

BSI supporting Smart and Sustainable Cities and Communities

A global best practice approach

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Shaping and Supporting Best Practice



By Royal Charter



Inspiring trust for a more resilient world

- We work for the public good to improve, standardize and simplify; business systems, products and services
- Profit is reinvested back into BSI and never distributed
- We are independent from outside influence
- Working constantly to serve industry
- Committed to finding new ways to deliver services
- Focussed upon enabling organizations to become more resilient;
 - survive
 - stabilize
 - rebuild
 - be resilient

Around the world, we enable businesses to turn best practices into habits of excellence

84,000
clients

in
193
countries

50%
of the
Fortune
500

84%
of the
FTSE 100

81%
of the
Nikkei
225
Index

BSI – From Strategy to Sensor:

Shaping and supporting digital innovation in the Built Environment



Smart Cities

Smart Communities

Smart Assets

Smart Systems

Smart Products

News
BAM is one of the First in the World to achieve BSI Kitemark for BIM



BSI Kitemark and Emergency Lighting
Our Automatic Monitoring Systems and IoT M-Web controller are now Kitemarked





Digital Transformation in cities: How standards can help

How to accelerate Smart Cities and Communities development

How to address the challenges

Challenges

- Moving from innovation to **global scale**
- **Silos** (organisations and systems) make it hard to connect the dots across programmes to **release value**
- Buyers **not sufficiently engaged**
- **Trust and security concerns**
- **Complex** standards and security landscape – with lots of **gaps**

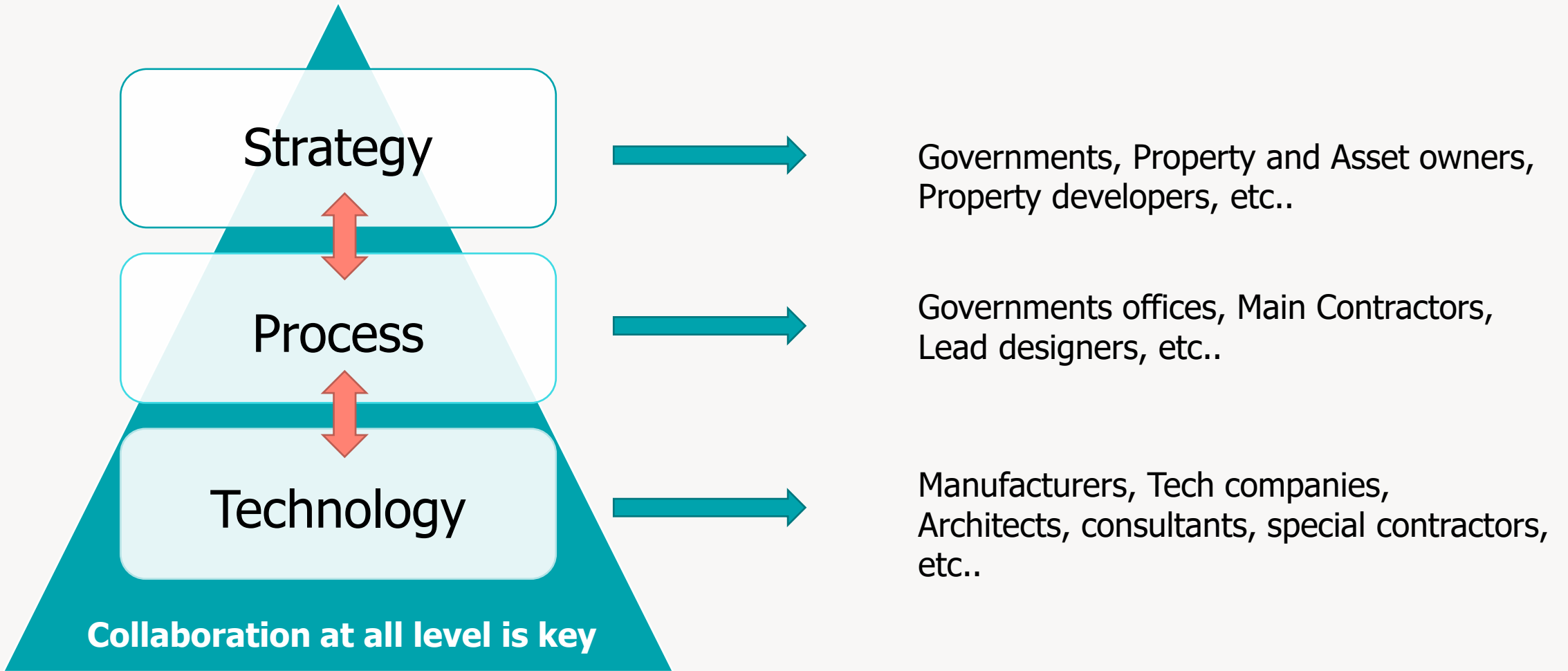
Standards can address different **needs** of stakeholders:

- “**why**” smartness? **STRATEGY**
- “**how**” smart initiatives can be executed across multiple sectors? **PROCESS**
- “**what**” kind of solution or application? **TECHNICAL SPECIFICATION**



Embracing Digital Transformation

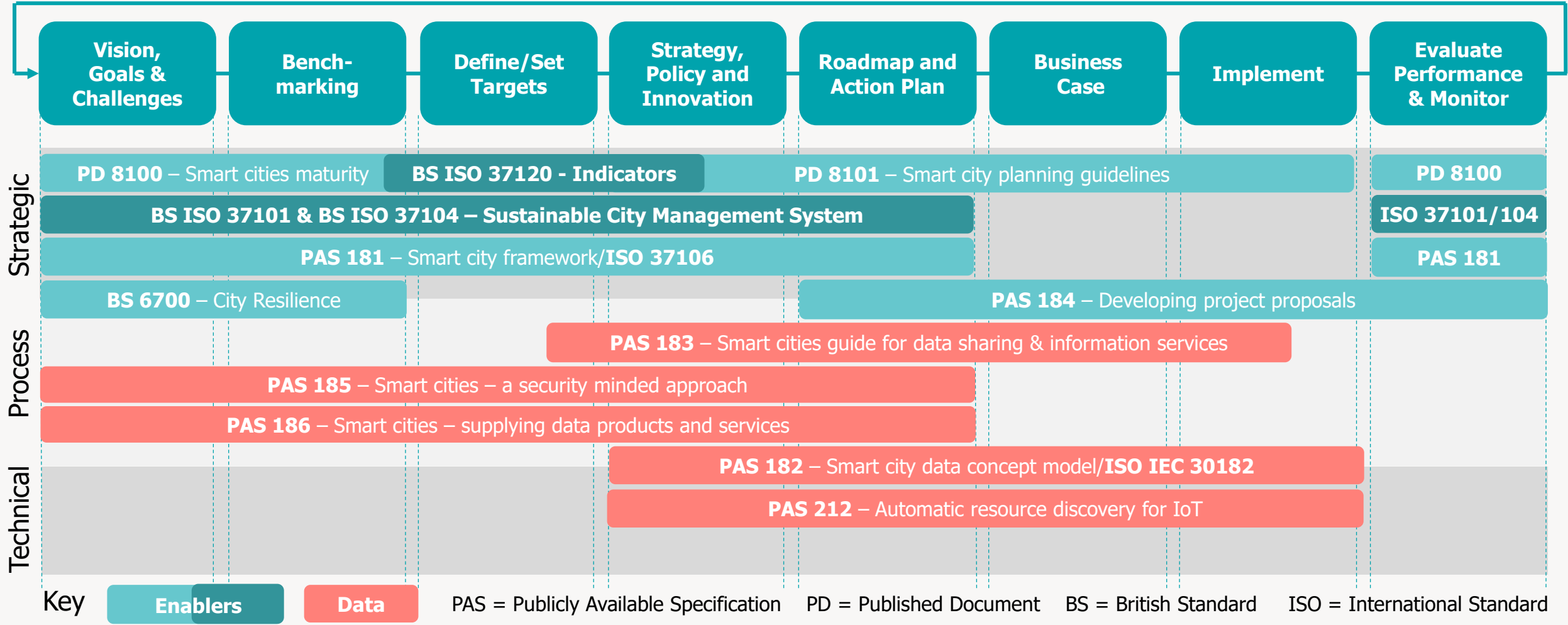
The importance of collaboration



Portfolio approach to smart city standards

Tools for supporting the development of smart city strategies

bit.ly/BSI-Cities





Examples of Standards: an ISO approach

Smart communities - Strategy

ISO 37101 - Content

This International Standard establishes requirements for a management system for sustainable development in communities.

The intended outcomes of a management system for sustainable development in communities include:

- managing sustainability and fostering smartness and resilience in communities, while taking into account the territorial boundaries to which it applies;
- improving the contribution of communities to sustainable development outcomes;
- assessing the performance of communities in progressing towards sustainable development outcomes and the level of smartness and of resilience that they have achieved;
- fulfilling compliance obligations.

**Can be used in conjunction with ISO 37106
ISO 37104 gives guidance for implementation**

bsi.

BS ISO 37101:2016



BSI Standards Publication

Sustainable development in communities — Management system for sustainable development — Requirements with guidance for use

bsi.



Smart communities - Strategy

ISO 37101 – Supporting UNSDG

ISO 37101 helps Cities and Communities support the United Nations Sustainable goals, by taking in consideration :

- **6 purposes of sustainability**
- **12 sustainability issues to consider against each purpose**



Smart communities – Process/Management

ISO 37106 - Content

guidance for leaders in smart cities and communities on how to develop an open, collaborative, citizen-centric and digitally-enabled operating model for their community that puts its vision for a sustainable future into operation.

It focus is on the enabling processes by which innovative use of technology and data, coupled with organizational change, can help each community deliver its own specific vision for a sustainable future in more efficient, effective and agile ways.

Can be used in conjunction with ISO 37101 management system

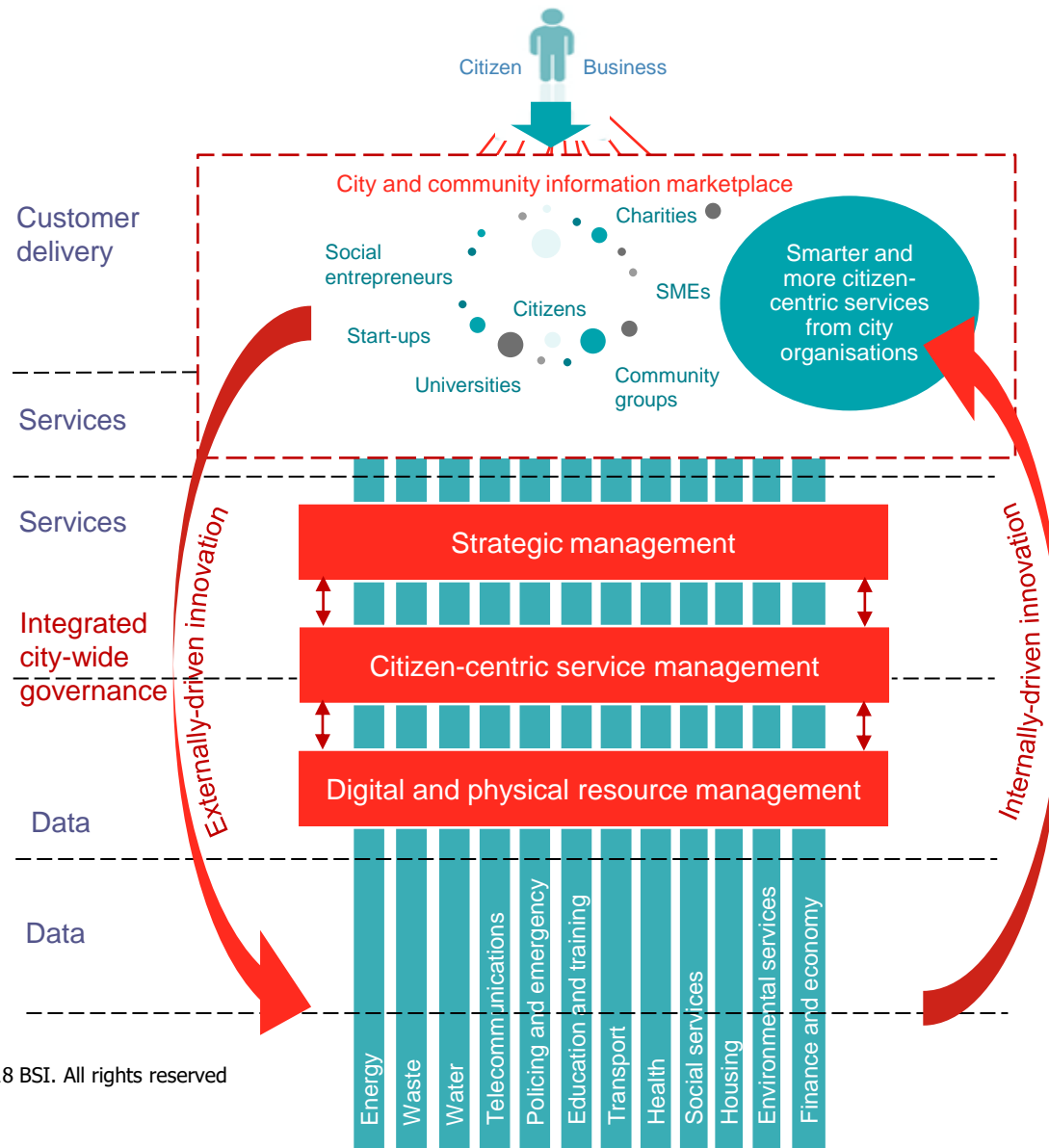


**Sustainable cities and communities —
Guidance on establishing smart city operating
models for sustainable communities**



The need for Smart Cities & Communities

Integrated Community operating model – ISO 37106



"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'



Smart cities and community Kitemark

BSI Smart Cities and Communities Kitemark

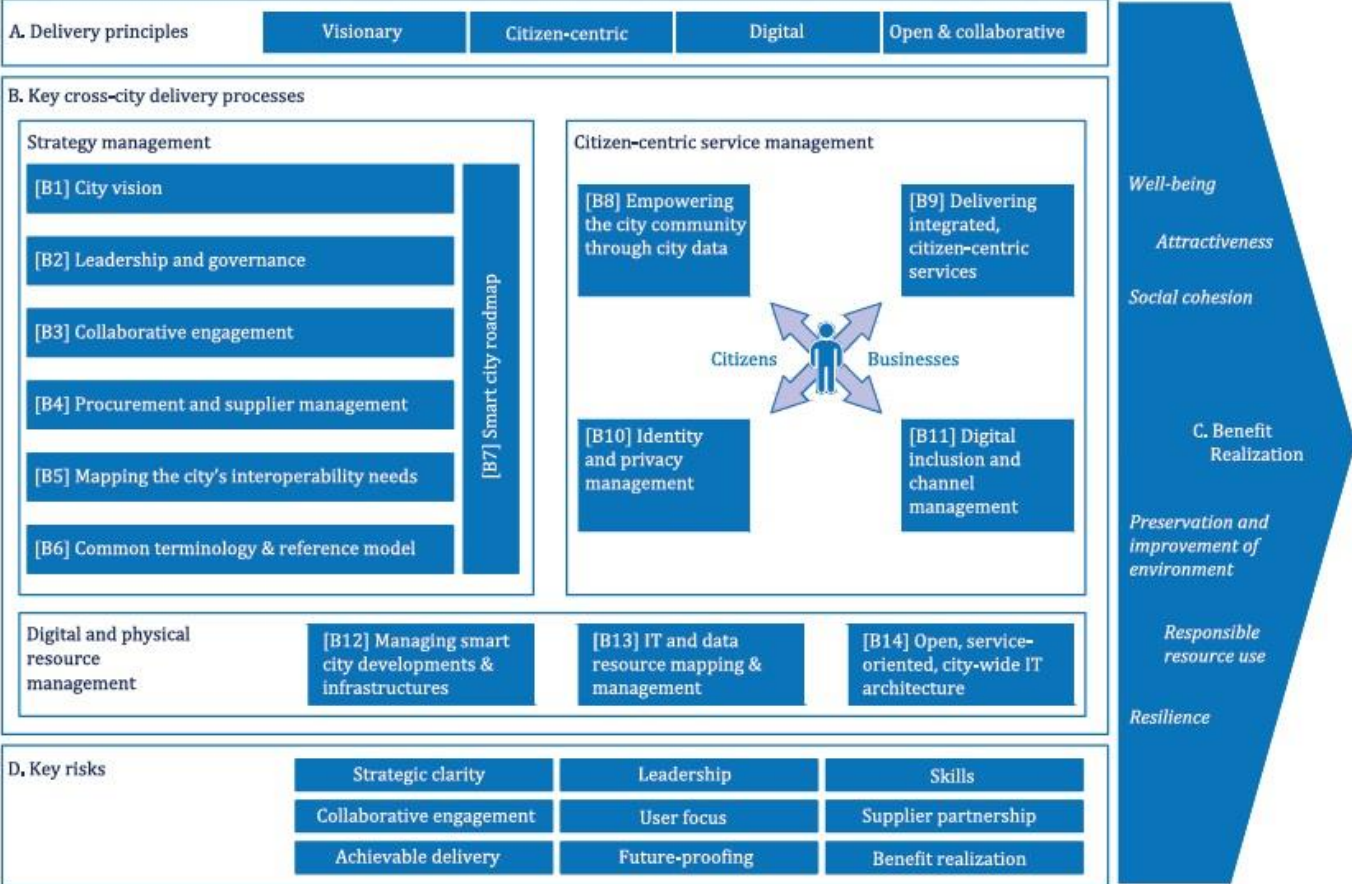
Certification based on the ISO 37106

Assesses mainly against the requirements of ISO 37106

Scores the client 1-5 in each of the areas individuated in the standard. **Important to note that a low score is not a failure**; it demonstrates a low development/ **low priority**

The client is assessed against all areas, so needs to have considered each one, even if the majority are low priority/ not advanced.

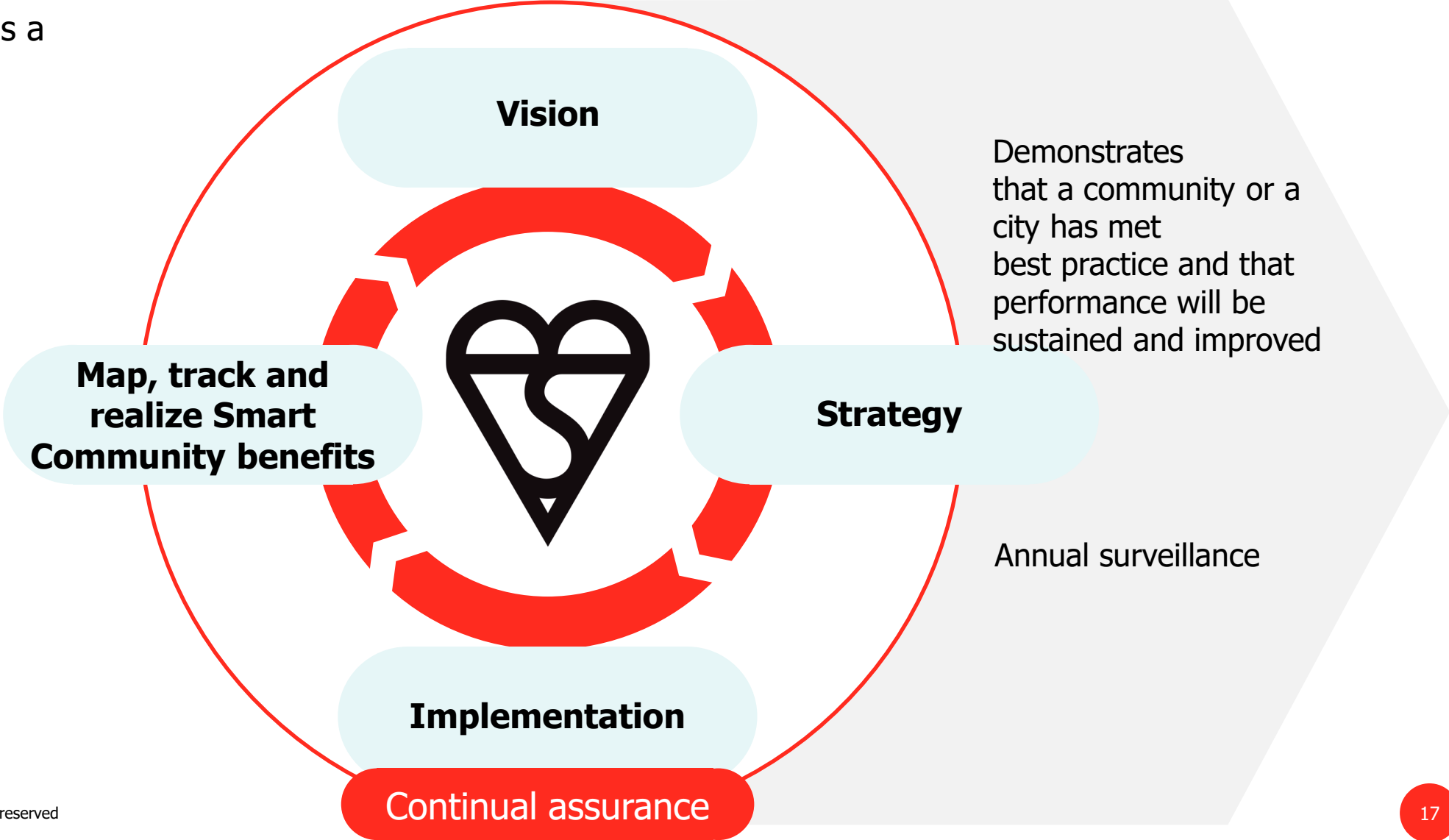
Can be offered to a city/community authority, with individual boroughs or districts, businesses and municipal functions covered under the scope.



BSI Smart Cities and Communities Kitemark

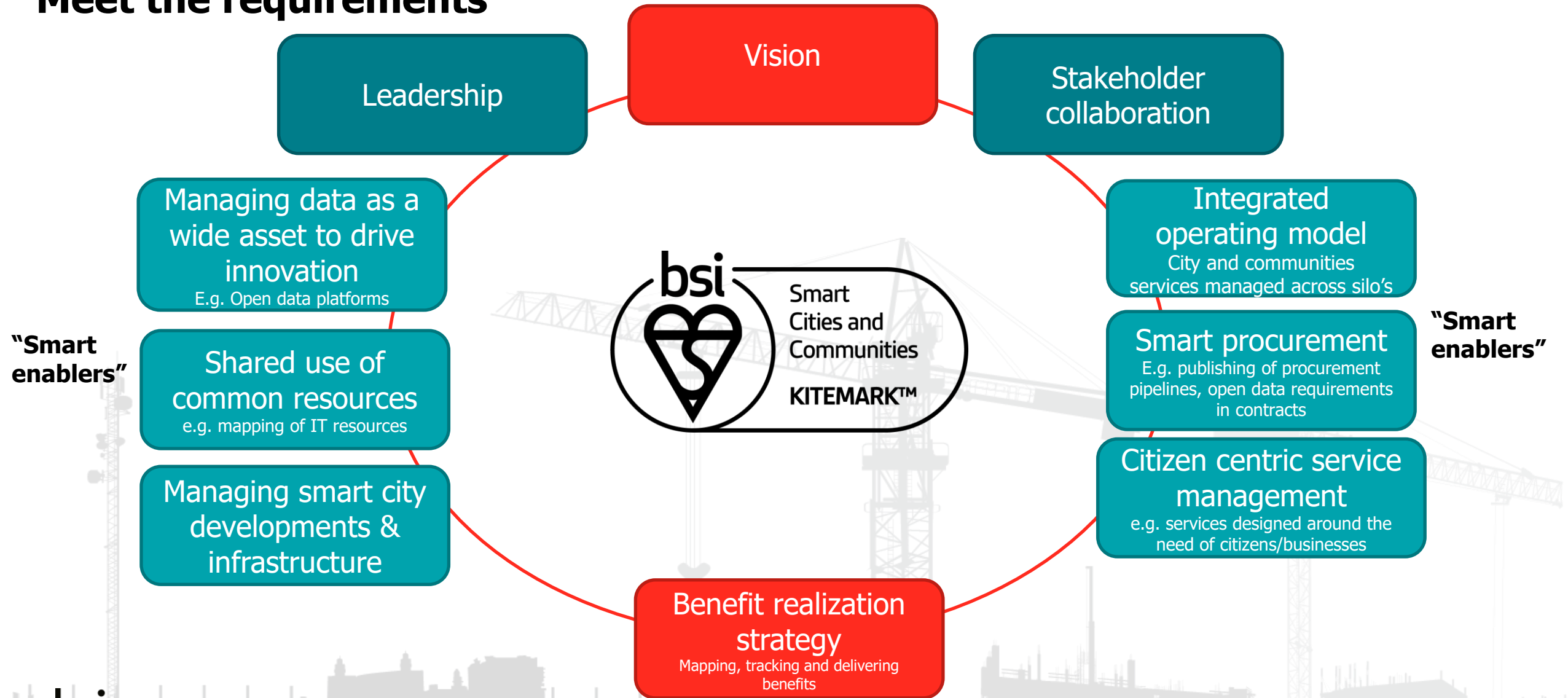
A process of continual improvement

The Kitemark provides a process of continual improvement



BSI Smart Cities and Communities Kitemark

Meet the requirements



Wider Smart Community **benefits**

Benefits of Kitemark

Better policy making & decision making

Increased innovation

Improve collaboration

Digital transformation

Increased citizen engagement

Improved transparency

Global competitiveness

City cost saving



The value of Kitemark

Improved citizen and visitor experience

Attract investment

Job creation

Economic growth

Improved productivity

Good place to do business

Sustainability

Better quality of life

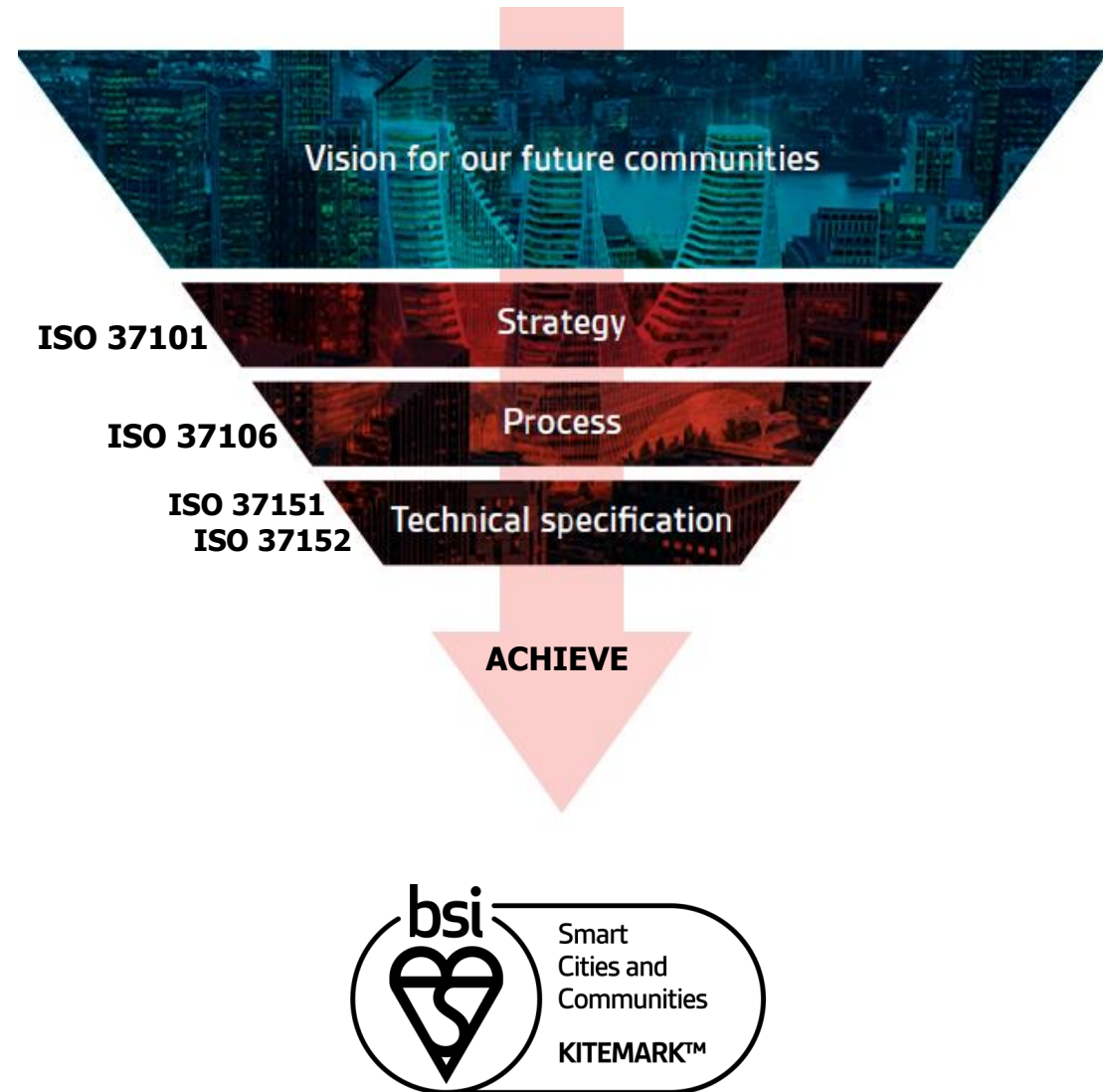
Efficiency in government

Better public services

Driving continual improvement

Smart Cities and Communities Kitemark

Pilot phase



During the assessment we will look at :

- Setting up a Sustainable Strategy (ISO 37101), looking how to deploy benefits such as : Resilience, wellbeing, sustainability, comfort, responsible use of resources and attractiveness.
- Setting up smart processes (ISO 37106), looking at how you create a smart strategy, using technology in order to deploy benefits all across the different functionalities in the plaza
- Setting up Technical specifications (ISO 37151 and ISO 37152), in order to evaluate your digital and IT performances and your common framework for development and operation, from an infrastructure perspective.

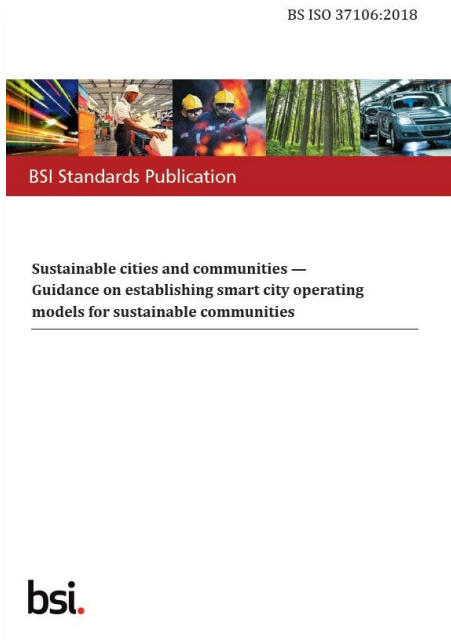


Smart cities and communities Kitemark- Demonstrating Compliance

BSI Smart Cities and Communities Kitemark

Assessing the maturity of Smart Cities and Communities

Assesses the maturity of Smart Cities and Communities



Level 1: Pre-development

The City/Community has not a clear idea of a vision and processes to meet the ISO 37106 are not put in place yet

Level 2: Developing Smart City

The City/Community is developing processes to meet ISO 37106

Level 3: Collaborative Smart City

There are processes in place to meet the requirements of ISO 37106

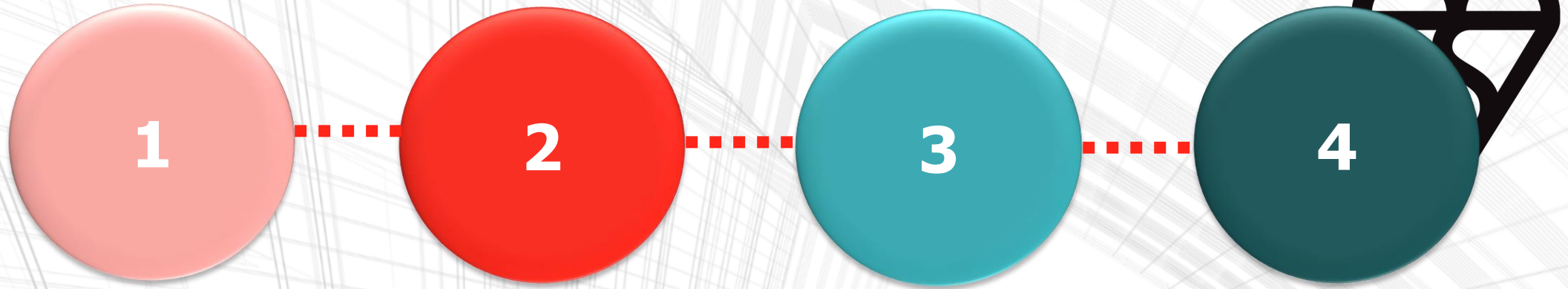
Level 4: Leading Smart City

The City/Community is implementing ISO 37106 processes, improving, measuring success

Level 5: Visionary Smart City

The City/Community is implementing a process of continual improving

BSI Smart Cities and Communities Kitemark Steps



Purchase the Standards

Gap Analysis against Kitemark requirements to inform strategy

BSI Smart Community Kitemark assessment and certification

Ongoing marketing, engagement and continual surveillance audits

Celebrating your success

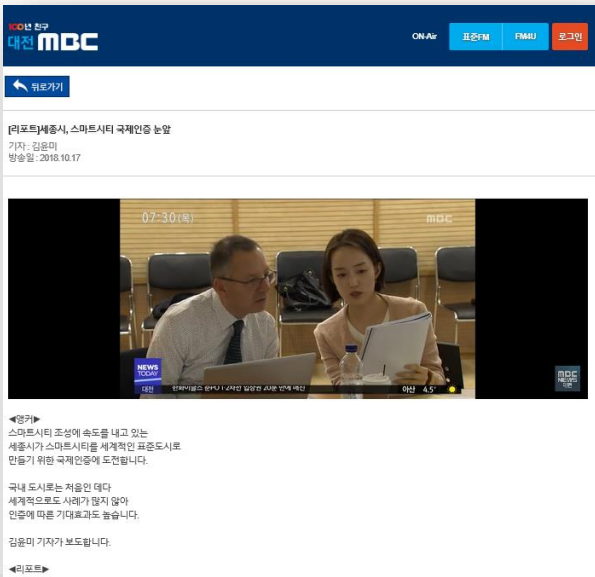
BSI Smart Cities and Communities Kitemark

Case Study : South Korea

After Sejong's success, three other cities have been certified:

- **Hwaseong**
- **Goyang**
- **Gawcheon**
- **Yangju**
- **Seocho District in Seoul**

Having a defined View and Roadmap is key in setting up future cities. The Land and Housing Corporation of South Korea shares this view and has been working closely with cities in order to have a common Smart city development framework.



Sejong City, Korea Built Environment

BSI Smart Cities and Communities Kitemark
based on ISO 37106

Company background
Sejong City in South Korea was selected as a city for a national smart city pilot project in January 2018 by the Korea Metropolitan Government for its focus on citizen consultation. The project aims to improve the quality of life for citizens and to solve urban problems by the application of technologies such as Big Data, Artificial Intelligence (AI) and the Internet of Things (IoT). A key aim is to establish an infrastructure for transport, safety, the environment and energy to become the top 200 (approximately 500,000 people) well-being in Sejong.

ISO 37106
BSI ISO 37106:2018 Sustainable cities and communities – Guidance on establishing smart city operating models for sustainable communities was created following the joint process of research and engagement with city leaders to define a smart operating model for cities, which enables them to operationalise their vision, strategy and policies in a faster pace.

The benefits:

- Accelerate and make it Sejong City which has helped to enhance its reputation nationally as a leading smart city
- Reduced risk in the process of preparing city services
- Attract to attract investors, businesses and people
- Address the framework to measure the operational performance process which sets the change to make Sejong to the next level of smart city maturity

"We strongly recommend Kitemark Smart City certification based on ISO 37106 for a sustainable and successful smart city construction and operation. This achievement will help Sejong City to provide opportunities to grow into a more mature and innovative city for our citizens"

Chae Hee, Director, Sejong City



SmartCitiesWorld
Infrastructure intelligence in one place

Sejong receives world's first ISO 37106 smart city certification

News | 18 Dec 2018 by SmartCitiesWorld news team

The standard focuses on developing an open, collaborative, citizen-centric and digitally enabled operating model for a smart city.

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Thank you!
Any Questions?