

Communication energy efficiency with SMEs

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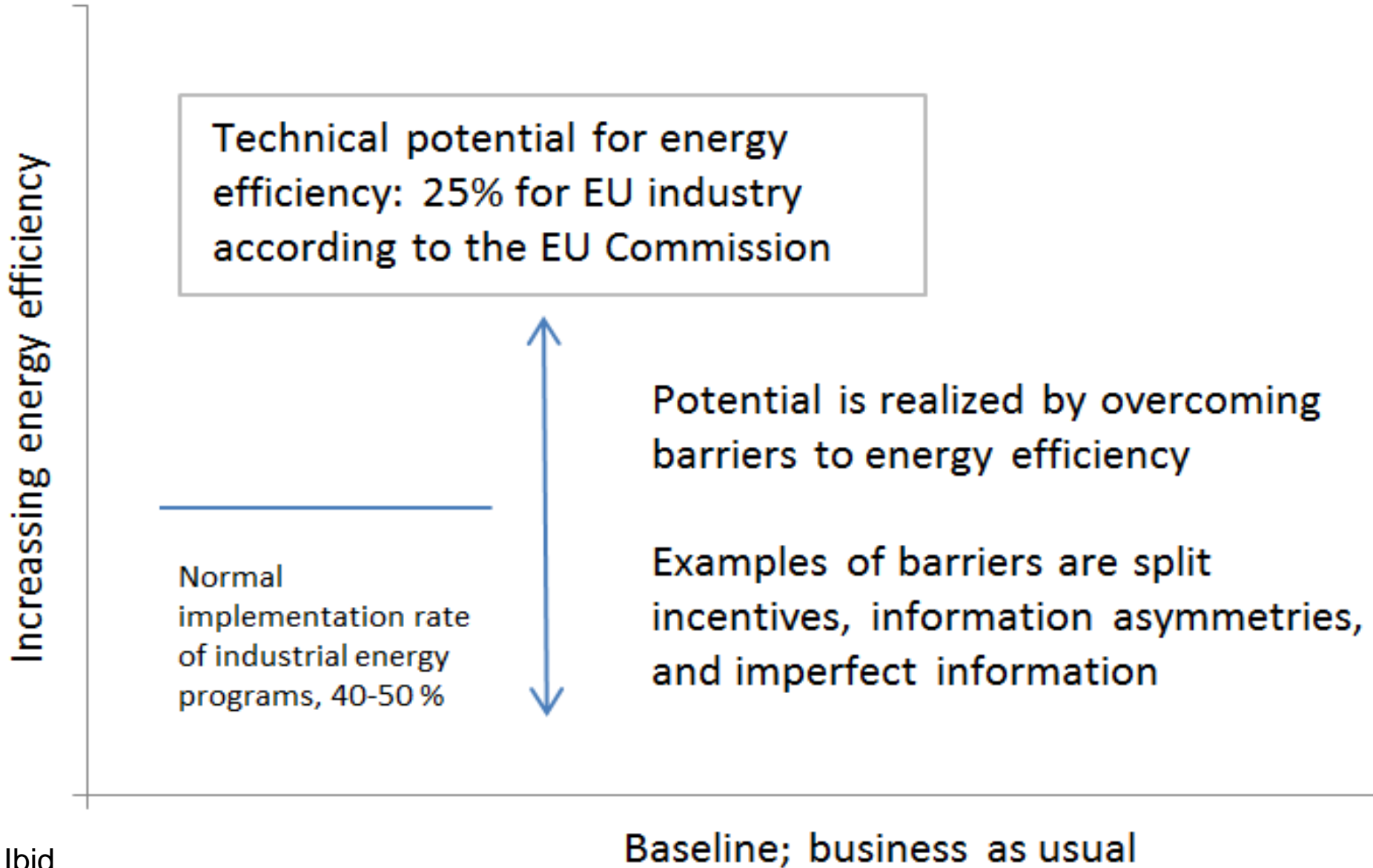
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There is a large relative energy efficiency potential in SMEs

Question is: how do we deploy it?



Example of successful policy measures for SMEs

- Energy audit programs (Price and Lu, 2011; Thollander and Dotzauer, 2010)
- Quick E-scan using a database (Cagno et al., 2011)
- Networks (Koewener et al., 2011)

Example of successful policy measures for SMEs

- Networks, example from Switzerland and Germany
 - "10-15 regionally based companies from different sectors share their experiences in energy efficiency activities in moderated meetings."
 - "A typical network period contains up to 16 meetings, after which the companies decide whether or not the EEN should be continued."
- 70 networks in Switzerland, 20 in Germany.
- **Results: companies double their energy efficiency improvements!**

Example of successful policy measures for SMEs

- Energy audit programs (Price and Lu, 2011; Thollander and Dotzauer, 2010)
- Quick E-scan using a database (Cagno et al., 2011)
- Networks (Koewener et al., 2011)
- SME Energy management tools (Hrustic et al., 2011; Moralez et al., 2011)

Barriers in SMEs – what does research say?

Largest barriers to energy efficiency improvement measures in European SMES:

- Lack of time and other priorities
- Lack of access to capital/other investment priorities and
- Information-related barriers

Barriers – what does the ESD say?

The ESD aims to: “***..remove existing market barriers and imperfections (market failures)..***”

Categorization of barriers

- **Market barriers** refer to any factor which explains why technologies which appear cost effective at current prices are not taken up;
- **Market failures** refer to those market barriers which corresponds to market imperfections/failures.

Market imperfections/failures

- Incomplete markets
- Imperfect competition;
- Imperfect information; and
- Asymmetric information

Categorization of barriers

- Because we have extensively focused on market imperfections and failures we have created programs overcoming information-related barriers

Policies for SMES to overcome imperfections/failures

- General information programs, e.g. breakfast seminars, info campaigns, advertisements,
- General information programs has shown to increase awareness but leads to NO or very little change in terms of behavior and investments

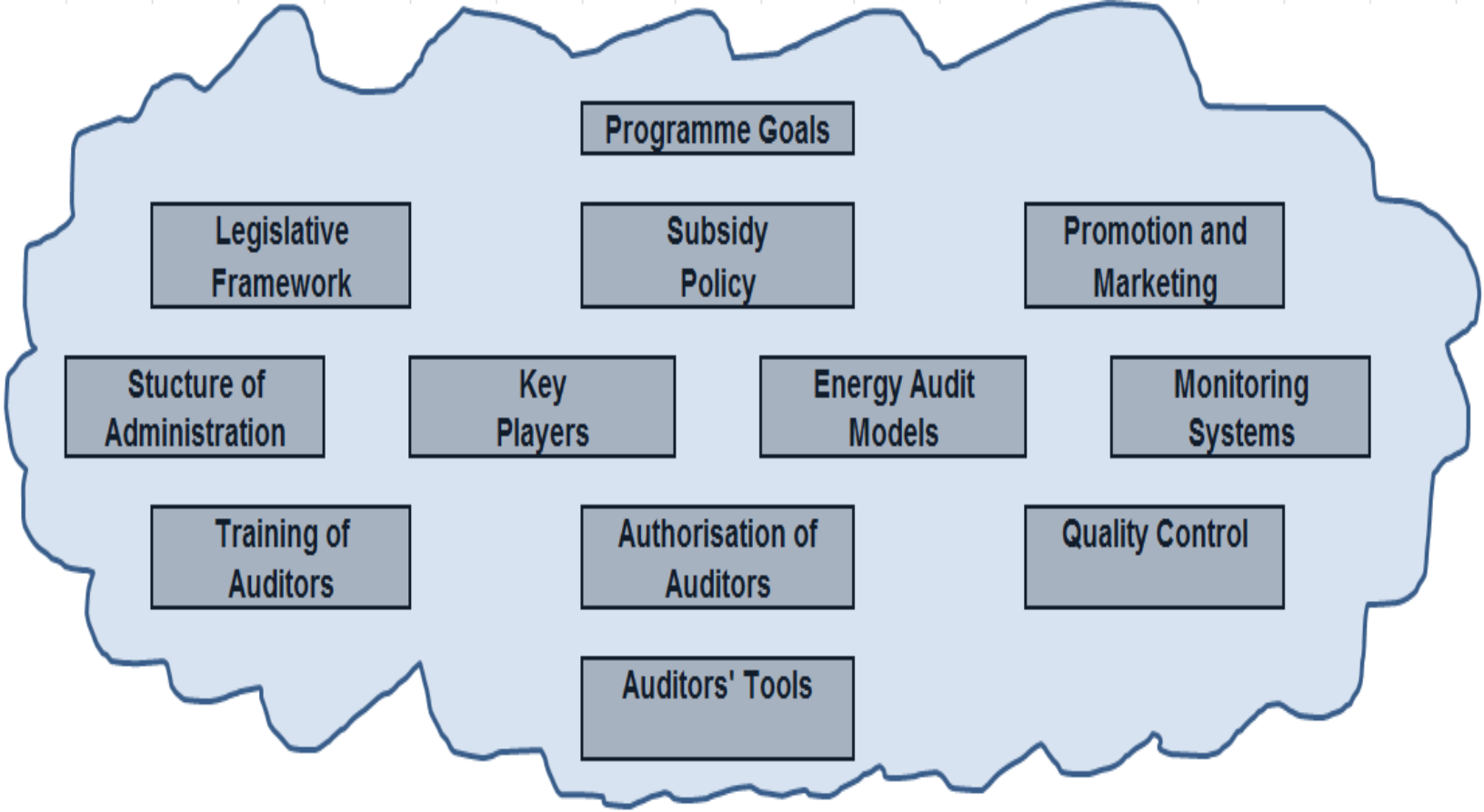
Policies for SMEs to overcome market barriers

- Targeted information programs, e.g. energy audit programs
- Targeted information programs, e.g. energy audit programs reduce barriers

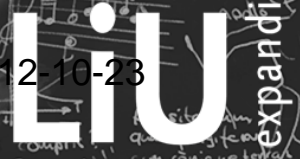
Reasons

- Information is one way
- Communication is two ways
- Targeted information programs initiates a communication process!

Components for administrating an industrial energy program



Väisänen 2003. In Thollander and Palm, 2013



Successful energy programs for SMEs

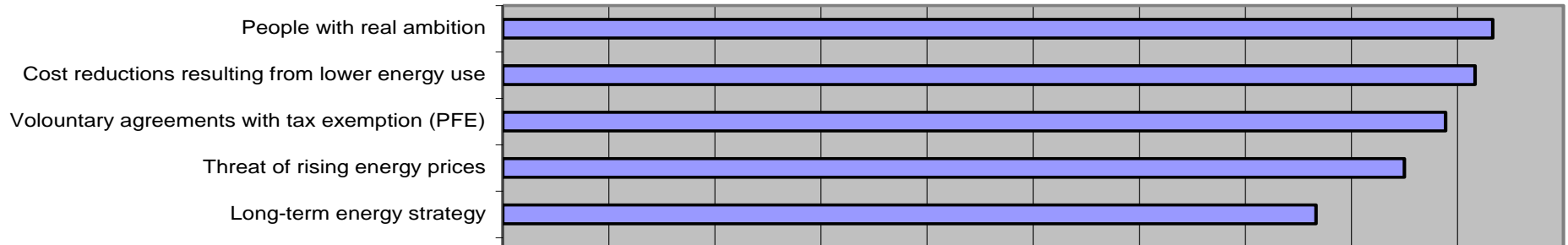
- Fully or partly subsidized energy audits?
- Scope of energy audits – deep or wide?
- Coverage of sector?
- Energy audit program or LTA?
- Choice of operating agent and local authority involvement?
- Evaluation of the program?

Succes factors for industrial energy management – beyond management systems

1. **top management support**
2. **Create a long-term energy strategy**
3. Based on the formulated strategy, **create energy plans**
4. **Create an energy manager position**, i.e., an energy controller position
5. Etc.....

Thollander P, Palm J, 2013. Improving energy efficiency in industrial energy systems - an interdisciplinary perspective on barriers, energy audits, energy management, policies & programs. Springer. ISBN 978-1-4471-4161-7.

Succes factors for industrial energy management – beyond management systems



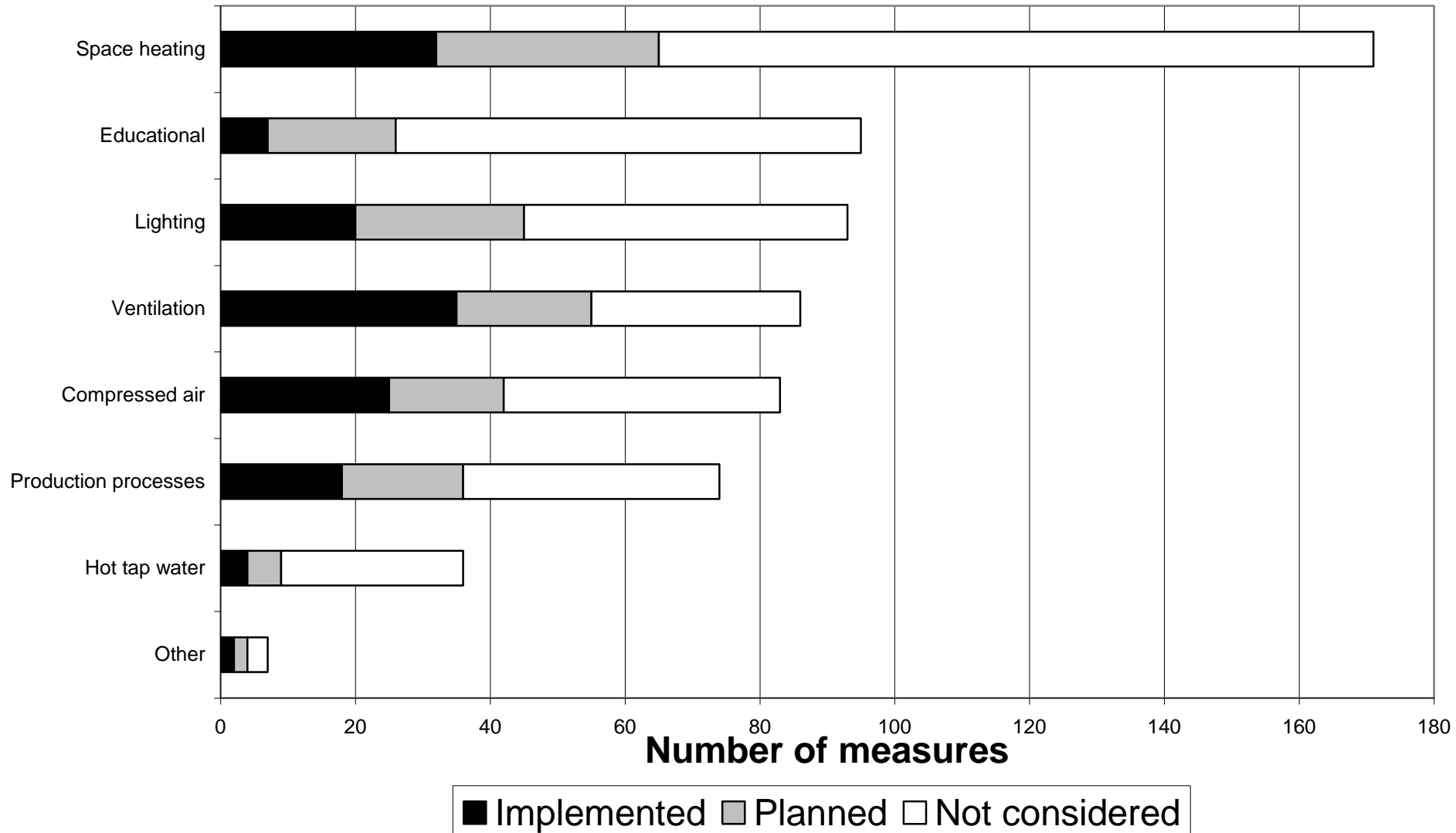
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Challenge

- Few SMEs have successful EnMS approaches
- Challenge for government to approach an actor which is sometimes both production manager and CEO, and within three weeks from now does not know if that order is accepted or not, i.e. if he or she has to fire half of their production division.

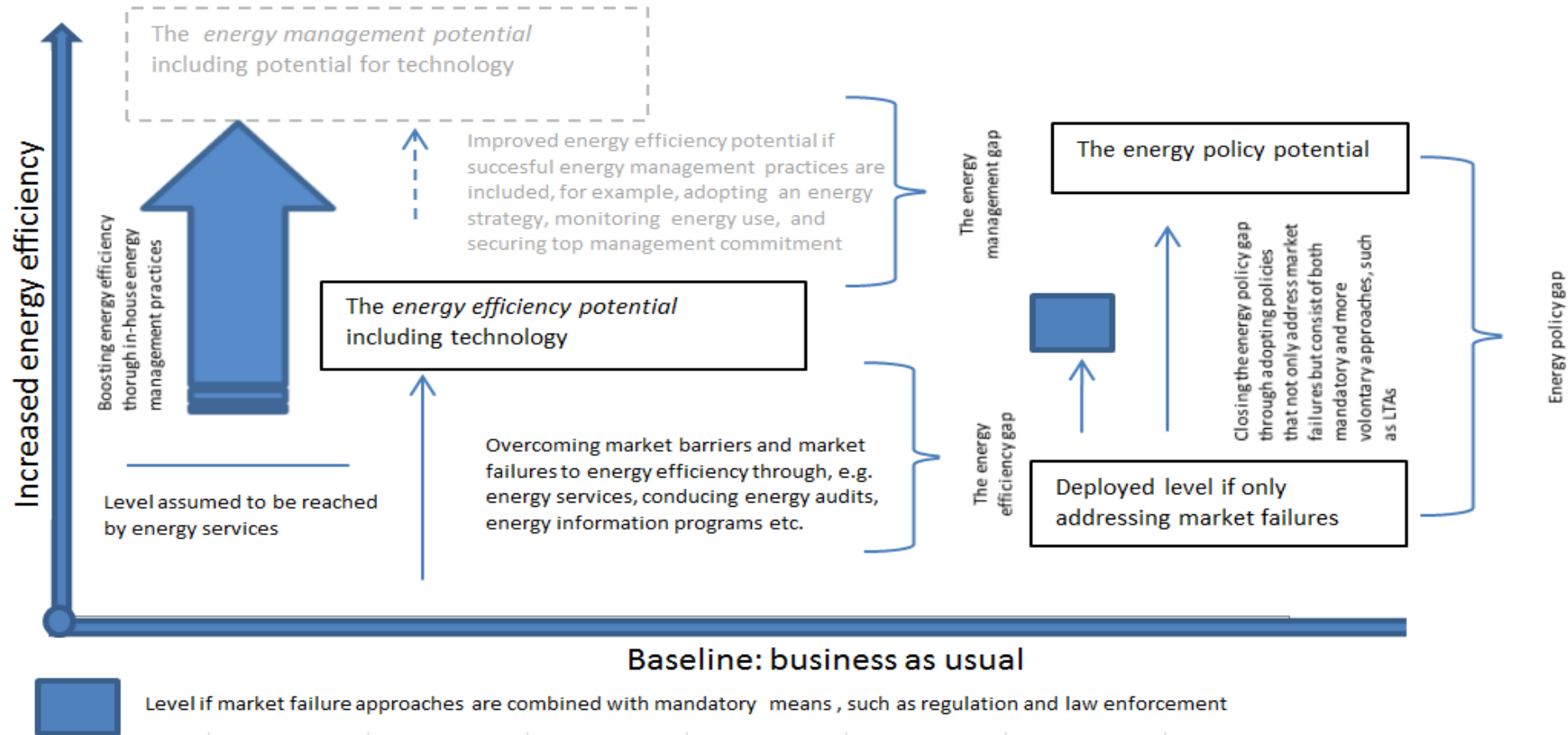
Ibid

What technologies are we targeting - example of an evaluation of an SME energy program



Suitable EnMS approaches for SMEs and less energy-intensive manufacturing firms

The energy policy, efficiency and management gaps



Psychiatry and communication – Transactional Analysis

- Three roles: Adult, Parent, Child
- Successful relation is adult to adult communication
- Boosting the EU energy efficiency potential through ESD and EED means moving from Parent –to-Child-relationship to Adult-to-Adult between the government and industry

Successful policy program design for SMEs

- Energy audit using E-scan
- Energy audit programs with "light" EnMS
- Networks or clusters for non energy-intensive SMEs (insourced energy controller).
- Full-scale LTAs/VAs including EnMS-certification for energy-intensive SMEs

Successful policy program design for SMEs

- Moving from information-focused to:
communication-focused programs
- Moving from technology-focused to:
technology and management-focused

Thanks for your attention!

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