



# ● BIM To Smart and Sustainable Infrastructure

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By Royal Charter





# ● A purpose-led organization

For more than 120 years BSI has benefitted the world in a profoundly unique way.

Incorporated by Royal Charter, we reinvest our profits to foster progress and increase trust between consumers, governments and organizations.

We help organizations achieve their goals and grow sustainably, while balancing the need for profit with the needs of the planet and its people.

Ultimately, we help business and society thrive together in an increasingly digital and more sustainable world.



By Royal Charter

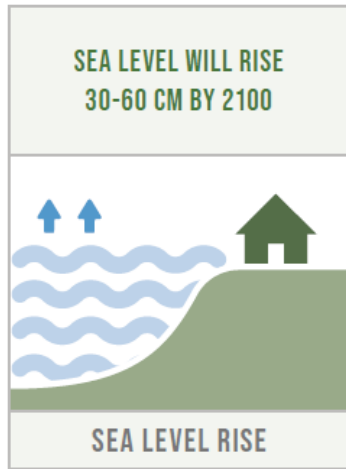
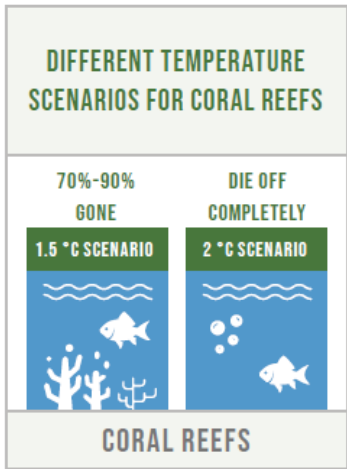
# ● Climate Change



## CLIMATE CHANGE

IS HUMANITY'S "CODE RED" WARNING

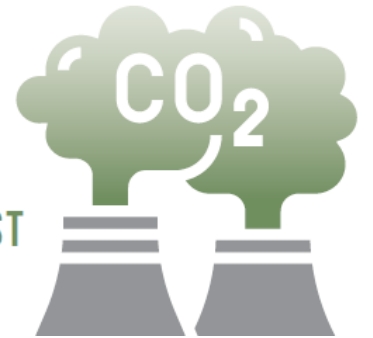
OUR WINDOW TO AVOID CLIMATE CATASTROPHE IS CLOSING RAPIDLY



ENERGY-RELATED CO<sub>2</sub> EMISSIONS INCREASED

6% IN 2021

REACHING HIGHEST LEVEL EVER



Source: UN – The Sustainable Development Goals Report 2022

# ● Rapid Urbanisation

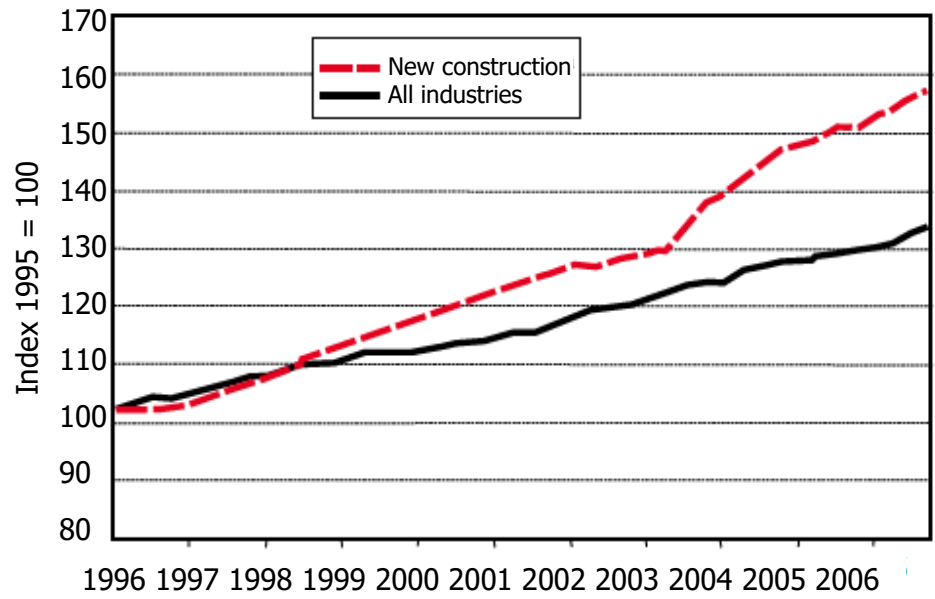
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~**1.7 million** people are added to global urban population **every week**

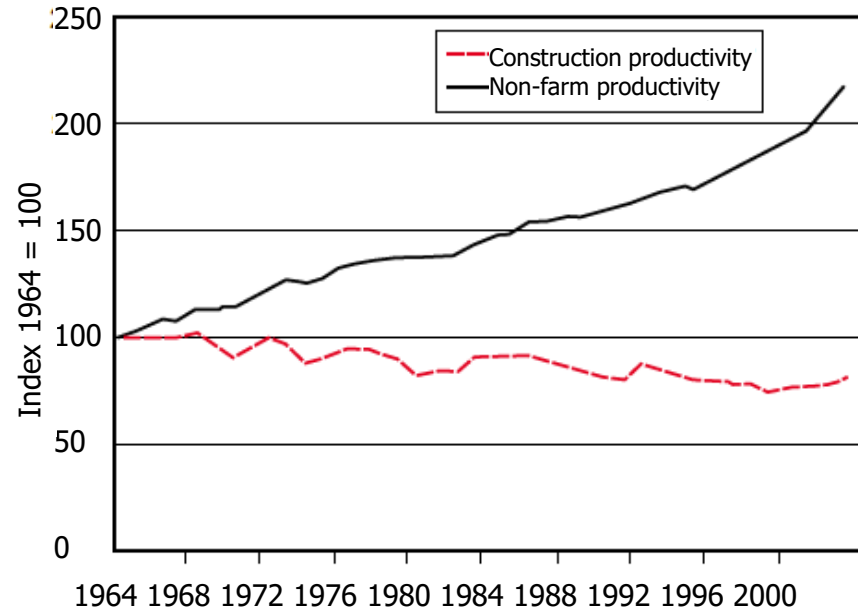
~**2.5 billion** projected to be added to the world's urban population by 2050



# ● Cost and Productivity



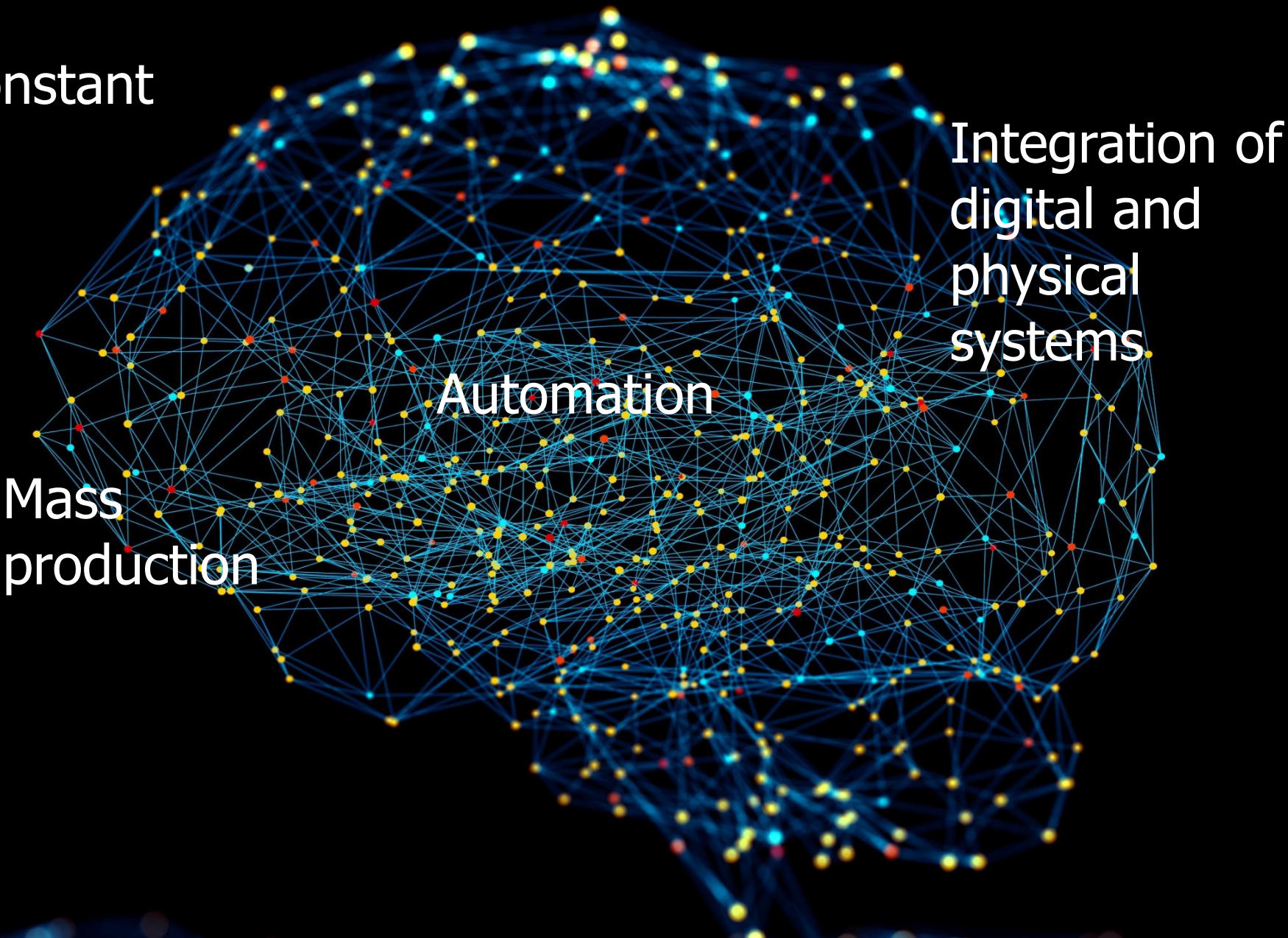
**Cost**



**Productivity**

These charts relate to UK data but cost and productivity problems exist in many other countries

Innovation - a constant



Integration of digital and physical systems

Automation

Mass production

Mechanization

# ● Sustainable Development Goals

The 2030 Agenda for Sustainable Development, adopted by all United Nations Member States in 2015, provides a shared blueprint for peace and prosperity for people and the planet, now and into the future. At its heart are the 17 Sustainable Development Goals (SDGs), which are an urgent call for action by all countries - developed and developing - in a global partnership.





# ● Global leadership – Local opportunities



## The UAE Digital Government Strategy 2025

- Leaving no one behind
- Resilient
- Fit for the digital age
- User-driven
- Digital by design
- Data-driven
- Open by default
- Proactiveness



# ● Smart cities and communities

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A smart city should be described one that ‘dramatically increases the pace at which it improves its **Sustainability** and **Resilience**... by fundamentally improving how it engages society, how it applies **Collaborative leadership** methods, how it works across disciplines and city systems, and how it uses **Data and Integrated technologies**... in order to **transform services and quality of life** to those in and involved with the city (residents, businesses, visitors).

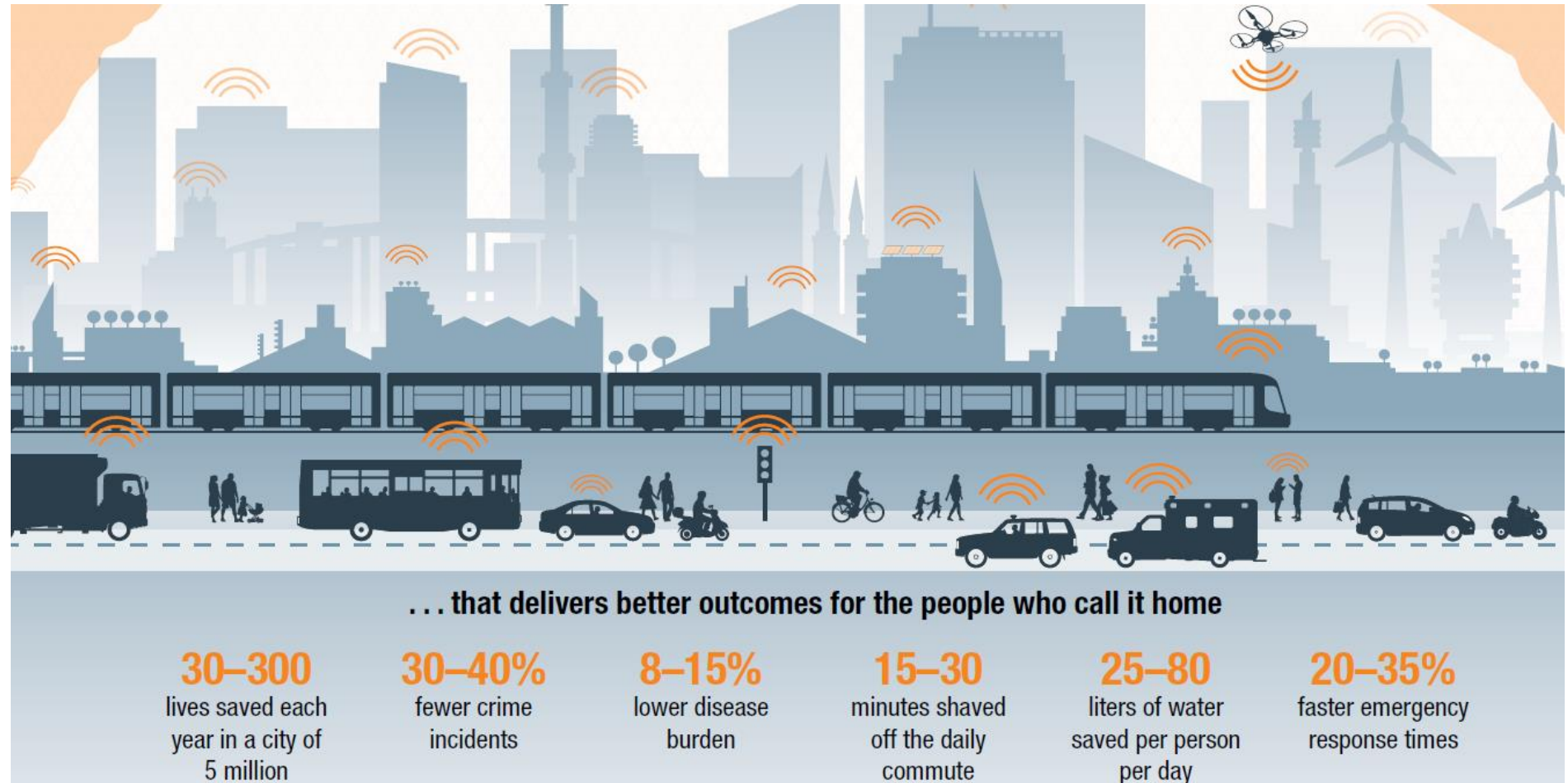
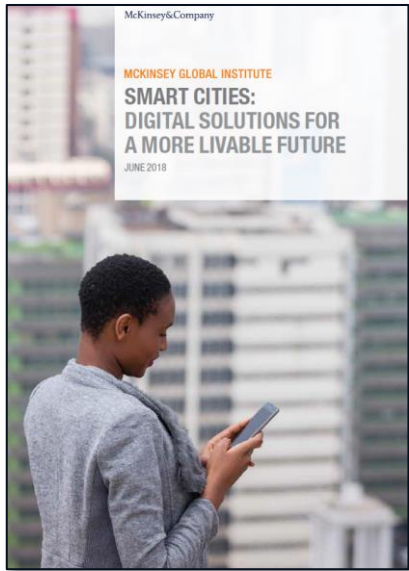
ISO 37106:2018

Sustainable cities and communities — Guidance on establishing smart city operating models for sustainable communities

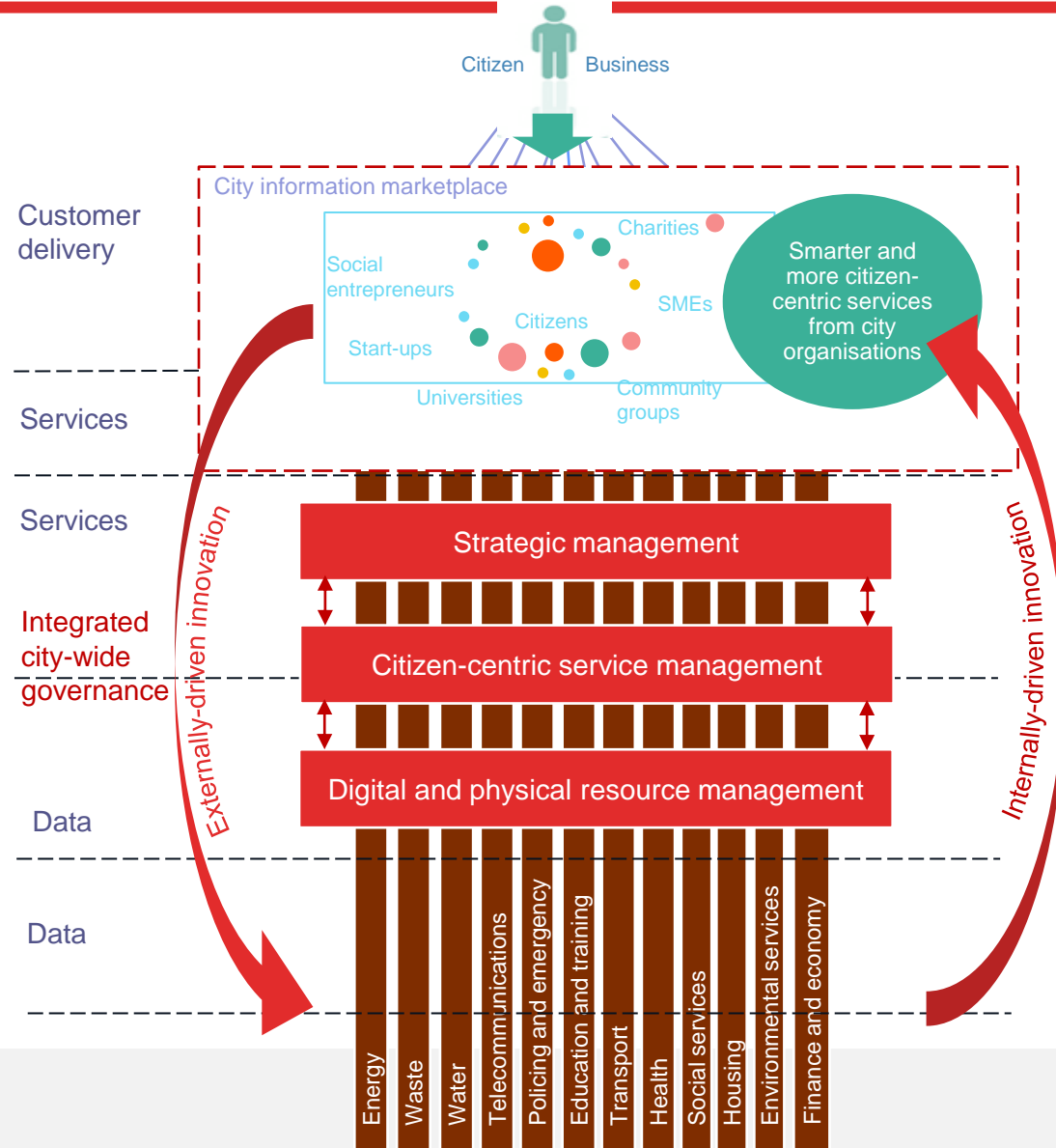


# Smart cities and communities

Smart cities use data and technology to make better decisions



# Smart City - Operating model



*"A twin track approach needs to be taken to the smart transformation of city services":*

- Enabling externally-driven, stakeholder-led innovation by opening up city data
- Delivering internally-driven, city-led citizen-centric service transformation'

Source: ISO 37106

# ● Standards enabling smart and sustainable development

**Strategic/  
Leadership**

## **ISO 37101**

- Management system for sustainable development

## **ISO 37106**

- Guidance on establishing smart city operating models for sustainable communities

**Based on PAS 181**

## **ISO 37100**

- Sustainable cities and communities- Vocabulary

**Input from PAS 180**

**Process/  
Management**

## **ISO/IEC 30182**

- Smart city concept model - data interoperability

**Based on PAS 182**

## **ISO/DIS 37156**

- Data exchange and sharing for smart community infrastructure

**Technical /  
Performance**

## **ISO 37120**

- Indicators for city services and quality of life

## **ISO 37122**

- Indicators for smart cities

## **ISO 37123**

- *Indicators for resilient cities*

# ● Information Management to Smart Infrastructure

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