ITU Green standards week
Innovating today for a sustainable tomorrow

Leveraging ICT in smart sustainable cities
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LEVERAGING ICT IN SMART SUSTAINABLE CITIES
THE URBANIZATION TREND
...AND ITS CHALLENGES

- 1900
  - 16 cities of one million or more

- 2010
  - 442 cities

Our future existence as a species is, inevitably, an urban one”

World Policy Journal
When people connect, their lives change, when everything connect the world changes...
FINDING THE WAY TO SUSTAINABLE CITIES

Methodology evolution (improvements, new assessment targets…)

LCA a tool for understanding – not for accounting

Results are complex – as reality is complex

Time to make use of methodologies

Time to share results
TOWARDS A WIDER PERSPECTIVE
**SUSTAINABLE CITY SOLUTIONS**

**CASE STUDIES**

**Smart meters, Australia**

**Connected buses, Brazil**

**Case study: Connected buses**

Potential reduction scenarios:

- 1:4 if the bus operation can be made 1 percent more efficient
- 1:3 if car travel can be reduced by 0.1 percent
- 1:30 if car travel can be reduced by 1 percent
**Assessment of ICT solution in City A**

**Assessment parameters:**
- ICT solution components life cycle impacts
- Changed activities due to solution
- Environmental, social and economic effects
- Energy mix in geographic area

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<thead>
<tr>
<th>City profile A</th>
<th>City profile B</th>
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<tbody>
<tr>
<td>Energy mix A</td>
<td>Energy mix B</td>
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<tr>
<td>Activities X,Y,Z</td>
<td>Activities W,Q,R</td>
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<tr>
<td>Type of ICT components</td>
<td>Type of ICT components</td>
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<td>Drivers and barriers</td>
<td>Drivers and barriers</td>
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<td>Location profile</td>
<td>Location profile</td>
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<td>Addressable market</td>
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**Scaling method**

**Impact**

Results transferred to City B

**Impacts e.g. resource depletion, kWh, CO₂**
COLLABORATION FOR SMART SUSTAINABLE CITIES

The data gap: ICT solutions are reducing the climate impact of the ICT sector – what are the current benefits in other sectors?

A widened perspective on climate change mitigation through ICT: From technology potential to actual use ... identifying the success factors

Solutions and assessments

Drivers and barriers

Policy makers

Academia

Companies

Solutions and assessments
Methodology:
Evaluating sustainability of using ICT solutions in smart cities – methodology requirements (N. Lövehagen, A. Bondesson)

Case studies:
http://www.ericsson.com/thecompany/sustainability_corporateresponsibility/enabling_a_low_carbon_economy
http://www.ericsson.com/thinkingahead/networked_society/city-life
SUMMARY

• Cities as prime motors for creating the sustainable Networked Society
• Connectivity a key to manage urbanization challenges
• Life cycle assessments captures environmental potential of ICT solutions
  – Magnitudes and complexity
• The impact from drivers, barriers and rebound needs to be considered
• Time to use assessment standards to identify promising ICT solutions and to share best practices between cities
  – From non-transparent figures, what-if and use stage perspective and ICT sector focus
    ...to measurements by all sectors and a life cycle perspective
  – Don’t forget the baseline
• ICT solutions offer the potential – policy framework etc sets their success!
Thank you