

# Consortium

**DECHEMA** (Society for Chemical Engineering and Biotechnology) brings together scientific experts with the aim to identify and evaluate technological trends and to facilitate the transfer of research results into industrial applications.

**ISQ** is a private non-profit technological company. The ISQ Sustainable Innovation Centre performs applied research to support companies on creating value through innovation in resource and energy efficiency, and risk management.

**BFI** is a private-sector non-profit institute for applied research and development. One of its key research aspects is the optimization of water and energy consumption in steel production processes.

**SINTEF** is the largest independent research organisation in Scandinavia, and is a not-for-profit institute. One focus area is the design of thermal systems and components for a wide range of applications, including industrial heat recovery.

**Cardiff University's School of Social Sciences** excels in researching today's workforce, its changing composition, experiences, working life, the identities people bring to work as well as the regulation of work.

**ISMB** is a research and innovation centre in applied information and communication technologies. Its expertise includes developing tools for sustainable development, data management, and mobile solutions.

# Contact

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Improvement of **energy efficiency** in industrial water circuits  
using **gamification**  
for online **self-assessment, benchmarking and economic decision support**



# Project

The main objective of the **WaterWatt** project is to increase **energy efficiency in industrial water circuits**. Currently, there is no benchmark for energy consumption in industrial water circuits, no tools for its systematic reduction and consequently, a lack of awareness of the savings potential. Moreover, measures aimed at improving energy efficiency have principally been directed at primary production processes.

In this project, the improvement of energy efficiency in industrial water circuits will be achieved through measures aimed at the **removal of market barriers**, namely the lack of expertise and information on energy management and saving potentials in industrial water circuits. These include:

- **case studies** in relevant industries
- **development of improvement measures** for energy efficiency in industrial water circuits
- **market studies**
- **capacity building activities**
- **dissemination in workshops** and by **e-learning**

A platform will be developed to disseminate knowledge/ know-how on energy efficiency improvements using a **gamification approach**. SMEs and large industrial producers will be able to use the platform for self-assessment and improvement of the energy efficiency of their circuits.

# E<sup>3</sup> Platform

The **Energy Efficiency Evaluation (E<sup>3</sup>) Platform** aims to improve the energy savings culture/mind set in enterprises by means of new technology and innovative approaches. To reach this target it is fundamental to engage people with energy savings goals. How? Using gamification!

The **E<sup>3</sup> Platform** will be designed to:

- increase **awareness of the reduction of energy consumption** in water circuits and support the engagement of people using a gamification approach
- provide a shared **knowledge base of best practices**, technologies and organizational models concerning energy and water management
- provide tools for **self-assessment** and **monitoring**
- enable situated initiatives like **field trials, training** and exercises

# Gamification

The approach of **gamification** is about using:

- **Game elements** (not full games)
- **Game thinking** (this doesn't need to involve game technique, it's more about the way games are designed and the idea behind games)
- Applied in a **non-game environment** (commercial as well as not-for-profit environments)
- So as to increase **target behaviour** and engagement (target behaviour is central to this definition)

In simpler terms, gamification takes the characteristics we like about games and applies them to everyday actions in order to make them more interesting. Game elements leverage our love of competition and reward and use it to encourage certain actions.

## E<sup>3</sup> Platform

GAMIFICATION,  
ENGAGEMENT



It will **focus attention** on the importance of energy saving in water circuits, supporting the **engagement** of people using **gamification** approach.

KNOW-HOW



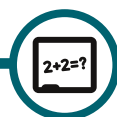
It will host a **shared know-how** (best practices, technologies and organizational models) concerning the energy and water management.

TOOLS,  
SELF ASSESSMENT



It will provide **tools for self-assessment and monitoring**, providing information and a cohering vision of common goal.

INITIATIVES



It will **enable** situated **initiatives** such as field trials, training and exercises.