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CONSORTIUM

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NILTECHNOLOGY maier
BONFIGLIOLIRIDUTTORISEMATEC
ICECHIM sistepiantCEMECON
SCANDINAVIA MichaelLundbech
MARIONTECHNOLOGIES
Fonderiemoragavardo

PROJECT DETAILS

Total Cost

Eur 7 468 976,25

EU contribution

EUR 6 027 653

Coordinated in

Spain

Topic(s)

NMP-02-2015 – Integration of novel nano materials into existing production lines

Call for proposal

H2020-NMP-PILOTS-2015

Funding scheme

IA – Innovation action

NANOTECHNOLOGY IMPROVED
MATERIALS AND PROCESSES
INTO EXISTING
PRODUCTION ENVIRONMENT

The logo for IZADI nano2industry features two overlapping circles, one purple and one yellow, to the left of the text 'IZADI' in a bold, black, sans-serif font. Below 'IZADI' is the text 'nano2industry' in a smaller, black, sans-serif font, with the '2' in a light green color.

Visit
IZADI-NANO2INDUSTRY
website

www.izadinano2industry.eu



HORIZON 2020

This project has received funding from the European Union's Horizon 2020 research and innovation programme under grant agreement No 686165.

INJECTION MOULDING,
CASTING AND COATING PILOTS
FOR THE PRODUCTION OF
IMPROVED COMPONENTS
WITH NANO MATERIALS FOR
AUTOMOTIVE, CONSTRUCTION
AND AGRICULTURAL
MACHINERY



HORIZON 2020

In **IZADI-NANO2INDUSTRY** conventional materials and injection moulding, casting and coating manufacturing processes will be improved by nanotechnology and will be combined to enable industrial scale production of new performance-enhanced components.

IZADI-NANO2INDUSTRY is built on and harvests the results of previous research projects, which include Plast4Future (FP7 FoF), EFEVE (FP7 FoF) OFIENGINE (FP6 SUSTDEV) and EXTREMAT (FP6-IP) all in TRL 5.

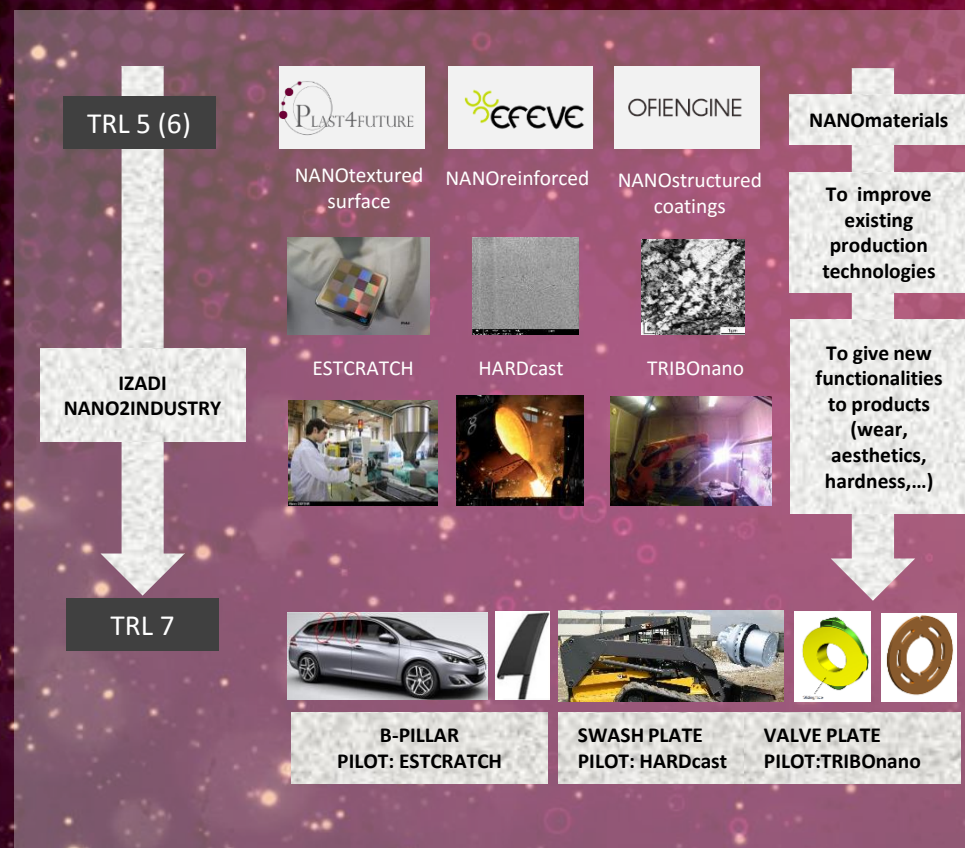
The project will establish the value chain for nanomaterial enabled improved performance products, and finally will validate the technologies through three components in industrial environment (TRL 7).

Technologies and strategies based on nano-reinforced materials, nanotextured surfaces and nanostructured-coatings that have been developed in the frame of these previous FP6 and FP7 projects will be further implemented in real manufacturing production plants.

THE CHALLENGE

The challenge of **IZADI-NANO2INDUSTRY** project is to contribute to overcome the barriers that nano-materials are currently facing to get introduced in the market.

For that, and based on the promising results obtained in previous projects, three strategies have been selected to be further implemented in real component manufacturing production plants: master-batches for thermoplastics (ESTCRATCH pilot), master-pellets for metals (HARDcast pilot) and nanostructured powders for metallic coatings (TRIBOnano pilot).



Technology	Requirements	Sector	IZADI-NANO2INDUSTRY		
			Demo	Pilot (TRL7)	Pilot location
Nano-reinforced thermoplastic + Nanotextured surfaces	Anti-scratch and aesthetic properties	Automotive	B-pillar	ESTCRATCH (Injection moulding)	Basque Country (Spain)
Nano-reinforced metal castings	Hardness, resistance temperature	Construction Agricultural machinery	Swash plate	HARDcast (Gravity casting)	Lombardy Region (Italy)
Nano-structured coatings	Wear	Construction Agricultural machinery	Valve plate	TRIBOnano (Coating by solid state deposition)	Emilia-Romagna Region (Italy)