

Overview and achievements of the SwitchMed - MED TEST II

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UNITED NATIONS
INDUSTRIAL DEVELOPMENT ORGANIZATION



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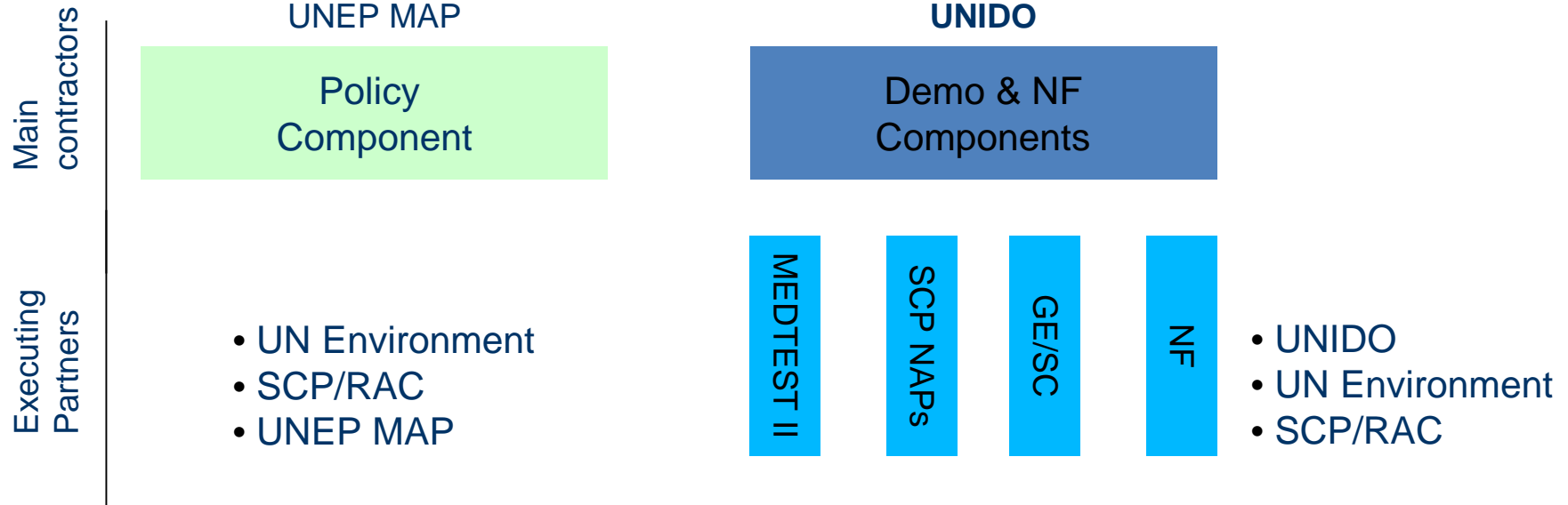
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The context



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EU DG NEAR (ENPI) SwitchMed (2014-2018)



SwitchMed (2014-2018) - Support and accelerate the transition of the Southern Mediterranean countries toward Sustainable Consumption and Production (SCP)



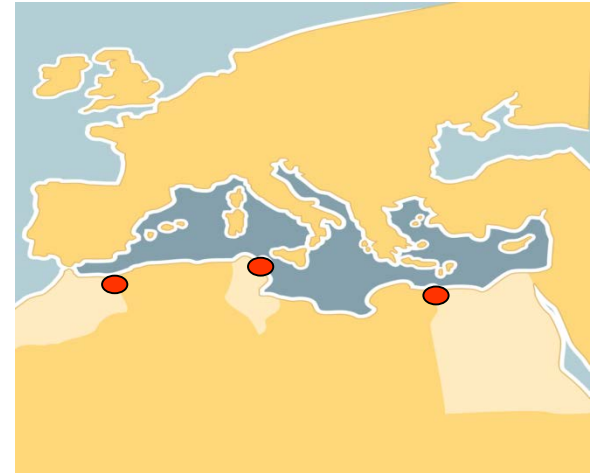
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MED TEST Programme

- **MED TEST I (2009-2012)**

MedPartnership

3 countries, 43 companies



- **MED TEST II (2014-2018)**

SwitchMed

8 countries, 125 companies



Scaling up: from MED TEST I to MED TEST II

www.switchmed.eu

To stimulate
the demand
and supply of
sustainable
production
services

Develop national capacities & the local market of sustainable production service providers

Scale-up adoption of best practices through industry demonstrations:

- Eco-innovative technology/Eco-Design products/packaging
- Production efficiency (modification, process control, GHK, etc.)

Engage key stakeholders (policy makers, industrial association, financial institutions) – enabling business environment

Service Providers

Industry

Institutional Stakeholders



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MED TEST Programme – Private Sector support

Objective: promote the adoption of **greener**, more **resource efficient** and **circular economy** business practices to increase productivity and reduce environmental footprint of manufacturing sector.



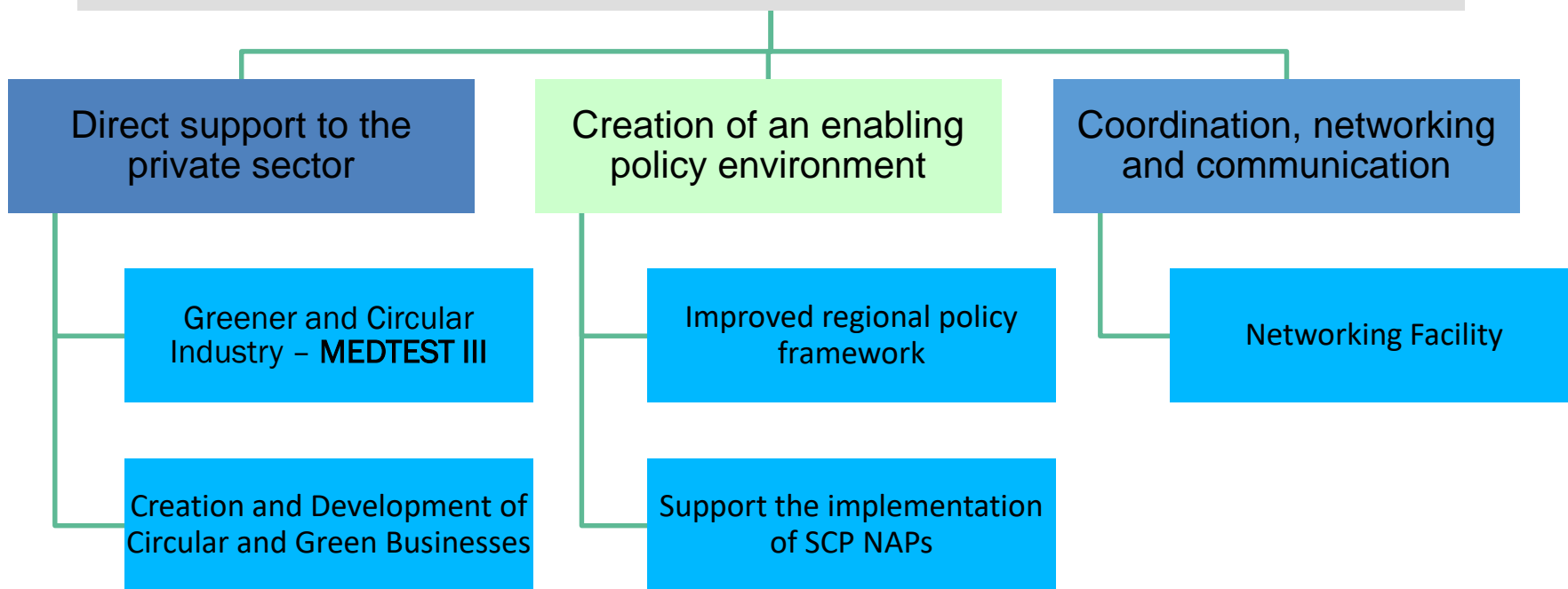
A unique methodology (TEST): full technical assistance package for **industries** and **service providers** to develop skills on eco-innovative technologies and process optimization solutions to greater production efficiency in the use of **natural resources**, **a reduction of waste and energy consumption**, which ultimately contribute to circular economy, economic growth and job creation in the region.



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SwitchMed II (2019-2022)

Programme Management



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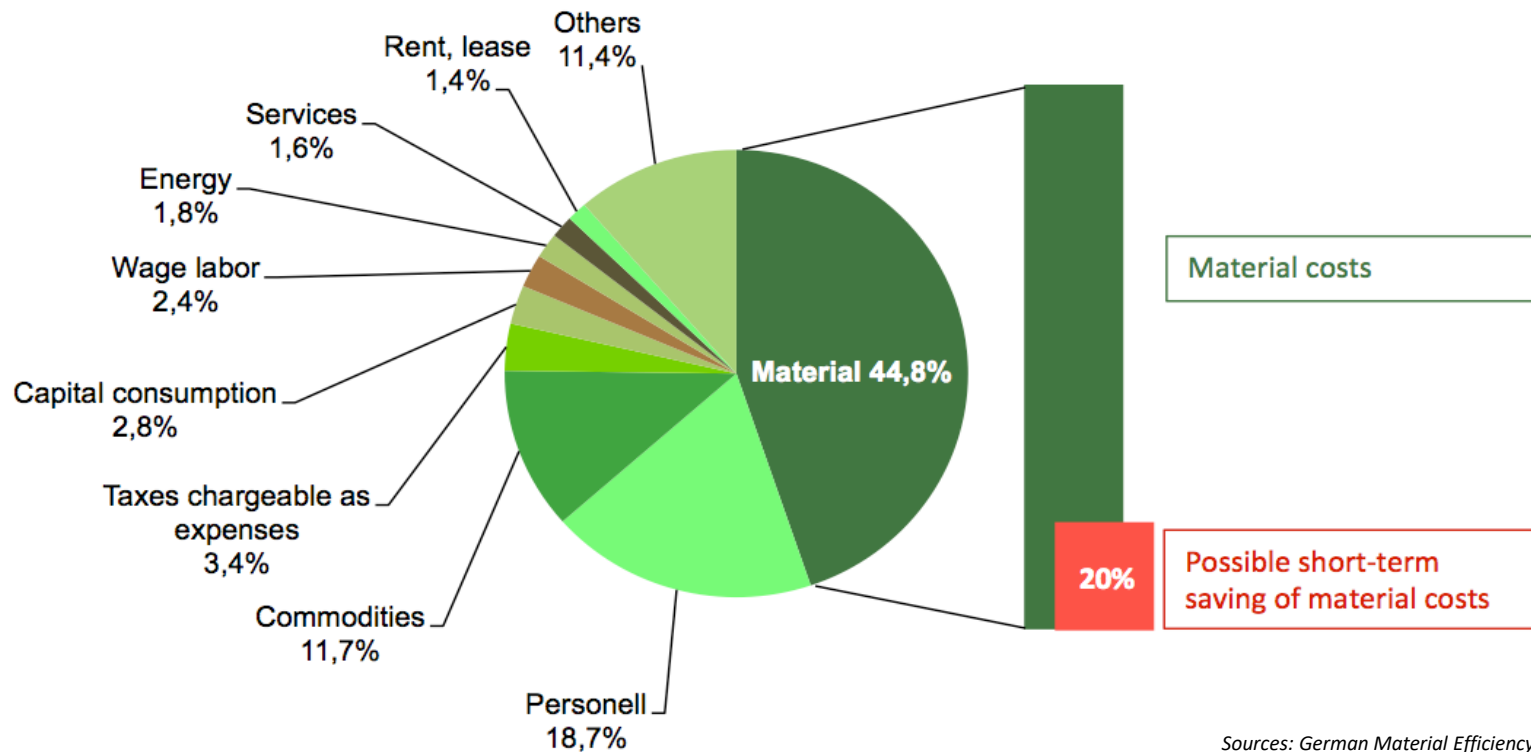
The TEST approach



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POTENTIAL for RECP IN DEVELOPED ECONOMIES

Cost saving potential by material efficiency in German manufacturing companies



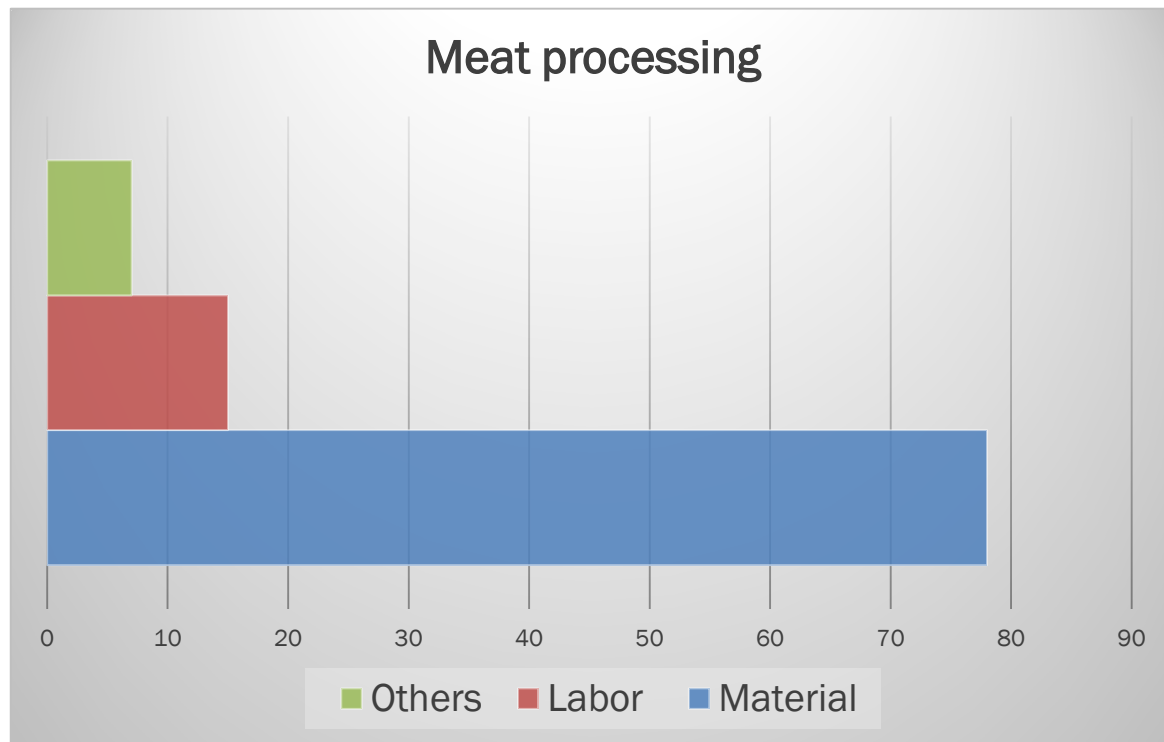
Sources: German Material Efficiency Agency (demea) and Federal Statistical Office – Study on SMEs



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Material costs in production

Materials are often the largest share of all production expenses, using less materials can lead to significant savings!

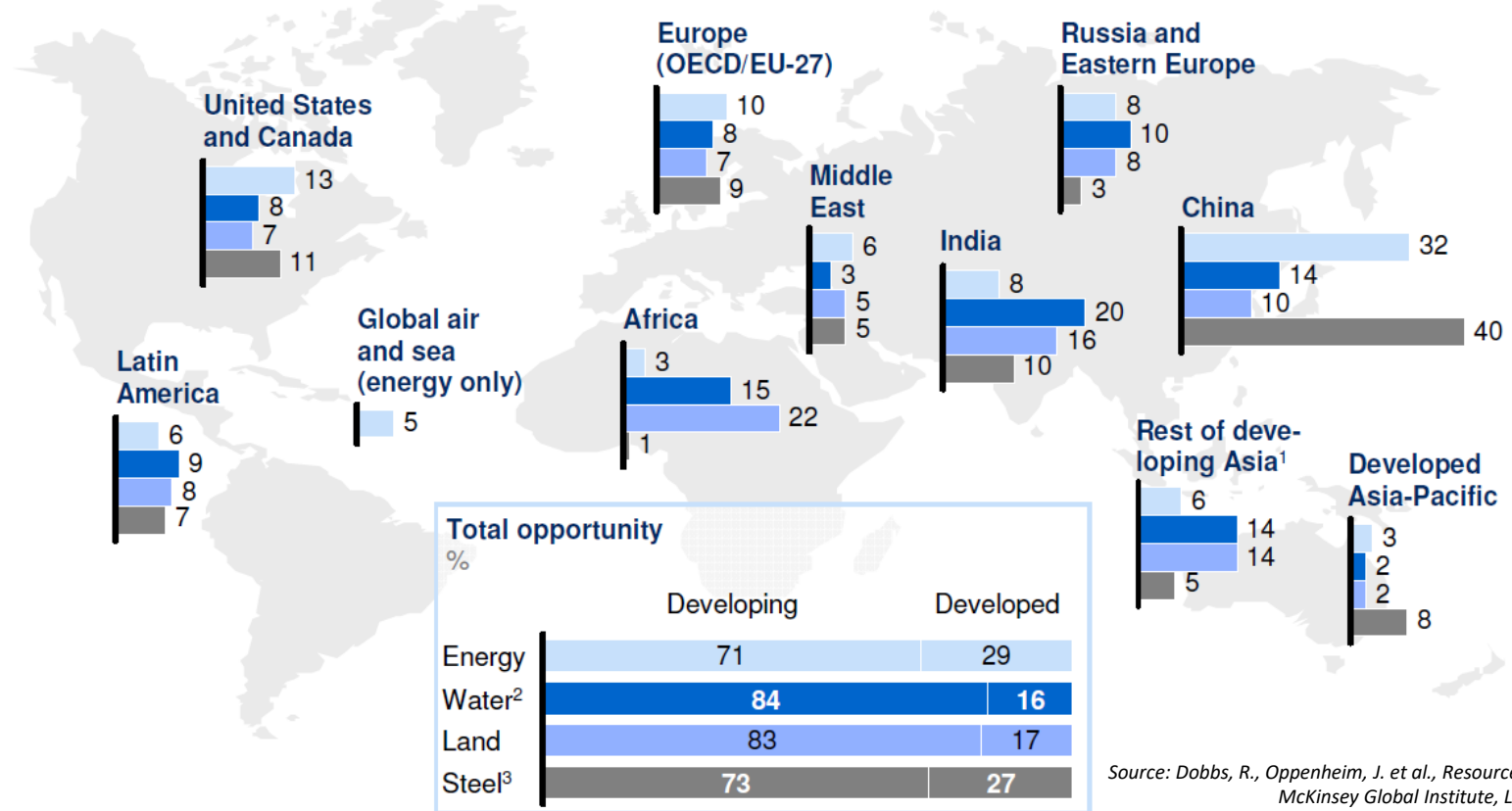


POTENTIAL IN DEVELOPING ECONOMIES

Up to 85 percent of the productivity opportunities are in developing countries

% of total productivity opportunity by resource and region

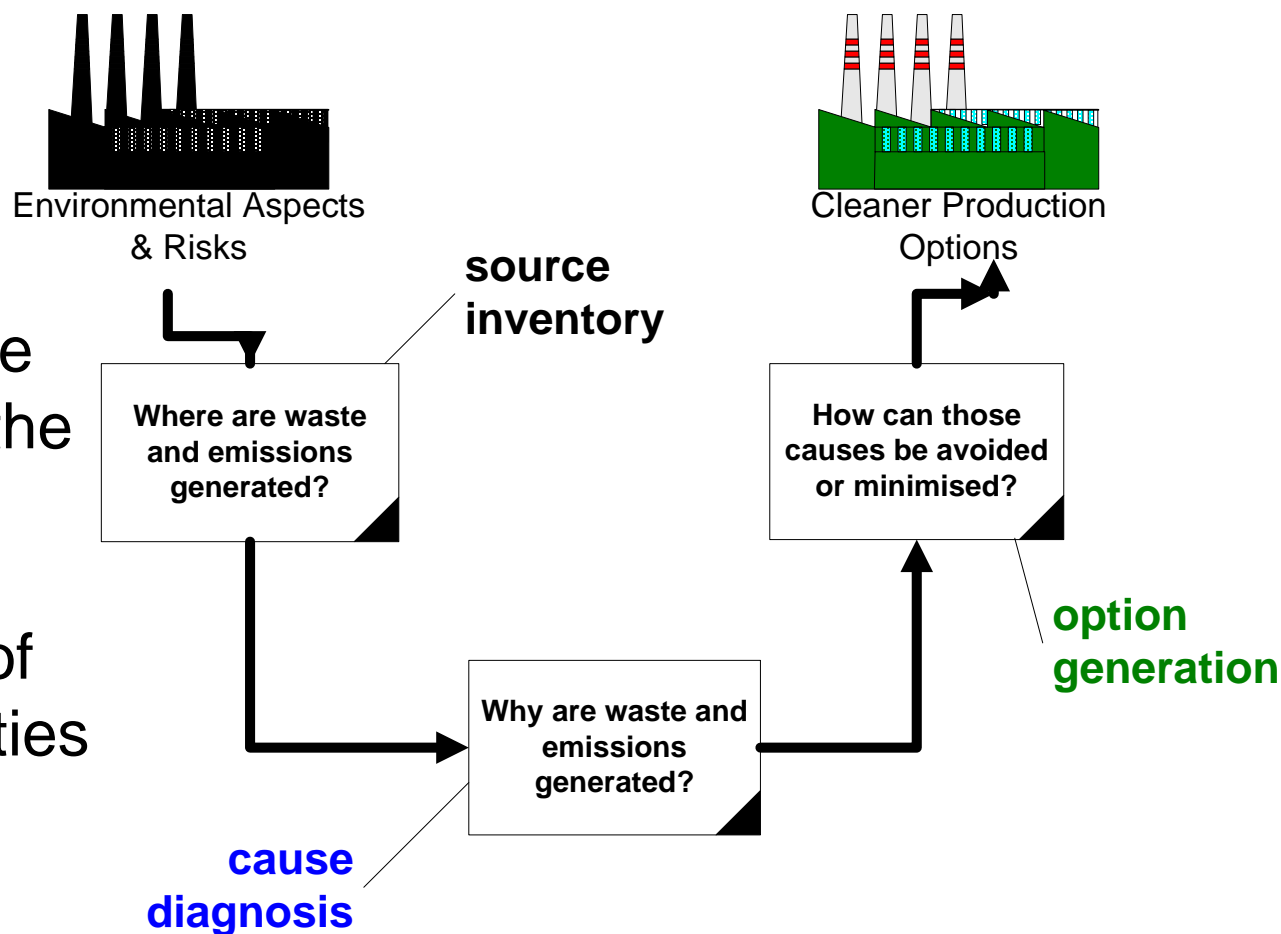
Energy Land
Water Steel



Source: Dobbs, R., Oppenheim, J. et al., *Resource Revolution*, McKinsey Global Institute, London, 2011

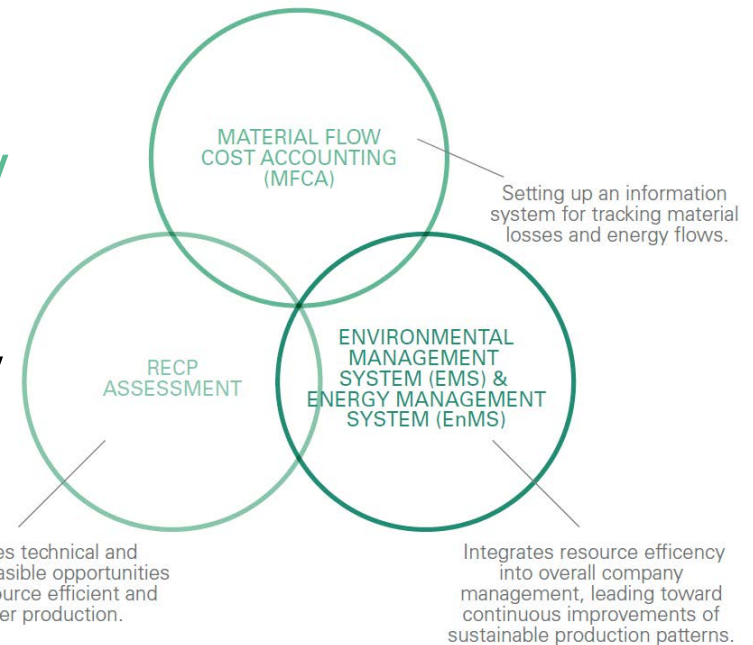
Cleaner Production Approach

Systematic root source and cause analysis guides the identification, evaluation and implementation of RECP opportunities



TEST – Enterprise level approach

1. Revealing the “total costs” of resource use inefficiencies within production (**NPOs- MFCA**).
2. Assess industry resource efficient & environmental performance against **sector benchmarks** and **international best practice**
3. Understand **root causes of inefficiency** (leverage points) and develop circular solutions
4. Improve **information system** on priority material and energy flows (tracking major losses)



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Key features of TEST

- ✓ Identification of “**Priority**” flow (Energy, Material, water) based on potential **financial and environmental gains**.
- ✓ Reveal gaps within the **information system** and data recording.
- ✓ Opportunities target **process** modifications, **utilities** improvements, **productivity** and **quality** gains.



Energy specifics

- Energy analysis within TEST follow a combined approach of **Energy audits**, and **Energy Management system**.
- **Analysis procedure**: Historical analysis, Identification of Significant Energy Users, Root cause analysis, Option generation, Monitoring and Targeting.
- Benefits from **System Optimization** far exceed the benefits from single equipment optimization.
- Energy savings can also result from optimizing **water use**, or **increase productivity**



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The business case: experience from MED TEST Programme



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Added value for Industry

- ✓ Increased productivity, reduced operational costs, optimized investments;
- ✓ Minimized environmental compliance costs, reduced business risks and smaller environmental/carbon footprint;
- ✓ Compliance with international environmental standards for accessing new markets (global supply chains and export markets, new green markets, public procurement, etc.);
- ✓ Secured long-term supply of production inputs: the adoption of a resource-efficiency strategy can mitigate the effects of disruptions and price volatility in the raw materials supply chain;
- ✓ Improved relationship with stakeholders (investors, banks, regulatory bodies, local communities, consumer associations, etc.).



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RECP sound business strategy

Manage business risks (water shortage), stakeholder's relationship

Best practice Jordan

*“Coca Cola company identified and integrated more than 30 RECP measures into existing ISO14001 system, cutting **water use by 22%**, **energy by 44%** and **raw materials by 3%** with total annual savings of 570k euro and a PBP of less than half a year. **Approximately 40,000 m3 of water have been saved annually by upgrading CIP & internal reuse.** Thanks to the reduction in product losses to drain and improved control of the WWTP, the company plans reusing wastewater for agricultural purposes, as a socially responsible action in a water scarce country like Jordan.”*



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RECP sound business strategy

Innovation, new business and green market opportunities

Best practice Tunisia

*“New Amico (DEMCO group) company jean washing realized 360keuro savings with a PBP of 1 yr. **Water savings reached 46%, savings in energy 26% and 1% in chemicals** . Some of the most important projects include acquisition of **Eco-Innovative E-Flows machines for textile finishing** (micro-nano-bubbles technology) and recycling 40% of wastewater within process.*

The company main motivation was to improve branding and respond to the increasing European market demand for green products.”



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RECP sound business strategy

Improved product quality, productivity and reduced operational costs

Best Practice Palestine

*“In the Sinkrot Food Company, the wafer production line revealed to be the major source of material and product losses with a reject of 15% compared to 1% of best practice. Through a modification of the product formulation, improved operational control and the installation of a new creamer section, the company not only achieved a better quality of their wafers, but also an increase in the productivity, while reducing rejects by 10% at packaging stage. Several energy efficiency measures led to a reduction by **60% of the total gas consumption at boilers and oven**”*



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Regional Results



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Enhancing the supply of RECP service

- A main objective of MED TEST II was to strengthen the **national capacity** of service providers in the area of RECP.
- **682 professionals** from academia, business associations, government institutions, and industries received training on the TEST tools
- By the end of the project, **44 SPs** were enabled with hands on experience in RECP.
- One SP already managed to engage **four** additional industries on a **full commercial basis**.



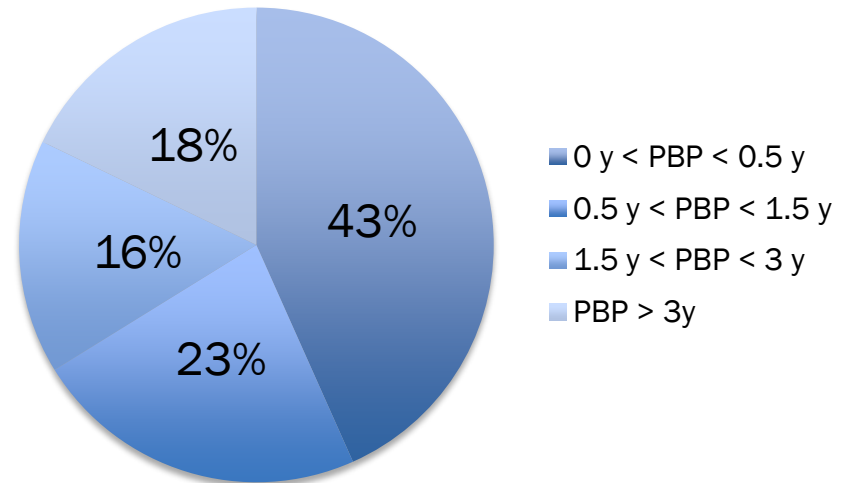
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MED TEST II

- **125 industries** received full package technical assistance
- Leverage of **87.6 Million Euro** Impact Investment for Resource Efficiency projects
- **40%** of investments envelope pipelined (approved) through national financing schemes

Partnership with IFIs (EBRD) and national financing institutions/programmes

- Joint promotional actions
- Pipeline of project
- Follow up with beneficiaries



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Resource savings opportunities for the local industries

- **24%** Average saving on Energy bill
- **5%** Average Raw material saving potential
- **20%** Average Water saving potential



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Up scaling RECP in the Manufacturing sector

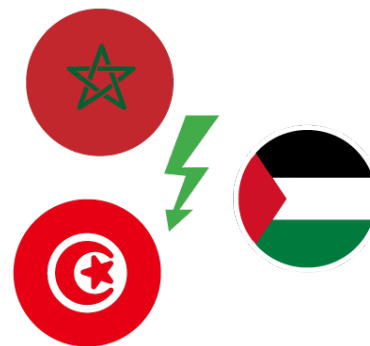
MENA Region perspective

18,570,856 tons of CO₂ per year



Corresponding to the unconditional declared contribution of **Algeria** for reaching the **2030** reduction target under the Paris Agreement.

76,667 Gwh of energy per year



Corresponding to the residential energy consumption of the inhabitants of **Morocco, Tunisia** and **Palestine** equivalent to **50 M people**



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Conclusion

- RE Proof business case due to raising production costs, resource scarcity (e.g. water) and environmental enforcement
- Savings from TEST not only impact priority flows
 - **Closer look on the changes within the process reveal hidden savings**
- TEST is know-how and multidisciplinary
 - **SPs need to understand both Energy and Resource analysis**



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Thank you!

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