Intelligent Motion Control Platform for Smart Mechatronic Systems

Fact Sheet

Project Information

I-MECH
Grant agreement ID: 737453

Funded under
INDUSTRIAL LEADERSHIP - Leadership in enabling and industrial technologies - Information and Communication Technologies (ICT)

Total cost
€ 17,027,716.68

EU contribution
€ 5,018,274.06

Coordinated by
SIOUX TECHNOLOGIES BV
Netherlands

Objective

The I-MECH target is to provide augmented intelligence for wide range of cyber-physical systems having actively controlled moving elements, hence support development of smarter mechatronic systems. They face increasing demands on size, motion speed, precision, adaptability, self-diagnostic, connectivity, new cognitive features, etc. Fulfillment of these requirements is essential for building smart, safe and reliable production complexes. This implies completely new demands also on bottom layers of employed motion control system which cannot be routinely handled by available commercial products. On the ground of this, the main mission of this project is to bring novel intelligence into Instrumentation and Control Layers mainly by bridging the gap between latest research results and industrial practice in related model based engineering fields. Next, I-MECH will deliver new
interfaces and diagnostic data quality for System Behavior Layer. It strives to provide a cutting edge reference motion control platform for non-standard applications where the control speed, precision, optimal performance, easy reconfigurability and traceability are crucial. The high added value of I-MECH reference platform will be directly verified in high-speed/big CNC machining, additive manufacturing, semicon, high-speed packaging and healthcare robotics. In these sectors, the main project pilots will be validated. However, the platform will be applicable in many other generic motion control fields. The project outputs will impact on the entire value chain of the production automation market and, through envisioned I-MECH center, create sustainable proposition for future smart industry.

Fields of science

- engineering and technology > electrical engineering, electronic engineering, information engineering
- electronic engineering > control systems
- engineering and technology > mechanical engineering > manufacturing engineering > subtractive manufacturing
- engineering and technology > electrical engineering, electronic engineering, information engineering
- electronic engineering > sensors > smart sensors
- engineering and technology > electrical engineering, electronic engineering, information engineering
- electronic engineering > robotics
- engineering and technology > mechanical engineering > manufacturing engineering > additive manufacturing

Programme(s)

H2020-EU.2.1.1. - INDUSTRIAL LEADERSHIP - Leadership in enabling and industrial technologies - Information and Communication Technologies (ICT)  

H2020-EU.2.1.1.7. - ECSEL

Topic(s)

ECSEL-2016-1 - ECSEL Key Applications and Essential technologies (RIA)

Call for proposal

H2020-ECSEL-2016-1-RIA-two-stage

See other projects for this call
Funding Scheme
ECSEL-RIA - ECSEL Research and Innovation Action

Coordinator

SIOUX TECHNOLOGIES BV
Net EU contribution
€ 577 500,00

Address
Esp 405
5633 AJ Eindhoven
Netherlands

Region
Noord-Brabant > Zuidoost-Noord-Brabant

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
€ 1 732 500,00

Participants (31)

ZAPADOCESKA UNIVERZITA V PLZNI
Czechia
Net EU contribution
€ 254 187,50

Address
Univerzitní 8
301 00 Pilsen

Region
Jihozápad > Plzeňský kraj
Higher or Secondary Education Establishments

ELEKTRONIKAS UN DATORZINATNU INSTITUTS

 Latvia

Net EU contribution
€ 113 050,00

Address
Dzerbenes Iela 14
1006 Riga

Region
Latvija > Latvija > Riga

Activity type
Research Organisations

REDEN B.V.

 Netherlands

Net EU contribution
€ 129 375,00

Address
F Hazemeijerstraat 800
7555 RJ Hengelo Ov
SME
Yes
Region
Oost-Nederland > Overijssel > Twente
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
€ 301 875,00

FUNDACION TEKNIKER
Spain
Net EU contribution
€ 136 412,50
Address
Calle Inaki Goenaga 5
20600 Eibar Guipuzcoa
Region
Noreste > País Vasco > Gipuzkoa
Activity type
Research Organisations
Links
Contact the organisation  Website
Participation in EU R&I programmes  HORIZON collaboration network
Non-EU contribution
€ 253 337,50

VYSOKE UCENI TECHNICKE V BRNE
Czechia
Net EU contribution
**Net EU contribution**
€ 211 312,50

**Address**
Antoninska 548/1
601 90 Brno Stred

**Region**
Jihovýchod > Jihomoravský kraj

**Activity type**
Higher or Secondary Education Establishments

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

**Non-EU contribution**
€ 392 437,50

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**ROVIMATICA SL**

Spain

**Net EU contribution**
€ 70 425,00

**Address**
Calle Plata, Num. 4 Pg Ind El Granadal
14014 Cordoba

**SME**
Yes

**Region**
Andalucía > Córdoba

**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**
€ 164 325,00
TECHNISCHE UNIVERSITEIT EINDHOVEN
Netherlands
Net EU contribution
€ 285 704,56
Address
Groene Loper 3
5612 AE Eindhoven
Region
Noord-Brabant > Zuidoost-Noord-Brabant
Activity type
Higher or Secondary Education Establishments
Links
Contact the organisation Website Participation in EU R&I programmes HORIZON collaboration network
Non-EU contribution
€ 530 594,19

INGENIA-CAT S.L.
Spain
Net EU contribution
€ 133 875,00
Address
Marie Curie 8-14
08042 Barcelona
SME Yes
Region
Este > Cataluña > Barcelona
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
€ 312 375,00

TECHNOLUTION BV

Netherlands
Net EU contribution
€ 232 483,13
Address
Burgermeester Jamessingel 1
2803 WV Gouda
SME
Yes
Region
West-Nederland > Zuid-Holland > Oost-Zuid-Holland
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
€ 542 460,62

FAGOR AOTEK S. COOP

Spain
Net EU contribution
€ 136 412,50
Address
B San Andres 19
20500 Arrasate Mondragon
Region
Noreste > País Vasco > Gipuzkoa
Activity type
GMV AEROSPACE AND DEFENCE SA
Spain
Net EU contribution
€ 75 750,00
Address
Calle Isaac Newton Parque Tecnologico De Madrid
28760 Tres Cantos
Region
Comunidad de Madrid > Comunidad de Madrid > Madrid
Activity type
Private for-profit entities (excluding Higher or Secondary Education Establishments)

INFORMATION TECHNOLOGY FOR MARKET LEADERSHIP
Greece
Net EU contribution
€ 138 750,00
Address
Katechaki 22
115 25 Athina
Region

Κεντρικός Τομέας Αθηνών > Αττική > Αττική

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

€ 323,750,00

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LABORATORIO IBERICO INTERNACIONAL DE NANOTECNOLOGIA LIN

Portugal

Net EU contribution

€ 105,000,00

Address

Avenida Mestre Jose Veiga
4715-330 Braga

Region

Continente > Norte > Cávado

Activity type

Research Organisations

Links

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

Non-EU contribution

€ 195,000,00

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TECO AS

Czechia

Net EU contribution

€ 112,500,00
OPEN ENGINEERING SA

Belgium

Net EU contribution
€ 109 790,00

Address
Avenue De L'expansion 7
4432 Alleur

SME
Yes

Region
Région wallonne > Prov. Liège > Arr. Liège

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
€ 256 176,68
GEFRAN SPA

 Italy
 Net EU contribution
 € 68 599,06
 Address
 Via Statale Sebina 74
 25050 Provaglio D Iseo Bs
 Region
 Nord-Ovest > Lombardia > Brescia
 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
 € 205 797,19

UNIVERSITA DEGLI STUDI DI BRESCIA

 Italy
 Net EU contribution
 € 175 437,50
 Address
 Piazza Mercato 15
 25121 Brescia
 Region
 Nord-Ovest > Lombardia > Brescia
 Activity type
 Higher or Secondary Education Establishments
 Links
 Contact the organisation
 Website
 Participation in EU R&I programmes
 HORIZON collaboration network
ELECTROMAGNETIC COMPATIBILITY MCC B.V.

Netherlands

Net EU contribution
€ 126 375,00

Address
Talmastraat 42
4812 KB Breda

SME
Yes

Region
Noord-Brabant > West-Noord-Brabant

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
€ 294 875,00

---

NEDERLANDSE ORGANISATIE VOOR TOEGEPAST NATUURWETENSCHAPPELIJK ONDERZOEK TNO

Netherlands

Net EU contribution
€ 85 379,00

Address
Anna Van Buerenplein 1
2595 DA Den Haag

Region
West-Nederland > Zuid-Holland > Agglomeratie 's-Gravenhage

Activity type
EDILASIO CARREIRA DA SILVA LDA
Portugal
Net EU contribution
€ 53 875,00
Address
Rua Augusto Costa Picassinos
2430 463 Marinha Grande
Region
Continente > Centro (PT) > Região de Leiria
Activity type
Private for-profit entities (excluding Higher or Secondary Education Establishments)
Non-EU contribution
€ 161 625,00

SIEMENS INDUSTRY SOFTWARE SAS
France
Net EU contribution
€ 123 593,75
Address
107 Avenue De La Republique Immeuble Iro
92320 Chatillon
Region
Ile-de-France > Ile-de-France > Hauts-de-Seine
Ile-de-France

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

€ 370 781,25

PHILIPS MEDICAL SYSTEMS NEDERLAND BV

Netherlands

Net EU contribution

€ 320 582,81

Address

Veenpluis 6
5684 PC Best

Region

Noord-Brabant > Zuidoost-Noord-Brabant

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

€ 961 748,44

I.M.A. INDUSTRIA MACCHINE AUTOMATICHE SPA

Italy

Net EU contribution

€ 45 312,50

Address

Via Emilia 428-442
40064 Ozzano Dell'emilia
UNIVERSITA DEGLI STUDI DI MODENA E REGGIO EMILIA

Net EU contribution
€ 180 381,25

Address
Via Universita 4
41121 Modena

Activity type
Higher or Secondary Education Establishments

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

Non-EU contribution
€ 334 993,75

EVIDENCE SRL

Net EU contribution
€ 158 625,00
IKERLAN S. COOP
Spain
Net EU contribution
€ 100 187,50

Address
P Jose Maria Arizmendiarrrieta 2
20500 Mondragon

Region
Noreste > País Vasco > Gipuzkoa

Activity type
Research Organisations

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

Non-EU contribution
€ 186 062,50
NICOLAS CORREA SA

Spain

Net EU contribution

€ 86,406,25

Address

Calle Alcalde Martin Cobos
09007 Burgos

Region

Castilla y León > Burgos

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

€ 259,218,75

UNIVERSITY COLLEGE CORK - NATIONAL UNIVERSITY OF IRELAND, CORK

Ireland

Net EU contribution

€ 174,126,75

Address

Western Road
T12 YN60 Cork

Region

Ireland > Eastern and Midland > Dublin

Activity type

Higher or Secondary Education Establishments

Links

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

Non-EU contribution

€ 323,378,25
JOHNSON & JOHNSON VISION CARE IRELAND UNLIMITED COMPANY

Ireland
Net EU contribution
€ 126 089,06
Address
The National Technological Park Plassey
Limerick
Region
Ireland > Southern > Mid-West
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
€ 378 267,19

NEXPERIA BV
Netherlands
Net EU contribution
€ 215 625,00
Address
Jonkerbosplein 52
6534 AB Nijmegen
Region
Oost-Nederland > Gelderland > Arnhem/Nijmegen
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
GEFRAN DRIVES AND MOTION SRL
Italy
Net EU contribution
€ 155 150,94

Address
Via Giosue Carducci 24
21040 Gerenzano (Va)

Region
Nord-Ovest > Lombardia > Varese

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
€ 465 452,81

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