ENHANCING SERVICE DELIVERY THROUGH INTEGRATED DIGITAL SYSTEMS FOR SUSTAINABLE URBAN DEVELOPMENT

WORLD
ECONOMIC
FORUM

COMMITTED TO
IMPROVING THE STATE
OF THE WORLD

The Future of our Cities

Cities today...

...and by 2050

Earth's surface — **2%**

World population — **50%**

Global energy consumption — **75%**

Global CO_2 emissions — **80%**

70% World population

40 Years to double the urban capacity developed over the past 4000 years

As cities grow, so do our challenges

Overloaded infrastructure

Congestion

Changing behavior

Pollution

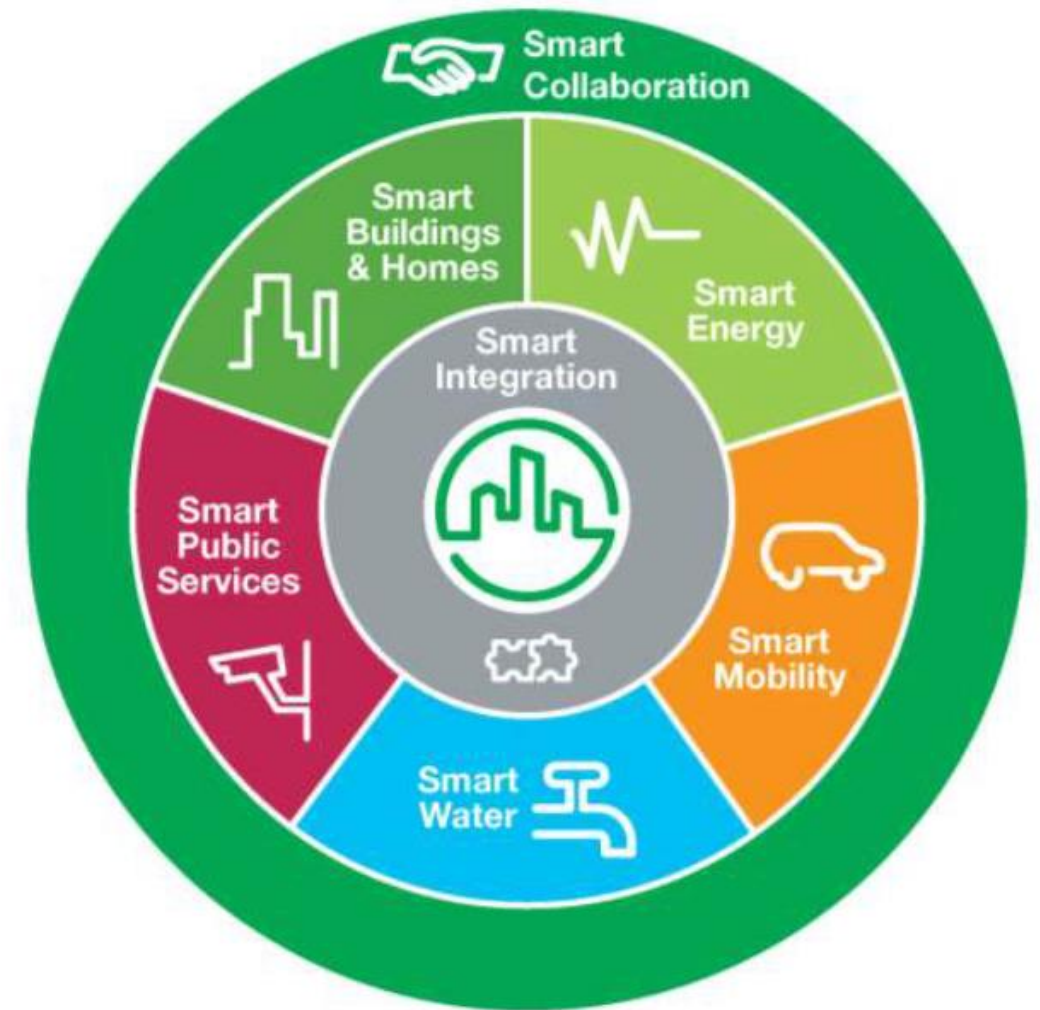Scarcity of resources

Reduce costs & manage debt

Attract global investment, jobs, talent

Provide high standard of living

Fostering Innovation

Delivering Urban Efficiency

- **Solutions** to cities' immediate challenges
- **Integration** for increased efficiency
- **Innovation** for a holistic sustainable future
- **Collaboration** to make it all happen
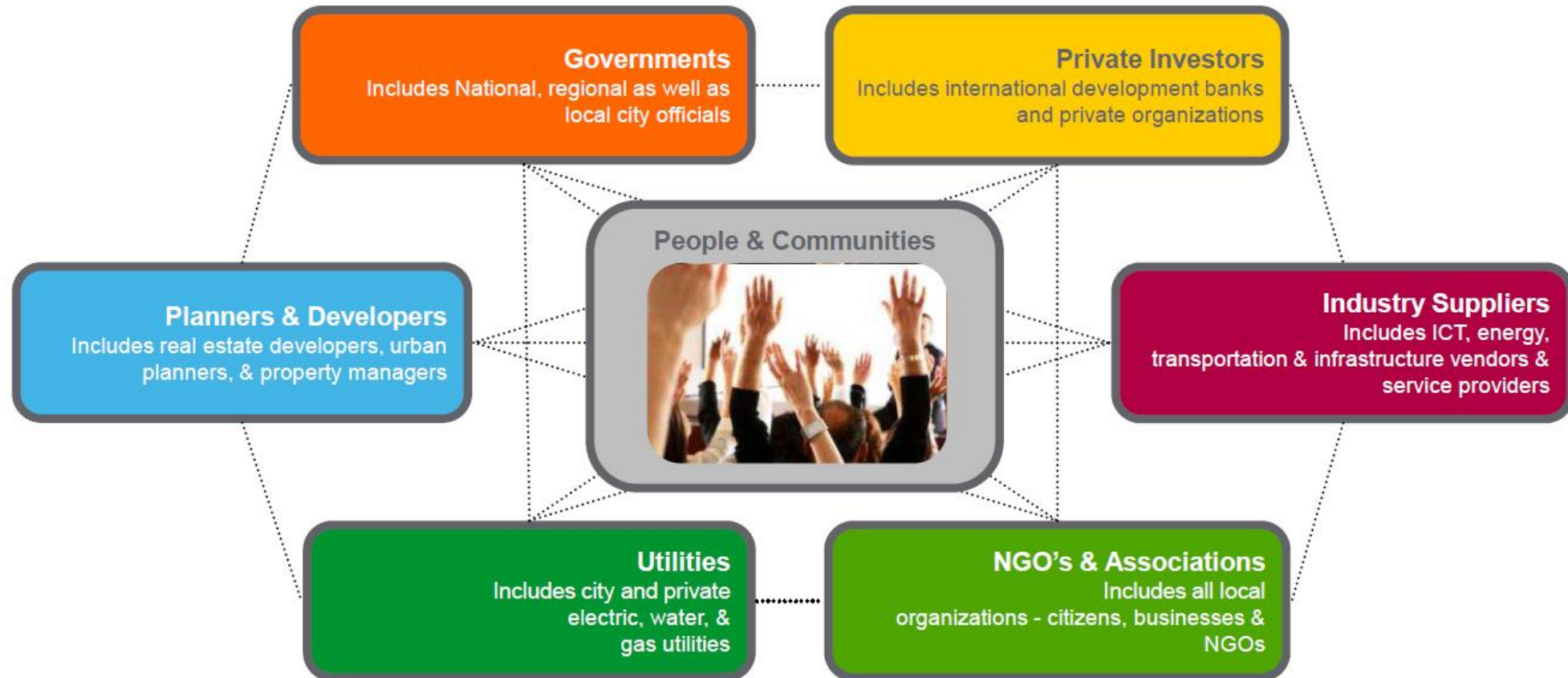
The Citizen Vision and Issues

Vision Cloud: green, traffic, clean, beautiful, safe

Issues Cloud: cleanliness, pollution, electricity, drainage, water, transportation, road, garbage, traffic

Issues aligned to smart city features

Top six sector preferences

- Transportation & Mobility — 30% — 01
- Water Supply & Sewage — 25% — 02
- Waste & Sanitation — 22% — 03
- Environment & Sustainability — 12% — 04
- Safety & Security — 3% — 05
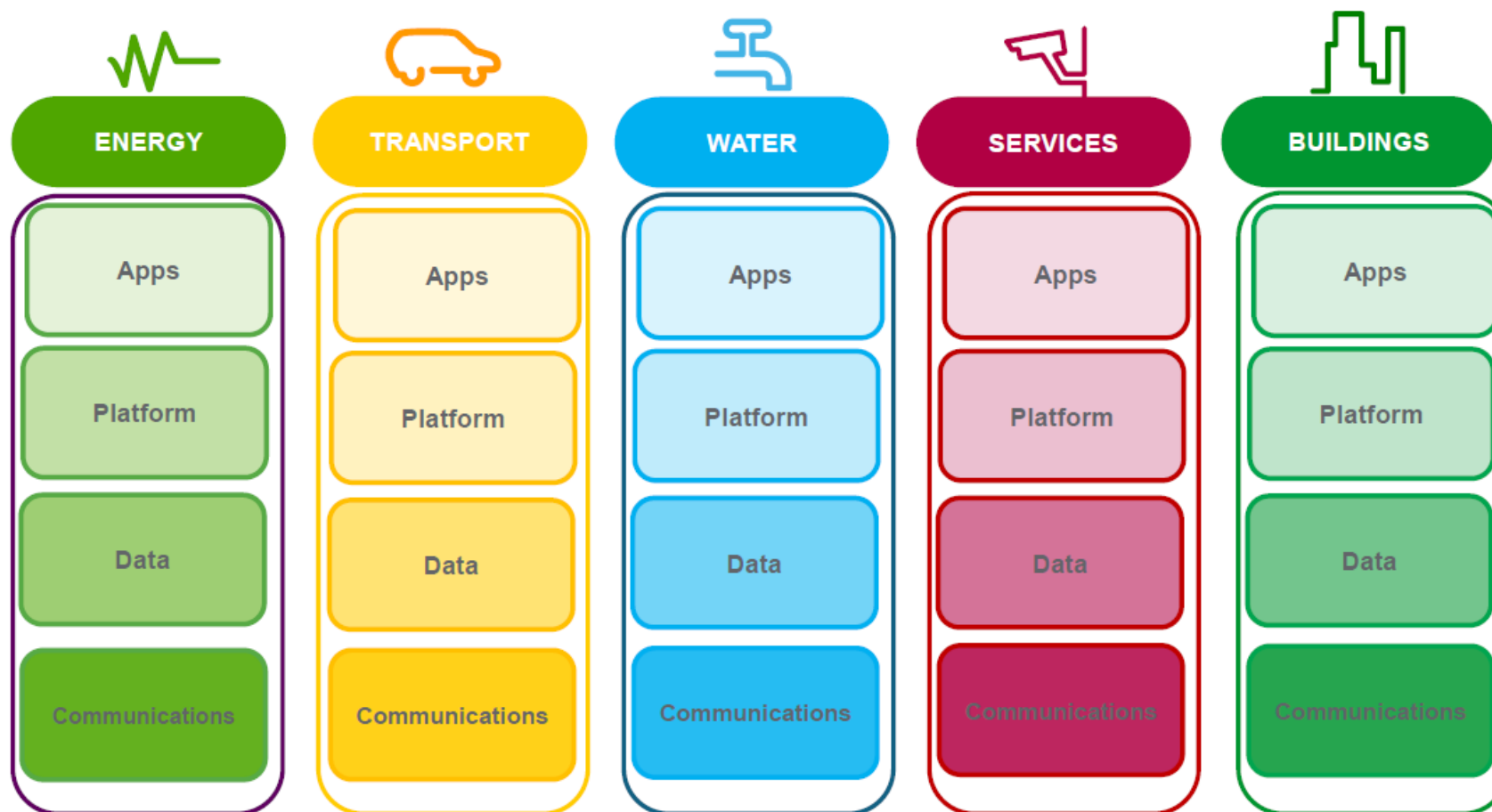- Energy — 2% — 06

Stakeholder collaboration

As cities embark on their own journey to 'smart', they need to bring in all their stakeholders, including the private sector, from the start

Governments
Includes National, regional as well as local city officials

Private Investors
Includes international development banks and private organizations

Planners & Developers
Includes real estate developers, urban planners, & property managers

People & Communities

Industry Suppliers
Includes ICT, energy, transportation & infrastructure vendors & service providers

Utilities
Includes city and private electric, water, & gas utilities

NGO's & Associations
Includes all local organizations - citizens, businesses & NGOs

Top opportunities for shaping the future of cities through digital and emerging technologies for improving service delivery
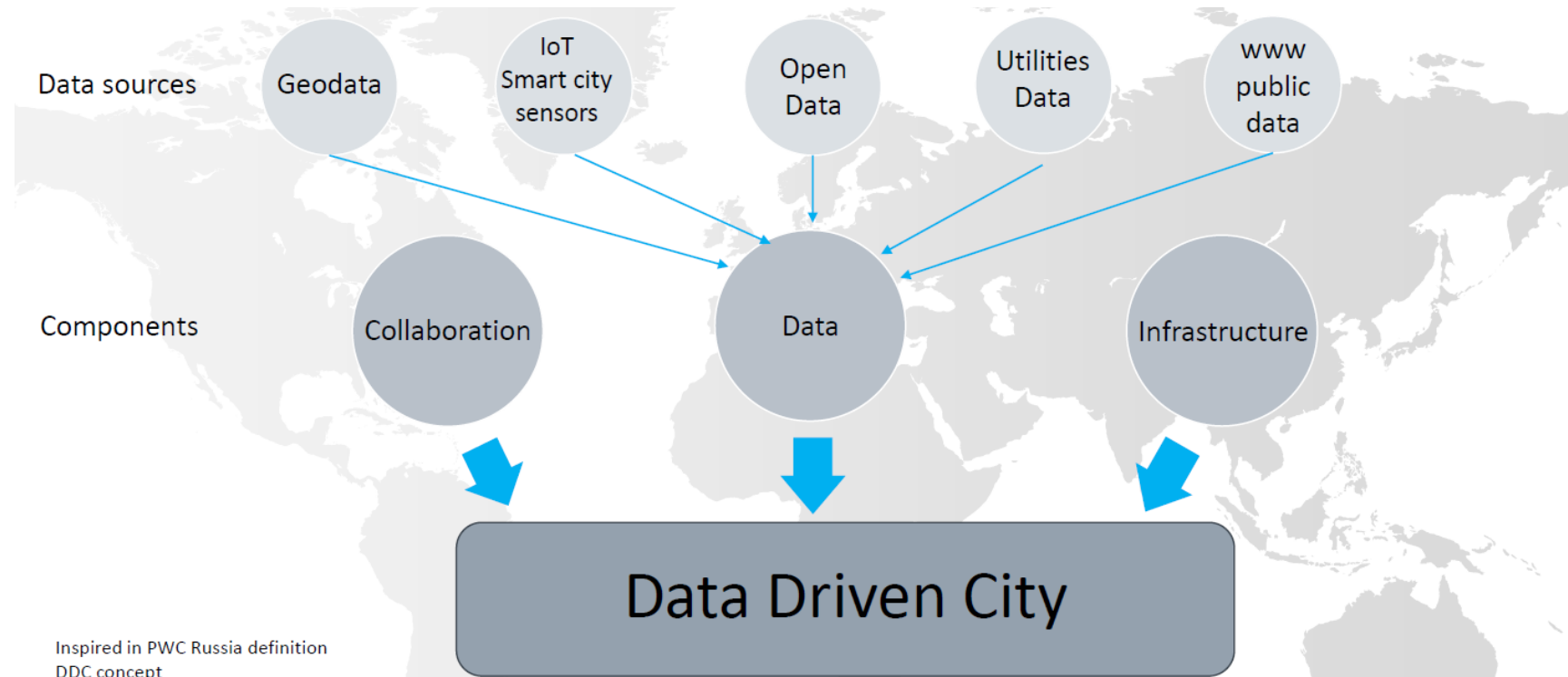
Smart Infrastructure and Connectivity

Digital and emerging technologies enable the creation of smart infrastructure, IoT sensors, smart grids, and connected devices can optimize the management of resources like energy, water, and waste

Data-Driven Decision-Making:

With the proliferation of data from various sources, cities can harness big data analytics and artificial intelligence to make informed decisions. Data-driven decision-making enhances service delivery by targeting interventions more effectively.

Data sources: Geodata, IoT Smart city sensors, Open Data, Utilities Data, www public data

Components: Collaboration, Data, Infrastructure

Data Driven City

Inspired in PWC Russia definition DDC concept

Transport and Mobility

Single biggest issue

People have to wait for at least

20 minutes

before they get a bus

Only about a

5th

of all commuters use public transport leading to a big push on private vehicles

Pedestrian safety remains another major area of concern as

1/4th

of the city does not have footpaths and even where they exist, they are marred by significant obstructions

Average trip length is already at

10 kms

today which will increase in future with the city expanding into the hinterlands

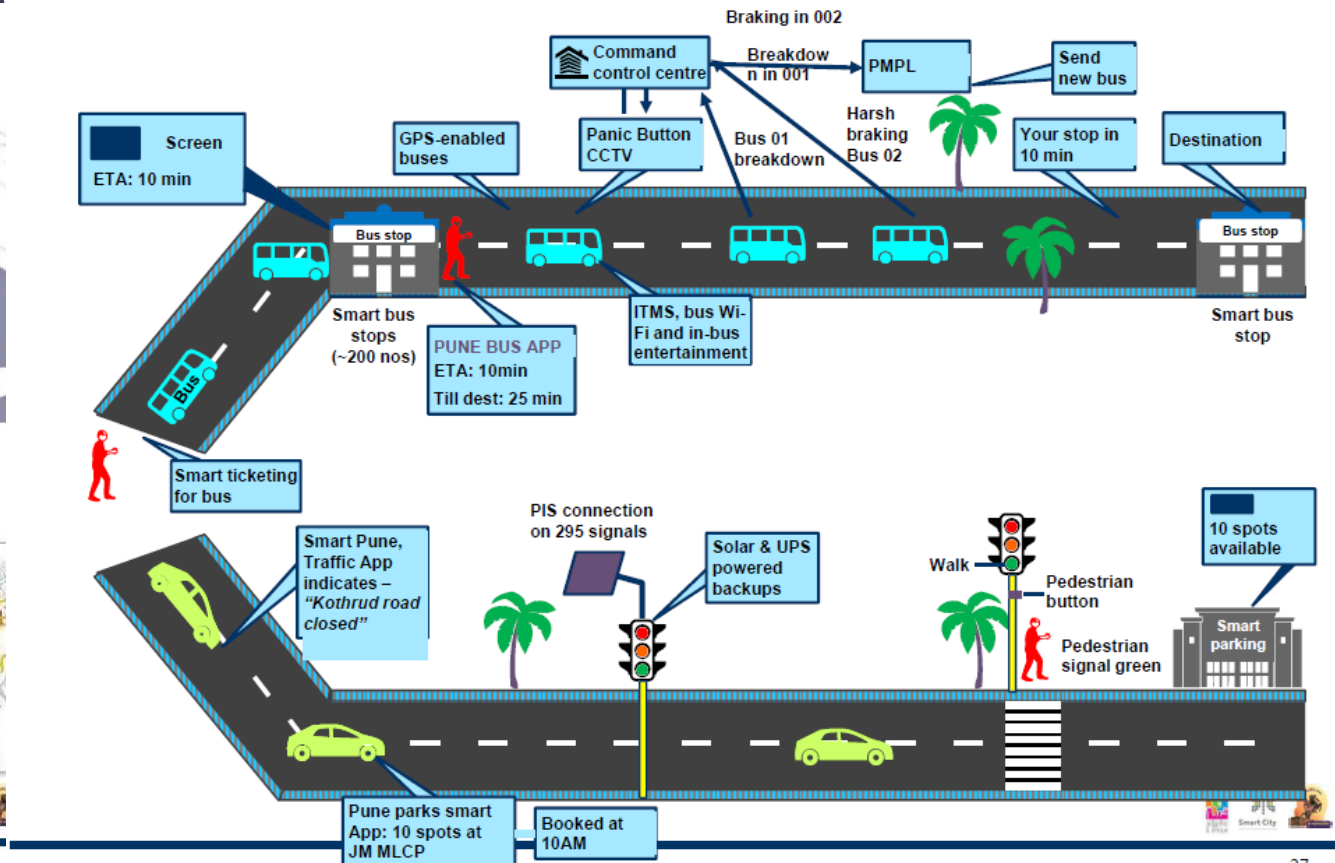| Sector	Metric	From	To	Benchmark
Transport and mobility	• Public transport usage (% of trip share)	• 18%	• 40%	• >50%
	• Number of buses (# per Lakh population)	• 46	• 79	• >55
	• Non-motorized vehicles (NMT) usage (%)	• 33%	• 50%	• >50%
	• Average traffic speed (km/hr)	• 18	• 22-23	• -

Smart Mobility and Transportation

Digital technologies offer the potential for transformative improvements in urban mobility.. Efficient transportation systems contribute to better service delivery by reducing commute times and making access to essential services easier.

Urban Planning and Design

Digital technologies offer powerful tools for urban planning and design. Virtual reality, augmented reality, and geospatial mapping enabling stakeholders to visualize and simulate urban development projects before implementation. This is helping identify potential issues and optimize city layouts for better service delivery and quality of life.

Digital Health and Telemedicine

Tele-surveillance

Tele-diagnosis and tele-treatment

Tele-triage and tele-monitoring

Telemedicine application model

Tele-surgery

Tele-education and tele-conferencing

Tele-radiology

- Emerging technologies like telemedicine and digital health platforms can revolutionize healthcare services in urban areas.
- Remote access to medical consultations and monitoring, enabling efficient and accessible healthcare delivery, especially in densely populated cities with limited healthcare facilities.

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Enhancing Service Delivery for Urban Ecosystems

Through Integrated Digital Systems

- The future of cities lies in the integration and application of digital and emerging technologies to improve service delivery, foster sustainability, and enhance the overall quality of life for residents.

- Policymakers, urban planners, and technologists must work together to seize these opportunities and shape cities that are efficient, inclusive, and responsive to the needs of their inhabitants.