



The ENERGY-SMARTOPS project

Energy-Smartops Consortium PITN-GA-2010-264940

1st February 2011 to 31st January 2015



The ENERGY-SMARTOPS project

- Energy savings from smart operation of electrical, process and mechanical equipment



*...“The EU’s action plan, Energy (2007-12), ... sets out a strategy to achieve 20% reduction before 2020 and suggests that manufacturing industry has the potential to achieve a **25% reduction.**”...*

- *Smart operation* makes use of new ICT and communications technologies and advanced algorithms such as optimization.



- €3M Marie Curie Initial Training Network (ITN)
 - Imperial, ABB, BASF, Cranfield University, ETH Zurich, ThyssenKrupp, Polytechnic University of Krakow.
 - With associated partners:
 - Carnegie Mellon University, ESD Ltd, and Statoil
- Interdisciplinary experts in
 - Drives, motors and rotating machinery
 - Condition monitoring and signal analysis
 - Automation, control and process operation
 - Modelling and optimization
- Industry sectors
 - Chemicals, steel, oil and gas industry,
 - Power electronics, automation and simulation

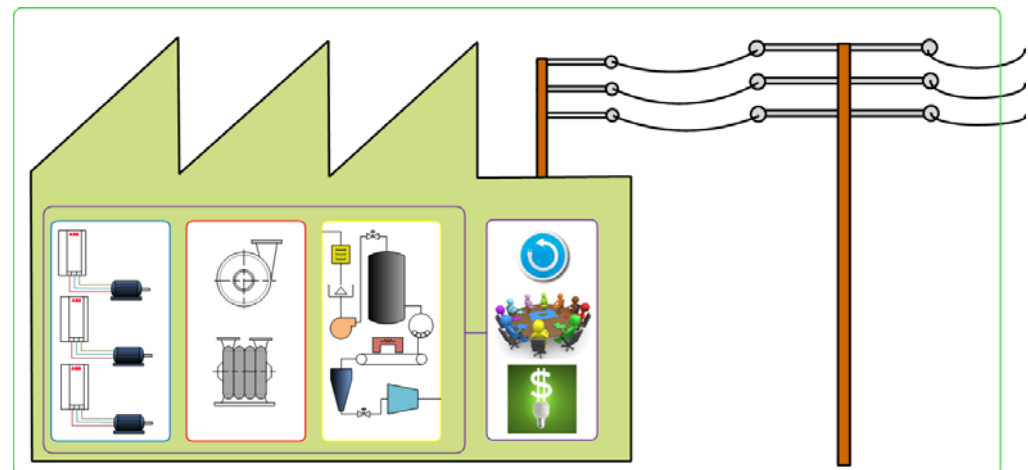


Challenges

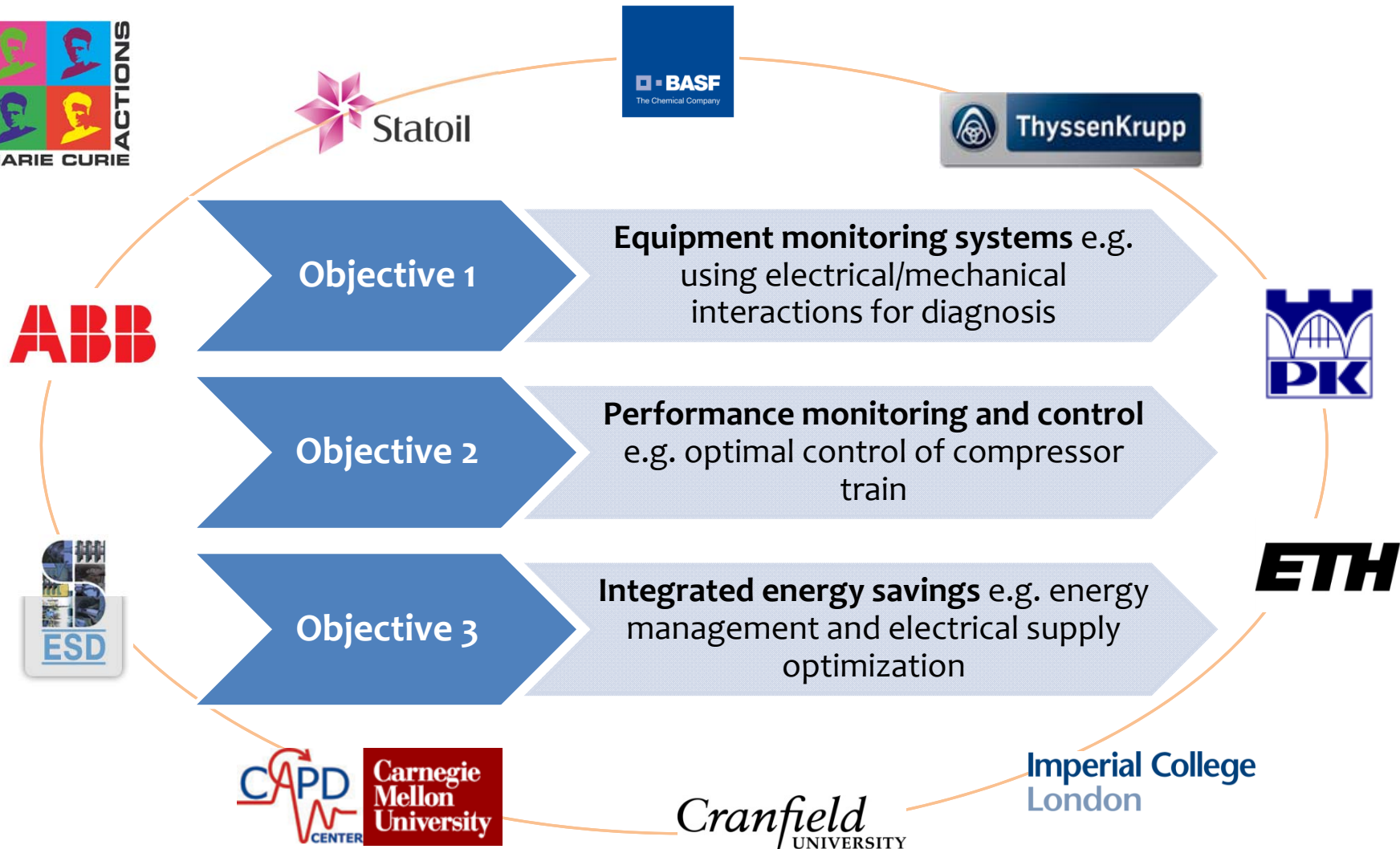
- Manufacturing industry to reduce energy consumption (25% before 2020)
- Manufacturing industry has a huge base of existing installed assets
- Savings must come from better operation of installed assets

Project aims

- Automation systems with an integrated approach
 - » processes, rotating machinery, electrical equipment
- Optimizing operation of equipment
- Optimizing workflows and intelligent decision making

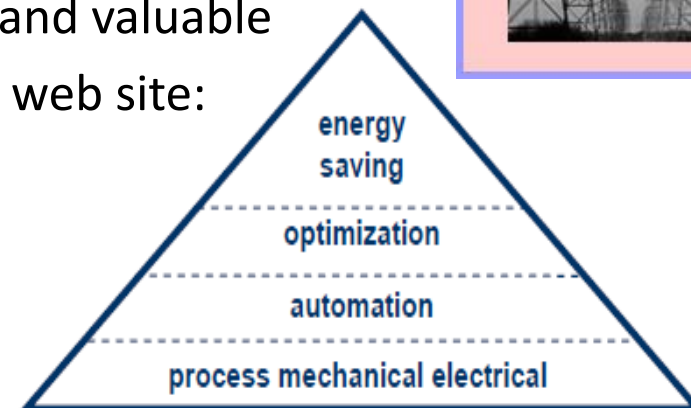


ENERGY-SMARTOPS motivation and aims



We aim to:

- Help the environment, reduce CO₂ emissions and energy use by
 - getting more from the same energy
 - operating already-installed equipment better
 - using smart process operations for energy savings
- Devise methods for smart operation
 - advanced algorithms such as optimization.
 - software, models, algorithms
 - decisions based on analysis of data.
- Demonstrate the methods are practical and valuable
- Disseminate findings through a synoptic web site:
 - information about energy saving
 - links to resources
 - results from energy saving projects
 - summaries and short papers



ENERGY-SMARTOPS researcher team



- An excellent cohort of high calibre Early Stage Researchers
 - Training by research on the job and in PhD programmes
 - Training courses from consortium partners and associated partners
 - Taking secondments to consortium partners and associated partners

ABB Victor in Poland
David in Norway
Hubert in Germany
Matteo B in Germany

 TBA

 Alejandro
Jose Gregorio

 Cristobal

 Matteo C

 Bart

Associated partners



hosting secondments

 Ricky

Dionysios
Sara



END

Coordinator contact details:

Nina F. Thornhill

Imperial College London

South Kensington Campus

London SW7 2AZ

n.thornhill@imperial.ac.uk