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Government policies on ICTs, the environment and climate change ("Green ICTs")

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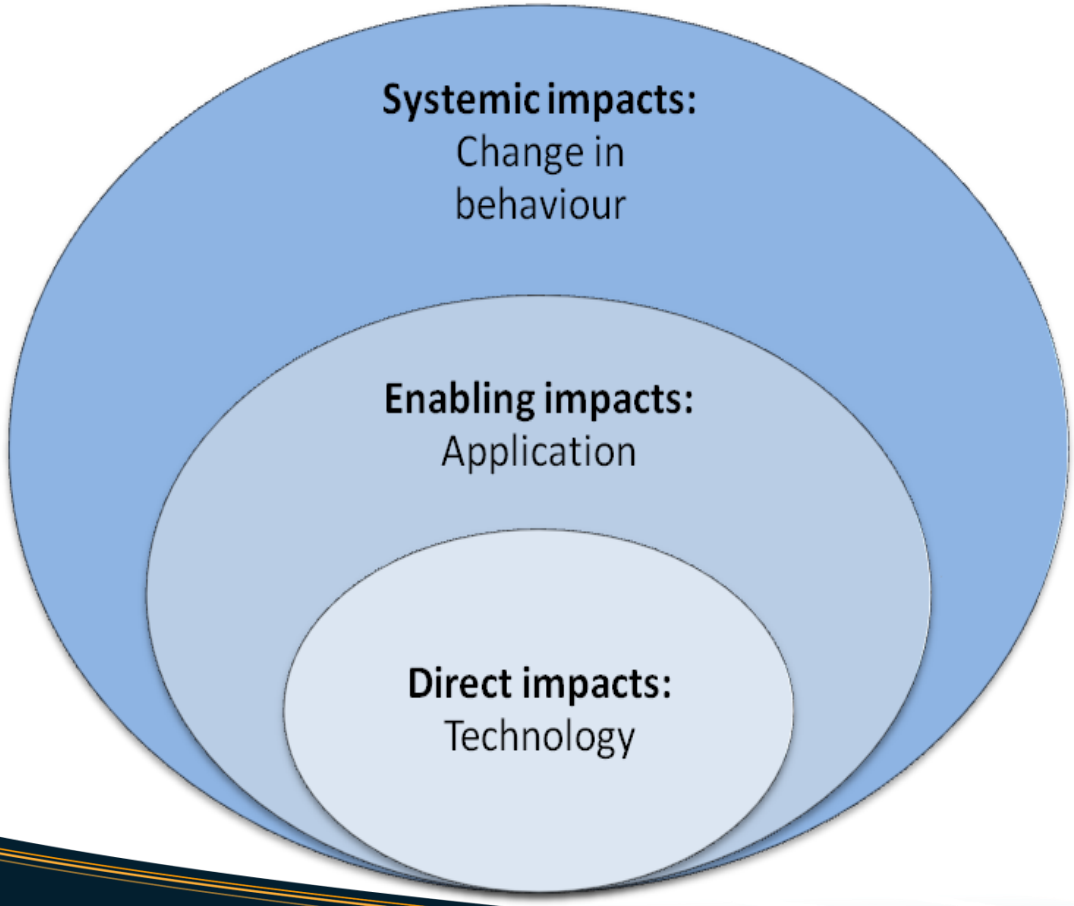
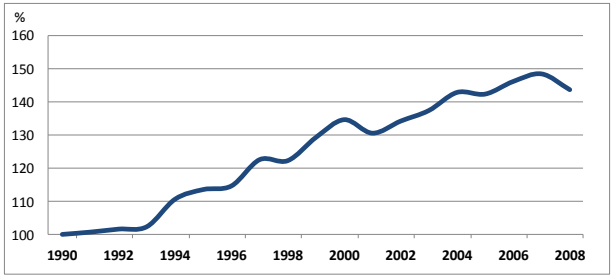
Structure

1. Net environmental impacts of Green ICTs
2. Comprehensive approaches, example of the cloud
3. OECD country policies
4. Applicability of OECD and EC recommendations in developing countries ?
5. Conclusions

1. Net environmental impacts of Green ICTs



Paper production and use

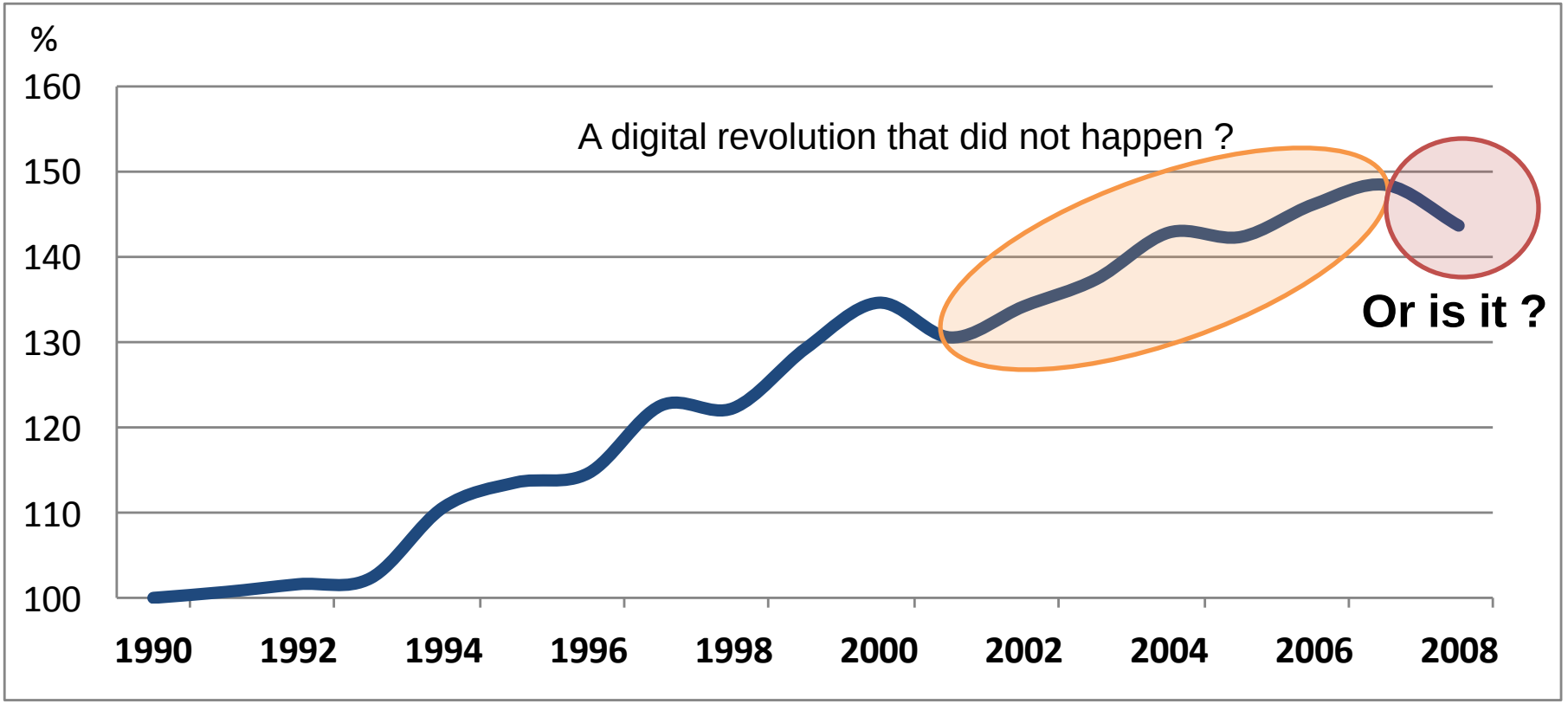


Smart agricultural irrigation

Rare metals in ICT goods

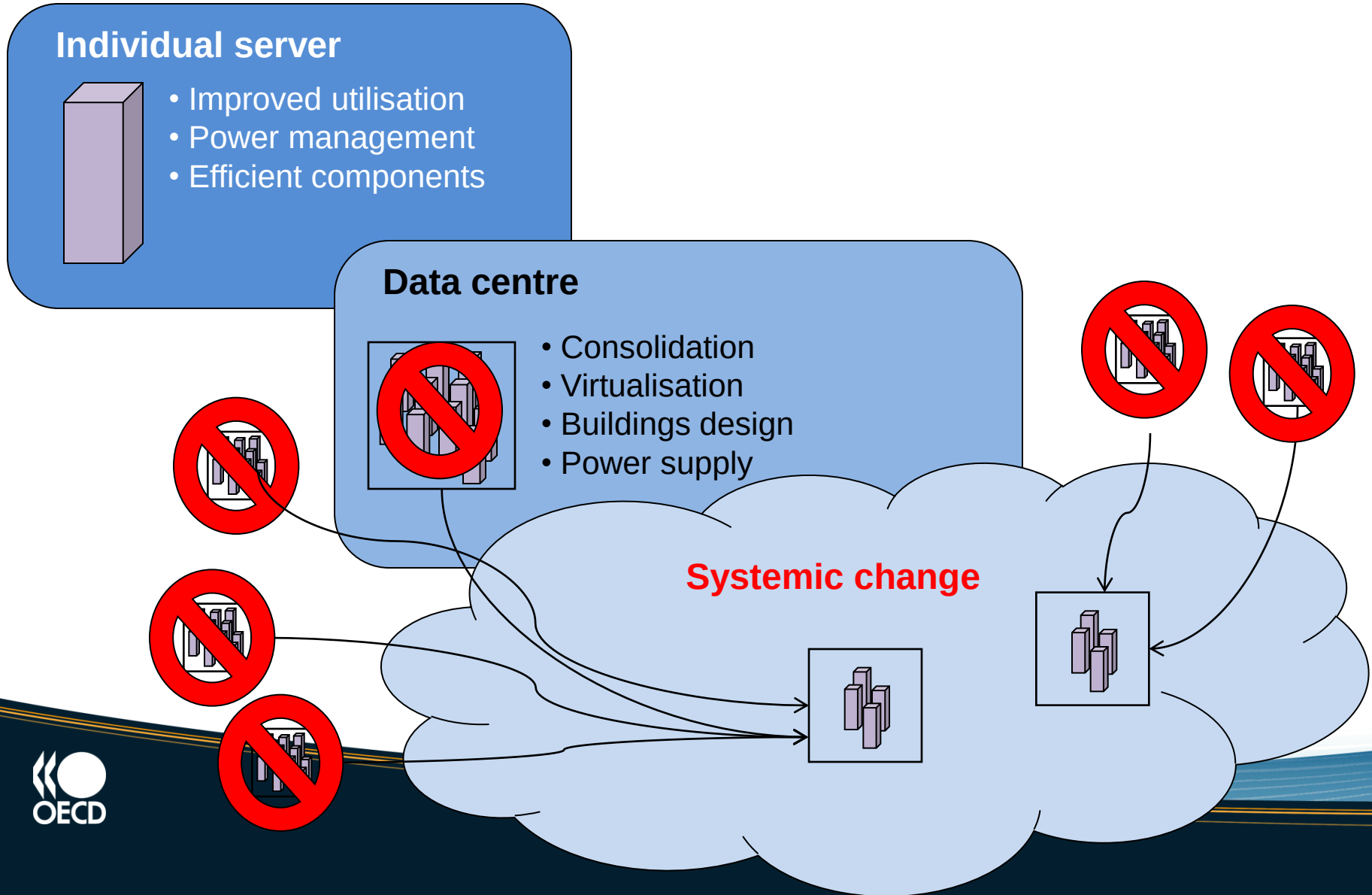
Source: OECD, 2010, "Greener and Smarter. ICTs, the environment and climate change".

1. Global paper production



Source: OECD calculations
based on FAO, ForesSTAT, May 2010

2. Comprehensive policy approaches – example of the cloud



2. Comprehensive policy approaches – example of the cloud

Cloud computing has much systemic environmental potential:

- Development aspect: “Leapfrogging” to government and business applications hosted by regional cloud providers in regional data centres.

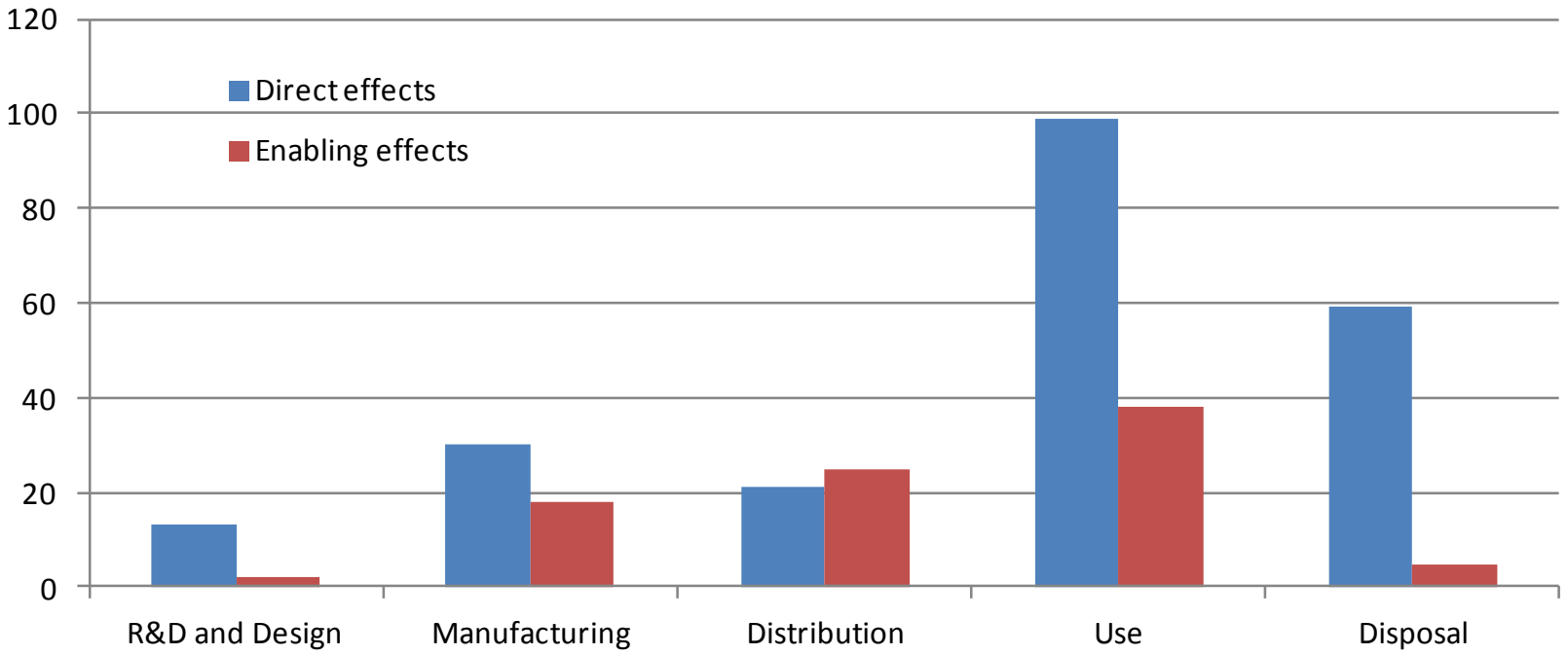
- Decarbonisation aspect: Ad-hoc re-routing via the clouds can help “shave” peaks in electricity demand.

- Dematerialisation aspect: Digital content, e.g. music and games.
  - globally **ONE QUARTER** of music is bought online
  - i.e. without CD or case (think energy, plastic, waste).

3. OECD country policies

So what are governments doing?

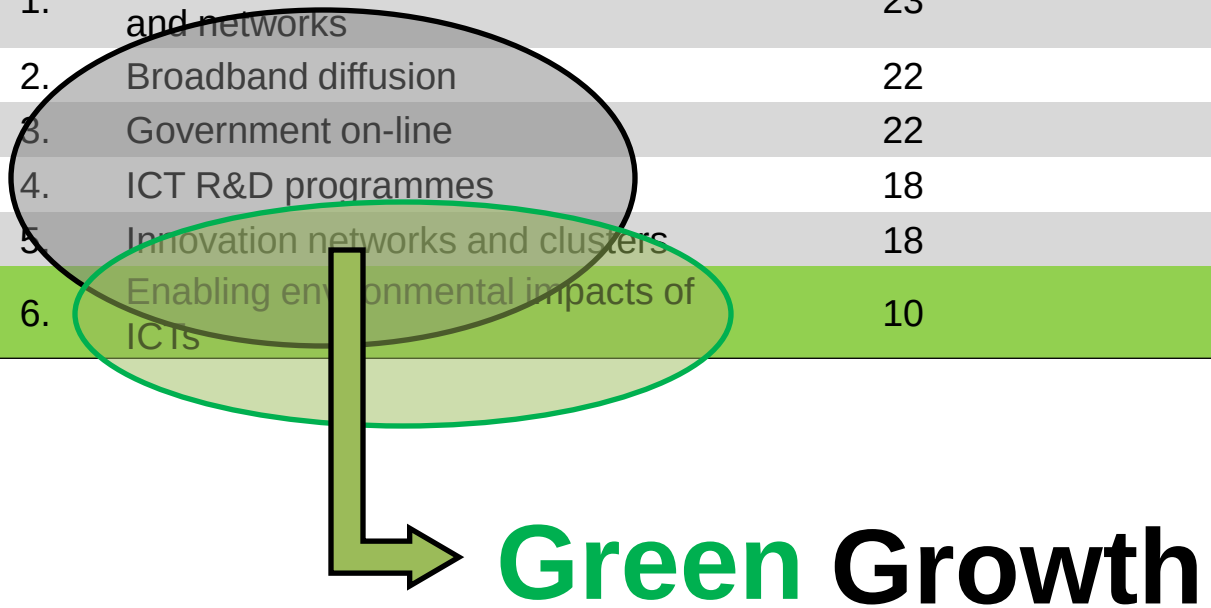
3. OECD country policies - 2009



Source: OECD, 2009, "Towards Green ICT Strategies: Assessing Policies and Programmes on ICT and the Environment".

3. OECD country policies – 2010

Priority	Policy area	# OECD countries with high priorities	# OECD countries with increased priorities
1.	Security of information systems and networks	23	11
2.	Broadband diffusion	22	10
3.	Government on-line	22	8
4.	ICT R&D programmes	18	11
5.	Innovation networks and clusters	18	8
6.	Enabling environmental impacts of ICTs	10	16



Green Growth

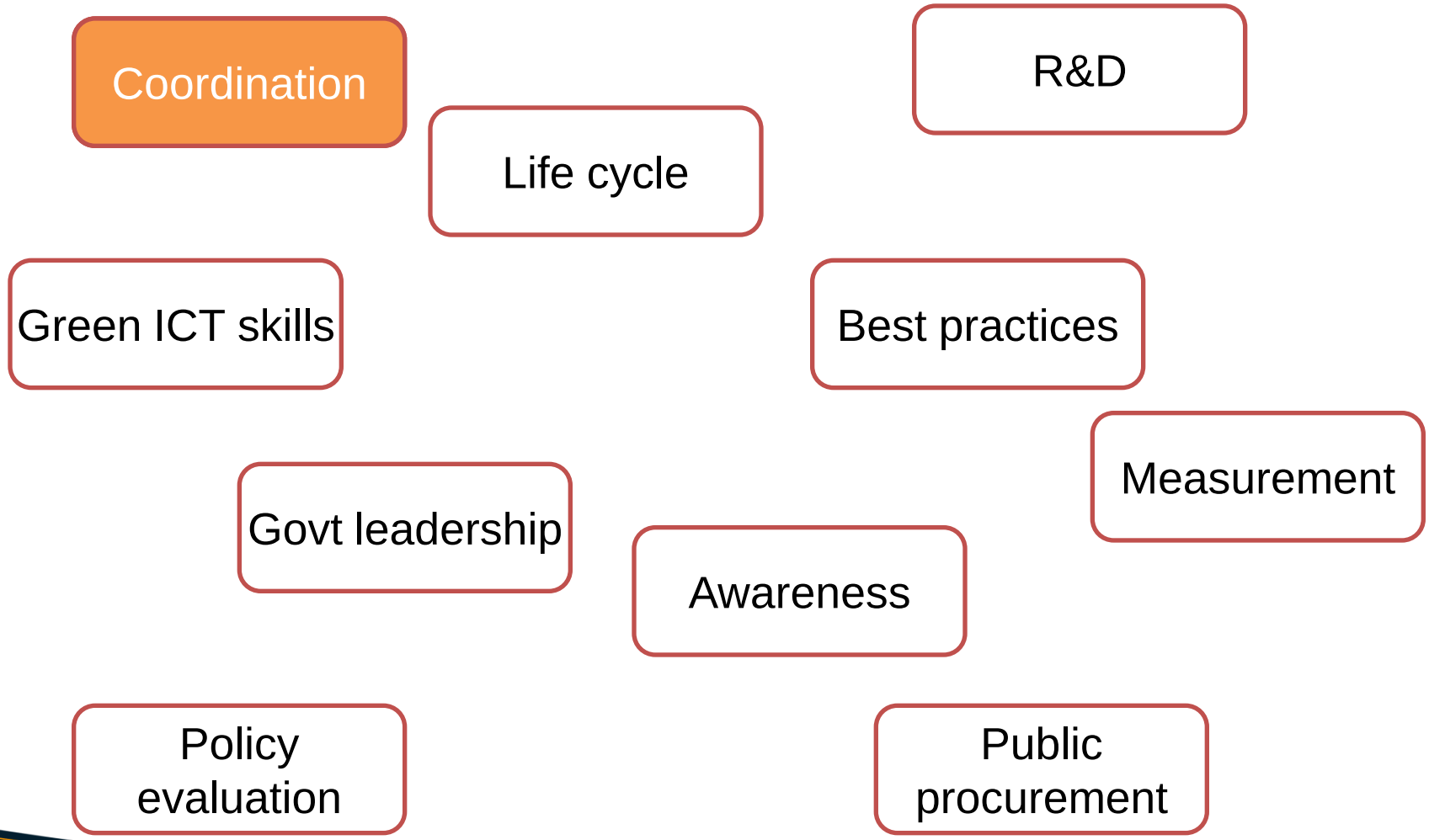
Source: Based on the policy questionnaire of the **OECD Information Technology Outlook 2010** (forthcoming)

3. OECD country policies – examples

Emerging good practice: tackling direct and enabling impacts jointly, researching systemic impacts.

	Direct	Enabling	Systemic
United States "National BB Plan"	Federal government data centres	FCC + DoE & DoT: energy and transport policy objectives	
Germany "Germany Green IT Pioneer"	Federal govt IT energy use by 2013: - 40%	E-energy: pilot regions for smart grids and e-transport	Accompanying research for e-energy
Netherlands "ICT+Energy"	Long-term agreements to limit energy use in ICT sector and co-develop solutions for energy and transport sectors.		

4. OECD and EC Recommendations



4. …for emerging economies ?

An open question for this discussion.

Some common characteristics,
but also differences:

- Electronic waste : from import to domestic generation
- Diesel back-up power in telecommunications networks
- Smart grid – how to combine with general objectives for electricity provision?
- Regional cloud computing centres – green energy, reliable energy

5. Conclusions

Three takeaways

1. Partnerships inciting and including the ICT sector – arguably the most innovative sector there is

2. Communicate and co-ordinate
   a. Within ICT policy community
   b. With environmental, energy, etc. policy communities

3. Climate change is big, but…
   1. energy efficiency *not equal* saving the climate
   2. water scarcity – *the* next big issue
   3. biodiversity and land loss reach farther than that
   4. adverse health effects

Thank you

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

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