



Overview of BSI and standardisation (Smart Cities & Big Data)

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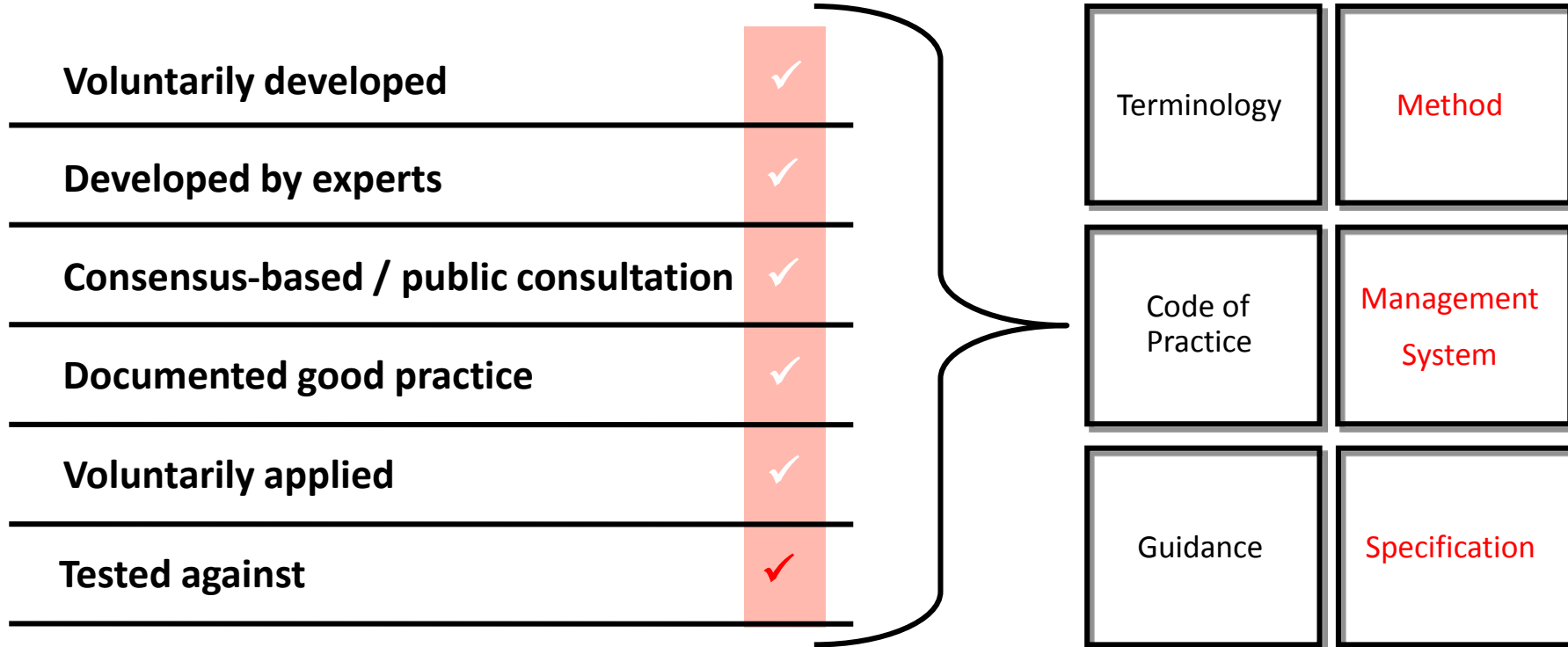
BSI as the National Standards Body

- Established in 1901, Royal Charter Company
- Representing UK interests in international and European standards matters (ISO, IEC, CEN, CENELEC, ETSI)
- BSI is a Royal Charter company independent of government and industry
- Developing voluntary consensus Standards, not Regulations
- Respected around the world, catalogue of 37,000 Standards
- Publishes 2,200 Standards each year (and withdraws 1,000)

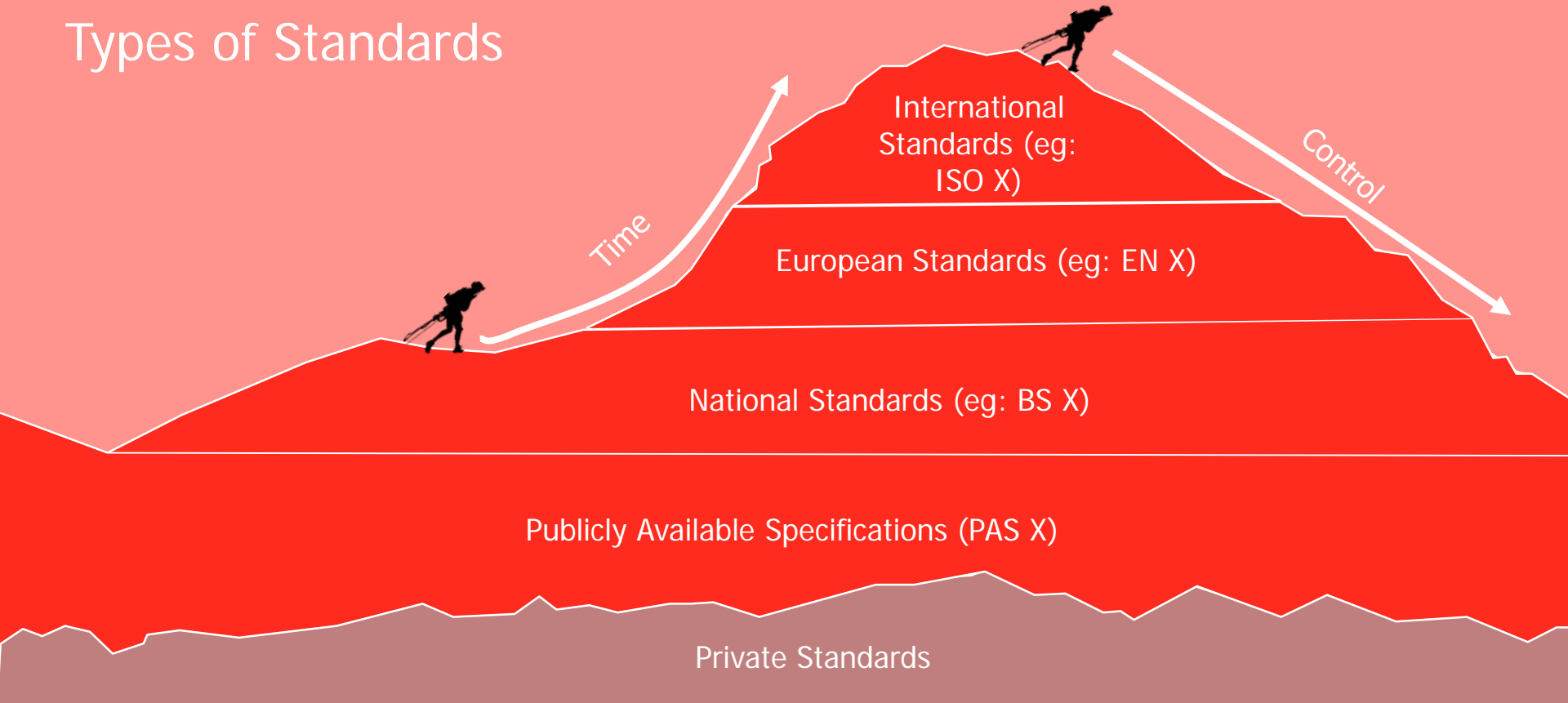


By Royal Charter

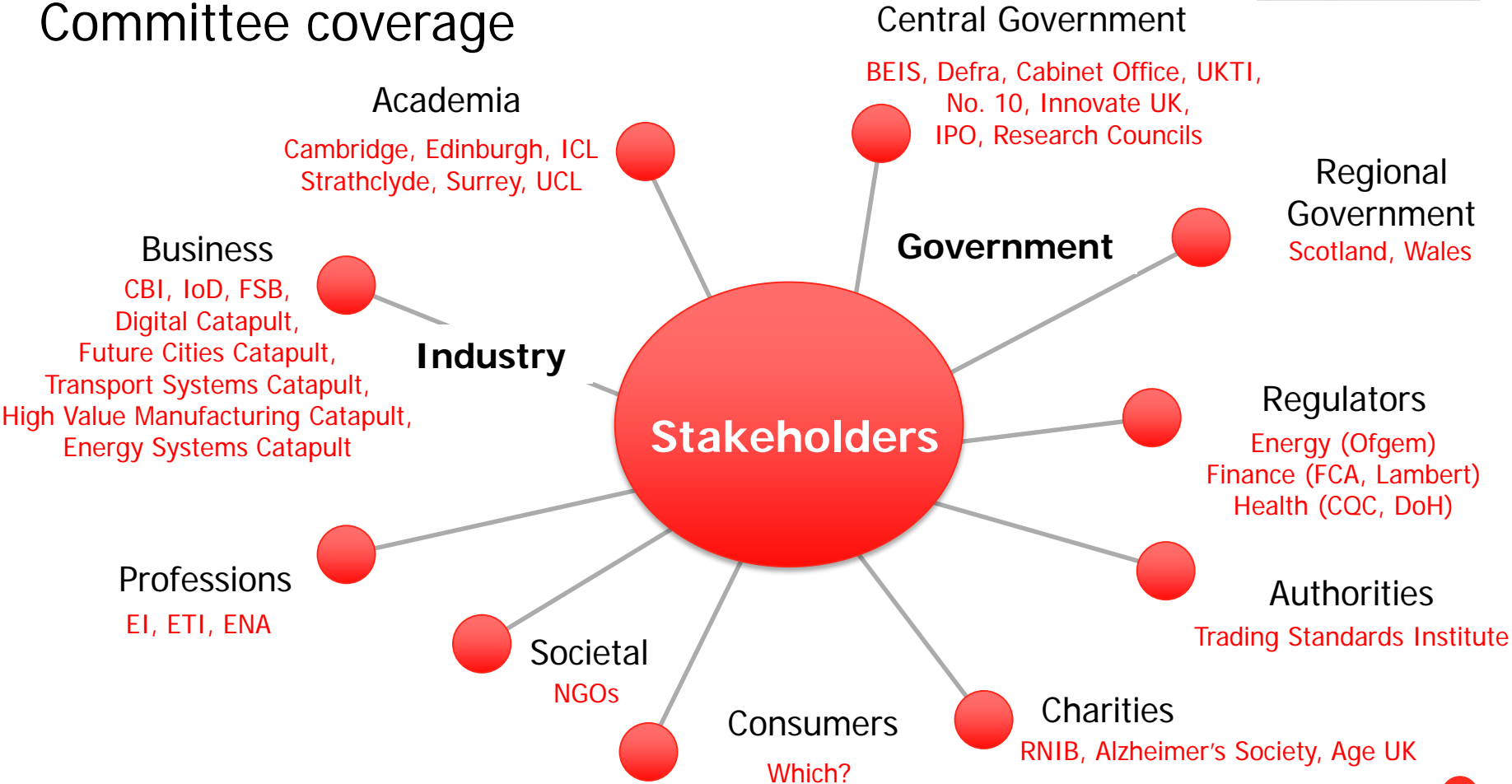
What are Standards?



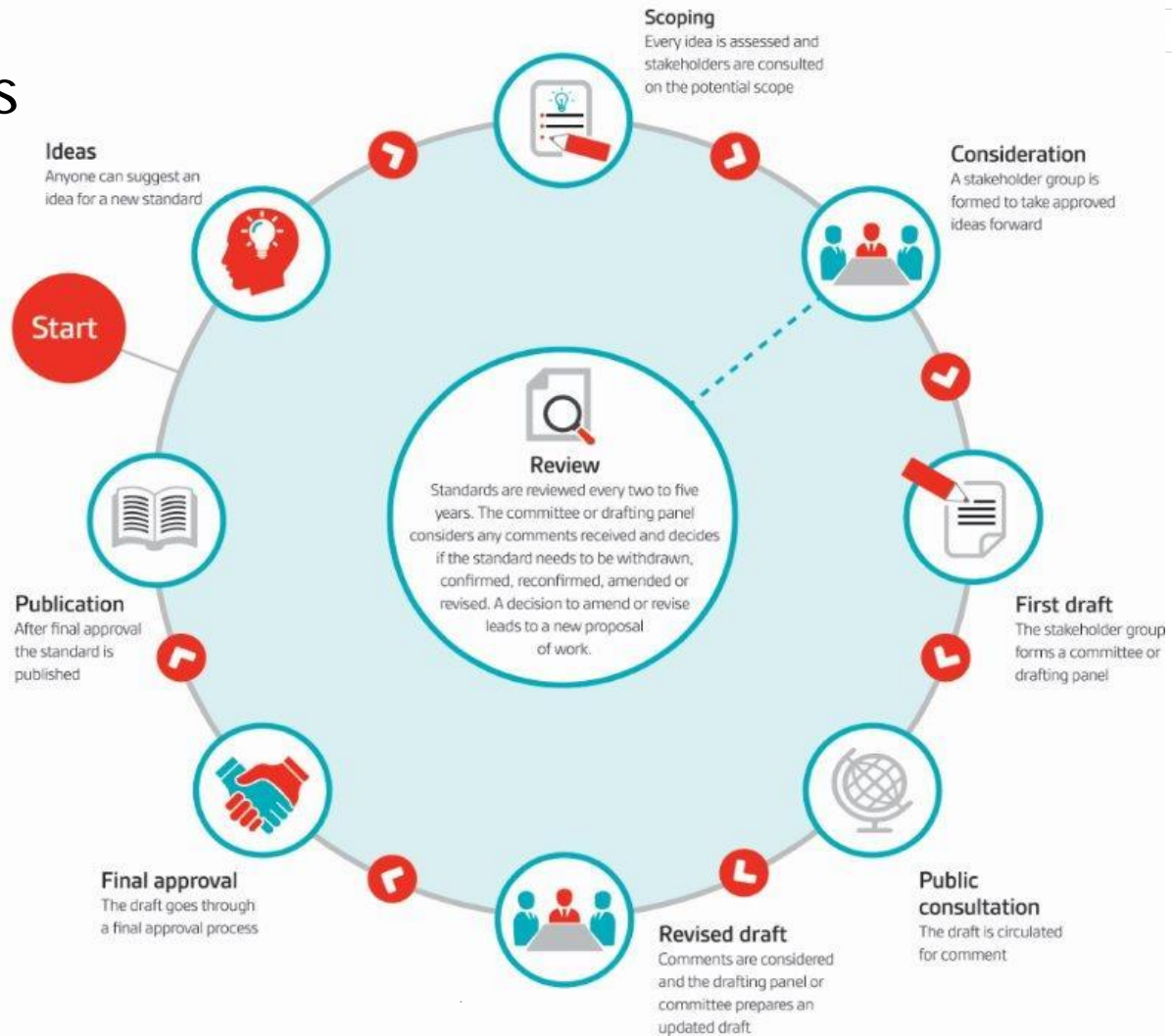
Types of Standards



Committee coverage



How standards are made



Using standards to make cities smarter

Common city challenges

Socio-economic

- Growing population
- Aging population
- Economic prosperity
- Healthcare issues
- Skills & market access
- Job creation & retention
- Infrastructure stress

Political

- Public sector budget
- Changing service needs

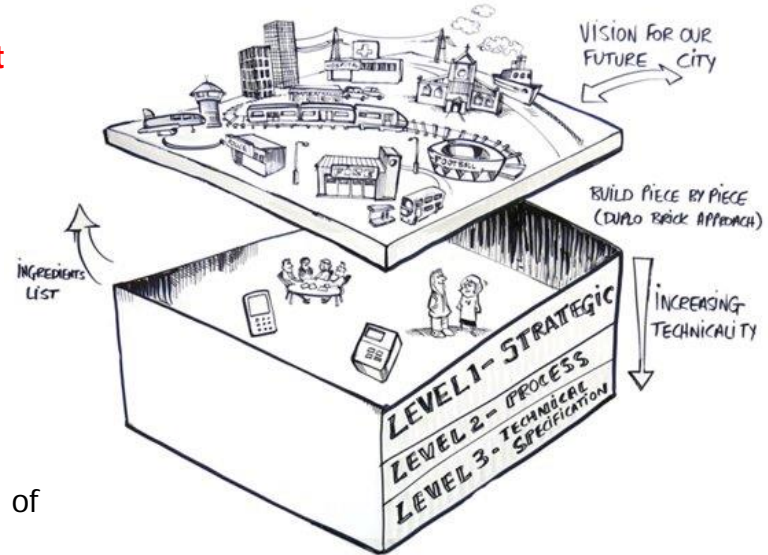
Environmental

- Climate change
- Resource scarcity
- Energy/carbon emission

✓ Provide good practice for **developing smart cities**

✓ Increase **confidence in procurement** of infrastructure and services

✓ Allow the development of **replicable solutions**



Consortium of Partners

- ✓ Cities, businesses, government and other organisations
- ✓ Decide how new and existing standards & best practice should be developed and implemented

Objectives

- ✓ Create right conditions for future UK cities market growth
- ✓ Addressing key market barriers
- ✓ **Standards uptake** through urban innovation projects

BSI Smart City Portfolio of Standards

PD 8100 Smart city **Overview**

Leadership engagement guide, providing useful assessment, and navigation to key BSI guidance

PD 8101 Smart city **Planning**

Best practise for delivering smart development and infrastructure programmes

PAS 181 Smart city **Framework**

Overarching smart city framework addressing key issues in delivering smart programmes

PAS 180 **Terminology**

Basic lexicon of terms

PAS 182 Smart city **Data Concept Model**

Ontology that sits above data sets to make city data more discoverable

PAS 212 Automatic **resource Discovery for IoT**

Specification that works with linked-data for exposing information about IoT over the web

PAS 183 **Decision Framework for Data Sharing & info. services**

Decision making framework addressing wider data-sharing issues

PAS 184 **Good Practices for delivering SC solutions**

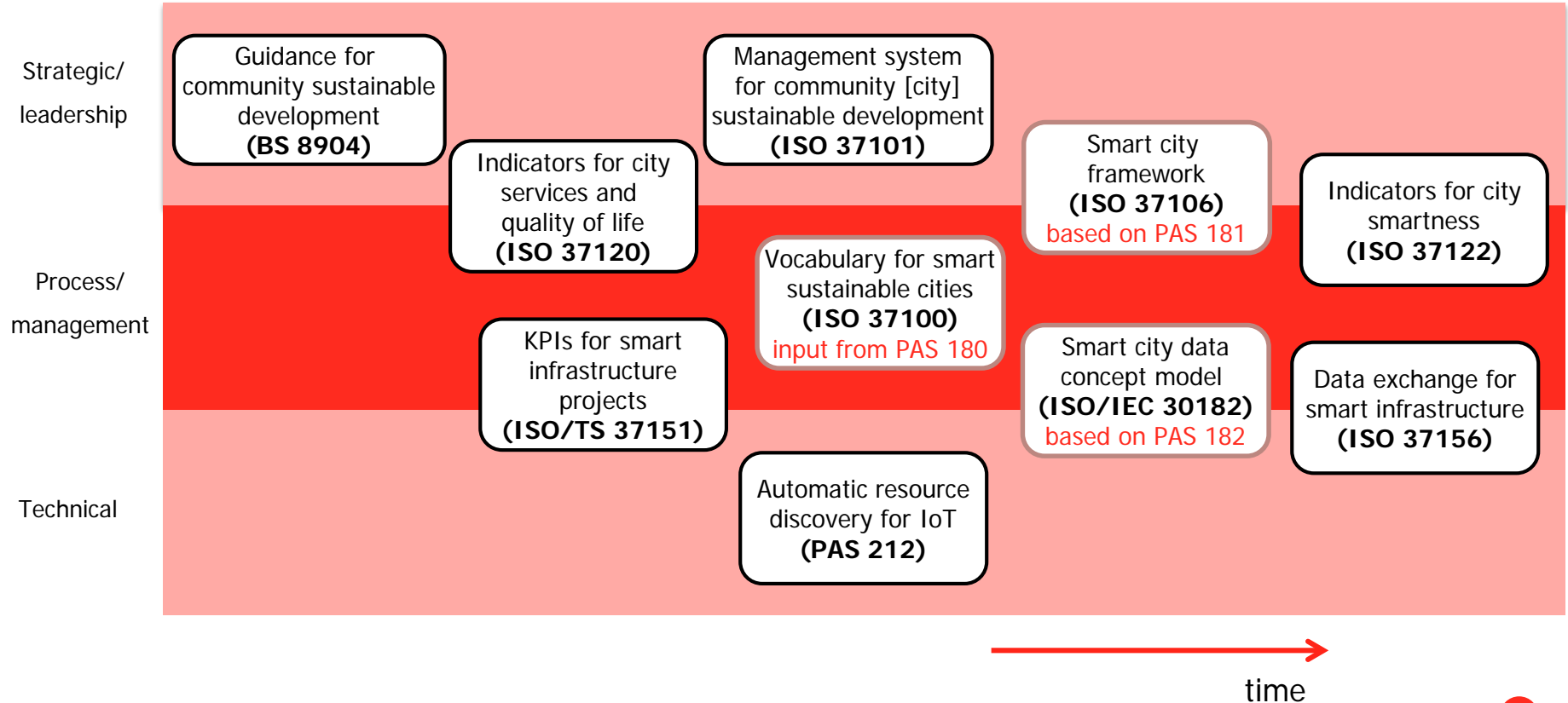
Leadership guide providing insight on alternative business models and use-cases to support these

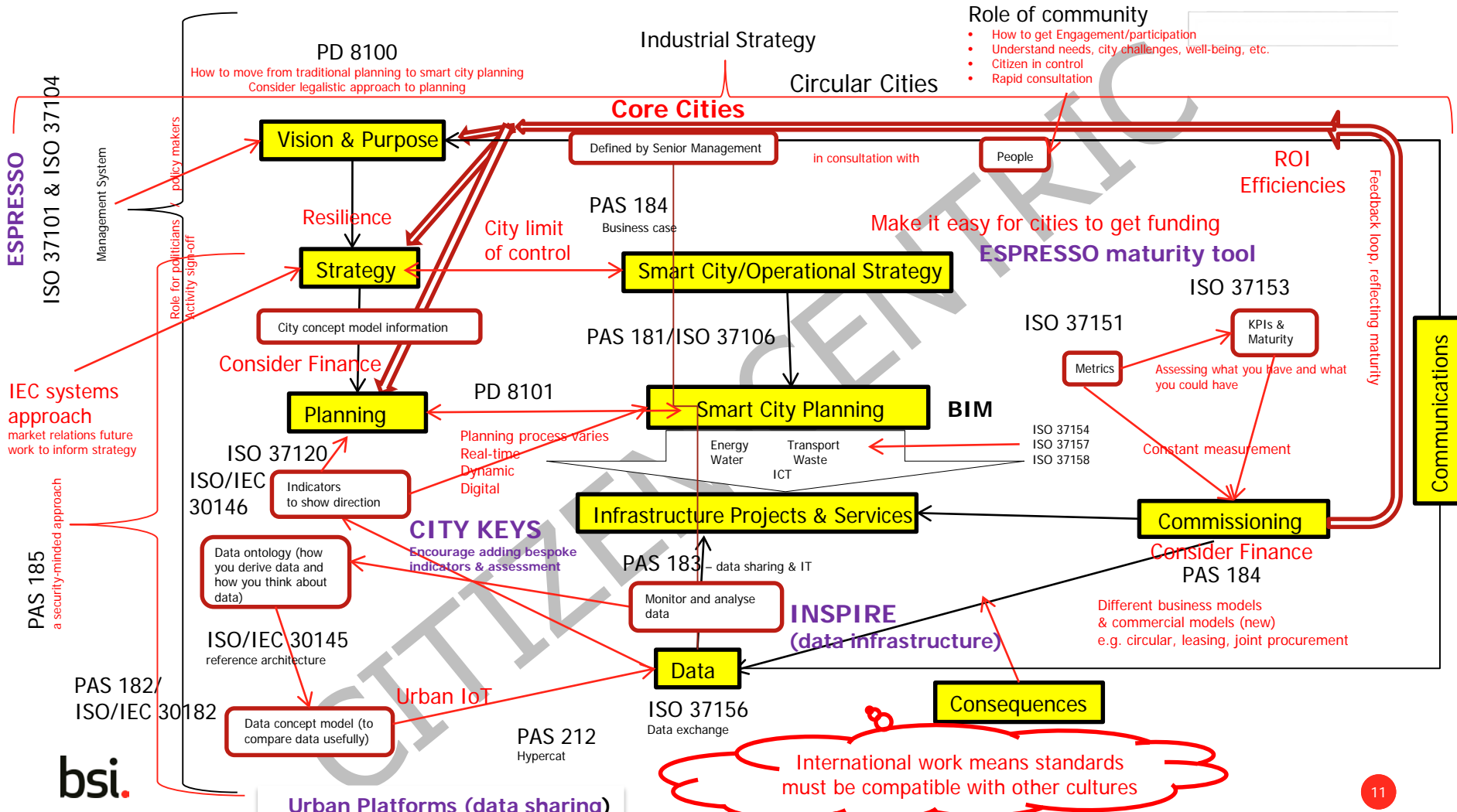
PAS 185 **Specification for establishing and implementing a security-minded framework**

Published

Planned/Under development

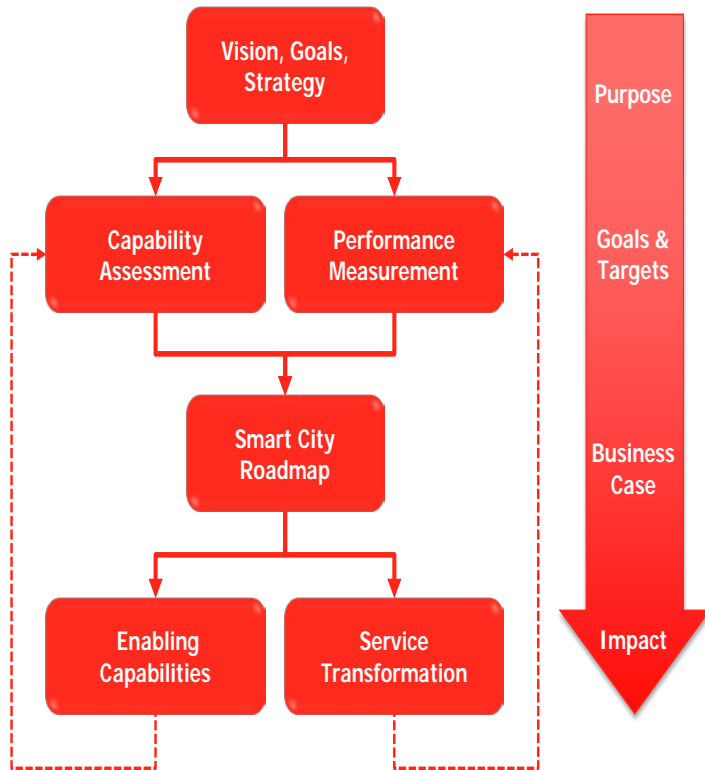
ISO – International Standards Organisation – Sustainable cities and communities standards activity





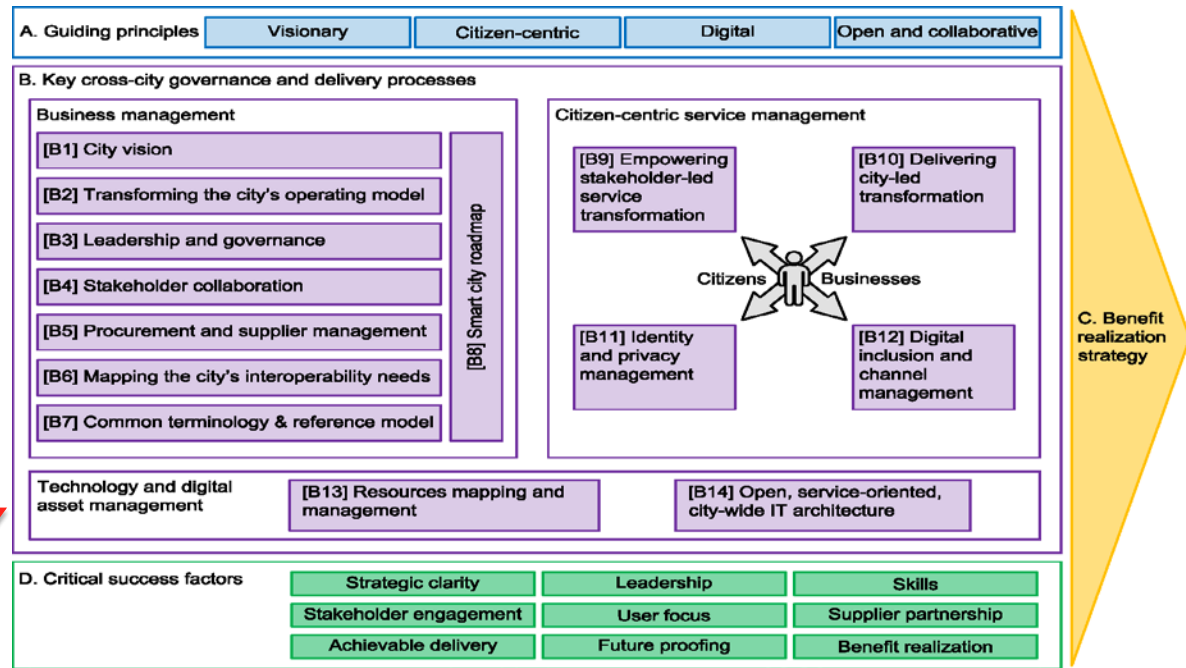
Complex – where do you start?

PD 8100 Overview and roadmap

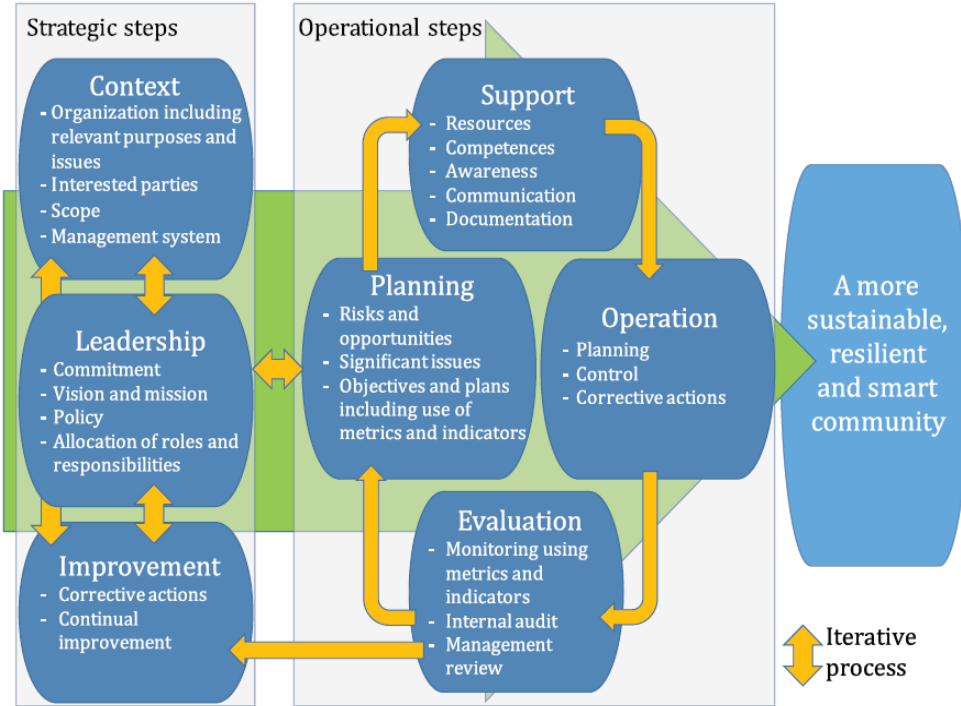


PAS 181->ISO 37106

Sustainable development and communities - Guide to establishing strategies for smart cities and communities



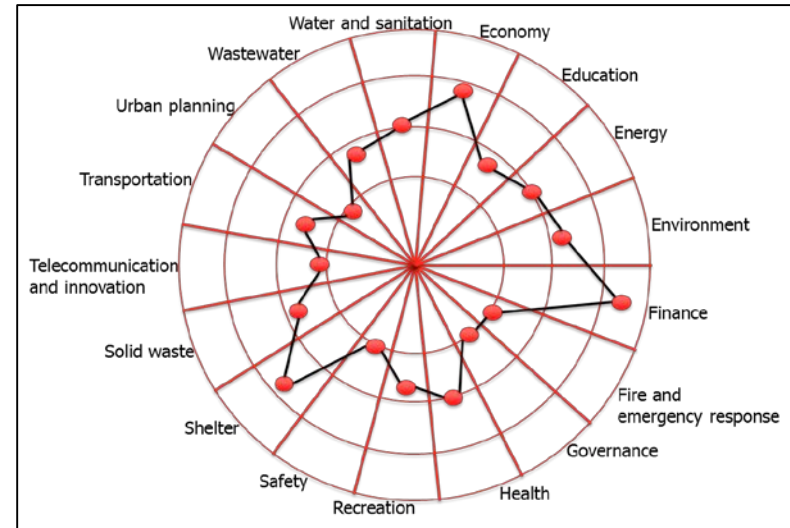
ISO 37101 Management system for sustainable development



NOTE Strategic steps are iterative, while operational steps are sequential. It is their combined implementation that helps communities become more sustainable, resilient and smart.

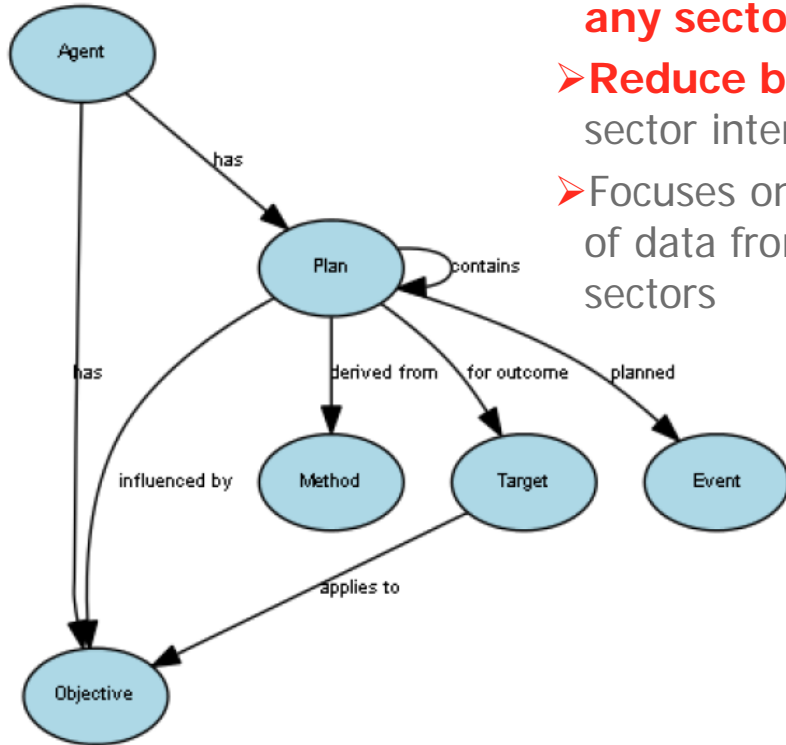
Figure 1 — Relationship between PDCA model and this International Standard

Purposes	Examples
Attractiveness	Appeal to citizens, investors, etc.
Preservation & improvement of environment	Reducing GHG emissions; biodiversity and ecosystem services; reduced health hazard.
Resilience	Climate change mitigation/adaptation; economic shocks; social evolution.
Responsible resource use	Consumption; land management; reducing, reusing and recycling of materials, etc.
Social cohesion	Accessibility; culture; heritage; inclusiveness; inequalities reduction; social mobility, etc.
Well-being	Access to opportunity; education; happiness; prosperity; quality of life; security; welfare, etc.



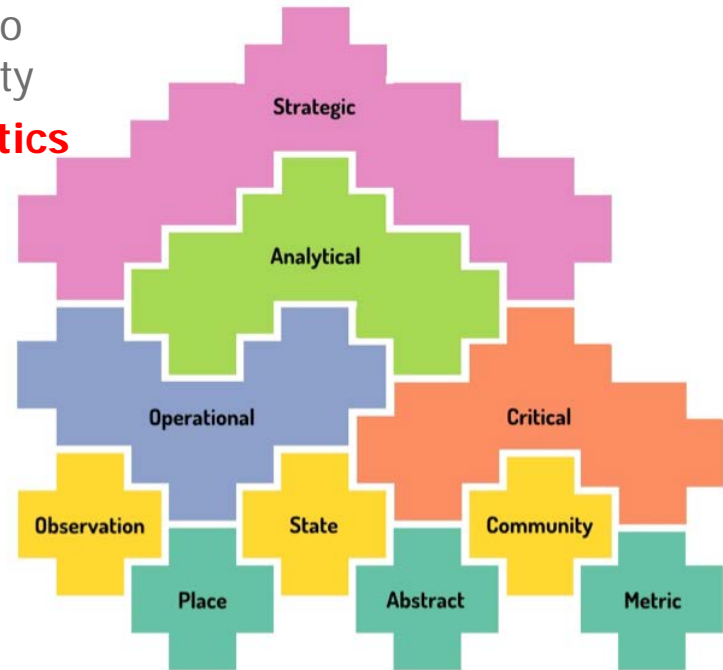
PAS 182->ISO-IEC 30182 Model for data interoperability

Make city data discoverable:



- To describes data from **any sector**
- **Reduce barriers** to sector interoperability
- Focuses on **semantics** of data from many sectors

From ISO/IEC 30145-2:



Smart sustainable cities standards map

