



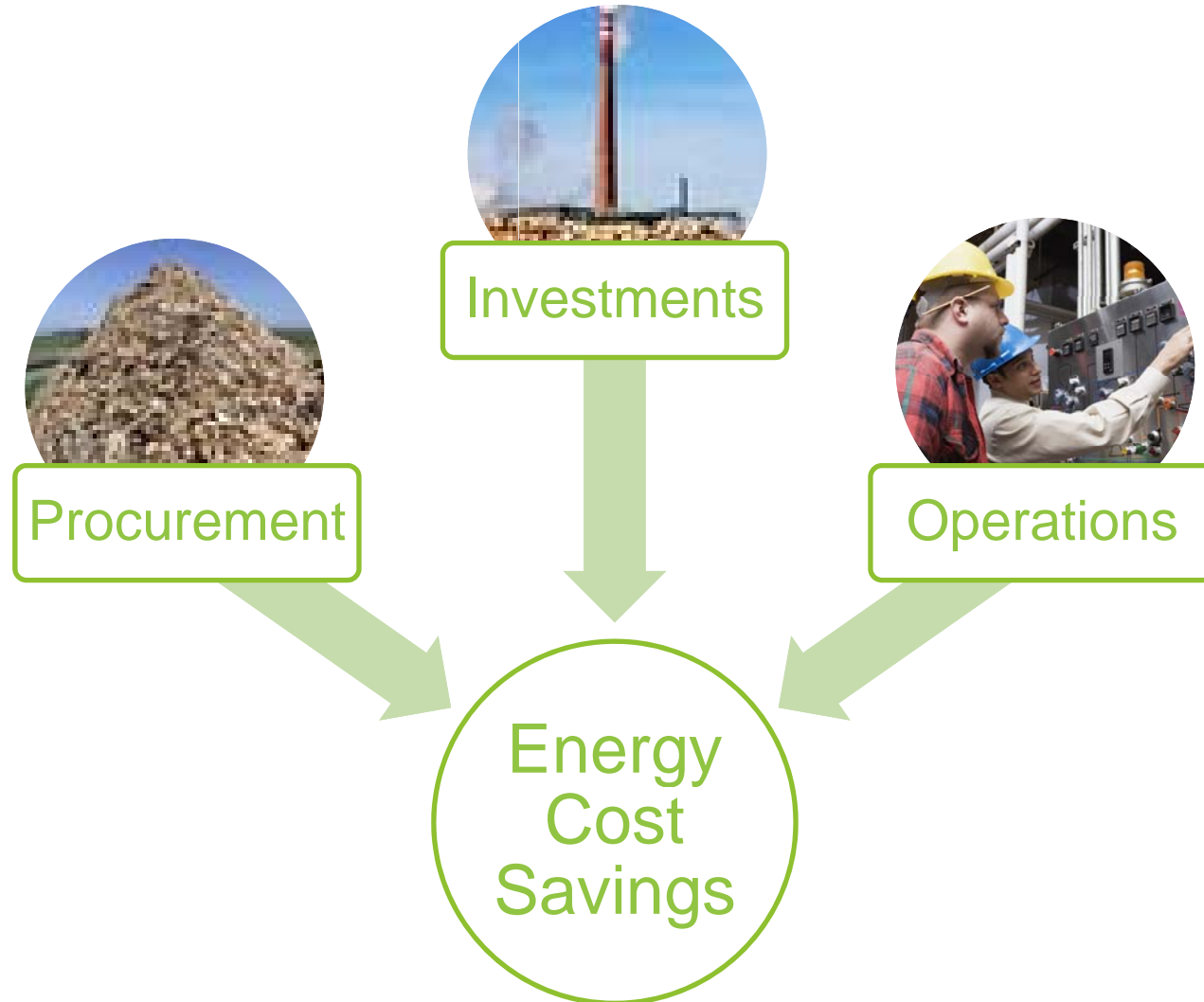
EMPOWERING YOU

DO YOU WANT TO SAVE 10-25% OF YOUR ENERGY COST?

Ulrika Wising – VP Sales and marketing, PEPiTe

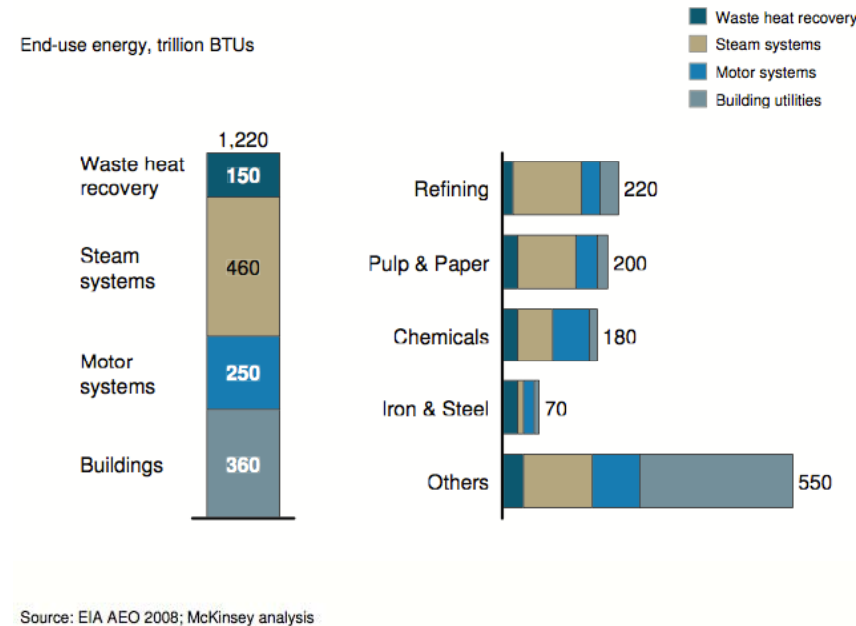


WE ALL WANT TO SAVE ON ENERGY COSTS



THE INDUSTRY HAS ALREADY SAVED A LOT

- But we can still do more!
 - 2010 McKinsey report – Large investments for energy efficiency have already been made
 - There is still a potential to reduce energy consumption up to 25% by improved energy management

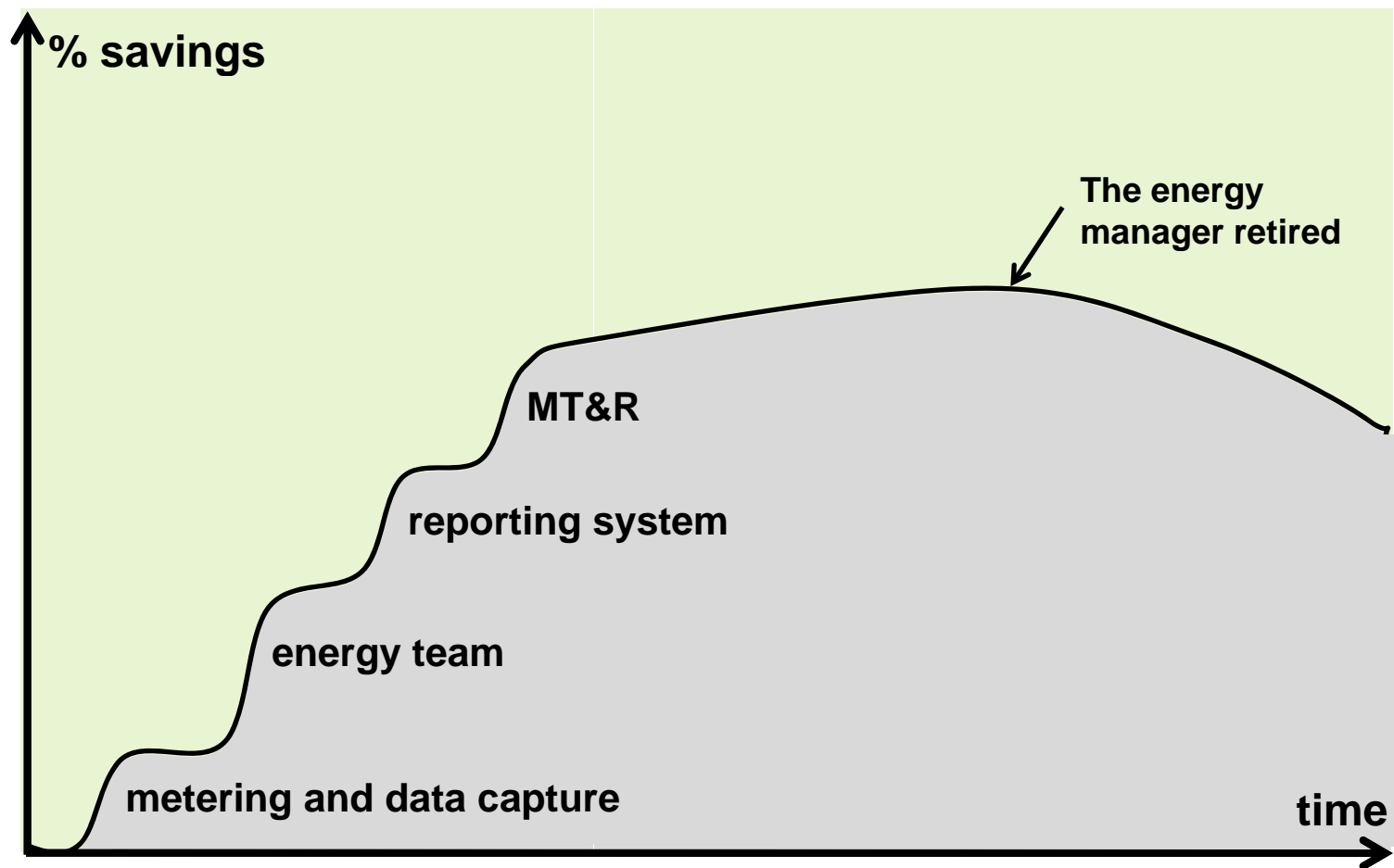


ENERGY MANAGEMENT CHALLENGES

- Reduce energy costs while maintaining production levels
- Secure already made investments for increased energy efficiency
- Increase sustainability
- Operations are production-oriented, not cost optimization-oriented
- Few actionable parameters for operators
- Problem solving is based on opinions and experience rather than on facts



IMPROVEMENT PROJECT LIFE CYCLE



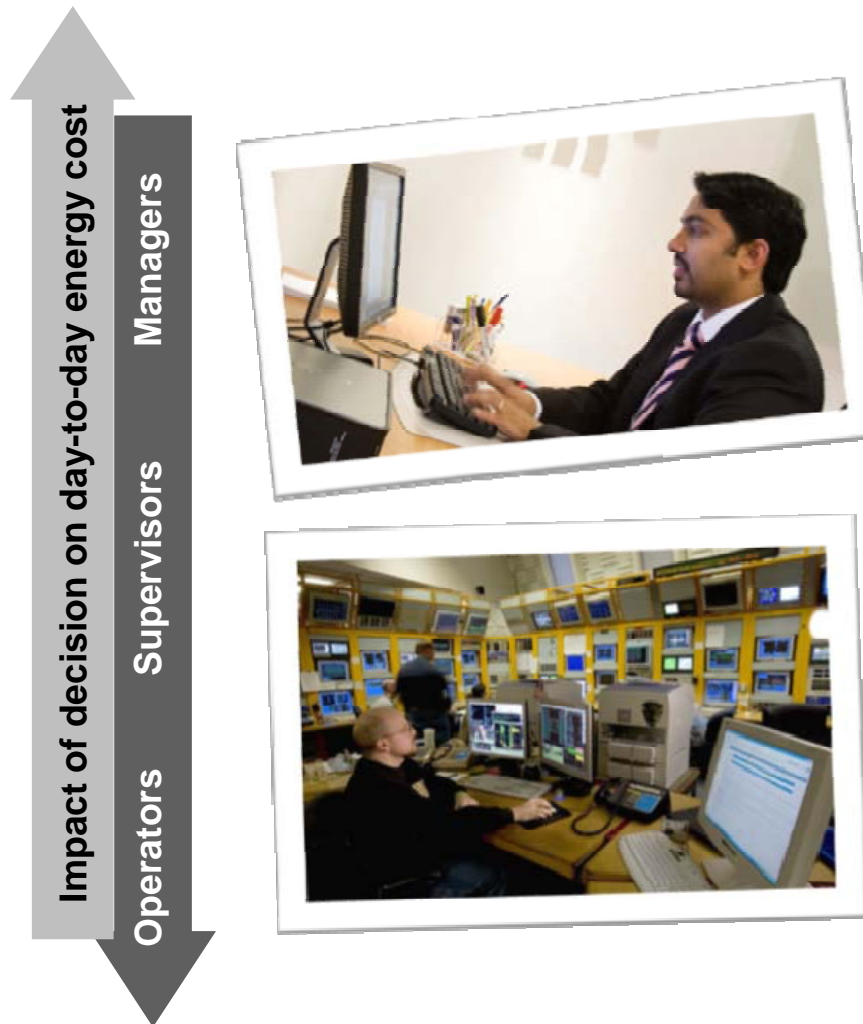
REDUCE YOUR ENERGY CONSUMPTION BY 10-25%!

How?

- **Linking energy use to operation decisions:** implement a KPI structure on top of energy account centers, with decision linked to process.
- **React faster when processes are deviating:** early detection of performance drift using dynamic target models.
- **Leverage historical process data to learn from the past:** make high performance a standard by identifying previous optimal operation and give operators the tools to bring back the process to the same state
- **Empowering your people:** put people at the center of the process to sustain gains.



EMPOWERING YOU

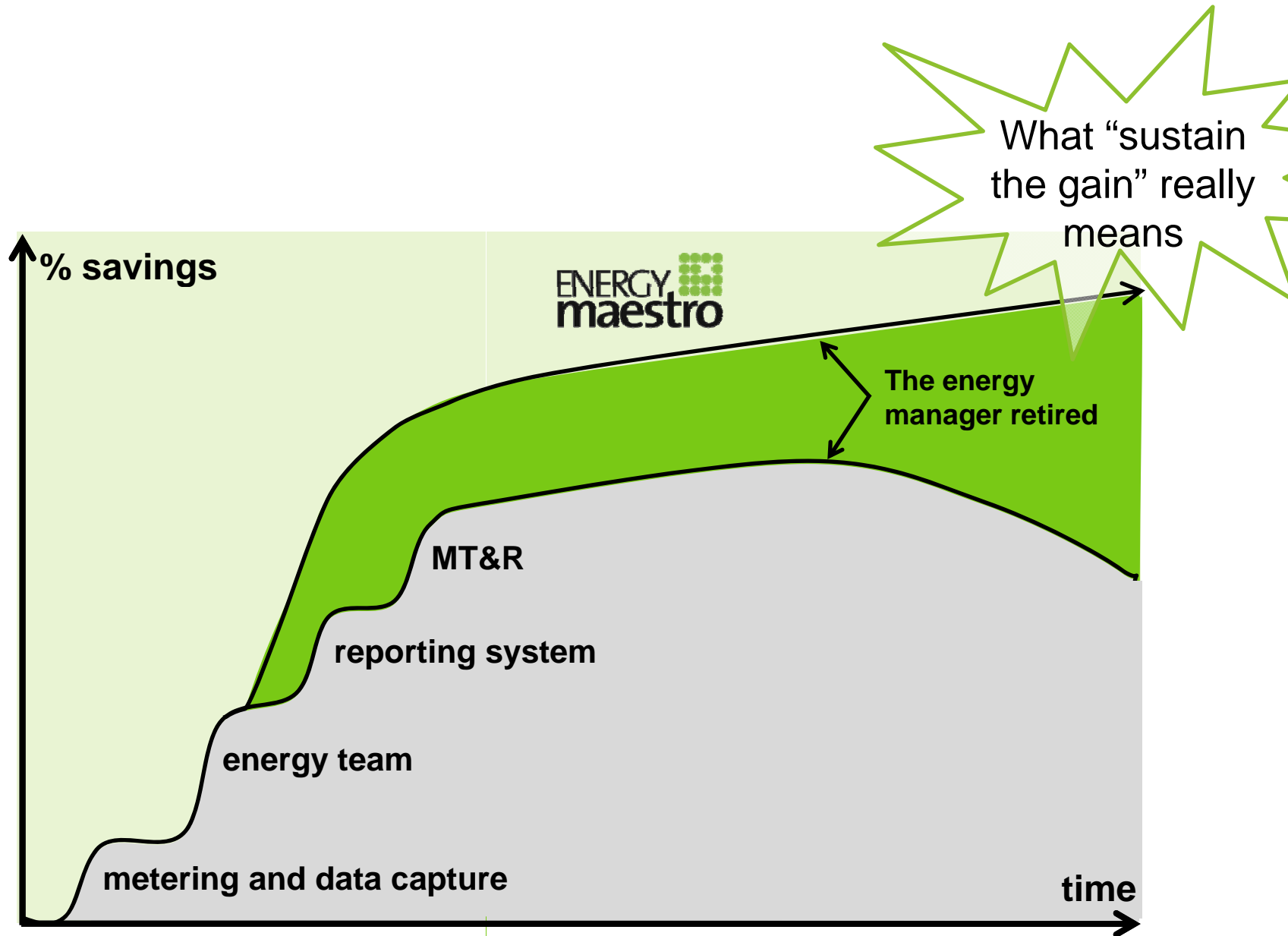


“Turning everyone into a **decision maker**. Push decision-making down to the **lowest level**.”

Our experience strongly suggests that when you ask employees to make most of the decisions, they become **more productive**”

- Nucor

IMPROVEMENT PROJECT LIFE CYCLE

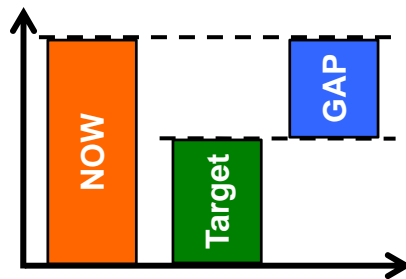


ENERGYMAESTRO ROADMAP

ANALYZE

GAP analysis -
Target and plan
where you want to
be

Define the
decision making
structure and
associated energy
KPI

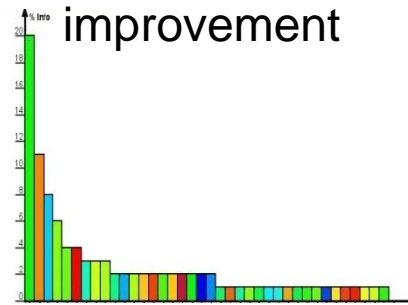


UNDERSTAND

Root cause
analysis – Identify
key parameters
that allow to take
actions

Identify optimal
rules of operation
that ensure better
performance

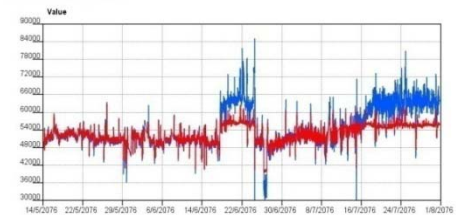
Measure impact of
improvement



IMPROVE

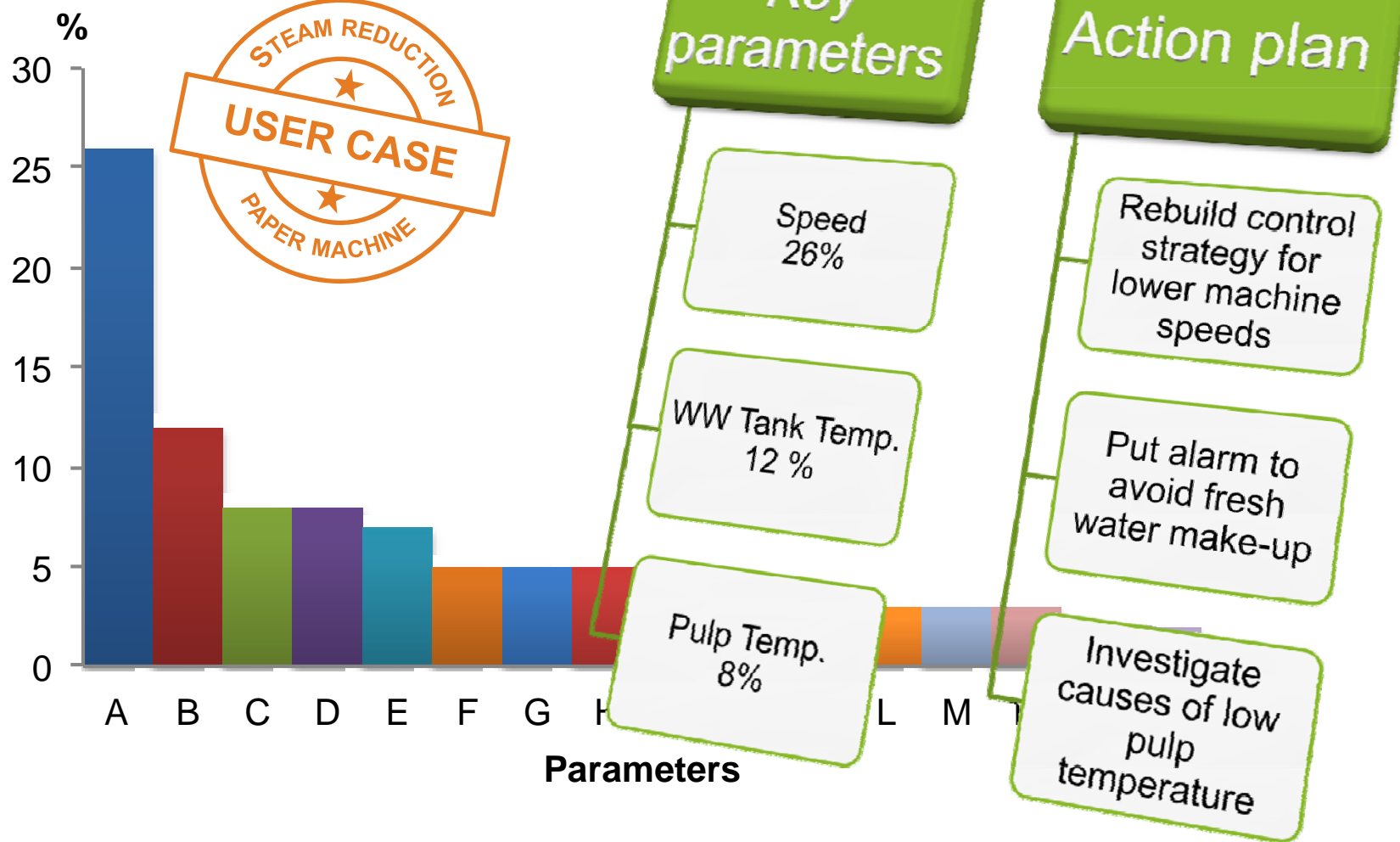
Implement
monitoring tools
that allow to take
actions at every
level

Increase operators
& manager
knowledge to
maintain gains

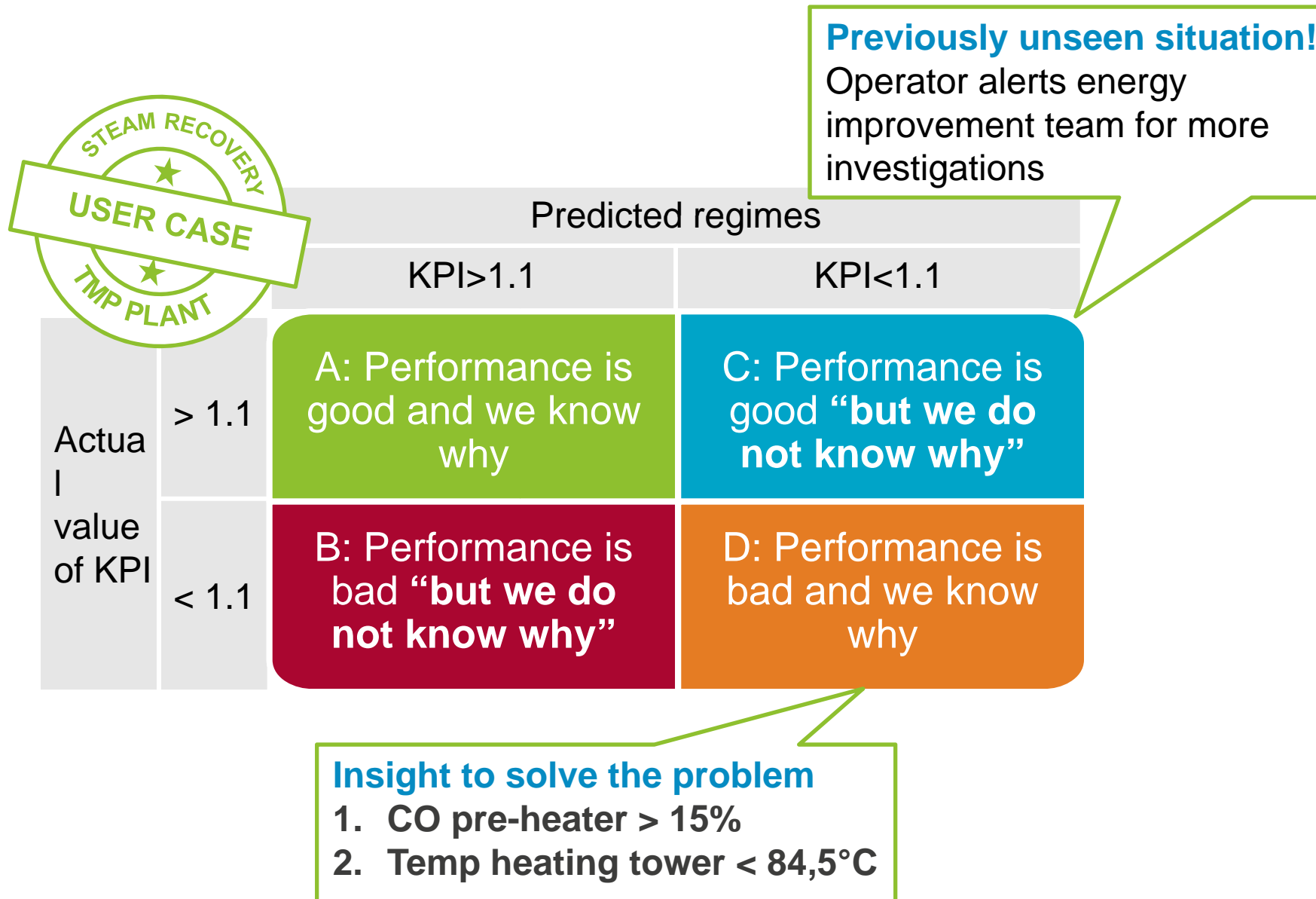


NEWSPRINT MACHINE OPTIMIZATION

Pareto chart

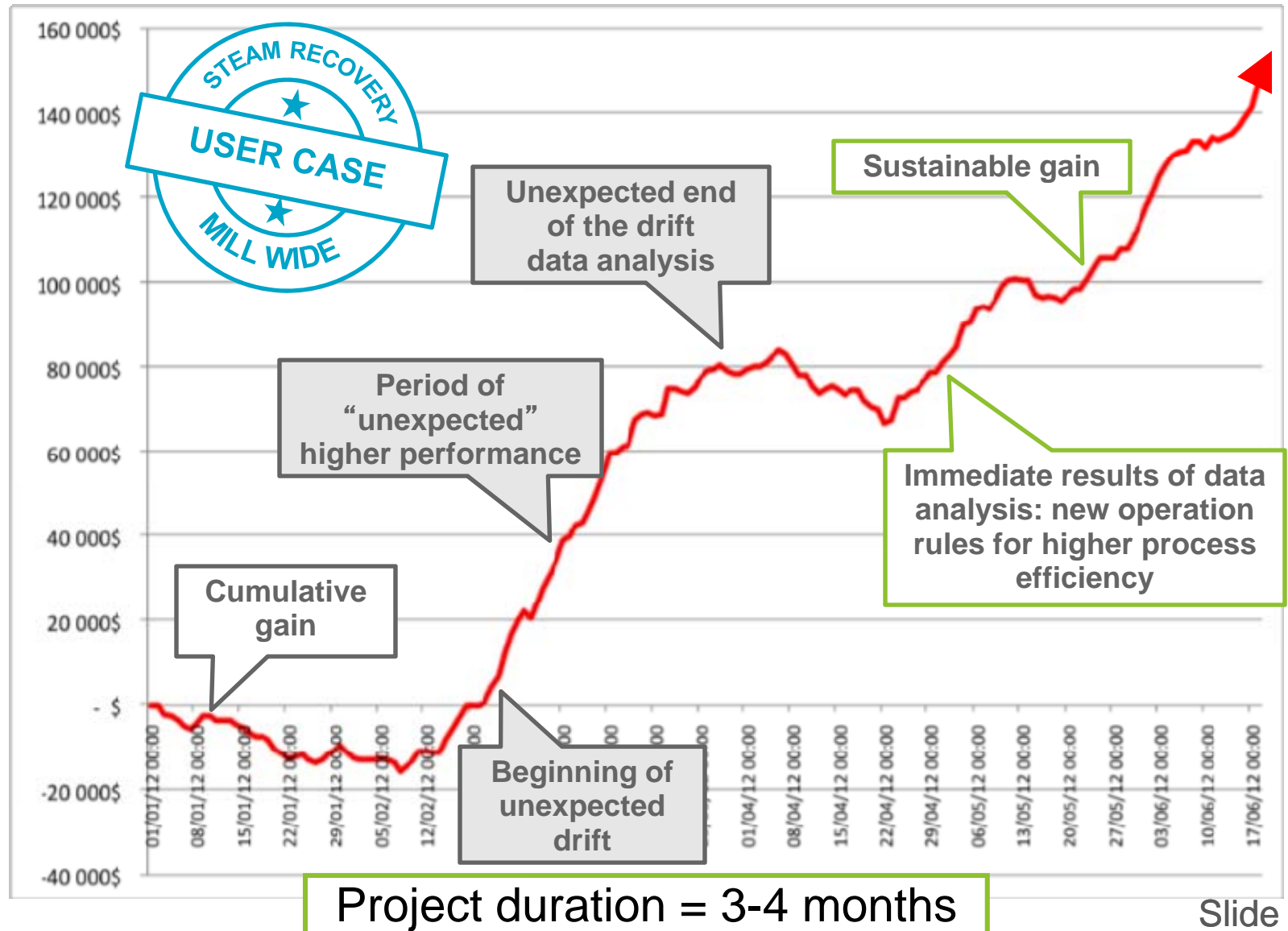


OPTIMIZATION IN OPERATOR HANDS



IMMEDIATE AND SUSTAINABLE BENEFITS

\$600,000/YR OF RECURRENT ENERGY COST SAVINGS



WHO ARE WE?

- **Dedicated team**
 - ✓ Project managers
 - ✓ Process engineers
 - ✓ Development team
- **Dedicated tools**
 - ✓ PEPITo[©] data mining platform
 - ✓ Technological partnerships
- **Focus on industry**
 - ✓ pulp and paper, steel, aluminium, cement, energy production, food and beverage, chemicals



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COME SEE US AT BOOTH #617

Ulrika Wising – VP Sales and marketing, PEPiTe

