



Important to think of when you prepare for this training

- This training material is primarily prepared as a face-to-face / on-location training opportunity for a group of 8-15 persons, ideally representing 4-8 different SME clusters.
- It can also be carried out as a trainer-led online training event for the same type of group. Suggestions for adapting interactive elements in such a case are included, but some further adaptations may be needed.
- The target group includes Trusted Partners (or potential new Trusted Partners) but also other stakeholders that may be involved in the development of local energy collectives, e.g., energy auditors, energy experts, local energy advisors, etc.
- The training should be interactive – with the aim that participants will actively contribute and learn both from you and each others' experience.
- Interactive elements are marked with the symbol to the right. Sometimes alternative options are given. Choose and adapt so that you do it in a way that best suits you and the group.
- You will find explanatory notes about the content of the slides in the **notes** of this presentation as well as extra material to read. Some specific notes on how to lead the training are added under *Instructions to the trainer* and *Note for the trainer*.





Messages to convey in this training

Learn how to organise collective energy projects in business parks

Learn the benefits of collective energy projects for SMEs

Learn how you can design the role as a Trusted Partner* in the process of organising collective energy projects

Find inspiration for developing a way of working that is relevant to everyone's own situation

* This training is relevant to anyone who has/will have a coordinating/supporting role in relation to a local cluster of SMEs (a Trusted Partner) and wants to address energy efficiency and sustainability in that role.

This can be any person working with business park management, a local industry association, climate and energy advice, municipal business development, etc.

The training material combines theory on specific topics with concrete examples and interactive activities based on the participants' own experience.





Gear@SME
Saving energy together

Collective energy projects

LEVEL I



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ondernemen



Welcome

- What will we do in these two hours?
 - Introduce the concept of Energy Efficiency in SMEs
 - Introduce collective energy projects and their benefits
 - Walk through the process of organising collective energy projects
 - In-depth insights on how to arrange an Energy Team and a project leader



Who are we?

Insert your
own picture
and contact
info





Why is energy efficiency in SMEs such a challenge?



Time to brainstorm

Think about your experiences...
**what challenges do SMEs face when
trying to implement Energy Efficiency
Measures?**



Introducing the barriers SMEs face

External barriers

- Market
- Government/politics
- Technology/services suppliers
- Designers and manufactures
- Energy Suppliers
- Capital Suppliers/Financiers

Internal barriers

- Economic
- Behavioral
- Organisational
- Competences related
- Awareness



Collective energy projects mostly address internal barriers

Area	Internal Barriers
Economic	Low capital availability Hidden costs Intervention-related risk
Behavioral	Lack of interest in energy efficiency
Organisational	Lack of time
Barriers related to competences	Identifying the inefficiencies Implementing the interventions
Awareness	Lack of Awareness or Ignorance

Collective energy projects mostly address internal barriers



Area	Internal Barriers	Benefit of the collective energy project on the perception of the barrier
Behavioral	Lack of interest in energy efficiency	Inspiration and understanding from peers: “Other SMEs similar to mine have already implemented energy efficiency measures and are satisfied”
Organisational	Lack of time	Resources are shared. The time required is shared with other SMEs and therefore less than that required by an individual energy efficiency project.
Barriers related to competences	Identifying the inefficiencies Implementing the interventions	If more than one company is interested in researching inefficiencies, it's easier to find a reliable professional who can follow through and find synergies between the companies.



Why implement energy measures in collective energy projects?

















What do we mean with 'collective energy projects'?

- Implementing energy efficiency measures **together**
 - Two or more SMEs join forces
- A Trusted Partner takes a facilitating role, partly unburdening the individual SMEs
 - This role can be taken by one or several of the SMEs, or a business park association, but also in some cases a municipality or energy service supplier

Examples of collective energy projects



Area		Building		Energy Culture of companies		
<div>Buffering, Storage</div> <div></div> <div></div> <div>PV on land</div> <div>Heat network</div> <div></div> <div></div> <div>Wind mills</div>		<div>Solar panels</div> <div></div> <div><div>Insulation</div><div></div></div> <div><div>Heating</div><div></div></div> <div><div>LED lighting</div><div></div></div> <div><div>Sensors</div><div></div></div> <div><div>Building management</div><div></div></div>		<div><div></div><div>Efficiency</div></div> <div><div>Individual SME Barriers AND Drivers</div></div> <div><div>Behavior</div><div></div></div>		
	Circularity		Transport			
						

May, 2022



Round-the-table discussion

What are the benefits of **collective energy projects**?



Direct benefits of **collective energy projects**

Collective energy projects mostly address **internal barriers**

A few examples

- Get access to **better energy contracts**
 - Union is strength! Together, you get more contractual power
- Share the **financial/time/bureaucratic workload** for a given energy project
 - Many tasks only need to be performed once for each project, regardless the size
 - If more people search for information, there are higher chances to find the right one
- Share **knowledge, experience and resources** with partners
 - This allows reducing the risks for failure/underperformance
 - Doing something together is more inspiring than doing it on your own
- Identify **potential synergies**
 - There might be **energy** or **material flows** to exchange between companies
 - Services might be **shared**, such as district heating or common power generation


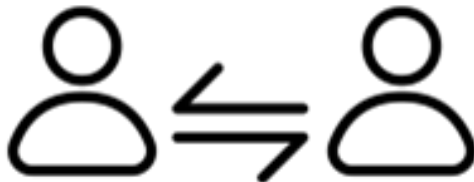


Indirect effects of the **collaboration**

- You can get **general advice from your peers**
 - What did they do to save energy? Did it work? How well?
- You can get advice on how to **move forward from low hanging fruits**
 - I changed my light bulbs to LED and installed a heat pump for hot water generation. Now what?
- You can **benchmark** with others **how efficient you are**
 - Am I doing enough? Could I do more?
- You can get help into **setting realistic goals for your energy efficiency plan**
 - How much should I reasonably expect to achieve?
- You can **learn from your peers' previous experiences**
 - Dos and don'ts, good experts to refer to, guidance through complex procedures

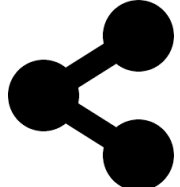
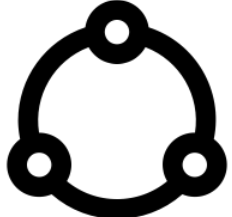



How do collective projects solve individual barriers?

Area	Benefit of the collective energy project	
Economic	<ul style="list-style-type: none">• (Process) costs can be shared• Risks can be shared• More bargaining power	
Behavioral	<ul style="list-style-type: none">• Inspiration and understanding from peers	



How do collective projects solve individual barriers?

Area	Benefit of the collective energy project	
Organisational	<ul style="list-style-type: none">Resources are shared	
Barriers related to competences	<ul style="list-style-type: none">Exchanging experiences and opportunitiesSynergies between companies (residual materials, heat, electricity)	
Awareness	<ul style="list-style-type: none">Motivation and exchanging ideas	



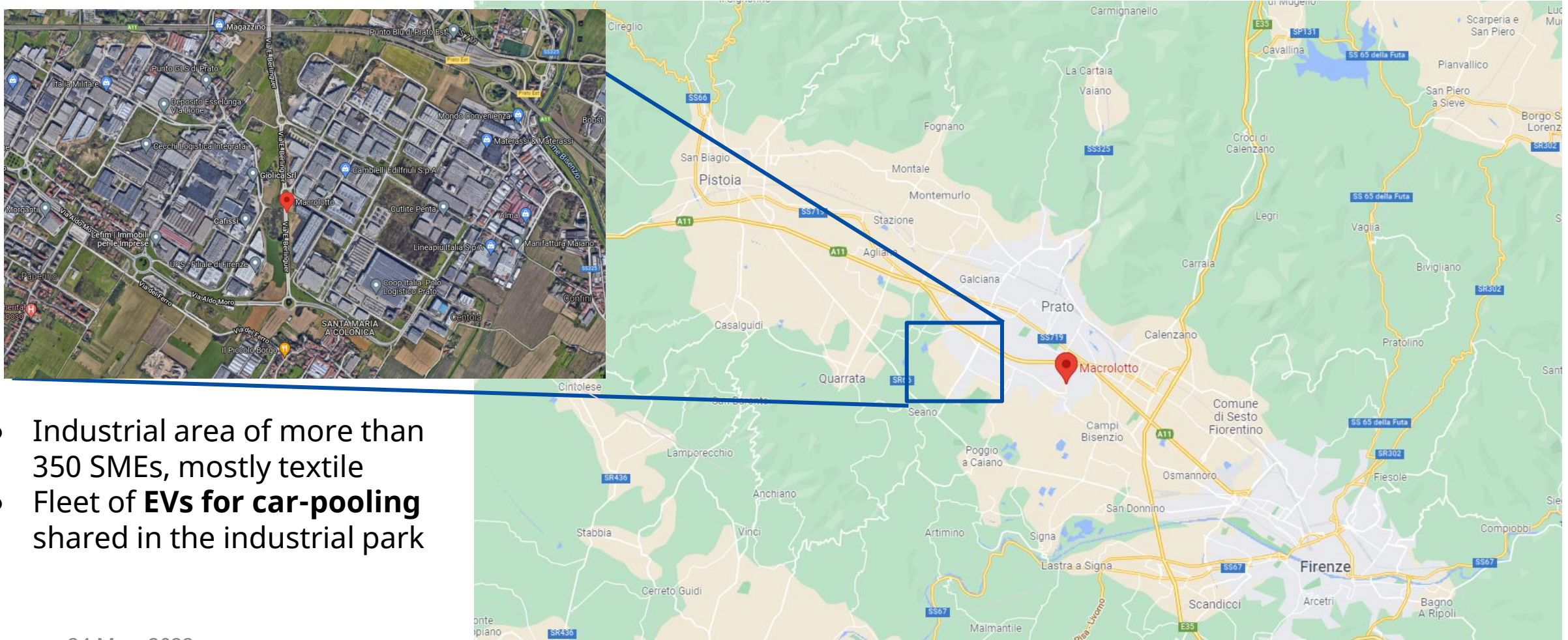
Local district heating - Cento di Budrio (IT)



- Industrial area of more than 100 SMEs
- Waste heat from local food production plant is transferred to a **local district heating network** and shared with the other SMEs



Shared electric mobility - Macrolotto (Prato, IT)



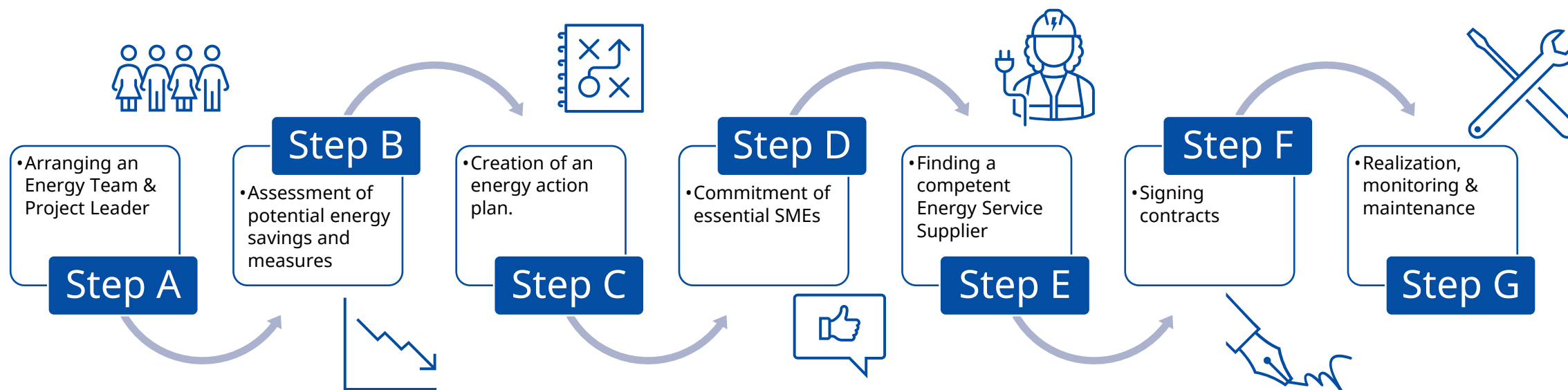
- Industrial area of more than 350 SMEs, mostly textile
- Fleet of **EVs for car-pooling** shared in the industrial park



How to organise collective energy projects?



Generic overview of the process





Step A: Arranging an Energy Team & project leader

Function of an Energy Team

- Leading this process
- Support for you (Trusted Partner)
- Needs a project leader

An energy team can consist of:

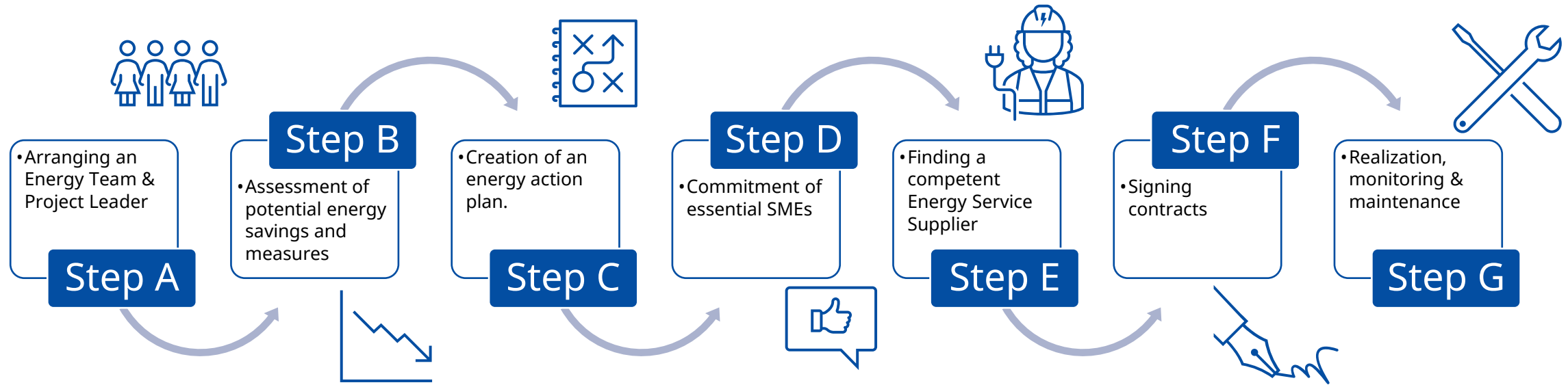
- Several ambitious SMEs (e.g. 5)
- The Trusted Partner
- A representative of a business association

Outcome of this step: a dedicated energy team and selected project leader (problem ownership)





Generic overview of the process



Note: the role of the Trusted Partner is fluid during the process, depending on the step and what's necessary in the process!



Step A: Arranging an Energy Team and project leader

In-depth steps

1. Identify which stakeholders play a role in your initiative
2. Map out what you know of these stakeholders
3. Select the stakeholders you want to collaborate with
4. Determine the intended role for each stakeholder

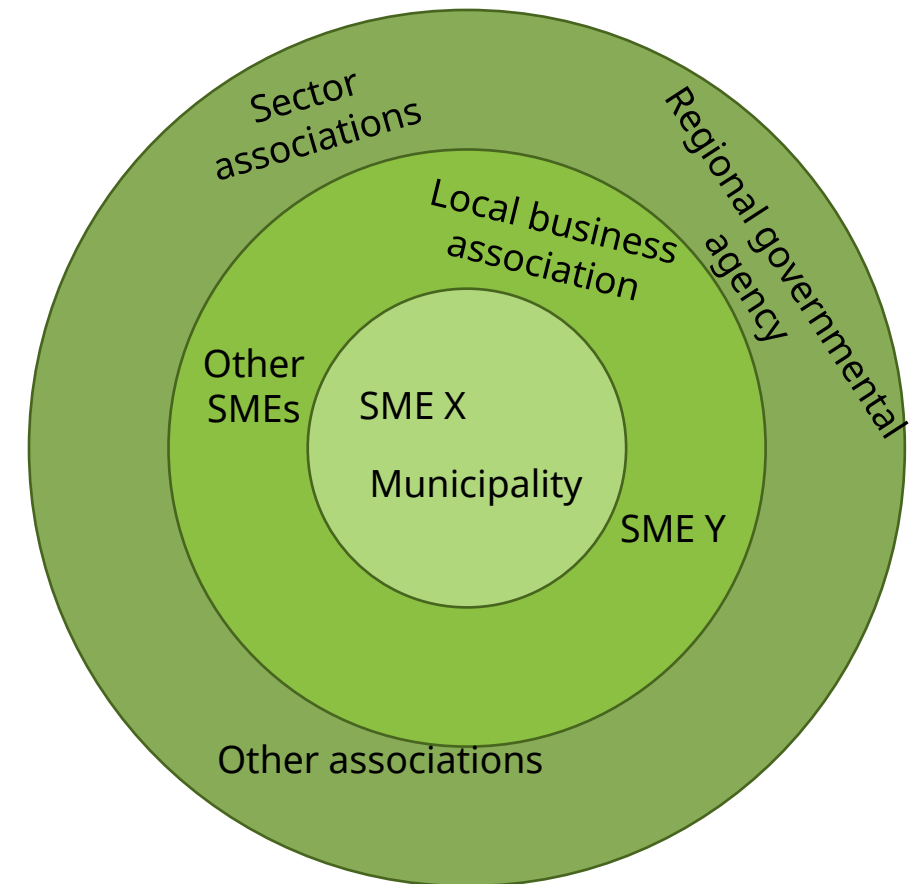




A.1 Overview of stakeholders, an example

Scanning your network

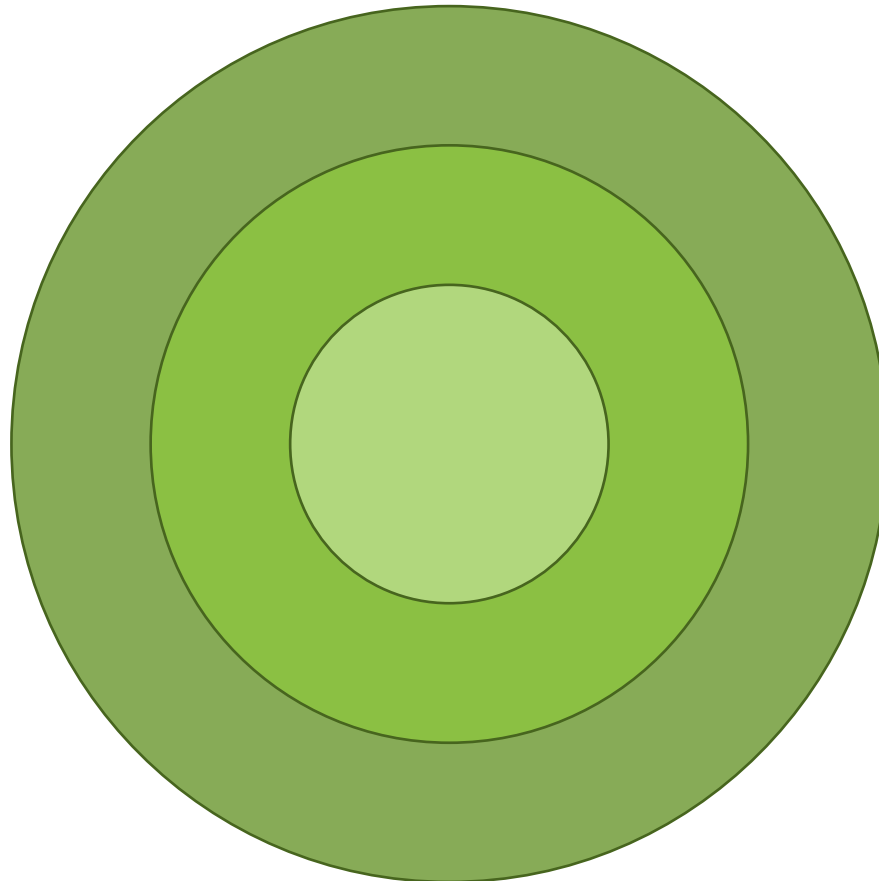
- Identify relevant stakeholders in your network/stakeholders that you know of (longlist)
- How relevant/central are they for your collective? (the more central in the circle, the more relevant/involved)





Exercise – Fill out the stakeholders for your business area

5 min





A.2 Mapping out knowledge on the stakeholders

1. Name	2. Current role	3. Attitude	4. Influence	5. Knowledge	6. Skills	7. Collaborate?
Thomas Bricks	Chairman of the business area	Very positive	Large	Knows the entrepreneurs well, big network	Knows how to enthusiaze people	<i>Will follow at the next step</i>
Anna Simons	Directors of Bubbles (biggest organization in the business area)	Critical	Average	Knows a lot of technical measures		
Chrisy Christens	City councilor	Positive	Small	In connection with regional government	Is good at communcation a vision	



Exercise – Fill out for your business area

10 min

1. Name	2. Current role	3. Attitude	4. Influence	5. Knowledge	6. Skills	7. Collaborate?
						<i>Will follow at the next step</i>



Round-the-table discussion

- What stands out about the overview of stakeholders?
- To what extent do you have sufficient insight into the attitude, influence, knowledge and skills of the stakeholders?



A.3 Select stakeholders for collaboration

2 min

- Determine which stakeholders you want to collaborate with now

1. Name	2. Current role	3. Attitude	4. Influence	5. Knowledge	6. Skills	7. Collaborate?



A.4 Determine intended role for the stakeholders

Think of the roles that are needed within the group, and the power that people have, for example:

- Trusted Partner: Spur enthusiasm/ (initial) Project leader
- Municipality: advisor
- Board of the business park association: support
- Work group chairman
- Role model/Figurehead
- Financial advisor
- ...

** Take into account your own role and level of involvement **

Stakeholder	Current role	Ask for Energy Team?	Intended role	How will we collaborate?
Thomas Bricks	Chairman of the business area	Yes	Figurehead	Monthly meetings
Anna Simons	Directors of Bubbles (biggest organization in the business area)	No	Advisor (external of Energy Team)	Discussion before decision moments
Chrisy Christens	City councilor	No	Support, subsidies (external of Energy Team)	Create a vision together

Tips for approaching stakeholders

- Establish personal contact, indicate “what's in it for them”
- Ideally a mix of a few (very) positive attitudes, and a negative (critical) attitude
- Define roles together with stakeholders > complementary roles
- Shared vision on purpose of the collaboration

Questions & Feedback



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Thanks for your attention!



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Barriers to energy efficiency for SMEs

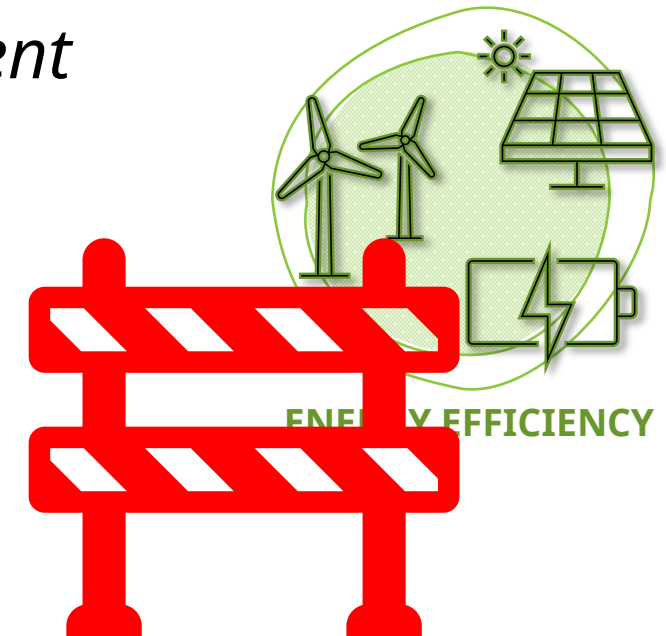
Insights from scientific literature



Barriers for SMEs: definition

A barrier is ...

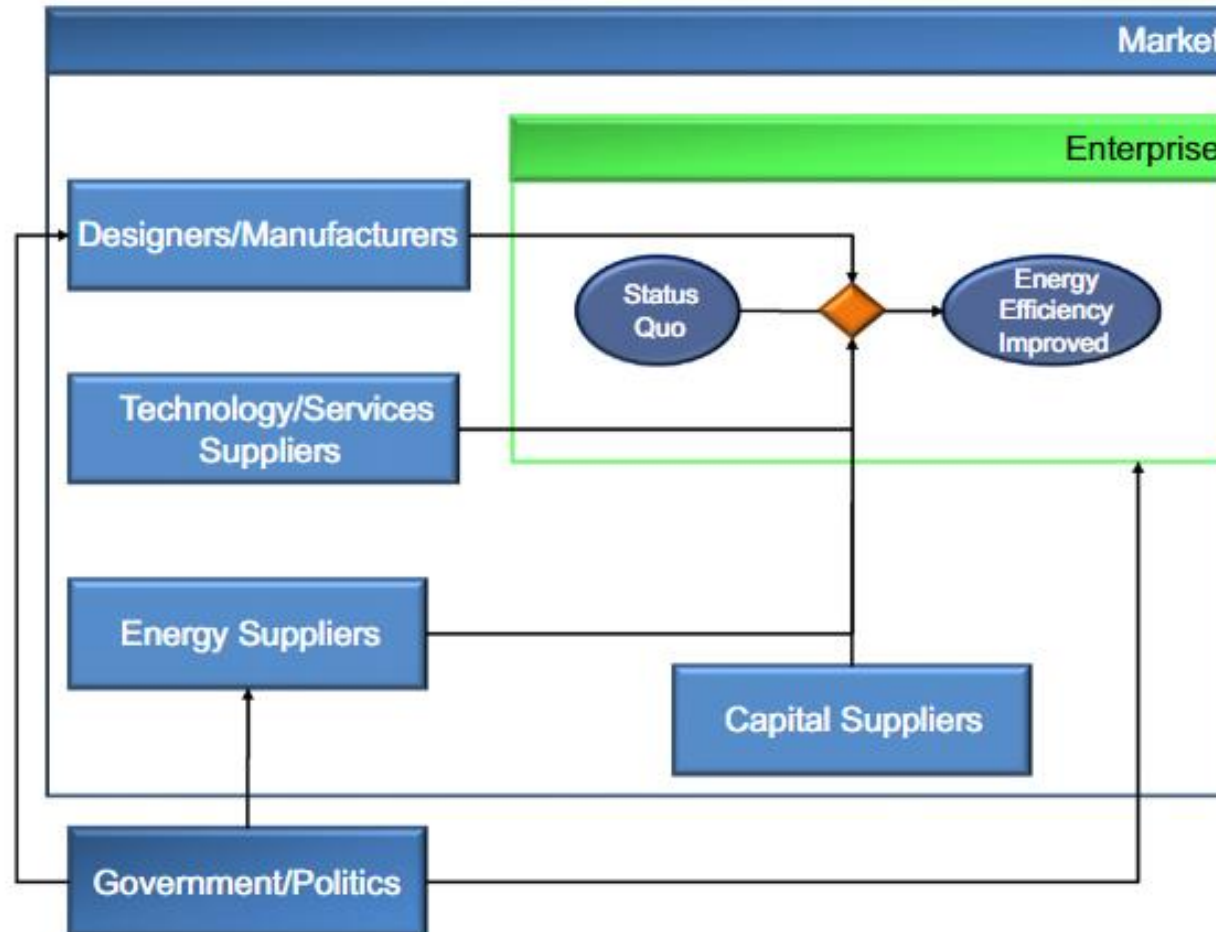
“A postulated mechanism that inhibits investment in technologies that are both energy efficient and (apparently) economically efficient”



Reference: E. Cagno, E. Worrell, A. Trianni G. Pugliese, 2012, A novel approach for barriers to industrial energy efficiency, Renewable and Sustainable Energy Reviews 19 (2013) 290–308



Barriers for SMEs: actors involved



Reference: Hirst and Brown



Introducing the barriers SMEs face

External barriers

- Market
- Government/politics
- Technology/services suppliers
- Designers and manufactures
- Energy Suppliers
- Capital Suppliers / Financiers

Internal barriers

- Economic
- Behavioral
- Organisational
- Barriers related to competences
- Awareness

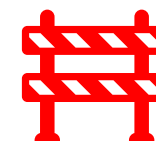
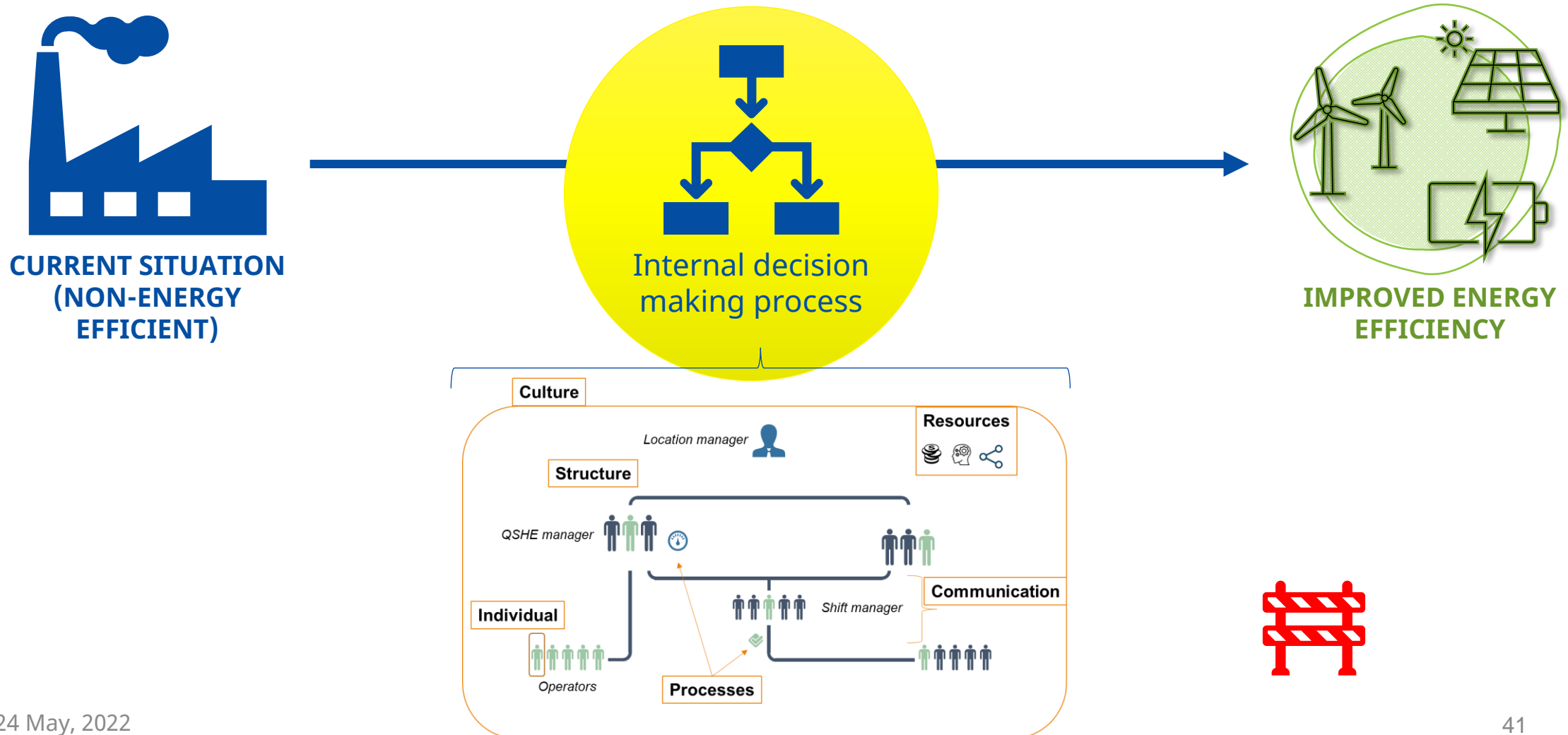


Barriers for SMEs: external barriers

Actor	Barriers
Market	Energy Price Distortion Low diffusion of technologies low diffusion of information Markets risks Difficulty in gathering External skills
Government/Politics	Lack of proper regulation Distortion in fiscal policies
Technology/Services Suppliers	Lack of interest in energy efficiency Technology Suppliers not updated Scarce communication skills
Designers and manufacturers	Technical Characteristic not adequate High Initial costs
Energy Suppliers	Scarce communication skills Lack of interest in energy efficiency
Capital Suppliers	Cost for investing capital availability Difficult in identifying the quality of the investments



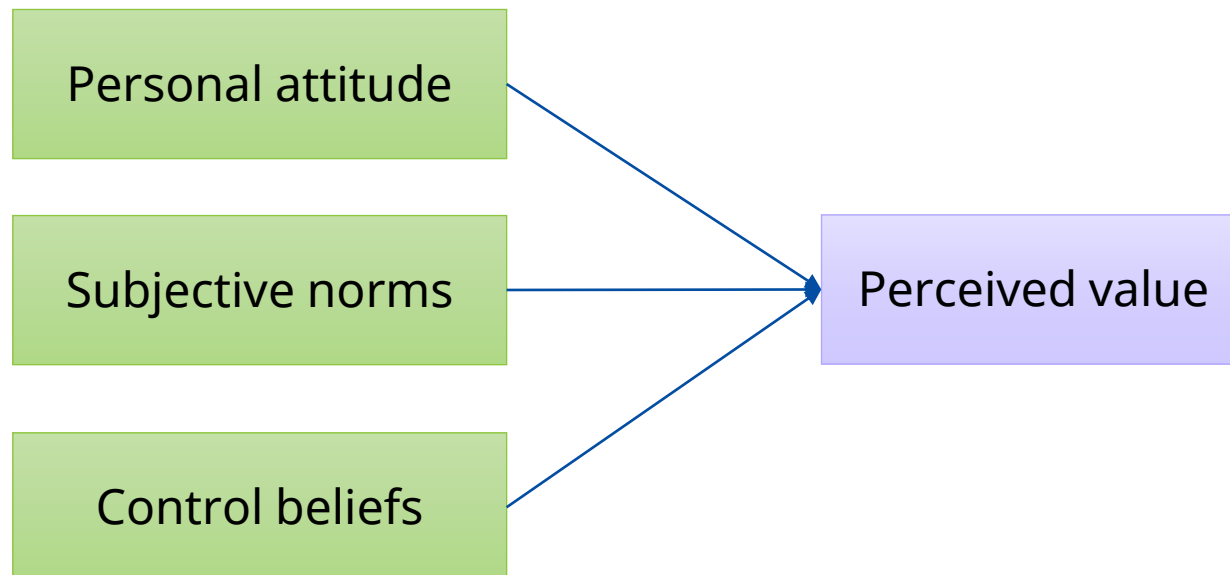
Barriers for SMEs: Effect on decision making process





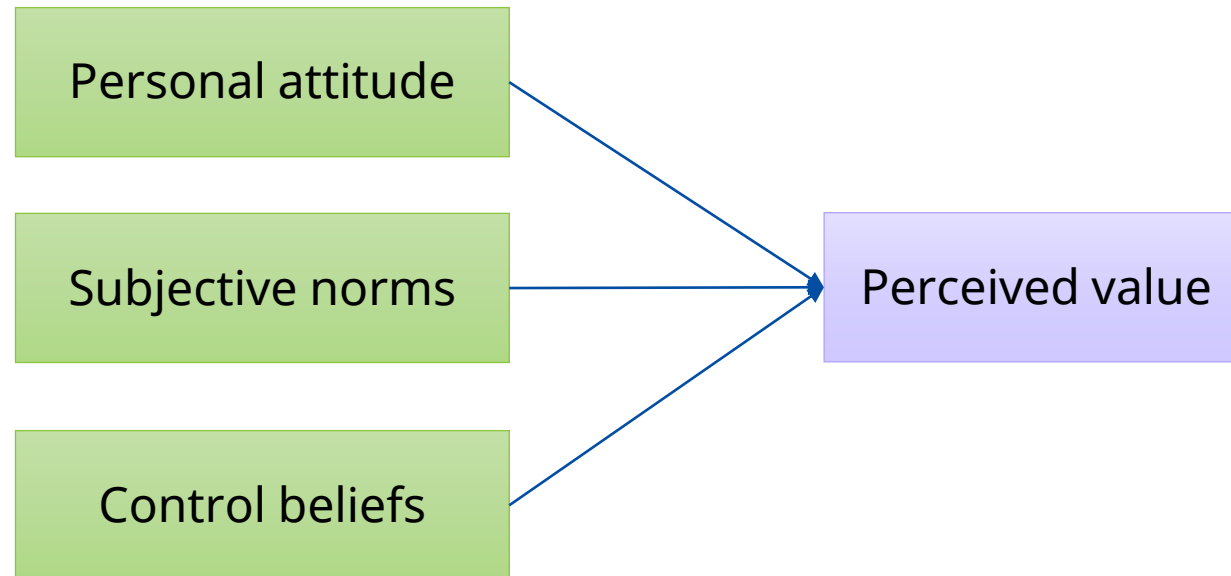
Barriers for SMEs: Perception of barriers

- Every barrier is associated with the **perception** of the decision-maker and the **value** that he/she attributes to this perception





Barriers for SMEs: Perception of barriers



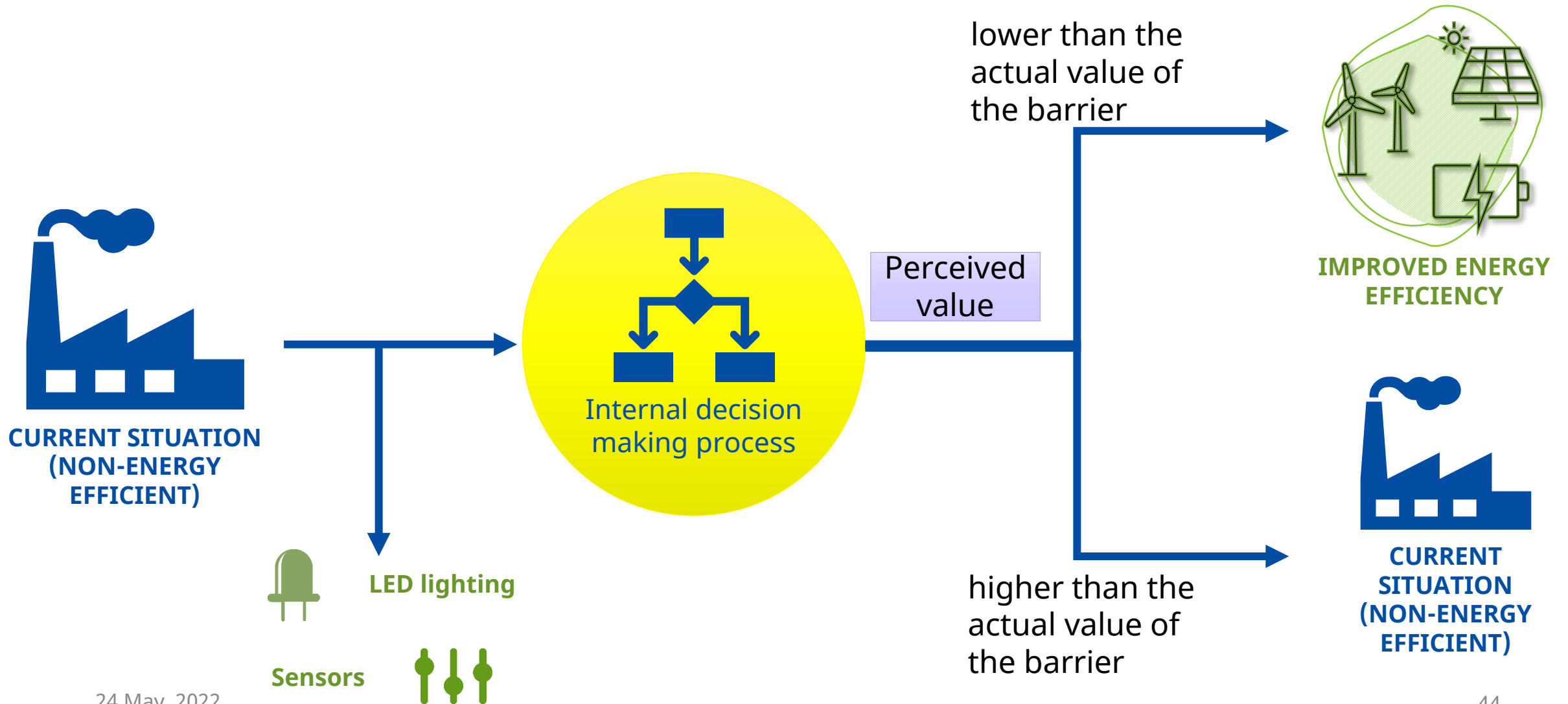
... higher than the actual value of the barrier → no investment

... lower than the actual value of the barrier → investment

Therefore, it is wise to make a clear **distinction** between the actual and perceived barriers



Barriers for SMEs: Perception of barriers



Barriers for SMEs: collective energy projects



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