ITU-SUDACAD Regional Forum on Internet of Things for Development of Smart and Sustainable Cities

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SSC ICT Architecture framework

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Data-driven Innovation for Smart Social Infrastructure

- huge amounts of data
- business, gov. and users
- (smart) devices
- security
- ICT infrastructure: Broadband, Cloud Computing, Internet of Things, ...
- data privacy, security
- consumer protection
- innovation:
  - System-wide Efficiency
  - Incentivize Smart Life-style
  - New Service Creation

Source: OECD
Policy Objectives for Smart ICT Innovation

System-wise optimization with smart infrastructure

- Incentivize energy-efficient products/facilities with networking function
- Promote demand-side energy management

Citizen empowerment for smart life-style

- Feedback timely information on eco-footprint of individual behaviour
- Promote energy-management servicer / smart devices

Promote social consensus building and data-driven innovation

- Consensus building for privacy and competition policy on large-scale data
- Facilitate secured link and use of data in the smart network
Facts for Smart Cities
Fact

1st step to a Smart City: reliable access to electricity
Fact

Every city requires its own mix of solutions
Fact

70% of energy is consumed in cities
Fact

Not every Smart City is built up from scratch
Fact

International Standards allow many organizations to work together
Smart City
Characteristics
Factors
Indicators
### Characteristics of Smart City

<table>
<thead>
<tr>
<th>SMART ECONOMY (Competitiveness)</th>
<th>SMART PEOPLE (Social and Human Capital)</th>
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<tr>
<td>Innovative spirit</td>
<td>Level of qualification</td>
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<td>Entrepreneurship</td>
<td>Affinity to life long learning</td>
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<td>Economic image &amp; trademarks</td>
<td>Social and ethnic plurality</td>
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<td>Productivity</td>
<td>Flexibility</td>
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<td>Flexibility of labour market</td>
<td>Creativity</td>
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<td>International embeddedness</td>
<td>Cosmopolitanism/Open-mindedness</td>
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<td>Ability to transform</td>
<td>Participation in public life</td>
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<tr>
<th>SMART GOVERNANCE (Participation)</th>
<th>SMART MOBILITY (Transport and ICT)</th>
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<td>Participation in decision-making</td>
<td>Local accessibility</td>
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<td>Public and social services</td>
<td>(Inter-)national accessibility</td>
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<td>Transparent governance</td>
<td>Availability of ICT-infrastructure</td>
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<td>Political strategies &amp; perspectives</td>
<td>Sustainable, innovative and safe transport systems</td>
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<th>SMART ENVIRONMENT (Natural resources)</th>
<th>SMART LIVING (Quality of life)</th>
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<td>Attractivity of natural conditions</td>
<td>Cultural facilities</td>
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<td>Pollution</td>
<td>Health conditions</td>
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<td>Environmental protection</td>
<td>Individual safety</td>
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<td>Sustainable resource management</td>
<td>Housing quality</td>
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<td>Education facilities</td>
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<td>Touristic attractivity</td>
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<td>Social cohesion</td>
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Green ICT Initiative: bottom-up approach

- Green IT Promotion Council
  (business, academic, government, …)

Public-Private Partnership

Government Initiatives
- Green R&D support
- Promote green tech diffusion
- Standardization of measurement

International Cooperation
- International projects for measurement & standardization
- Symposium for public awareness
Smart grid & demand-side energy management
Optimizing energy efficiency in the ICT sector (e.g. for data centers)
Encouraging R&D by establishing CC innovation center on the regional level.
Localizing and Adapting Green procurement specifications and regulations according to international standards.
Enhancing use of ICT emission monitoring tools.
Harmonizing legislations as needed for better management of e-waste.
Identifying national projects and piloting for less informal sector recycling (e.g. e-waste management).
Partnering with expert institutions for knowledge Transfer and research (e.g. e-waste assessment report).
Leading by example in Smart buildings; examples include turning the Smart Village to a model for smart and green city.

Promoting and expanding use of Smart Grids/ metering for monitoring and controlling energy usage.

Generating tele-work using tele-presence, and broadband applications.

Conducting studies on potential of ICTs in sustaining the built environment.

Transforming the transport system to Smart Management (Routing efficiency- Traffic control systems and cameras on roads).

Implementing Smart water management; metering and sensors towards AMI (e.g. Irrigation innovations in The Nile Delta)
- Bridging the digital divide by increasing Broad Band capacity and applications for further greener effect.
- Prioritizing areas of work based on national needs.
- Generating investments and Allocating funds for R&D and deployment of smart ICTs.
- Coordinating with different sectors to avail smart ICTs.
Thank You