

HORIZON
2020

Integrated Process Control based on Distributed In-Situ Sensors into Raw Material and Energy Feedstock

Fact Sheet

Project Information

DISIRE

Grant agreement ID: 636834

[Project website](#) 

DOI

[10.3030/636834](https://doi.org/10.3030/636834) 

Project closed

EC signature date

11 November 2014

Start date

1 January 2015

End date

31 December 2017

Funded under

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

Total cost

€ 5 998 343,75

EU contribution

€ 5 998 343,75

Coordinated by

LULEA TEKNISKA UNIVERSITET



Sweden

Objective

The DISIRE project has been inspired by the real existing needs of multiple industrial sectors, including the world leading industrial partners in the non-ferrous, ferrous, chemical and steel industries that are highly connected and already affiliated with the SPIRE PPP and its objectives. The overall clear and measurable objective of the DISIRE project is to evolve the existing industrial processes by advancing the Sustainable Process Industry through an overall Resource and Energy efficiency by

the technological breakthroughs and concepts of the DISIRE technological platform in the field of Industrial Process Control (IPC).

With the DISIRE project the properties of the raw materials or product flows will be dramatically integrated by their transformation in a unique inline measuring system that will extend the level of knowledge and awareness of the internal dynamics of the undergoing processes taking place during transformation or integration of raw materials in the next levels of production. In this approach, the Integrated Process Control system, instead of having external experts to tune the overall processes, based on the DISIRE concept will enable the self reconfiguration of all the production lines by the produced products itself.

Specific DISIRE Process Analyzer Technology (PAT) will be able to define quality and performance requirements, that for the first time in the process industry will be able to be directly applied on the physical properties of the developed products and thus enabling the overall online and product specific reconfiguration of the control system. In this way, the whole production can be fully integrated in a holistic approach from the raw materials to the end product, allowing the multiple process reconfigurations and an optimal operation based on the product's properties that can be generalized in a whole product production cycle being spanned in multiple cross-sectorial processes.

Fields of science (EuroSciVoc)

[engineering and technology](#) > [electrical engineering](#), [electronic engineering](#), [information engineering](#) > [electronic engineering](#) > **[control systems](#)**

[engineering and technology](#) > [environmental engineering](#) > **[mining and mineral processing](#)**

[engineering and technology](#) > [electrical engineering](#), [electronic engineering](#), [information engineering](#) > [electronic engineering](#) > **[sensors](#)**

[engineering and technology](#) > [environmental engineering](#) > **[energy and fuels](#)**

[natural sciences](#) > [computer and information sciences](#) > [data science](#) > **[data processing](#)**



Keywords

[Integrated Process Control](#)

[on-line PAT based IPC](#)

[In-situ sensors](#)

[machine learning](#)

[statistical learning](#)

[spatial swarm sensing](#)

[optimization](#)

Programme(s)

[H2020-EU.2.1.5. - INDUSTRIAL LEADERSHIP - Leadership in enabling and industrial technologies - Advanced manufacturing and processing](#)

MAIN PROGRAMME

[H2020-EU.2.1.5.3. - Sustainable, resource-efficient and low-carbon technologies in energy-intensive process industries](#)

Topic(s)

[SPIRE-01-2014 - Integrated Process Control](#)

Call for proposal

[H2020-SPIRE-2014-2015](#) 

[See other projects for this call](#)

Sub call

H2020-SPIRE-2014

Funding Scheme

[RIA - Research and Innovation action](#)

Coordinator



LULEA TEKNISKA UNIVERSITET

Net EU contribution

€ 1 470 723,75

Total cost

€ 1 470 723,75

Address

UNIVERSITETSOMRADET PORSON

971 87 Lulea

 Sweden 

Region

Norra Sverige > Övre Norrland > Norrbottens län

Activity type

Higher or Secondary Education Establishments

Links

[Contact the organisation](#)  [Website](#) 

[Participation in EU R&I programmes](#) 

[HORIZON collaboration network](#) 

Participants (14)



LUOSSAVAARA-KIIRUNAVAARA AB

 Sweden

Net EU contribution

€ 164 750,00

Address

POBOX 952

971 28 Lulea 

Region

Norra Sverige > Övre Norrland > Norrbottens län

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](#) 

Total cost

€ 164 750,00



KGHM POLSKA MIEDZ SA

 Poland

Net EU contribution

€ 98 750,00

Address

UL M SKŁODOWSKIEJ CURIE 48
59301 Lubin 

Region

Makroregion południowo-zachodni > Dolnośląskie > Legnicko-głogowski

Activity type

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

Links

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[Participation in EU R&I programmes](#) 

[HORIZON collaboration network](#) 

Total cost

€ 98 750,00



ODYS SRL

 Italy

Net EU contribution

€ 172 500,00

Address

VIA A PASSAGLIA 185
55100 Lucca 

SME 

Yes

Region

Centro (IT) > Toscana > Lucca

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](#) 

Total cost

€ 172 500,00



POLITECHNIKA WROCLAWSKA

 Poland

Net EU contribution

€ 394 962,50

Address

WYBRZEZE WYSPIANSKIEGO 27

50-370 Wrocław 

Region

Makroregion południowo-zachodni > Dolnośląskie > Miasto Wrocław

Activity type

Higher or Secondary Education Establishments

Links

[Contact the organisation](#)  [Website](#) 

[Participation in EU R&I programmes](#) 

[HORIZON collaboration network](#) 

Total cost

€ 394 962,50



SCUOLA IMT (ISTITUZIONI, MERCATI, TECNOLOGIE) ALTI STUDI DI LUCCA

 Italy

Net EU contribution

€ 447 031,25

Address

PIAZZA SAN PONZIANO 6

55100 Lucca 

Region

Centro (IT) > Toscana > Lucca

Activity type

Higher or Secondary Education Establishments

Links

[Contact the organisation](#)  [Website](#) 

[Participation in EU R&I programmes](#) 

[HORIZON collaboration network](#) 

Total cost

€ 447 031,25



KGHM CUPRUM SPOLKA Z OGRANICZONA ODPOWIEDZIALNOSCIA - CENTRUM BADAWCZO- ROZWOJOWE

 Poland

Net EU contribution

€ 212 200,00

Address

UL GENERAŁA WŁADYSŁAWA SIKORSKIEGO 2-8
53-659 Wrocław 

Region

Makroregion południowo-zachodni > Dolnośląskie > Miasto Wrocław

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](#) 

Total cost

€ 212 200,00



ELECTROTECH KALIX AB

 Sweden

Net EU contribution

€ 293 053,75

Address

Industrigatan 13
95231 Kalix 

Region

Norra Sverige > Övre Norrland > Norrbottens län

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](#)

Total cost
€ 293 053,75



FUNDACION CIRCE CENTRO DE INVESTIGACION DE RECURSOS Y
CONSUMOS ENERGETICOS

Spain
Net EU contribution
€ 589 562,50

Address
PARQUE EMPRESARIAL DINAMIZA, AVDA. DE RANILLAS, 3D
50018 Zaragoza

Region
Noreste > Aragón > Zaragoza

Activity type
Research Organisations

Links
[Contact the organisation](#) [Website](#)
[Participation in EU R&I programmes](#)
[HORIZON collaboration network](#)

Total cost
€ 589 562,50



DOW CHEMICAL IBERICA SL

Spain
Net EU contribution
€ 291 875,00

Address
CALLE JOSE ABASCAL 56 - 5 A PLANTA
28003 Madrid

Region
Comunidad de Madrid > Comunidad de Madrid > Madrid

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

Total cost

€ 291 875,00



HITACHI ENERGY SWEDEN AB

Sweden

Net EU contribution

€ 515 000,00

Address

Kopparbergsvagen 2
721 83 Vasteras



Region

Östra Sverige > Östra Mellansverige > Västmanlands län

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

Total cost

€ 515 000,00



RINA CONSULTING SPA

Italy

Net EU contribution

€ 203 750,00

Address

VIA CECCHI 6
16129 Genova



Region

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](#)

Total cost

€ 203 750,00



FRAUNHOFER GESELLSCHAFT ZUR FORDERUNG DER ANGEWANDTEN FORSCHUNG EV

Germany

Net EU contribution

€ 168 727,50

Address

HANSASTRASSE 27C
80686 Munchen

Region

Bayern > Oberbayern > München, Kreisfreie Stadt

Activity type

Research Organisations

Links

[Contact the organisation](#) [Website](#)

[Participation in EU R&I programmes](#)

[HORIZON collaboration network](#)

Total cost

€ 168 727,50



G-STAT LTD

Israel

Net EU contribution

€ 547 500,00

Address

Raoul Wallenberg 4
6971904 Tel-Aviv 

SME 

Yes

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](#) 

Total cost

€ 547 500,00



SWERIM AB

 Sweden

Net EU contribution

€ 427 957,50

Address

ARONTORPSVAGEN 1

971 25 Lulea 

SME 

Yes

Region

Norra Sverige > Övre Norrland > Norrbottens län

Activity type

Research Organisations

Links

[Contact the organisation](#) 

[Participation in EU R&I programmes](#) 

[HORIZON collaboration network](#) 

Total cost

€ 427 957,50

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European Union, 2025

