Energy efficiency networks for SMEs

- boosting the energy efficiency potential by joining forces

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The importance of SMEs

Key figures for industrial SMEs in Belgium, Japan, Spain and Sweden

	Industry share in energy	SME's share in energy	SME's share in economic output
Japan	46%	11% of industrial energy-related CO2 emission in 2010	48% of manufacturing shipments in 2006
Sweden	38%	25% of industrial energy use in 2010	37% of manufacturing value added in 2011
Spain	27%	N.a.	N.a.
Belgium	35%	11% of industrial energy use in 2010	40% of manufacturing value added in 2010

Energy efficiency in SMEs

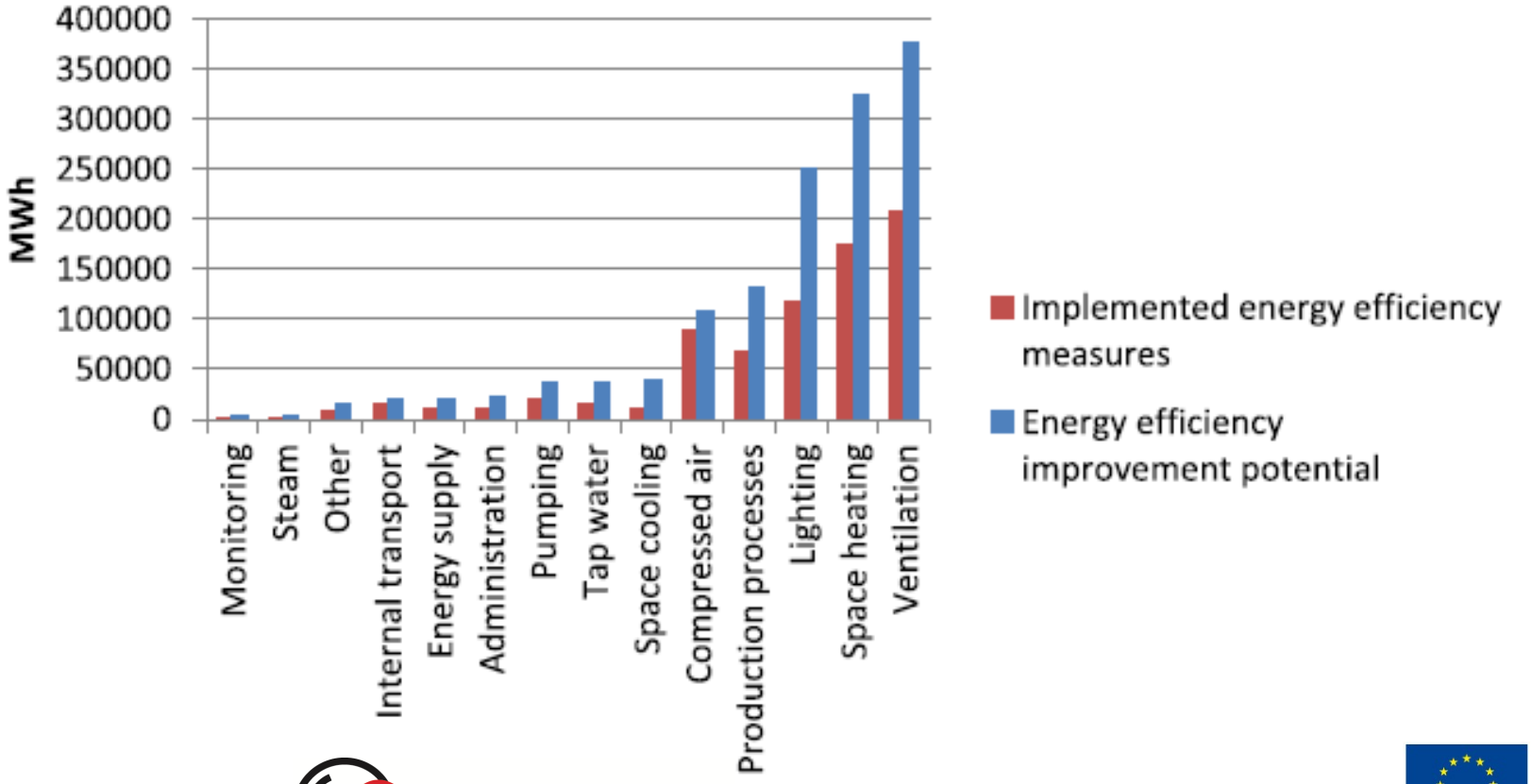
- The relative energy efficiency potential is larger for SMEs
- More cost-efficient than for energy-intensive industries
- The level of deployment due to energy efficiency barriers remains low
- + all the other benefits of improved energy efficiency

Policy programs for improved energy efficiency

- Energy audit policy program - the most common policy towards SMEs
- LTA or VA - for large and energy-intensive companies

The results from the Swedish Energy Audit Program

53% measures implementation rate



International energy efficiency networks

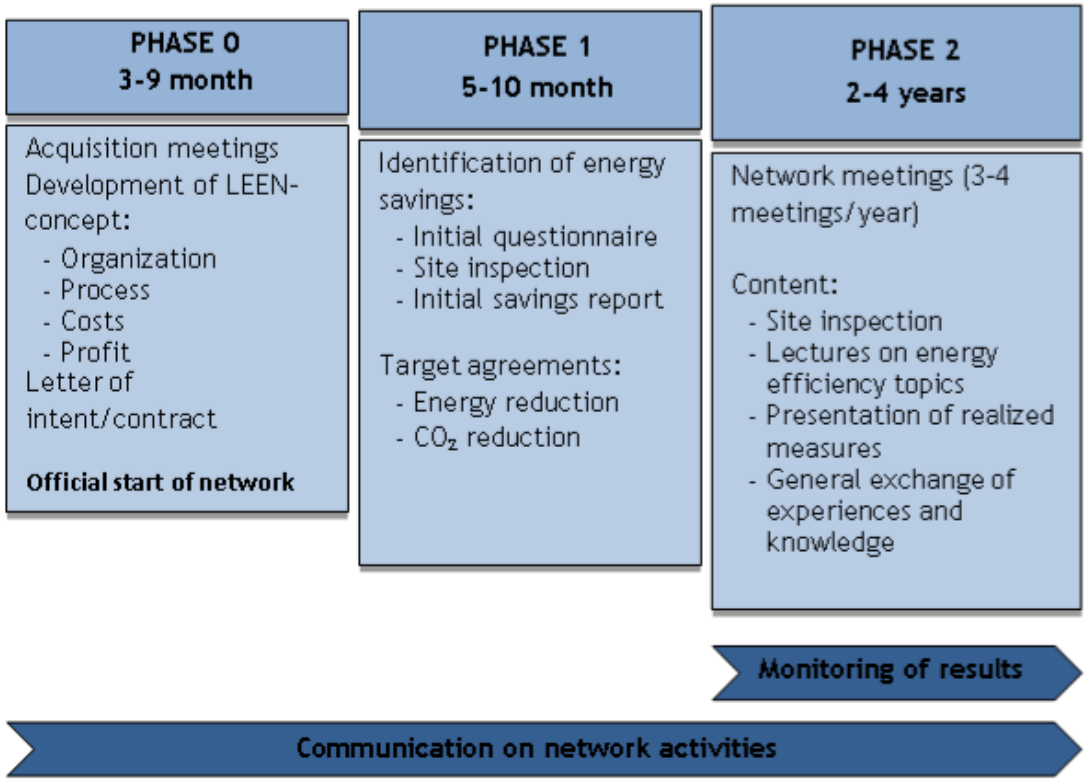
Switzerland

- EnergyModel, 1987
- Fossil fuel surcharge exemption
- 70 energy efficiency networks, 2000 companies
- Energy costs reduction €110000

Germany

- Learning energy efficiency networks (LEEN), 2002
- More than 50 networks functioning
- 2,5% electricity-efficiency improvement
- Energy costs reduction €120000

Energy efficiency networks



The LEEN concept (revised from LEEN, 2013)

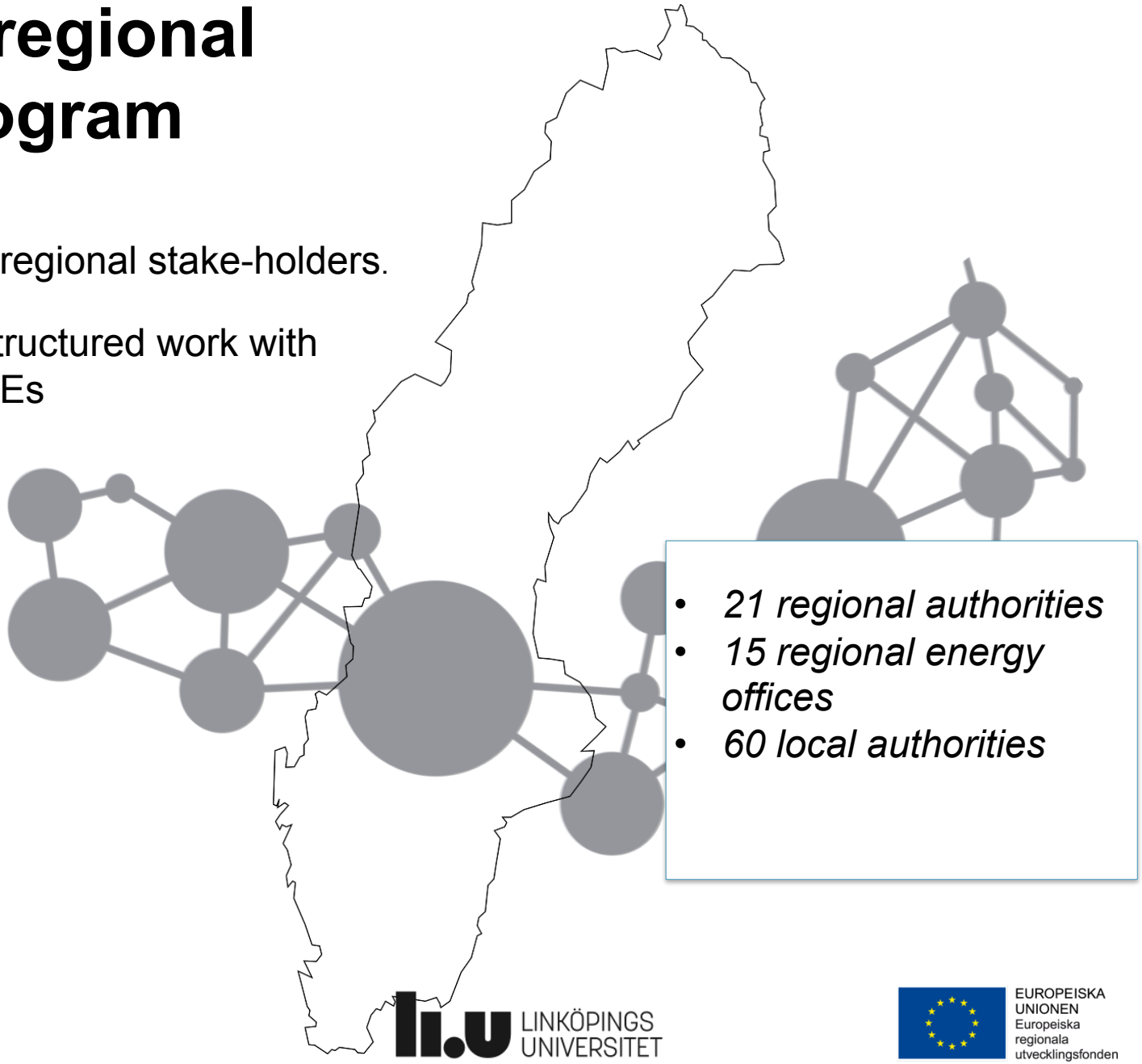
Swedish energy efficiency networks

- 32 energy efficiency networks
- Lack of structure and follow-up
- Theoretical understanding of governance, double-loop learning
- Good and bad examples

National regional funds program Vision

Cooperation with regional stake-holders.

Systematic and structured work with energy use in SMEs



- *21 regional authorities*
- *15 regional energy offices*
- *60 local authorities*

Energimyndigheten

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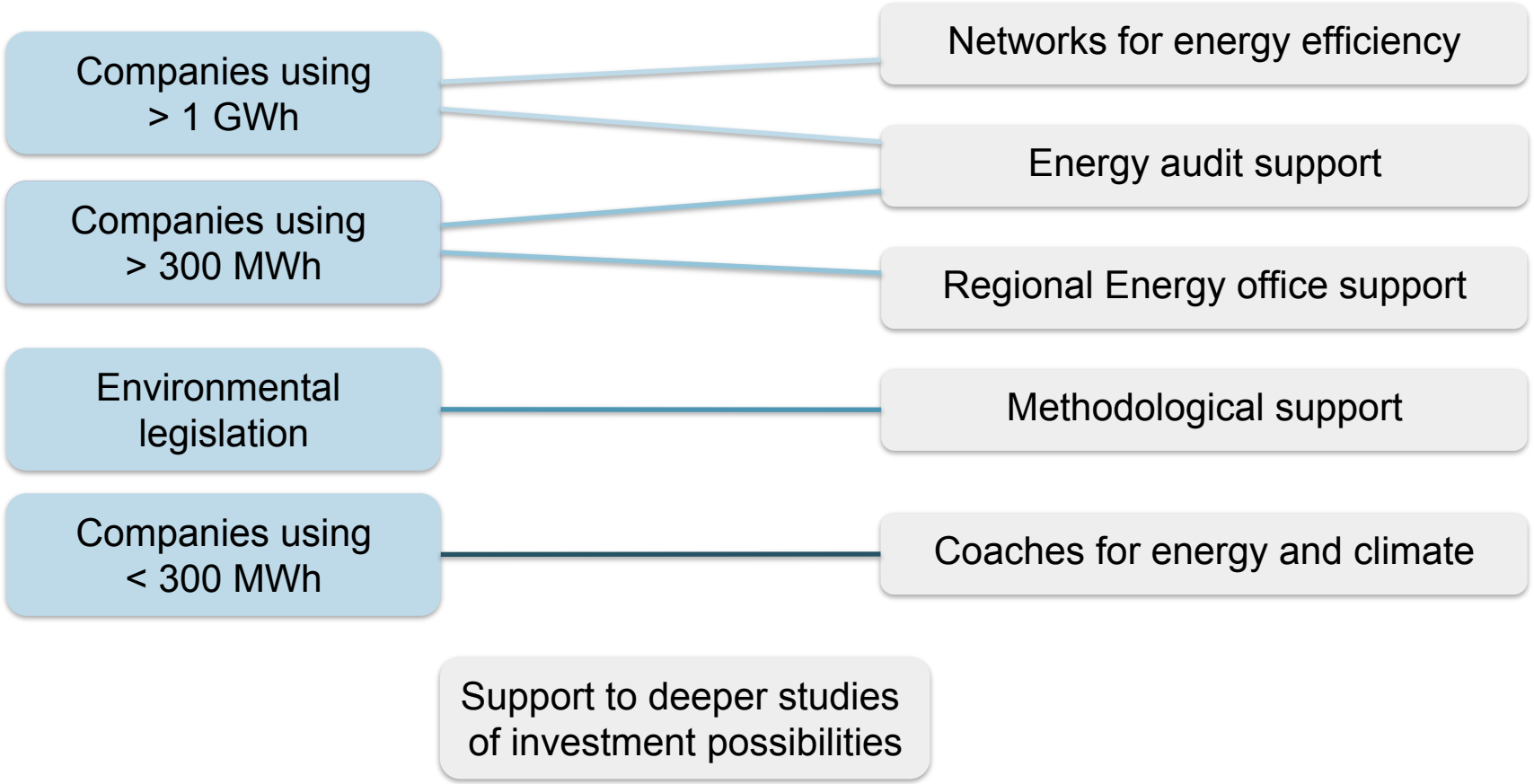
Focus on SMEs

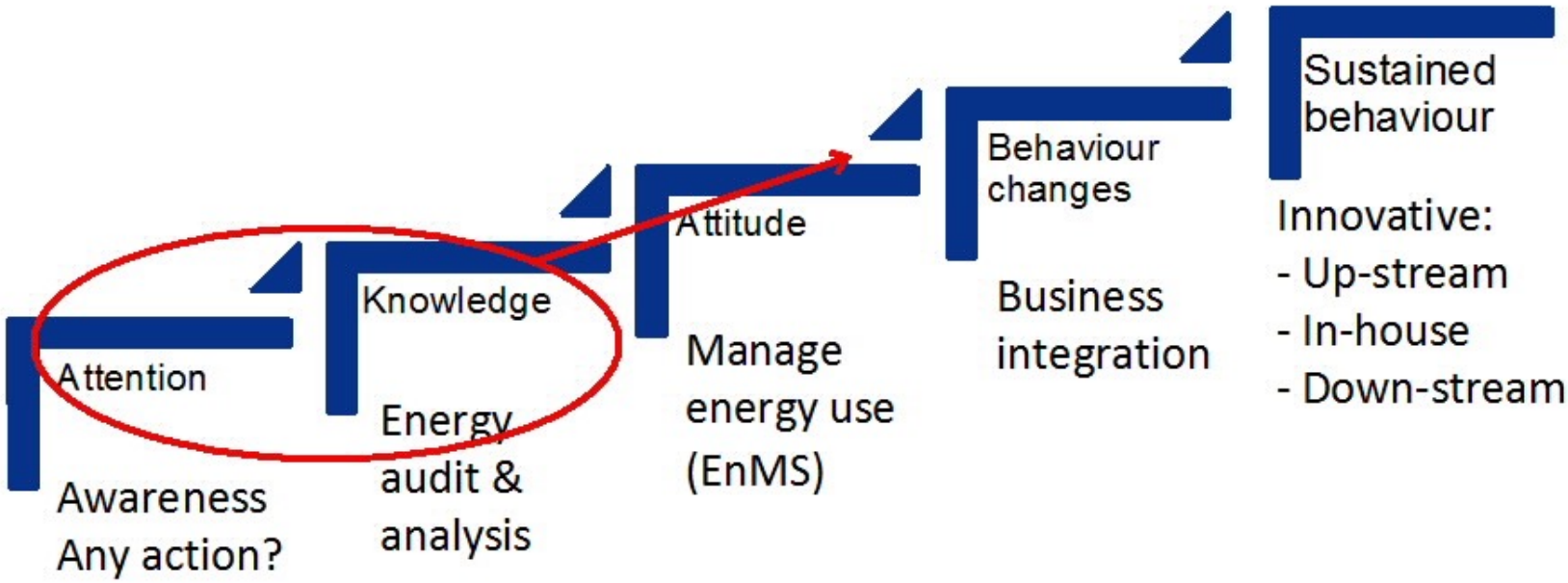
The projects are designed give support to SMEs to lower their energy use to;

- Lower costs
- Strengthen competitiveness
- Lower climate effect
- Find innovative solutions

Support to SMEs



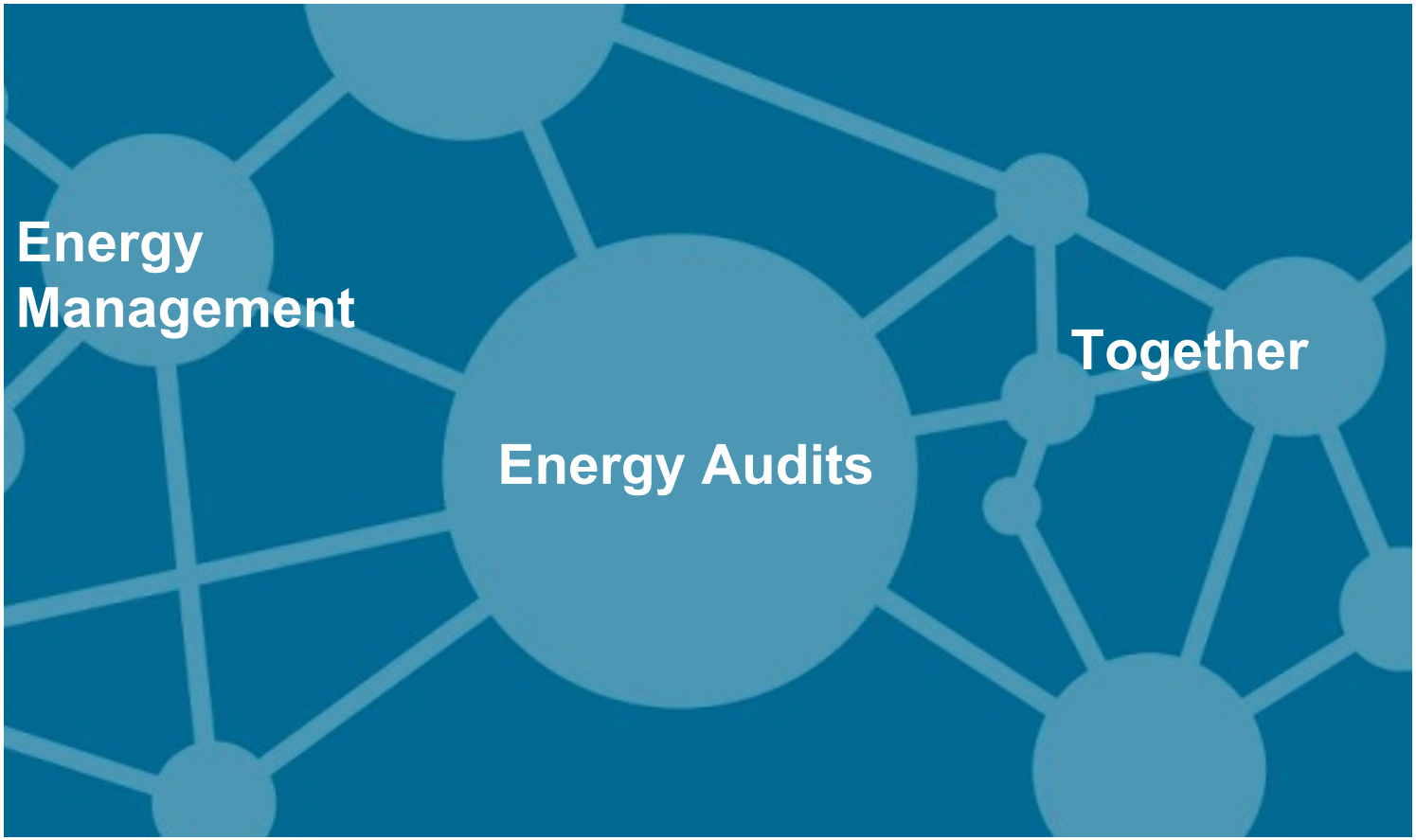
The Energy Efficiency Stairs



Management Attention

No Priority ⟷ **Strategic Issue**

Key Words



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Building the network

- Aggregated target for the network
- Content largely based on the needs of the participants.
- Sharing of experiences.
- Rotating meetings at the sites of the part’s.

Why energy management?

- Structured way of work
  - Engaging more employees
  - Providing more long-term oriented strategic energy thinking

- Continous improvements
  - Insuring continuous efficiency work
  - Find more energy saving opportunities

- Better follow-up
  - A clearer picture of companies' energy use
  - Knowing effects from implemented energy efficiency measures provide incentives to implement more measures

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Energy audit support

- Methodology, Discussion and Training.
- Support to hire the auditor.
- Support to get the financial audit support from Swedish Energy Agency.
- Review and update of audits already made.

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Ex-ante evaluation

- Previous energy audit policy program in Sweden
- 0,7-1,4 TWh/year energy savings
- Lower deployment level: 0,34-0,6 TWh/year
- 5% free-rider, 22% spillover effect

EENet's ex-ante evaluation

- The Swedish Energy Audit Program's database
- 713 companies, 5370 GWh/year energy end-use
- 40 networks, 400 companies
- 10 companies/network
- 2 GWh/year energy end-use
- 84 MSEK operational costs, 11,5 MSEK administrative costs
- 10 000 SEK membership fee
- 79,5 MSEK subsidy costs

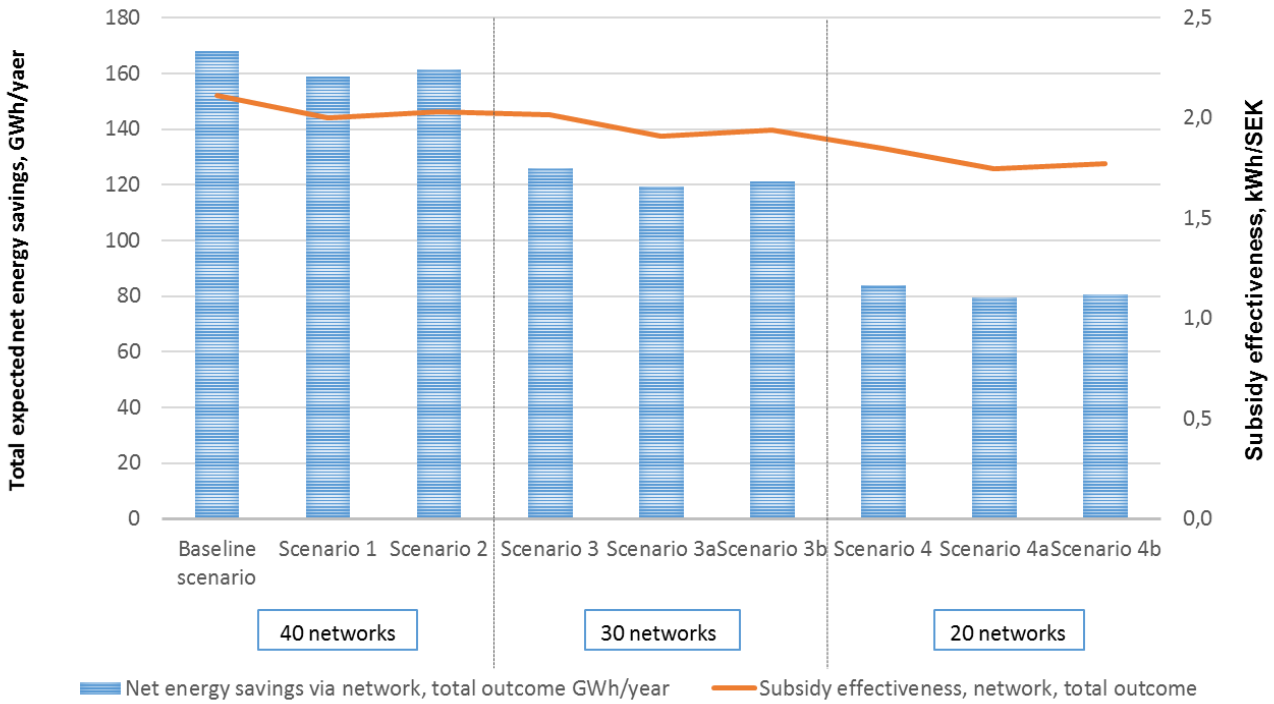
EENet's ex-ante evaluation

Assumptions:

- Energy efficiency networks provide 50% more improved energy efficiency
- Updated energy audits provide 25% more improved energy efficiency

	Limit for energy use	Number of networks
Baseline	2 GWh/year	40 networks
Scenario 1	1,5 GWh/year	40 networks
Scenario 2	1 GWh/year	40 networks
Scenario 3	2 GWh/year	30 networks
Scenario 3a	1,5 GWh/year	30 networks
Scenario 3b	1 GWh/year	30 networks
Scenario 4	2 GWh/year	20 networks
Scenario 4a	1,5 GWh/year	20 networks
Scenario 4b	1 GWh/year	20 networks

EENet's ex-ante evaluation results



1,75 - 2,03 kWh/SEK subsidy effectiveness

0,97 - 1,93 for PFE (only tax relief 150 mln SEK)

EENet's ex-ante evaluation results

- Reduction of threshold value without reduction of the goal for energy savings
- Developing objectives for the EENet
- Continuing work and monitoring within the EENet
- Continuous update (companies' information, real potential)
- Scientific input in policies development, scientific publications

Thank you for your attention!

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