

Telefonica



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



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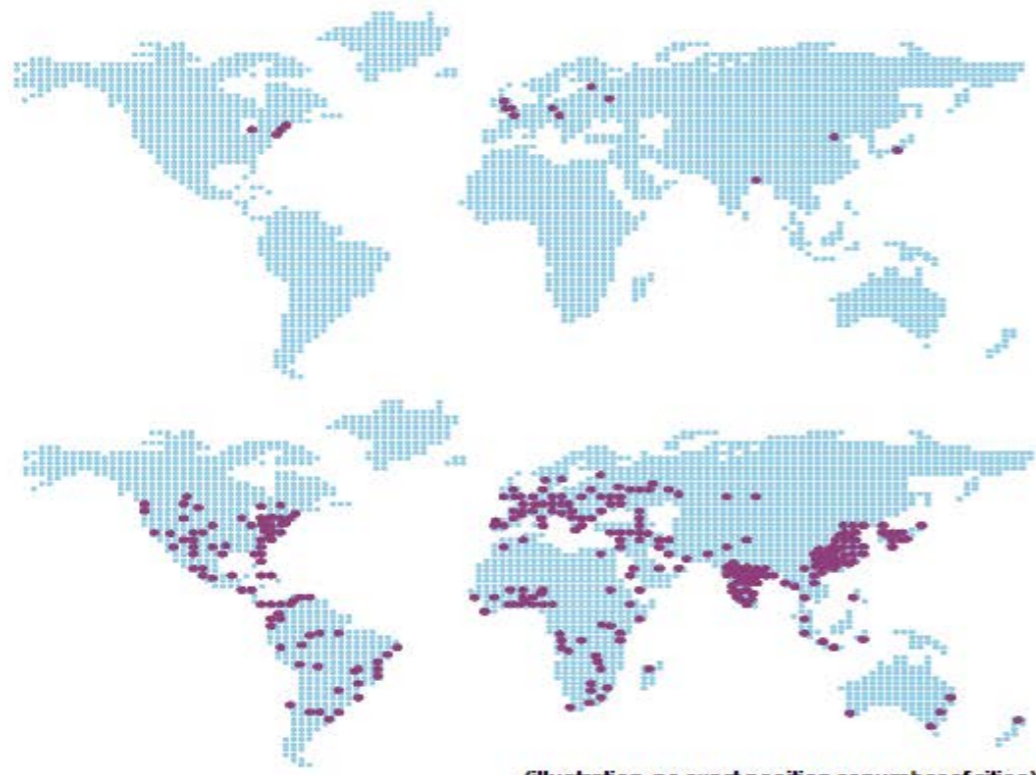
MASTER RESEARCHER,
SUSTAINABILITY ASSESSMENTS

GREEN STANDARDS WEEK 2013
HIGH LEVEL SEGMENT ON SMART SUSTAINABLE CITIES
SEPTEMBER 2013

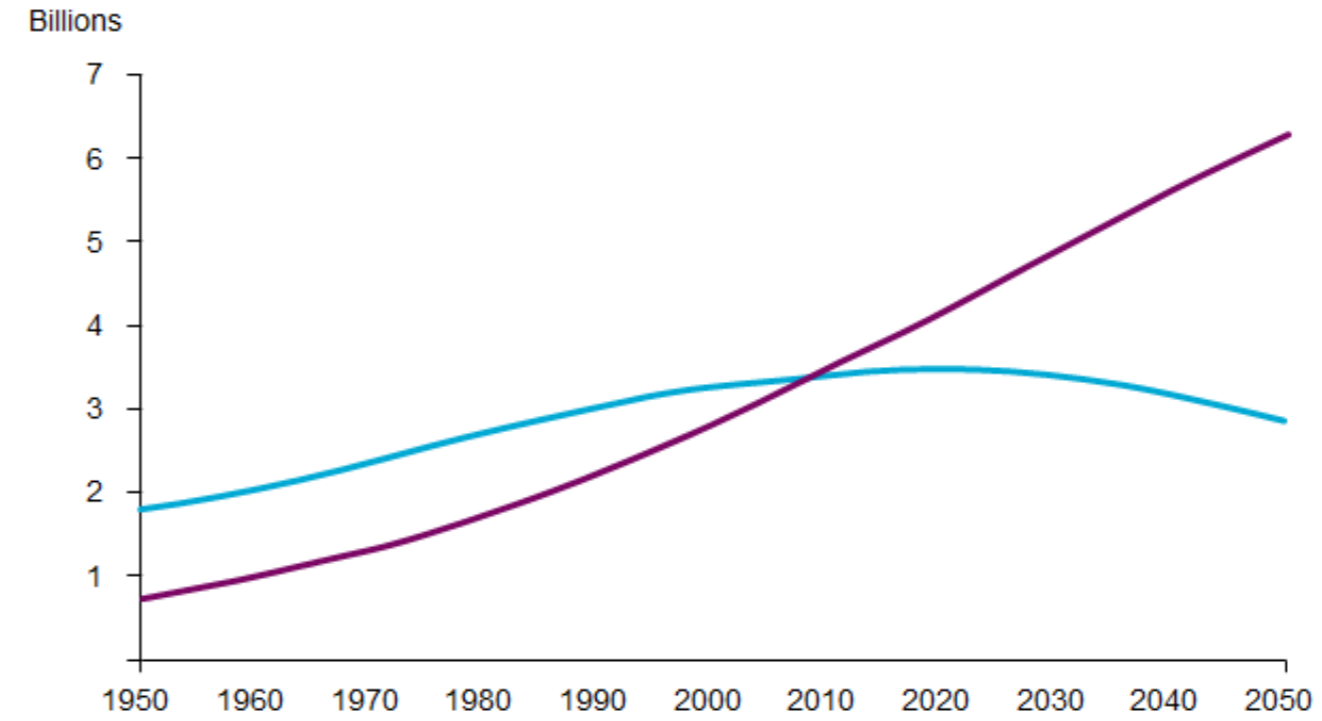
THE URBANIZATION TREND ...AND ITS CHALLENGES



- 1900
 - 16 cities of one million or more
- 2010
 - 442 cities



(Illustration, no exact position or number of cities)
Source: National Geographic, December 2011



Source: United Nations, Department of Economic and Social Affairs, Population Division

“Our future existence as a species is, inevitably, an urban one”
World Policy Journal



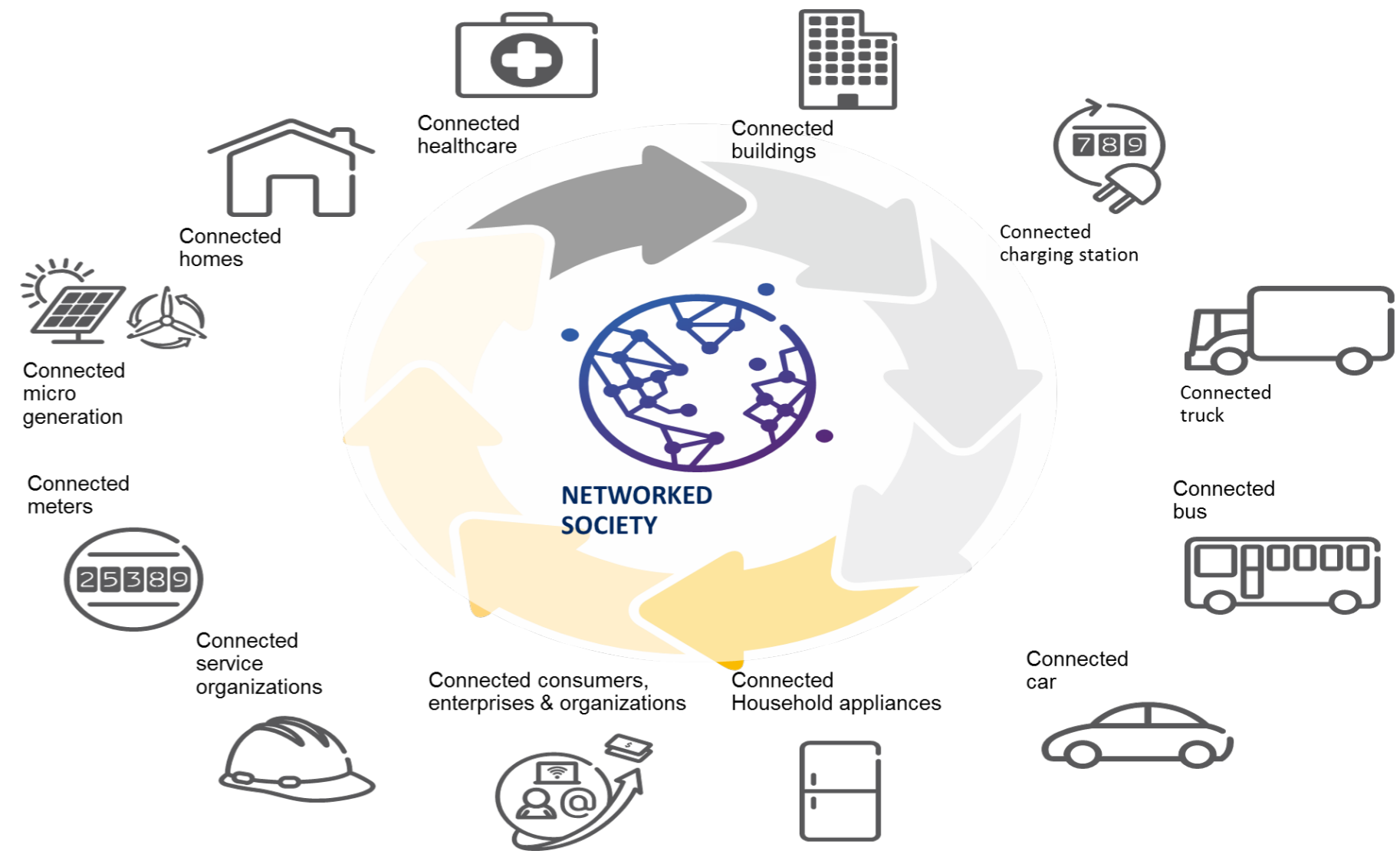
SHAPING SUSTAINABLE CITIES...



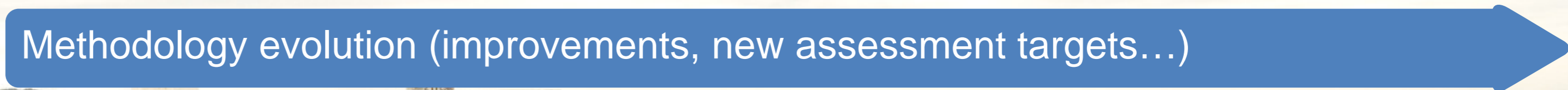
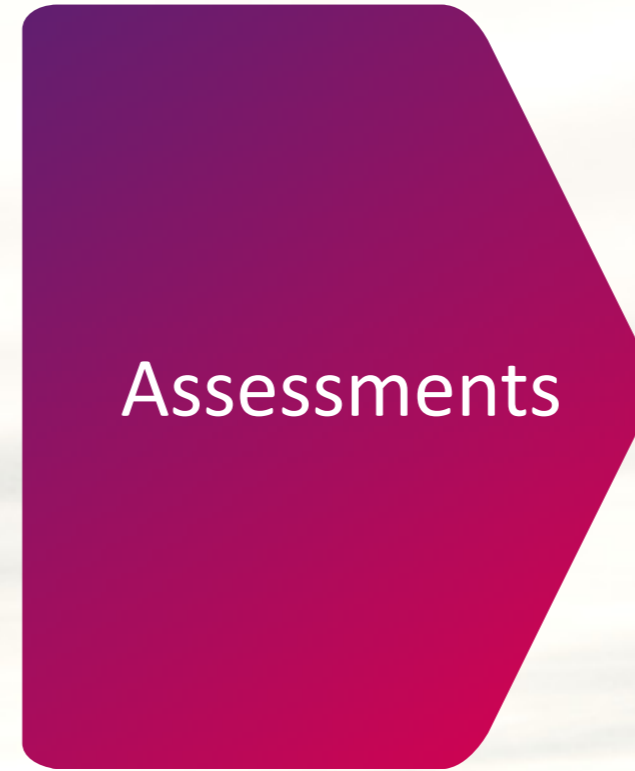
...IN THE NETWORKED SOCIETY



When people connect,
their lives change, when
everything connect
the world changes



FINDING THE WAY TO SUSTAINABLE CITIES



LCA a tool for understanding – not for accounting

Results are complex – as reality is complex

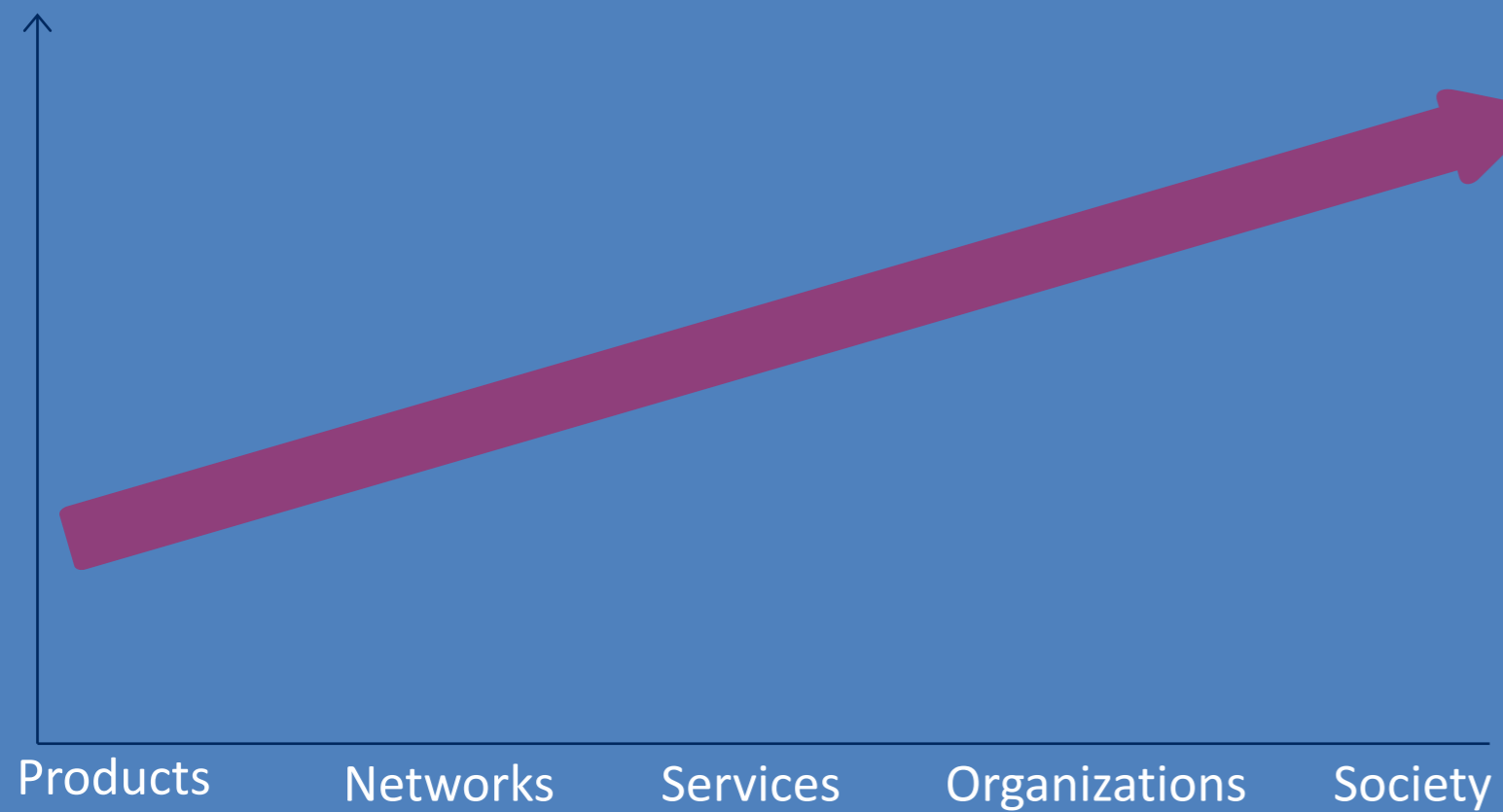
Time to make use of methodologies

Time to share results

TOWARDS A WIDER PERSPECTIVE



Potential



City administration
use of ICT

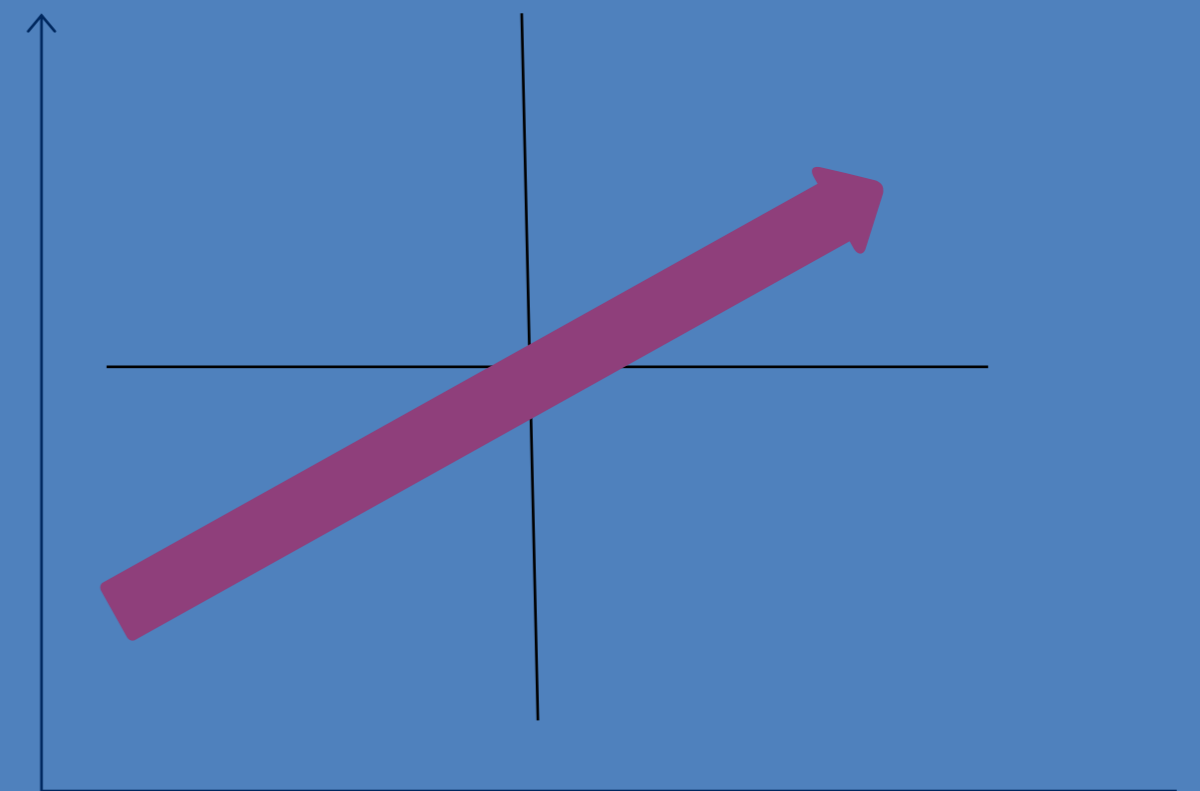
City ICT footprint

City

Complexity

Different
impacts

CO₂e



Solution

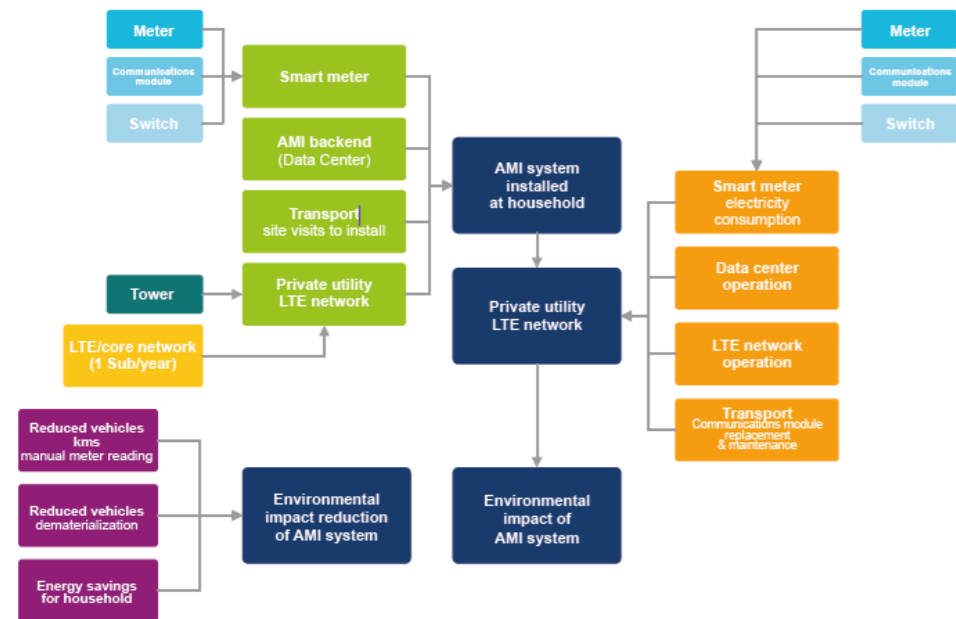
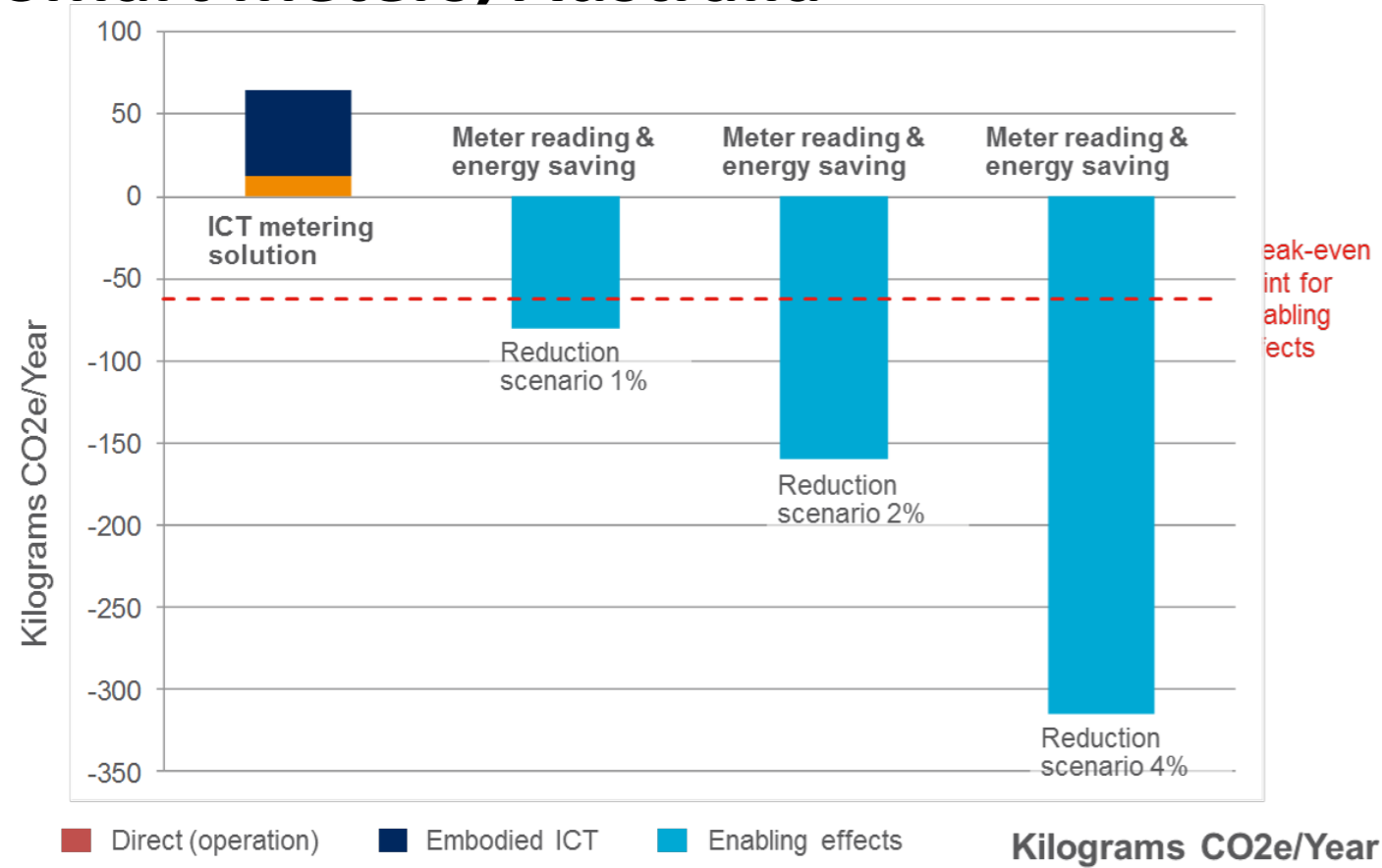
Society

SUSTAINABLE CITY SOLUTIONS

CASE STUDIES

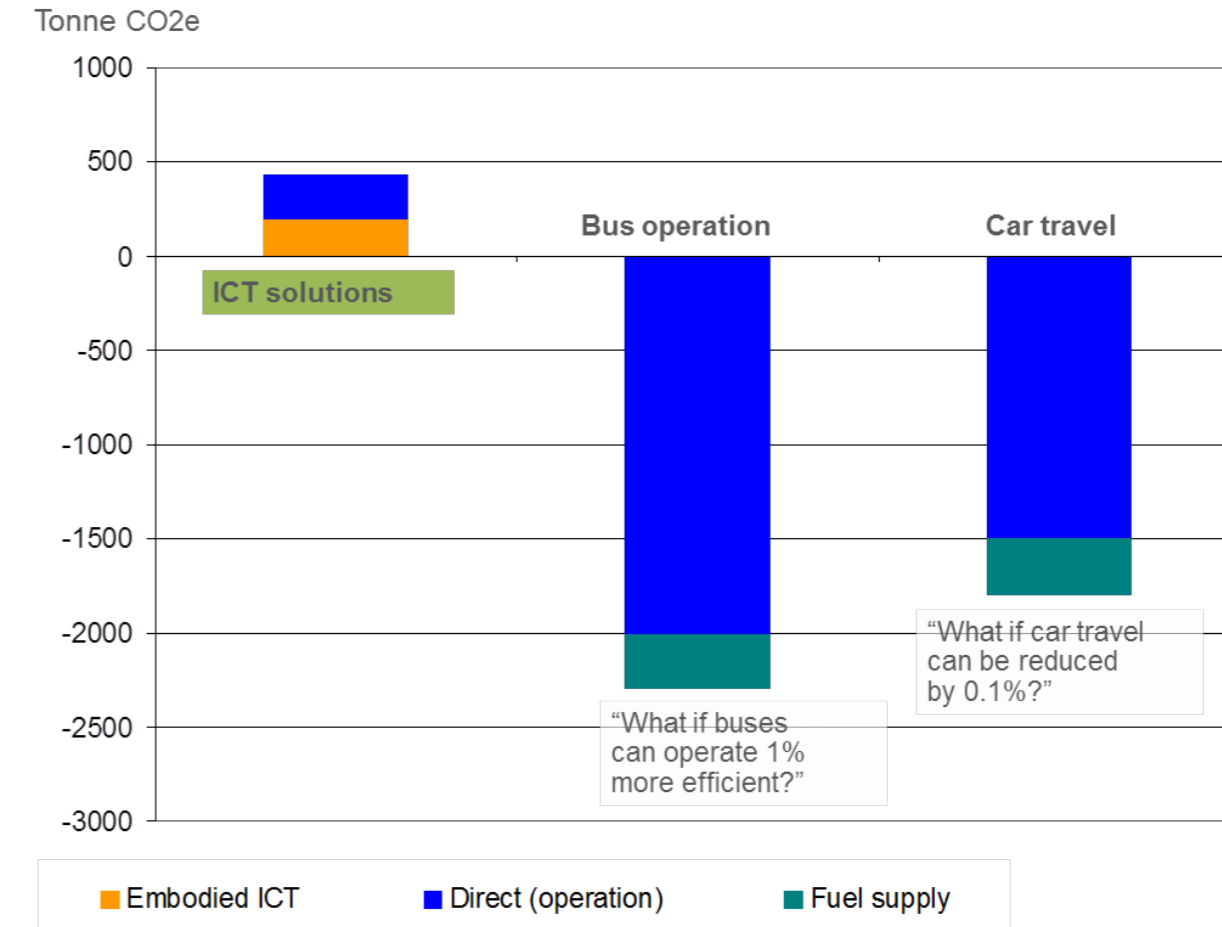


Smart meters, Australia



System flowchart of LCA models

Connected buses, Brazil



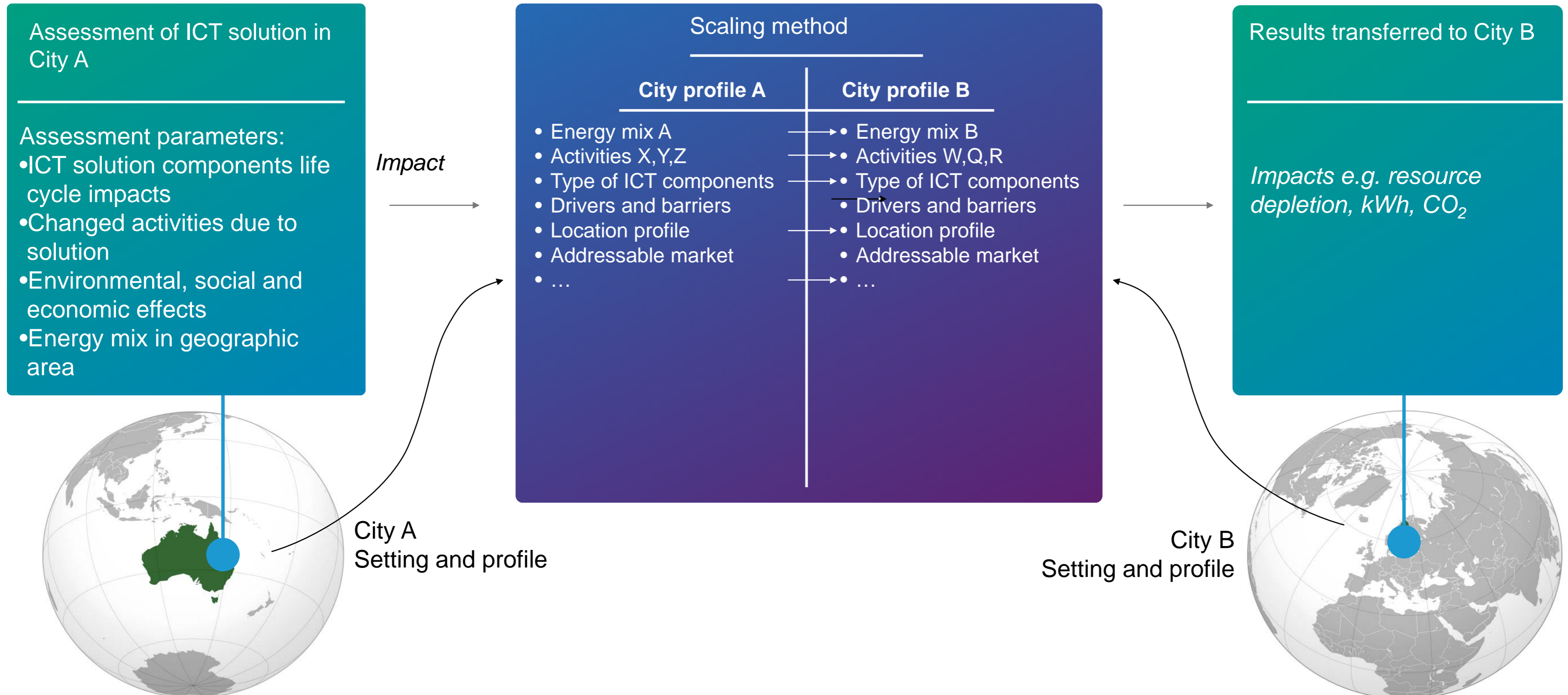
Case study: Connected buses

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

SHARING BEST PRACTICES

THE METHODOLOGY CHALLENGES



COLLABORATION FOR SMART SUSTAINABLE CITIES



The data gap:

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

Drivers and barriers

A widened perspective on climate change mitigation through ICT:

From technology potential to actual use ... identifying the success factors

Policy makers

Solutions and assessments

Academia

Companies

Solutions and assessments

FURTHER READING




Methodology:

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

<http://e-collection.library.ethz.ch/eserv/eth:6558/eth-6558-01.pdf> p 181-188

Case studies:

SMART WORK AT TELIASONERA

As mobile broadband becomes universal, and more and more things and people become connected, the opportunities presented by ICT multiply. In Sweden, telecom operator Teliasonera has cooperated with Ericsson to study the impact of implementing ICT-based smartwork solutions such as teleworking, flex-working, virtual or telepresence conferencing and flex-office. While taking all of these measures the company has significantly reduced its CO₂e emissions and travel costs.




CONNECTED BUSES IN CURITIBA

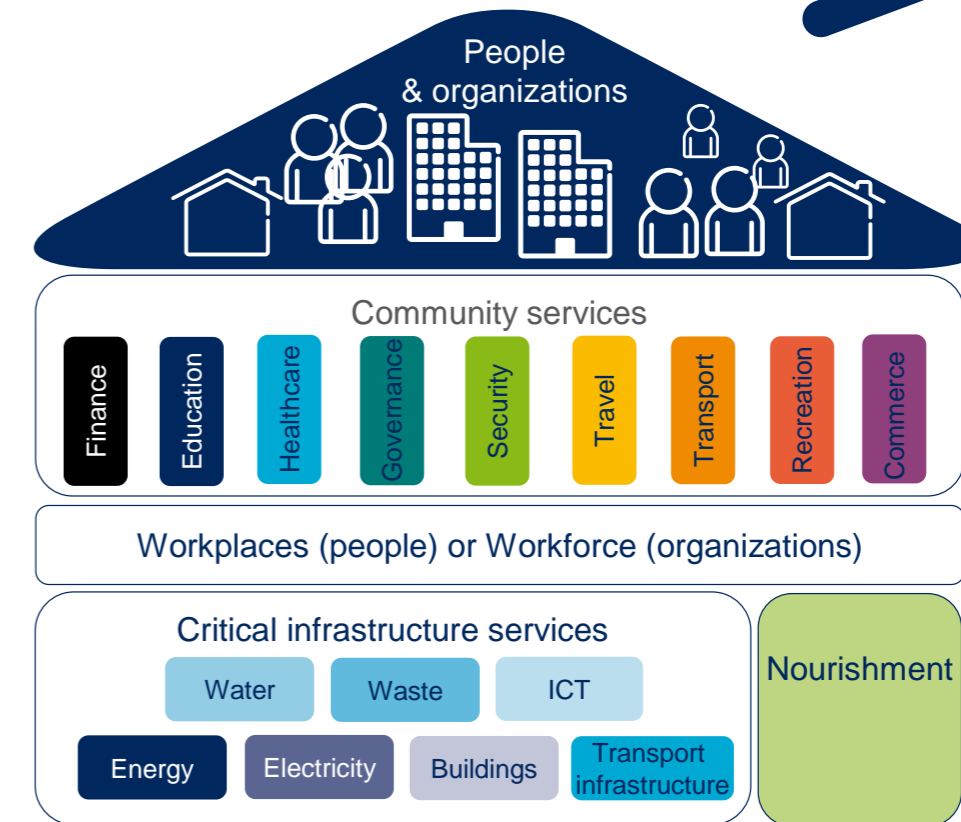
Today, more people live in cities than in rural areas, and while cities consume the majority of our planet's resources, they are also centers of innovation, where new ways to more effectively use those resources are explored. One of Brazil's largest cities, Curitiba, is transforming its public-transportation system by connecting city buses to a high-speed mobile-broadband network. This could mean a significant reduction of the city's energy consumption and total carbon dioxide equivalent (CO₂e) emissions.




SMART METERING IN AUSTRALIA

Australia's largest energy distributors supply electricity to millions of customers in the major metropolitan areas and remote rural outback. The electricity network powers both large and small businesses, as well as major industries, including mining, shipping, tourism, manufacturing and agriculture.

With initiatives in smart grid development, the Australian Government is working closely with electricity companies to help Australia set the foundation of energy technology.



[http://www.ericsson.com/thecompany/sustainability_corporateresponsibility/enabling a low carbon economy](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!



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Thank you

