

# INDUSTRIES

Digitally-enabled FLEXible Industries for reliable energy grids under high penetration of Variable Renewable Energy Sources (VRES)

# THE SOLUTION

The project will develop, demonstrate and implement a Dynamic Energy & Process Management Platform to monitor, analyse and optimize the most energy-intensive industrial processes, providing plant and process flexibility as well as offering grid services for a better interconnection among networks (at all levels) with emphasis on electric & heating.



# IMPACTS

FLEXIndustries is expected to have a great impact on energy intensive industries.

## **CLEAN ENERGY GENERATION**

optimization of flexibility capacity with a consequent reduction of dependence on fossil fuels.

## **EFFICIENT ENERGY MANAGEMENT**

new digital tools to create connections to energy grids platforms for a more efficient energy management system.

## **COST SAVING AND CIRCULARITY**

reduced production costs and reuse of waste streams with consequent energy and materials savings.

33,111 TCO<sub>2</sub>EQ/Y  
SAVED IN THE 7 DEMO  
CASES

PRIMARY ENERGY  
SAVINGS AT DEMO  
LEVEL  
FROM 0.9% UP TO 41%

ENERGY COST  
REDUCTION  
FROM 1.7% TO 45.6%

LONG TERM GHG  
REDUCTIONS BY RES  
INTEGRATION  
>65 MTCO<sub>2</sub>EQ

# THE DEMO CASES

FLEXIndustries approach will be validated in 7 European demo cases, offering the opportunity to overcome technical and non-technical barriers. The project will promote, onsite:

- » energy efficiency and operational flexibility along with process redesign;
- » a more electrified, digital and automated production chain;
- » enhance users' satisfaction and grid flexibility services;
- » a relevant smaller environmental footprint thanks to the implemented solutions.

# SECTORS



## **AUTOMOTIVE**

FORD  
Kocaeli  
(Turkey)



## **BIO FUELS**

MIL  
Serres  
(Greece)



## **POLYMERS**

KFLX  
Uniejów, Łódź  
(Poland)



## **PULP & PAPER**

PRO  
Eisenhüttenstadt  
(Germany)



## **PHARMA**

SUAN  
Rovereto  
(Italy)



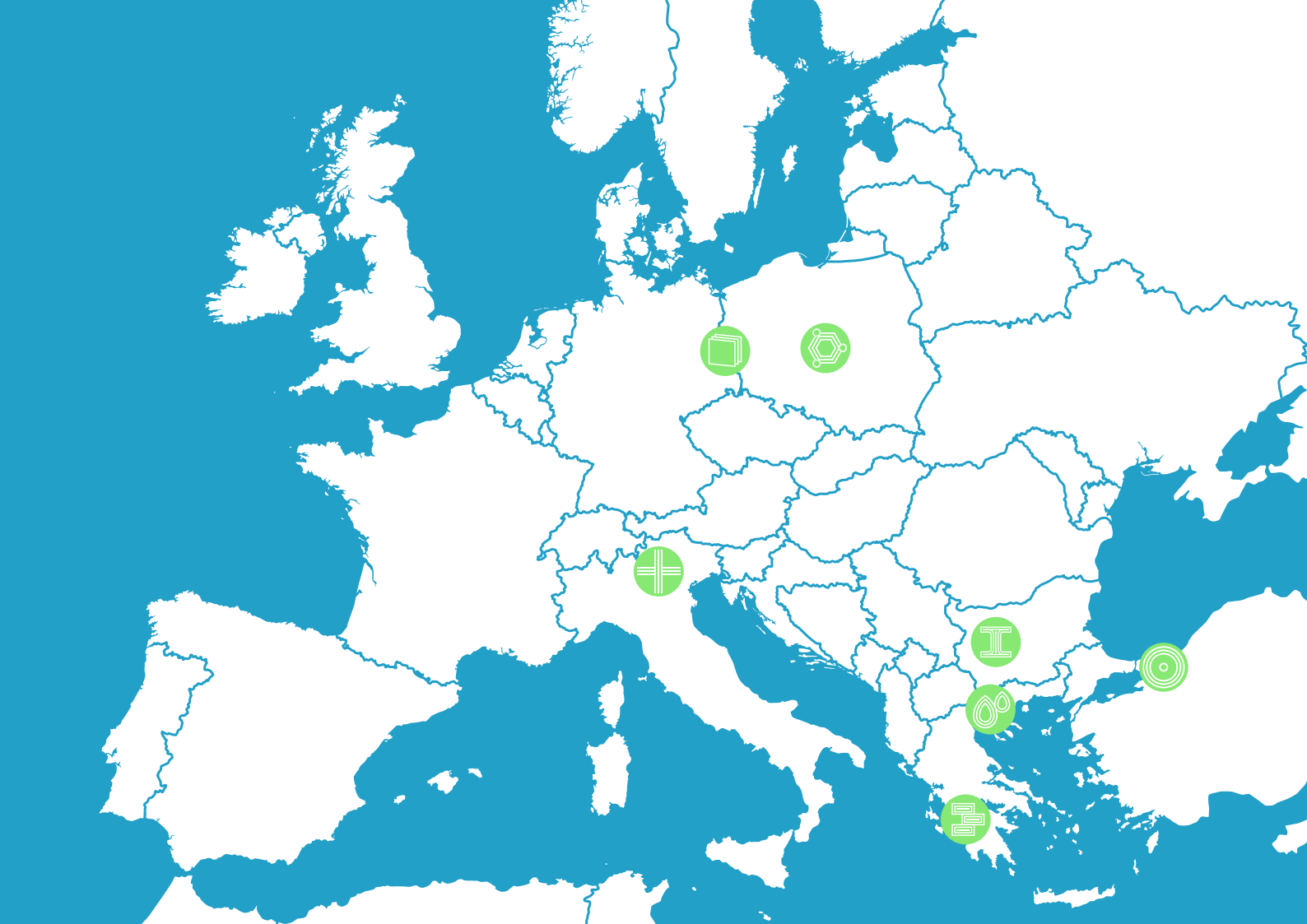
## **CEMENT**

TITAN  
Patra  
(Greece)



## **STEEL**

STM  
Pernik  
(Bulgaria)



# FLEX INDUSTRIES

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