EC HORIZON2020
Project Co-Funded by the European Commission
Grant agreement: 958410
Call identifier: DT-FOF-09-2020
Project Start Date: 1st of November 2020

Life-cycle optimization of industrial energy efficiency by a distributed control and decision-making automation platform

E2COMATION Project at a glance

Andrea Ballarino
Project Coordinator
CNR-STIIMA

European manufacturing industry need

Improving industrial energy efficiency at European Manufacturing level requires the integration of energy data, such as

- historical data,
- real-time data and
- real-time predicted energy cost,

into the production management systems based on the given and individual industrial task.

In parallel, manufacturing systems are complex systems since many parameters, related to

- environment, usage of materials,
- components, machines, cells, lines and
- supply chains

collectively influence the energy as well as the sustainability performance of production processes.

European manufacturing industry need: the strategy

material

energy

…

water

The Key factor: Anticipating

What does it imply?

- **Completing and characterising**: full production-, Material-, Energy-, Life-cycle-related information flow
- **Synchronizing:** in time information

What does it offer?

- **Decision making**: "how can I energy efficiently/ sustainably steer production"

Energy and LC management

time

Production

Overall High-level Project Objective

A novel approach toward a
new integrated production paradigm
based on
energy efficiency and sustainable management.

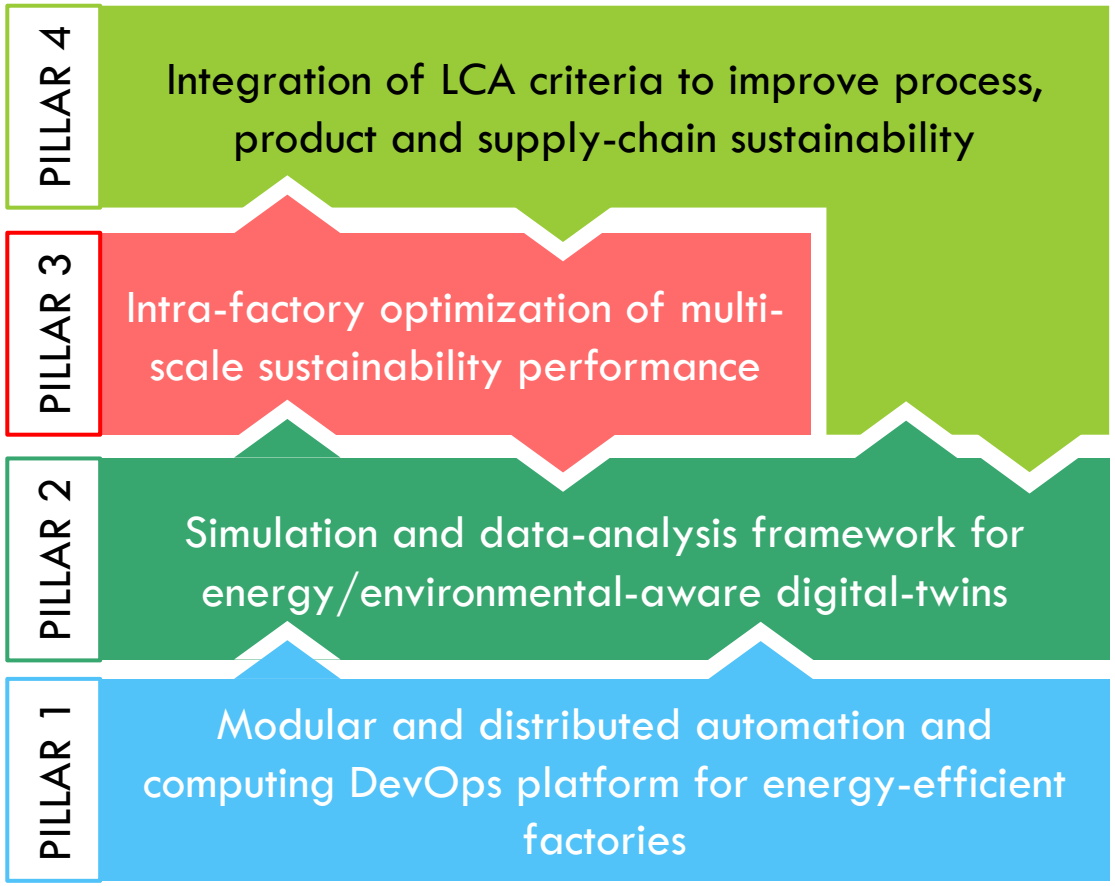
Overall High-level Project Objective…

E2COMATION intends to address the **optimization of energy usage, at multiple hierarchical layers of a manufacturing process** as well as **considering the whole life-cycle perspective across the value chain**.

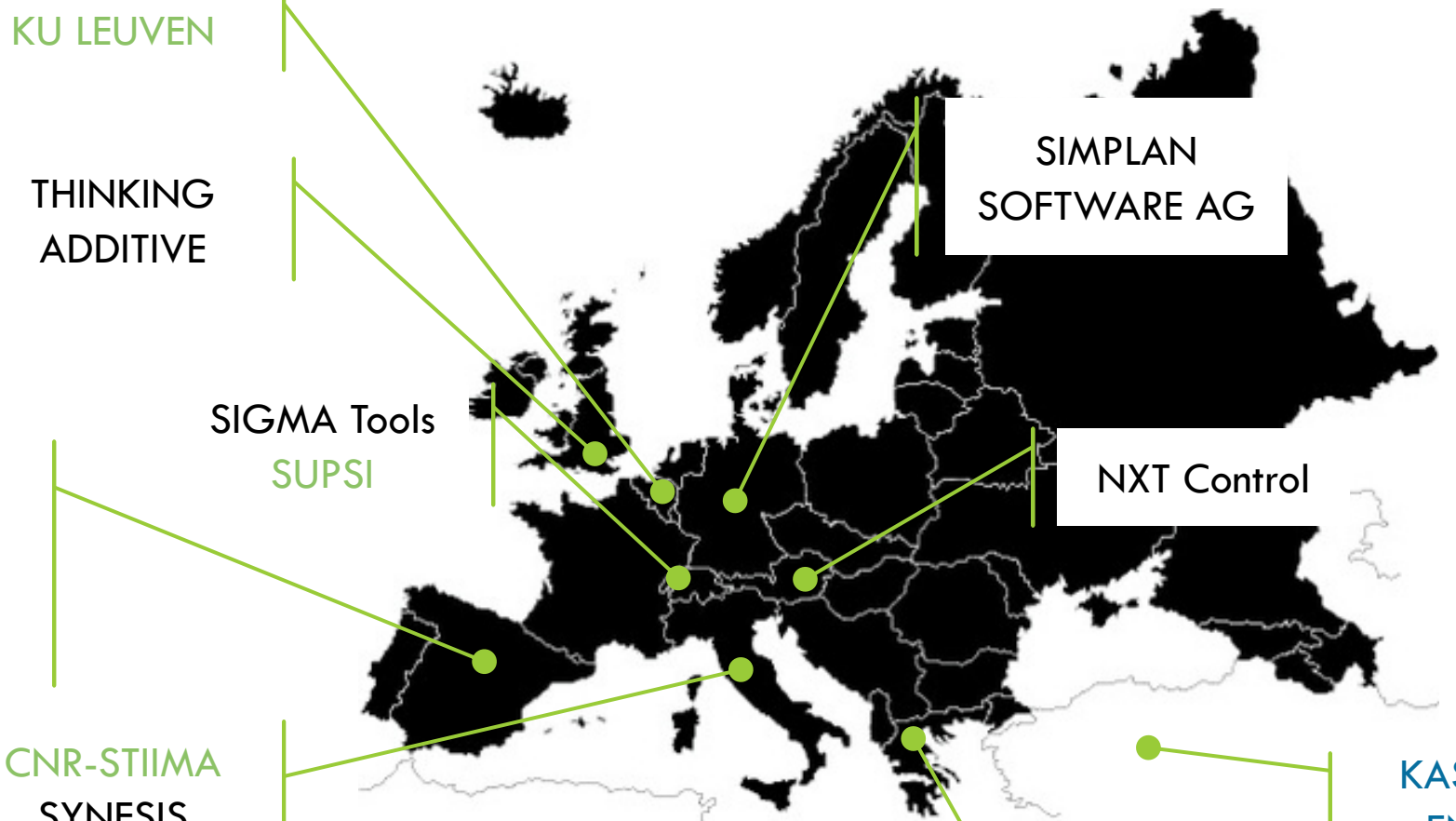
To this purpose, E2COMATION aims at providing a cross-sectorial methodological framework and a modular technological platform **to monitor, predict, evaluate impact of the behavior of a factory across energy and the life-cycle assessment dimensions**, **in order to adapt and optimize dynamically**

- not only its **real-time behavior** over different time-scales, but also
- its **strategic and sustainable** positioning with respect to the complex **supply and value chain** it belongs to.

E2COMATION core concept



A rich-in-competence and diversified consortium



KU LEUVEN

THINKING
ADDITIVE

SIGMA Tools
SUPSI

AIDIMME
MAHOU
CONDIS
ROYO

CNR-STIIMA
SYNESIS
ACT-OR
OCME
SCM Group

SIMPLAN
SOFTWARE AG

NXT Control

ATC

KASTAMONOU
ENTEGRE AS

RTD
TECHNOLOGY PROVIDERS
INDUSTRY

Contacts

www.e2comation.eu

info@e2comation.eu

@e2comation

e2comation H2020 project