



Preparing the way for smart cities

How our work will help to accelerate the rollout of smart cities across the United Kingdom

Challenge

Judging a modern city's performance depends not only on its physical infrastructure, but also its social infrastructure, particularly how knowledge is communicated. Tomorrow's cities will harness the latest data capture and communication management technologies to deliver high quality services to citizens.

Smart approaches to transport, utilities and waste management could transform the efficiency and sustainability of urban communities, leading to significant reductions in service provision costs and carbon emissions. But there is a risk that solutions created by one provider may not be compatible with those created by others.

Solution

Standards will address this risk and ensure that new technology fulfills its potential. Standards for smart cities will include technical specifications and classifications that support interoperability (ie devices and systems working together), metrics against which benefits can be assessed and good practice documents that detail controls.

BIS (the Department for Business, Innovation and Skills) commissioned BSI to develop a smart cities standards strategy, to identify where standards are needed to accelerate the rollout of smart cities and support UK providers of smart city solutions.

Now successfully completed, the project required us to: research current thinking on smart cities; carry out a gap analysis to identify where standards are needed; organize events and a public consultation document to validate the approach taken; and develop a work programme for the delivery stage.

Outcome

The next phase of the programme is underway. A smart cities standards forum has been set up and there are many key themes. Smart city programmes will only work if they stem from a clear understanding of desired outcomes and this requires methodologies and frameworks for identifying needs, as well as metrics to gauge how well cities are meeting those needs and what contribution digital infrastructure investments can make.

Smart city terminology for systems, sensors and devices varies across disciplines and sectors, and this is being addressed in two phases. The first involves reviewing and documenting existing systems, gathering terms and definitions and creating a smart city terminology document. The second will involve creating methods of analyzing a formalized taxonomy for discovering and identifying objects.

Implementing smart city projects will pose significant challenges for city authorities. Guidance and best practice documentation is required and this will provide a roadmap for delivering smart city projects, as well as an overview of key information governance issues.

Interoperability between devices, other infrastructure elements and service delivery channels will be crucial to the success of smart cities. An interoperability standards workshop has already been held to determine future work, which is an early, but important step forwards on the path to specifying standardized interoperability requirements.

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