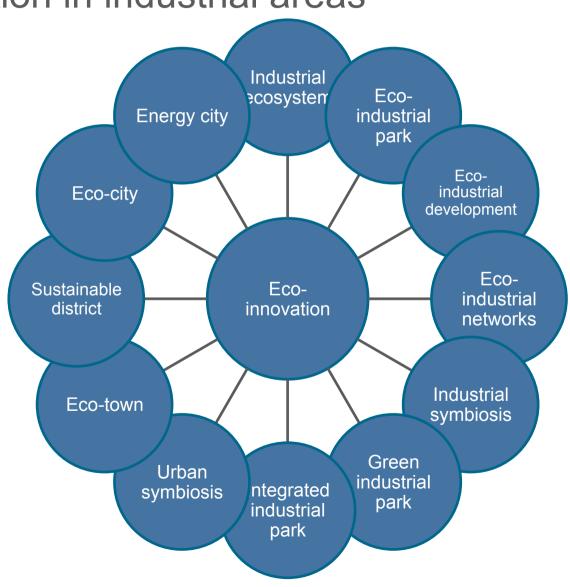
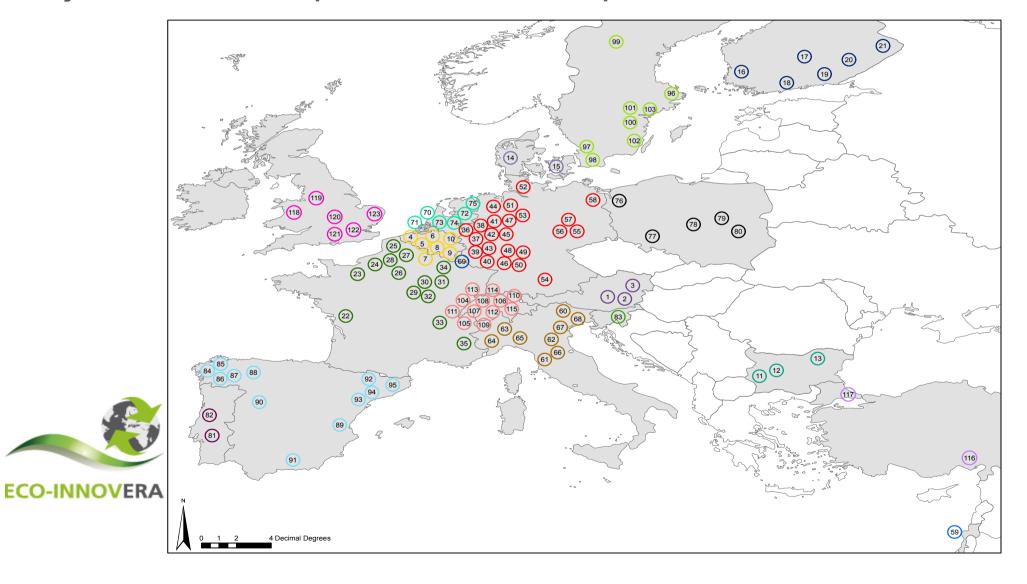


Eco-innovation in industrial areas



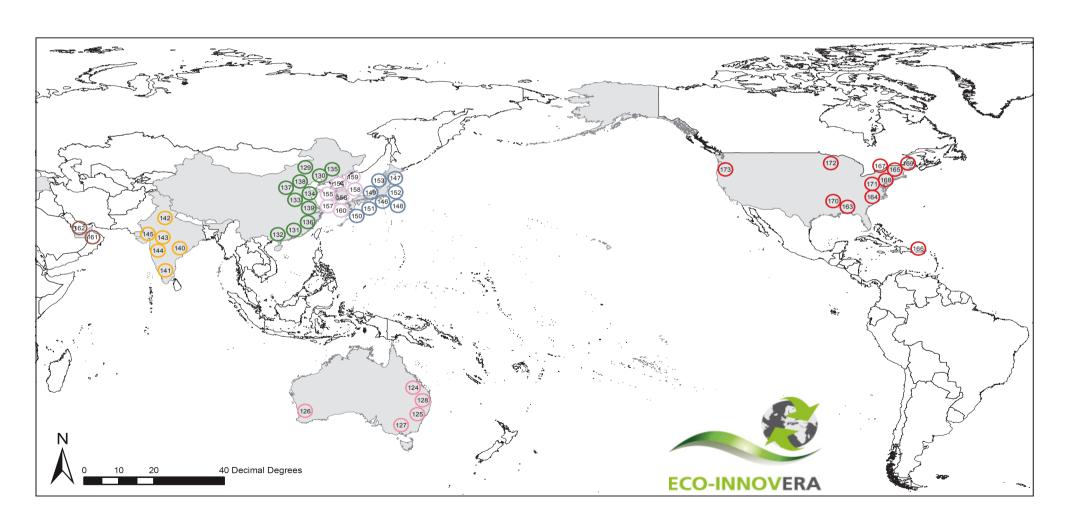
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Major trends and practices in Europe

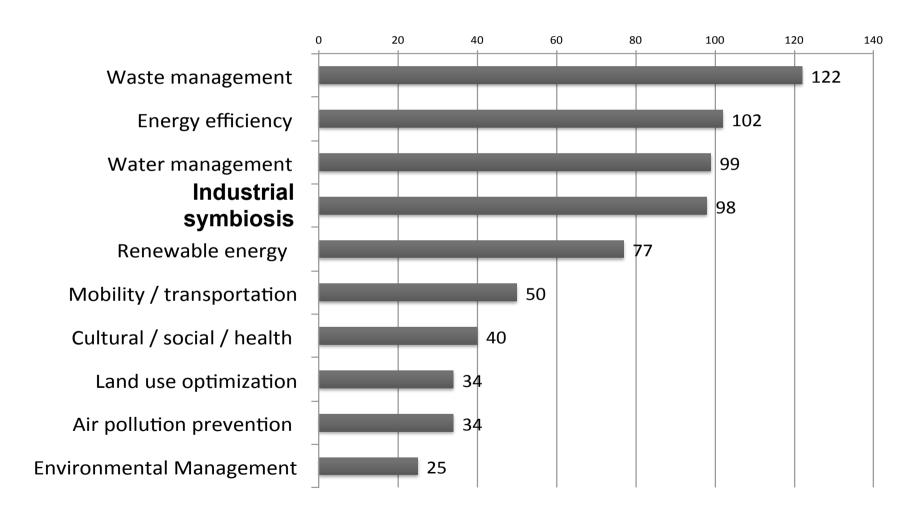


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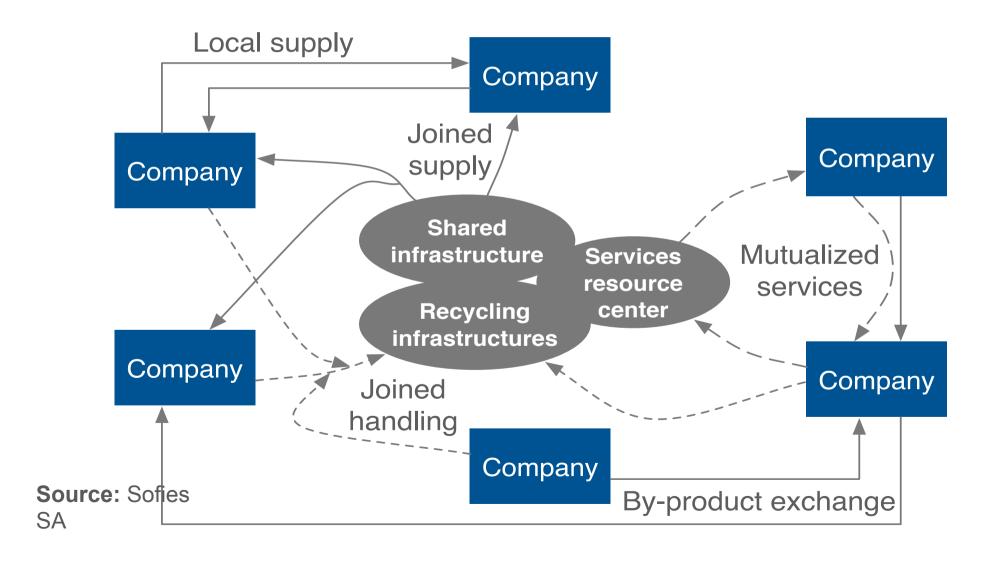
Major trends and practices in Asia



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









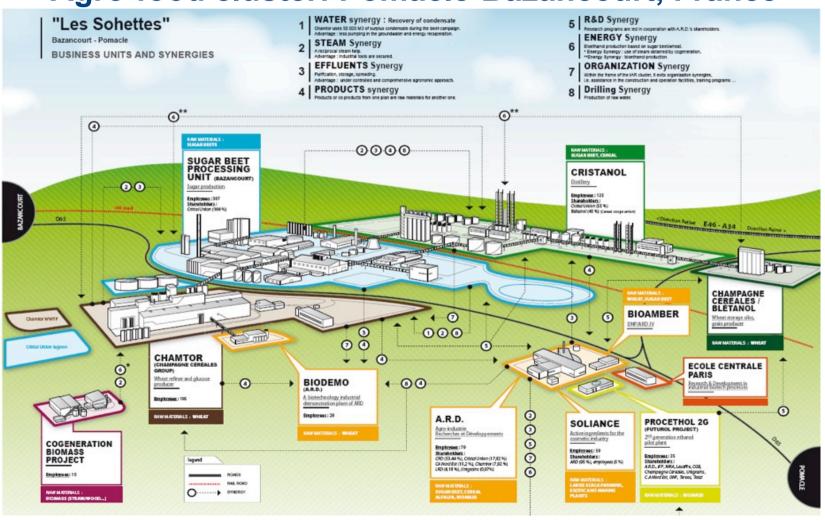






Major trends and practices: what is industrial symbiosis?

Agro-food cluster: Pomacle-Bazancourt, France



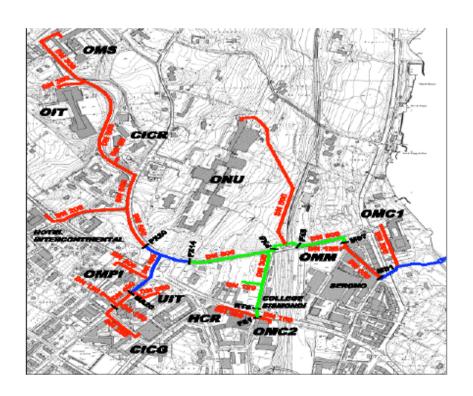
Major trends and practices: what is industrial symbiosis?

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 Leman 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

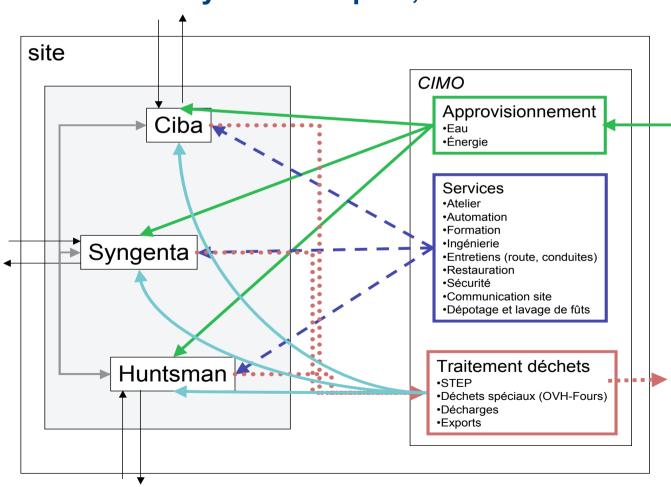
Reusing by-products of resins as raw materials to produce synthetic rubber

- 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

National programs	Regional initiatives	Local initiatives
L. NISP (UK)	1. Environmentally	1. Kalundborg (DK)
2. Zero-emission park	Equipped Industrial Area	2. Dunkerque (France)
initiative (Germany)	(Italy)	3. State of geneva (CH)
3. National waste	2. Cleantech Ostergotland	ı 4. Relvao (Portugal)
management plan	(Sweden)	5. Prato 1 st Industrial
(Portugal)	 3. Eco-zoning, Wallonia 	Macrolotto (Italy)
	(Belgium)	6. Knapsack (Germany)
	4. Randstad (Netherlands)	7 1
	!	<u> </u>

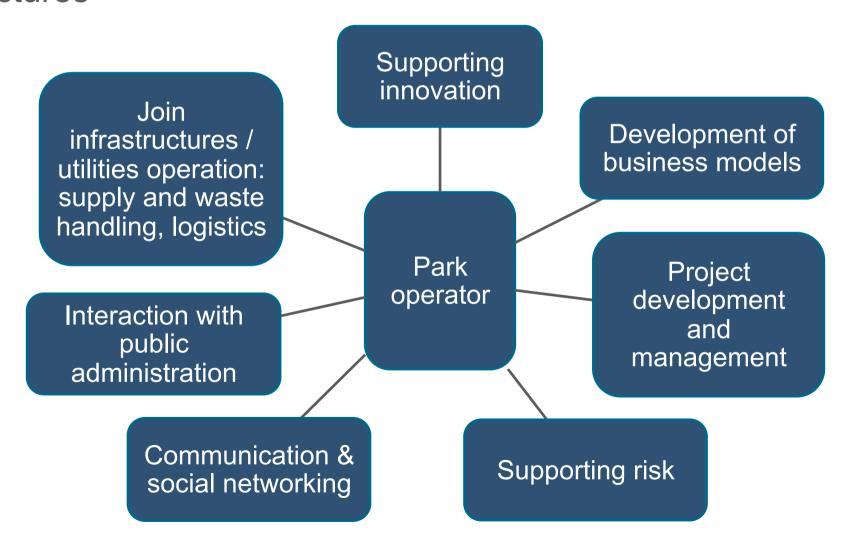
Major trends and practices: levels of intervention



... for both existing and new Industrial Parks

Source: UNEP, 2014, by Sofies

Major trends and practices: the role of park management structures



Major trends and practices: tools for implementation



Preliminary analysis of the territory Industrial metabolism

Implementation and monitoring

Identifying successful experiences and establishing a social network



Project management and support

Thematic workshops

Identification of opportunities and feasibility study

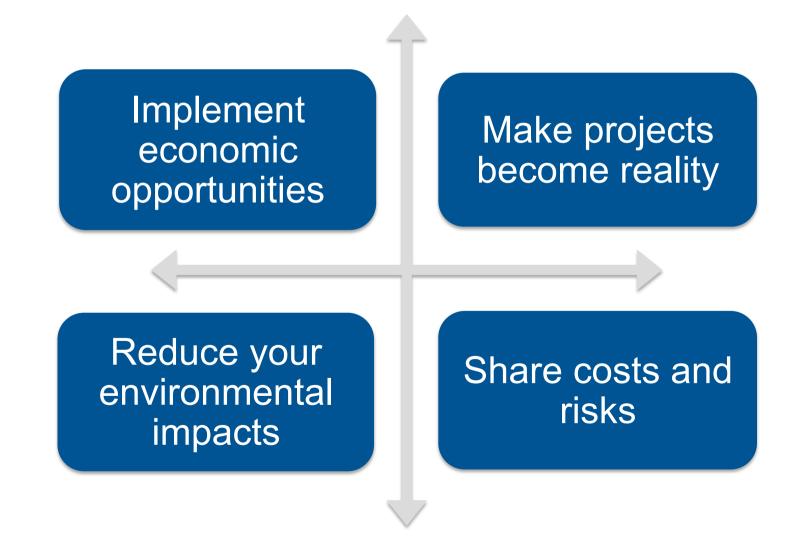
Interviews and audits

Major trends and practices: tools for implementation

Need for new business models and financial mechanisms

provider	Private	Management contract Franchise	Rent contract Leasing	Concession Sub-contracting		
Management of service provider	Mixte	Provision of services Change to a company	Co-company	Built, Own, Operate, Transfer Design Build Finance and Operate		
Managen	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

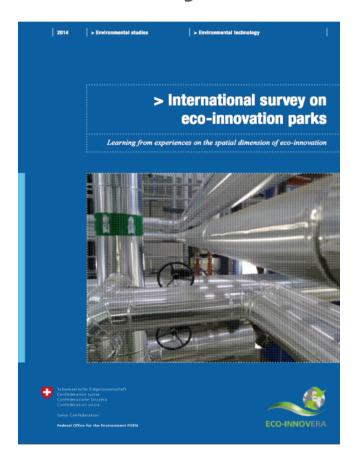
Planning of industrial areas and economic activities

Pollution control through resource efficiency and industrial symbiosis

Regional and park marketing and development

Developing innovation and green jobs

Thank you for your attention!



International survey on ecoinnovation parks

Download it from:

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

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