

Swedish energy manager networks for energy-intensive industry as a driver for improved energy efficiency



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Reinventing research and education



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Implementation of EED art 8 – using networks to reach SMEs

- SMEs are inertisch to traditional information channels

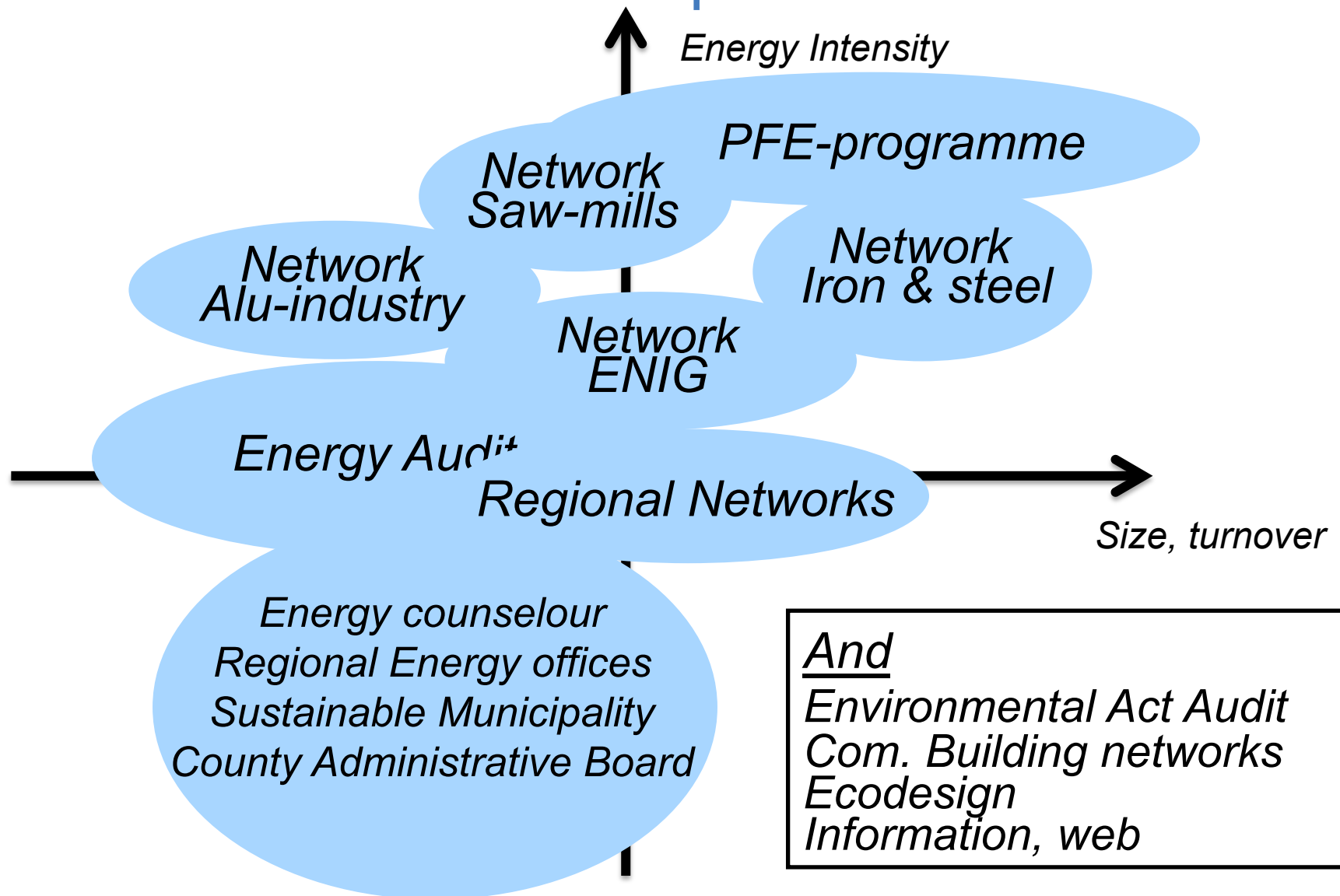


Communication to Enterprises

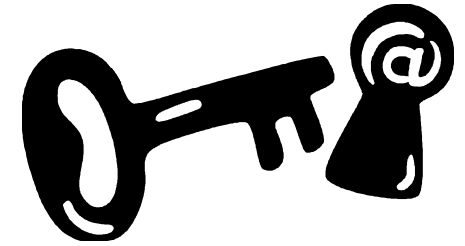
- Laws: PFE & Environmental code
- National networks, Sector specific or other
- Regional & local networks
- B2B and consumer relations
- Energy service market, consultants
- Procurement



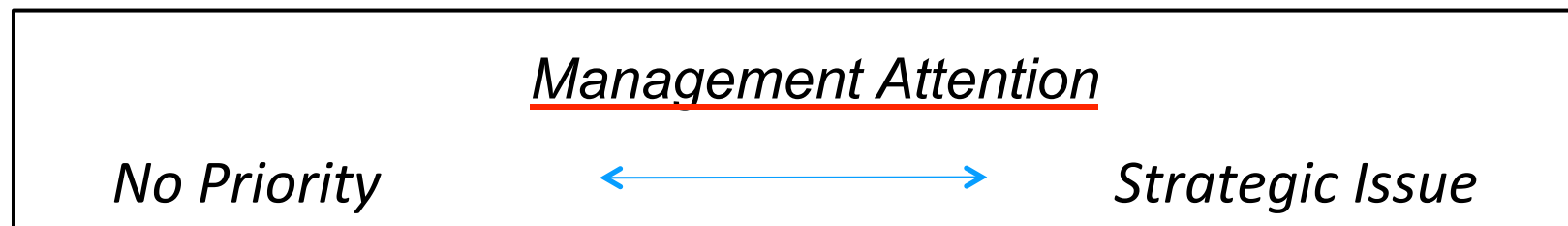
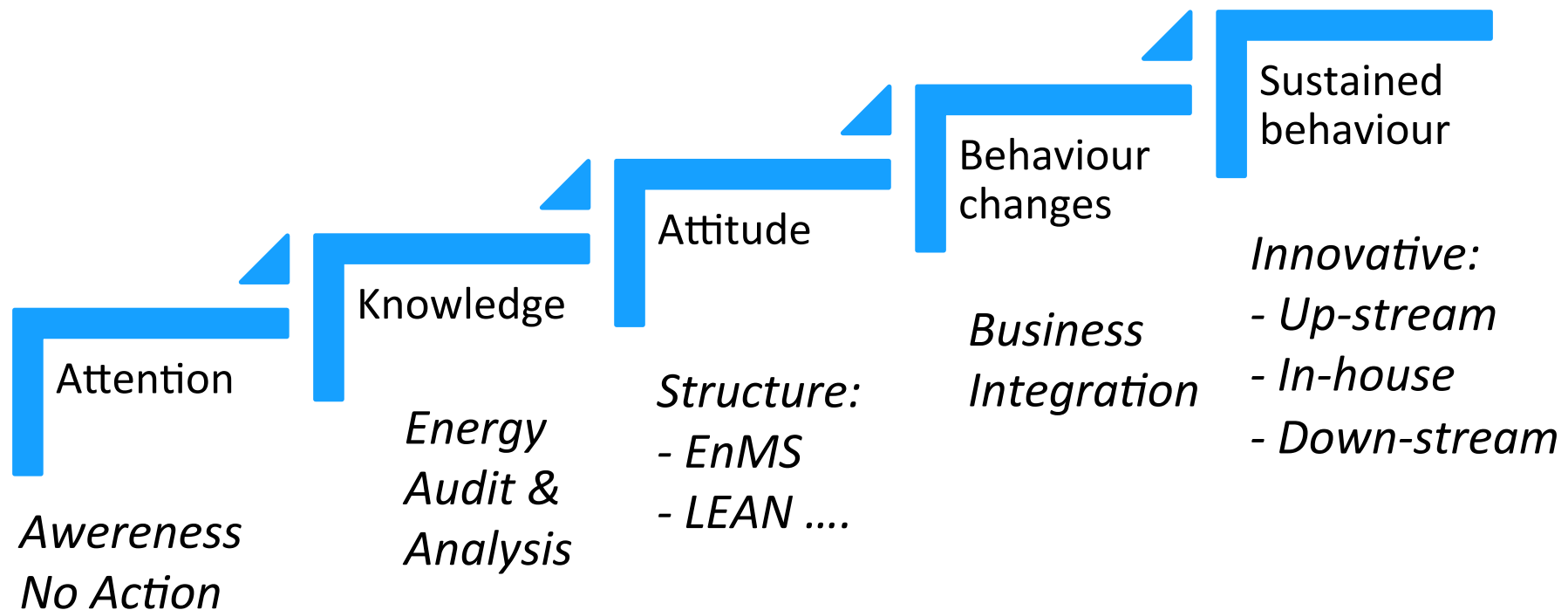
How to reach the enterprises?

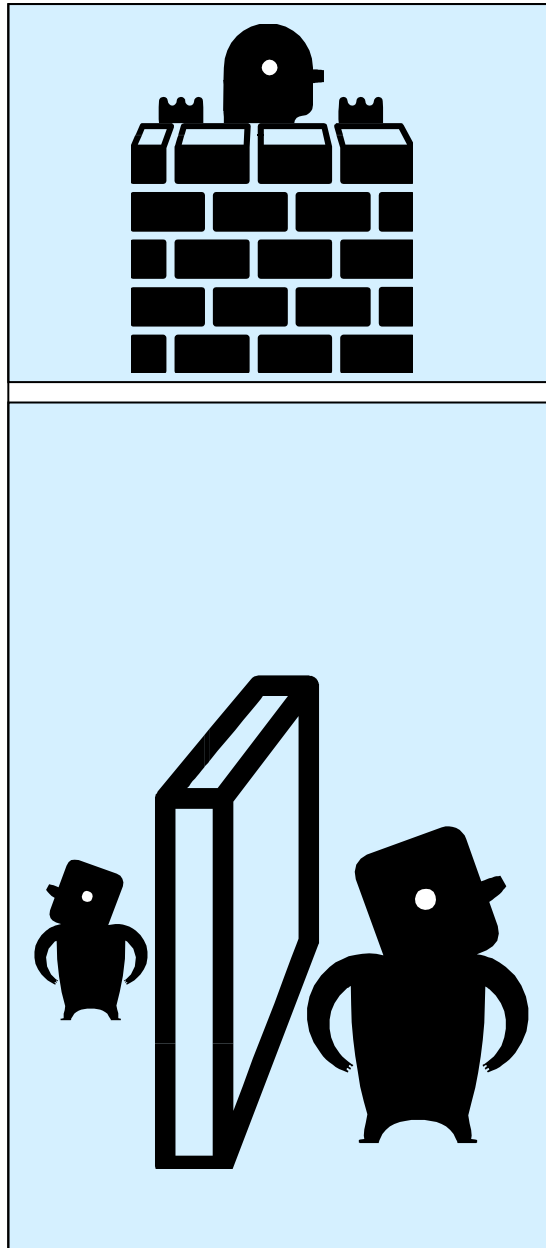


Cooperation between stake-holders



The Energy Efficiency Ladder

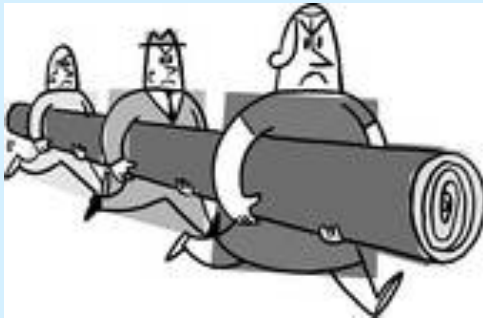




Known barriers for energy efficiency

- Technological system
 - Capital, costs, risks
- Technological regime
 - Knowledge, information-sharing
- Socio-technical regime
 - Culture, values, power

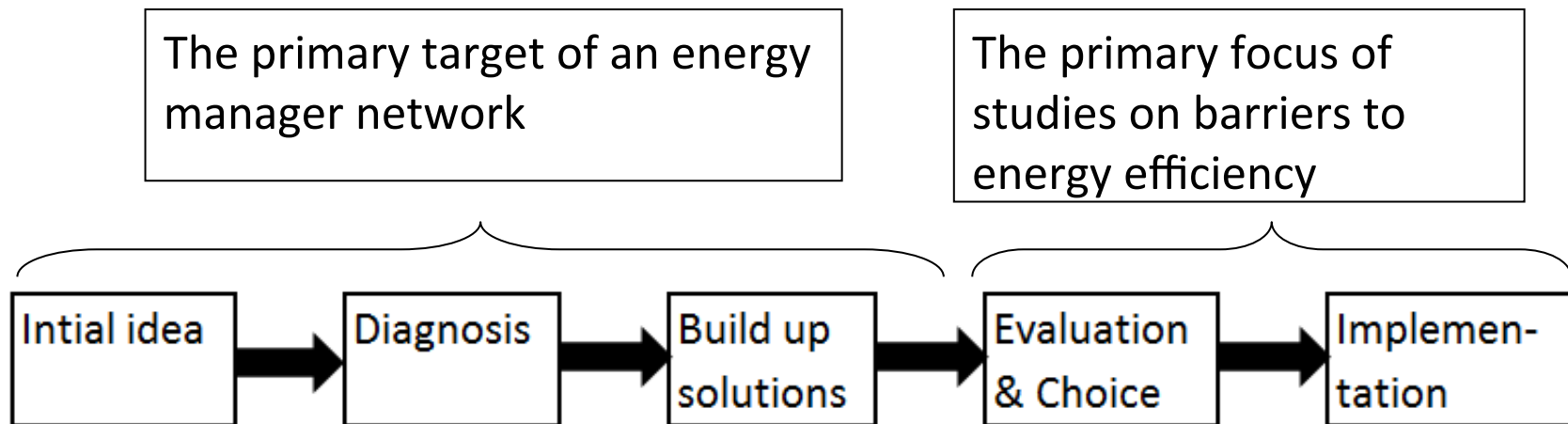
Thollander and Palm, 2013



Networks breaking barriers?

- Technological system
 - Shared costs as well as experiences
- Technological regime
 - Access to expertise and information
- Socio-technical regime
 - Learning, new experiences, trust

The role of Energy Manager Networks in relation to Cooremans' Decision Model



Cooremans, 2011

Known (potential) network merits

Transaction

- Driven by desired effects
 - €, new markets
- Competition
 - Who wants to be the "black sheep"?
- Challenges
 - Joint problem-solving

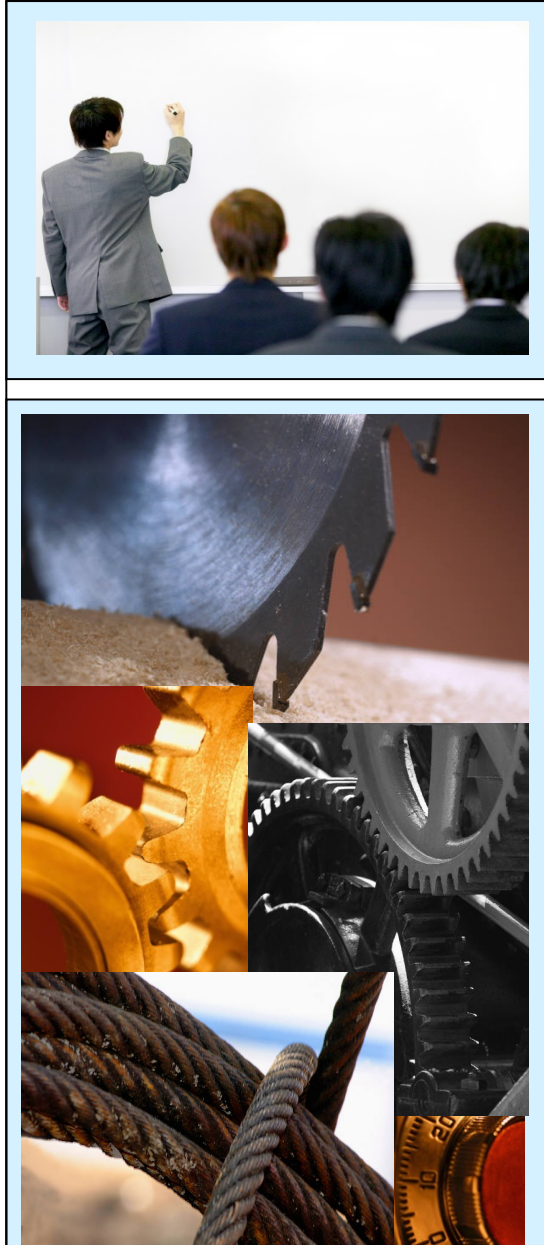
Transformation

- Organizational learning
 - New ideas brought "home"
- Professional culture
 - Employees bring knowledge to new workplaces

Time is very important!

Elmhester, 2008

Varamäki et al, 2008



EE-networks in the energy-intensive industry in Sweden

- Industrial branch
- Supported by the Swedish Energy Agency
- 40-100 participating enterprises
- 1-2 annual meetings
- Administrated by external part
- Expert resources available
- Focus on learning

Broberg et al, forthcoming

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Experiences from EE-networks in the energy-intensive industry in Sweden

- ENET Steel – established 2005
 - Varied success in implementation of activities
 - Energy handbook issued and used
 - Inspired to new networks
- EESI (Sawmills) – established 2010
 - At least 20 per cent energy savings
 - New uses for by-products
- GeniAl (Aluminium industry) – established 2011
 - First learning phase with establishment of a common board
 - Energy audits and process mappings
 - No evaluation of measurable results



Broberg et al, forthcoming

Future research

- How have networks been organised?
 - Do they promote transaction effects?
 - Do they facilitate transformation?
 - Branch vs local?
- How can and should networks be evaluated?

Towards new models for Swedish energy efficiency networks (ECEEE 2015)!



Dank U!

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