Smart Cities
Arup Digital
Who are Arup?

• 13,000 people
• 90 offices in 37 countries
• 10% of profit R&D
• Trust ownership
Arup in Bristol
What is a Smart City?
Information rich

Interconnected
Smart City Outcomes

Economic

Political

Environmental

Human

Functional
Smart Cities: Transforming the 21st century city via the creative use of technology

Information Marketplaces: The New Economics of Cities

Sensing City, Christchurch

Global Market Opportunities & UK Capabilities for Future "Smart Cities"

Global Innovators: International Case Studies on Smart Cities

Urban Mobility in the Smart City Age

Delivering the Smart City

2010 2011 2012 2013 2014

Smart Cities
Our Research

Solutions for Cities: An analysis of the feasibility studies from the Future Cities Demonstrator Programme

Designing with data: Shaping our future cities

Smart London Roadmap

Future Cities: UK Capabilities For Urban Innovation
Ciudad Creativa Digital
Jalisco, Guadalajara, Mexico

London 2012 Olympics & Legacy
London, UK

Sensing City
Christchurch, New Zealand

Liverpool Digital Vision and Leadership
Liverpool, UK

Bristol City Council
Bristol, UK

Low2No
Helsinki, Finland
Wearable Technology

Integrated Real Time Journey Planner

Mobile Payment

Mobile Ticketing

Engaging with Citizens via Social Media

Real Time City Dashboard
Smart Parking
Enabled by sensor, network connectivity, and integrated with control centre

Real –Time Pedestrian Counting
Understand people movement 24/7 in a city via sensors

Biometric Security Check Technology
Data from tools like Iris Scans and Face Recognition might be used for site security control

Waste Tracking
Enabled by sensor or RFID and network connectivity

Real Time Digital Wayfinding Signage
Enabled by real time built environment and crowd sourcing data

Command and Control Centre
Site Wide Activity Monitoring, Management and Emergency Response
Mapping your city’s digital ecosystem

ARUP
Cities are complicated and messy systems. Problems, like congestion, emerge as a result of many factors and have far-reaching impacts involving complex feedback loops.

Given the complexity of urban problems, the most effective approach to resolving them considers a city’s multiple systems simultaneously rather than focusing on how to fix a particular element.

A total city design approach is just this: it considers the city as a system and designs solutions to have maximum positive impacts, while minimizing negative unintended consequences.