Mapping smart cities in the EU

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Innovative ways of urban living are needed

- Number of urban residents is growing by nearly 60 million people a year
- For the 1st time the number of people living in cities exceeds those not...
What is a smart city?

- ‘A Smart City is a city seeking to address public issues via ICT-based solutions on the basis of a multi-stakeholder, municipally based partnership’.
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Characteristics of Smart City projects

MOB

PEO

GOV

ENV

LIV

ECO
51% of cities have implemented or proposed Smart City initiatives
Total number of Smart Cities per country
Percentage of Smart Cities per country
Larger cities have been earlier adopters of Smart City initiatives.
Over 50% of cities have not started pilots or implementation

- Maturity level 1: Strategy or policy only (27%)
- Maturity level 2: project plan or vision (28%)
- Maturity level 3: pilot testing (20%)
- Maturity level 4: implementation/launch of initiative (25%)
Types of Smart City initiatives been undertaken

Number of initiatives

Smart characteristic

- Smart governance: 85
- Smart Economy: 67
- Smart Mobility: 125
- Smart Environment: 199
- Smart People: 52
- Smart Living: 71
Scale of Smart City endeavours

- Population (1000s):
  - 100-199: 1.9
  - 200-299: 2.7
  - 300-399: 2.8
  - 400-499: 3.2
  - 500+: 3.5

Mean number of characteristics

Distribution of Smart City characteristics

a) Governance

b) Economy

c) Mobility

d) Environment

e) People

f) Living
Factors which influence the needs of a city
Issues we found undertaking the mapping exercise

• Ongoing updating of information

• Provision of baseline data

• Unique nature of Smart Cities
The components of a ‘successful’ Smart City

Assessment

Vision  People  Process

Evaluation Criteria
Vision

• What is the aim beyond the improvement in quality of life?
• What are the specific targets?
• There is a need for buy-in and consensus to the vision across actors to achieve a sum greater than the individual parts

Process

• Project management – 1 point of contact
• Ongoing evaluation
• Knowledge management
People

- Securing participation of different stakeholders who are affected by it
- Collaboration between public, private and community

![Diagram of Top-Down and Bottom-Up Approaches]

- Top-Down-Approach
- Bottom-Up-Approach

- Coordination
- Triggering and Monitoring
- Feedback
- Smart City Initiative
Any questions?
Methodological overview

- **CHAPTER 2**
  468 cities with a population of over 100,000 within the EU28

- **CHAPTER 3**
  240 Smart Cities identified, based on definition and characteristics of a Smart City

- **CHAPTER 4**
  From the Smart Cities identified, 37 selected based on size, geographical location and status of the city

- **CHAPTER 5**
  A dashboard developed for 20 of these cities to examine the impacts of initiatives on EU2020 and contribution of characteristics

- **CHAPTER 6**
  Six of the cities further analysed to identify potential Smart City solutions
Aims of our research project

- To produce a working definition of a Smart City
- To map the Smart Cities across the EU
- To understand what a Smart City looks like
- To assess whether Smart City objectives align with Europe 2020 targets
- To identify good practices and scalable Smart City solutions
What is the definition of a Smart City?

- ‘A Smart City is a city seeking to address public issues via ICT-based solutions on the basis of a multi-stakeholder, municipally based partnership’.

- Smart City Characteristics:

![Diagram of Smart City Characteristics]

- Smart Economy
- Smart Mobility
- Smart Governance
- Smart Environment
- Smart Living
- Smart People
Attributes of Smart Cities

• Stakeholders:
  – mixture of participants drawn from (local) government, commercial industry and civil society,
  – the degree and nature of participation varies, as do the roles of the participants.
• Finance:
  – mix of public and private finance
  – The differences occur in the purposes for which such finance is provided, the modality and scale, and the way in which risks are managed and economic returns captured. The highest level of public (municipalities and EU) finance is provided to intelligent traffic system projects.
• Success and benefit:
  – differ in the extent to which their success and benefits can be assessed. Some have concrete measures of performance. For other types, evaluation is complicated by the absence of objectives stated in concrete and measurable terms, and
  – by the lack of identified and agreed baselines for comparison. Even where partial indicators are identified (or can be inferred), the data necessary to assess performance are not always collected, made available, or provided at the necessary levels of quality and coverage. Assessment and benchmarking are also limited by maturity.
Could we use icons for the 3 attributes
Catriona Manville, 31-05-2014
Smart Cities need to be designed with aims in mind and evaluated
There are a number of critical success factors
CM9

Need a bit more here - not sure whether to concentrate on the conclusion or the recommendations
Catriona Manville, 31-05-2014