

Internationale Tagung “Energie Neu Denken”

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OECD work on Green ICTs for Green Growth

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Context

OECD Ministerial on the Future of the Internet in
Seoul, Korea, in 2008

OECD Ministerial “Declaration on Green Growth”
in 2009

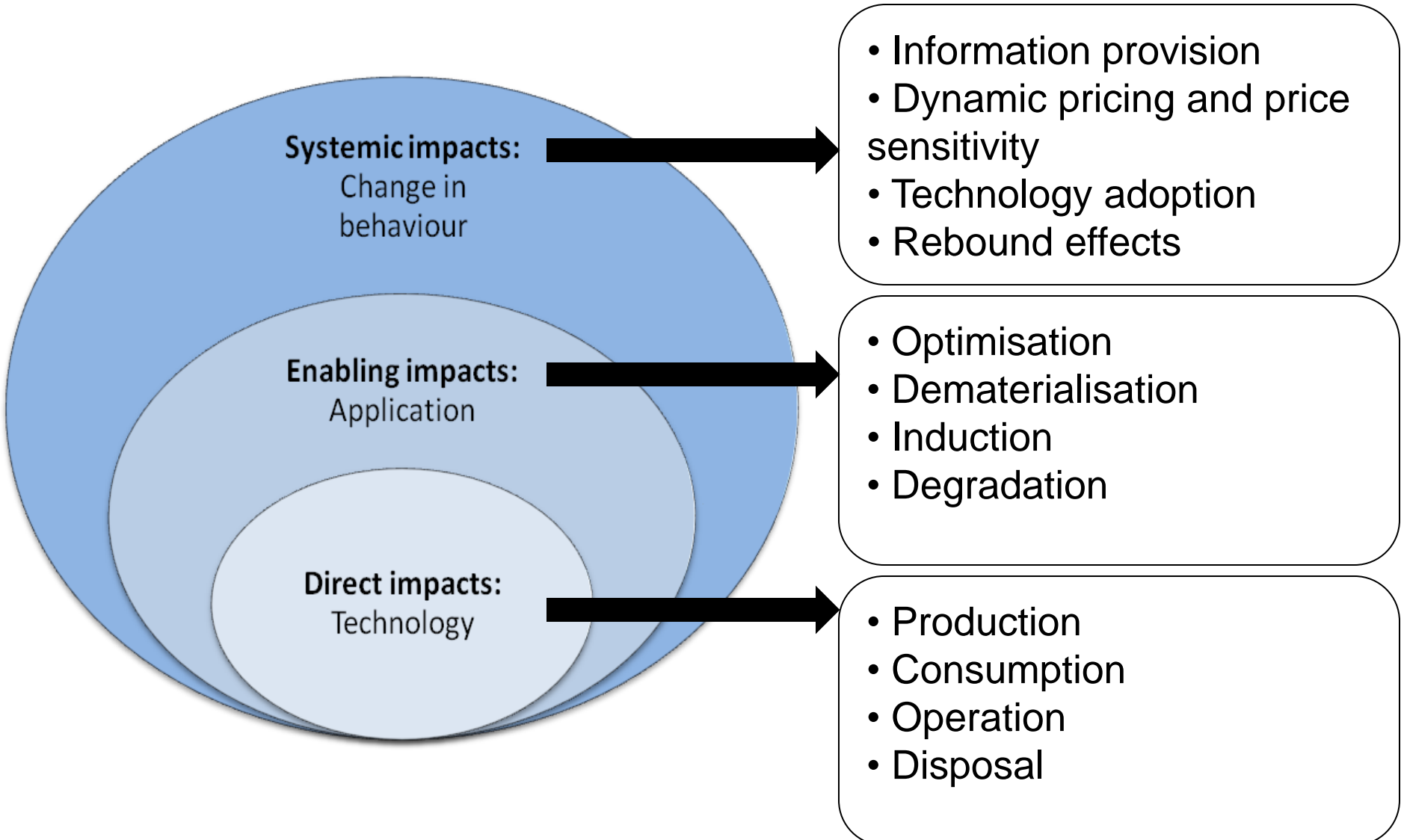
OECD Green Growth Strategy

- Start 2009, half-time 2010, final report 2011

Why green ICT?

- **Enabling effects:**
 - ICT enabled “smart” solution can save 15% of emissions in 2020 [GeSI,2008]
 - “Smart” solution can cut global electricity consumption by 30% in 2030 [IEA, 2009]
- **Direct effects:**
 - ICTs are responsible for around 2-3% of global carbon footprint [Gartner, 2008]
 - ICTs and CEs account for 15% of global residential electricity consumption [IEA, 2009]

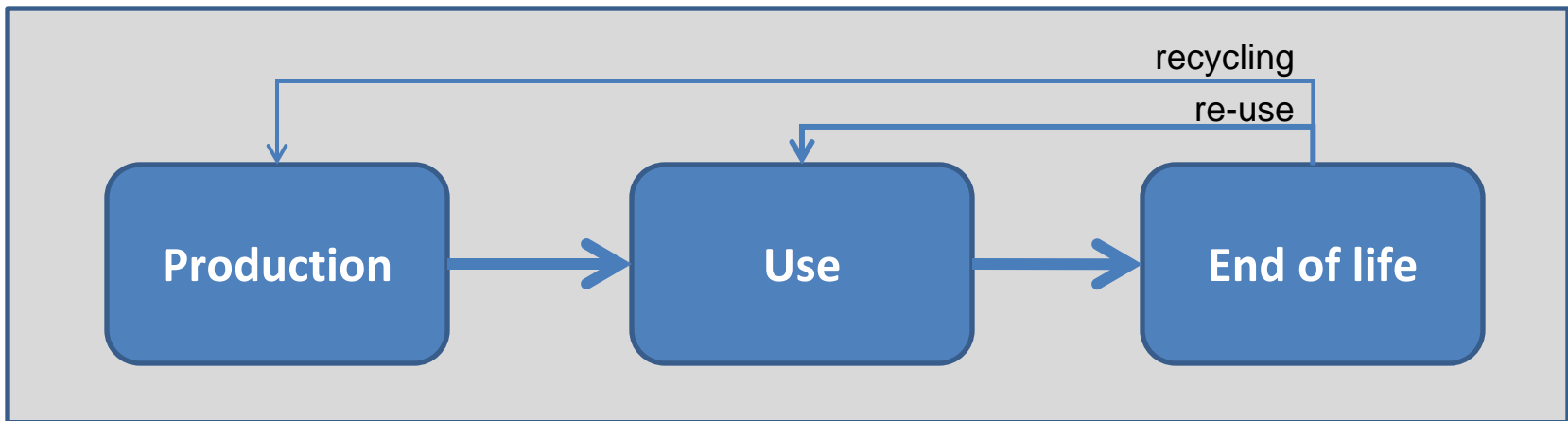
Analytical framework



Analytical framework - 2

Environmental impact categories

Global warming, primary energy use, toxicity, non-energy resource depletion, land use, water use, ozone layer depletion, Impacts on biodiversity

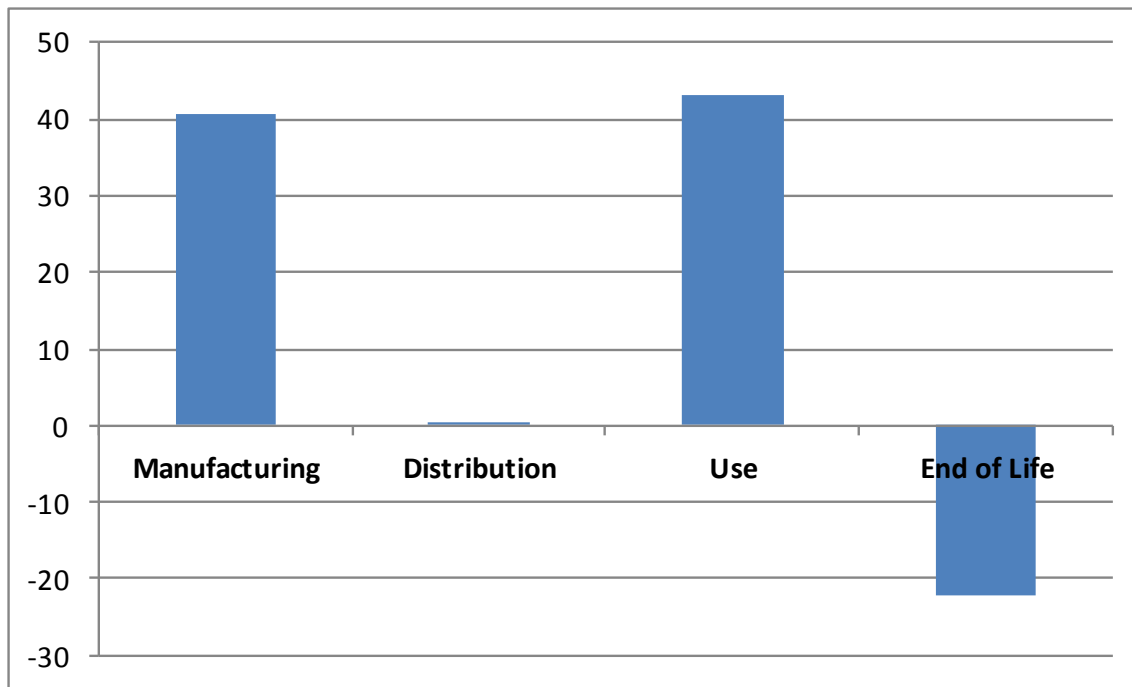


Life-cycle assessment

Some take-aways

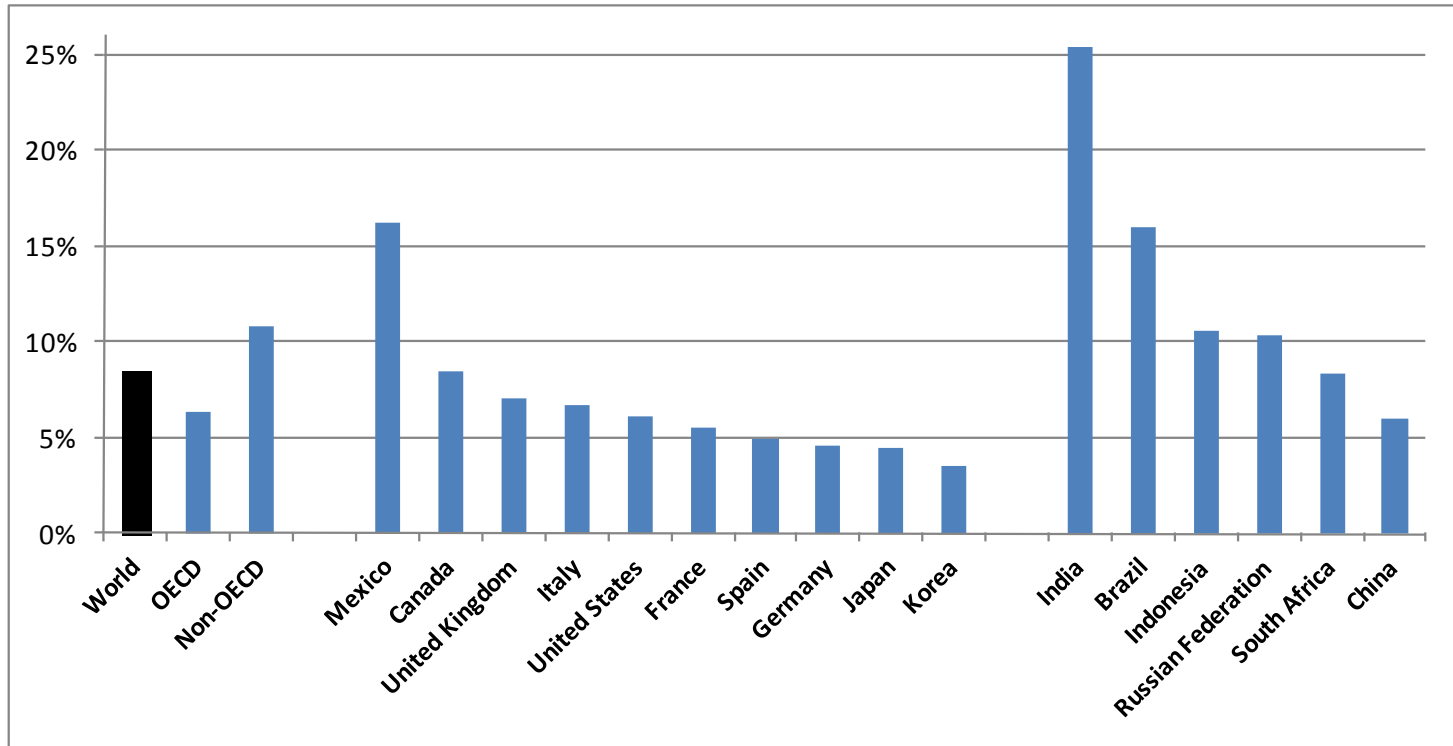
PC life-cycle

All impacts: **Use = Manufacturing**



Electricity losses

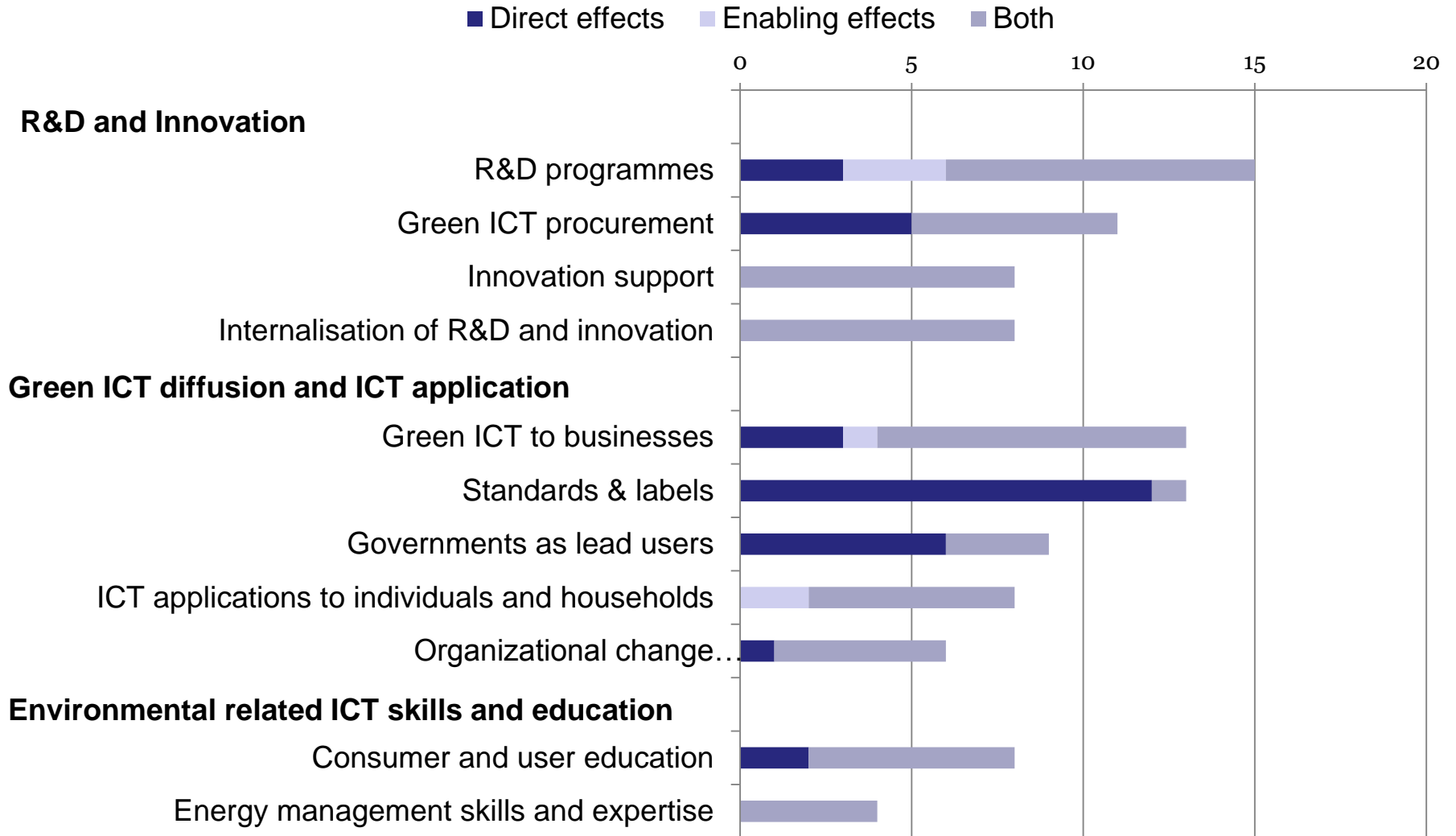
Share of domestically generated electricity lost during T&D, 2007



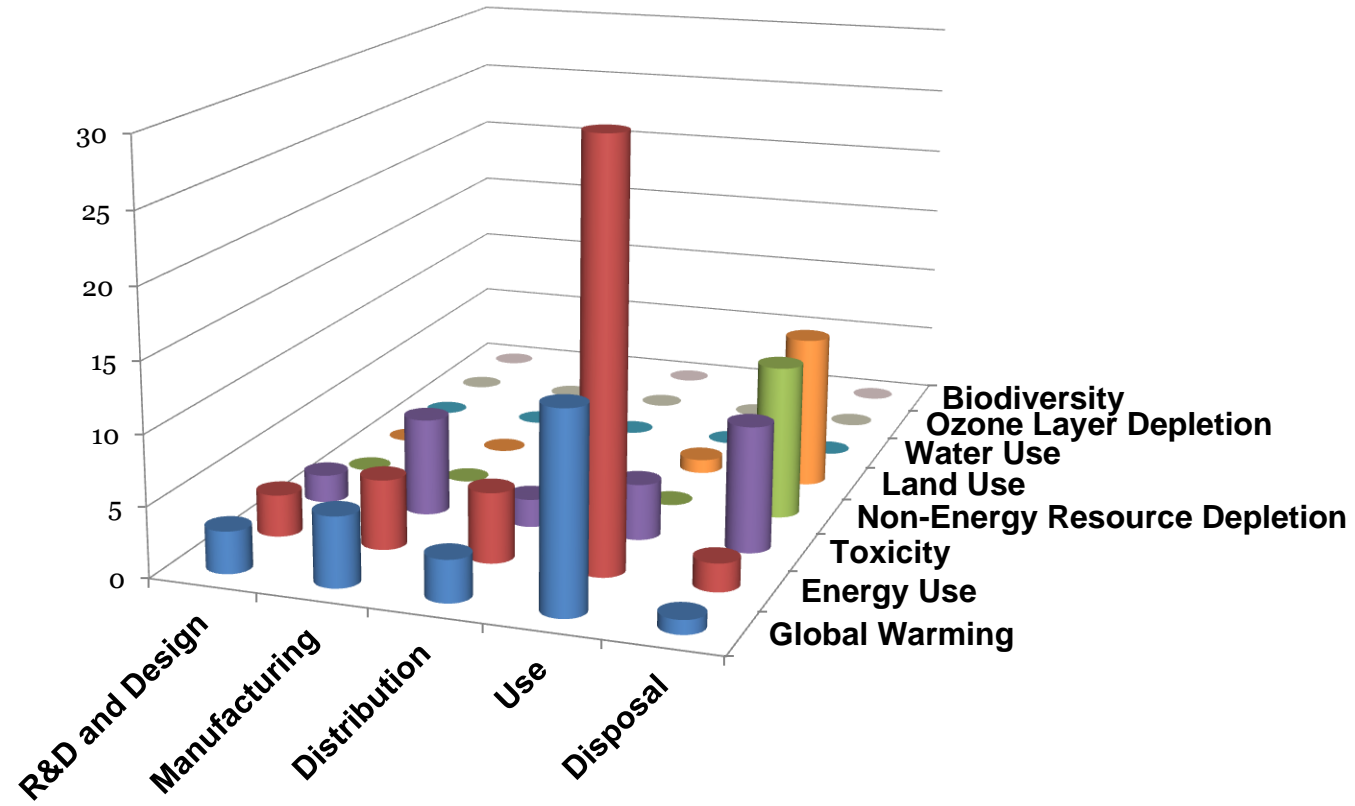
Smart grids: sensor-based networks to identify and locate leaks.

Government policies and programmes

Organised by broad policy areas

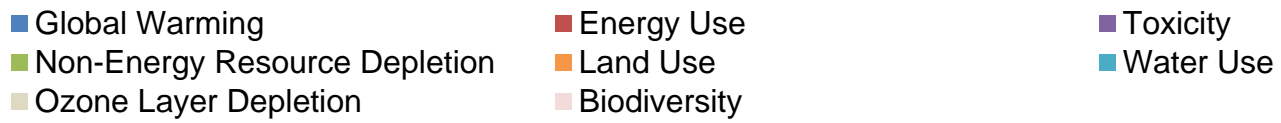
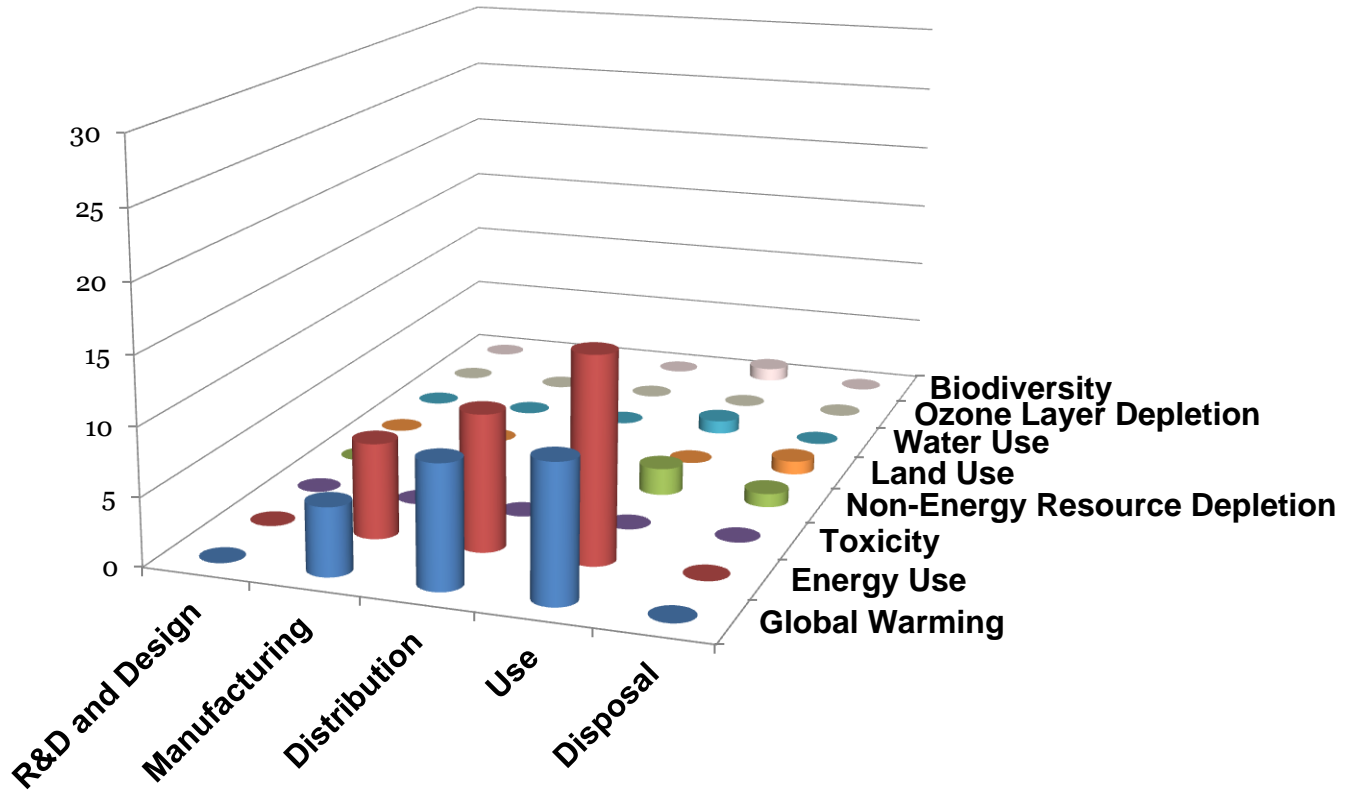


Focus areas of green ICT initiatives targeting *direct* effects



- Global Warming
- Energy Use
- Toxicity
- Non-Energy Resource Depletion
- Land Use
- Water Use
- Ozone Layer Depletion
- Biodiversity

Focus areas of green ICT initiatives targeting *enabling* effects



Green technologies in response to the economic crisis

	Infra-structure	R&D	Education	Green Technology
Australia	AUD 11.5 billion	AUD 0.58 billion	AUD 17 billion	AUD 5.2 billion
Canada	CAD 20 billion	CAD 0.8 billion	n.a.	CAD 4.6 billion
Finland	EUR 910 million	EUR 25 million	EUR 30 million	EUR 38 million
France	EUR 4.7 billion	EUR 0.05 billion	EUR 0.73 billion	EUR 0.03 billion
Germany	EUR 20 billion	EUR 1.4 billion	EUR 19 billion	EUR 5 billion
Norway	NOK 3.8 billion	NOK 0.17 billion	NOK 0.27 billion	NOK 1.6 billion
US	USD 100 billion	USD 16 billion	USD 157 billion	USD 54 billion

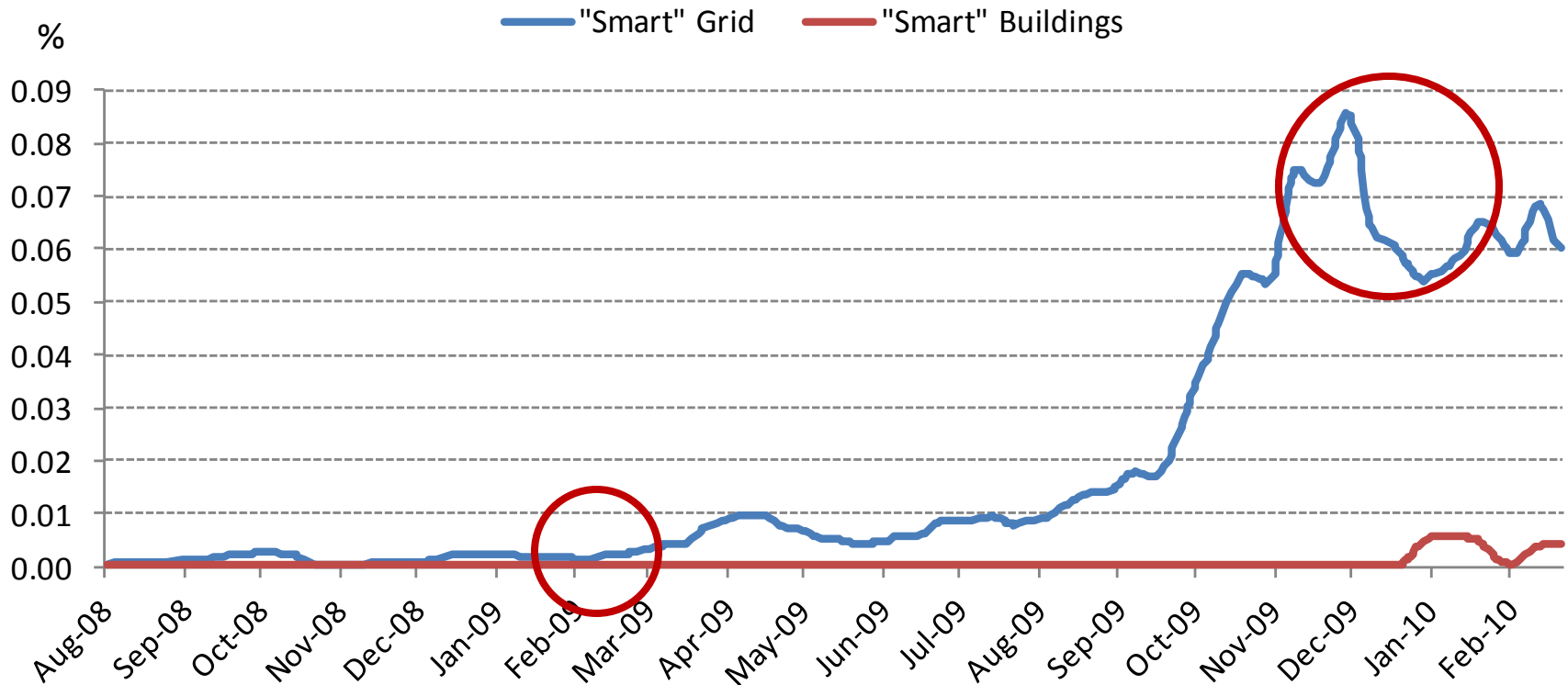
Blue: Green technology is second most important.

Measurement and evaluation

- Very few initiatives have implemented measurable targets for the evaluation of their policies or programmes.
- Governments provide measurable indicators more frequently than industry associations.
- Efforts are being made in developing and promoting instruments for measuring the quality and impacts of policies and programmes.

The potential for green ICT-related jobs

Vacancies for “smart” jobs in the U.S.



Source: OECD based on SimplyHired.com.

Government initiatives on Green ICT-related jobs and skills

- Korea's *IT Research Center Fostering and Supporting* program involves master and PhD students in R&D activities together with the ICT sector and the green technology sector.
- The Save Energy Now initiatives of the U.S. Department of Energy provides training to enhance energy management skills in companies across the economy, including Data Centers providers.
- The European Commission provides EUR 5 billion to the automotive industry to promote green cars. This is expected to created jobs, for example, in the automotive semiconductor industry.

Thanks

www.oecd.org/sti/ict/green-ict

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