Cognitive Automation Platform for European Process Industry digital transformation

Fact Sheet

Project Information

CAPRI
Grant agreement ID: 870062

Funded under
INDUSTRIAL LEADERSHIP - Leadership in enabling and industrial technologies - Advanced manufacturing and processing

DOI
10.3030/870062

Funded under

Total cost
€ 6 990 666,08

EU contribution
€ 6 104 451,75

Coordinated by
FUNDACION CARTIF
Spain

Project description

Innovative cognitive automation for the European process industry

Digitalisation represents a new challenge for the European process industries, which need to handle an increasingly wide range of actions. Cognition capabilities will permit the sector to improve its flexibility and performance. The EU-funded CAPRI project will establish, test and demonstrate an advanced cognitive automation platform (CAP) for process industry digital transformation. The platform will help the sector increase its flexibility of operations and improve performance through different indicators and cutting-edge quality control of products and intermediate flows. The
CAP will be modular and scalable, allowing the development and integration of advanced applications that address manufacturing challenges in significant process sectors such as asphalt, steel-making and pharma.

**Objective**

European process industries need to address resources, materials and environmental constraints by improving its flexibility and performance through cognition capabilities, as existing in human intelligence. Digitisation is the main enabler for such capabilities. CAPRI will develop, test and experiment an innovative Cognitive Automation Platform (CAP) for Process Industry Digital Transformation, enabled by cognitive tools that provide existing process industries flexibility of operation, improvement of performance across different indicators (KPIs) and state of the art quality control of its products and intermediate flows. The CAP encompasses methods and tools for governing six Digital Transformation pathways (6P, Product, Process, Platform, Performance, People, Partnership), a Reference Architecture with four levels of cognitive human-machine interaction (industrial IoT connections, smart events processing, knowledge data models and AI-based decision support), a set of reference implementations, both commercial and open source, for batch, continuous and hybrid process industry plants, and a toolbox of cognitive solutions for planning, operation, control and sensing. The CAP will be modular and scalable, so that advanced applications could be developed and integrated on top of it and its validation will take place addressing manufacturing challenges in industrial operational environments of three outstanding process sectors: asphalt (minerals), steelmaking, and pharma industry (chemical). CAPRI results could be applied to a wide range of problems and challenges in future cognitive plants. CAP Platform and the cognitive tools included in it can be replicable in areas of production planning, control, automated processes and operations of virtually all SPIRE sectors. A strong and experienced consortium of 7 EU companies and 6 RTOs will ensure maximum exploitation and replication of the systems developed.

**Fields of science**

- natural sciences
- computer and information sciences
- internet
- internet of things
- social sciences
- sociology
- industrial relations
- automation
- social sciences
- economics and business
- economics
- production economics

**Programme(s)**
H2020-EU.2.1.5. - INDUSTRIAL LEADERSHIP - Leadership in enabling and industrial technologies - Advanced manufacturing and processing

H2020-EU.2.1.5.3. - Sustainable, resource-efficient and low-carbon technologies in energy-intensive process industries

Topic(s)

DT-SPIRE-06-2019 - Digital technologies for improved performance in cognitive production plants (IA)

Call for proposal

H2020-NMBP-ST-IND-2018-2020

See other projects for this call

Sub call

H2020-NMBP-SPIRE-2019

Funding Scheme

IA - Innovation action

Coordinator

FUNDACION CARTIF
Net EU contribution
€ 653 750,00

Address
Pq Tecnologico Boecillo 205
47151 Boecillo
Spain

Region
Castilla y León > Valladolid

Activity type
Research Organisations

Links
Contact the organisation Website
Participants (14)

ENGINEERING - INGEGNERIA INFORMATICA SPA

*Italy*

Net EU contribution

€ 364 000,00

Address

Piazzale Dell'agricoltura 24
00144 Roma

Region

Centro (IT) > Lazio > Roma

Activity type

Private for-profit entities (excluding Higher or Secondary Education Establishments)

Links

Contact the organisation  
Website  
Participation in EU R&I programmes  
HORIZON collaboration network

Non-EU contribution

€ 156 000,00

RESEARCH CENTER PHARMACEUTICAL ENGINEERING GMBH

*Austria*

Net EU contribution

€ 1 107 437,50

Address

Inffeldgasse 13
8010 Graz

Region

Südösterreich > Steiermark > Graz
Activity type
Research Organisations

Links
Contact the organisation  Website  
Participation in EU R&I programmes  HORIZON collaboration network

Non-EU contribution
€ 0,00

POLITECNICO DI MILANO
Italy
Net EU contribution
€ 644 750,00

Address
Piazza Leonardo Da Vinci 32
20133 Milano

Region
Nord-Ovest > Lombardia > Milano

Activity type
Higher or Secondary Education Establishments

Links
Contact the organisation  Website  
Participation in EU R&I programmes  HORIZON collaboration network

Non-EU contribution
€ 0,00

VDEH-BETRIEBSFORSCHUNGSINSTITUT GMBH
Germany
Net EU contribution
€ 1 010 551,25

Address
Sohnstrasse 69
40237 Dusseldorf

Region
5 of 11
EIFFAGE INFRAESTRUCTURAS SA
Spain
Net EU contribution
€ 285 075,00
Address
Poligono Industrial Carretera De La Isla Parcela E Carretera El Copero
41703 Dos Hermanas Sevilla
Region
Andalucía > Sevilla
Activity type
Private for-profit entities (excluding Higher or Secondary Education Establishments)
Links
Contact the organisation
Participation in EU R&I programmes
HORIZON collaboration network
Non-EU contribution
€ 122 175,00

EIFFAGE INFRAESTRUCTURAS GESTION DESARROLLO SL
Spain
Net EU contribution
€ 125 737,50
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Pg Carretera De La Isla 3
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Activity type
Private for-profit entities (excluding Higher or Secondary Education Establishments)

Links
Contact the organisation
Participation in EU R&I programmes
HORIZON collaboration network

Non-EU contribution
€ 53,887,50

SIDENOR ACEROS ESPECIALES SL
Spain
Net EU contribution
€ 196,925,50

Address
Barrio Ugarte
48970 Basauri Bizkaia

Region
Noreste > País Vasco > Bizkaia

Activity type
Private for-profit entities (excluding Higher or Secondary Education Establishments)

Links
Contact the organisation
Participation in EU R&I programmes
HORIZON collaboration network

Non-EU contribution
€ 140,699,50

THIRD-PARTY
SIDENOR INVESTIGACION Y DESARROLLOSA
Spain
Net EU contribution
€ 172,937,50

Address
Barrio Ugarte
48970 Basauri
MONDRAGON SISTEMAS DE INFORMACION SOCIEDAD COOPERATIVA

Spain
Net EU contribution
€ 259 350,00
Address
Calle Ama Kandida 21
20140 Andoain
SME
Yes
Region
Noreste > País Vasco > Gipuzkoa
Activity type
Private for-profit entities (excluding Higher or Secondary Education Establishments)
Links
Contact the organisation  
Participation in EU R&I programmes  
HORIZON collaboration network
Non-EU contribution
€ 111 150,00

ASOCIACION DE INVESTIGACION METALURGICA DEL NOROESTE

Spain
Net EU contribution
€ 439 475,00
Address
Calle Relva Torneiros 27a
36410 Porrino

Region
Galicia > Pontevedra

Activity type
Research Organisations

Contact the organisation
Website
Participation in EU R&I programmes
HORIZON collaboration network

Non-EU contribution
€ 0,00

CORE INNOVATION AND TECHNOLOGY OE

Greece

Net EU contribution
€ 53 409,62

Address
Delagrammatika 5
341 00 Chalkis

SME
Yes

Region
Εύβοια > Στερεά Ελλάδα > Κεντρική Ελλάδα

Activity type
Private for-profit entities (excluding Higher or Secondary Education Establishments)

Contact the organisation
Participation in EU R&I programmes
HORIZON collaboration network

Non-EU contribution
€ 22 889,83
PRIVREDNO DRUSTVO ZA PRUZANJE USLUGA ISTRUZIVANJE I RAZVOJ
NISSATECH INNOVATION CENTRE DOO

Serbia

Net EU contribution
€ 256 025,00

Address
Cara Dusana 58 Office 303
18000 Nis

SME
Yes

Region
Србија - југ > Регион Јужне и Источне Србије > Нишавска област

Activity type
Private for-profit entities (excluding Higher or Secondary Education Establishments)

Links
Contact the organisation
Participation in EU R&I programmes
HORIZON collaboration network

Non-EU contribution
€ 109 725,00

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APPLIED MANUFACTURING SCIENCE SPOLKA Z OGRANICZONA
ODPOWIEDZIALNOSCIA

Poland

Net EU contribution
€ 395 937,50

Address
Ul. Krzemowa 1
62-002 Zlotniki

Region
Makroregion północno-zachodni > Wielkopolskie > Poznański

Activity type
Private for-profit entities (excluding Higher or Secondary Education Establishments)

Links
Contact the organisation
Participation in EU R&I programmes
HORIZON collaboration network
Non-EU contribution
€ 169 687,50

CORE KENTRO KAINOTOMIAS AMKE
Greece
Net EU contribution
€ 139 090,38

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Delagrammatika 5
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Region
Εύβοια > Στερεά Ελλάδα > Κεντρική Ελλάδα

Activity type
Research Organisations

Links
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Participation in EU R&I programmes
HORIZON collaboration network

Non-EU contribution
€ 0,00

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