



Closing the eco-innovation gap: What role for policy?

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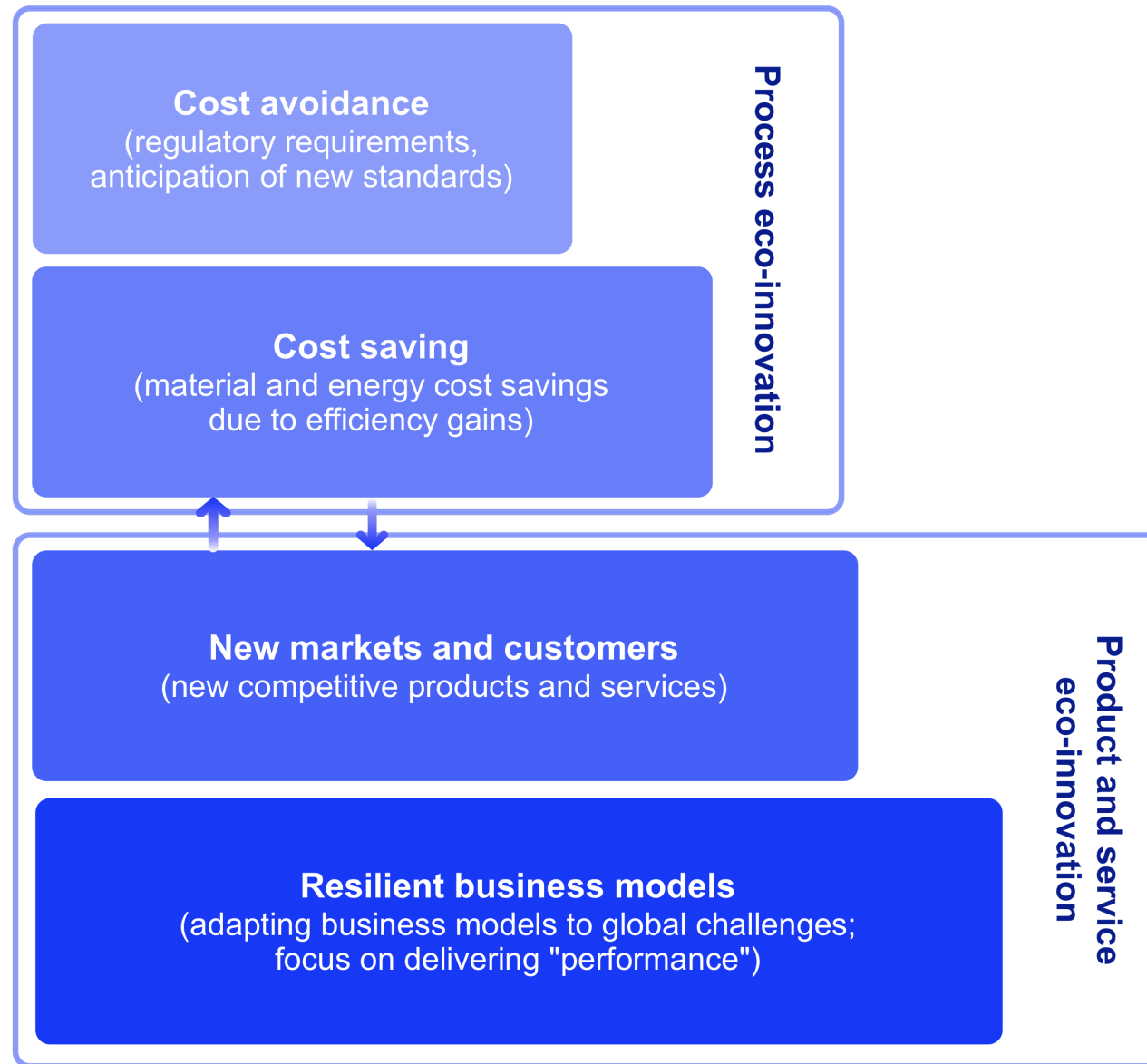
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Frames: why eco-innovation?

Eco-innovation is any innovation that reduces the use of natural resources (including materials, energy, water, biomass and land) and decreases the release of harmful substances across the whole life-cycle.





- Saving material and energy costs
- New products and services: new markets
- New business models

economy



- Sustainable management of natural resources
- Tackling climate change
- Improving biodiversity and ecosystem services

environment



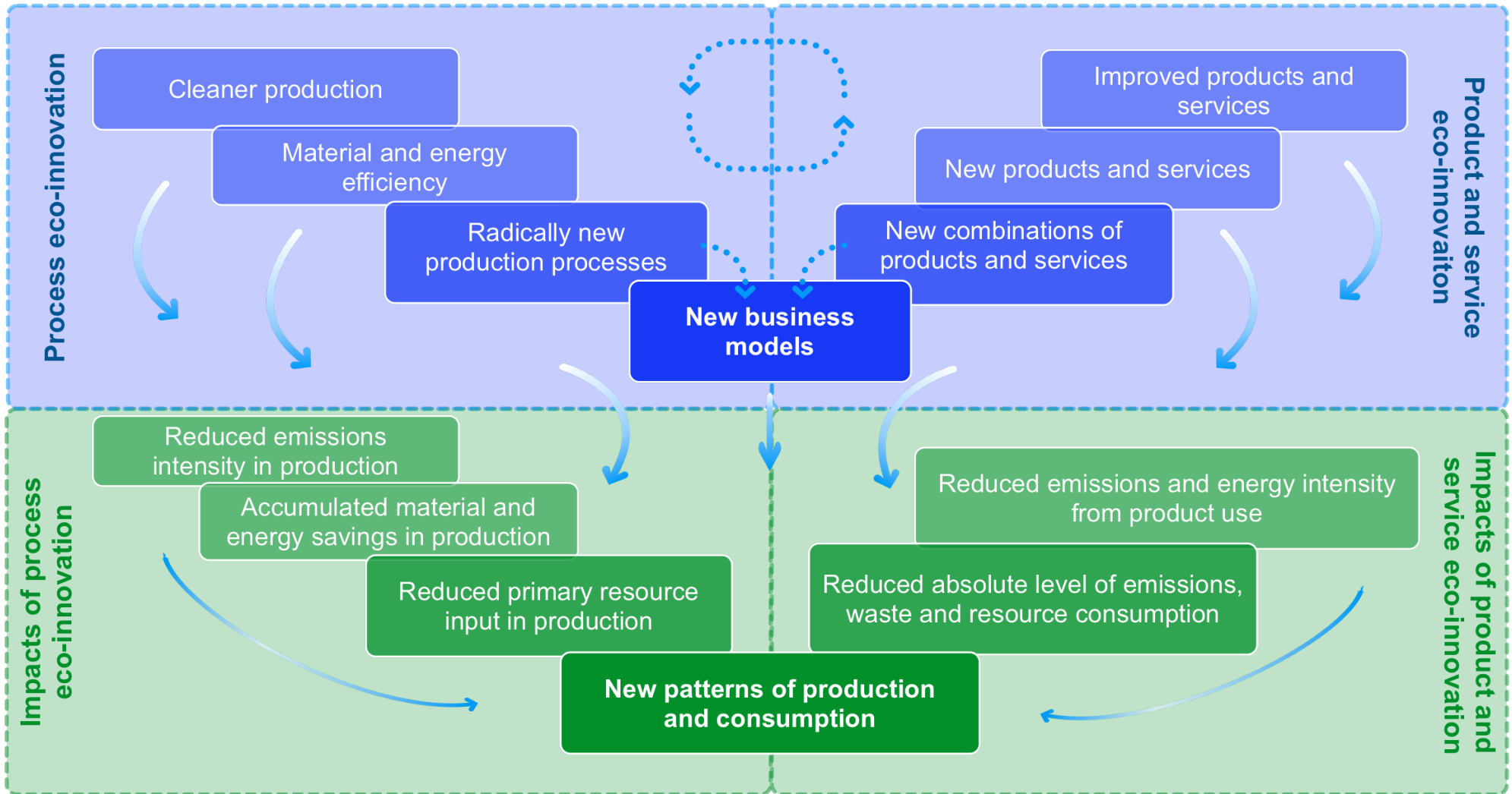
- Enhanced quality of life
- New sustainable jobs

society



- “Material security”
- Resource justice

politics

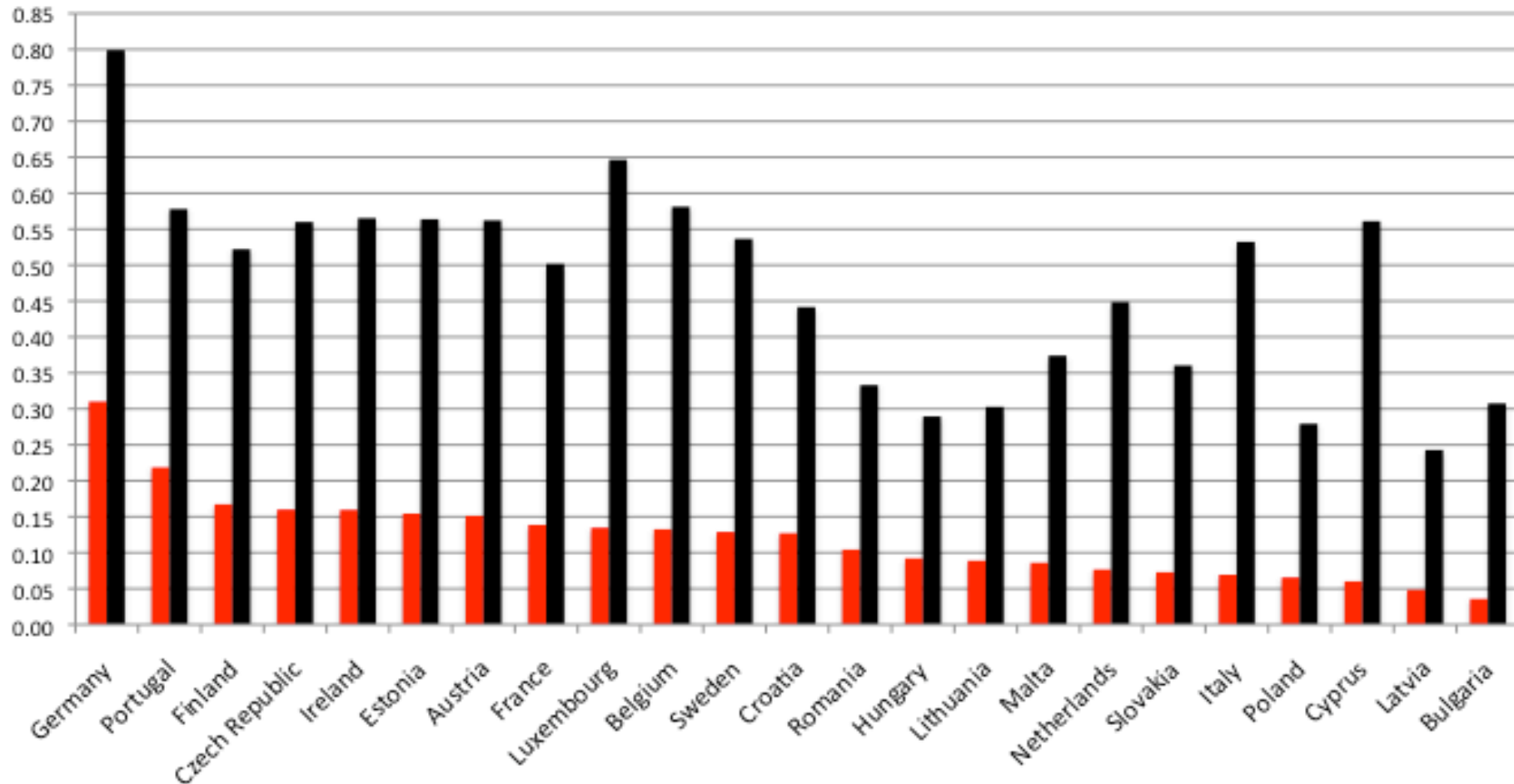




Eco-innovation in industry: Untapped potential

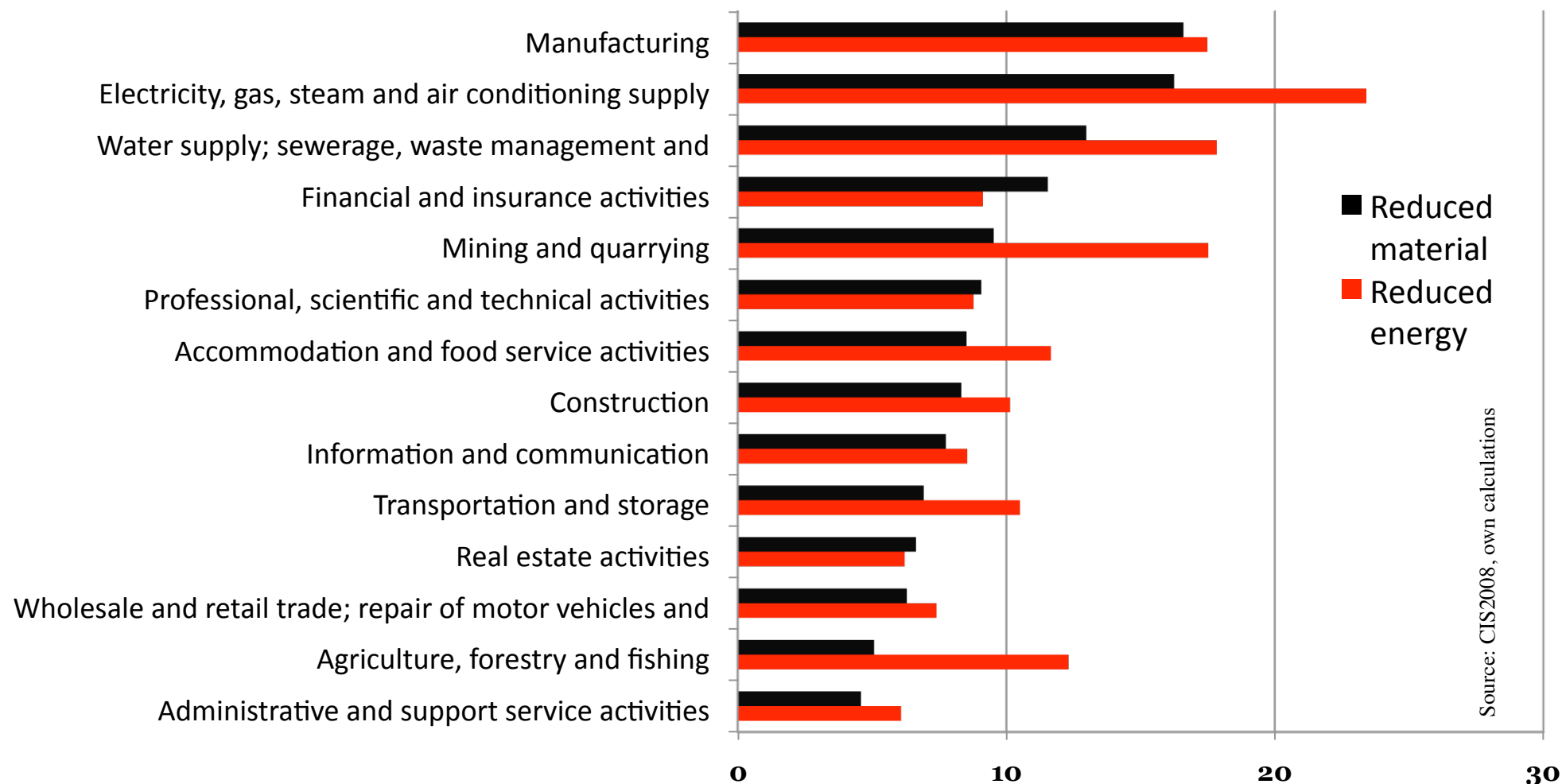


45% of companies in EU in manufacturing, construction, agriculture, water supply and food services have **introduced at least one eco-innovation in the past two years** (Eurobarometer 2011).

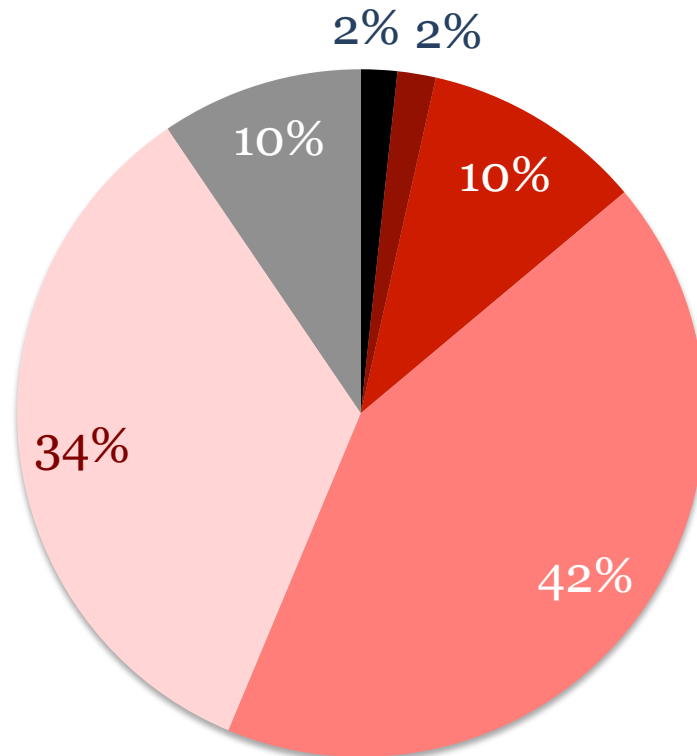


Source: CIS2008, own calculations

Share of **firms reporting reduced material use** per unit of output as a result of innovation (red) and firms with any innovation activity (black) (CIS 2008)



Share of firms reporting **reduced material and energy use** per unit output as a result of innovation in selected sectors (CIS 2008)

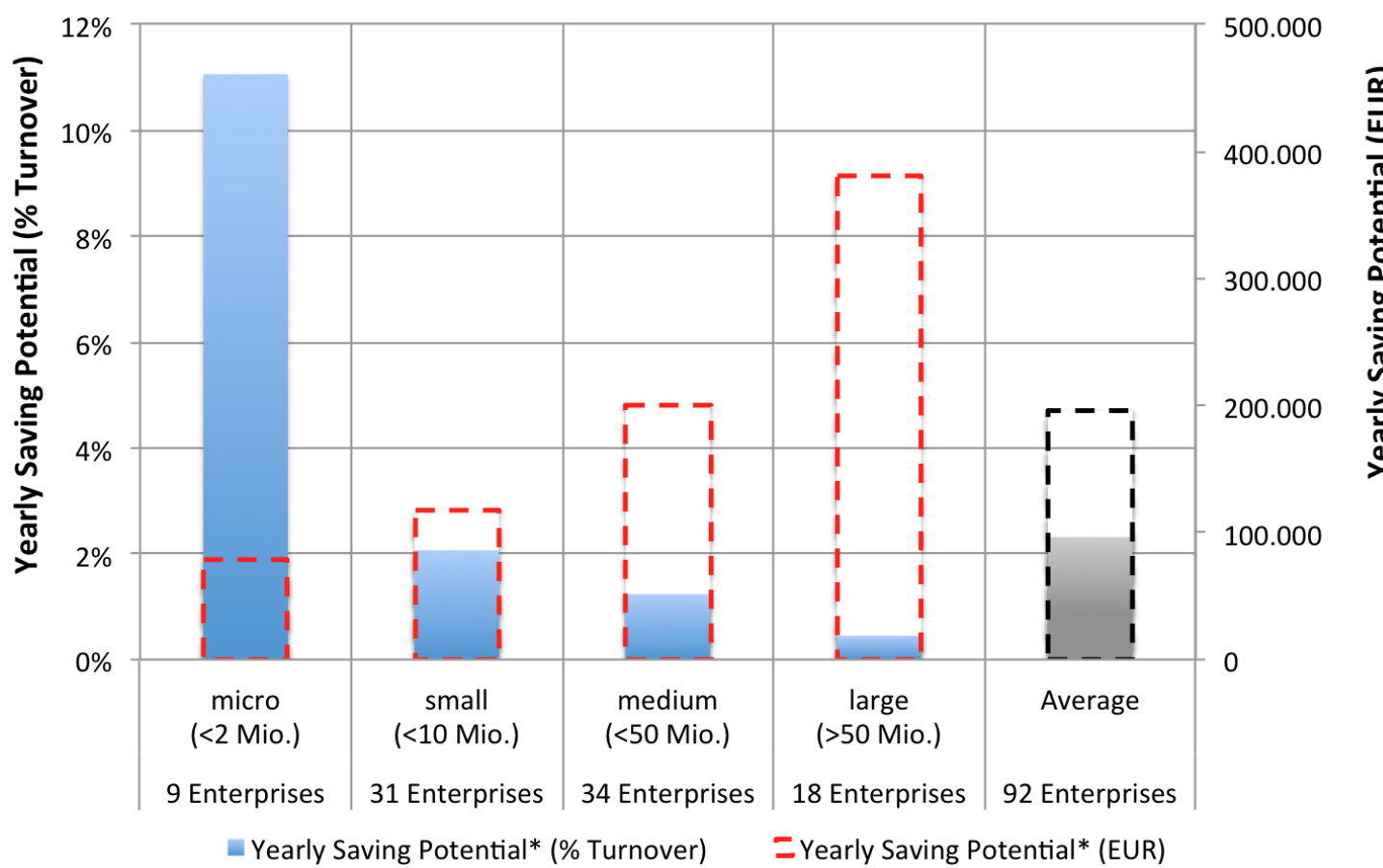


Source: Eurobarometer (2011)

- More than 60% reduction of material use per unit output
- Between 40% to 60% reduction of material use per unit output
- Between 20% to 39% reduction of material use per unit output
- **Between 5% to 19% reduction of material use per unit output**
- **Less than 5% reduction of material use per unit output**
- DK/NA

How would you describe **the effect of innovation** you have introduced in the past 24 months in terms of **resource efficiency**?

On average, manufacturing companies supported by demea (DE) saved **€196,000 annually** (or **2.3% of their annual turnover**) as a result of material efficiency innovation. The investment was typically paid off within **13 months** following the start of the process (EIO 2012, based on demea data).



Yearly savings potential in companies introducing material efficiency solutions (N=92; Calculations: EIO; Source: demea)



Towards eco-innovation policy

Eco-innovation policy aims to support development and diffusion of innovations resulting in a long-term economic and environmental sustainability.



Two pillars of systemic eco-innovation policy

- **Frames:** to establish a framework for eco-innovation activity (level playing field) and to set an overall direction of change (including binding environmental targets on resource use and emissions)
- **Direct support:** to support resource productivity improvements in business as well as to promote development and implementation of more radical and systemic eco-innovations (involving consumers)

Three “policy orientations”

Policy orientations	Main objectives	Type of eco-innovation supported
Environmental technologies	<ul style="list-style-type: none"> - ENV: protect the natural environment by reducing pollution and waste streams from production - ECON: increase competitiveness and create jobs in eco-industries through production and diffusion of environmental technologies 	Mainly incremental technological and process eco-innovations.
Eco-efficiency	<ul style="list-style-type: none"> - ENV: protect the natural environment by reducing the use of energy and resources in production and consumption (life cycle approach) - ECON: increase competitiveness and economic growth by decreasing material and energy costs of companies in all relevant sectors 	Technological and non-technological eco-innovations. Support for new disruptive technologies, but without realisation of systemic impacts.
Systemic eco-innovation	<ul style="list-style-type: none"> - ENV: improve the relationship between human activity and eco-systems by reconfiguring production and consumption patterns (eco-system services perspective) - ECON: increase sustainable competitiveness and economic development by developing radical eco-innovations and creating new markets 	Systemic (transformative and radical) eco-innovations focussed on e.g. value chain management, re-designing cities, industrial ecology, new business models providing alternative solutions (e.g. product service systems)

General findings from EU27 “policy mapping”

- all EU MS offer support for eco-innovation, but the scope of policies differ between countries
- Nordic and Western EU MS with most diversified eco-innovation policy portfolios; Eastern EU MS seem to rely mostly on demand-side measures
- Very limited and fragmented evidence of impact of these policies on eco-innovation and on their wider impacts on environment, economy and society

Typical eco-innovation measures

- Supply-side measures

- Most common: R&D funding, support for “cleantech” clusters and science-technology parks, as well as technology platforms;
- Less common: equity support for “eco-innovation”, dedicated business advisory services, fiscal instruments (targeting companies investing in eco-innovation R&D)

Typical eco-innovation measures (cont'd)

- Demand-side measures

- Most common: environmental regulations (EU level), Green Public Procurement, product and service certification, grants and fiscal support for companies adopting environmental technologies, awareness raising campaigns
- Less common: tax incentives for consumers (supporting “green” goods and services); other schemes stimulating demand (e.g. eco-vouchers)



Concluding remarks

- Eco-innovation recognised in political and policy debates across the EU, but not an over-arching concept guiding policy and regulatory frameworks
- Major focus of public support for eco-innovation on environmental technologies or “eco-industries”
- The importance of resource efficiency on the rise in most EU MS, but rarely linked to innovation
- Promoting “systemic innovation” rare and reported only in few countries and regions.

- Current EU eco-innovation policies not likely to lead to a major shift towards “green economy”
- Main challenges for public policy remain:
 - To apply ambitious sustainability criteria to all governmental expenditures
 - To use regulation and fiscal measures to get the true price of resource use
 - To find a good balance between support to incremental changes in industry and more radical and systemic eco-innovations
 - To link up relevant stakeholders in a coherent policy



Eco-Innovation Observatory

EIO offers

- Reports and briefs
- EU27 country profiles
- Database with on-line charts and maps
- 150+ good practices
- Eco-innovation glossary
- Surveys



<http://www.eco-innovation.eu>



Thank you

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