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## Shaping best practice for Smart Cities

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4 June 2013, ETSI Workshop on Smart Cities



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Standards are a **knowledge** framework

### The Standards Landscape

#### First Generation

- Technical Specifications
- Better Products

#### Second Generation

- Management Systems
- Better Processes

#### Third Generation

- Values and Principles
- Better Behaviours



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We need all three generations of Standards to deliver products and services for Smart Cities and Infrastructure

1 Products

1950

2000

2 Processes

Potential

3

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Standards form **knowledge strategies** for industry 

 **CabinetOffice**

PAS 1192-2: 2012  
Building  
Information  
Modelling

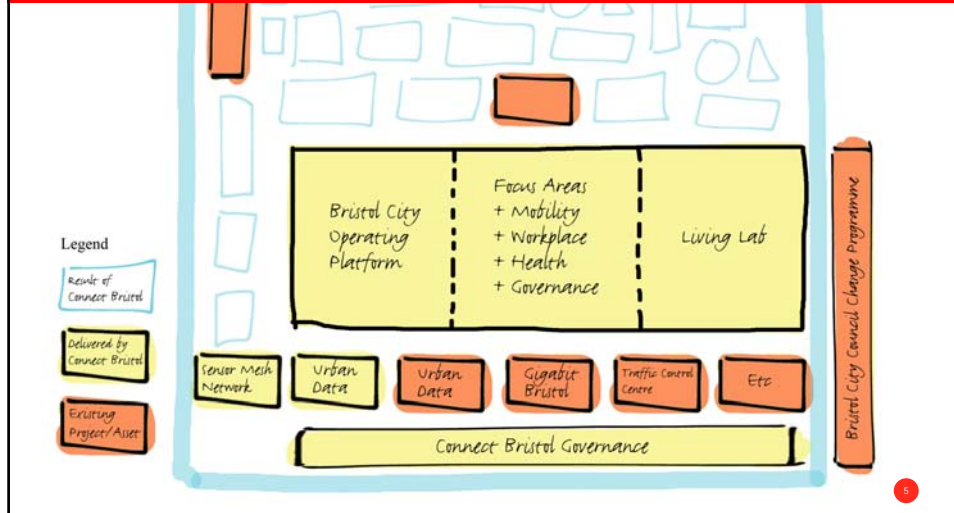
**PAS 55-1:2008**  
Asset Management  
Part 1: Specification for the optimized  
management of physical assets

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"Future cities will be creative, smart, green and connected,  
open and inclusive."

Stephen Hilton, Bristol Futures Group



## Challenges for Smart Cities

- How can Smart Cities create a shared understanding of their aspirations?
- How will Smart Cities set objectives and measure progress?
- How will the devices and systems communicate?
- How can Smart Cities manage the risks and protect people?

## Standards for Smart Cities: BSI's strategy for the UK

- 1) Developed a national strategy for a coherent, consistent suite of standards covering the full range of needs from decision making to terminology and interoperability.
- 2) Mapped existing standards, identifying gaps.
- 3) Now working with the TSB future cities catapult centre team and the four UK demonstrator projects (Glasgow, London, Peterborough, Bristol) and with industry to draft standards.



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## Shared understanding for Smart Cities

- 1) We have a decision-making framework standard:  
BS 8904:2011 Community sustainable development
- 2) We need a common understanding at international level:  
**A Guide for a Decision-Making Framework for the Establishment of a Smart City (PAS 181, kick-off SG 18/4/13)**



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## Setting Objectives for Smart Cities

Urban infrastructure indicators project (ISO TC 268) is using the Global City Indicators Facility 2012 as its source document.

Assessment of greenhouse gas emissions of a city:

Draft PAS 2070:2012 will be published in 2013.

PAS 2070 will use London as an example of a city assessment.

BSI Workshop to develop a methodology on assessing city performance & investment appraisal for public sector, 08/13.



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## Sharing data across Smart Cities

BSI's analysis of existing standards identified that there is:

- A dominance of technical specification and systems standards,
- Few framework standards, little about how components fit together to form a system, and
- Even less on the overarching requirement for interoperability in any future city context.



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## Sharing data across Smart Cities

PAS 180 on Smart City terminology – a scoping workshop held on 1/3/13 identified key areas where there is a need for:

- 1) Framework level requirement: the Interoperability Ecosystem.
- 2) Data concept model of a common language for Smart Cities.
- 3) Code of Practice for Open Data ~ definition and access.
- 4) Technical specifications for a DCU (digital consumer unit).
- 5) A guide covering infrastructure and data use in cities.
- 6) Creation of advisory committee to develop an interoperability standardisation roadmap.



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## Minimizing the risks in Smart Cities

- How can data be shared between services securely?
- How can personal data be protected?
- How resilient will delivery channels be?
- Will digital services be accessible to all citizens?



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## Minimizing the risks in Smart Cities

- BS ISO 27000 Series: Information security,
- BS 10012 Data protection,
- BS ISO/IEC 29100 Privacy risk management,
- BS ISO 22301 Business continuity management,
- BS 18477 Inclusive service provision.

We are planning:

- 1) A Smart City guide to information governance,
- 2) BSI workshop to be held around the wider topic of risks and robustness, not just information governance.



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## BSI Smart Cities knowledge strategy

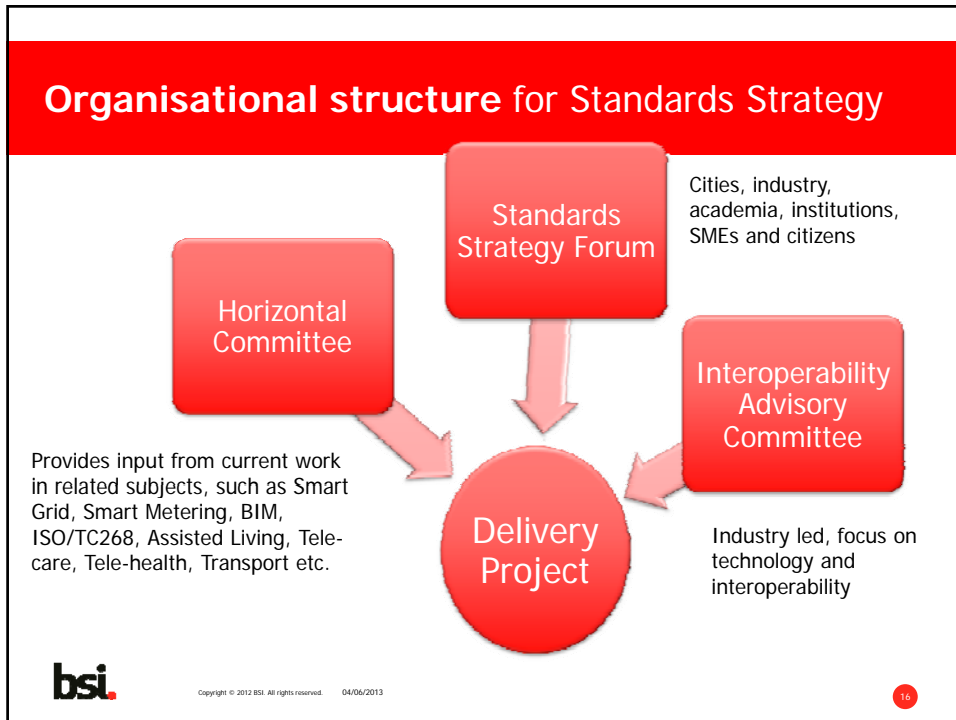
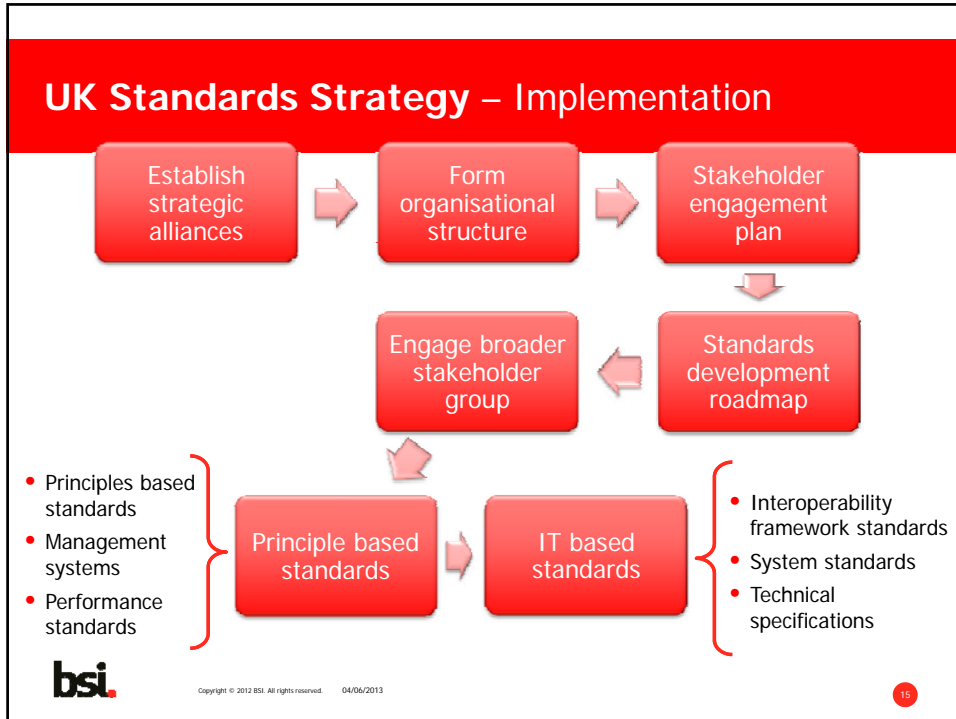
BSI's strategy provides a knowledge framework that will help cities become smarter with standards to:

- ✓ Set the overarching principles,
- ✓ Develop the supporting processes,
- ✓ Agree the technological specifications.



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## BSI Smart Cities strategy – conclusions

- 1) Standards are an essential knowledge framework for Smart Cities and Infrastructure.
- 2) BSI is working with Bristol, Glasgow and other UK cities, industry and government to deliver the framework.
- 3) Work has begun on the decision-making framework and terminology standards, to be published in 2014.
- 4) Coordination of UK national with international work by ISO, IEC, CEN, CENELEC and ETSI is essential.



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