



CE-SPIRE-03-2018

## BAMBOO

**Full Title:** Boosting new Approaches for flexibility Management By Optimizing process Off-gas and waste use

**Aim:**

BAMBOO aims at developing new technologies addressing energy and resource efficiency challenges in 4 intensive industries (steel, petrochemical, minerals and pulp and paper). BAMBOO will scale up promising technologies to be adapted, tested and validated under real production conditions focus on three main innovation pillars: waste heat recovery, electrical flexibility and waste streams valorisation. These technologies include industrial heat pumps, Organic Rankine Cycles, combustion monitoring and control devices, improved burners and hybrid processes using energy from different carriers (waste heat, steam and electricity) for upgrading solid biofuels. These activities will be supported by quantitative Life Cycle Assessments.

**Concept:** In order to maximize their application and impact to plant level, flexibility measures will be implemented in each demo case towards energy neutrality and joined in a horizontal decision support system for flexibility management. This tool will analyse, digest and interchange information from both, the process parameters and the energy market, including the BAMBOO solutions. As a result, the operation of the plants will be improved in terms of energy and raw materials consumption, and will lay the foundation of new approaches in the energy market. BAMBOO will empower intensive industries to take better decisions to become more competitive in the use of natural resources in a broader context, in the spirit of facilitating the use of larger variability and quantity of RES. BAMBOO consortium comprises strong industrial participation; 6 large companies as final users and 3 SMEs as technology providers, working with experienced RTOs and supporting entities. The private investment associated to BAMBOO is over 7M€ along the execution of the project. Lastly, the transferability potential of BAMBOO is extremely relevant as

targeted process and plant improvements offer very high potential applications in other intensive industries.

**Start date:**

**End date:**

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