

Energy Management: a driver to sustainable behavioural changes in companies



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EU Energy strategy



- a 40% cut in greenhouse gas emissions compared to 1990 levels
- at least a 27% share of renewable energy consumption
- at least 27% energy savings compared with the business-as-usual scenario

Change in organisations

To improve you need to do things in a different way



And you need to sustain behaviour changes over time

And keep on improving

Can a voluntary energy management program help?

McKinsey, change in organisations



“...approaches must be tailored to the specific challenges, skills, and change readiness of a given part of the organization....

... designing a methodology for setting appropriate goals and performance objectives..

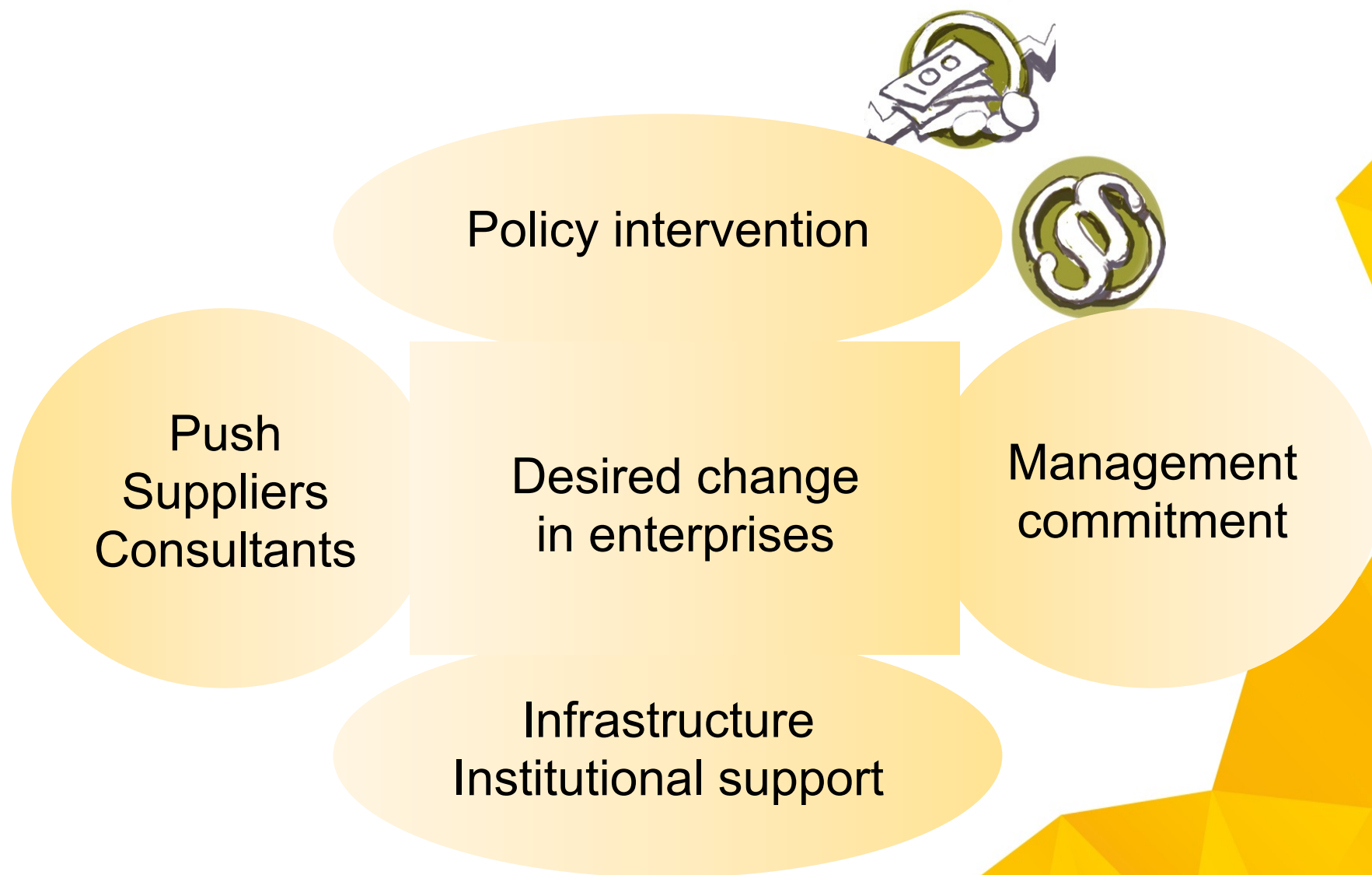
... determining specific information needs that, of course, will vary by level and unit..

...For most parts of an organization, this effort will start simply and become more advanced over time”

McKinsey Classics | January 2016:

February 1993 | by Steven F. Dichter, Chris Gagnon, and Ashok Alexander

Energy Management Program



ISO 50001 in Swedish PFE

(103 companies 25 % of Swedish energy use)

Program start

2 years

5 years

- Energy audit and analysis
- Implement and certify ISO 50001
- Find measures & set target
- Implement routines for procurement & planning

- Continuously improve the Energy Mgmt System
- Realize measures
- Apply routines
- Effects of routines

**Tax reduction
0.5 Euro/MWh**

Organisational Changes

- Planning and control
- Capital budgeting
- Human resources
- Energy culture or energy awareness

Result: 10 % less electricity use



Benefits for the companies

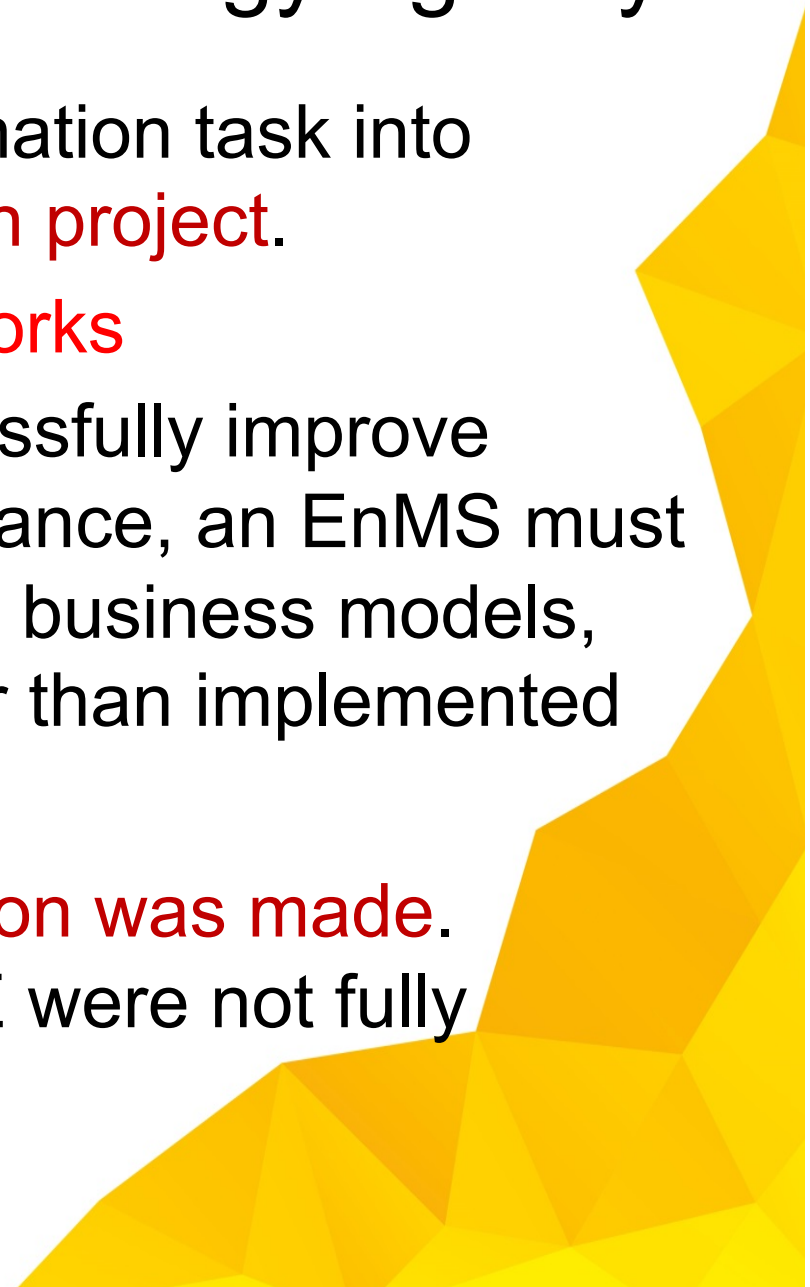


- Cost reductions (energy 87%); (other 45%)
- Other internal business opportunities (59%)
- External benefits, sustainability report (36 %)
- Customer demand (27 %): not frequent yet, but growing (also carbon footprint).

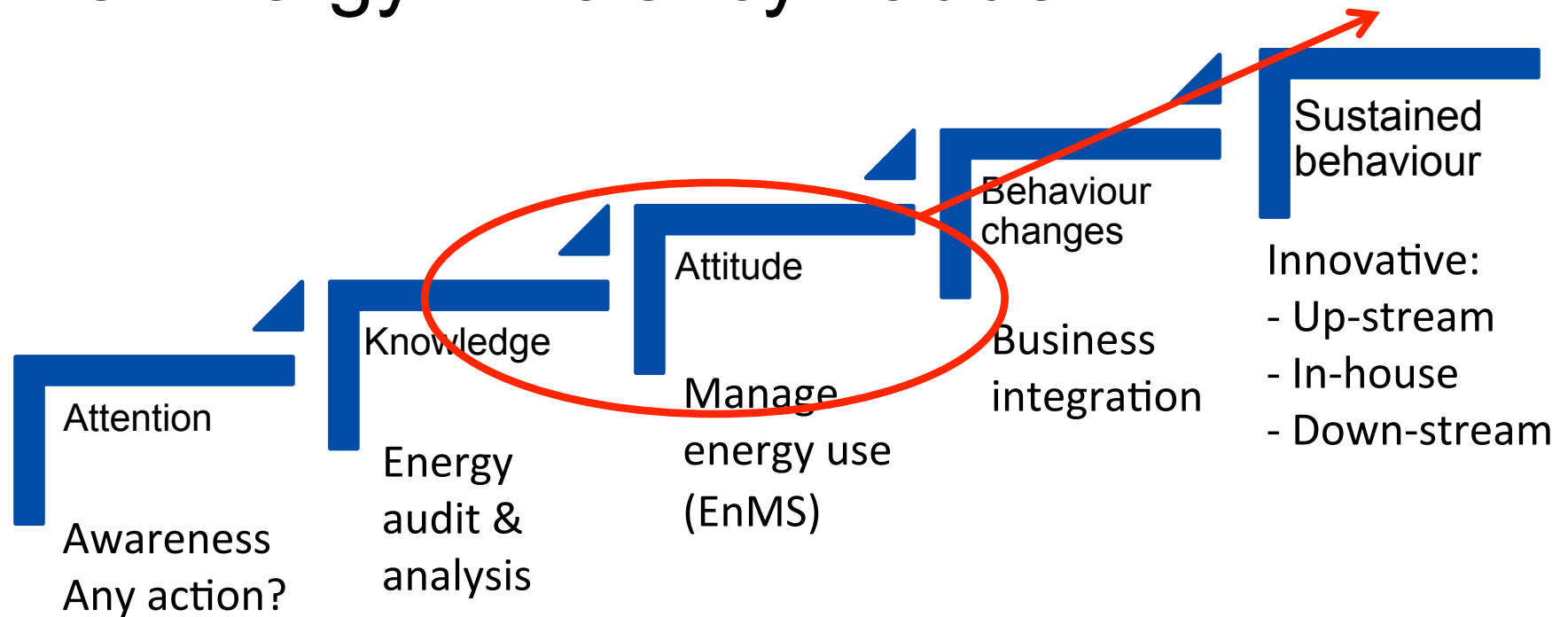
Benefits for the Swedish Energy Agency

- PFE turned a difficult information task into **a successful communication project**.
- Knowledge sharing in **networks**
- **One major lesson**: to successfully improve companies' energy performance, an EnMS must be integrated in companies' business models, structure and culture, rather than implemented as a stand-alone action.

However a **complete evaluation was made**.
Therefore impacts of the PFE were not fully identified and explained



The Energy Efficiency Ladder



Analysing PFE results through organization behaviour research lenses

Kotter (1996) organizational change theory

8 successive steps are needed to successfully and durably change an organisation:

1. Establishing a **sense of urgency**
2. Creating the guiding coalition
3. Developing a vision and a strategy
4. Communicating the change vision
5. Empowering employees for broad-based action
6. Generating short-term wins
7. Consolidating gains and producing more changes
8. Anchoring new approaches in the culture

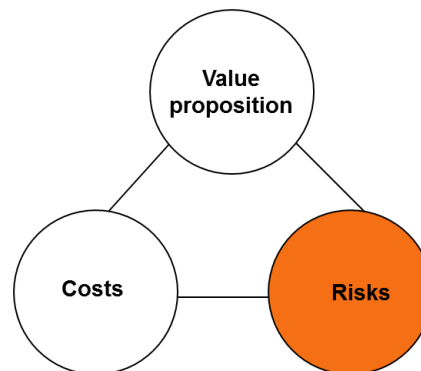
Kotter (1996) organizational change theory

Conclusions:

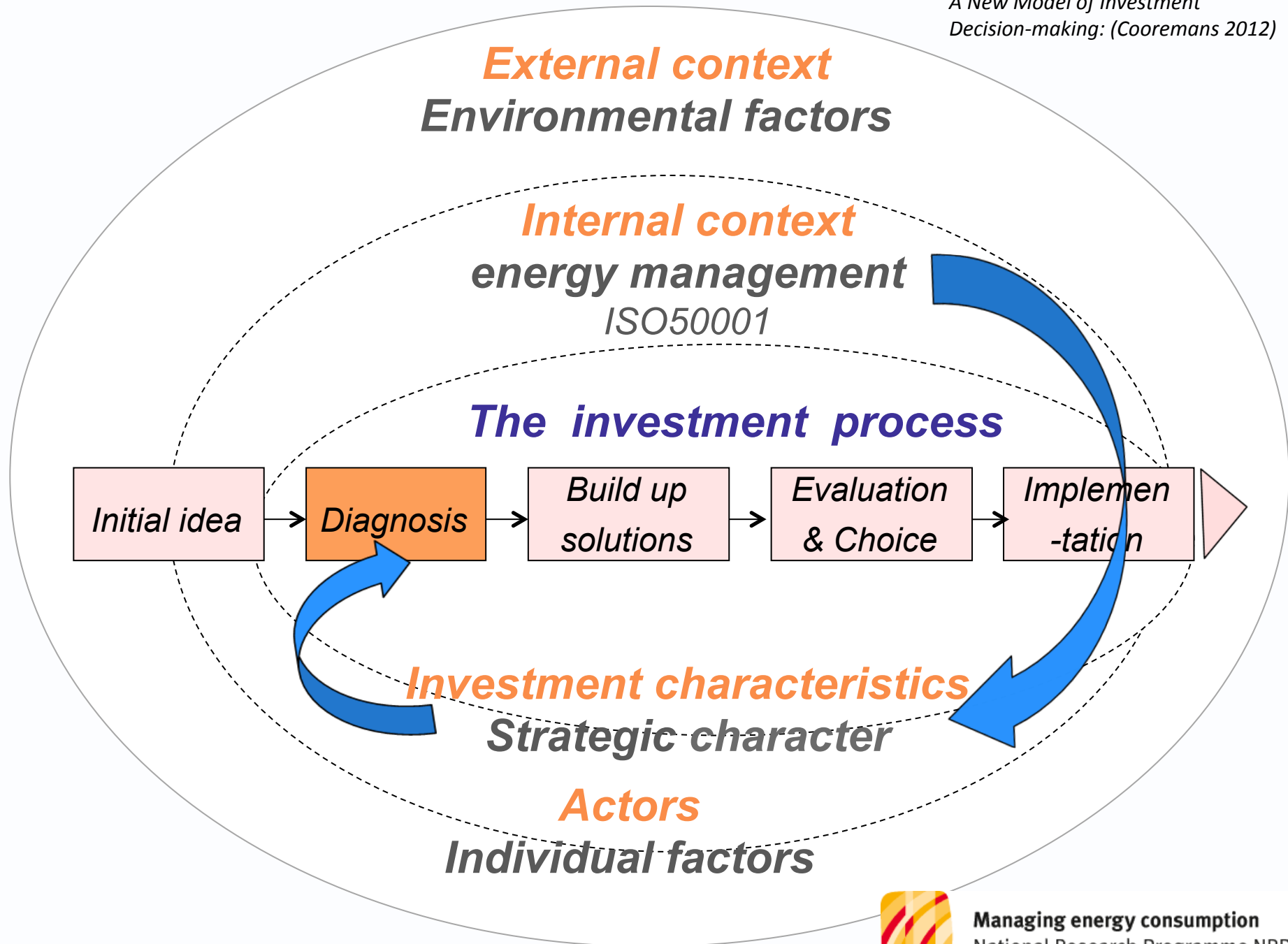
- ISO50001 can be considered not only as a managerial system but as a **change tool**, capable to durably changing organization behaviour, at all levels
- But: **success depends on how this tool is implemented** in the organisation.
- **More analysis is needed** on companies' characteristics, which could explain different effects of ISO50001 certification on their behaviour and activities.

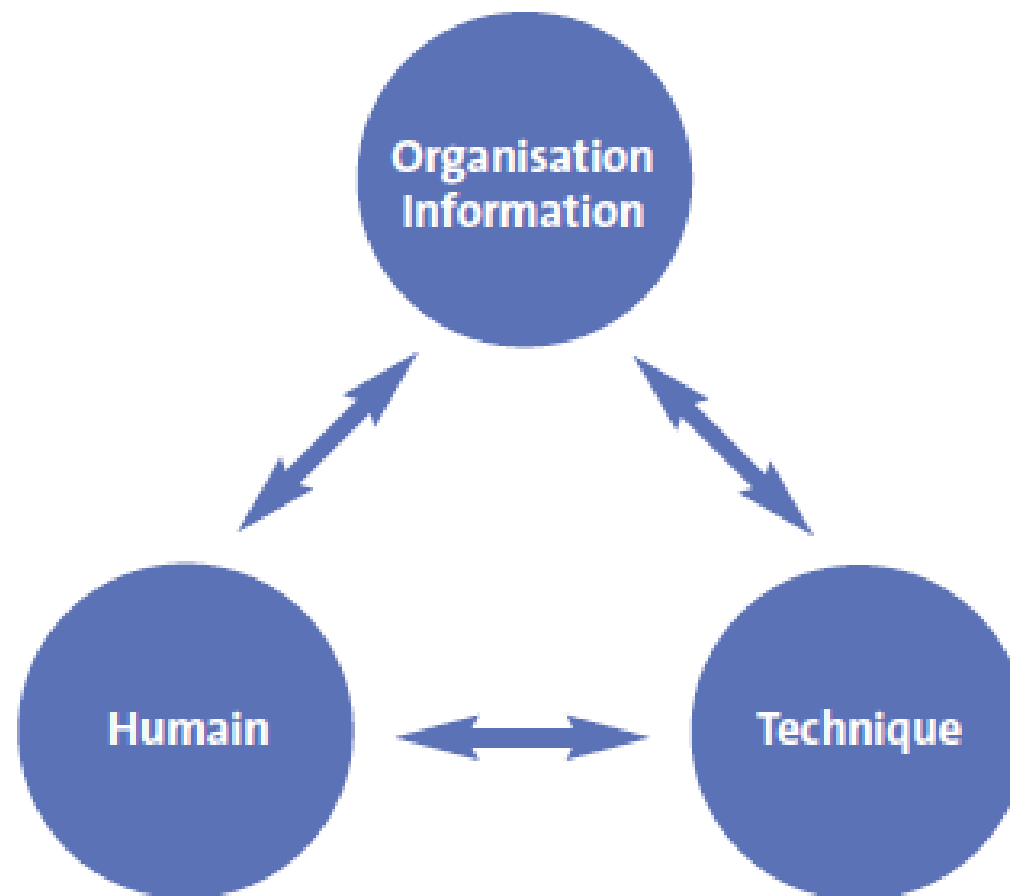
Cooremans (2011, 2012) investment decision-making model: **Make it strategic!**

- There is a competition for resources in every company.
- Winning investment are not the most profitable but the most strategic.
- An investment is strategic if it contributes to create, maintain or develop a sustainable competitive advantage.



- But **investments are not strategic for objective reasons only**: they are interpreted as such by decision-makers and organizations.
- Organizations' internal context is a filter which influences how issues and projects are interpreted.
- Management systems (such as ISO50001) are key elements of internal context, at the same time a set of rules/routines and an emanation of corporate culture.
- Therefore, **management systems influence how investment projects are interpreted and how, ultimately, decisions are made.**





Conclusions

- Energy management programmes can usefully support energy-efficiency programmes and policies by improving energy-efficiency operational skills and decision-making context in enterprises.
- However there is still a knowledge gap regarding modalities of influences and impacts of these instruments.
- Better evaluation tools have to be developed and more academic research is needed.



**Thank you
for listening!**
