STEAM-UP: Objective

Closing the gap between energy audit results and implementation

Identified barriers

✔ No business case for steam efficiency for enterprise decision makers
✔ Lack of steam expertise at energy auditors and enterprises
✔ No formal structure for energy efficiency at enterprises
STEAM-UP: Activities

✓ Developing of in-depth steam scan covering:
  ▪ State of the art steam expertise
  ▪ Involvement of all stakeholders
  ▪ Non energy benefits
  ▪ Energy management implementation

✓ Piloting at 75 enterprises

✓ Reducing efforts for measure implementation

✓ Building capacity amongst energy auditors, enterprises and trainers
Energy Efficiency Behavior in Industries

Inventory based on:

- Interviews at 55 enterprises in member countries (NL, DK, D, E, I, GR, CZ, AU)
- Survey’s at 45 energy auditors in member countries
- Survey’s at Steam-Up partners (energy agencies and consultants)
- Concise literature search
Energy Efficiency Behavior in Industries

Audit and Reporting:

- 73% of enterprises performs audits regularly
- People involved: top management (38%), people influencing EE (29%), other staff (9-14%)
- Reporting in 48% more than a list of measures
Energy Efficiency Behavior in Industries

Follow up of Audits:

- In 64% of enterprises audits are being followed up
- In 60% implementation plans are being made (10% not)
- In 27% of enterprises resources are being allocated
- In 46% measures are being verified (41% by monitoring/measuring)
Energy Efficiency Behavior in Industries

Management Practises:

✓ In 91% a management system in place (9001, 14001, 50001 (15%), 22000)
✓ In 47% enterprises EE is a priority but only in 22% EE laid down in EnMs (50001 (15%) or 14001 (7%))
✓ Evaluation mainly based on SPP (44%) or combined (20%)
✓ NEBs in 53% included (decision phase)
Energy Efficiency Behavior in Industries

Some Insights from Literature

✓ Financial importance EE investment questioned: is profitability decisive?
✓ High required return rates (50% or more) to cover risks & ‘hidden cost’
✓ EE investment considered as not strategic
✓ Energy efficiency is invisible to senior managers
✓ NEBs crucial to raise strategic value EE investments
Three crucial factors: STEAM-UP approach

Corporate Strategy

How to drive steam efficiency to a higher level?

ISO 50001  NEBs
But don’t forget behavior!
A model for individual behavior and change

What people DO (= BEHAVIOR)

What people THINK - based on a.o. conceptions and norms

What people WANT - motives (based on a.o. values)

McCleland’s Iceberg
But don’t forget behavior!
The same model for organisational behavior and change

What the organisation DOES – Visible and verifiable actions (= BEHAVIOR)

What the organisation ‘THINKS’ – protocols, procedures, working guidelines, instructions and norms (= CULTURE)

What the organization WANTS – Policies and strategies

McCleland’s Iceberg
But don’t forget behavior!
How the crucial factors interact with the model

- **What the organisation DOES** – Visible and verifiable actions (= BEHAVIOR)
- **What the organisation ‘THINKS’** – protocols, procedures, working guidelines, instructions and norms (= CULTURE)
- **What the organization WANTS** – Policies and strategies

Link with Corporate Strategy

Base for behaviour

Helping or ISO 50001

NEBs

McCleland’s Iceberg

Energy Efficiency

Energy Efficiency

Energy Efficiency

Energy Efficiency

Energy Efficiency

Energy Efficiency

Energy Efficiency

Energy Efficiency
Crucial Steam-Up elements

✓ Link with **Corporate Strategy** to connect with what the organisation **WANTS**
✓ Include **NEBs** to influence the **THINKING** and chance conceptions
✓ Build an **ISO 50001** structure to secure energy efficiency culture

This is expecting to contribute to what the organisation eventually **DOES**
But that’s not the whole story!
Something more is needed!

Behavioural change at individual level (Green & Kreuter):

- Predisposing (build the motivation)
- Enabling (build the capacity for the behaviour)
- Reinforcing (positive feedback)

**Example:** EE isn’t reinforced when people are not being held accountable for it!
But that’s not the whole story!
Reinforcing ISO 50001 by using the model of Green & Kreuter

ISO 50001 sets the organisational structure, but:

✓ How are people (besides their regular duties) motivated to act energy efficient?
✓ What skills, capacities and knowledge do they need?
✓ How will their energy efficient behaviour be reinforced (by management)?
STEAM-UP aims for:

Strengthen EE culture by ISO 50001 implementation while taking note of:

✓ the human factor (individual behavior)
✓ the existing organisational structures (organisational culture)

However after STEAM-Up the (behavioral) change might not be fully set, therefore we are already looking for follow up in HORIZON EE-15-2017.
Care to join?

Ronald.Vermeeren@rvo.nl
+31(0)88 602 2658

Thank you for your attention!