



European Union
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Regional energy policy programs for energy efficiency in SMEs

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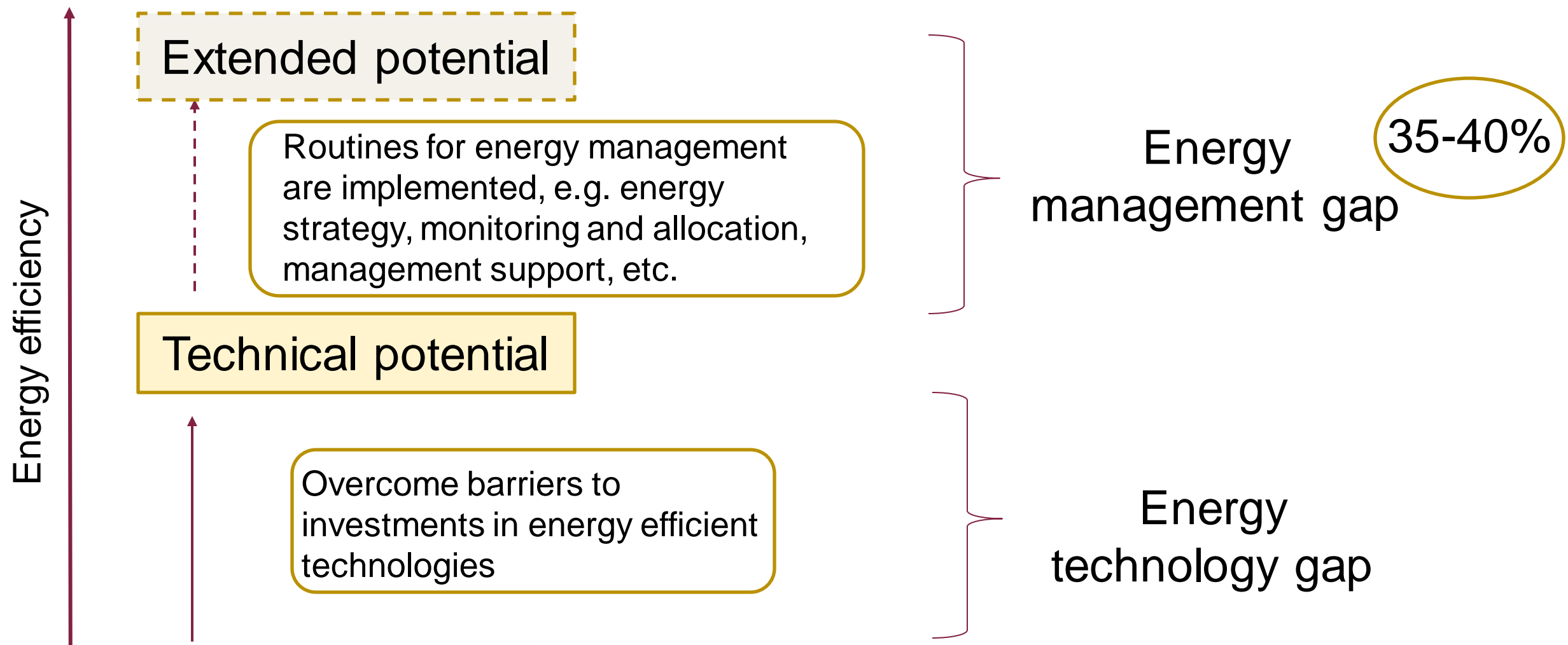
Energy efficiency in SMEs

- More than 99% of companies are SMEs
- Total energy efficiency potential in the industrial sector is estimated to **25%**
- The potential for SMEs are **higher!**
- Energy efficiency is a **key factor** for reduced green house gases

- Only **half of the measures** in an energy audit is implemented

- Large potentials are left untapped!

Energy efficiency gap



Not only **technical energy efficiency measures**, but also activities linked to energy management, such as **behaviour, operation/maintenance, strategy/planning, etc.**, which aim to continuously reduce the company's energy consumption and related costs

→ **improved energy efficiency**

Barriers to energy management

- Lack of time/Other priorities
- Non-energy related working tasks are prioritised higher
- Slim organisation
- Lack of internal competence

Mainly organisational barriers

Drivers for energy management

- Reduce waste
- Participation in energy efficiency networks
- Reduced costs
- Full support from top management

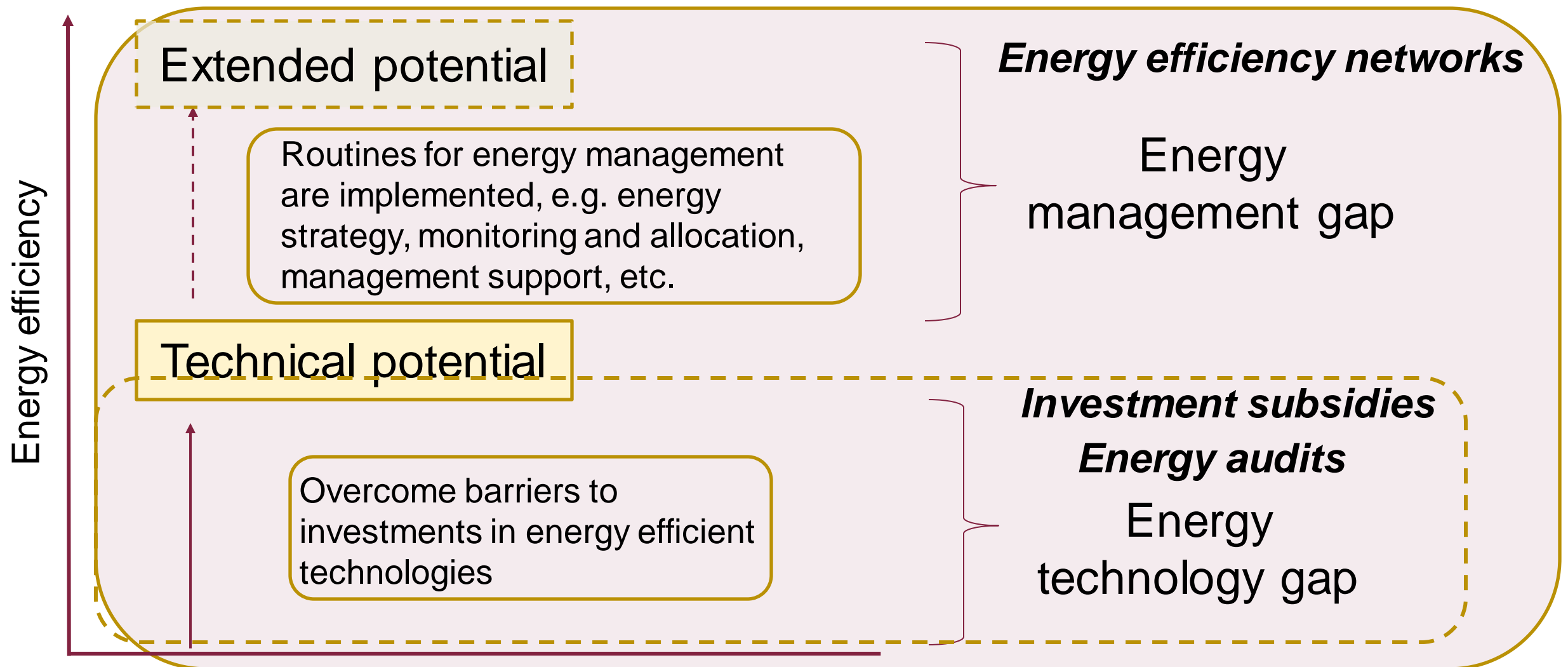
Mainly **organisational** and **economical drivers**

Success factors

- Full support from top management
- Long term energy strategy
- Energy plan
- Energy manager position
- Real energy cost allocation, based on submetering
- Clear KPIs

Success factors are not met in SMEs

Energy efficiency networks



Energy efficiency networks

The companies receive **support** to move forward with all **success factors**

Get **support** to establish the important **driving forces**

Continuity in the companies' energy work

Results from Swedish network ENERGIG

Energy efficiency potential: 17%

Achieved energy efficiency*: 10%

Implemented measures*: 74%

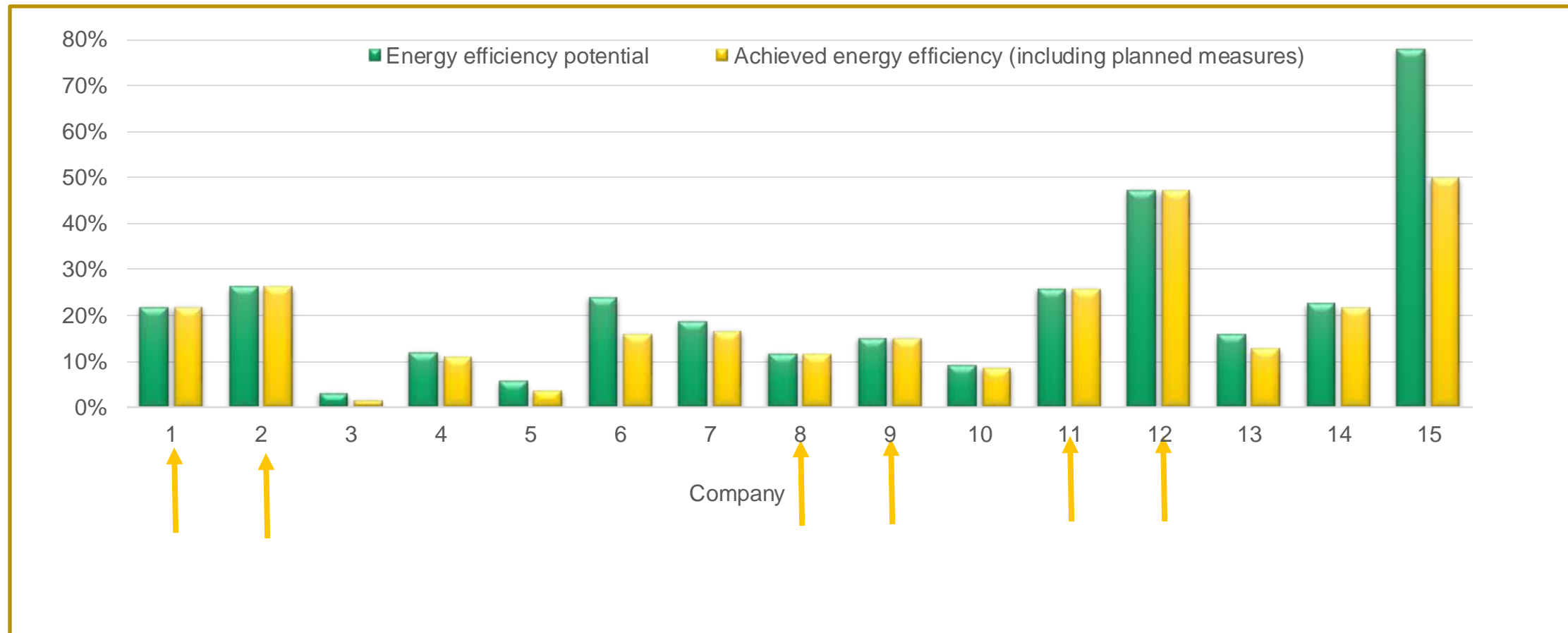
Twice as high compared to energy audit



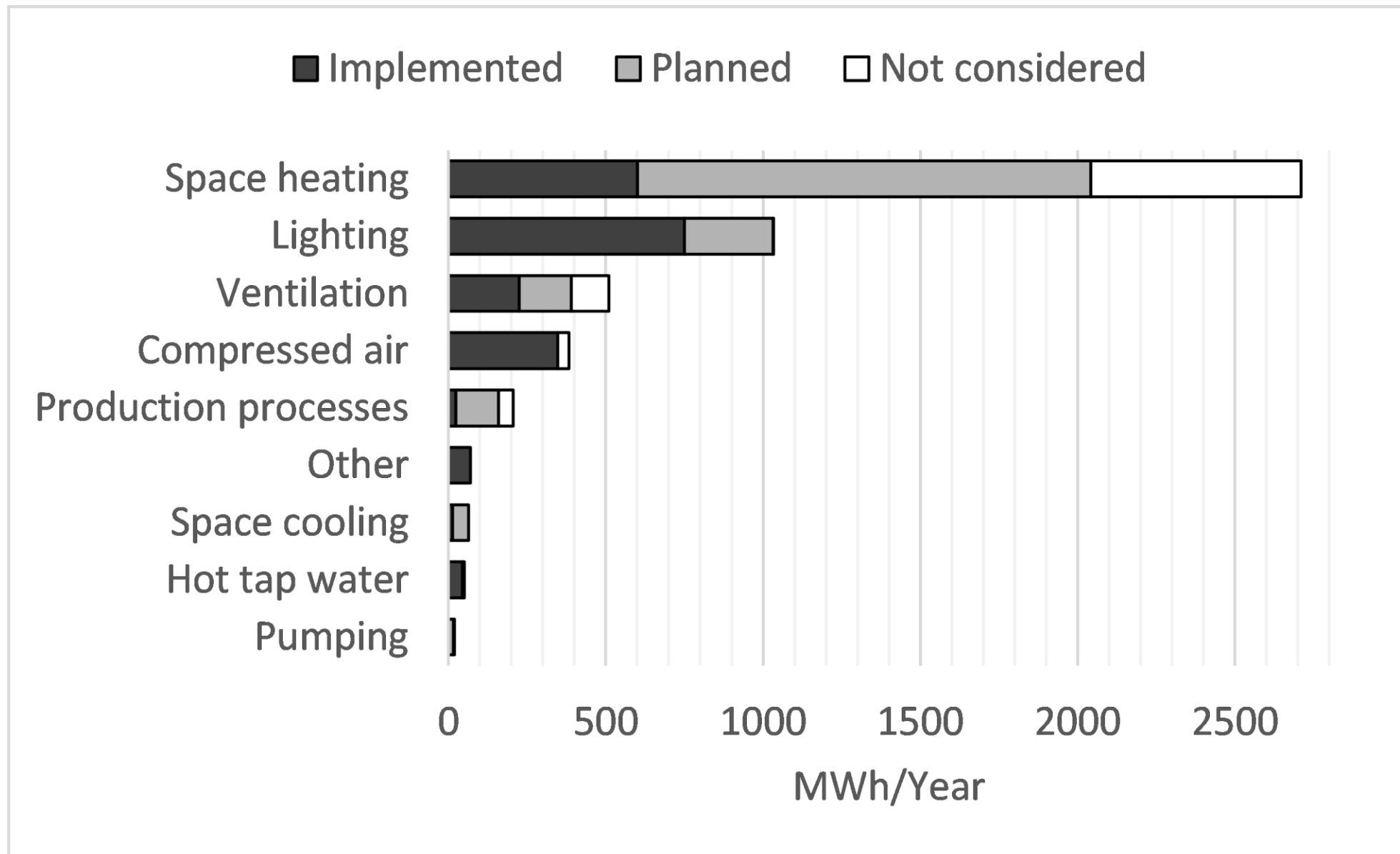
The cost is **five times as high** for the policy administration, compared to the cost of a policy instrument that promotes energy auditing

*Incl. planned measures

Results from Swedish network ENERGIG



What measures were implemented?



What barriers can networks overcome?

1. Lack of technical skills
2. Poor information quality regarding energy efficiency opportunities
3. Difficulty/cost of getting information on the energy use of purchased equipment
4. Lack of staff awareness
5. Lack of time/Other priorities

Non-energy benefits (NEBs)

- NEBs are benefits in addition to energy costs savings
- Example of NEBs are increased production, improved work environment, reduced maintenance of equipment, improved company image etc.
- Difficult to quantify, but could cut payback time by a factor of two when including NEBs
- NEBs play an important role in energy efficiency!

NEBs



- Participants from the energy audit program related NEBs mainly to **technical installations**
- Network participants also saw these types of NEBs from **energy management practices**
- Networks deliver a **higher degree of improved energy efficiency and knowledge about energy management practices**, compared to energy audits alone

NEBs



- Most commonly mentioned NEB: **Increased lifetime of equipment**
- **More reliable production** due to **improved knowledge** from energy audits and network participation
- Network participant perceived NEBs also related to measures related to **energy management practices**, i.e. not only technical installations
- **Improved work ethics** and **improved company image** were mentioned by network participants but not from companies from the energy audit program
- Participants from the network mentioned **new contacts** as a NEB

Summary

- Networks are a good way to **support** the companies in energy efficiency
 - Networks help companies **implement success factors**
 - Networks **overcome some of the common barriers** to energy efficiency
 - Networks increase the **internal knowledge** of energy efficiency and the energy system at the company
 - Networks need to be **further improved** to target energy efficiency in production processes and improve the level of maturity in relation to energy management in the companies
- Network can **double the energy efficiency** compared to energy audit alone

Next study

Questionnaire: Identify the major NEBs from regional policy programs in EU member states

Do more advanced policy programs lead to higher perception of NEBs?

Production

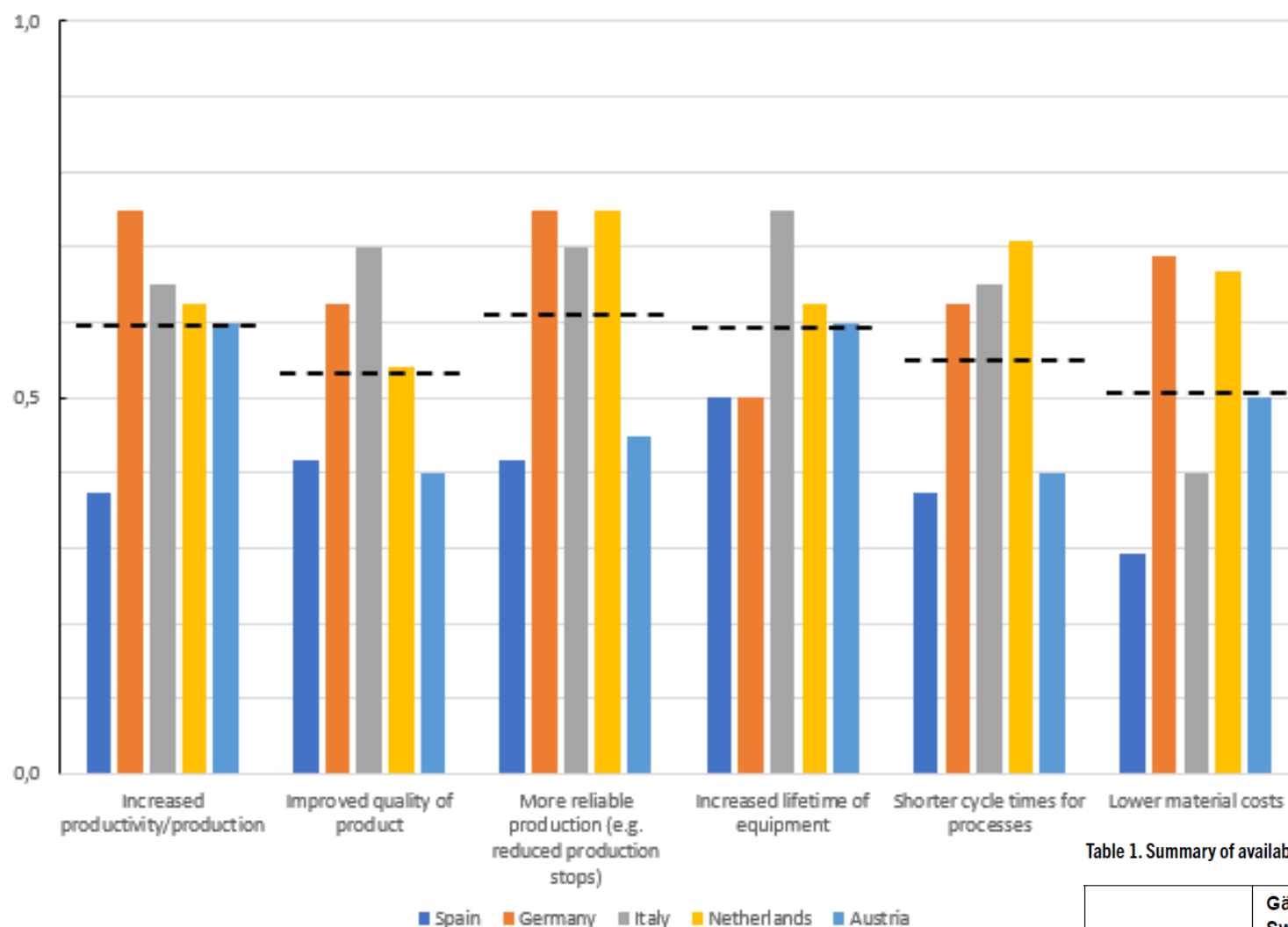


Table 1. Summary of available regional and national policy types.

	Gävleborg, Sweden	Burgenland, Austria	Hessen, Germany	Campania, Italy	Groningen, The Netherlands	South-West Oltenia, Romania	La Rioja, Spain
Policy program including energy audit components	Regional and National	Regional and National	Regional and National	National	Regional and National	–	Regional and National
Investment subsidies available	Regional and National	Regional and National	Regional and National	Regional and National	–	Regional and National	Regional and National
Energy efficiency networks offered (for supporting energy management)	Regional and National	Regional and National	Regional and National	–	–	–	–
Direct policy program available including energy management components	Only large companies	Obligatory only for large companies, recommended and partly funded also for SME	Only for energy-intensive companies	Only for energy-intensive companies	National	Only for energy intensive companies	National
Benchmarking scheme that is under operation	–	–	–	–	National, for ETS and energy companies	–	–

Thank you for your attention!

”Improved energy efficiency in industrial small and medium-sized enterprises – Regional energy efficiency network policy programs”

<http://urn.kb.se/resolve?urn=urn:nbn:se:hig:diva-37595>

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