



Module 3. Technologies and innovation

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General comments

- A positive approach towards innovation
 - A consensus that innovation and technology will contribute to resource efficiency
 - A number of success stories
 - better service + improved environmental performance = competitive edge (e.g. green light, circular pumps, nano-coatings)
- Agreement on drivers
 - CC, population growth, « Chindia », scarcity, costs...
 - Competition (between firms, territories), retailers and consumers, finance community (appetite for green tech), government (green public procurement)...
- Taking account of the complexity of innovation
 - Technological + organisational innovations
 - Systemic innovation (design, reverse logistics, strategic corporate decisions)
- Integration is key – tools, information, networks, etc.
- Challenge: « picking th right bouquet » for specific contexts

Business opportunities

- New products + adaptation of existing ones (e.g. buildings) + new business models
- A large and growing market (figures from Germany)
 - World market will grow from 1 trillion € in 2006 to 2.8 trillion € in 2020
 - Some new markets starting from scratch (hydrogen-fueled devices)
- A competitive edge for innovative firms
- Knowledge and learning may become a key product in itself
- Global environmental gain?
 - New demands for materials
 - Risks associated with substitutions

A priority: To foster networking

- Why
 - To jump out of the box to think outside the box (need multiple expertise, external groups)
 - To bridge the information gap (knowledge, data)
 - To disseminate tools and expertise
 - To engage investors, buyers, regulators
- How it works
 - Create multistakeholder fora (including using e-tools)
 - Take advantage of scale effects: labs -> incubators -> business parks -> clusters (e.g. solar valley in China)
 - Develop collaborative projects, to serve both business and government/regulatory purposes

A business perspective on government's role

- Need smart policies
 - Towards collaborative policies, involving stakeholders
 - Taking risks
 - Creating markets (green public procurement)
- International cooperation
 - To share tools and methods
 - To help developing countries (e.g. to create markets for recycled materials)
- A cautious note from a government's perspective
 - Lack of support structures for collaboration
 - The limitations of collaborative policies

More work needed

- Definitions and metrics
 - Need a broad awareness (not only carbon and CC)
 - No precise, agreed-upon definition
 - Some metrics being developed
 - at macro level: patents (EC, OECD)
 - at corporate level: Factor T (Toyota: benchmark the eco-efficiency of a product, defined a ratio between the value of the product and its environmental impact)
 - Still conceptual and methodological issues. Need to deploy successful metrics
- Shared visions across and among
 - Governments
 - Businesses (at both industry and corporate levels)
 - Consumers
- Integration