternatives — countering the tendency for data-driven systems to reproduce the status quo. Make room for the new and unexpected.

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GLOBAL IMPLICATIONS

Contribution to People-Centered Smart Cities

1. **Measurable Framework**
   Provides an SDG-aligned system for assessing people-centered smartness — moving beyond slogans to indicators and cross-pillar synthesis replicable in other cities.

2. **Governance & Service Delivery**
   Documents specific arrangements in housing, mobility, digital participation, and social services that operationalize PCSC for vulnerable groups in a mid-sized city.

3. **Enabling Conditions**
   Clarifies requirements: multi-level governance, data systems, education, institutional continuity — ensuring digital innovation strengthens rather than undermines equity.

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GLOBAL IMPLICATIONS

Practical Insights for SDG Localization

How SIT serves as a practical tool for SDG localization:

- ✓ **Structured framework:** Organizes urban performance into 5 pillars, 20 focus areas, and 53 indicators aligned with global SDG and GUMF standards — making global goals operational at the local level.
- ✓ **Place-based contextualization:** Uses locally available data, citizen surveys, spatial analysis, and administrative statistics to translate SDG targets into actionable local priorities in mobility, housing, inclusion, and environmental management.
- ✓ **Institutional continuity:** Suwon's decade of sustainability policies, citizen engagement, and periodic surveys made SIT analysis feasible. Durable institutional practices are essential for embedding SDG-oriented thinking into planning.
- ✓ **Multi-level alignment:** Enabling conditions — data availability, digital infrastructure, national reporting frameworks — remain critical. Municipal action alone cannot deliver SIT at scale without national-level support.

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Smart Inclusive Transition for Equitable Futures in ALL CITIES!

Thank You

Suwon Research Institute Anniversary International Conference

Presentation 2

AI and bigdata for architecture, urban planning, and community design

Yoshimura Yuji, Professor
The University of Tokyo

Urban Sciences LAB. THE UNIVERSITY OF TOKYO

AI and bigdata for architecture, urban planning, and community design

吉村有司 Yuji Yoshimura
東京大学先端科学技術研究センター特任准教授

Apr. 3, 2026

My professional backgrounds:
-Japanese／architect／Ph.D in Computer Science

2001	Barcelona, Spain
2003−2004	Barcelona Contemporary Culture Centre
2004−2005	UNESCO Chair (UPC)
2005−2009	Barcelona Urban Ecology Agency
2009−2011	Centre for Innovation in Transport
2011−	Start-up, Spain
2017−2019	Massachusetts Institute of Technology（MIT)
2019-	The University of Tokyo
2020-2025	Advisor for the Louvre Museum
2020-2025	Advisor for Barcelona City Council

Urban THE UNIVERSITY OF TOKYO LAB. Sciences

Apr. 3, 2026

Quantification of urban aesthetics: what is the beauty for the city?

Interpretation of Ashihara (1979)
by digita technologies

Ashihara（1979）
『Aesthetics of the city』

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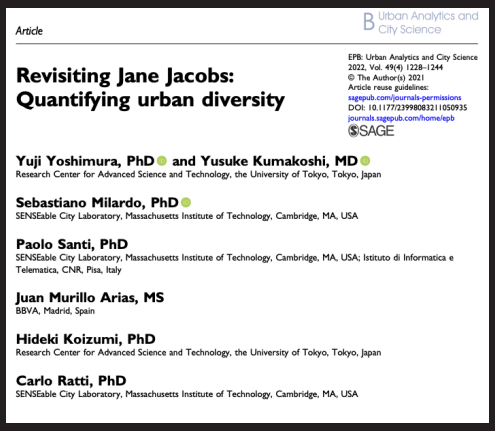
Apr. 3, 2026

Quantification of urban diversity: interpretation of Jacobs through digital technologies



Article

B Urban Analytics and City Science

Revisiting Jane Jacobs: Quantifying urban diversity

EPB: Urban Analytics and City Science
2022, Vol. 49(4) 1228–1244

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SAGE

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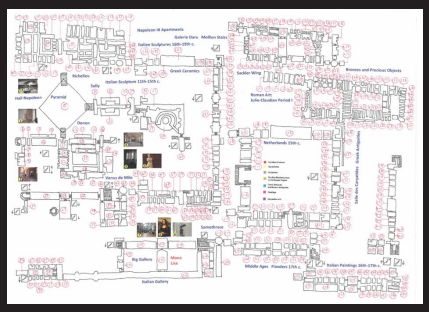
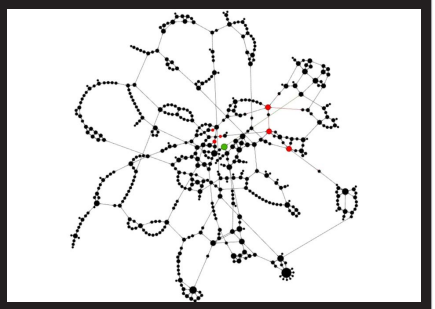
Apr. 3, 2026

Network sciences for the city and architecture





Visitors studies in the Louvre Museum ：
Yoshimura, et al., 2014; 2017; 2019

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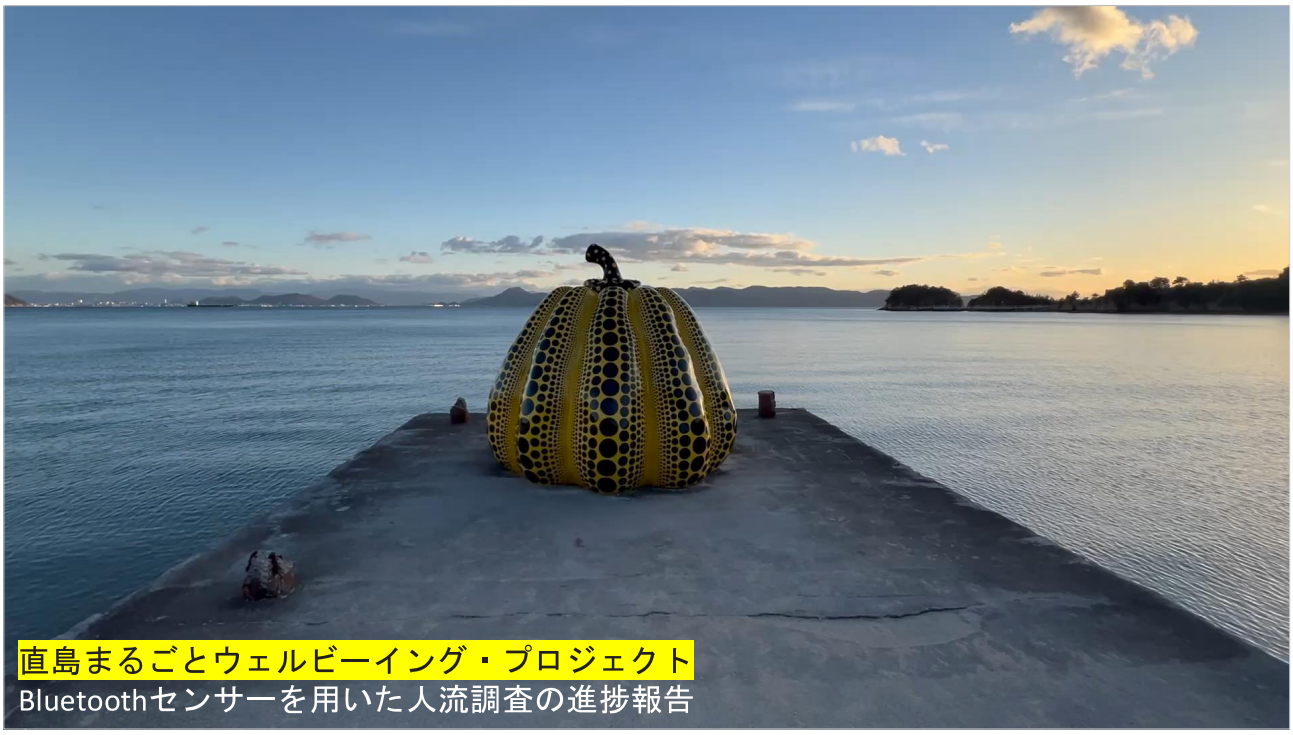
Apr. 3, 2026



直島まるごとウェルビーイング・プロジェクト
Bluetoothセンサーを用いた人流調査の進捗報告

Introduction

Case 1 : Urban Greenery mapping through AI

Case 2 : Implementation of HIKGE FINDER

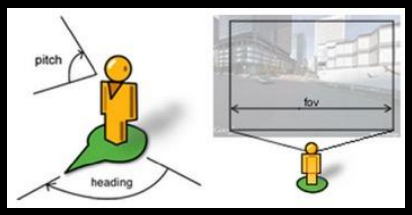
Traditionally, architect/planner is researching urban greenery in the city
= where and how much green exist in the city

Traditional methodology is already establised

Manual-based method

Aerial photo from the sky

Our eye is on 150cm from the ground



We recognize the tree
such as looking up from the ground

Different impression from the sky

Aerial photo recognize the tree
such as looking down from the sky

Google Street View + AI (Deep Learning)

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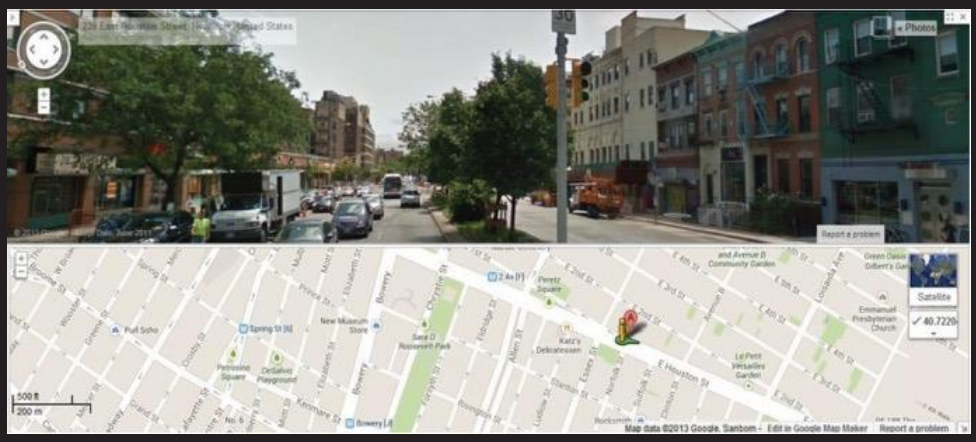
Apr. 3, 2026

Google Street View



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Google Car

Location of the camera is almost 2.5m from the ground

Google Street View is very similar to our eye level recognition

If we compare it with the aerial photo, its difference becomes much clear

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Analytical methodology to use AI (Deep learning)

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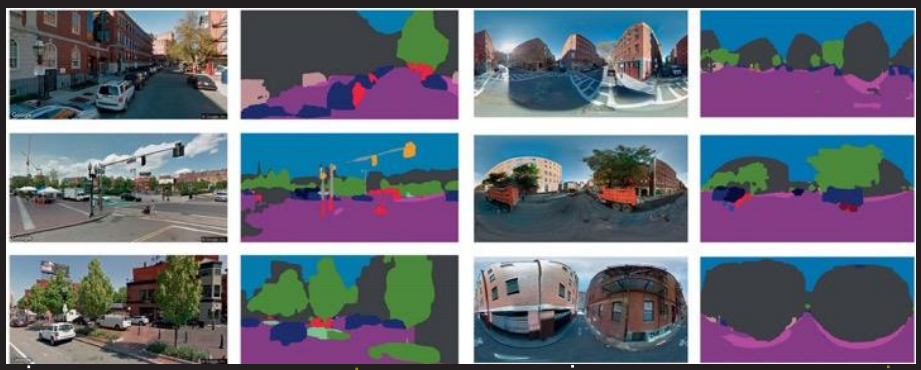
The result of the application of the learned algorithm to detect tree



Original photo

Result for classification

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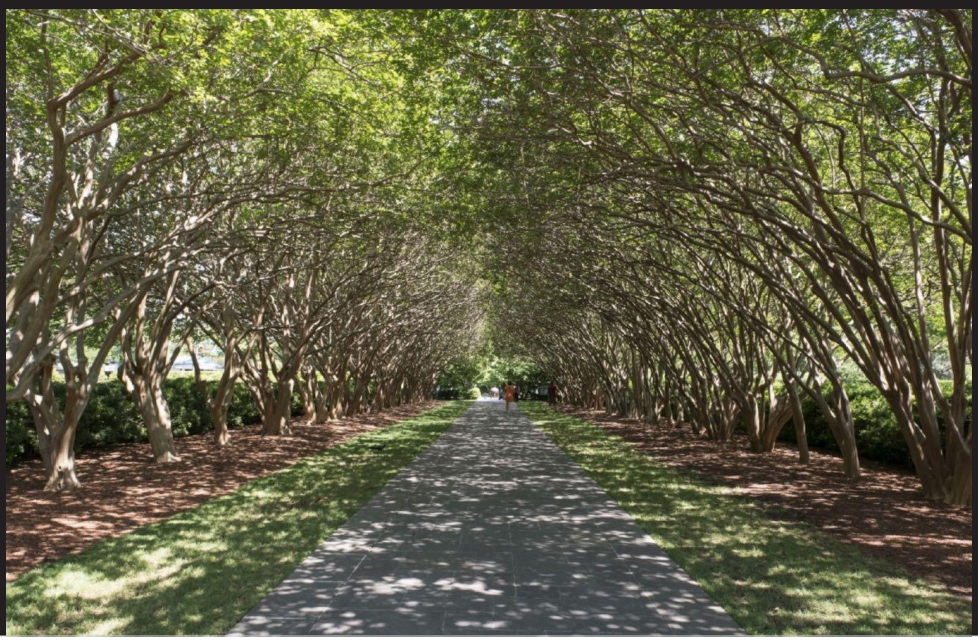
Shadow route can be made, not shortest-route



Introduction 1

Case 1 : Urban Greenery mapping through AI

Case 2 : Implementation of HIKGE FINDER

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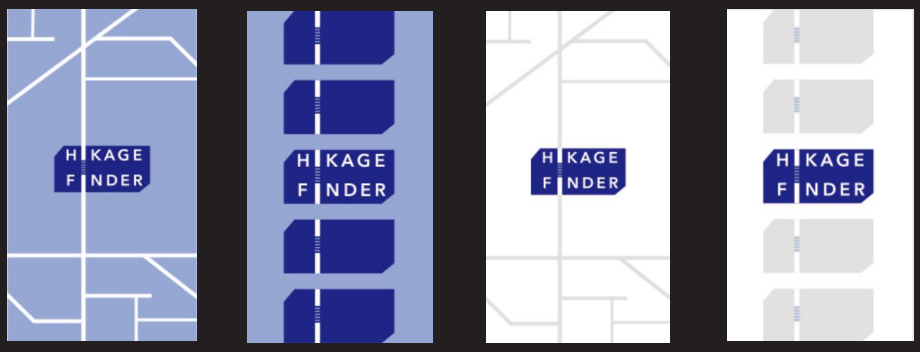
HIKAGE FINDER
βバージョン



The application of looking for the shadow in the city

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The technical aspect of HIKAGE FINDER

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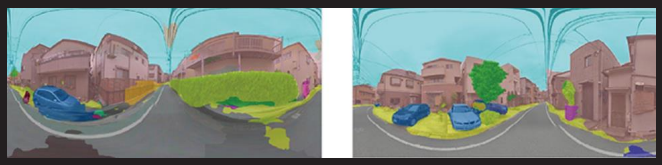
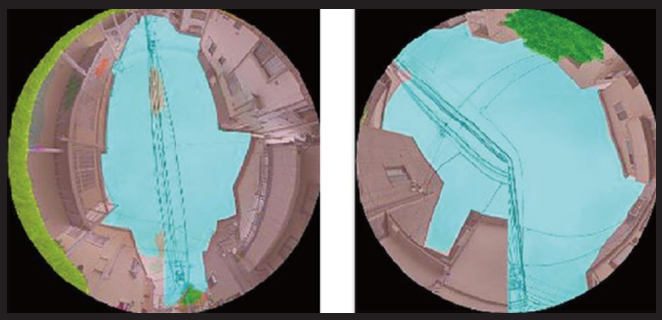
Make the panorama picture
by connecting 6 photos

We applied the segmentation
algorithm
to identify the objects in the picture



We make the Hemispheric
View, looking up to the sky



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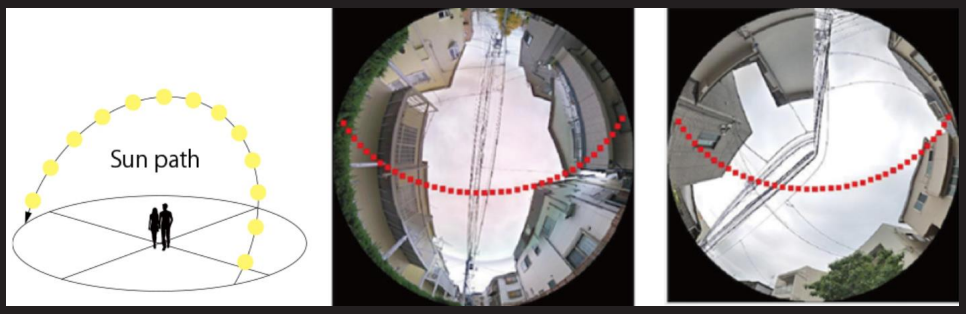
Simulation of sun movement



where and when the shadow is made along the street

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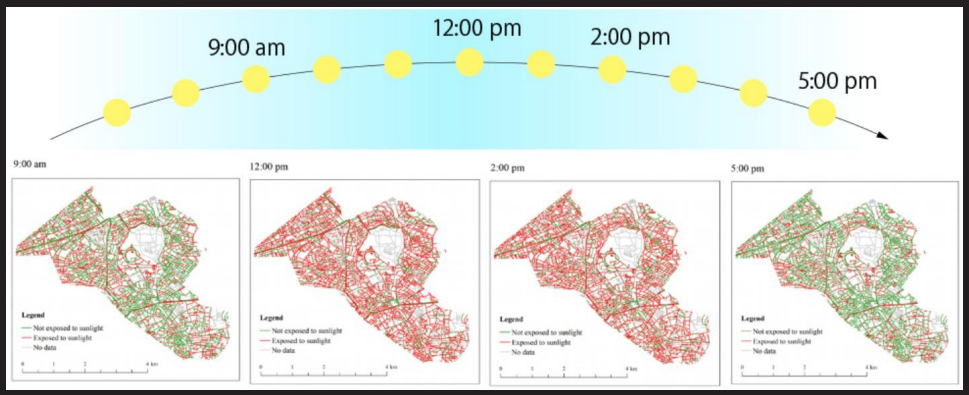
Application for Shibuya district



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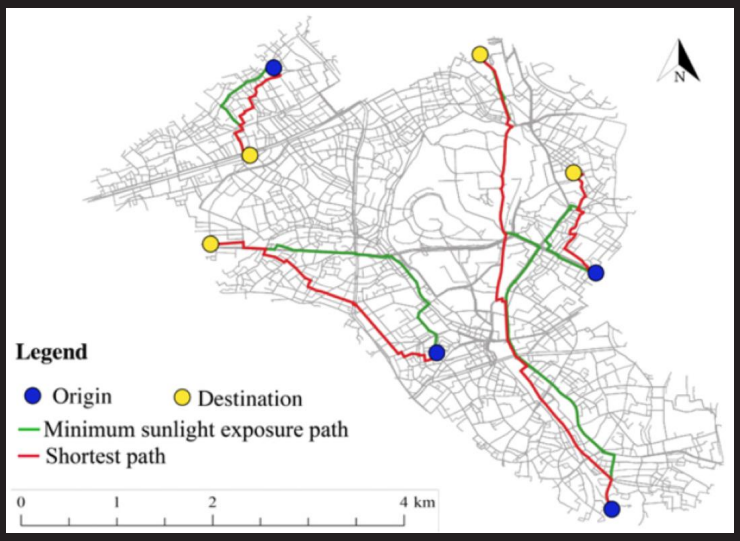
Shortest Path and Shadow path



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Summary of today's talk

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Urbanism by Bigdata

Possibility for Bigdata-based urban planning

Possibility for AI-used urban planning

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Thank you so much for your attention

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http://blog.archiphoto.info/

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Apr. 3, 2026

Appendix

Urban Sciences

Apr. 3, 2026

Contents lists available at ScienceDirect

Cities

journal homepage: www.elsevier.com/locate/cities

Street pedestrianization in urban districts: Economic impacts in Spanish cities

Yuji Yoshimura [a,*], Yusuke Kumakoshi [a], Yichun Fan [b], Sebastiano Milardo [c], Hideki Koizumi [a], Paolo Santi [c,d], Juan Murillo Arias [e], Siqi Zheng [b], Carlo Ratti [c]

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[b] Department of Urban Studies and Planning, Center for Real Estate and Sustainable Urbanization Lab, Massachusetts Institute of Technology, 77 Massachusetts Avenue, Cambridge, MA 02139, USA
[c] SENSEable City Laboratory, Massachusetts Institute of Technology, 77 Massachusetts Avenue, Cambridge, MA 02139, USA
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ARTICLE INFO

Keywords:
Pedestrianization
Urban morphology
Street network
Transaction data
Consumer city

ABSTRACT

This study analyzes the influence of pedestrianization of urban space on the revenues of surrounding retail stores. Pedestrianization refers to the conversion of street use from vehicles to a walkable environment. We compiled a unique transaction dataset containing the estimates of sales volumes for stores across Spain and combine it with data from Open Street Map to provide the history of land-use changes at the street-level. Based on these high-granular datasets, we apply a difference-in-differences empirical method to measure the economic impact of pedestrian intervention. The results show that stores located in pedestrian environments tend to record higher sales volumes than stores located in non-pedestrian environments. We further analyze the mechanisms underlying this revenue-boosting effect and find that a key factor is the store density of the pedestrianized place, while geographic location is insignificant. This finding suggests that there are no differentiation impacts on stores' revenue based on whether pedestrianization occurs in the city center or periphery. Store category also acts as an

Cities
Volume 160, May 2025, 105803

Quantifying tactical urbanism: Economic impact of short-term pedestrianization on retail establishments

Yuji Yoshimura [a], Kaoru Yamaoka [a], Paolo Santi [b]

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Artide

Urban Analytics and City Science

EPB: Urban Analytics and City Science
2022, Vol. 49(4) 1228–1244

DOI: 10.1177/23998083211050935
journals.sagepub.com/home/epb
SAGE

Revisiting Jane Jacobs: Quantifying urban diversity

Yuji Yoshimura, PhD and Yusuke Kumakoshi, MD
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SENSEable City Laboratory, Massachusetts Institute of Technology, Cambridge, MA, USA

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Carlo Ratti, PhD
SENSEable City Laboratory, Massachusetts Institute of Technology, Cambridge, MA, USA

Abstract
This study attempts to formally quantify Jane Jacob's notion of urban diversity and examine whether greater diversity actually contributes economic benefits to a neighborhood. Focusing on the number and types of stores at the street level, we use the Shannon–Weaver index to quantify commercial diversity. We then compare the obtained degrees of diversity with store sales volumes

Article preview

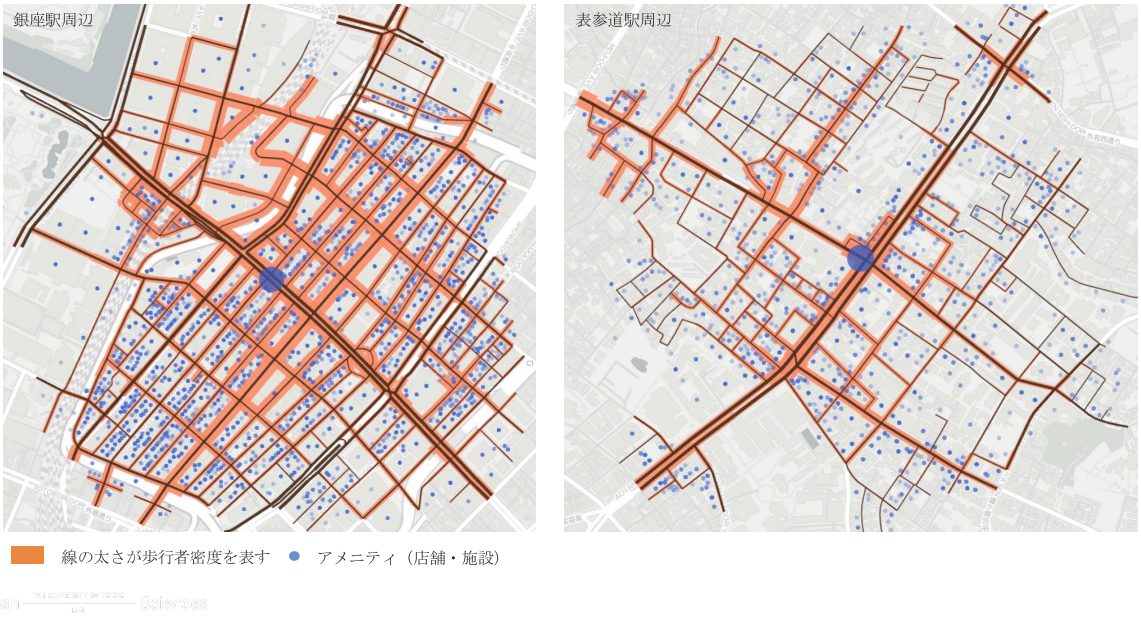
Transportation Research Part C: Emerging Technologies
Volume 167, October 2024, 104840

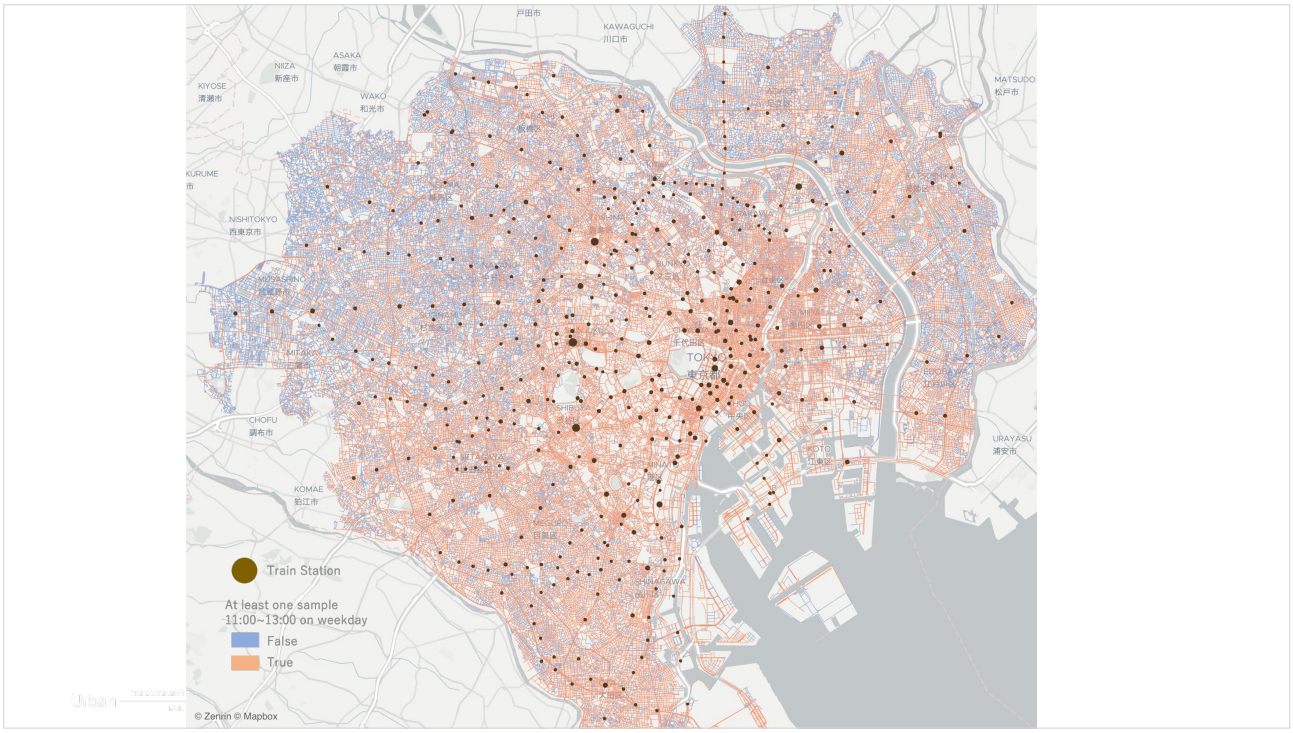
Quantifying the vibrancy of streets: Large-scale pedestrian density estimation with dashcam data ☆

Takuma Oda [a b], Yuji Yoshimura [a]

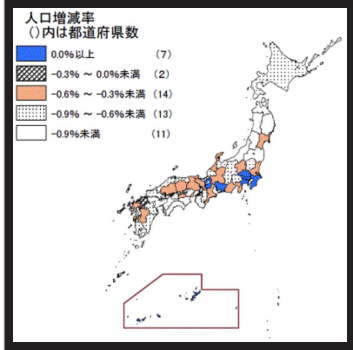
[a] Research Center for Advanced Science and Technology, The University of Tokyo, Tokyo, Japan
[b] AI Technology Development Department, GO Inc., Tokyo, Japan

Received 1 May 2023, Revised 2 July 2024, Accepted 27 August 2024, Available online 3 September 2024, Version of Record 3 September 2024.
What do these dates mean?
Check for updates



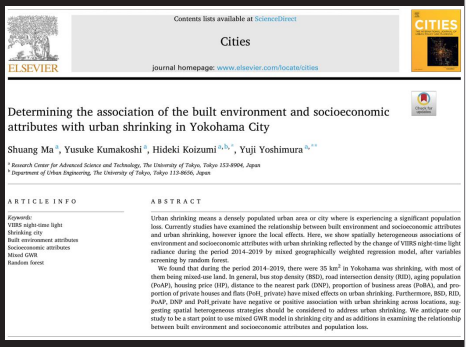

Train Station
At least one sample
11:00~13:00 on weekday
False
True
© Zenrin © Mapbox


Train Station
At least one sample
11:00~13:00 on weekday
False
True



出典：総務省統計局ホームページ
https://www.stat.go.jp/data/jinsui/2019np/index.html

出典：NASA



Contents lists available at ScienceDirect

Cities

journal homepage: www.elsevier.com/locate/cities

Determining the association of the built environment and socioeconomic attributes with urban shrinking in Yokohama City

Shuang Ma[a], Yusuke Kumakoshi[b], Hideki Koizumi[a,b,*], Yuji Yoshimura[a,c,**]

[a] Research Center for Advanced Science and Technology, The University of Tokyo, Tokyo 153-8904, Japan
[b] Department of Urban Engineering, The University of Tokyo, Tokyo 113-8656, Japan

ARTICLE INFO

Keywords:
VIIRS night-time light
Shrinking city
Built environment attributes
Socioeconomic attributes
Mixed GWR
Random forest

ABSTRACT

Urban shrinking means a densely populated urban area or city where is experiencing a significant population loss. Currently studies have examined the relationship between built environment and socioeconomic attributes and urban shrinking, however ignore the local effects. Here, we show spatially heterogeneous associations of environment and socioeconomic attributes with urban shrinking reflected by the change of VIIRS night-time light radiance during the period 2014-2019 by mixed geographically weighted regression model, after variables screening by random forest.

We found that during the period 2014-2019, there were 35 km^2 in Yokohama was shrinking, with most of them being mixed-use land. In general, bus stop density (BSD), road intersection density (RID), aging population (PoAP), housing price (HP), distance to the nearest park (DNP), proportion of business areas (PoBA), and proportion of private houses and flats (PoH, private) have mixed effects on urban shrinking. Furthermore, BSD, RID, PoAP, DNP and PoH_private have negative or positive association with urban shrinking across locations, suggesting spatial heterogeneous strategies should be considered to address urban shrinking. We anticipate our study to be a start point to use mixed GWR model in shrinking city and as additions in examining the relationship between built environment and socioeconomic attributes and population loss.

Urban THE UNIVERSITY OF TOKYO LAB. Sciences

Apr. 3, 2026

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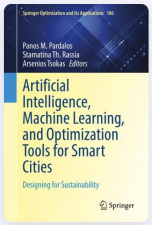
Home > Artificial Intelligence, Machine Learning, and Optimization Tools for Smart Cities > Chapter

A Pedestrian-Level Strategy to Minimize Outdoor Sunlight Exposure

Chapter | First Online: 09 January 2022

pp 123–134 | Cite this chapter



Artificial Intelligence, Machine Learning, and Optimization Tools for Smart Cities

Xiaojiang Li, Yuji Yoshimura, Wei Tu & Carlo Ratti

Part of the book series: Springer Optimization and Its Applications ((SOIA,volume 186))

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PLOS ONE

RESEARCH ARTICLE

Network science for museums

Yuji Yoshimura[1]*, Anne Krebs[2], Carlo Ratti[3]

1 Research Center for Advanced Science and Technology, The University of Tokyo, Tokyo, Japan, **2** Dominique-Vivant Denon Research Centre, Paris, France, **3** Senseable City Laboratory, Massachusetts Institute of Technology, Cambridge, MA, United States of America

* yyyoshimura@cd.t.u-tokyo.ac.jp

Abstract

This paper introduces network science to museum studies. The spatial structure of the museum and the exhibit display largely determine what visitors see and in which order, thereby shaping their visit experience. Despite the importance of spatial properties in museum studies, few scientific tools have been developed to analyze and compare the results across museums. This paper introduces the six habitually used network science indices and assesses their applicability to museum studies. Network science is an empirical research field that focuses on analyzing the relationships between components in an attempt to understand how individual behaviors can be converted into collective behaviors. By taking the museum and the visitors as the network, this methodology could reveal

Environment and Planning B: Planning and Design 2014, volume 41, pages 1113 – 1131

doi:10.1068/b130047p

An analysis of visitors' behavior in The Louvre Museum: a study using Bluetooth data

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Juan Pablo Carrascal, Josep Blat
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Suwon Research Institute Anniversary International Conference

Presentation 3

Planning & Development of a Transnational Cooperative Industrial Town : A Case of China-Singapore Suzhou Industrial Park

Chen Qining, Chairman
SCP China

Planning & Development of a Transnational Cooperative Industrial Town :

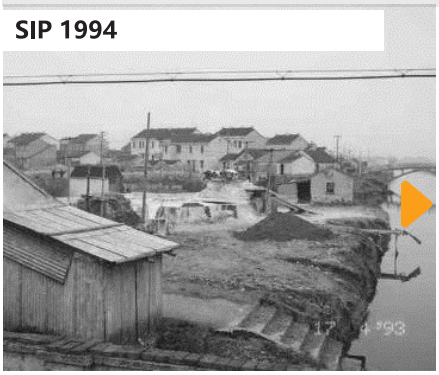
A Case of China-Singapore Suzhou Industrial Park

1

Location of Suzhou Industrial Park (SIP)

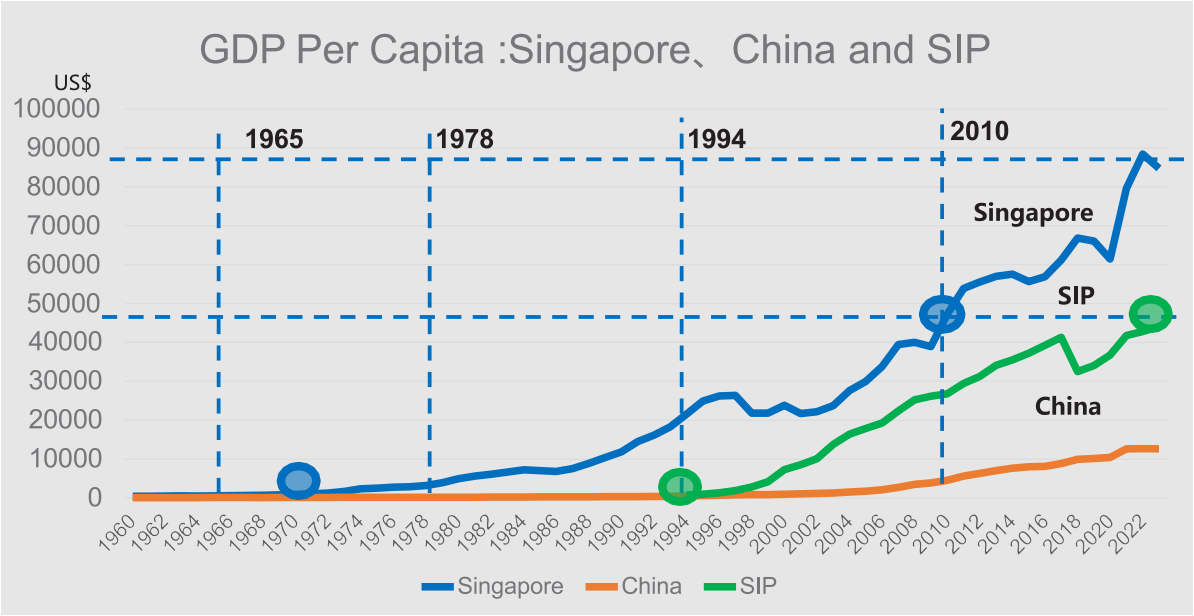
2

1965—1994—2025



3

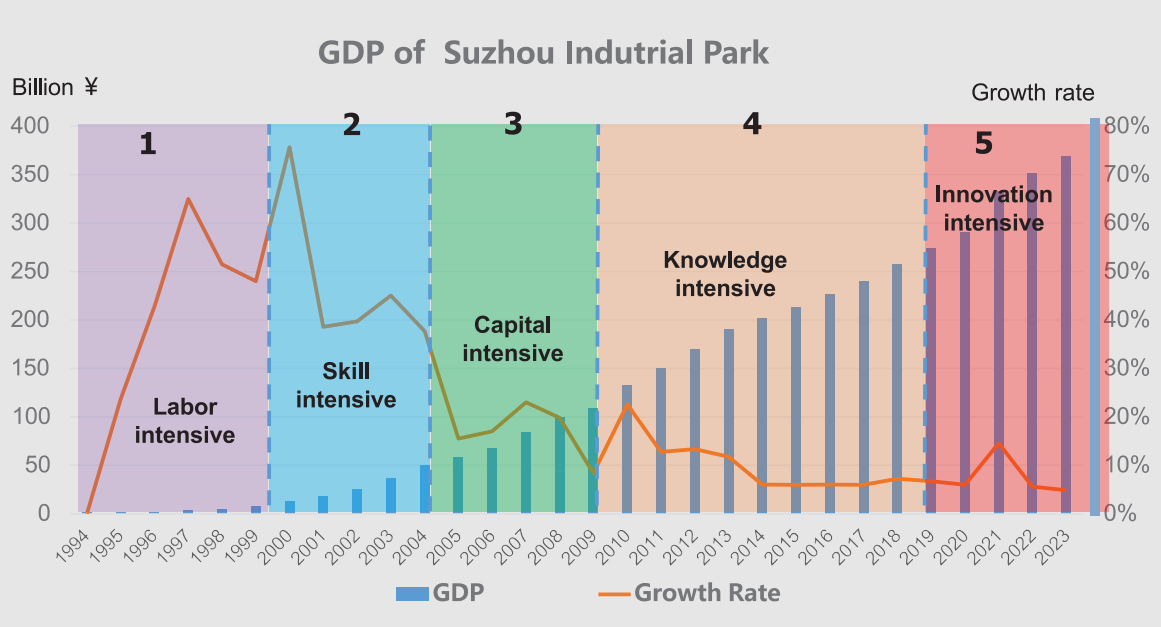
Growth in Singapore, China, and SIP during 1960-2023



Source：World Bank、Yearbook of SIP

4

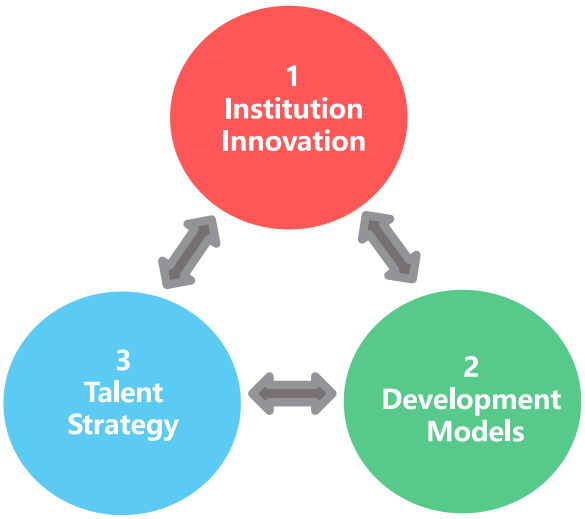
Transformation and Upgrading of SIP



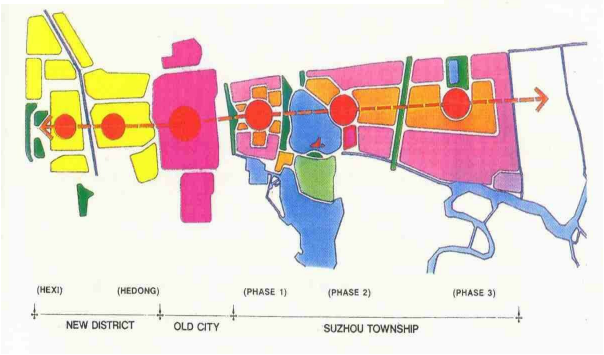
Source：Yearbook of Suzhou Industrial Park

5

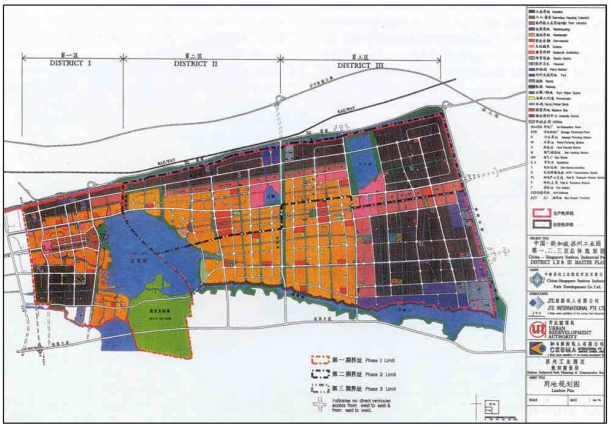
experience

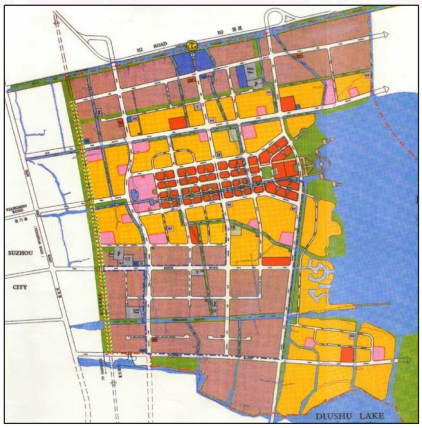


Institutional Innovation: 1994 Concept Plan of SIP




滨湖区—从金鸡湖看到的景观





7

Institutional Innovation: Suzhou's Integrated Bonded Area

1. Storing import and export goods;
2. Foreign trade;
3. International procurement and distribution;
4. International transit;
5. Testing and maintenance;
6. Commodity display;
7. R&D, processing, manufacturing, etc.

8

Development Patterns:
Infrastructure of International Standard

Taihu Lake Water Intake Point

Sewage Treatment Plant

CS-Suzhou Industrial Park

9

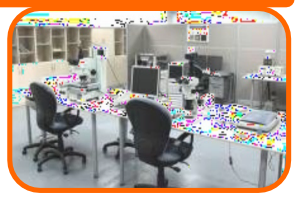
Development Patterns:
World-renowned Industrial Enterprises

10

Development Patterns:
Innovative and modern service industries

356 R&D institutions of various types were introduced

Samsung R&D Center



USTC R&D Center

NJU Graduate School

Bosch Tech Center

Emerson R&D Center

Academy of Sciences

11

Development Patterns: Modern service industry

Service industry clusters:

1. Scientific Research
2. Software Technology
3. Trade
4. Finance
5. High-end Business
6. Cultural Tourism

12

Talent Strategy: Dushu Lake Science and Education Innovation Zone

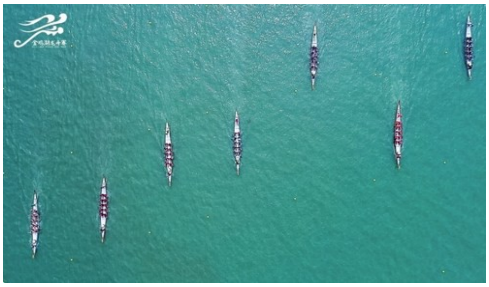



Building an innovative ecosystem

13

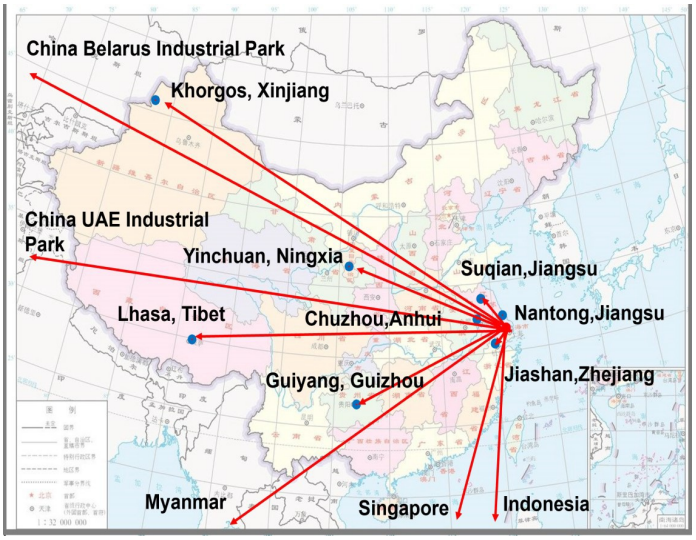
Talent Strategy: Culture, Sports, Medical Care, and Education

1. Jinji Lake Dragon Boat Festival and Marathon
2. Olympic Sports Center
3. Suzhou Symphony Orchestra
4. Film Theme Park
5. Dushu Lake Hospital
6. Public Liaison Office




14

The footprint of SIP experience "Go Out"



15

Look forward to the future

Make long-term plans & review them regularly

The key points of the future SIP planning & development

Green/sustainable eco environment
绿色永续的
生态环境

Innovative/flexible production mode
创新灵活的
生产模式

Liveable/inclusive lifestyle
宜居包容的
生活方式

Resilient/intelligent governance system
韧性智慧的
治理体系

Thank You

Sincere cooperation and mutual benefit
Joint planning, investment promotion and development
Scientific and technological innovation, service trade, financial innovation, cross-border investment and social governance

18

Suwon Research Institute Anniversary International Conference

Panel Discussion

Sophie Sturup
Professor, Xi'an Jiaotong-Liverpool University

Chen Bing
Professor, Xi'an Jiaotong-Liverpool University

Fernando ORTIZ-MOYA
Professor, Waseda University

Park In-kwon
Professor, Seoul National University

Choi Seok-hwan
Research Fellow, Suwon Research Institute

Discussant Remarks

Sophie Sturup
Professor, Xi'an Jiaotong–Liverpool University

What will the next generation of the Suwon-ized SIT model look like, positioning Suwon as a leader in future-proof urban governance?

For me, the question that technology development, and our apparent mastery of data that Yuji was describing raises is how do we retain a discussion of the future - of where we want to get to? What kind of life do we want to live? The problem with data is it is all based on the past, it doesn't tell us what we should do or want to do, only what we already do. The problem with technology is that it is deterministic, it makes you live in a particular way, just as the form of buildings, and the kind of economy we produce does.

The concept of inclusive doesn't avoid the need to struggle with this, because much of the time we are asking 'how do we make sure everyone is included in what is' rather than asking, 'Is that what people want to be included in?' If I bring that down to a very practical question related to transport: which everyone here does. Technology in transport is generally focused around moving people faster, and more comfortably. In the past this has led to journeying further, which is taken to mean people want to do that. But do we? Do we want to live lives that demand we travel every day? Lives that demand we can move swiftly between locations to meet prescribed calendar appointments? Or if we could, would we live in a different time/space continuum, one which made room for more time in the location we are in, for experiences of the present? For flexibility and serendipitous encounter?

I hope that the next generation of Suwon-ized SIT can harness technology in a way that gives you a life that is designed, that takes account of multiple ways of living, that brings to the fore the extraordinary capacity for creativity, generosity and care that human beings are capable of and crave. Because the future that is coming, demands a very different kind of life, one which I would argue is better than the ever smaller, individualised, and rapacious version of life that we have found ourselves moving toward lately.

■ Takeaway points

Depending on context, what gets said, maybe something like:

On the matter of including foreigners better into Suwon. This is a long term project, and there may be some useful lessons from places such as Australia. The concept of multi-culturalism was brought in during the 1980s, and has at least partly overturned notions that migrants who come must 'become' Australian. Rather the process of integrating migrants has become one of reaching a balance between their becoming Australian and Australia becoming them. This is complex, complicated, and fraught with going backwards and forwards, and I believe every place has to come to its own balance point. The experience of Australia however does suggest that the enormous value of diversity makes this difficult engagement worthwhile.

In consideration of designing a future. The tripartite imperatives of responding effectively to climate change, net zero economies, and mass extinction suggest that the future is going to demand something very different from us. One place to find opportunity in that is through theories of post-growth, through conversations about the way we want to live, through discussions about what a duty of 'care' means. Some places have turned to their indigenous populations for this. In a context such as Suwon, with long histories of living in this place, of turning into yourselves in dialogue with this place. There are lessons there. Lessons in acknowledging that each of use carry our ancestors with us in our DNA, in our culture, in the meanings we inscribe and have inscribed into us by our relationship with each other, the world and ourselves. It might be fruitful to re-engage this understanding of these entanglements in pursuit of what kind of life calls to the community as a future to live into.

Education-led Urban Regeneration: Fostering a smart and inclusive Ecosystem

Chen Bing
Professor, Xi'an Jiaotong–Liverpool University

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Affiliation: Xi'an Jiaotong-Liverpool University

The main purpose of urban regeneration is reflected in the renowned saying 'we shape our buildings, thereafter they shape us'. The research and development of emerging technologies, including artificial intelligence (AI), unmanned aerial vehicles (UAV), and the Internet of Things (IoT) and so on, have not only led to lifestyle changes (e.g., one person company) but also facilitated collaborative planning towards a more inclusive approach.

This discussion paper intends to provide a critical insight into such change as well as its impact on urban regeneration – 'technical innovation – lifestyle change (new working and living scenarios) – place-making in urban regeneration'.

In China, the Central Government's 15thFive-yearPlan(2026-2030)highlightstheimportanceofdeve lopingso-called'newqualityproductiveforces'(thatunderpin'technicalinnovation')andtheur

- Technical innovation: the focus is shifting from traditional manufacturing (10-100) to front-end R&D (0-1).
- Lifestyle change (new working and living scenarios): with support from AI and robotics, the working style is moving from a 'centralized mode' to a 'decentralized mode' (e.g., One-Person Company, work remotely, etc.).
- Place-making in urban regeneration: the urban-industrial complex is shifting from "industrial clustering" (focusing on 10 to 100) to "R&D at colleges-Incubators & industrial labs-prototype manufacturing and test" (focusing on 0 to 1 and then to 10).

In return, the key planning/design rationale for urban regeneration is moving from 'industry-city-people' to 'people-city-industry'. This 'people-oriented principle' has also been incorporated in the relevant policies that underpin urban regeneration.

To attract more young talented people to study and work in industrial parks (and free economic zones) and better prepare them for future industrial revolution, the higher education mode in China is undergoing a major reform – from traditional learning and teaching to syntegrative education (which is closely linked with industrial needs).

■ Best Practice

Suzhou Industrial Park has established the Higher Education Town (a.k.a., Science and Education Innovation District) in its regeneration process back to 2000s to attract and train young talented people in order to foster the new quality productive forces. By adopting the syntegrative education mode, the academia-industry-government relationshipis also moving from ‘co-existing’ to ‘symbiosis’ that underpins a smart and inclusive ecosystem. It is expected that the planning practice will also move from a unified/collective planning decision (top-down or bottom-up) to a more personalized accompany (co-build) process.

Adapting Smart Inclusive Transitions for East Asia's Demographic Cliff

Fernando ORTIZ-MOYA
Professor, Waseda University

■ Introduction

The largest countries in East Asia are facing a demographic cliff. UN projections estimate that between 2025 and 2050, Japan is poised to shrink by roughly 15%, China by 11%, and the Republic of Korea by 12%, totalling nearly 175 million people. With current demographic trends, their combined population losses will amount to about 850 million by the year 2100 (UNDESA, 2024).

What does this entail for Smart Inclusive Transitions?

The impacts of this demographic transition will be uneven, with some cities stagnating and stabilising their populations while others suffer tremendous losses. Shrinking cities will experience the proliferation of vacant and derelict properties, land abandonment, underutilised infrastructure, a smaller workforce, an increasing elderly population, and a reduced tax base, among other challenges (Hartt, 2018; Hirt & Beauregard, 2021). Here, the principles of 'smart' and 'inclusive' underpinning Smart Inclusive Transitions (SIT) must mean using data, new technologies, and participatory tools to identify and protect the social fabric and everyday lived spaces that can keep an ageing and shrinking community anchored while supporting vulnerable populations.

Shrinking cities are inevitably ageing cities. Yet, older adults are oftentimes the most digitally excluded group across all vulnerable populations. If urban transitions continue to prioritise digital deployment over social infrastructure, however, they risk leaving behind the very residents they are designed to protect.

■ Searching for A New Vantage Point

With a population of 1,228,165 in 2025, Suwon is the capital and largest city of Gyeonggi Province. It is the first SIT piloting city in Asia, a commitment solidified in the city's vision of a "Smart Inclusive City: History, Technology, People" since 2021. Across the five strategic pillars of the SIT Monitoring Framework, Suwon achieved an almost perfect score in Pillar 4 on Digital Innovation for Collaborative Solutions thanks to initiatives such as the "digital budgeting via Saebit TokTok app" and the 2025 AI Innovation Governance project, which was launched with three thematic offices on AI Citizen, AI Industry, and AI Administration. While the city boasts strong legal frameworks, its scores in areas like open society and gender equality remain below global averages, hindered by deeply entrenched cultural norms. A major caveat of smart city initiatives is that top-down, purely administrative tech solutions often fail to capture the lived realities of citizens. Addressing these cultural and social practices requires a new vantage point that acknowledges the shortcomings of an aerial administrative view and instead looks at the city and its social spaces from the ground up.

This administrative disconnect mirrors a spatial one: traditional urban planning frequently observes the city from above—through maps and aerial photos—thereby misrepresenting what pedestrians experience. Shifting the analytical lens to the pedestrian eye-level provides a complementary perspective on different aspects of urban spaces, such as greenery and shadow paths. AI and big data can then map the physical realities of streetscapes, but they remain blind to the emotional and social fabric of communities.

Ensuring that SIT initiatives leave no one behind requires supplementing top-down and tech-driven solutions with other participatory tools that account for the on-the-ground reality of people's lives. This, in turn, will be crucial to advance demographic resilience—addressing the impact of demographic changes in socioeconomic development and individual well-being.

■ Bridging the Smart-Inclusive Divide via Participatory Mapping

In cities undergoing population ageing and shrinkage, demographic resilience entails bolstering social spaces of belonging. Place attachment—the emotional and cognitive bonds that people and communities form with specific spaces—works as the invisible glue of cities, sometimes becoming one of the main reasons people decide to stay in a shrinking city. But people do not form place attachment around top-down smart infrastructure. Instead, they bond with everyday, ordinary community spaces, or "sweet spots" (Pineda et al., 2023). While a smart city dashboard or a physical AI map might flag a run-down residential building as a sign of urban blight, locals might view its ground floor and old shops as a vital, rooted community space. Big data and AI tools alone cannot detect emotional and social infrastructure—both crucial elements for advancing just and truly inclusive transitions.

SIT must leverage digital tools to co-create knowledge with residents to bridge the 'smart' and 'inclusive' dimensions of this framework. Through participatory mapping, local governments can crowdsource this emotional data, transforming residents from passive subjects of smart city policies into active co-creators of their urban environment (Pineda et al., 2024). Digital tools like geo-localised applications designed specifically to capture social and emotional spaces can help visualise the invisible socio-spatial structure of cities. By pinpointing these vital nodes, planners can shift from traditional pro-growth strategies to anticipatory adaptation, concentrating social services and community care around these established sweet spots before the demographic cliff fully materialises.

■ Conclusion

Urban shrinkage is not an inherent failure, but rather a springboard for inclusive, justice-driven urbanism (Ortiz-Moya, 2026). Smart Inclusive Transitions hold the potential to steer cities away from a growth-at-all-cost mentality toward a development model anchored on strengthening quality of life, equity, and ecological limits. By combining SIT solutions with participatory methods that allow planners to identify urban sweet spots, cities can move beyond merely counting digital users and instead foster true ethnographic inclusivity. For Suwon, mastering the Smart Inclusive Transition means accepting that managing development in a post-growth era is not about reversing demographic trends, but adapting to them. Ultimately, a truly Smart Inclusive Transition in a shrinking city does not mean deploying technology to chase elusive regrowth; it means leveraging digital innovation to care for, empower, and anchor the people who are already there.

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A Review of Korean Cases for Enhancing Diversity and Multicultural Acceptance

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*This discussion paper was translated using AI and may not fully reflect the panelist's original intent.

■ Introduction

The largest countries in East Asia are facing a demographic cliff. UN projections estimate that between 2025 and 2050, Japan is poised to shrink by roughly 15%, China by 11%, and the Republic of Korea by 12%, totalling nearly 175 million people. With current demographic trends, their combined population losses will amount to about 850 million by the year 2100 (UNDESA, 2024).

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Shrinking cities are inevitably ageing cities. Yet, older adults are oftentimes the most digitally excluded group across all vulnerable populations. If urban transitions continue to prioritise digital deployment over social infrastructure, however, they risk leaving behind the very residents they are designed to protect.

■ Searching for A New Vantage Point

With a population of 1,228,165 in 2025, Suwon is the capital and largest city of Gyeonggi Province. It is the first SIT piloting city in Asia, a commitment solidified in the city's vision of a "Smart Inclusive City: History, Technology, People" since 2021. Across the five strategic pillars of the SIT Monitoring Framework, Suwon achieved an almost perfect score in Pillar 4 on Digital Innovation for Collaborative Solutions thanks to initiatives such as the "digital budgeting via Saebit TokTok app" and the 2025 AI Innovation Governance project, which was launched with three thematic offices on AI Citizen, AI Industry, and AI Administration. While the city boasts strong legal frameworks, its scores in areas like open society and gender equality remain below global averages, hindered by deeply entrenched cultural norms. A major caveat of smart city initiatives is that top-down, purely administrative tech solutions often fail to capture the lived realities of citizens.

■ Weaknesses of Suwon City from the Perspective of a Smart Inclusive City

● A "Smart Inclusive City" is one where the benefits of smart technology innovation are not concentrated in specific social classes or regions, but are distributed equitably to all local residents, including socially vulnerable groups (the poor, people with disabilities, the elderly, foreigners, etc.).

● Suwon City is lacking in the aspect of "social justice for vulnerable groups" (Pillar 3 in Professor Song Jae-min's presentation).

- Lack of Diversity Acceptance and Trust: The 'Open Society Toward Diversity' indicator ranked at the lowest level compared to global and OECD benchmarks, and interpersonal trust stands at a mere 26%

- Gender Equality and Multicultural Sensitivity: Acceptance of diverse groups, particularly refugees, is relatively high when referring to coworkers (49.1%), but drops sharply as the relationship becomes closer, such as with family or spouses (10.8%)

● Low mutual trust among members and strong exclusivity toward external immigrants or minorities create a "closed social atmosphere," resulting in social costs

- In a closed society, smart administration is misperceived as "surveillance and control" or a "mechanism of exclusion," thereby reducing citizens' willingness to cooperate with and adopt necessary smart services

-Closed governance that is intolerant of diversity marginalizes specific groups in the policy-making process and reinforces "exclusion through technology."

■ Case Study 1: Inclusion of the Jumma People in Gimpo City

● The Jumma people, an ethnic minority from Bangladesh, began migrating to South Korea in the 1990s. Initially, they lived precariously as undocumented workers in areas such as Suwon, Incheon, and Gimpo; however, they began to form a formal community in 2002 when they organized the "Solidarity of Jumma People in Korea," centered in Yanggok-ri, Gimpo City

● The relationship between Gimpo City and the Jumma community developed through the following stages

- Securing settlement infrastructure: The Yanggok area is favorable for family-based settlement due to affordable housing costs, easy access to jobs, and convenient childcare facilities

- Solidarity with civil society: Through solidarity with civic groups such as "Sanctuary," they supported the recognition of large-scale refugee status. This went beyond simply obtaining legal status to function as cooperative social capital within the local community

- Recognition as cultural agents: The Zummer people's traditional winter festival, "Boisabi," was elevated to become Gimpo City's representative intercultural festival

● Intercultural communication through the Boisabi Festival at venues such as Gimpo Art Village

- The Boisabi Festival serves as a means for the Zumma people to maintain their ethnic identity, while also providing a venue for "interculturalism" where Gimpo citizens can joyfully experience refugee culture

- The festival is attended by UNHCR officials, experts from various fields, and many local residents, who enjoy fashion shows, traditional games, and food sharing together

● Gimpo City treats the Zomi people not as recipients of charitable welfare, but as partners in a "multicultural city that interacts with people from around the world," enabling immigrants to contribute to the local community and feel a sense of belonging. The Zomi community has even presented plaques of appreciation to Gimpo City and its citizens.

■ Case Study 2: Ansan City's Foreign Resident Policy Based on the Principle of Inclusion

● Ansan City has the highest proportion of foreign residents in South Korea (approximately 100,000 as of 2024, accounting for 13.9% of the total population).

● A comparative analysis of Ansan City with 26 major cities worldwide—all with populations of 500,000 or more and foreign resident ratios of 10–15%—revealed that Ansan ranked fourth globally, following Oslo, Norway; Copenhagen, Denmark; and Dublin, Ireland.

● Although there was a high risk of cultural clashes and social conflicts in the early stages, Ansan City redefined diversity as a "source of urban competitiveness" and implemented world-class multicultural inclusion policies.

● Ansan City's core philosophy is to ensure that foreign residents are not "excluded" from public services

- Specialization of administrative organizations: An "International Residents' Human Rights Team" was established within the International Residents' Center to address human rights violations, and interpreters and translators with sector-specific expertise (labor, marriage migration, gender, law, etc.) were trained

- Identifying and Protecting Vulnerable Groups: To ensure the minimum basic rights of groups not covered by central government policies—such as asylum seekers, undocumented single mothers, children who arrived in the country after their parents, and stateless persons—the city enacted and revised local ordinances

- Protecting Daily Living Rights: The city operates a system to assess the actual conditions and provide counseling to protect immigrants from legal vulnerabilities they face in daily life, such as lease disputes, security deposit fraud, and duplicate mobile phone contracts

● Designation and Development of Ansan City's "Multicultural Village Special Zone"

- Officially designated by the Ministry of Knowledge Economy on May 1, 2009. The designated

area covers 370,000 square meters around 795 Wongok-dong, Danwon-gu. The goal is to foster this area, where foreigners reside in large numbers, into an economic, social, and cultural hub

- The mayor may issue employment recommendation letters for foreign chefs at restaurants, and outdoor advertising structures may occupy public roads autonomously during festivals.

- Installation of facilities within the special zone, including the Multicultural Street (International Zone), the Foreign Resident Support Headquarters, Meeting Plaza, and design installations reflecting local characteristics

● Enactment of the Ordinance on the Creation of Intercultural Cities (ICC)

- As the first of its kind nationwide, the "Ordinance on the Creation of Intercultural Cities" was enacted to ensure that interactions between the majority and minority populations are considered across all administrative sectors, including education, welfare, housing, and the economy

- Global networks will be strengthened through initiatives such as hosting the 2025 International Symposium on Intercultural Cities

● Evolution into an AI-based Smart Inclusive City

- AI-based multilingual interpretation and administrative guidance services

- Infrastructure deployment based on data analysis of foreign residents' movement patterns and service demand

- Upgrading of intelligent surveillance systems to prevent crime and ensure safety in areas with high concentrations of foreign residents

■ Lessons for Suwon City's Smart Inclusive Transition

● Both cases share the common approach of viewing the influx of immigrants and the expansion of multiculturalism as new opportunities for regional development, and recognizing foreigners as partners in a "multicultural city" to foster a culture of coexistence

● Recommendations for Enhancing Diversity and Multicultural Acceptance in Suwon City

- Branding the Intercultural Festival: Consider elevating the culture of foreign resident communities in Suwon into a festival for all Suwon citizens by organizing "Suwon World Culture Week" or integrating it with the Suwon Hwaseong Cultural Festival

- Revision of the "Suwon City Ordinance on Support for Multicultural Families": Comprehensive support should be provided not only to multicultural families but also to all foreign residents, regardless of their residency status, to ensure they are not excluded from access to emergency medical care or children's education.

- Family Matching and Mentoring Programs: Match immigrant families with native families to promote daily cultural exchange.

Discussant Remarks

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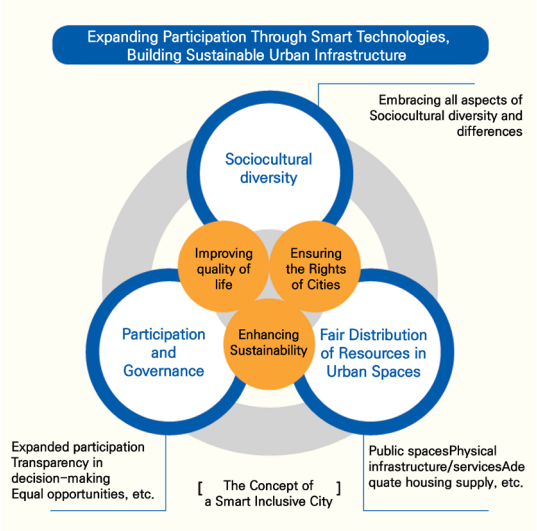
*This discussion paper was translated using AI and may not fully reflect the panelist's original intent.

The new urban agenda for the future is the "Inclusive City." An Inclusive City is a "City for All." Specifically, an Inclusive City is one that guarantees "The Right to the City" for everyone, including marginalized groups—such as multicultural communities, people with disabilities, the homeless, informal workers, children, youth, women, and the elderly—who have been excluded during the process of urban growth.

The Inclusive City goes a step further than the conventional sustainable city. It is a city that guarantees the "Right to the City," ensuring that all citizens—including the socially vulnerable—can enjoy urban public spaces, political participation, and diverse cultures as public goods. To be more specific, it refers to a city where spatial justice is realized in resource allocation, citizen participation is guaranteed in political decision-making, and social, economic, and cultural diversity is respected. The key here is to prioritize the rights of local cities over those of the central government, the rights of citizens over administrative procedures, and the rights of marginalized groups over those of the middle class.

Furthermore, a Smart City aims to incorporate "intelligence" into urban management with the goal of becoming a more sustainable and resilient city. It is a city that analyzes and optimizes its physical infrastructure—such as energy, water, waste, transportation, and pollution—as well as its social infrastructure—including socio-economic integration, governance, and citizen participation—through transparent and inclusive information feedback mechanisms. Most cities in Europe already exhibit the characteristics of a smart city, and more than 90% of large cities with populations of 500,000 or more demonstrate these features. Smart city technologies can be used to create cities that are more sustainable, improve quality of life, and reduce discrimination against marginalized groups, thereby fostering inclusive cities.



In this perspective, a smart inclusive city is one that leverages recent advancements in AI, smart technologies, and administrative systems to ensure that all citizens—including the socially vulnerable and marginalized—have the right to participate and the right to safety, so they are not harmed by changes in the urban environment, such as the climate crisis.

Suwon established its 2012 Master Plan with direct citizen participation and operates a Citizen Policy Planning Group, where 200 to 300 citizens gather annually for roundtable discussions to debate key urban policy issues and make policy decisions. This process utilizes a system that collects and organizes discussion content in real time, enabling immediate decision-making. The Saebit TalkTalk app allows users to propose policy ideas and engage in discussions online at any time using their smartphones, without the need for in-person participation.

To further develop this initiative, we need to emulate Amsterdam's Smart City (ASC) model in the Netherlands. In Amsterdam, citizens and startups propose various ideas, services, and products for urban life using IT technology, and these proposals are being transformed into actual smart city services. This smart city framework, led by ASC (Amsterdam Smart City), involves the joint participation of local residents, the government, and businesses, with over 200 projects currently underway.

Utilizing smart technologies for sustainable cities is also crucial. Among the points raised by Professor Yuji Yoshimura, the use of AI for urban green space mapping is expected to enable a more detailed analysis of the current shortage of green spaces in Suwon's old downtown area. Furthermore, simulations showing how much summer temperatures drop when green spaces are created could serve as data to secure budgets for green space development and help inform policy decisions on which areas to prioritize for greening.

The case study of the Suzhou Industrial Park was also very interesting. The era when companies moved in simply because business functions were concentrated in a particular area is over. Suwon City is creating hubs around subway stations and universities—such as the R&D Science Park, North Suwon Techno Valley, and Uman Bio Valley—where innovative companies can settle. In particular, if the Free Economic Zone currently being promoted in the West Suwon area is designated, it will play a role in driving Suwon's development as the center of a new industrial cluster.

In this process, while attracting research functions, technology companies, and angel and venture capital is important, creating an attractive urban environment—including housing, green spaces, and enjoyable recreational activities (such as culture and commerce)—is crucial to retaining talent.

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