

Eco-innovation in industrial areas: opportunities from eco-industrial parks

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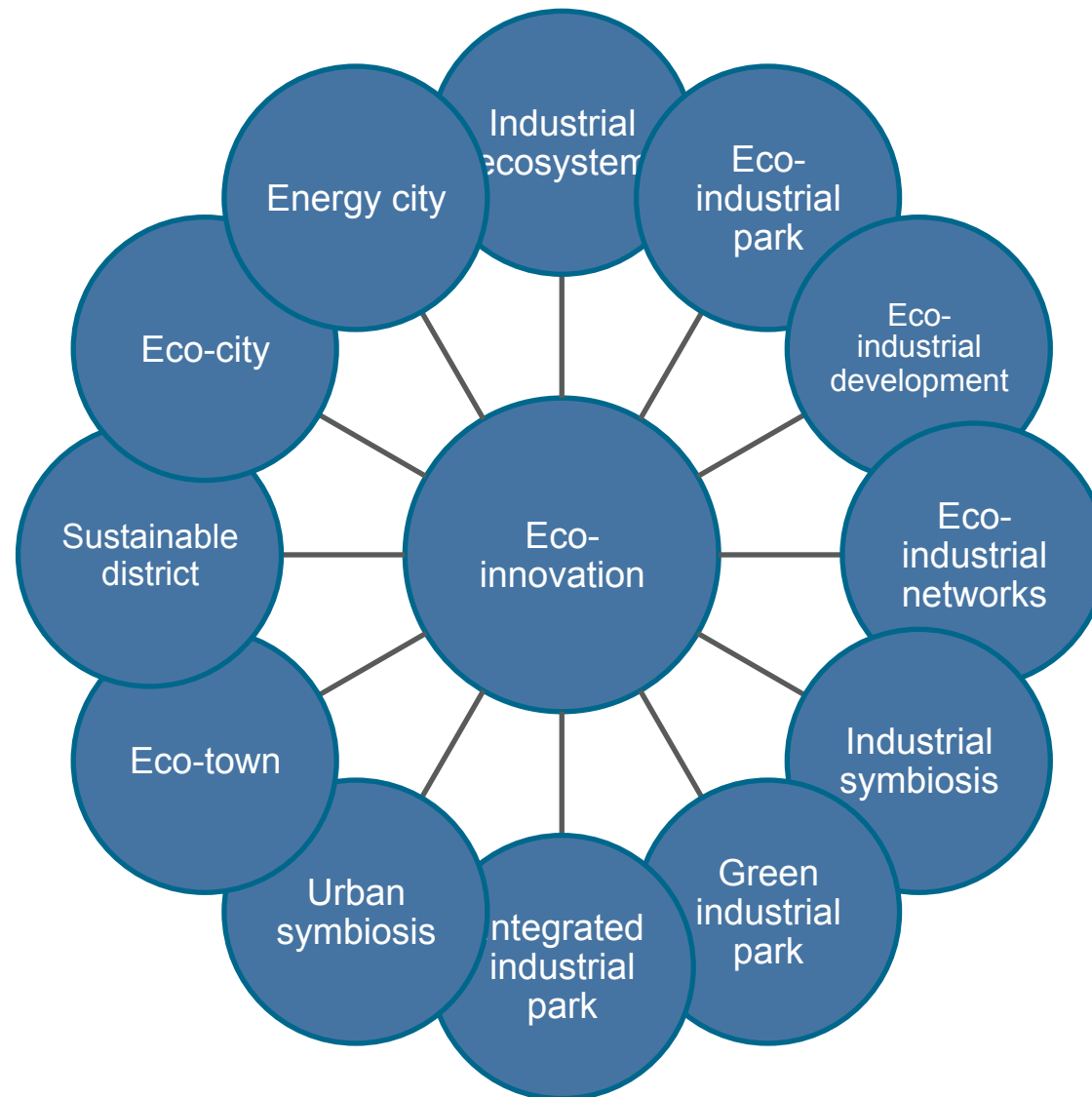
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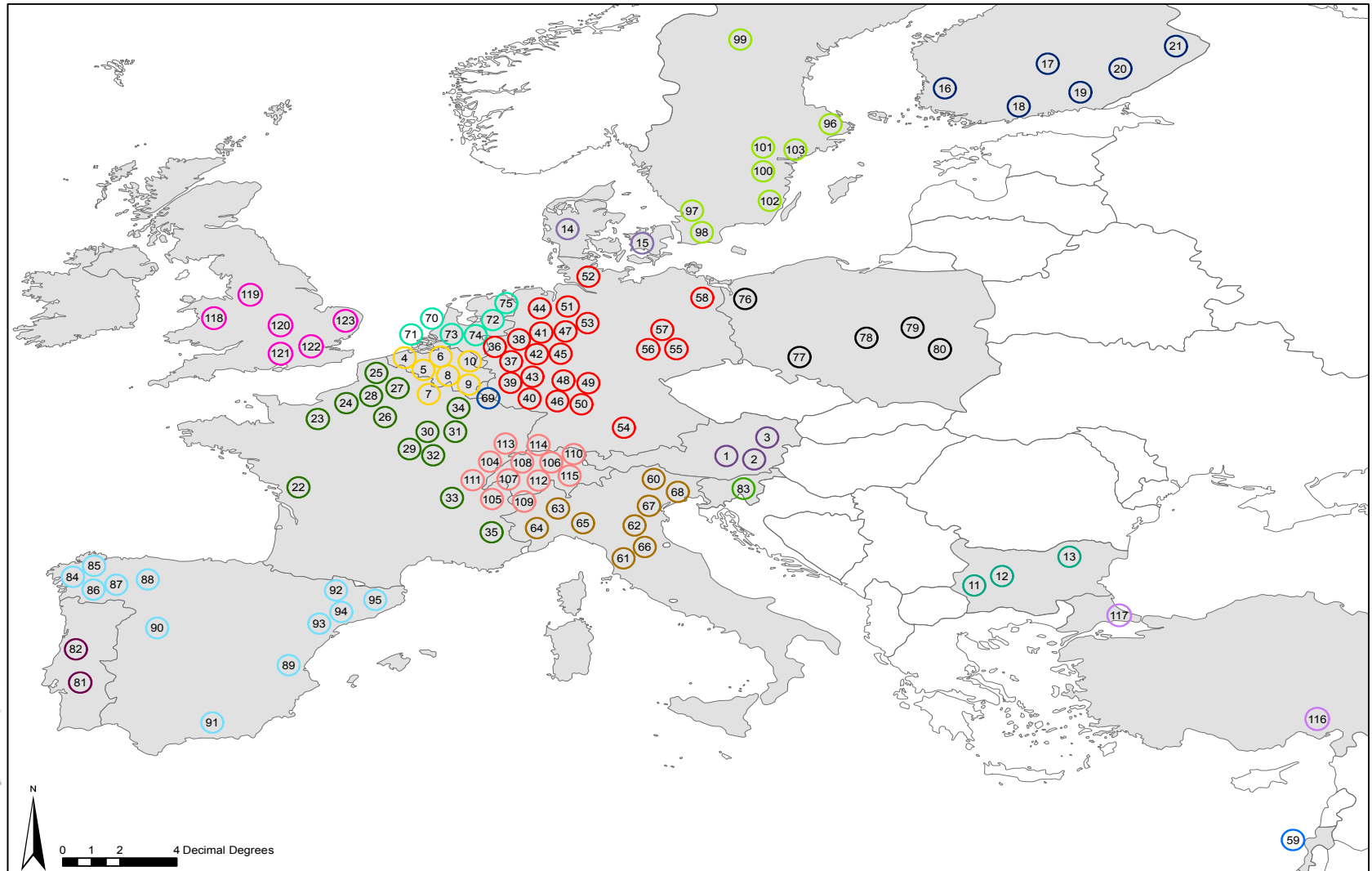
MODELLI CONCRETI DI CIRCULAR ECONOMY

Firenze - 16.10.14

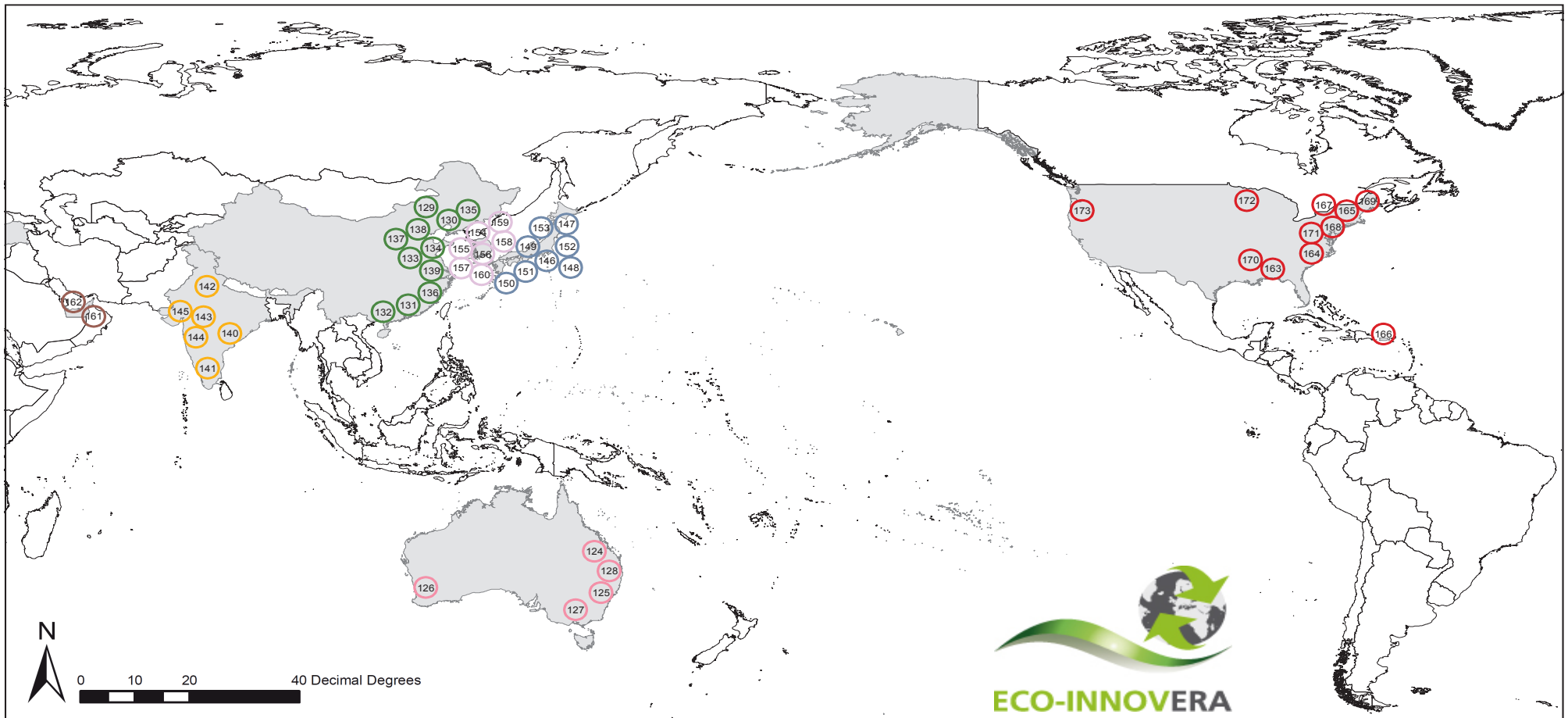
Eco-innovation in industrial areas



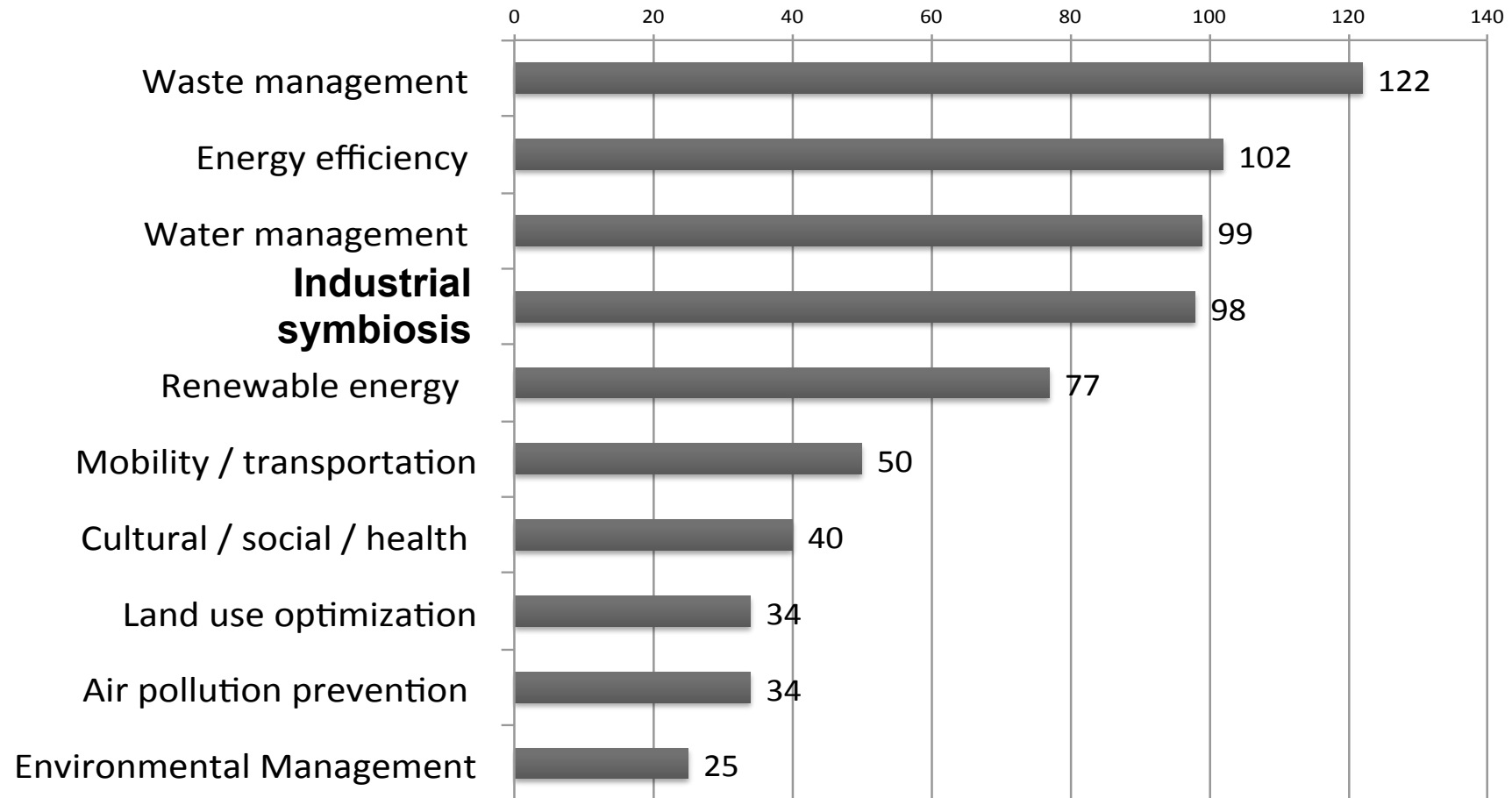
Major trends and practices in Europe



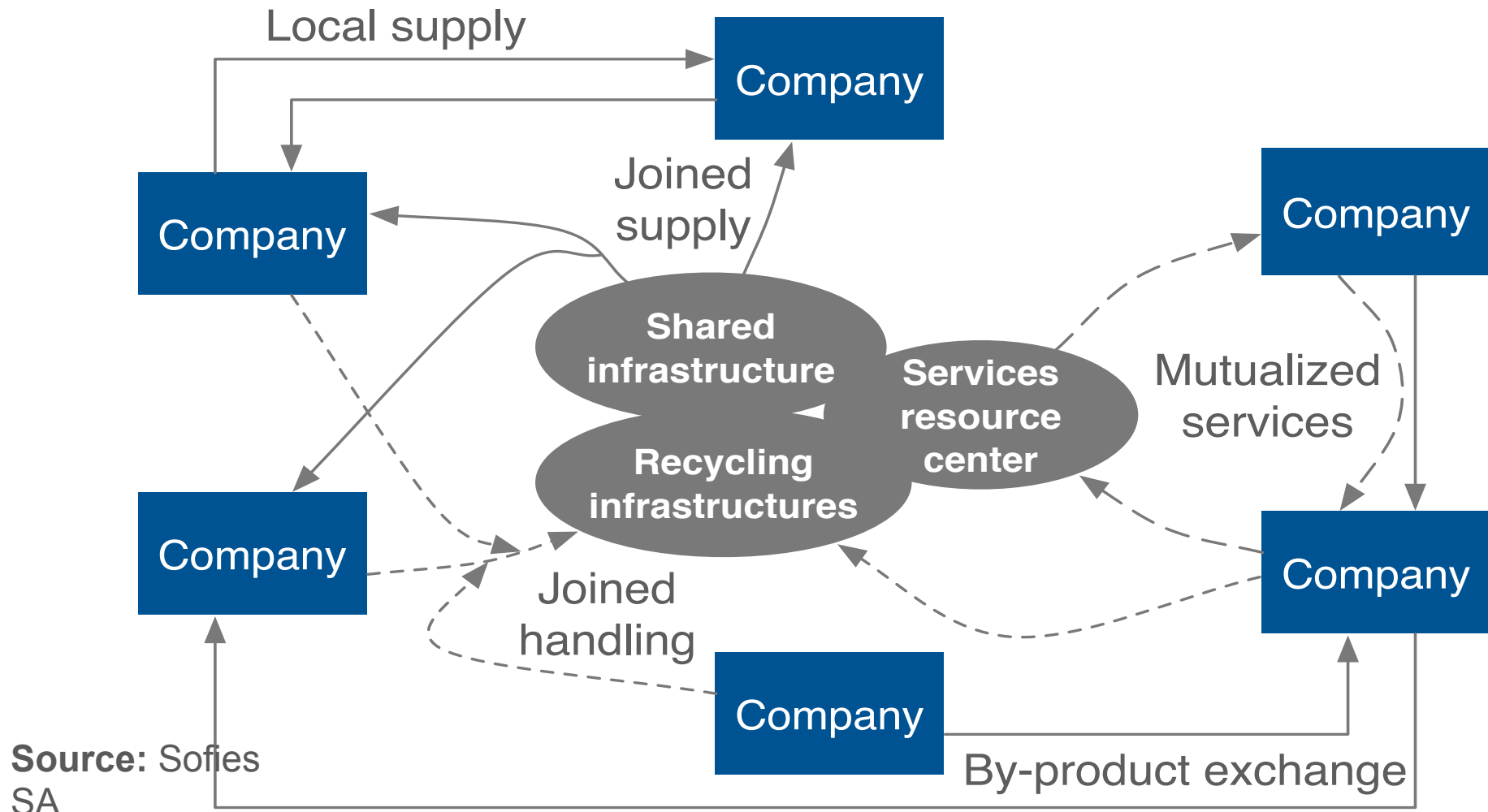
Major trends and practices in Asia



Major trends and practices: eco-criteria



Major trends and practices: what is industrial symbiosis?



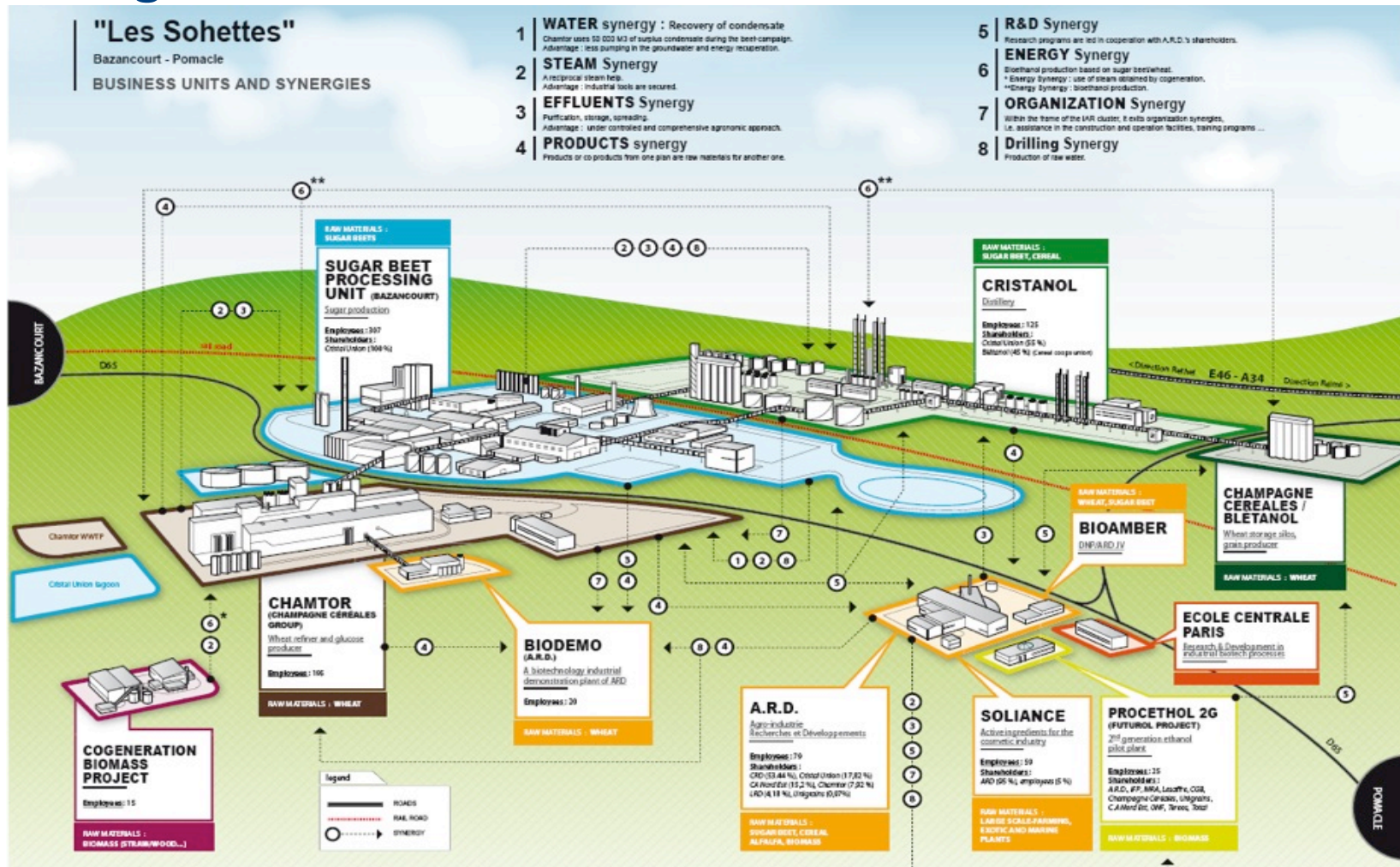
Major trends and practices: what is industrial symbiosis?

Industrial symbioses offer an innovative resource management approach for companies wishing to **reduce their environmental impacts** while **securing their resource supply** and **strengthening their economic competitiveness**



Major trends and practices: what is industrial symbiosis?

Agro-food cluster: Pomacle-Bazancourt, France

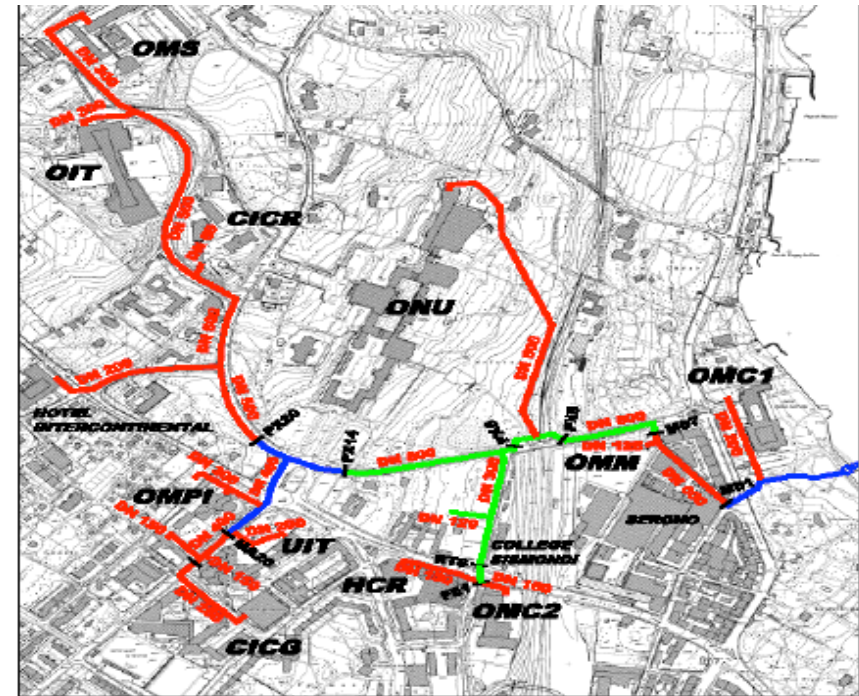


Major trends and practices: what is industrial symbiosis?

Setting up of resource, waste and service centers:

GENEVA-LAC-NATION PROJECT FOR SHARED ENERGY PRODUCTION AND DISTRIBUTION

- Technology: heat pumps
- Resource: water from the Lemman lake
- Electricity savings: 8000 MWh
= 1'200'000 euros/year
- Fossil fuel savings: 1'500 tons
= 750'000 euros/year
- Water savings: 400'000 m³/year
- Investment: 25 millions euros
- Payback period: 10 years



Major trends and practices: what is industrial symbiosis?

Korea EIP program – Dongnam EIP

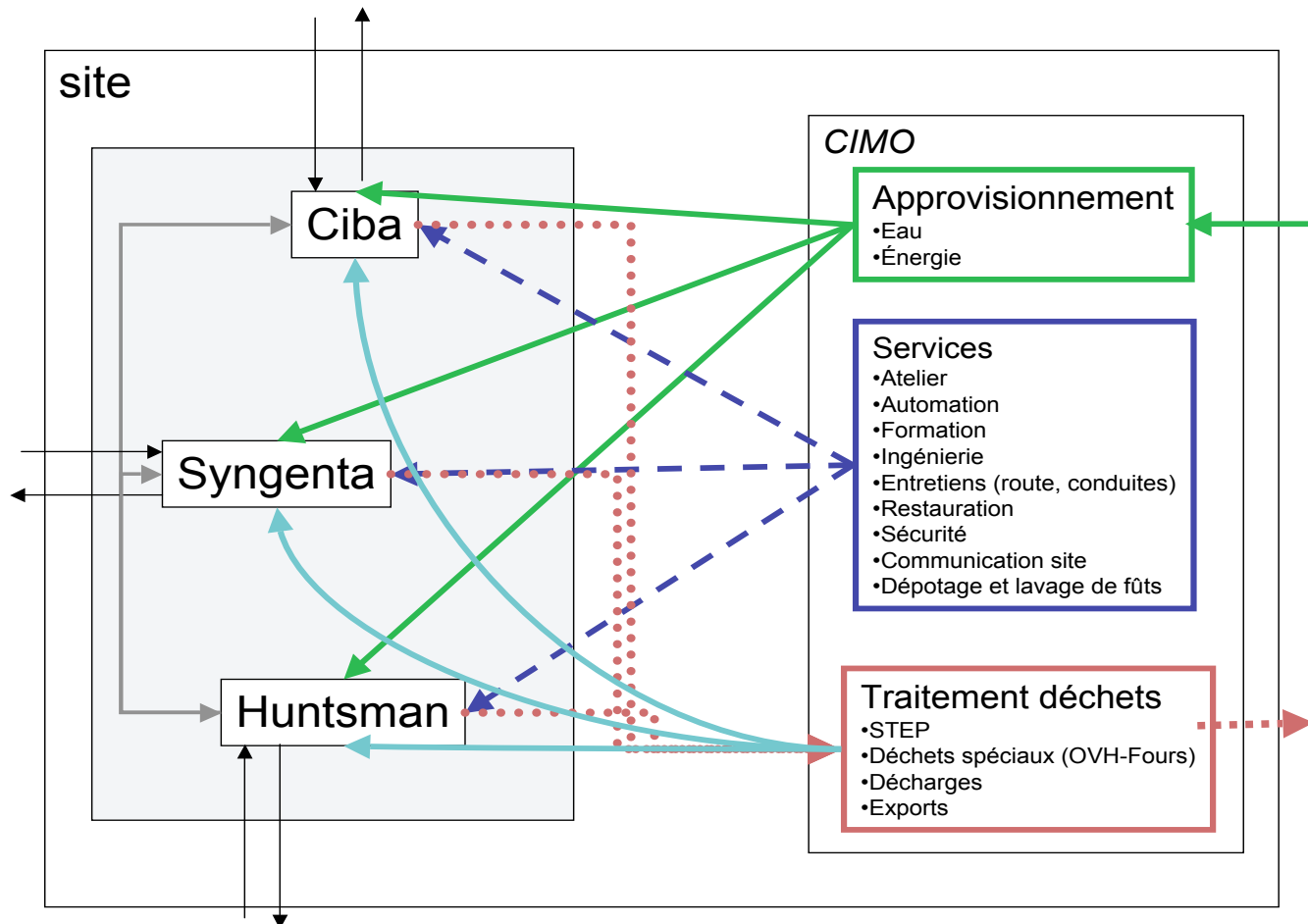
Reusing by-products of resins as raw materials to produce synthetic rubber

- By-products from producers of ABS (Acrylonitrile-Butadien-Styren Copolymer) recovered by South Korean industries and used as raw material for synthetic rubber production
- Investment: **450,000 USD**
- By-product processed: **556 tons/year**
- Economic benefits
 - ✓ Recycling and sales activities, as well as a reduction in raw material consumption allow economic partners to save over **1.1 million USD/year**
 - ✓ Enable expansion of by-products businesses

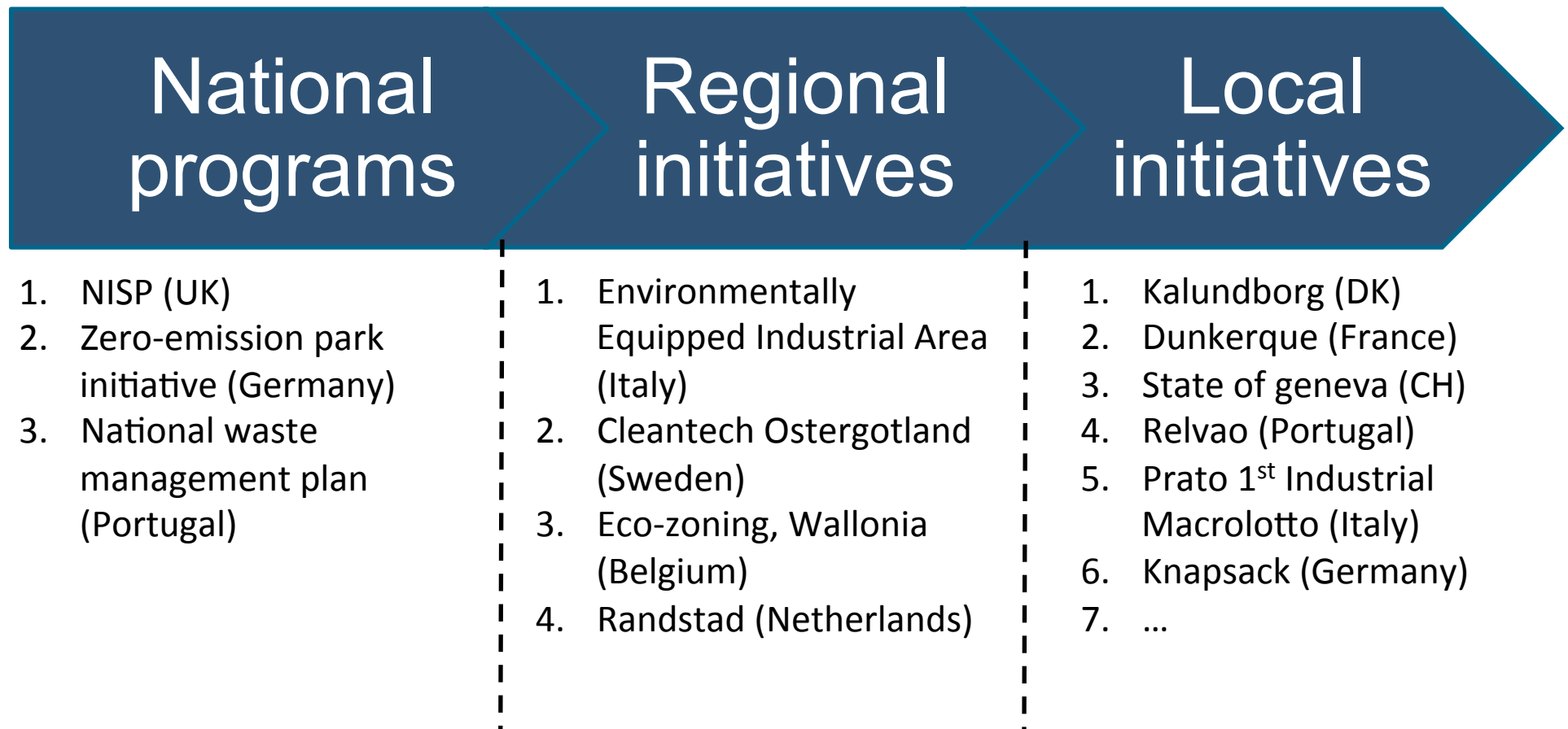


Major trends and practices: what is industrial symbiosis?

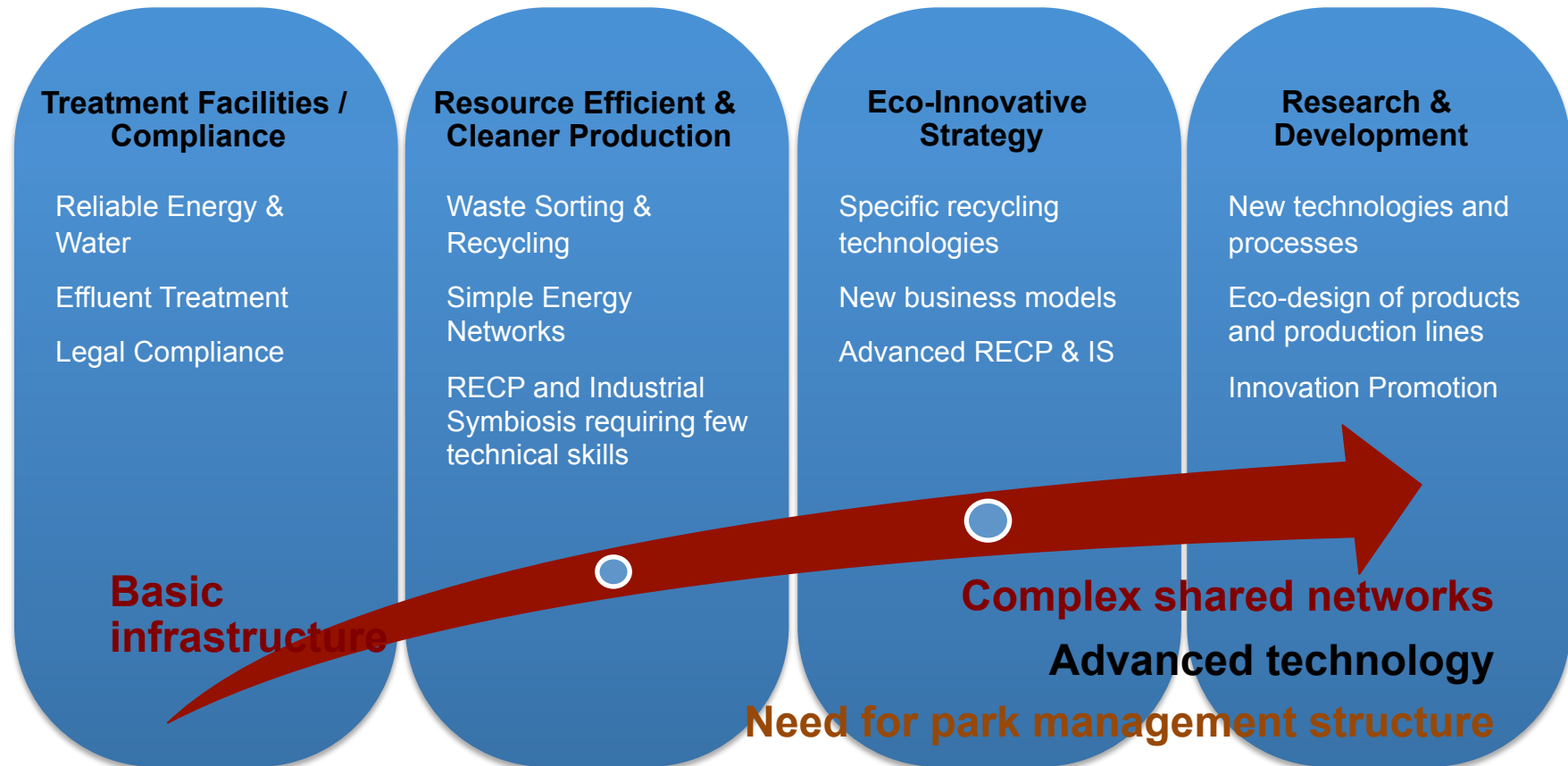
Shared services: service centers Monthey chemical park, Switzerland



Major trends and practices: diversity of support mechanisms in Europe

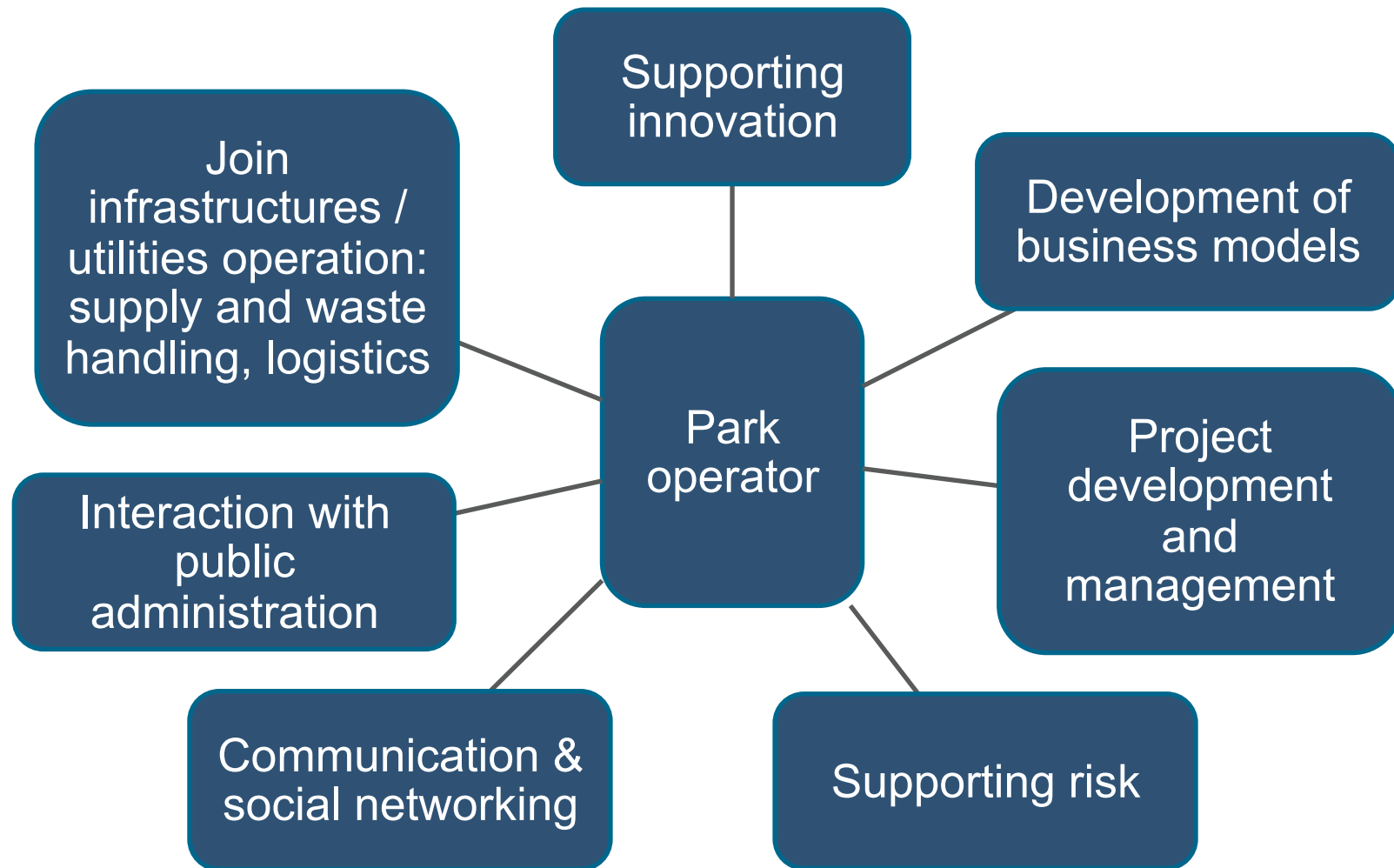


Major trends and practices: levels of intervention

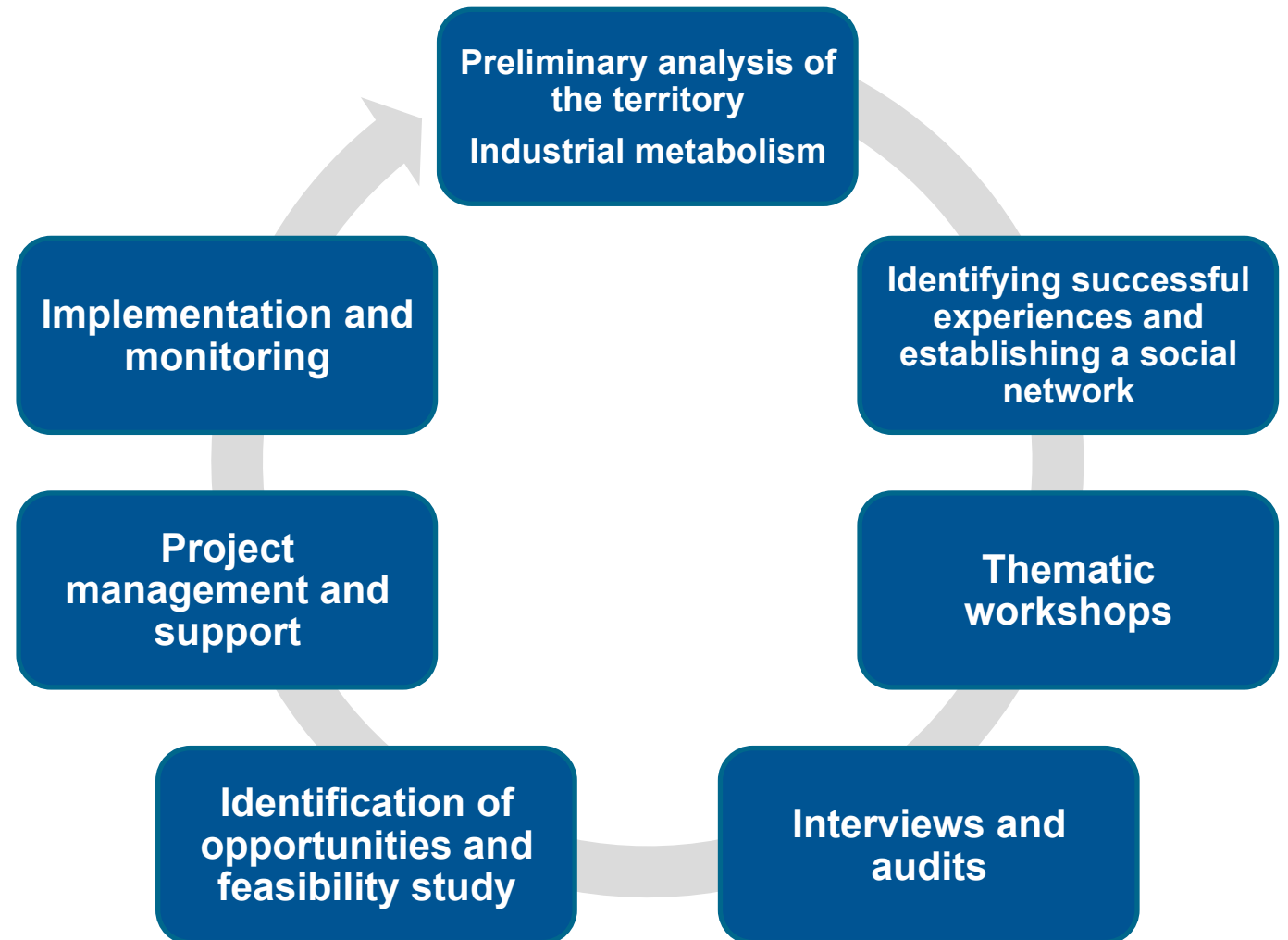


... for both existing and new Industrial Parks

Major trends and practices: the role of park management structures



Major trends and practices: tools for implementation

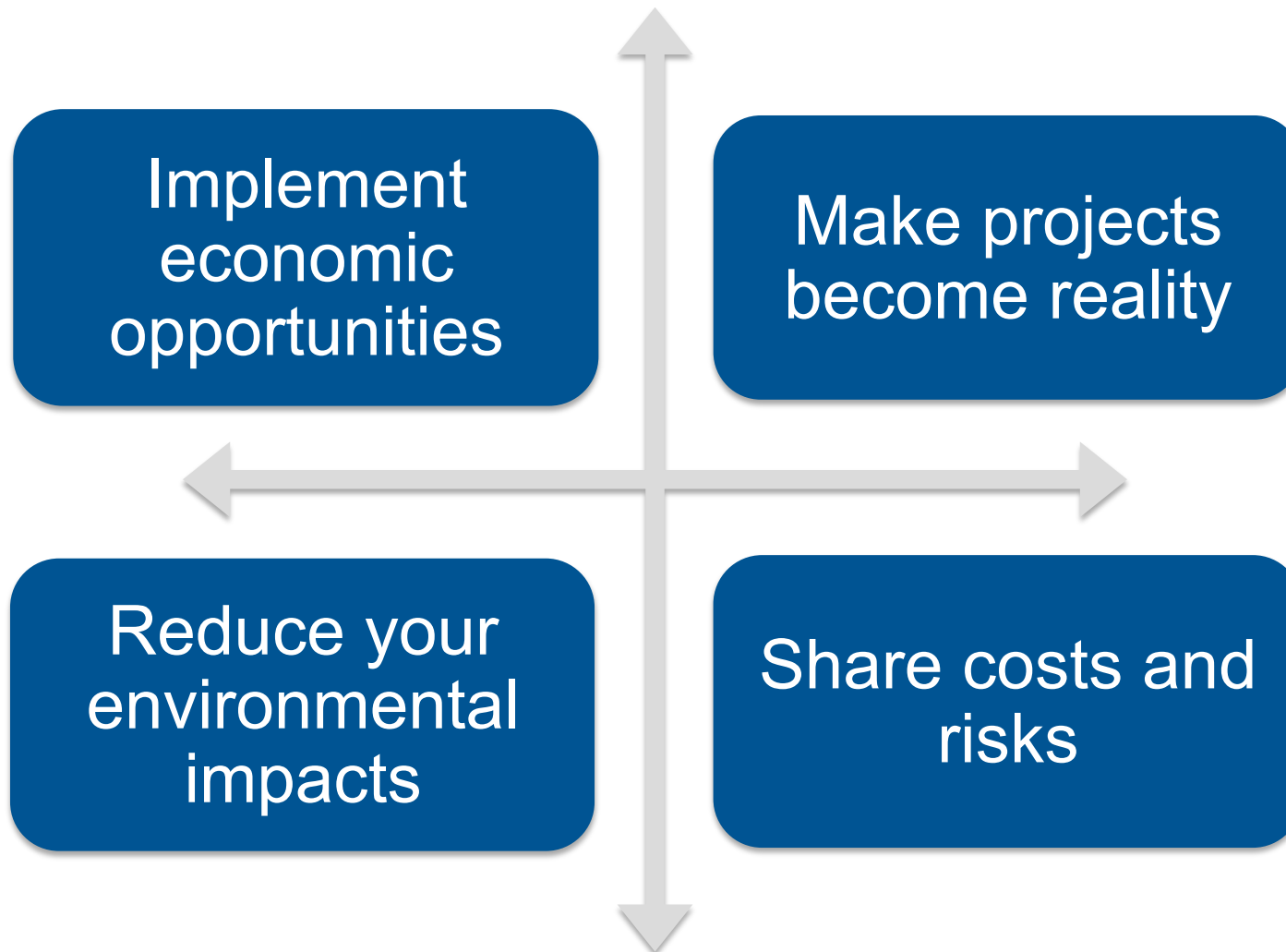


Major trends and practices: tools for implementation

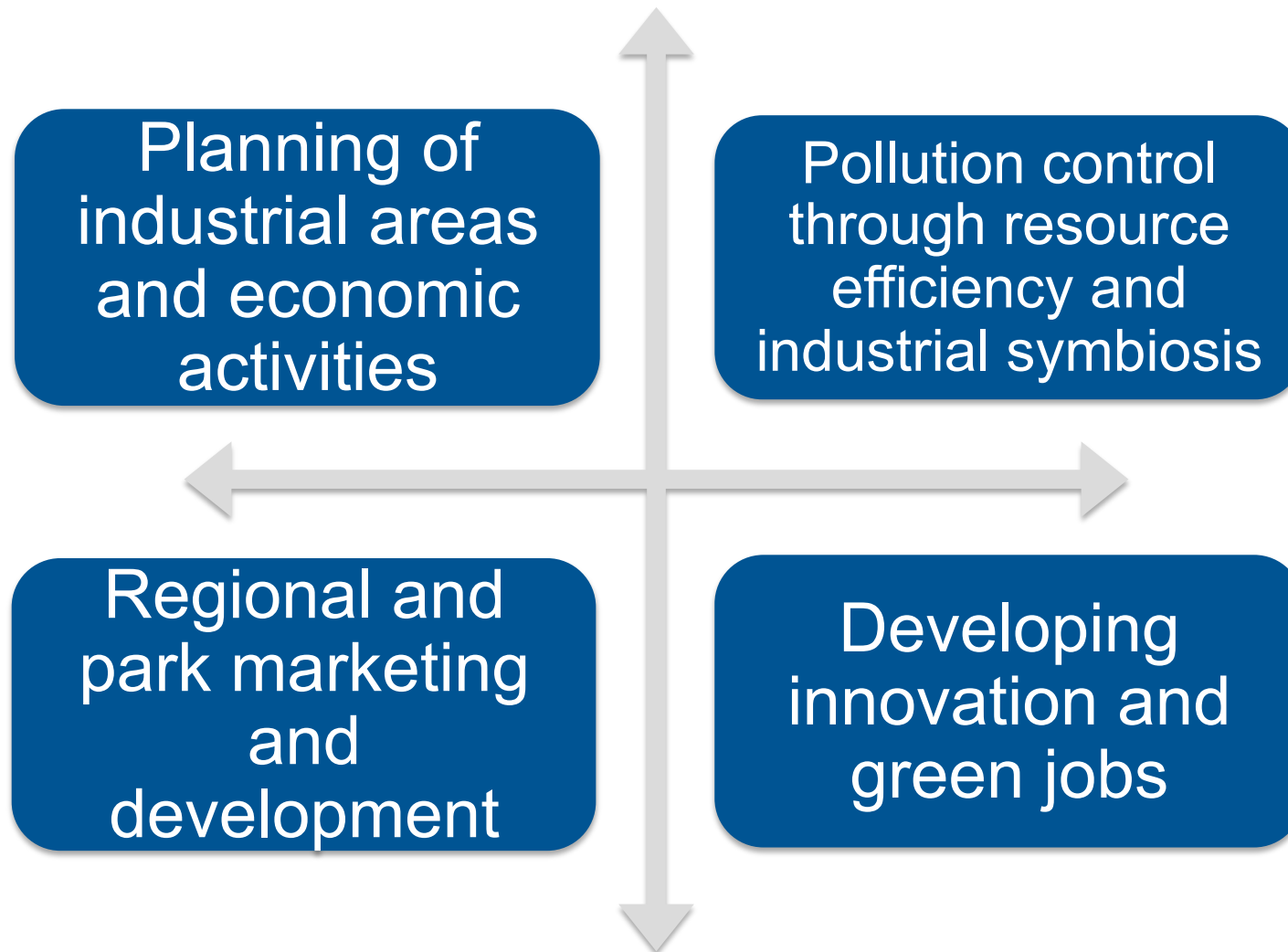
Need for new business models and financial mechanisms

Management of service provider	Private	Management contract Franchise	Rent contract Leasing	Concession Sub-contracting
	Mixte	Provision of services Change to a company	Co-company	Built, Own, Operate, Transfer Design Build Finance and Operate
	Public	Municipal authorities	Cooperative Twinning	
		Public	Mix	Private
		Control of actives		

Major trends and practices: benefits for companies



Major trends and practices: benefits for regional development



Thank you for your attention!



International survey on eco-innovation parks

Download it from:

<http://www.bafu.admin.ch/publikationen/publikation/01756/index.html?lang=en>