



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

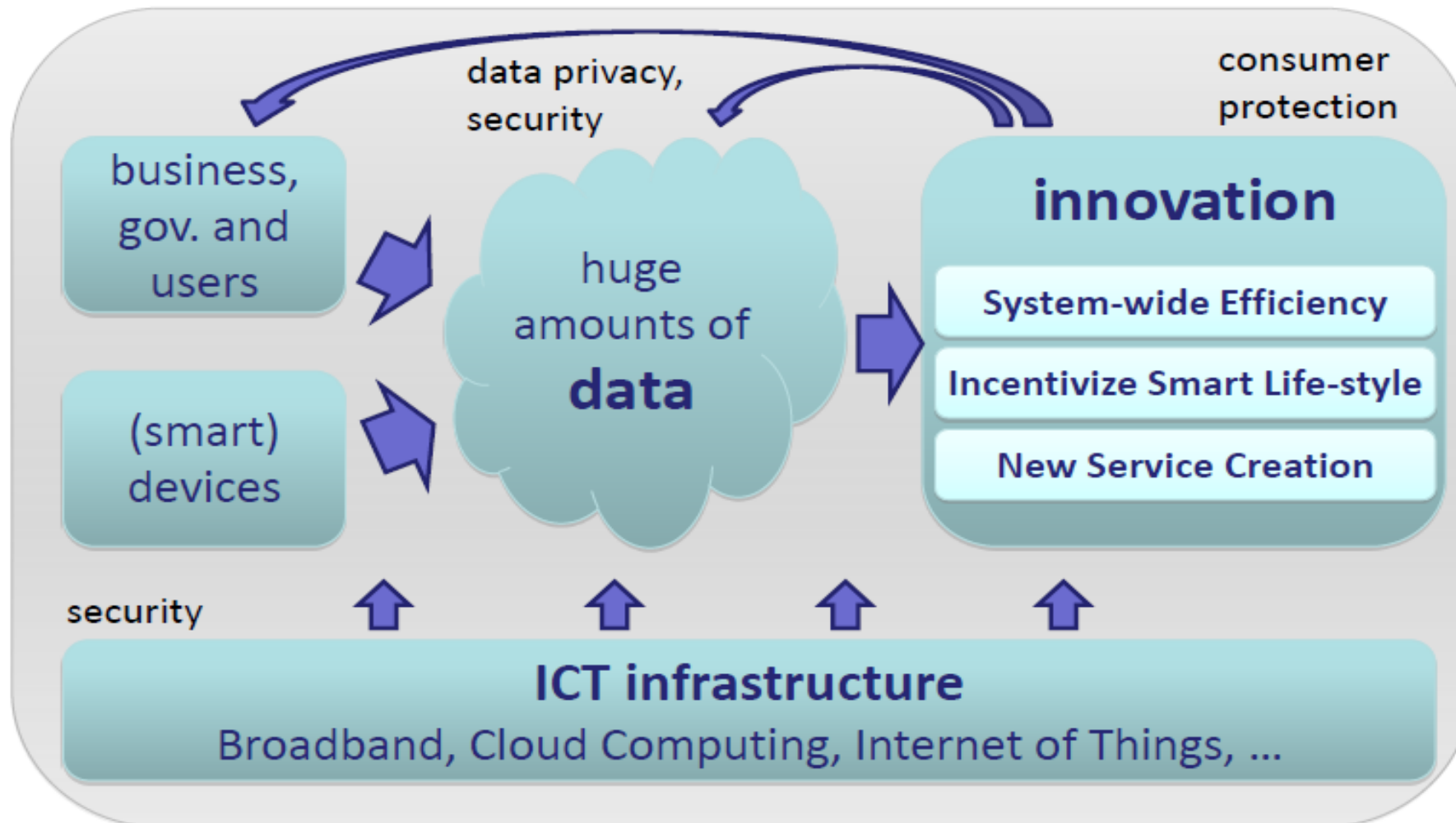
Khartoum, Sudan 13-14 Dec 2017

### SSC ICT Architecture framework

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# Data-driven Innovation for Smart Social Infrastructure



Source: OECD

# Policy Objectives for Smart ICT Innovation

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## 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 services / 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



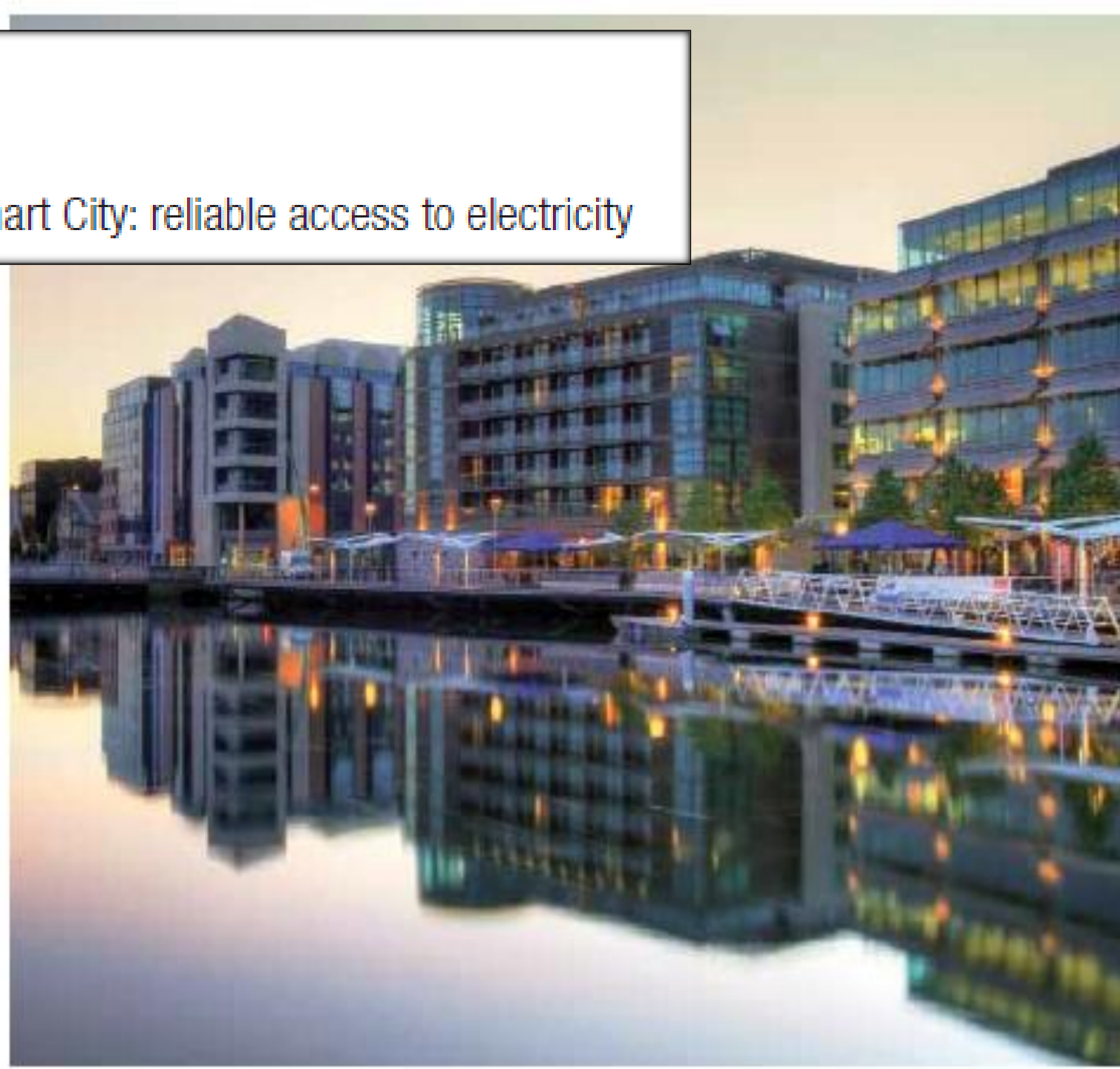
# Facts for Smart Cities





## Fact

1<sup>st</sup> step to a Smart City: reliable access to electricity





## Fact

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Every city requires its own mix of solutions







## Fact

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70% of energy is consumed in cities

## Fact

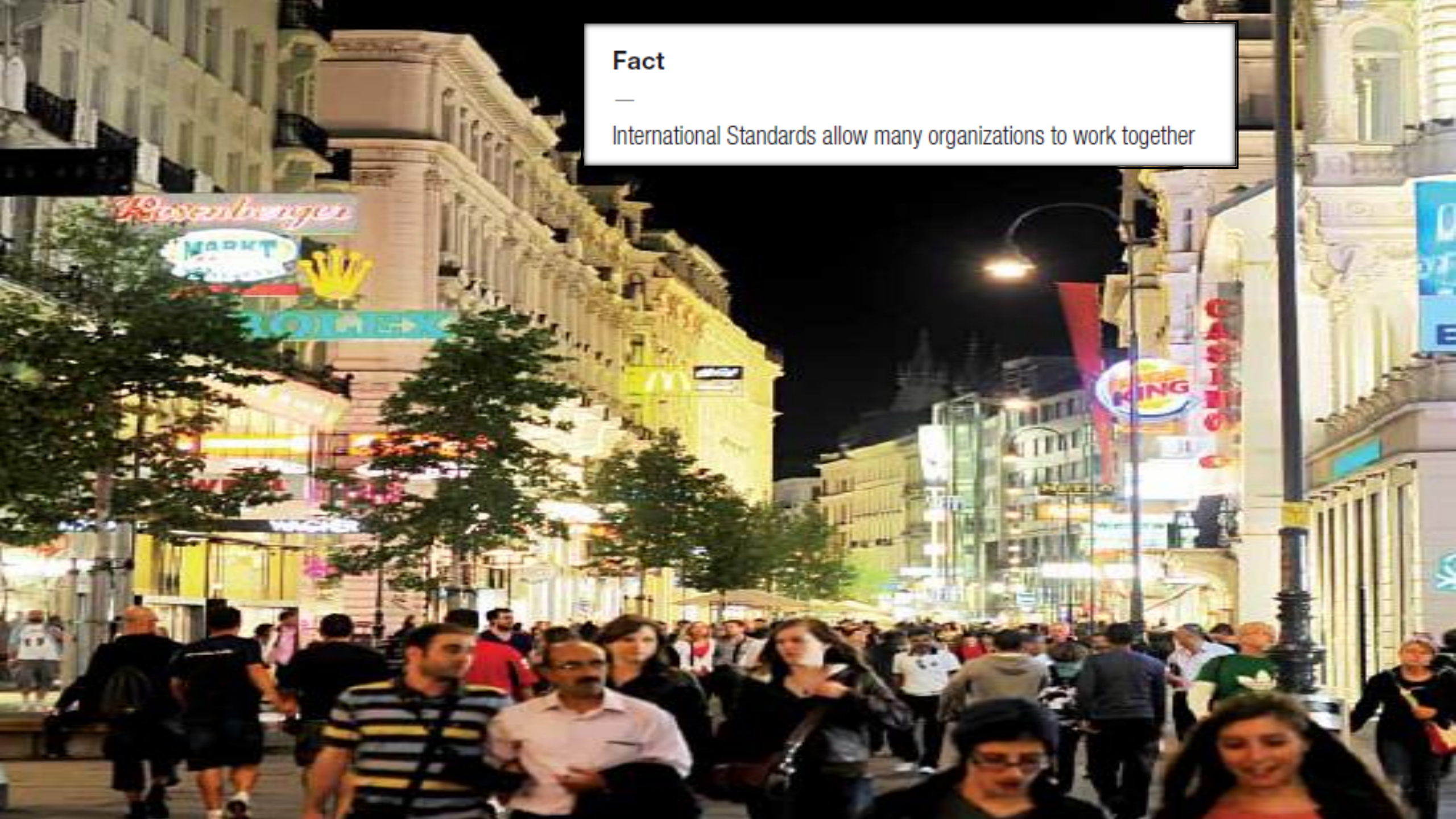
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Not every Smart City is built up from scratch

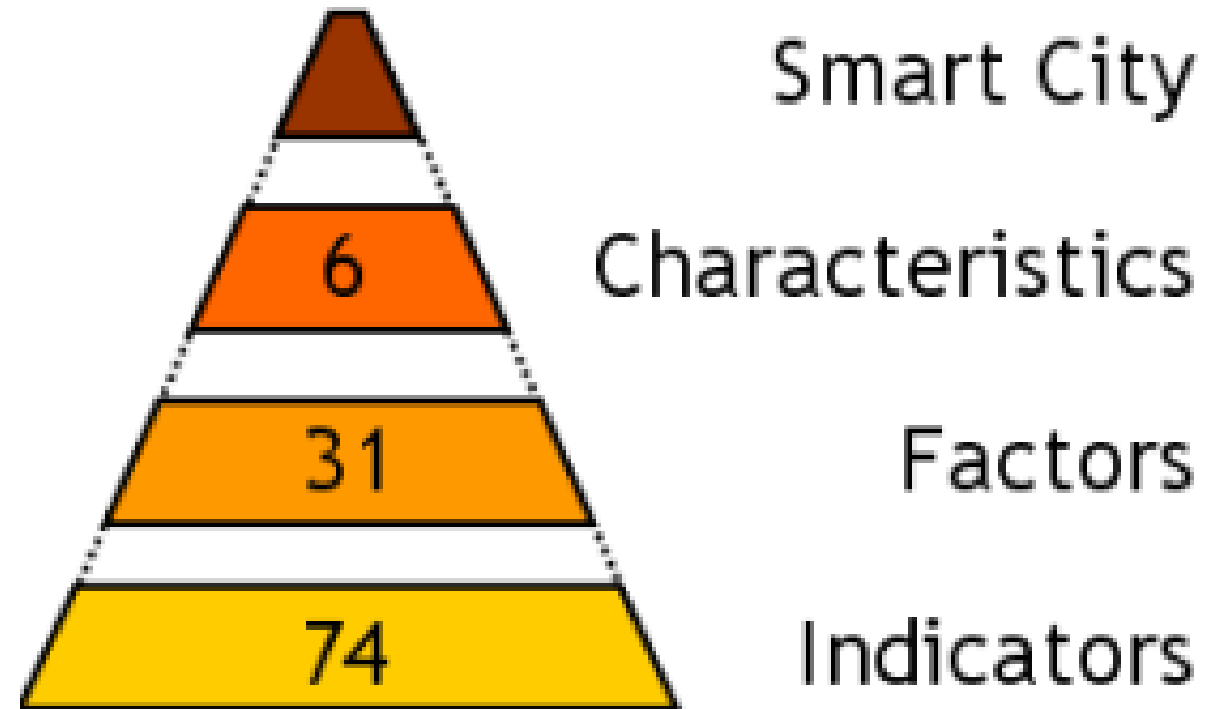




## Fact

International Standards allow many organizations to work together









#### SMART ECONOMY (Competitiveness)

- Innovative spirit
- Entrepreneurship
- Economic image & trademarks
- Productivity
- Flexibility of labour market
- International embeddedness
- *Ability to transform*

#### SMART PEOPLE (Social and Human Capital)

- Level of qualification
- Affinity to life long learning
- Social and ethnic plurality
- Flexibility
- Creativity
- Cosmopolitanism/Open-mindedness
- Participation in public life

#### SMART GOVERNANCE (Participation)

- Participation in decision-making
- Public and social services
- Transparent governance
- *Political strategies & perspectives*

#### SMART MOBILITY (Transport and ICT)

- Local accessibility
- (Inter-)national accessibility
- Availability of ICT-infrastructure
- Sustainable, innovative and safe transport systems

#### SMART ENVIRONMENT (Natural resources)

- Attractivity of natural conditions
- Pollution
- Environmental protection
- Sustainable resource management

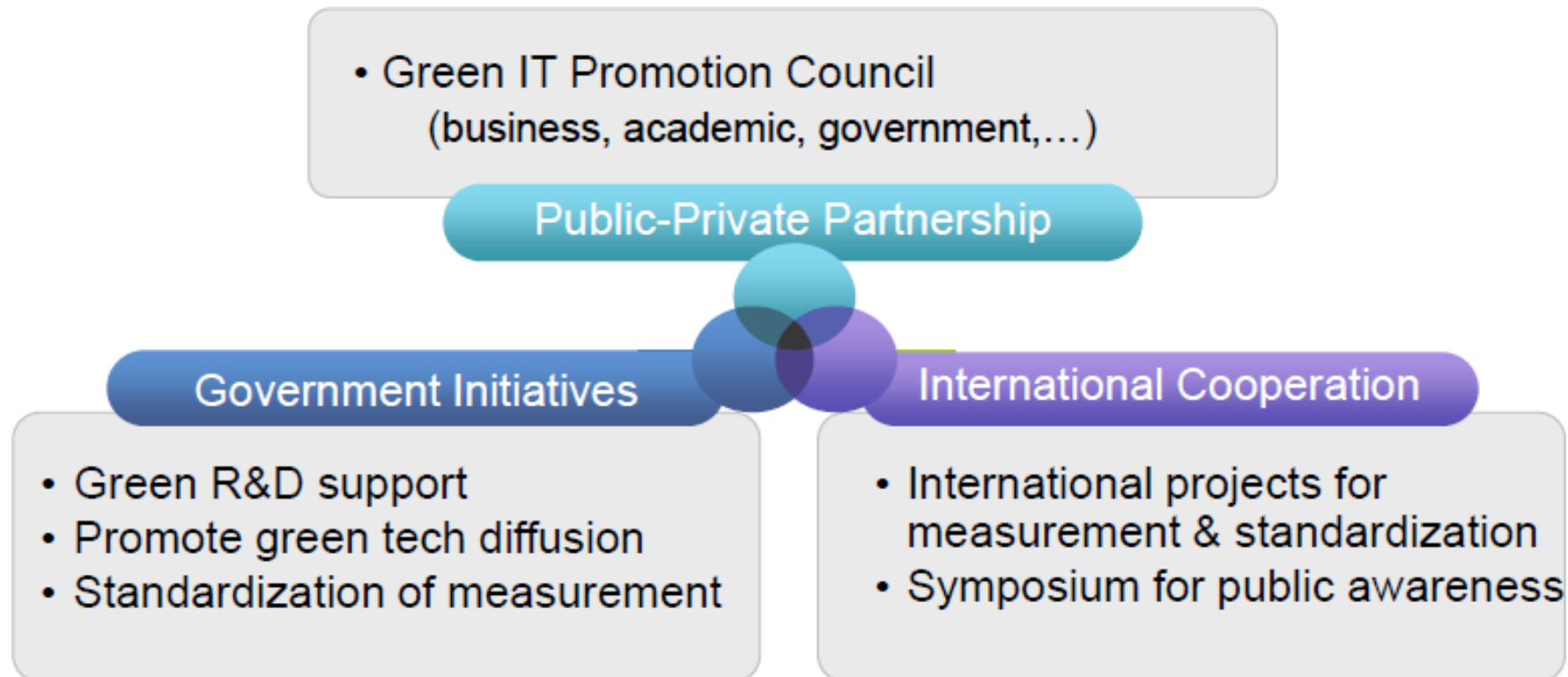
#### SMART LIVING (Quality of life)

- Cultural facilities
- Health conditions
- Individual safety
- Housing quality
- Education facilities
- Touristic attractivity
- Social cohesion

## Characteristics of Smart city

[http://www.smart-cities.eu/download/smart\\_cities\\_final\\_report.pdf](http://www.smart-cities.eu/download/smart_cities_final_report.pdf)

## Green ICT Initiative: bottom-up approach





# Smart grid & demand-side energy management



2.png



# Policies



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

