NANOUPTAKE COST ACTION
Overcoming Barriers to Nanofluids Market Uptake

What is a Nanofluid

Nanofluids (NFs) are advanced **Heat Transfer** and/or **Thermal Storage Fluids** (HTF/TES) with **enhanced thermal properties** by the addition of **nanoparticles** (NPs).

What is a COST Action

The European **Cooperation** in **Science** and **Technology** (COST) is an intergovernmental organisation **supporting** the scientific/ technological **collaboration** through **networks** (COST Actions) and supported by H2020.

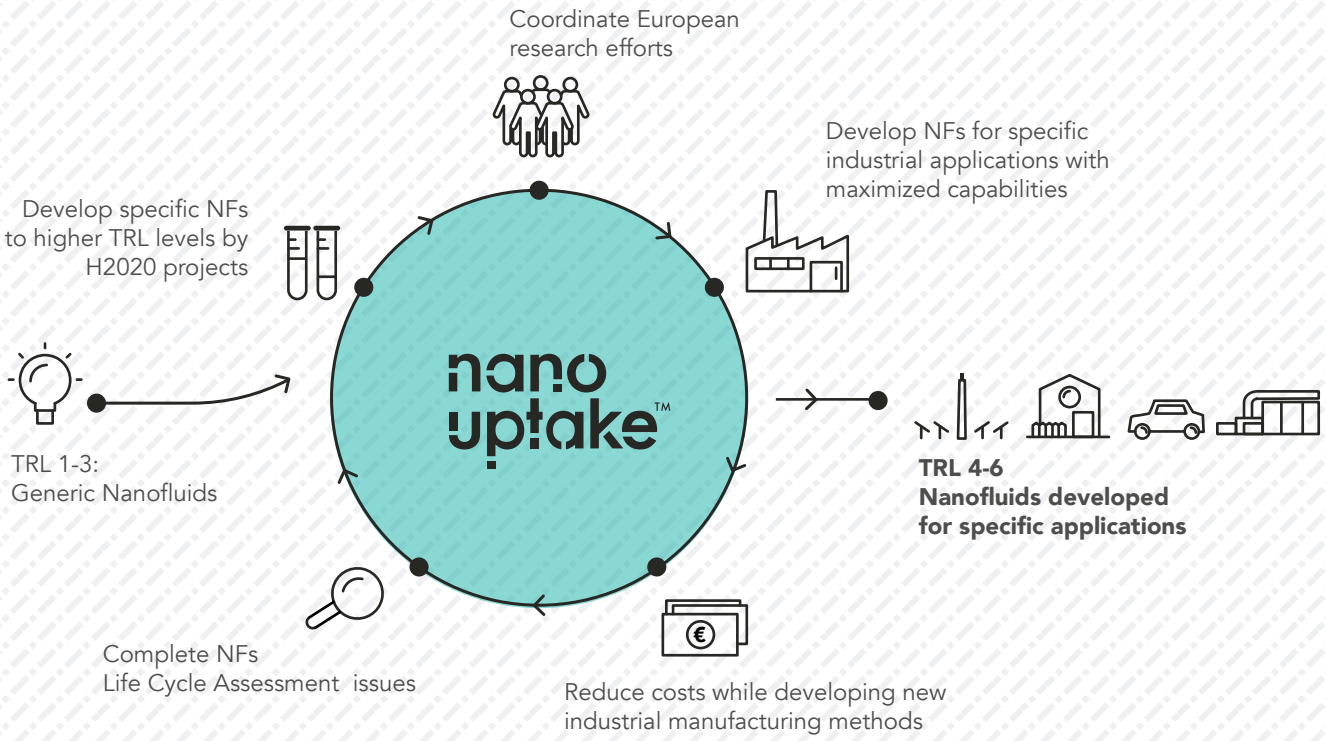
Participants

37 INSTITUTIONS
21 COST COUNTRIES

General Objective

The objective of NANOUPTAKE is to create a Europe-wide **network** of **leading R+D+i centres**, and of **key industries**, to develop and foster the use of **nanofluids** as **advanced HTF/TES** to increase the **efficiency** of **heat exchange** and **storage systems**.

NANOUPTAKE goals (2016-2020)



Activities and participants

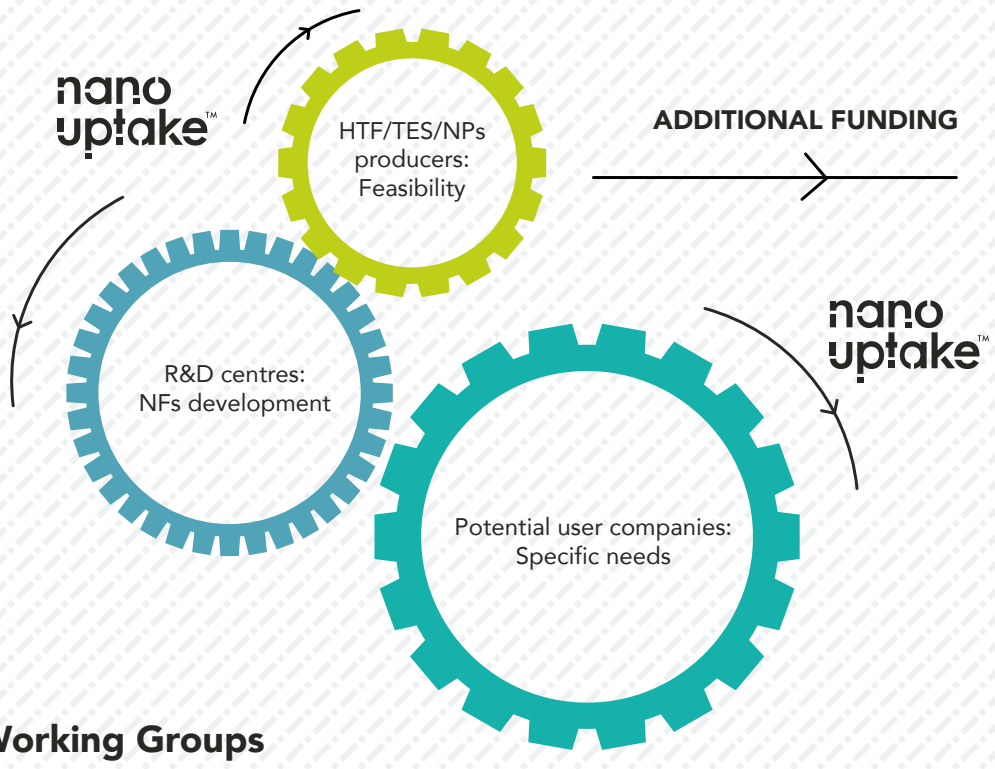
2 **Short Term Scientific Missions**
Participants staff exchange between 2 weeks and 3 months

4 **Participants**
- Research Centres (R&D)
- HTF/TES/NPs producer companies
- NFs potential user companies

1 **Training Schools**
Once per year
Short, intensive courses with high level trainers addressed to new participants

3 **Working Groups Activities**
Nanofluid development for specific applications
Research centers and companies involved

Working Groups



Working Groups defined by applications

WG1. Heating
NFs based on water, ionic liquids and thermal oils for medium and high temperature transfer processes

WG2. Cooling
NFs based on water, ethylene-glycol and refrigerant for cooling in power electronic, thermal engines, refrigeration systems etc.

WG3. Storage
NFs based on molten salts and Phase Change Materials for thermal energy storage in Concentrated Solar Power, waste heat, etc.

WG4. Boiling and Solar
NFs based on water for boilers, heat pipes and volumetic solar absorbers

cost EUROPEAN COOPERATION IN SCIENCE AND TECHNOLOGY

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+ info: www.cost.eu
www.nanouptake.eu