The AI Data Robotics Association

Welcome

Info Day and Brokerage Event

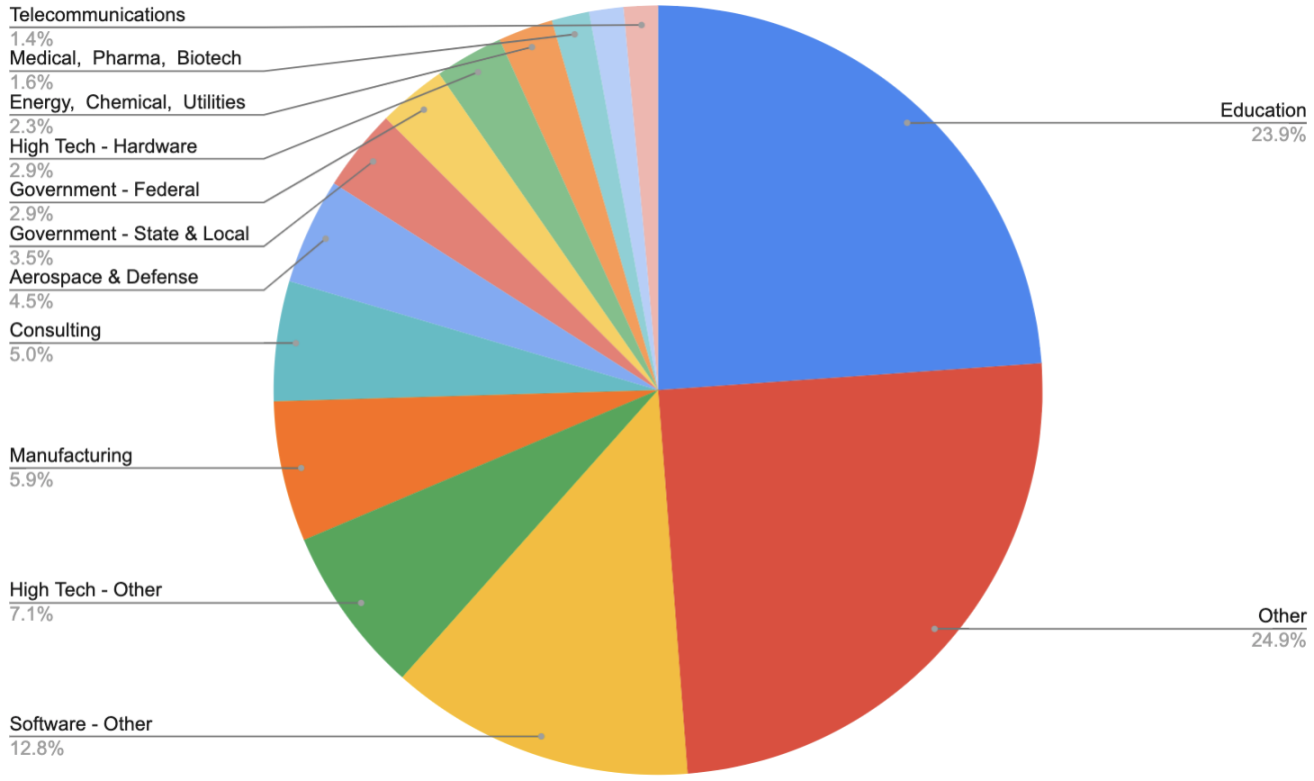
Friday Feb 3rd 9:30 - 13:00

The AI Data Robotics Association

Info Day and Brokerage Event

Friday Feb 3rd 9:30 - 13:00

Who are we?



Based on 695 registrants

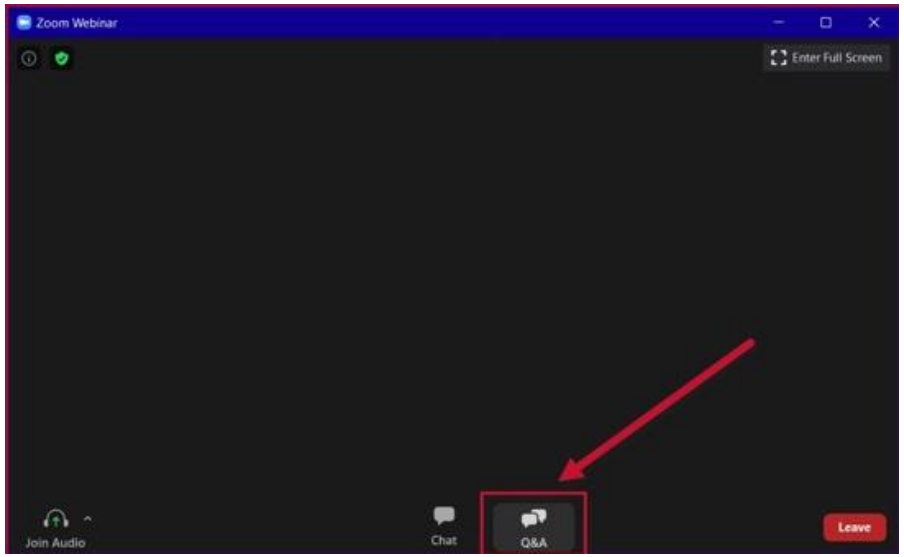
The AI Data Robotics Association

Info Day and Brokerage Event

Friday Feb 3rd 9:30 - 13:00

Housekeeping:

- Q&A – post your Question in the Q&A chat on the right of the screen
- At the beginning of your question please put the speakers name or topic to make it easier to track.
- Please use the chat for general conversation.
- If you want to tweet about the event please use the hashtag #adrainfoday



The AI Data Robotics Association

Info Day and Brokerage Event

Friday Feb 3rd 9:30 - 13:00

Agenda:

9:30 - 9:35 Welcome
9:35 - 10:00 Adra speaker: Rich Walker
10:00 - 11:30 - European Commission speakers:
- · Evangelia Markidou, CNECT A1
- · Antonio Puente-Rodero, CNECT A1
- · Maria Tsakali, CNECT E2
- · Kimmo Rossi, CNECT G1
- · Pawel Dobosz, CNECT G3

11:30 - 11:45 - IDEAL-IST speaker: Edina Nemeth
11:45 - 13:15h – Pitches

The AI Data Robotics Association

Adra in a nutshell

adr-association.eu

Content

- Partnership and Association
- Objectives, Why join Adra?
- Approach and Governance
- Membership and benefits

The AI, Data and Robotics partnership (2021-2030)

European Commission
Public Side

Co-Programmed
Partnership

Adra Association
Private Side

The AI Data Robotics Association

The MoU signed between Adra and the European Commission 2021

- Up to **1.3** billion euros of public investment by the European Commission (through Horizon Europe)
- Up to **1.3** billion euros of private investment through Adra

The AI Data Robotics Association

A Joint Initiative by

BDV BIG DATA VALUE ASSOCIATION

CLAIRE

ellis

EurAi

eu ROBOTICS

Join Us! www.adr-association.eu

General Objectives of the ADR Partnership and Adra

Secure **European's sovereignty over AI, Data and Robotics** technologies and knowhow

Establish **European leadership in AI, Data and Robotics** technologies with high socio-economic and environmental impact

Reinforce a **strong and global competitive position of Europe** in AI, Data and Robotics

Adra is needed for the EU Digital Decade policy

Target: 75% of European enterprises uses Big data
Baseline (2020): 14%

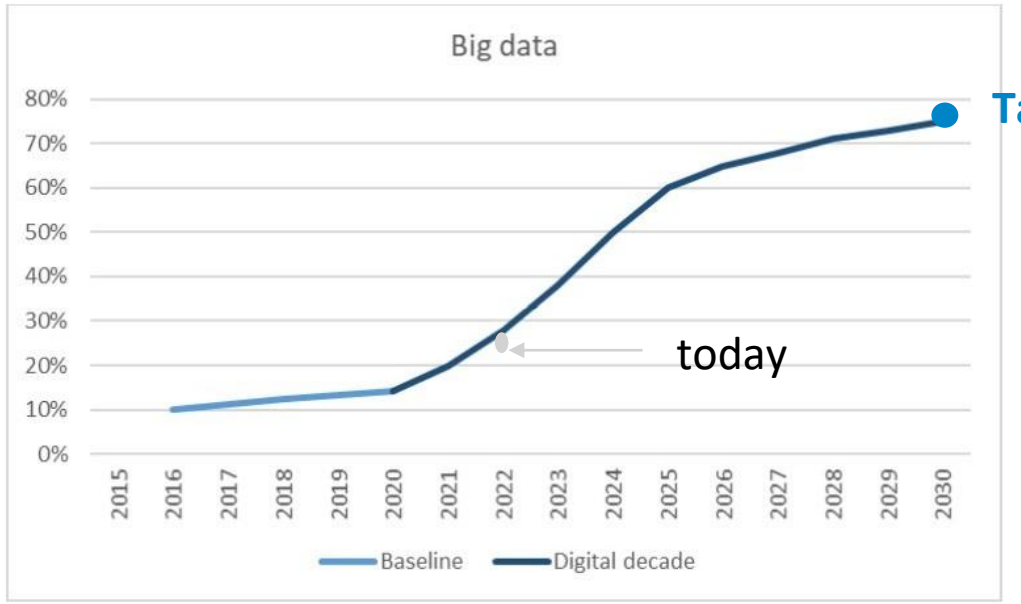


Figure 18: Percentage of European enterprises using big data (EU projection to 2030)

Source: Commission services based on data from Eurostat.

Target: 75% of European enterprises have taken up AI
Baseline (2020): 25%

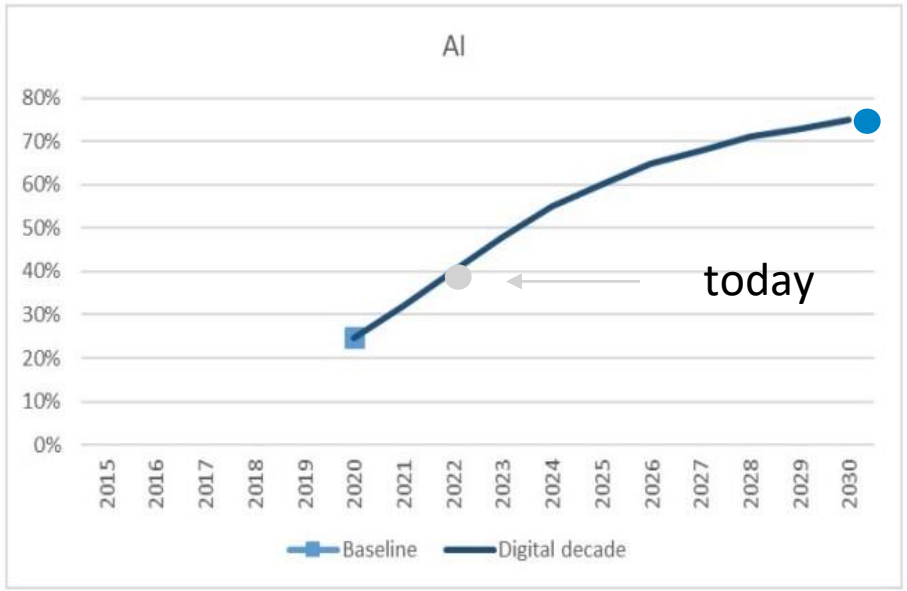
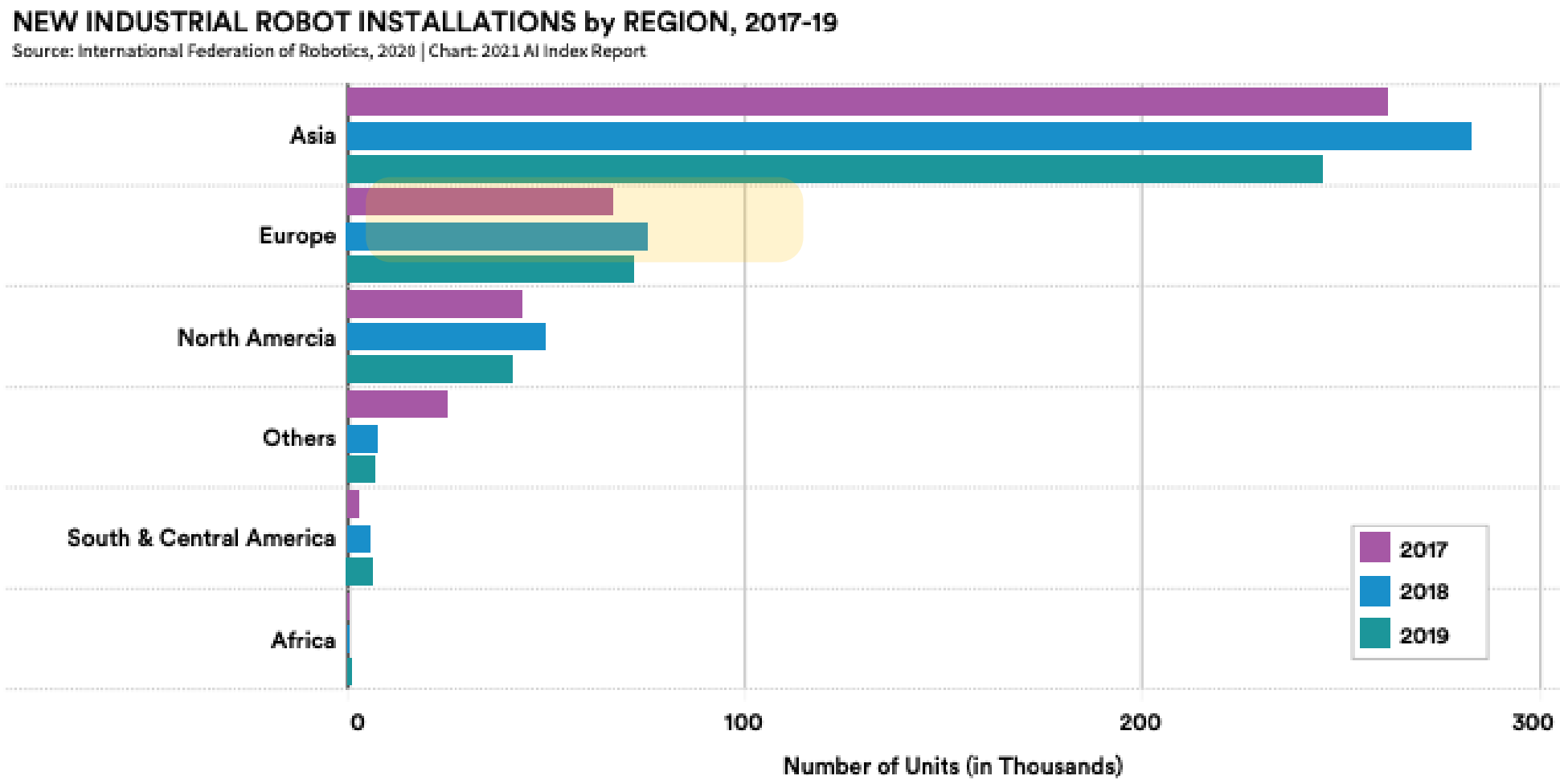


Figure 20: Percentage of European enterprises using AI (EU projection to 2030)

https://eur-lex.europa.eu/LexUriServ/LexUriServ.do?uri=SWD:2021:0247:FIN:EN:PDF

The AI Index 2021 Annual Report(1)

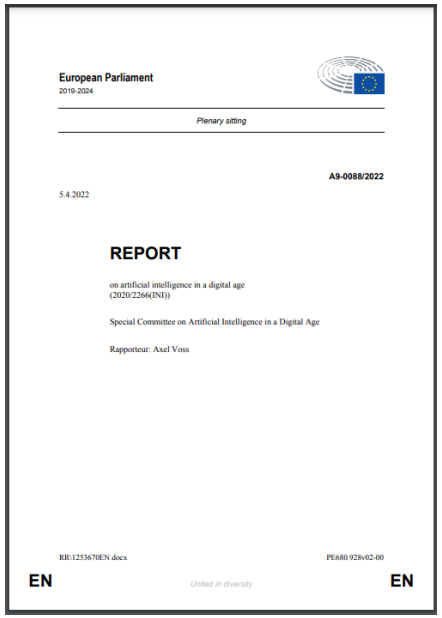


European Parliament report (May 2022): "on artificial intelligence in a digital age"

5. Conclusion: an urgent call for action!

294. Believes that the ongoing digital transformation, in which AI plays the key role, has triggered a global competition for tech leadership; stresses that the EU has so far fallen behind with the result that future technological standards risk being developed without sufficient EU contributions, oftentimes by non-democratic actors, which presents a challenge to political stability and economic competitiveness; concludes that the EU needs to act as a global standard-setter on AI;

p.58


European Parliament
2019-2024

Plenary sitting

A9-0088/2022

5.4.2022

REPORT

on artificial intelligence in a digital age
(2020/2266(INI))

Special Committee on Artificial Intelligence in a Digital Age

Rapporteur: Axel Voss

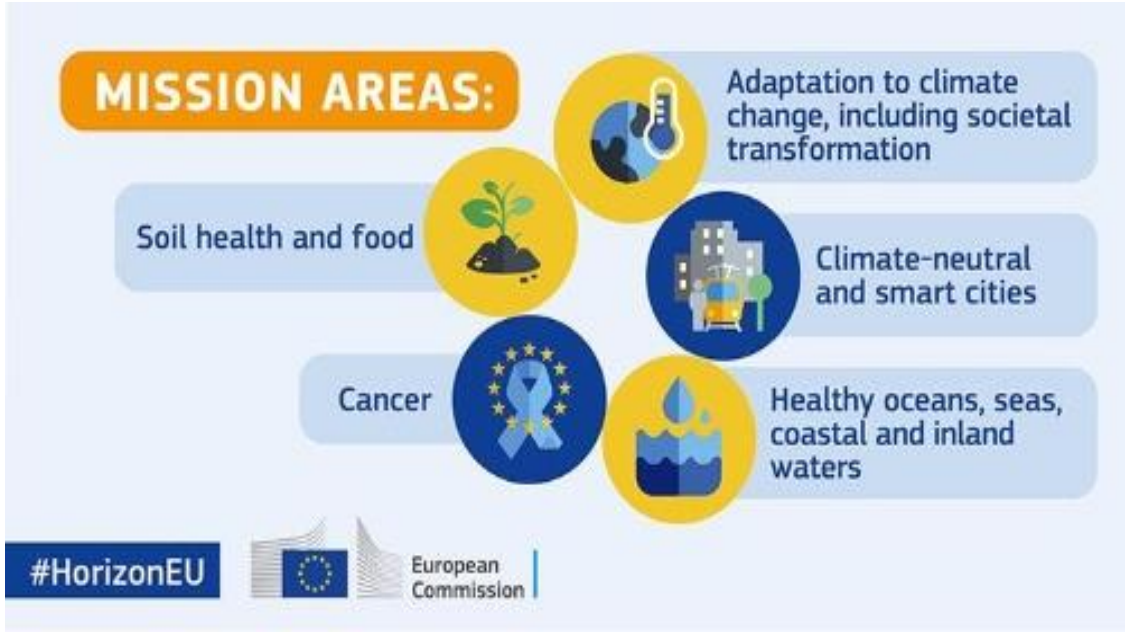
RR\1253670EN.docx PE680.928v02-00

EN United in diversity EN

REPORT on artificial intelligence in a digital age (2020/2266(INI)) Special Committee on Artificial Intelligence in a Digital Age. Rapporteur: Axel Voss.
https://www.europarl.europa.eu/cmsdata/246872/A9-0088_2022_EN.pdf

Major global challenges and EU Missions

UN Sustainable Development Goals



EU Missions until 2030

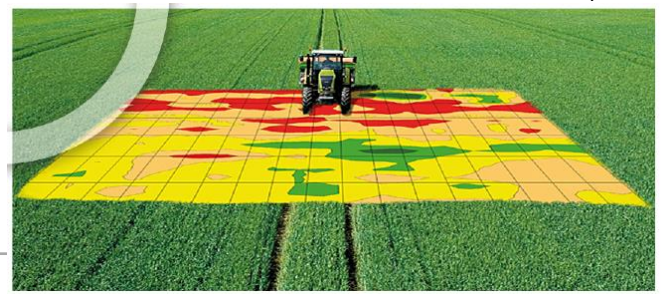
Solving big challenges needs AI + Data + Robotics

- Cleaning oceans

- Safe & Autonomous Driving

Source: Wikipedia

- Smart agriculture



Source: DataBio project

Why join Adra - Value Proposition

- Adra offers its members to drive the European Future around AI, Data, and Robotics to address the major **socio-economic challenges**.

- Adra is the only European association able to create unique value for its members through leveraging the **convergence of** AI, Data and Robotics.

- Adra unifies European ADR **research bodies and industry** to one strong voice.

- Adra helps its members to formulate **research & innovation objective**s from an analysis of socio-economic challenges.

- Adra also addresses **short-term topics** and contributes to creating a European **environment** for ideas to flourish and scale-up

Value to special target groups

Big industry:

- Adra helps companies to bring the **strategy discussion** and analysis to next level leveraging the ADR convergence.

SMEs and startups:

- Adra helps companies to **enhance their products and services** through the convergence of AI, Data and Robotics and to enlarge the application domains. It allows them to **position** themselves in the developing ADR field and towards the socio-economic challenges.

RTOs and universities:

- Adra helps to **formulate research objectives** in solving major socio-economic challenges. Adra offers its research members opportunities to long-term **collaboration with industry** and to maintain sustainable ADR excellence.

End users, public sector and NGO´s:

- Adra supports end users, public sector and NGOs in **using** ADR technologies to raise productivity and advance socio-economic targets.

Topic groups and task forces open to Adra members

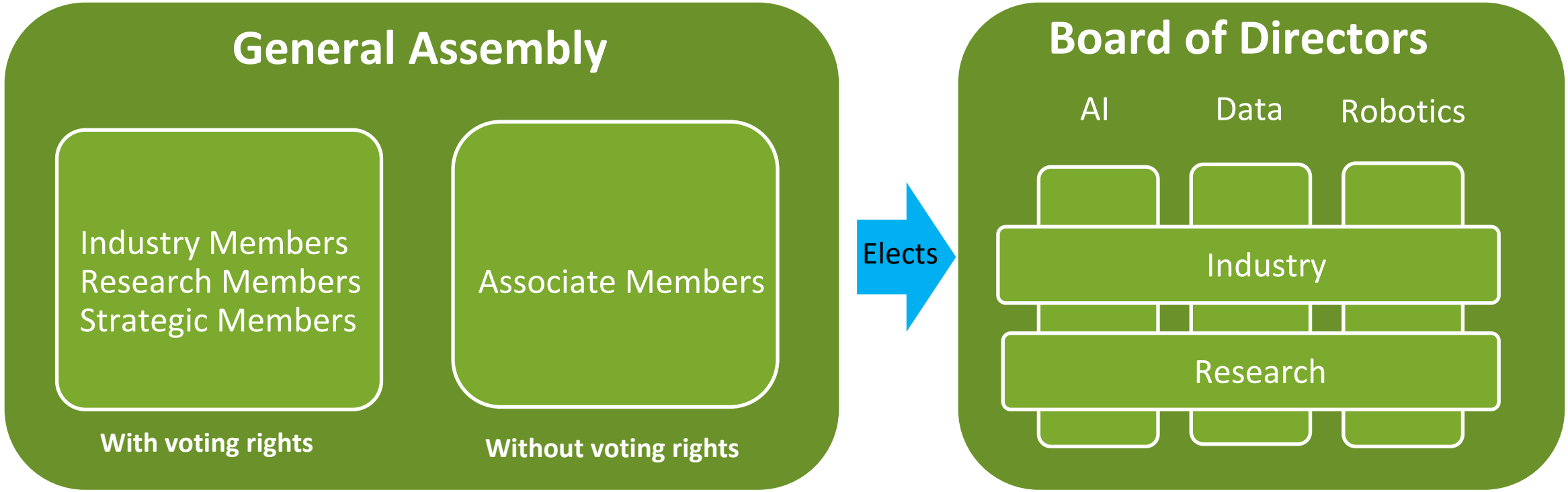
- Standardization
- Policy
- Strategic Research, Innovation and Deployment Agenda (SRIDA)
- Automotive and mobility
- Communication and marketing
- National and regional ADR initiatives (*in progress*)

If you have questions about topic groups or are, as a member, interested to start a new topic group, please contact the Adra secretariat (secretary-general@adr-association.eu)

Adra's approach to European AI, Data and Robotics

- Leverage existing **European strengths** in AI, Data and Robotics
- **Openness** and i**nclusiveness** are essential to ensure success
- A **broad dialogue** is essential for the European innovation eco-system (Start-Ups, SMEs, Large Industry and Research)
- Safeguard **balance** and **representatio**n between constituences and industry/research
- Build the AI, Data and Robotics eco-system on **existing** stakeholder communities.
- Ensure representation of **all** important stakeholders including start-ups/scale-ups, SMEs, regional ecosystems

General Assembly and Board of Directors

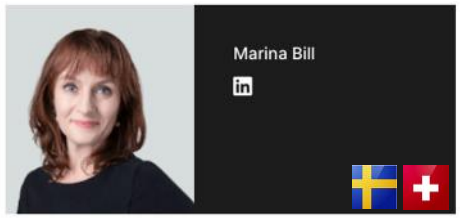


President

Secretary General

President and Founding Board

PRESIDENT



The Adra Office is supported by Adra-e, BDVA, CLAIRE Paris/Inria and euRobotics/University of Twente.

AI


INDUSTRY VP

Clemens Wasner


RESEARCH VP

Morten Irgens


Emanuela Girardi


Petri Myllymäki


Fredrik Heintz


Konstantina Bereta

DATA


INDUSTRY VP

Thomas Hann


RESEARCH VP

Caj Södergard


Laure Le Bars


Milan Petkovic


Edward Curry


Henk-Jan Vink

ROBOTICS


INDUSTRY VP

Renaud Champion


RESEARCH VP

Christophe Leroux


Rich Walker


Anne Waltenberger


Juha Röning


Jon Agirre Ibarbia

Overview of Members

(January 2023)

Membership Category

Industry Member	11
Research Member	40
Associate Member	0
Strategic Member	7
Total	58

Founding Organisations Membership

BDVA Full	17
BDVA Associate	4
Claire	12
Ellis	5
EurAI	4
euRobotics	22
None	19

Members per Country

Belgium	5
Germany	2
Spain	8
France	5
Netherlands	6
Finland	6
Ireland	2
Sweden	3
Norway	2
Greece	5
Slovakia	2

United Kingdom (UK)	2
Poland	1
Italy	1
Turkey	3
Romania	1
Luxembourg	1
Hungary	1
Denmark	1
Switzerland	1

Annual membership Fees

Type of Organisation	Description (total number of employees)	Annual fee	Maximum Discount if member of Founding Organisations
Large Enterprise	>3000 persons employed	10,000.00 €	5,000.00 €
Mid-caps	250 – 3000 persons employed	5,000.00 €	2,500.00 €
SMEs	1- 249 persons employed	2,000.00 €	1,000.00 €
Research and Academia	>= 50 employees	2,000.00 €	1,000.00 €
Small research entity	<50 employees	500.00 €	250.00 €
Strategic members	Any size	3,000.00 €	NA
Start-ups	Any size (3 years)	250.00 €	125.00 €
Others	Any size	500.00 €	250.00 €

Membership Benefits 1/2

- Access to a large network of ADR stakeholders (Industry, Research and policy makers). This facilitates match-making to enter e.g. EU project consortia
- Impact on EU research programs. As a unique contractual partner to EC, Adra is involved in writing the research programs of Horizon Europe concerning AI, Data and Robotics
- Participate in the authoring of the Strategic Research, Innovation and Deployment Agenda (SRIDA)
- Coordinated response through position documents and white papers to consultations, and policy documents
- Improved visibility at EU-level

Membership Benefits 2/2 *

- Propose candidates to the Board of Directors
- Voting right in the General Assembly
- Lead and participate in topic groups and task forces

* for industry and research members. Slightly different rules for strategic and associate members

General Assembly and Board election 2.3.2023

- A whole new Board of Directors will be elected replacing the current founding board
- Adra members have voting rights
- New members: join before 10.2 and you can propose a candidate to the Board. Join before 24.2 to be able to vote.
- Joining: Go to adr-association.eu

Get in touch

adr-association.eu

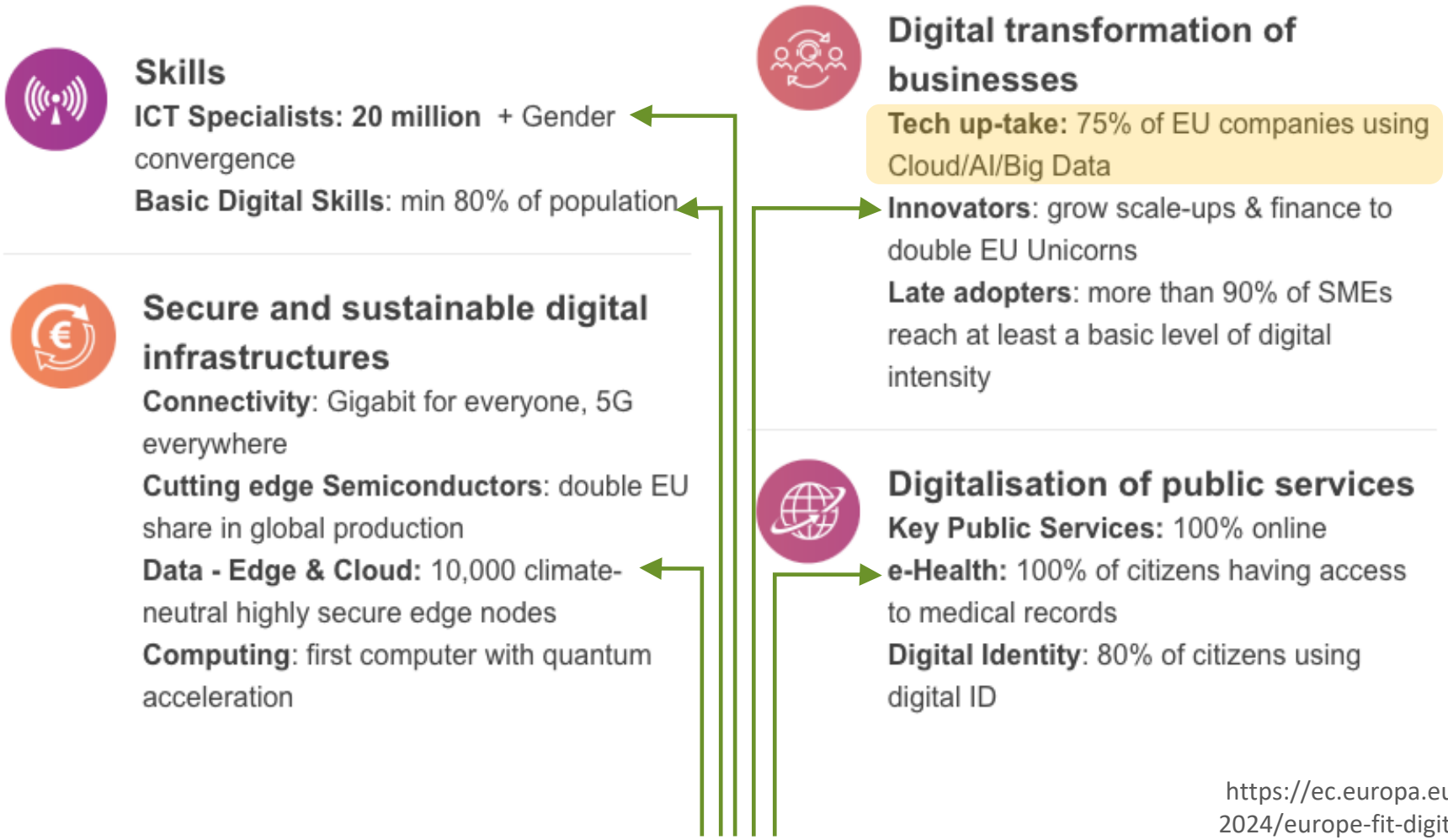
secretary-general@adr-association.eu

www.linkedin.com/company/adr-association

https://mobile.twitter.com/adra_eu_

Extra slides

Europe's Digital Decade: digital targets for 2030



But ADR also needed for

https://ec.europa.eu/info/strategy/priorities-2019-2024/europe-fit-digital-age/europes-digital-decade-digital-targets-2030_en

Digital Economy and Society Index (DESI) 2021 Integration of digital technology

Figure 12 Levels of adoption of AI by sector (% of enterprises)

Sector (Part I)	At least one AI technology	At least two AI technologies	Plans to use
Agriculture, forestry and/or fishing	39%	24%	18%
Manufacturing	47%	27%	16%
Construction	36%	23%	16%
Oil and gas	38%	19%	6%
Waste management	31%	21%	27%
Water and electricity supply	45%	28%	17%
Trade, retail	38%	22%	20%
Transport	36%	22%	20%
Food	36%	26%	20%

Sector (Part II)	At least one AI technology	At least two AI technologies	Plans to use
Accommodation	42%	22%	15%
Recreation activities	37%	24%	11%
IT	63%	43%	12%
Finance, insurance	40%	20%	27%
Real estate	42%	23%	18%
Other technical and/or scientific sectors	43%	22%	18%
Education	49%	21%	21%
Human health	47%	29%	19%
Social work	47%	26%	10%

Base question Q1: What is the current state of adoption in your firm for [AI technologies]?; Base: EU27, N=8661. (Base size represents only EU27 Member States, excluding the UK, Iceland and Norway).

Source: Ipsos, European enterprise survey on the use of technologies based on artificial intelligence, 2020.

ADR deployed and booming in many (all?) sectors

https://digital-strategy.ec.europa.eu/en/policies/desi

Value to special target groups

Big industry:

- Adra helps companies to bring the strategy discussion and analysis to next level leveraging the ADR convergence.

SME:s/startups:

- Adra helps companies to enhance their products and services through the convergence of AI, Data and Robotics and to enlarge the application domains. It allows them to position themselves in the developing ADR field and towards the socio-economic challenges.

RTOs and universities:

- Adra helps to formulate research objectives in solving major socio-economic challenges. Adra offers its research members opportunities to long-term collaboration with industry and to maintain sustainable ADR excellence.

Topic Groups

- FO proposes their group
- BoD mandates
- Chair continues

Single Topic Group

FO1

Adra member

- Member proposes
- BoD proposes
- Group selects Chair

Joint Topic Group

FO1 Adra member

FO2 Adra member.

- BoD proposes
- BoD selects Chair

Core Task Force

Adra member

Adra member

Adra member

Deliverable

Adra Board of Directors

Adra asbl: Types of Membership

Members with voting rights

Industry Members

- Large companies
- Mid-Caps
- Small and Medium Enterprises (“SME”) and Start-ups

Research Members

- Research and Technology Organisations (RTO)
- Universities, university colleges and university departments and laboratories or research groups of universities engaging in research, innovation and education (HES)

Strategic Members

- Not-for-profit organisations having their own members and whose main objectives are of essential value for the Purpose of the Association

Members without voting rights

Associate Members: trade unions, non-governmental organisations, regional clusters, etc. and other stakeholders not falling in the Member categories above

Adra - Partnership – Coordination & Support Action (CSA)

European Commission
Public Side

Co-Programmed
Partnership

Adra Association
Private Side

The AI Data Robotics Association

Adra-e CSA project 2022-24

- Supports Adra Association and Partnership

Adra Status – Chronology and Milestones 1/2

- First Board meeting - April 2021
- Office setup - April 2021
- **Founding of the association -** May 2021
- Election of President Marina Bill - June 2021
- **Signing of MoU with the EC** - June 2021
- InfoDay organised in collaboration with EC and IDEAL-IST – July 2021
- Initial website launched (www.adr-association.eu) and social media (LinkedIn, twitter)
- Start Bi-Weekly BoD meetings, bi-Weekly VP meetings (+ 45 minutes EC) – August 2021
- GA (between founding members) – October 2021
- Launch Event – November 2021

Adra Status – Chronology and Milestones 2/2

- Open for members – December 2021
- Shaping WP23-24 with EC – February – March 2022
- Exchange with National delegates and NCPs – today
- Periodic Welcome Event – starting May 17th
- Infoday with EC – 16/17 June
- **General Assembly** – Monday June 20th
- Launch even 42 HE projects – Monday October 17th

Ongoing sub-committees (by the BoD) :

- Communication and Marketing
- Adra Strategy and Vision
- Policy
- Standardization
- Regulations and Finance
- Recruitment of Secretary General

Bootstrapping the Adra Secretary General's office *A call for action*

- AI is general purpose technology that affects affects nearly all sectors of industry, and has profound impact on modern society and the global challenges it faces.
- The strategy for the promotion and adoption of artificial intelligence is naturally European
- The heart of the European movement of innovation of AI is the AI, Data and Robotics Association, as private partner in the ADR partnership with the European Commission
- Your engagement and coordination with existing European and national initiatives is essential to effectively generate the necessary stakeholder mobilization

Today, Adra provides a model for cooperation that **leverages existing communities** and their specific expertise. It is also structured to **assure balance and representation**. We need **your support and hands** to be effective.

How to apply

STEP 1: Download the template of the Adra Membership Application form from the Adra website *www.adr-association.eu*

STEP 2: Send an electronic copy of the Adra Membership Application Form filled in and duly signed to *membership@adr-association.eu*

STEP 3: Your application will be reviewed by the Adra Secretary General / Office that will inform you if any modifications or additional information needed.

STEP 4: The Board of Directors reviews the application and decides on granting the temporary membership status.

STEP 5: The General Assembly grants the final membership status upon proposal of the BoD

Do you need any support? Send an email to *secretary-general@adr-association.eu*

The AI Data Robotics Association

Welcome

HORIZON-CL4-2023-DATA-01-02

Integration of data life cycle, architectures and standards for complex data cycles and/or human factors, language (AI, data and robotics partnership) (RIA)

EU contribution per project: EUR 9 million

Indicative budget of the call: EUR 45 million

Type of Action: RIA

TRL: Achieve TRL 4-5 by the end of the project

Eligibility conditions: The conditions are described in General Annex B. The following exceptions apply:

If projects use satellite-based earth observation, positioning, navigation and/or related timing data and services, beneficiaries must make use of Copernicus and/or Galileo/EGNOS (other data and services may additionally be used).

HORIZON-CL4-2023-DATA-01-02

Expected impact (in the Destination 3 introduction):

Proposals for topics under this Destination should set out a credible pathway to contributing to world-leading data and computing technologies, and more specifically to one or several of the following impacts:

- **Improved European leadership in the global data economy**
- **Maximised social and economic benefits from the wider and more effective use of data**
- **Reinforced Europe's ability to manage urgent societal challenges (e.g. data for crisis management, digital for clean)**

HORIZON-CL4-2023-DATA-01-02

Expected outcomes:

- ability to process vast volumes data as one of the key enablers for other technological developments, supporting the competitiveness of the EU's industrial ecosystems;
- successful deployment of data spaces involving several sectors of economy or society;
- improve data access (in line with the FAIR principles), data sovereignty, data interoperability and data protection as an essential factor in the development of sustainable value chains respecting all stakeholder interests, particularly SMEs, but also the public sector as data providers and innovation/market ecosystem enablers.

The European Strategy for Data calls for actions to support and promote data sharing and the use of data for social and economic benefit.

FAIR = Findable, Accessible, Interoperable, Re-usable

Topic HORIZON-CL4-2023-DATA-01-02

Scope (see the Work Programme for full text!):

- Address the **entire data life cycle** from data generation/collection to the final use and deletion of data;
- Build on existing and emerging **standards, models and architectures** and complement/expand them as necessary in view of **interoperability** of systems and **portability** of data, especially between sectors, between private and public sectors and between different communities/constituencies of actors;
- Enable allocation and enforcement of data-related rights, obligations and responsibilities across the life cycle.
- Address relevant **human language issues** at all stages of data life cycle, addressing the **social and cultural factors** as necessary; involve "**human in the loop**" when relevant/necessary
- Build on or seek **collaboration** with existing projects and **develop synergies** with other relevant European, national or regional initiatives, funding programmes and platforms
- Develop use cases or pilots addressing or involving **at least three different common European Data spaces** and/or related ecosystems
- Liaise with **Data Spaces support centre** (DSSC) funded under the Digital Europe programme

Topic HORIZON-CL4-2023-DATA-01-02

Useful links:

- https://ec.europa.eu/info/funding-tenders/opportunities/docs/2021-2027/horizon/wp-call/2023-2024/wp-7-digital-industry-and-space_horizon-2023-2024_en.pdf
- https://ec.europa.eu/info/funding-tenders/opportunities/portal/screen/opportunities/topic-details/horizon-cl4-2023-data-01-02

WORLD LEADING DATA AND COMPUTING TECHNOLOGIES 2023

From Cloud to Edge to IoT

HORIZON-CL4-2023-DATA-01-04

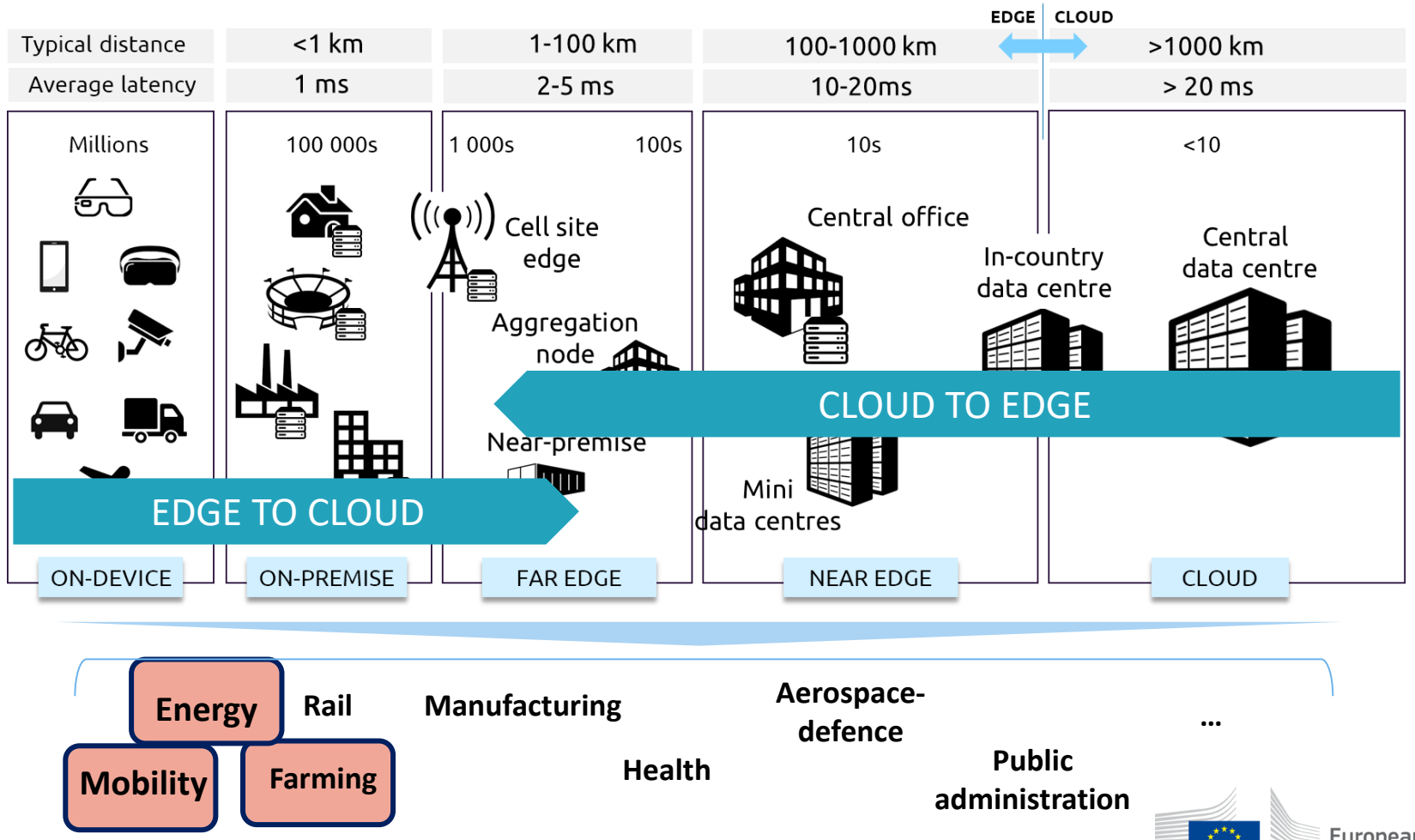
Cognitive Computing Continuum: Intelligence and automation for more efficient data processing (RIA)

Maria Tsakali
Cloud and Software (Unit E2)
DG Connect
Maria.Tsakali@ec.europa.eu

Research and Innovation

Digital Decade objectives for the cloud & edge computing continuum by 2030

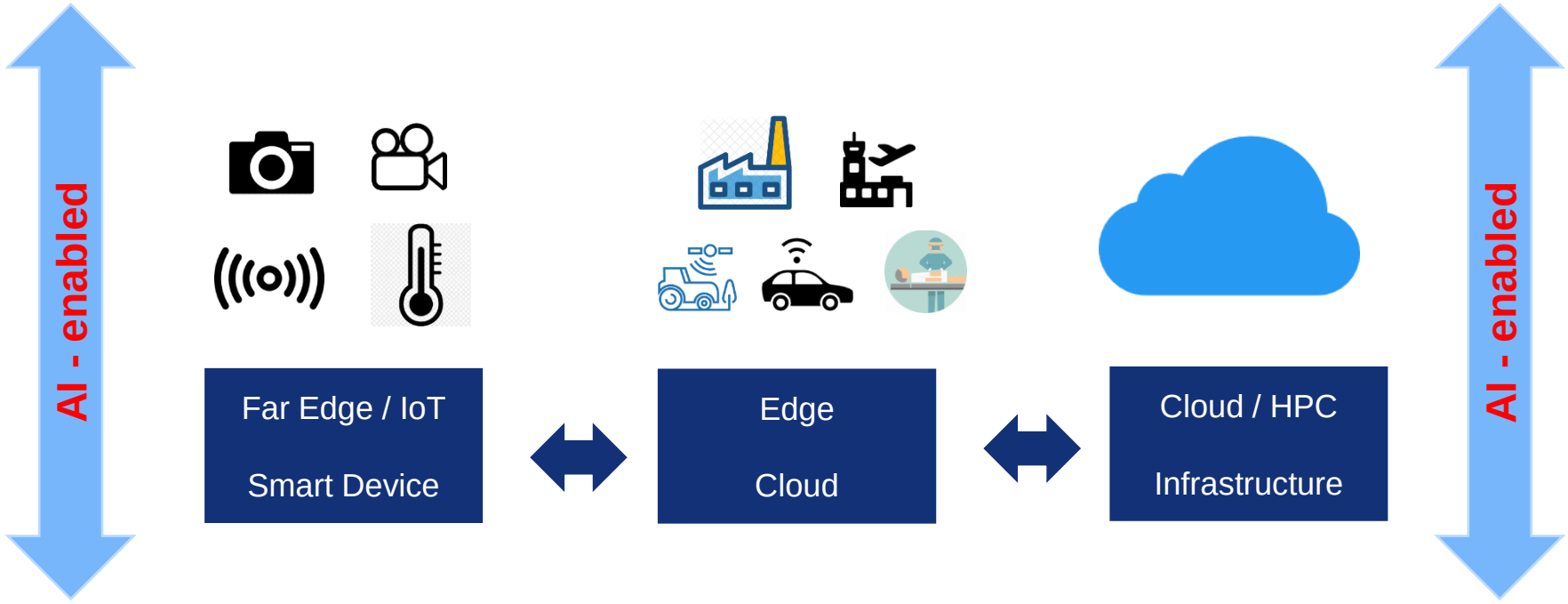
- ✓ **>10.000 edge nodes by 2030**
- ✓ **75% of cloud uptake by EU enterprises in 2030**



European Commission

Cloud – Edge – IoT computing continuum
R&I on the next generation Cloud-to-Edge-to-IoT technologies

An AI-enabled Cloud-Edge-IoT Continuum

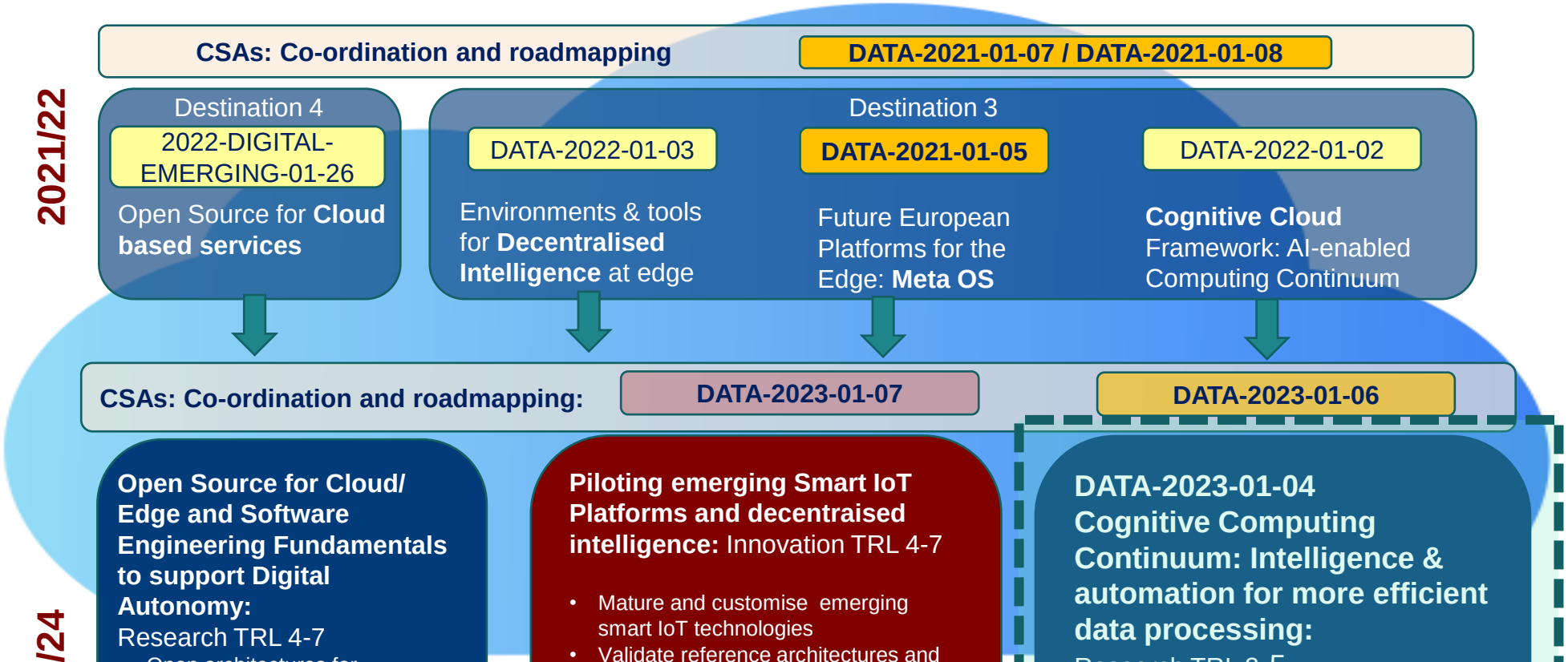


Seamless, transparent and trustworthy integration of diverse computing and data environments spanning from core cloud to edge to IoT

INTELLIGENCE, AUTOMATION and INTEROPERABILITY ➔ ADAPTABILITY

European Commission

From Cloud to Edge to IoT for European Data Horizon Europe Work Programme 2023/24



European Commission

From Cloud to Edge to IoT for European Data - HORIZON-CL4-2023-DATA-01-04: Cognitive Computing Continuum: Intelligence and automation for more efficient data processing (RIA)

28 Million EUR (LUMP SUM)

TRL2-5, 4-6 mil. EUR per project

Scope:

- **AI-enabled Management of the whole computing continuum enabled by Swarm computing and decentralized intelligence. This will allow services and data to be seamlessly processed across various providers, connectivity types and network zones.**
- **Novel automated management tools, programming models, learning and decision-making methods, and approaches able to cope with end-to-end security and identity management, resources heterogeneity, extreme scale and fault-tolerance together with elasticity to flexibly allocate resources and tasks.**
- **Intelligent compute, data and code orchestration mechanisms to allow efficient value extraction from the huge volumes of generated data while supporting resource dynamicity and scalability across the compute continuum.**
- **Optimization of energy efficiency and ecological sustainability taking into account end-to- end data processing across the continuum.**

European Commission

From Cloud to Edge to IoT for European Data - HORIZON-CL4-2023-DATA-01-04: Cognitive Computing Continuum: Intelligence and automation for more efficient data processing (RIA)

28 Million EUR (LUMP SUM)

TRL2-5, 4-6 mil. EUR per project

Expected Outcome:

- Enhanced openness and strategic autonomy in the evolving data and AI economies across the computing continuum including adapted system integration at the edge and at device level, validation of key sectors and nurturing European value chains to accelerate and steer the digital and green transitions.
- Paving the way to strategic industrial cooperation in data processing required to support future hyper-distributed applications by building open platforms, underpinning an emerging industrial open edge ecosystem critical to establishing a mature European supply chain.
- Establishment of adaptive hybrid computing, cognitive clouds and edge intelligence beyond today's investments on data infrastructure.
- Better international collaboration with trusted partner regions, guaranteeing a minimum level of interoperability, portability thereby fostering competition in the Cloud/Edge services market for the European cloud/edge and software industry and facilitate European access to foreign markets.

European Commission

From Cloud to Edge to IoT for European Data - HORIZON-CL4-2023-DATA-01-04: Cognitive Computing Continuum: Intelligence and automation for more efficient data processing (RIA)

28 Million EUR(LUMP SUM)

TRL2-5, 4-6 mil. EUR per project

Other Important aspects:

RIAs:

- **For security and identity management**, proposals are expected to apply state-of-the-art technologies, develop synergies and relate to activities and outcomes in *Cluster 3 (namely, HORIZON-CL3-2023-CS-01-01: Secure distributed platforms (IoT, Edge, Cloud, Dataspaces) and HORIZON-CL3-2023-CS-01-02: Privacy-preserving and identity technologies*).

- Projects are expected to **develop synergies** and **relate to activities** and outcomes of the Digital Europe Programme (DEP) *(topics 2.1.1, 2.1.2 and 2.1.3*) and any existing or emerging Important Projects of Common European Interest (IPCEI) initiative, IPCEI on Next Generation Cloud Infrastructure and Services.

- Interoperability approaches (based on open standards, interoperability models and open platforms) should be considered where appropriate.

RIAs and CSAs:

- **International cooperation** is encouraged, especially with **Japan and S. Korea**.
  - NO FUNDING by the EU for international entities!

  They need to secure their own funding!

European Commission

HORIZON-CL4-2023-DATA-01-04: Cognitive Computing Continuum: Intelligence and automation for more efficient data processing (RIA)

What are we looking for?

- Development of **generic and advanced AI-enabled Cloud/Edge technologies, mechanisms, techniques, etc. covering the whole continuum.**

  Research on cloud/edge technologies! not in AI

  - For example: hyper-distributed computing approaches encompassing resources from IoT and far-edge constrained devices, to federated fog/edge computing nodes to central cloud computing centres and hybrid cloud models which exploit Artificial Intelligence techniques

- **Beyond State-of-the-art**, **not incremental type of research** →cutting-edge novel approaches, TRL 2-5.

- The proposals should **demonstrate the applicability and viability of the proposed technological solutions** across multiple application domains.

What do we NOT want?

- Using existing Cloud/Edge technologies as an enabler for research in other domains (e.g., AI, IoT, BigData, 5G, etc.)
- Any User Application development using existing Cloud/Edge/AI technologies

European Commission

HORIZON-CL4-2023-DATA-01-04 & 06

Current Project Portfolio and Future Outlook

- HE cloud-edge-iot projects https://eucloudedgeiot.eu/
- H2020 Cloud projects https://www.h-cloud.eu/projects/research-innovation/ and Funding and Tenders (F&T) portal: ICT-40 , ICT-15, ICT-16, HE projects on the F&T portal
- Roadmap published by the Alliance on Industrial Data and Cloud
- **White paper on future cloud research** https://www.h-cloud.eu/news/h-cloud-publishes-final-version-of-white-paper-cloud-computing-in-europe/
- Related videos on future research https://www.h-cloud.eu/videos/
- DEP and IPCEI on Next Generation Cloud Infrastructure and Services
- Lump Sum https://ec.europa.eu/info/funding-tenders/opportunities/portal/screen/programmes/horizon/lump-sum/guidance and Link to the related training https://ec.europa.eu/research/participants/docs/h2020-funding-guide/other/event221020.htm

Thank you!

Maria.Tsakali@ec.europa.eu

HorizonEU

http://ec.europa.eu/horizon-europe
https://digital-strategy.ec.europa.eu/en/policies/cloud-computing

HORIZON-CL4-2023-DIGITAL-EMERGING-01-01

Novel paradigms and approaches, towards AI-driven autonomous robots (AI, data and robotics partnership) (RIA)

We are looking for:

- Achieve substantial "next step autonomy" in robots, undertaking non-repetitive tasks in realistic settings, including Human-Robot interactions, as well as robots acting in isolation, demonstrated in key high impact sectors where robotics has the potential to deliver significant economic and/or societal benefits.
- Deliver a step change in autonomy essential for the diffusion of robots in various industries, sectors and services.
- Accelerate enabling conditions essential for the diffusion of robots in various industries, sectors and services.
- TRL: start at 2-3 and achieve 4-5 at the end of the project
- Indicative project size ~8M€ (Indicative budget: 30M€)

HORIZON-CL4-2023-DIGITAL-EMERGING-01-01

Novel paradigms and approaches, towards AI-driven autonomous robots (AI, data and robotics partnership) (RIA)

We do NOT want:

- Proposals with **limited ambition** on robot autonomy delivering only incremental progress over the scientific state of the art.
- **Non-realistic settings** disconnected from actual needs of key industries, sectors and services (end-user involvement is key)
- Focus on **low impact sectors** with little potential to deliver economic or societal benefits.

- ***DO NOT DEVIATE FROM ADMIN/FORMAL requirements****: e.g. transfer of essential information to annexes to overcome page limits, font size and formatting imposed by the templates…*

5. Who are the types of main stakeholders that are addressed?

6. Is there a key group of actors (eg. Partnership or other) driving this?

HORIZON-CL4-2023-DIGITAL-EMERGING-01-01

Key actors

Types of stakeholders that are addressed:

- Academy and research organizations
- Robot system manufacturers and integrators
- End users

  - Pay attention to requirements on multidisciplinarity + SSH (if human interaction)

HORIZON-CL4-2023-DIGITAL-EMERGING-01-01
Topic evolution

The main focus of this topic is new, but it has close relationship with some topics of the work-programme 2021-2022:

- HORIZON-CL4-2021-DIGITAL-EMERGING-01-11
  Pushing de limit of robotic cognition (RIA)
- HORIZON-CL4-2021-DIGITAL-EMERGING-01-12
  European Network of Excellence Centres in Robotics (RIA)
- HORIZON-CL4-2022-DIGITAL-EMERGING-02-06
  Pushing de limits of physical intelligence and performance (RIA)

This topic is complemented by the topic:

- HORIZON-CL4-2023-DIGITAL-EMERGING-01-02
  Industrial leadership in AI, Data and Robotics – advanced human robot interaction (IA)

HORIZON-CL4-2023-DIGITAL-EMERGING-01-01
Topic evolution

Current project portfolio of RIAs in robotics (Horizon Europe)

2021-DIGITAL-EMERGING-01-11 *Pushing de limit of robotic cognition*:

- *101070066 REGO*
- *101070292 HARIA*
- *101070254 CoreSense*
- *101070165 AGIMUS*
- *101070381 PILLAR-Robots*
- *101070227 CONVINCE*
- *101069536 MOZART*
- *101070136 IntelliMan*
- *101070310 SESTOSENSO*

2021-DIGITAL-EMERGING-01-12 *European Network of Excellence Centres in Robotics*

- *101070596 euROBIN*

HORIZON-CL4-2023-DIGITAL-EMERGING-01-02

Industrial leadership in AI, Data and Robotics – advanced human robot interaction (AI Data and Robotics Partnership) (IA)

We are looking for:

- Proposals must target one of these two scopes (to be identified in the proposal):
  1. Development of **innovative solutions** to address major **application-driven challenges** (min 50% FSTP),
  2. **Large scale pilots** bringing major industries from key application sectors in Europe (FSTP optional)
- To reach the point where human robot interaction adds value and improves the quality of outcome for complex tasks.
- To address challenges in key industries and develop solutions that address human robot interaction at all levels from physical interaction to social interaction in a variety of working environments.
- Boost the innovation potential for wide uptake of AI, Data and Robotics.
- Proposals should include a clear business case and exploitation strategy.
- TRL: start at 3-5 and achieve 6-7 at the end of the project
- Indicative project size ~10M€ (Indicative budget: 30M€)

HORIZON-CL4-2023-DIGITAL-EMERGING-01-02

Industrial leadership in AI, Data and Robotics – advanced human robot interaction (AI Data and Robotics Partnership) (IA)

We do NOT want:

- Academic exercises with **limited potential for commercial exploitation** of the results after the end of the project.
- **Non-realistic settings** disconnected from actual needs of key industries, sectors and services.
- Focus on **low impact sectors** with little potential to deliver economic or societal benefits.

- ***DO NOT DEVIATE FROM ADMIN/FORMAL requirements****: e.g. transfer of essential information to annexes to overcome page limits, font size and formatting imposed by the templates…*

5. Who are the types of main stakeholders that are addressed?

6. Is there a key group of actors (eg. Partnership or other) driving this?

HORIZON-CL4-2023-DIGITAL-EMERGING-01-02

Key actors

Types of stakeholders that are addressed:

- Robot system manufacturers and integrators
- Tech-transfer institutions (e.g. DIHs, competence centers…)
- Academy and research organizations
- End users

  - Pay attention to requirements on multidisciplinarity + SSH (if human interaction)

HORIZON-CL4-2023-DIGITAL-EMERGING-01-02
Topic evolution

The main focus of this topic is new, but it has close relationship with some topics from the work-programme 2021-2022:

- HORIZON-CL4-2021-DIGITAL-EMERGING-01-11
  AI, data and Robotics for the Green Deal (IA)
- HORIZON-CL4-2021-DIGITAL-EMERGING-01-12
  AI, Data and Robotics at work (IA)
- HORIZON-CL4-2022-DIGITAL-EMERGING-02-05
  AI, data and robotics for industry optimisation (including production and services) (IA)
- HORIZON-CL4-2022-DIGITAL-EMERGING-02-07
  Increased robotics capabilities demonstrated in key sectors (IA)

This topic is complemented by the topic:

- HORIZON-CL4-2023-DIGITAL-EMERGING-01-01
  Novel paradigms and approaches, towards AI-driven autonomous robots (AI, data and robotics partnership) (RIA)

HORIZON-CL4-2023-DIGITAL-EMERGING-01-02

Topic evolution

Current project portfolio of IA (Horizon Europe):

101070080	*DARROW*	*101070588*	*HACID*
101070076	*CLARUS*	*101069994*	*EARASHI*
101070046	*ALCHIMIA*	*101070600*	*SOFTENABLE*
101070115	*TUBERS*	*101069499*	*FAIRWork*
101070496	*Smart Droplets*	*101070443*	*GEYEDANCE*
101070405	*DIGIFOREST*	*101070440*	*FEROX*
101070320	*ROMAIN*	*101070604*	*SIMAR*
101070321	*GRINNER*		
101070524	*RECLAIM*		

A

THE EU RESEARCH & INNOVATION PROGRAMME

2021 – 2027

ADRA Info Day

Destination 6: A human-centred and ethical development of digital and industrial technologies

European Commission

Research and Innovation

HORIZON-CL4-2023-HUMAN-01-01

Efficient trustworthy AI - making the best of data (AI, Data and Robotics Partnership) (RIA)

European Commission

HORIZON-CL4-2023-HUMAN-01-01

Efficient trustworthy AI - making the best of **data** (AI, Data and Robotics Partnership) **(RIA)**

- **EU contribution per project: EUR 7-9 million**
- **Indicative budget of the call: EUR 35 million**
- **TRL: Achieve TRL 4-5 by the end of the project**

- Eligibility conditions are described in **General Annex B**. The following exceptions apply: If projects use satellite-based earth observation, positioning, navigation and/or related timing data and services, beneficiaries must make use of Copernicus and/or Galileo/EGNOS (other data and services may additionally be used)
- To ensure a balanced portfolio coverage, grants will be awarded to applications not only in order of ranking but at least also to the **highest ranked proposals for each of the two focus areas**, provided that the applications attain all thresholds

HORIZON-CL4-2023-HUMAN-01-01

Efficient trustworthy AI - making the best of data (AI, Data and Robotics Partnership) **(RIA)**

We are looking for:

- Optimized AI solutions: optimizing model design and data usage to maximize accuracy and robustness.
- Ensure in general, the pipeline of high-quality, representative, unbiased and compliant training data for AI development in all relevant sectors
- Support data preparation and AI training processes that lead to efficient and more trustworthy AI

HORIZON-CL4-2023-HUMAN-01-01 - Focus

- automated and AI-based mining, harvesting, selection, cleaning, annotation, and/or enrichment/augmentation of data for AI; generating and using synthetic data to reduce the need for large volumes of real and potentially sensitive data; validating the efficiency of these processes in AI systems;
- lighter, less data-intensive and less energy-consuming AI models, optimized learning processes that require less input (data efficient AI) without degrading the quality of the output; machine learning methods and architectures that deal with lower volumes such as transfer learning; one-shot learning; continuous and/or lifelong learning.

! Proposals should clearly mention which of the two areas will be their main focus area.

HORIZON-CL4-2023-HUMAN-01-01

Efficient trustworthy AI - making the best of **data** (AI, Data and Robotics Partnership) **(RIA) –** additional information

- contribute to increasing **data efficiency** and **energy efficiency** of **AI**, and rationalize the **provision of data for AI**. The work should support a**ppropriate AI paradigms** (central, distributed, dynamic, hybrid**), responding** and **adapting** easily to the needs of the use situation, and to the **changing characteristics**, **availability** and **use conditions** for **data**.
- Target AI systems should be **appropriately evaluated**, and **results analysed** and **fed back** to ensure **continuous improvement** of the **“data for AI” pipeline.**

HORIZON-CL4-2023-HUMAN-01-01

Efficient trustworthy AI - making the best of data (AI, Data and Robotics Partnership) **(RIA) –** additional information

- The proposal should describe the **characteristics and availability** of the data to be used within the project and explain how the possible privacy and IPR issues related to the data are addressed.
- In order to achieve the expected outcomes, **international cooperation** is **encouraged**, in particular with Canada and India.

HORIZON-CL4-2023-HUMAN-01-01

Efficient trustworthy AI - making the best of data (AI, Data and Robotics Partnership) **(RIA)**

We do NOT want:

- Proposals with limited ambition delivering only incremental progress over the scientific state of the art.

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HORIZON-CL4-2023-HUMAN-01-02

Large Scale pilots on trustworthy AI data and robotics addressing key societal challenges(AI, Data and Robotics Partnership) (RIA)

European Commission

HORIZON-CL4-2023-HUMAN-01-02

Large Scale pilots on trustworthy AI data and robotics addressing key societal challenges (AI Data and Robotics Partnership) **(IA)**

- **EU contribution per project: EUR 8 million**
- **Indicative budget of the call: EUR 24 million**
- **TRL: Achieve TRL 6-7 by the end of the project**

- Eligibility conditions are described in **General Annex B**.
- All proposals should demonstrate the assessment criteria upon which the proposed sectors/use-cases have been selected (e.g. in terms of socioeconomic factors, etc.)
- involvement of end-users in the requirement and validation of the pilots to ensure human-centric approach and maximise acceptance

HORIZON-CL4-2023-HUMAN-01-02: Large Scale pilots on trustworthy AI data and robotics addressing key societal challenges (AI Data and Robotics Partnership) (IA)

We are looking for:

- Strengthening EU's ecosystem of AI, Data and Robotics excellence and innovation in world class foundational and application-inspired and application-oriented research;
- Technology progress in AI addressing major challenges hampering the deployment of AI, Data and Robotics technologies;
- Wide uptake of AI, Data and Robotics technologies by industry and end-users towards the Digital Decade targets for 2030.

HORIZON-CL4-2023-HUMAN-01-02

We do NOT want:

- Academic focus with limited potential for commercial exploitation of the results after the end of the project.
- Lack of or limited **end user** involvement (human-centric approach)
- Lack of critical mass of industry and therefore non-realistic settings disconnected from actual needs of key industries, sectors and services.
- Focus on low impact sectors with little potential to deliver economic or societal benefits.
- *DEVIATIONS FROM ADMIN/FORMAL requirements: font size and formatting imposed by the templates.*

5. Who are the types of main stakeholders that are addressed?

6. Is there a key group of actors (eg. Partnership or other) driving this?

HORIZON-CL4-2023-HUMAN-01-02
Key actors

Types of stakeholders that are addressed:

- Academy and research organizations
- Critical mass of industry in targeted sectors/applications (incl. SMEs and startups)
- End user involvement (human centric approach)

Key group of actors driving this:

- AI, Data and Robotics Partnership
  https://adr-association.eu/

The AI Data Robotics Association

HORIZON-CL4-2023-HUMAN-01-04

Open innovation: Addressing Grand challenges in AI (AI Data and Robotics Partnership) (CSA)

European Commission

HORIZON-CL4-2023-HUMAN-01-04

Open innovation: Addressing Grand challenges in AI (AI Data and Robotics Partnership) (CSA)

- **EU contribution: EUR 4 million**
- **Indicative budget of the call: EUR 4 million**
- **TRL:** Achieve **TRL 4-5** by the end of the project
- **FSTP: minimum 50%** of the requested EU funding
- The support to **third parties** can only be provided in the form of **prizes**.
- The maximum amount to be granted to each third party is **EUR 500.000** to address open innovation challenges on key important S&T challenges and drive general progress on important tasks through a common challenge/benchmark problem.
- Eligibility conditions are described in **General Annex B.**

HORIZON-CL4-2023-HUMAN-01-04

We are looking for:

- Demonstrate and reinforce Europe's research excellence in AI by driving substantial scientific progress in the following major scientific & technological AI areas
- Develop prestigious AI open innovation challenges that will mobilise wide participation of top scientists from academia, industry including start-ups and as well as young teams and rising stars from all over EU and Associated countries.
- Substantially increase interest from industry in AI (incl. SMEs and start-ups), in particular from key socio-economic sectors for Europe, and contributing to uptake of research results by industry

HORIZON-CL4-2023-HUMAN-01-04

Aim of open innovation challenges:

- Attract outstanding talent and the best research teams to tackle key scientific and technological AI challenges, of relevance to industry.
- Drive substantial and broad scientific progress in key AI areas with the aim to reinforce the research excellence in Europe.
- Enable strong cooperation and co-creation between academia and industry
- Attract industry and business interest in demonstrating advanced performances meeting the needs of user industry, in view of fostering deployment and business opportunities in Europe.
- Define a process that fosters the uptake of developed algorithms/solutions across Europe

HORIZON-CL4-2023-HUMAN-01-04:

CSA should prepare **at least** three open innovation challenges addressing challenges in collaboration with the projects funded under the following topics:

- Optimisation (in collaboration with CL4-2023-HUMAN-01-01)
- natural language understanding and interaction (in collaboration with CL4-2023-HUMAN-01-03)
- Explainability, robustness (with CL4-**2024**-HUMAN-01-06)
- and collaborative intelligence (with CL4-**2024**-HUMAN-01-07)

The projects funded through these calls should participate in the respective open innovation challenges, and can receive rewards, but will not be eligible to receive prize money as they are already funded.

HORIZON-CL4-2023-HUMAN-01-04:

Proposals are expected to:

- Provide a **sound methodology** for the **design** of **AI challenges** as **open innovation** challenges and/or **benchmarks**
- Provide a **convincing approach** to **attract** the best teams from academia and industry, incl. start-ups and SMEs, students, rising stars and newcomers
- Address all aspects of running open innovation challenges and best exploit them to maximise the visibility of AI to the wider audience.
- Mobilise external partners (incl. from industry)
- Collaborate with the AI on Demand Platform, the AI, Data and Robotics Partnership, the Networks of AI excellence centres, and projects funded under CL4-2023-HUMAN-01-01+03, CL4-2024-HUMAN-01-06+07, as well as other relevant initiatives.

HORIZON-CL4-2023-HUMAN-01-04

Open innovation: Addressing Grand challenges in AI (AI Data and Robotics Partnership) **(CSA)**

We do NOT want:

- Proposals with limited ambition and plans delivering only incremental progress over the scientific state of the art.
- Lack of expertise to organize, plan and to attract and engage outstanding talent and best research teams in the challenges
- Limited visibility of the innovation challenges

DO NOT DEVIATE FROM ADMIN/FORMAL requirements: font size and formatting imposed by the templates.

5. Who are the types of main stakeholders that are addressed?

6. Is there a key group of actors (eg. Partnership or other) driving this?

HORIZON-CL4-2023-HUMAN-01-04
Key actors

Types of stakeholders that are addressed:

- Academy, research organizations and organizations having experience with carrying out innovation challenges
- industry (incl. SMEs and startups)

Key group of actors driving this:

- AI, Data and Robotics Partnership
  https://adr-association.eu/

The AI Data Robotics Association

#HorizonEU

THE EU RESEARCH & INNOVATION PROGRAMME

2021 – 2027

PAWEL DOBOSZ

Adra Infoday

3 February 2023

Destination 6: A human-centred and ethical development and industrial technologies

HORIZON-CL4-2023-HUMAN-01-03: Natural Language Understanding and Interaction in Advanced Language Technologies (AI Data and Robotics Partnership) (RIA)

Research and Innovation

HORIZON-CL4-2023-HUMAN-01-03

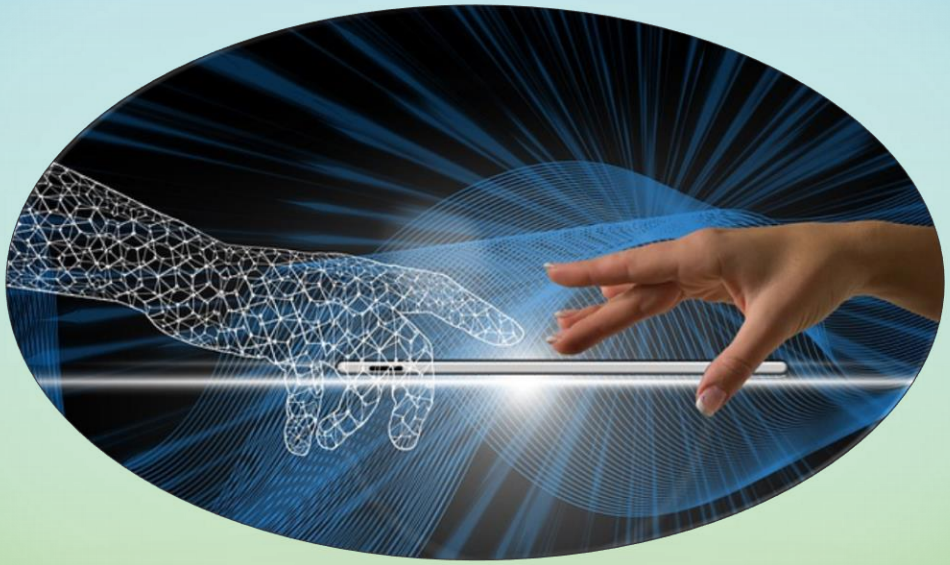
Natural Language Understanding and Interaction in Advanced Language Technologies

(AI Data and Robotics Partnership)

European Commission

CHALLENGE

Effective AI-based human-machine interaction and collaboration



European Commission

NATURAL LANGUAGE UNDERSTANDING AND INTERACTION IN ADVANCED LANGUAGE TECHNOLOGIES

TOPIC BUDGET	EU CONTRIBUTION PER PROJECT	TYPE OF ACTION	TRL
			
20 Mio	6-8 Mio *(3 projects)*	RIA	TRL 2-5

European Commission

What are we looking for?

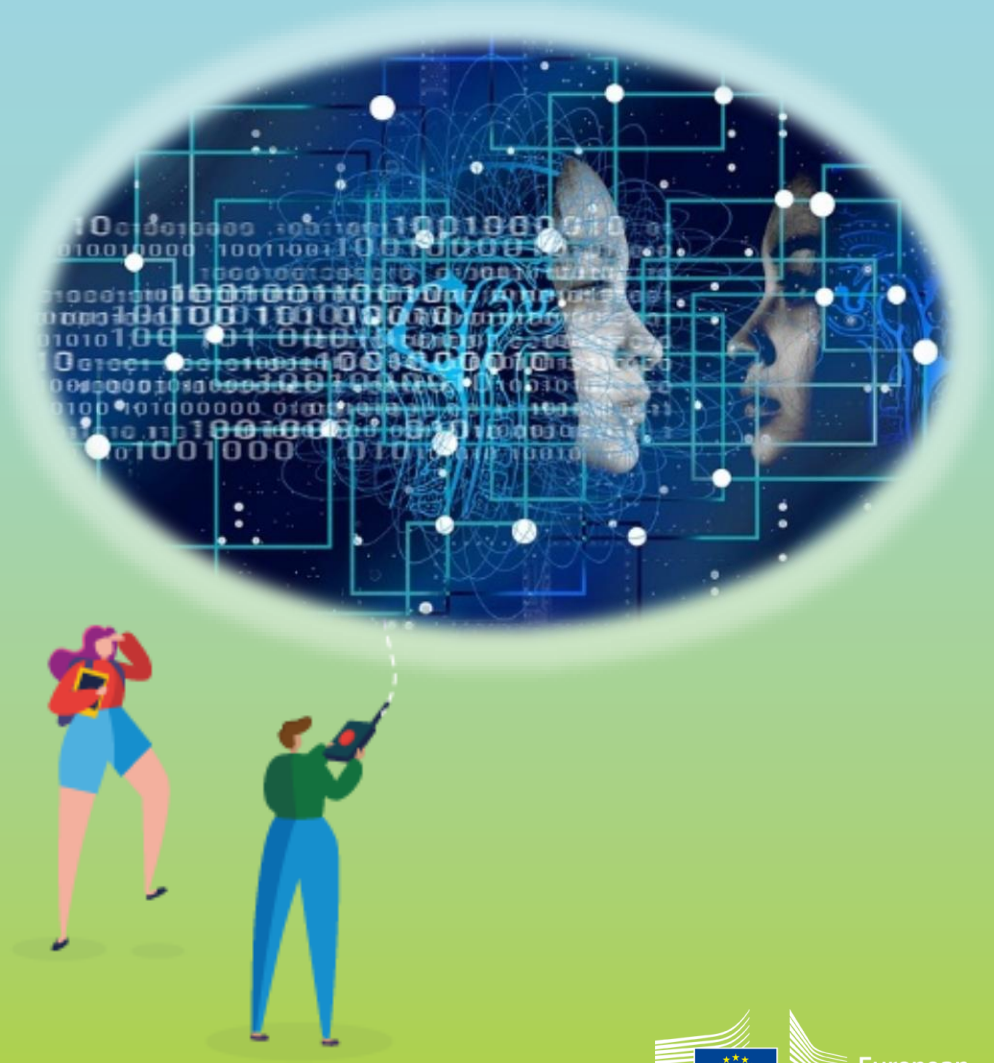
EXPECTED OUTCOMES (1/4)

Development of **natural language understanding and interaction** in advanced language technologies, based on **context-aware language models** able to

- further integrate **long-term general knowledge** and
- **derive meaning**

in order to

- develop automated reasoning
- and enhanced interaction skills.

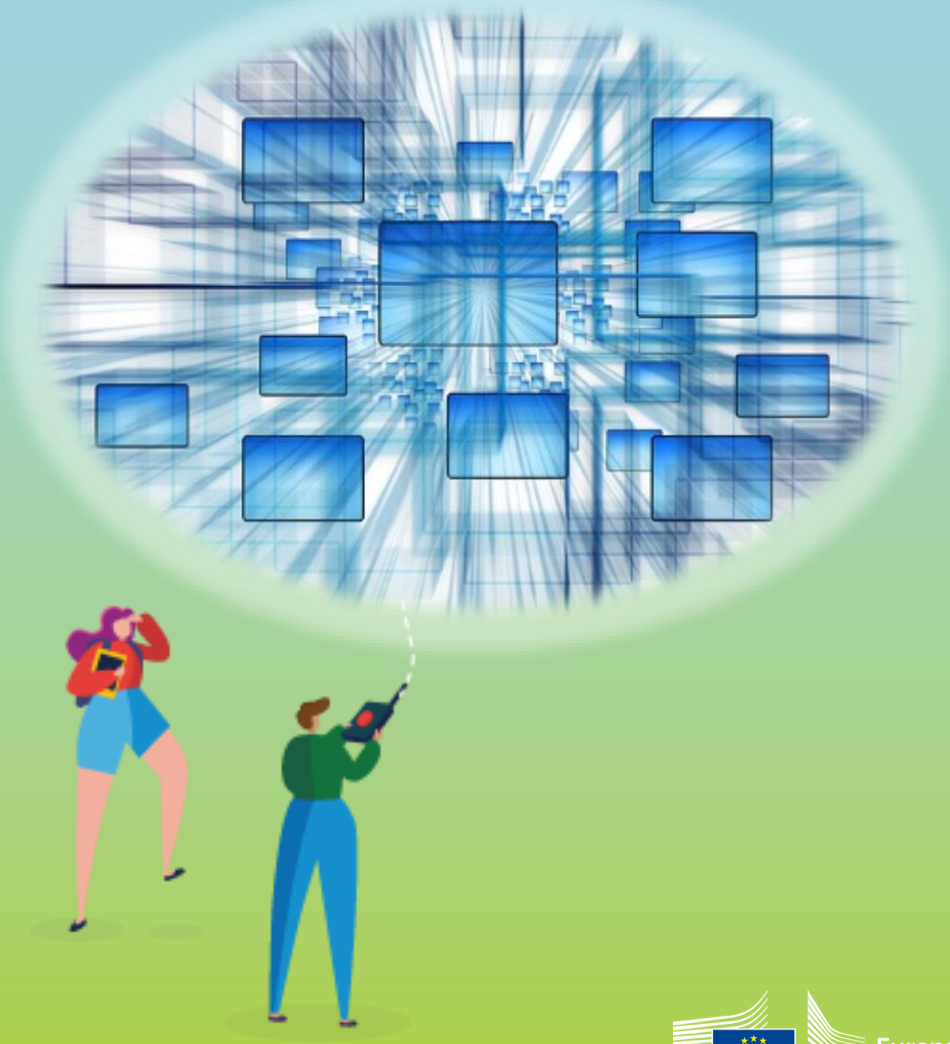


European Commission

EXPECTED OUTCOMES (2/4)

Effective multilingual and bias-controlled language models, capable of

- learning from smaller language corpora,
- efficient in computing and
- respectful of European values.



European Commission

EXPECTED OUTCOMES (3/4)

AI systems and solutions based on novel multilingual pre-trained language models that have assimilated

- cross-language and
- cross-cultural knowledge

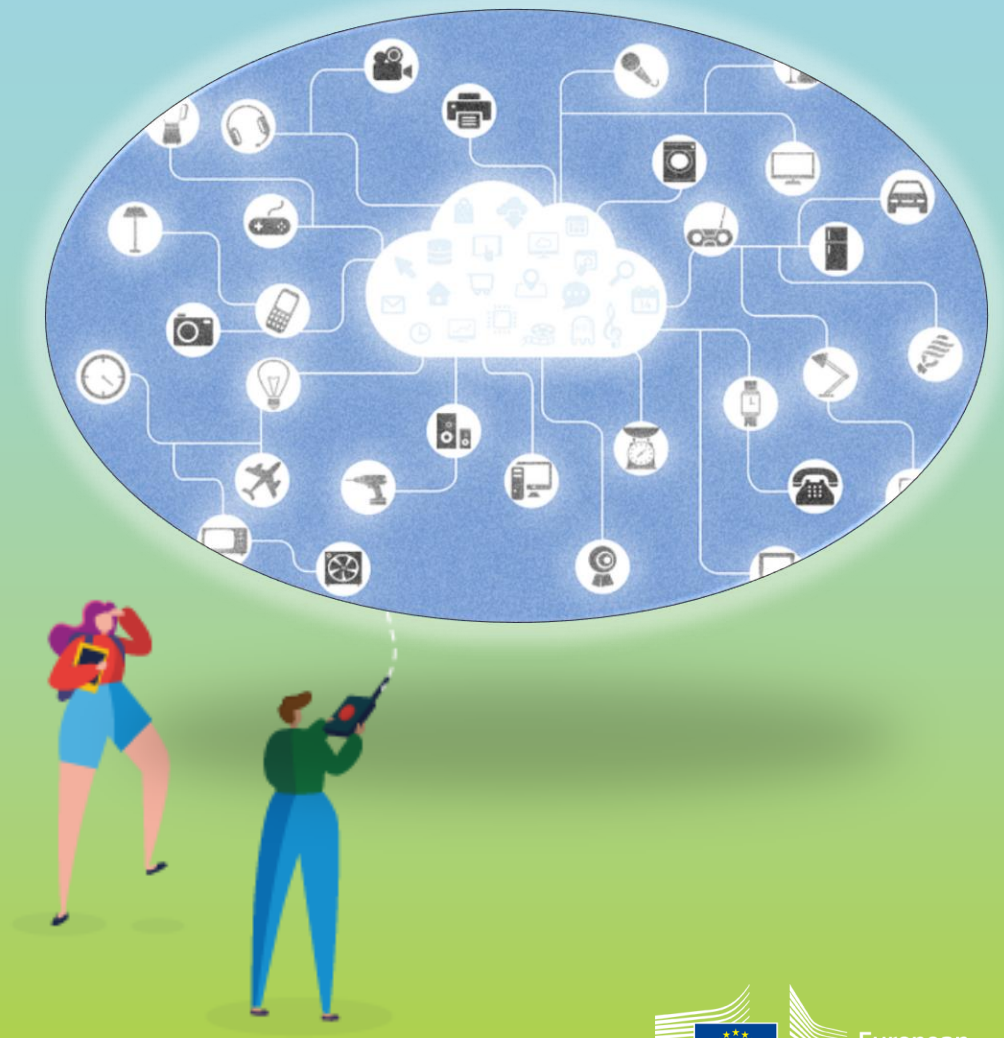
through

- textual and
- speech input.

European Commission

EXPECTED OUTCOMES (4/4)

Higher uptake of innovative language technology solutions by European companies, providing extensive language coverage of AI-enabled applications and services in Europe.



European Commission

SCOPE (1/6)

Improve context-aware human-machine interaction to increase

- understanding and
- exploitation

of

- the interaction context and
- content in multimodal settings,

thus increasing responsiveness of interactive AI solutions, such as

- smart assistants,
- conversational and dialogue systems,
- content generation models, etc.

AND/ OR..

European Commission

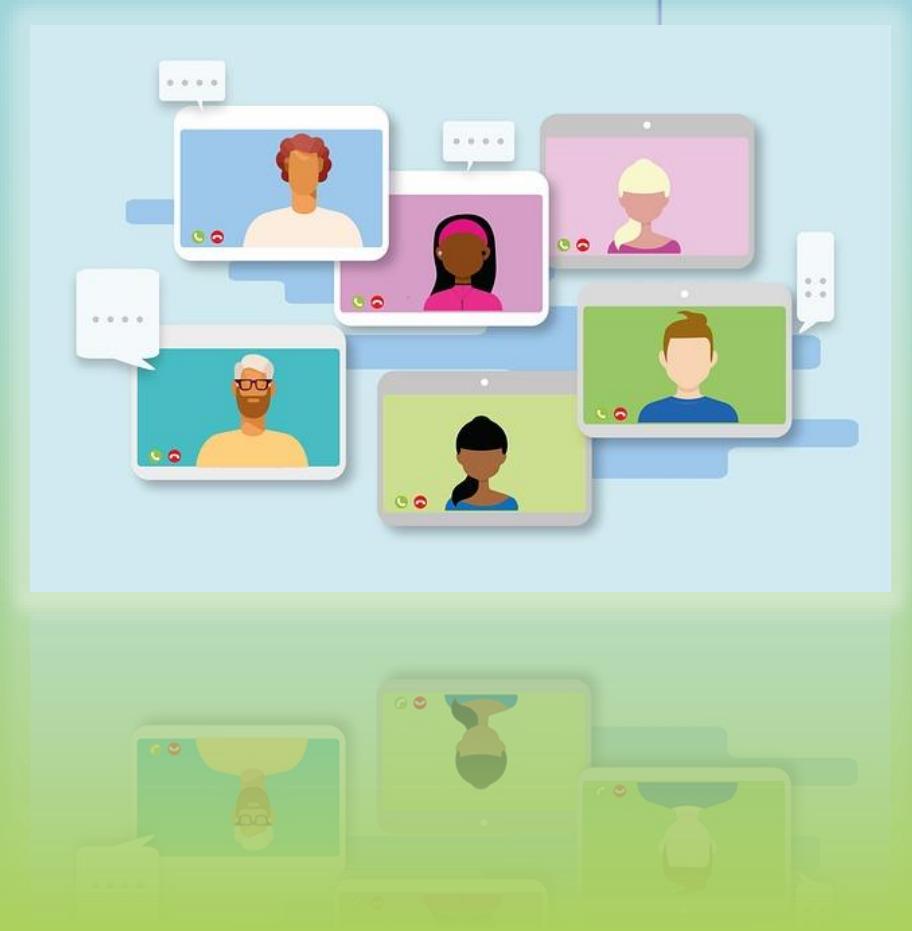
SCOPE (2/6)

..**support and enhance seamless human-to-human communication** across languages e.g. by means of

- automatic translation or
- interpretation (incl. automatic subtitling) in real time

with a greater understanding of

- the communication context and
- the meaning involved in it.



European Commission

SCOPE (3/6)

AT LEAST ONE OF THE FOLLOWING:

- **Developing novel methods and techniques for producing context-aware models**, which incorporate
  - factual-based structured and
  - unstructured knowledge

in

- broader situational and
- temporal information,

and continual learning to achieve natural

- behaviour and
- reasoning

in all intended settings.

European Commission

SCOPE (4/6)

- **Improving large pre-trained multilingual language models** to cover a large set of languages, with

- a high level of natural language understanding and
- the ability to efficiently add more languages, including low-resource ones, via
- transfer or
- language-independent learning methods.

SCOPE (5/6)

- **Improving language-independent and bias-controlling algorithms and methods for language model training and usage efficiency** in terms of data, time and energy consumption while retaining performance, accuracy and general usability.

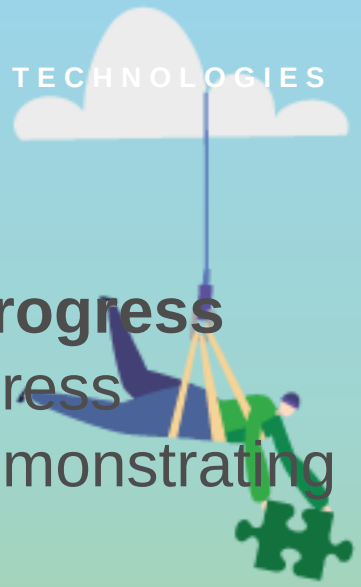
SCOPE (6/6)

- **Developing language representations**, encompassing an effective combination of multilingual, symbolic and sub-symbolic knowledge and allowing systems to perform cross-cultural reasoning in various contextual tasks.

CONDITIONS (1/2)

- ✓ **Appropriate expertise**, incl. data science, computer science, computational linguistics, machine learning, natural language processing, biases in language models, etc.
- ✓ **Building on existing standards and contributing to standardisation.**
- ✓ **Resulting in findable, accessible, interoperable and reusable research data** including metadata schemas and ontologies.

CONDITIONS (2/2)



- ✓ Embedding **mechanisms to assess and demonstrate progress** (qualitative and quantitative KPIs, benchmarking and progress monitoring, as well as illustrative application use-cases demonstrating concrete potential added value).
- ✓ **Sharing communicable results with the European R&D community** through the AI-on-demand platform, Common European Data Spaces (esp. Language Data Space), etc.
- ✓ **Participation in the innovation challenges**.

European Commission

What do we NOT want?

- Simple copying / refreshing of existing ideas/ technologies/ solutions.
- Proposals where language modelling technologies and their evident applications are not the main subject.
- Proposals with a vague / imprecise description of the action.

Topic evolution

HORIZON-CL4-2021-HUMAN-01-13
eXtended Reality Modelling (RIA)

HORIZON-CL4-2023-HUMAN-01-03
Natural Language Understanding and Interaction in Advanced Language Technologies (AI Data and Robotics Partnership) (RIA)

European Commission

Current project portfolio

SERMAS (**Socially-acceptable Extended Reality Models and Systems**)
https://cordis.europa.eu/project/id/101070351

UTTER (**Unified Transcription and Translation for Extended Reality**)
https://cordis.europa.eu/project/id/101070631

VOXReality (**Voice driven interaction in XR spaces**)
https://cordis.europa.eu/project/id/101070521

European Commission

Key actors

Leading research entities with expertise in:

- **Artificial Intelligence**, especially **Natural Language Processing**, **Data Science**, **Computational Linguistics**, etc.

Industrial users of language modeling technologies:

- **Communication**, **Telepresence**, **Smart Assistants**, **Chatbots**, **Content Generation**, **Internet of Things**, **Robotics**, etc.

Additional/ background documents

https://digital-strategy.ec.europa.eu/en/policies/language-technologies

https://www.european-language-technology.eu/

https://live.european-language-grid.eu/

https://european-language-equality.eu/

https://www.lr-coordination.eu/

Future Outlook

Artificial Intelligence Index Report 2022
Stanford University
https://aiindex.stanford.edu/report/

2022 Tech Trends Report, Artificial Intelligence
Future Today Institute
https://futuretodayinstitute.com/trends/

State of AI Report 2022
Nathan Benaich, Ian Hogarth
https://www.stateof.ai/

More information

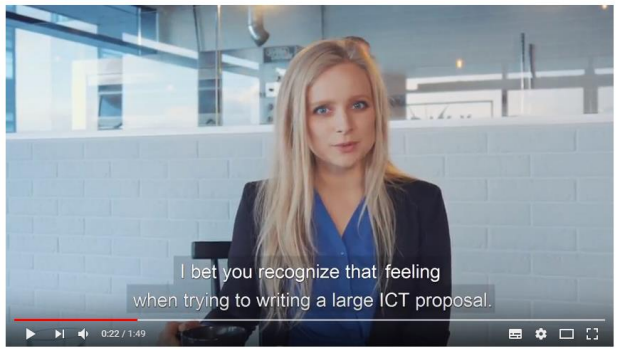
Call opening: 8/12/2022
Call deadline: **29/03/2023**
Call page: https://ec.europa.eu/info/funding-tenders/opportunities/portal/screen/opportunities/topic-details/horizon-cl4-2023-human-01-03

European Commission

Thank you for your questions

HorizonEU

http://ec.europa.eu/horizon-europe



Ideal ist Promotional Video
https://www.youtube.com/watch?v=zIdtz1yLKrE

Made up individuals with lots of experience to help you!

Ideal-ist has been active since 1996!

Who we are?

from 48+ countries!

Albania Argentina Armenia Austria Azerbaijan Belarus Belgium -Brussels Belgium -Federal Belgium -Flanders Belgium -Wallonia Bolivia Bulgaria Canada Croatia Cyprus Czech Republic Denmark Dominican Republic Estonia Faroe Islands Finland France Georgia Greece Guatemala Hungary Iceland Ireland Israel Italy Latvia Lithuania Luxembourg Macedonia Malta Mexico Moldova Netherlands Norway Poland Portugal Romania Serbia Slovakia Slovenia Spain Sweden Switzerland Tunisia Turkey Uganda Ukraine United Kingdom

IDEAL-IST
GA No 831620

National NCP

+

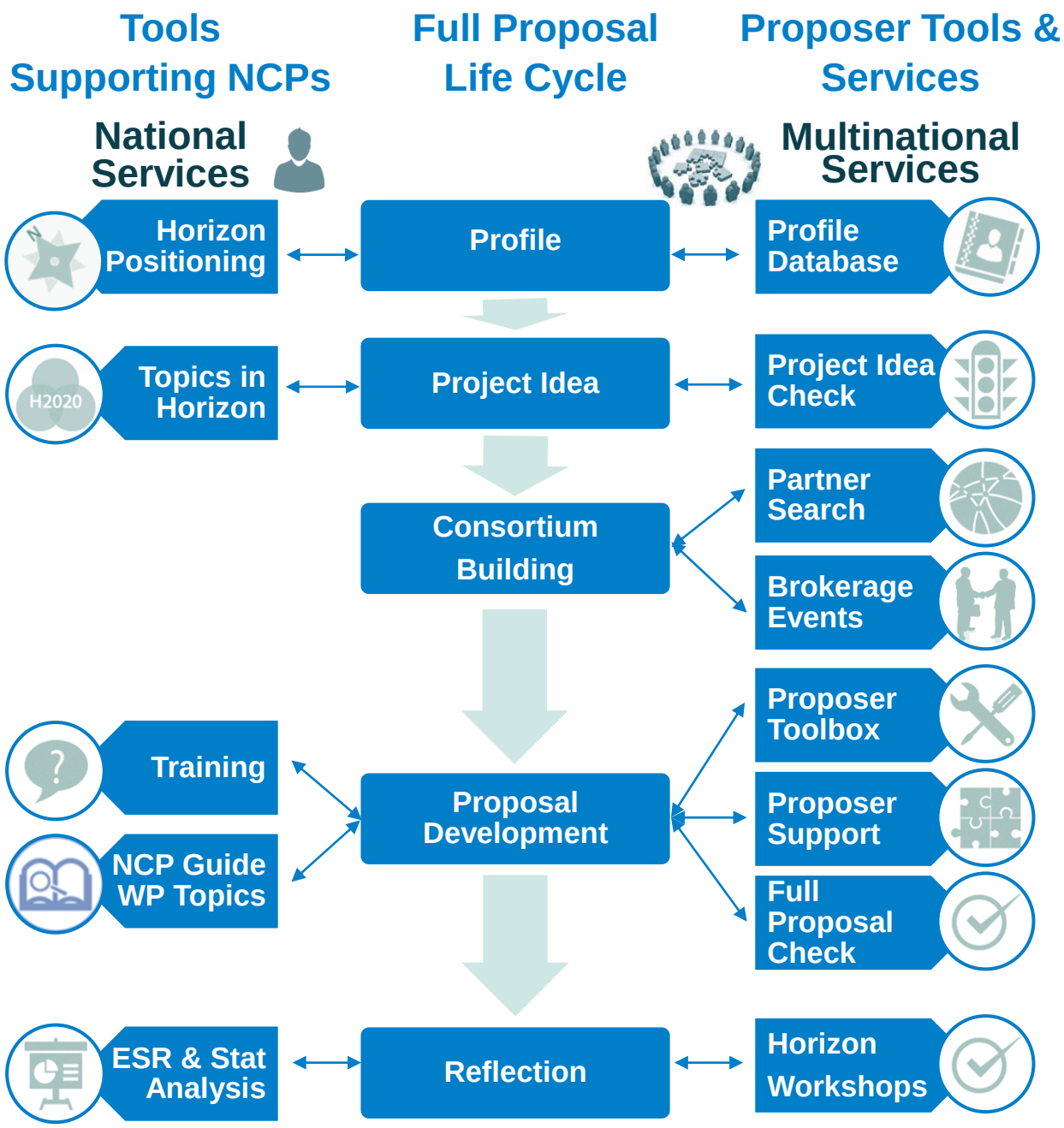
Multinational networks

=

Comprehensive Support for Proposers

This project has received funding from the European Union's Horizon 2020 research and innovation programme under grant agreement No 645216

Comprehensive Proposer Support



Ideal-ist Services

IDEAL-IST
GA No 831620

Fantastic services!

Partner match/search

Trainings, Seminars & Webinars

Brokerage events

Toolbox for proposers

IDEAL-IST

Full proposal check
&
Project idea check

Personalised weekly notification

Topic Tree

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GA No 831620

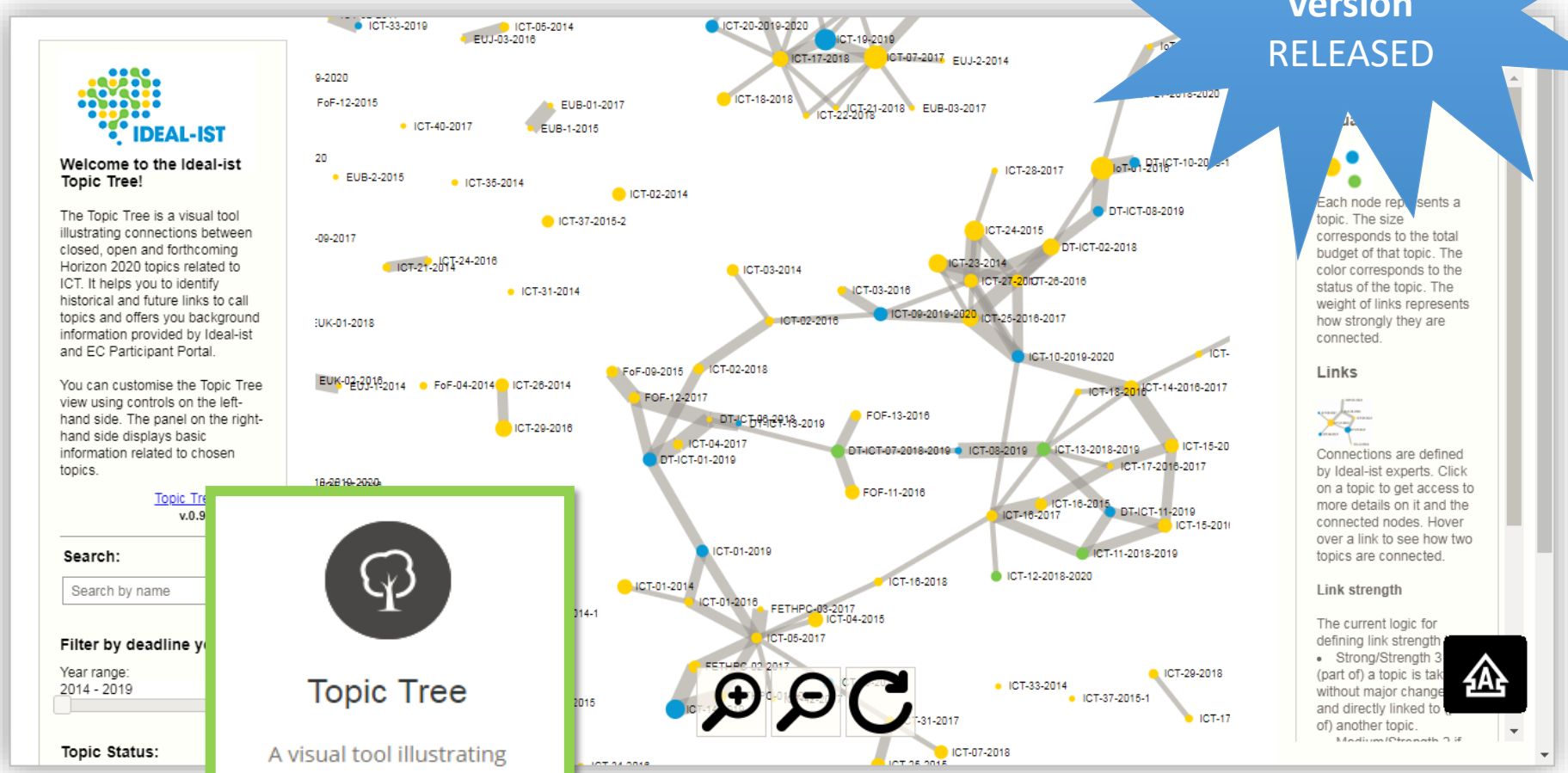
Ideal-ist Topic Tree

2023-24 version RELEASED

How are call topics linked?

How have these areas evolved over the years?

What is the new focus this year?



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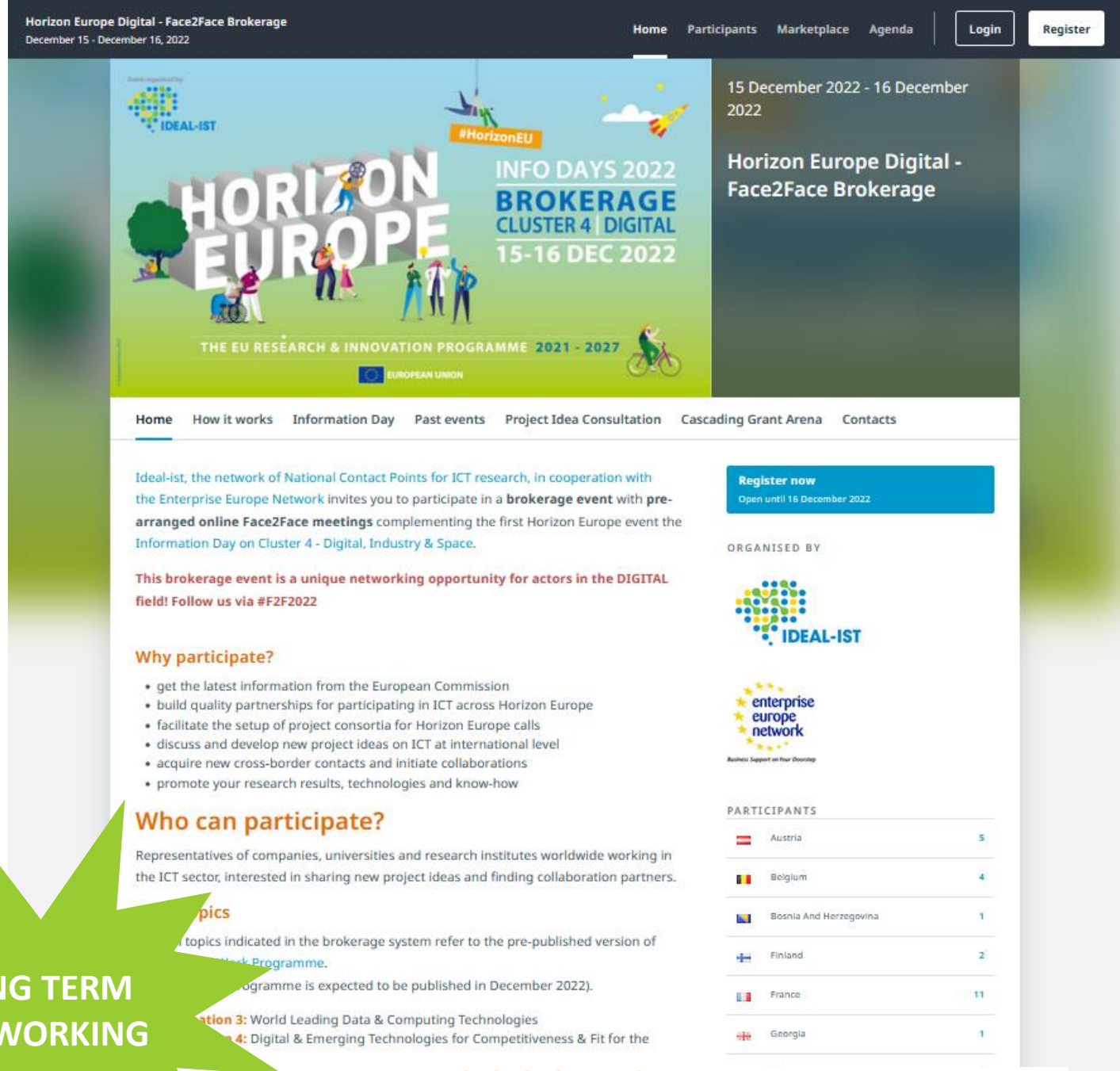
http://www.ideal-ist.eu/topic-tree

BROKERAGE

VIRTUAL AGORA

- Register
- Create a profile
- Share cooperation offers
  - Project ideas
  - Expertise
  - Requests
- Find & contact partners



IDEAL-IST

A service offered by:
the network of ICT
National Contact Points

LONG TERM NETWORKING

digital2022.b2match.io

Project Idea Check

Have a proposal idea? Get early feedback

from experienced National Contact Points @Digital2022

Ideal-ist National Contact Points (NCPs) are available at key events to review your project ideas. Discuss discretely with NCPs whether your idea fits the call topic you chose. Or get help to find another topic.

When: By appointment
Where: Online

Have an idea? for a project

Have a topic? where you think it will fit

Hear more about the topic! at the information session

Speak one-on-one with an NCP to discover if your idea fits

IDEAL-IST
GA No 101070043

Ideal-ist

Full Proposal Check

Registration Open …

https://idealist.proposalcheck.eu

Find us

www.ideal-ist.eu

twitter.com/ICT_IDEALIST

www.linkedin.com/in/idealistictproject

We're also on Youtube!

IDEAL-IST
GA No 831620

Our Benefit

Supporting Applicants Together

IDEAL-IST
www.ideal-ist.eu
Your Worldwide ICT Support Network

This project has received funding from the European Union's Horizon Europe research and innovation programme under grant agreement No 101070043

The AI Data Robotics Association

Horizon Europe Info Day and Brokerage event

Cluster 4 AI, Data and Robotics

In collaboration with the European Commission and Ideal-ist

University of Warwick

SSH Ethics Expertise

Prof. Keith Hyams

k.d.hyams@warwick.ac.uk

WARWICK
THE UNIVERSITY OF WARWICK

INTERDISCIPLINARY ETHICS RESEARCH GROUP

- **SSH Social Science and Humanities methods**
- **Expertise:**
  - **Ethics of AI**
  - **Data ethics**
  - **Robot ethics**
  - **Security ethics**
  - **Research ethics**

WARWICK
THE UNIVERSITY OF WARWICK

INTERDISCIPLINARY ETHICS RESEARCH GROUP

- **In Department of Politics and International Studies, University Warwick**
- **Top 4 in UK for Research Power, 1st in UK for Research Environment**
- **Over 40 funded projects across more than 10 years, including many Horizon Europe, Horizon 2020, and FP7**

WARWICK
THE UNIVERSITY OF WARWICK

INTERDISCIPLINARY ETHICS RESEARCH GROUP

- **Please get in touch to discuss how we can help to incorporate SSH/ethics into your project**
- **Keith Hyams, Professor of Ethics**
- **k.d.hyams@warwick.ac.uk**

WARWICK
THE UNIVERSITY OF WARWICK

The AI Data Robotics Association

BirgerMind®
Express your thoughts loudly

BirgerMind

Sustainable Non-Invasive Brain Computer Interface (BCI)

& Scalable Communication System for ALS/MND patients

Presenter: Juris Klonovs,
Member of the Board, CTO
juris@birgermind.com / invest.als.care
+371 26567701

ALS - Amyotrophic Lateral Sclerosis,
MND - Motor Neurone Disease

Our Mission:
Giving autonomy to ALS patients

SIA "BirgerMind", Latvia, EU, 2023

ADRA - 3rd February 2023
Horizon Europe Info Day on Cluster 4 AI, Data and Robotics

PROBLEM & SOLUTION

BirgerMind®

Pain:
ALS patients lose ability to speak and move, relying fully on personal assistants

Need: Autonomy and privacy,
50 000+ ALS patients in Europe

Birger Bergmann Jeppesen,
an ALS patient and a good friend

adra | The AI Data Robotics Association

PROBLEM & SOLUTION

BirgerMind®

Our solution:
Stand-alone easy-to-use non-invasive BCI with dedicated graphical and auditory interface for communication and ALS daily needs

MODEL X MODEL C

Reading brain waves and muscle impulses

BirgerMind AI engine

Real-time signal interpretation into 5 controls for typing and browsing

BirgerMind UI

Text-to-speech, e-mails, chats, ALS browser for social media & news…

The AI Data Robotics Association

The AI Data Robotics Association

BirgerMind®

Operations per Minute Score	Set-up Ease & Speed	Non-Intrusiveness
BirgerMind® >30+ continuous improvement	<5 min and no medical assistance needed	Non-invasive and no radiation
Eye Trackers 12~30, depends on ALS severity	>10 min calibration	IR radiation = eye tiredness, but no headset needed
BCI Implants 10~100, depends on positioning	Operation + calibration	Highly intrusive
Head/Mouth Joystics 12~20, only for early ALS	<5 min and no medical assistance needed	Semi-invasive, tiring

FASTER AND EASIER COMMUNICATION

The AI Data Robotics Association

Horizon Europe Info Day and Brokerage event

Cluster 4 AI, Data and Robotics

In collaboration with the European Commission and Ideal-ist

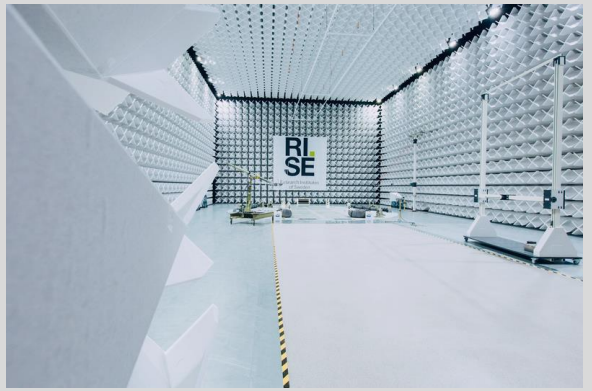
RISE

Resilient Autonomous Data Collection for Earth Observation

Erik Källman

T: 0046707347700

E: erik.kallman@gmail.com



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Horizon Europe Info Day and Brokerage event

Cluster 4 AI, Data and Robotics

In collaboration with the European Commission and Ideal-ist

PROJECT IDEA

Topic: HORIZON-CL4-2023-DIGITAL-EMERGING-01-01

Type of project: Research and Innovation Action

Project objectives:

A system design for autonomous dispatch of data collecting workers (UAVs).

WANTED

Competences & Skills wanted

Coordination, Writing, Domain expertise

Types of partners sought

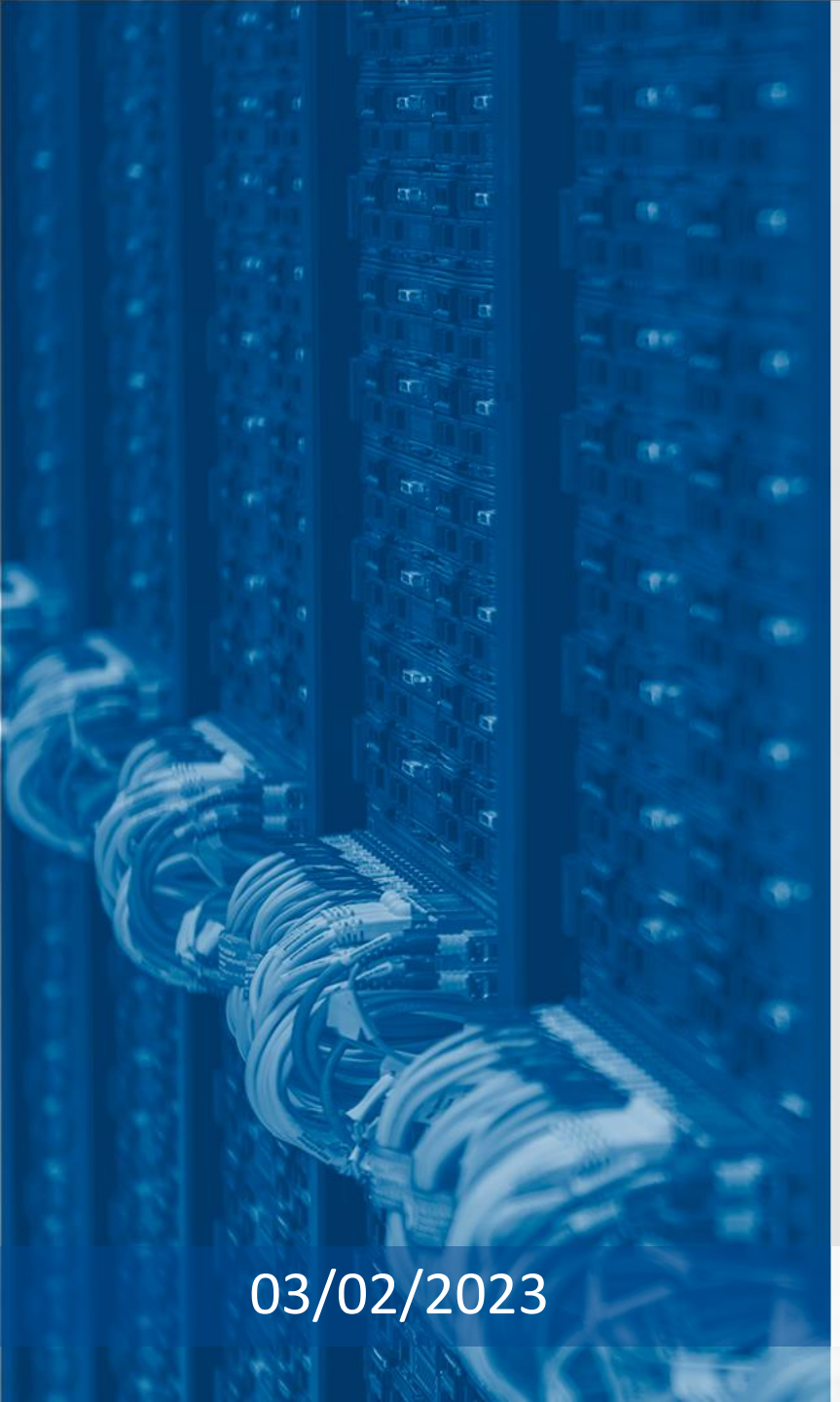
Industry, University research partners, public authorities

Work to be performed

System prototyping, system development and integration, data aquicition

EXPERTISE OFFER

Experimental cluster facility access
Systems development (kubernetes, worker-queue systems, etc)
Data science (earth observation, edge computing)
Growing history of projects related to analysis of drone data (lidar, optical, etc)
5G-edge APK development for drone image collection pipelines



Barcelona Supercomputing Center
Centro Nacional de Supercomputación

The work on AI of the CAOS research group

Axel Brando, Jaume Abella, Francisco J. Cazorla

CAOS Research Group (www.bsc.es/caos)

03/02/2023

Barcelona Supercomputing Center (BSC)

CAOS (computer architecture / operating system or the high-performance real-time group)

- International and multidisciplinary (~50 members, 15+ years of experience)
  - Multiple (**EU projects** (+7) coordinated, (+10) participated, bilateral **contracts with industry**, spin-off creation
  - 200+ publications in **top conferences and journals**, several **best paper awards**
- Design and validation **safe, time predictable, and high-performance** hardware and software solutions for Embedded and safety-Critical Systems (ECS)
  - **AI is central due to increasing autonomy of systems** (cars, planes, space missions, robots, etc.)
- Key AI-related research topics in CAOS
  - Designing **robust machine learning models** and AI-based systems:
    - Uncertainty quantification
    - Improve explainability and traceability
    - Combine with Extreme Value Theory (EVT) to enhance AI forecasts
  - **Modelling of uncertainty**
    - Applicable across multiple domains (e.g., autonomous cars, financial, pharmacological)
    - Increase the reliability, robustness and trustworthy of any AI-based forecasting system
    - Distinguish probabilistic sources of uncertainty, apply risk mitigation measures, increase interpretability

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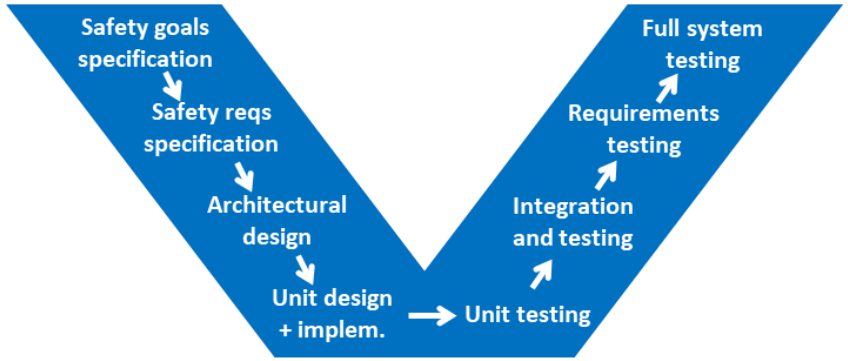
CAOS group at the BSC
axel.brando@bsc.es | jaume.abella@bsc.es | francisco.cazorla@bsc.es

Horizon Europe SAFEXPLAIN (coordinated project)

Safe and Explainable
Critical Embedded Systems based on AI

- AI needed to realize autonomous systems
- But **AI challenges common practice for FUSA-related software**
  - Failure rates, data used for software design, etc.
- SAFEXPLAIN goals
  - Make **DL components explainable and traceable** by design
    - DL components built with FUSA in mind.
  - **Adapt FUSA standards** to allow certifying DL software
    - Make standards amenable to intrinsic DL characteristics (e.g., failure rates, data used for design).
  - **Preserve sufficiently high levels of performance** to meet safety goals (e.g., 25 FPS).



- **SW (algorithm) deterministic. Systematic errors management**
- Data is abstracted (name, source, but not its values)
- **Algorithm is "data-independent"** (defined independently of how the data looks like)
- Code (SW) designed based on **human expert knowledge and physical laws/operational rules**

→

- **SW (algorithm): Not always deterministic and limited predictability/explainability**
- **Algorithm behavior is determined by actual data** (e.g., weights of a DNN)
- Algorithm is fully "data-dependent"
- Software functionality **can deliver erroneous predictions**

- **Do not consider each part on its own, but keep a continuous dialogue among DL, FUSA and platform experts, along with end users to make all pieces fit together.**

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Centro Nacional de Supercomputación

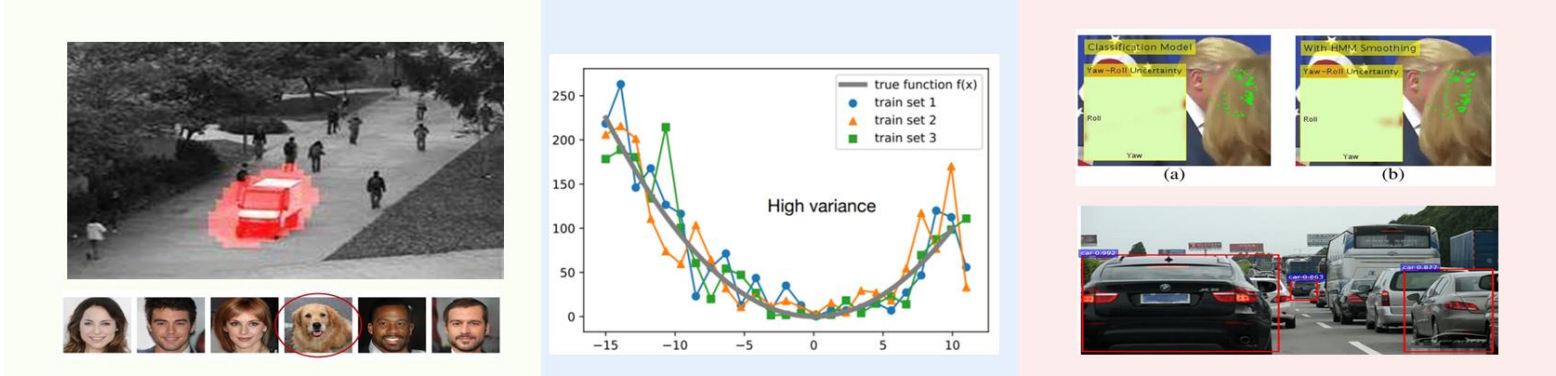
Funded by the European Union

This project has received funding from the European Union's Horizon Europe programme under grant agreement number 101069595.

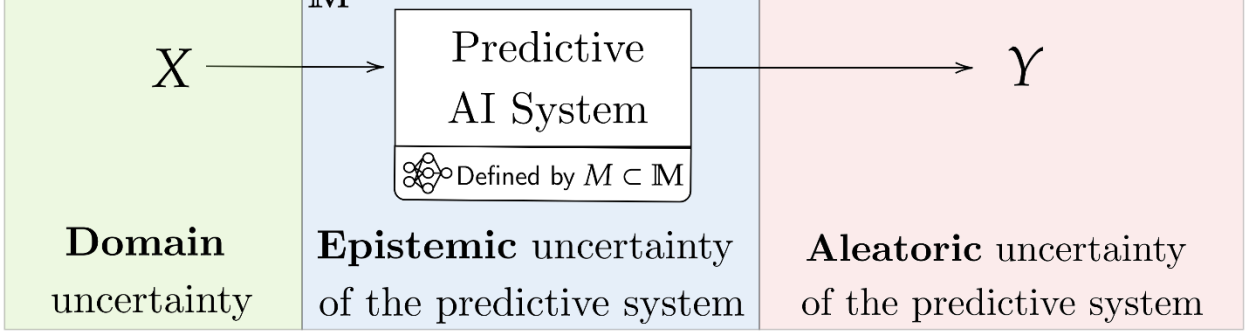
CAOS group at the BSC
axel.brando@bsc.es | jaume.abella@bsc.es | francisco.cazorla@bsc.es

Modelling uncertainty as the barebone to build Trustworthy AI

- **Analyze AI trustworthiness** for its use in safety-critical systems.
- Needed to
  - Determine **safety risks**.
  - Set appropriate **mitigation**.
  - Enable **AI use in certified systems**.
- **Trustworthy AI is applicable to other domains** (e.g., finances, Earth science, pharma, biology, medicine, social sciences, etc.).



$$p(x^*, y^* \mid X, Y) = p(x^* \mid X) \int_{\mathbb{M}} p(M \mid X, Y, x^*) \cdot p(y^* \mid X, Y, M, x^*)\, dM$$



Axel Brando, Isabel Serra, Enrico Mezzetti, Francisco J. Cazorla, Jaume Abella, "**Standardizing the Probabilistic Sources of Uncertainty for the sake of Safety Deep Learning**", AAAI SafeAI Workshop, 2023.
Axel Brando "**Aleatoric Uncertainty Modelling for Regression problems with Deep Learning**". Doctoral dissertation Thesis (2022).

Applied to any standard AI-based forecasting process from a **probabilistic viewpoint**:

- Anomalous (outlier) combination of input values (**Domain** uncertainty).
- Bias produced for selecting a certain model (**Epistemic** uncertainty).
- Irreducible variability of the correct predicted values given the same input (**Aleatoric** uncertainty).

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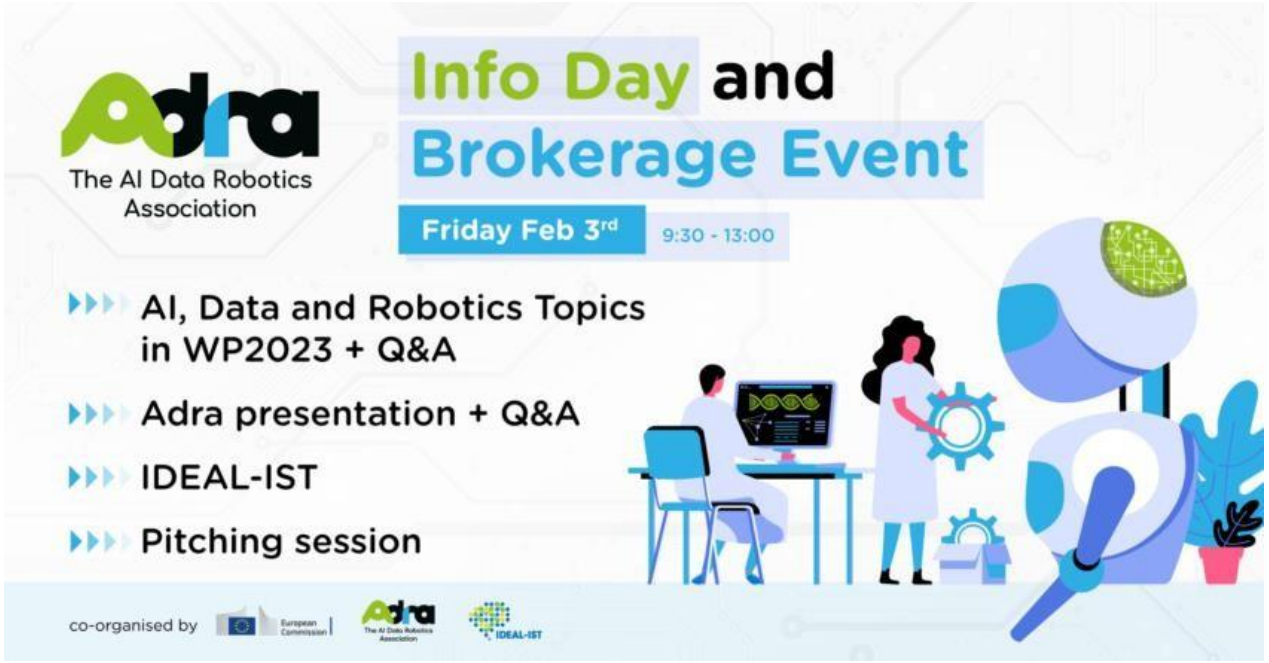


IDEKO/AdMuRob

Advanced Multitask Robotics (machining, vision, inspection, AM)

Juanan Arrieta

IDEKO
MEMBER OF BASQUE RESEARCH & TECHNOLOGY ALLIANCE

T: +34 605 775 421

E: jarrieta@ideko.es

PROJECT IDEA

Targeted topics:

- HORIZON-CL4-2023-DIGITAL-EMERGING-01-01 - Novel paradigms and approaches, towards AI-driven autonomous robots (AI, data and robotics partnership) (RIA)
- HORIZON-CL4-2023-DIGITAL-EMERGING-01-02 - Industrial leadership in AI, Data and Robotics – advanced human robot interaction (AI Data and Robotics Partnership) (IA)

Type of project:

- RIA or IA

Project objectives:

- Smart mechatronics & software compensations for higher stiffness/accuracy.
- Robotics machining & polishing, for both metallic/composite parts
- Robotics in-line/in-process vision & inspection
- Additional tentative functionalities: mobility, AM, handling, load&unloading…
- Digitalisation through data capture & analytics, edge/cloud computing, local/cloud apps, data-spaces and data-lakes, AAS/IDS connectors, link to GAIA-X
- Data cleaning & FAIR data, as previous step for AI implementation

WANTED

Competences & Skills wanted

- Tech providers both from robotics field as well as digitalisation
- Design & engineering capabilities
- NLP and robotics programming, HMI development
- Interaction with humans and machines (collision avoidance systems)
- System integrators

Types of partners sought

- Project coordinator
- Industrial tech providers
- User-groups from industrial sectors
- RTO/Univ with competences above mentioned

Work to be performed

- Programming, System Integration, Dissemination, Engineering, etc

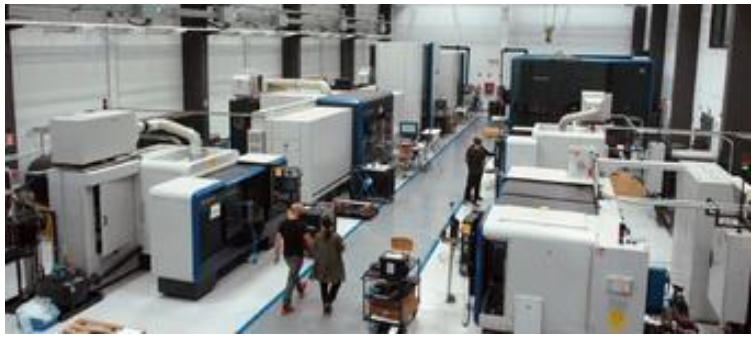
The AI Data Robotics Association

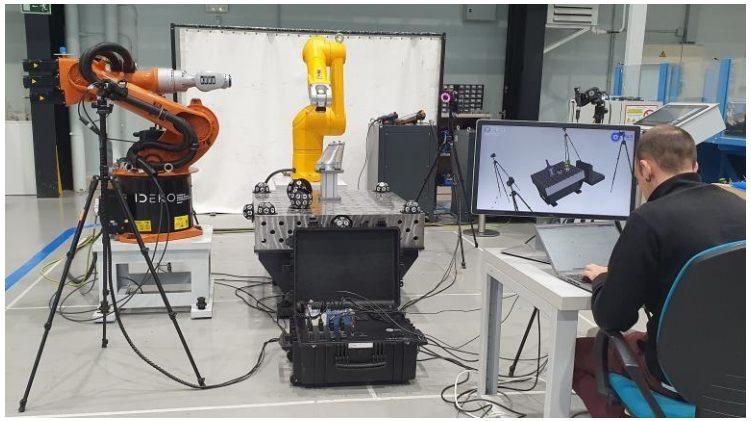
Info Day and Brokerage Event

Friday Feb 3rd 9:30 - 13:00

EXPERTISE OFFER

- Private and market-oriented RTO, skilled in advanced manufacturing, machine-tools & industrial production technologies.
- Close collaboration with INDUSTRY (Mondragon Corporation and DanobatGroup) as well as SCIENCE & TECHNOLOGY partners (Basque Research & Technology Alliance - BRTA)
- Direct access to industry-driven use-cases in challenging targeted sectors (aerospace, railways, wind power, railways, oil&gas, etc)
- 4 robotics fields applied to manufacturing (machining, NDT inspection, vision, AM robotics)
- Development of smart mechatronics for compensation of low rigidity/precision of end-effector in robotics systems.
- Data capture & data analysis, development of IDS connector and AAS concept in multi-level industrial manufacturing (clamping/fixturing, workpiece, machine, process, system, factory domains)
- Self-diagnosis, condition-based monitoring (CBM), cloud computing for most critical components at manufacturing domain (bearings, ballscrews, guideways, gears…)
- AI for manufacturing, applied to predictive maintenance strategies (servitization) as well as optimization of manufacturing processes.





IDEKO

IDEKO is a research centre founded in 1986 and specialised in industrial production and manufacturing technologies, integrated into the IK4 Reseach Alliance. IDEKO's activity covers the design and development of products, business lines and production processes, the resolution of problems through the provision of technological services such as technical consultancy and equipment-based services. IDEKO is known for the scientific excellence developed in its 4 research groups which are aimed at advancing its specialisation.

Asier Barrios abarrios@ideko.es www.ideko.es

Main capabilities in Robotics:

DYNAMICS AND CONTROL
Description and optimisation of dynamic behaviour of machines and processes.

MANUFACTURING PROCESSES
Design, development and improvement of production processes.

ICT & AUTOMATION
ICT for manufacturing and industrial production technology.

DESIGN AND PRECISION ENGINEERING
High-performance product design and development.

- **Specialised in robotics for manufacturing and inspection.**
- **Robotic applications** in milling, drilling, grinding, laser, additive manufacturing, composites manufacturing, NDT, etc.
- **Mechatronics** design and development for robot dynamics improvement.
- **Robot vibration suppression** solutions.
- **Process and robot real-time control** systems.
- **Multi-domain simulation** (FEM, control).
- Manufacturing **process modelling and simulation.**
- **Accuracy increasing technologies**: volumetric, thermal deformation, stiffness modelling.
- **Vision based robot tracking system** for accurate 6D location.
- **Virtual commissioning, digital twin**, system **optimization.**
- **Cloud-based robot and process monitoring** platform.
- **Artificial Intelligence** toolbox.





EU Research background:

- > 60 projects (50% as coordinators).
- Most recent coordinated project in robotics: COROMA

Coroma — COGNITIVELY ENHANCED ROBOT FOR FLEXIBLE MANUFACTURING OF METAL AND COMPOSITE PARTS

Facilities:

- Two **robotic cells for manufacturing**, assets of the Basque Digital Innovation Hub.
- **Different industrial robots** (Kuka, Stäubli, ABB)
- **Two large workshops** for prototype testing.
- **Metrology, laser and composites** laboratories.


basque digital innovation hub · eu ROBOTICS · HispaRob · IK4 Research Alliance · BRTA BASQUE RESEARCH & TECHNOLOGY ALLIANCE · MONDRAGON HUMANITY AT WORK · Finanzas Industria Distribución Conocimiento · DANOBATGROUP

The AI Data Robotics Association

Horizon Europe Info Day and Brokerage event

Cluster 4 AI, Data and Robotics

In collaboration with the European Commission and Ideal-ist

Firat University/FU

Pitch Title

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The AI Data Robotics Association

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PROJECT IDEA

Topic: *HORIZON-CL4-2023-DIGITAL-EMERGING-01-01: Novel paradigms and approaches, towards AI-driven autonomous robots (AI, data and robotics partnership)*

Type of project: *(RIA)*

Project objectives:

Next step autonomy in Human-Robot interaction, to reach the point where robots are able to autonomously adapt in order to socially interact with people in an everyday working environment.

WANTED

Competences & Skills wanted

*Robotics and AI companies interested in any kind of autonomy such as collaborative, collective, cooperative.

*Experience fused AI and the topics of renewable energy installations, such as wind turbines, photovoltaic farms, or in the maintenance of city infrastructure such as wastewater systems or road and rail infrastructures Complex healthcare tasks such as patient handling or in complex logistical operations such as the optimal packing of consumer goods for shipping.

Types of partners sought

Industry, SME, RTD center

Work to be performed

Programming and System Integration

ROBOLAUNCH

Cloud Scale Robotics

Who we are?

Founded in 2020

+10 Team Members

Deep expertise in Kubernetes, Cloud, Robotics&AI, 5G

Products / Expertise: Cloud Robotics Platform
3 different mobile robots

EU project experience: HORIZON-CL4-2022-DIGITAL-EMERGING-02
5G connected autonomous agricultural robots (fleet) for carrying harvested fruits in the agricultural field

Addressed calls/topics:
HORIZON-CL4-2023-DIGITAL-EMERGING-01-01
HORIZON-CL4-2023-DIGITAL-EMERGING-01-02
HORIZON-CL4-2023-DATA-01-04
HORIZON-CL4-2024-DATA-01-01
HORIZON-CL4-2024-DIGITAL-EMERGING-01-03
HORIZON-CL4-2024-DIGITAL-EMERGING-01-04
HORIZON-CL4-2024-DIGITAL-EMERGING-01-21

Agriculture | Energy | Healthcare | Education | Cloud Robotics | Public Safety | Autonomous Car | Construction | Last-mile delivery | Fleet Management | Logistics | Cloud Gaming

Unified Cloud Robotics Platform.

01
DESIGN
create 3D robots and worldviews for different use cases

02
DEVELOP
use Cloud based IDE without no manual software and library installation

03
SIMULATE
photo-realistic and gpu-accelerated physics simulation

04
AI/ML
use GPU accelerated Re-infocement learning for PID controller gen and usecases

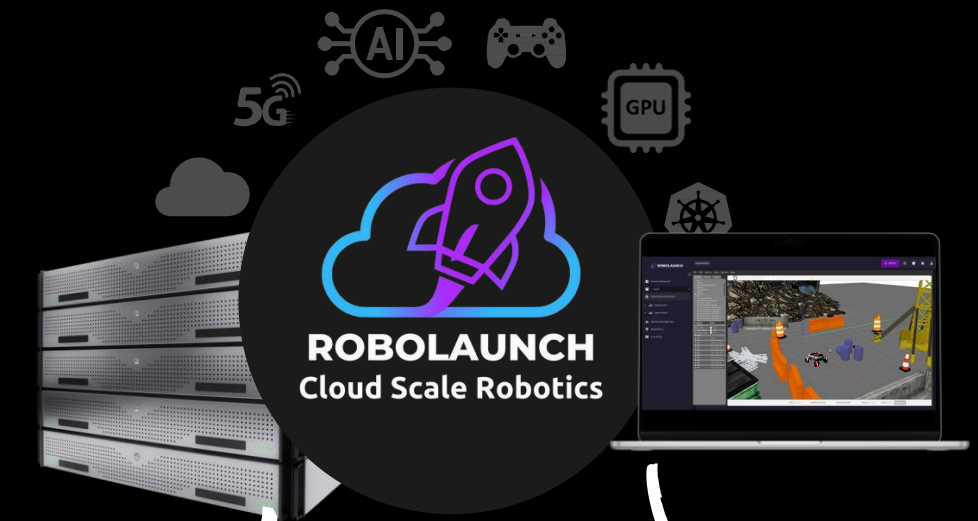
05
DELIVER
deploy robots in a declerative way "as a service" solutions for robot operators

06
OPERATE
configure, manage and monitor multiple robots and fleets in run-time

CLOUD POWERED

Mobile Robots.

ROS 2



Education Robot
(Skid Steering)

Agriculture Robot
(Skid Steering)

Inspection Robot
(Mecanum)

Thank you!

www.robolaunch.io

info@robolaunch.io

github.com/robolaunch

Contact Details

Özgecan Sarı

ozgecan@robolaunch.io

ROBOLAUNCH
Cloud Scale Robotics

The AI Data Robotics Association

Horizon Europe Info Day and Brokerage event

Cluster 4 AI, Data and Robotics

In collaboration with the European Commission and Ideal-ist

SESTEK

Ayse Guventurk

T: + 90 212 286 25 45

E: ayse.guventurk@sestek.com

SESTEK

Gartner-recognized vendor for Speech-to-Text technology

22

YEARS OF TRACK RECORD IN CONVERSATIONAL TECH

ast saved: Just now

+300

CLIENTS IN 16 COUNTRIES USE SESTEK SOLUTIONS

%70

70% of WORKFORCE ARE R&D ENGINEERS

100% In-house Developed Technologies

Speech Recognition (SR)	Text-to-Speech (TTS)	Voice Biometrics
Natural Language Processing (NLP)	Artificial Intelligence (AI)	Speech and Text Analytics

Conversational AI | **Conversational Biometrics** | **Conversational Analytics**

The AI Data Robotics Association

Horizon Europe Info Day and Brokerage event

Cluster 4 AI, Data and Robotics

In collaboration with the European Commission and Ideal-ist

PROJECT IDEA

Topic: HORIZON-CL4-2023-HUMAN-01-03: Natural Language Understanding and Interaction in Advanced Language Technologies

Type of project: *(RIA)*

Project objectives:Effective AI-based human-machine interaction and collaboration relies on grasping real meaning from natural languages, recognizing gestures and activities, understanding intention, creating and maintaining shared mental models and designing multi-step interactions. Reciprocally, truly natural interaction between people and machines is essential for future AI-enabled systems across all application areas and domains.

WANTED

Competences & Skills wanted

Coordination

Types of partners sought

Consortium

Use case provider candidates from SESTEK customer portfolio

- Retail Sector (Online e-commerce platform)
- Insurance Sector (headquartered in Paris with operations in 10 countries)
- Finance Sector (Private Banking Services)

The AI Data Robotics Association

Horizon Europe Info Day and Brokerage event

Cluster 4 AI, Data and Robotics

In collaboration with the European Commission and Ideal-ist

EOI

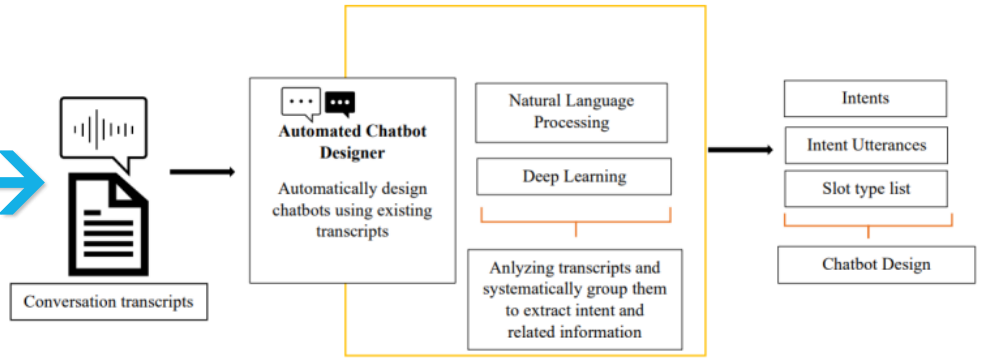
- context-aware **human-machine interaction - smart assistants, conversational and dialogue systems**
- human-to-human communication across languages
- **Potential low TRL research topics for the call:**
  - New topic detection
  - Unstructured data utilization
  - Fine-grained and/or QA based intents
  - Context aware flow

EXPERTISE OFFER

- Natural Language Understanding (NLU)
- Speech recognition
- Text-to-speech
- Automatic language detection
- Conversational AI
  - Cognitive intent detection - Independent dialog design - Adaptive grammar engine - Named entity recognition - Multi-lingual - Spelling correction - Dialects and mispronunciations understood - Omnichannel reporting - On-premise and Cloud

Low TRL Flow Planned→

Automated chatbot design



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Phone: +90 212 338 1721
Fax: +90 212 338 1548
e-mail: cbasdogan@ku.edu.tr
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Publications:
https://scholar.google.com/citations?user=Oz32f6gAAAAJ&hl=de (h-index:42)

Cagatay Basdogan

2002-	Faculty Member Koc University
1999-2002	Senior Member of Technical Staff NASA/Jet Proposulsion Laboratory, California Institute of Technology
1996-1999	Research Scientist Massachusetts Institutte of Technology
1994-1996	Research Scientist Northwestern University Research Park
1991-1994	PhD Student Southern Methodist University
1984-1991	MS Student + Undergraduate Student Orta Doğu Teknik Üniversitesi

KOÇ UNIVERSITY

RML

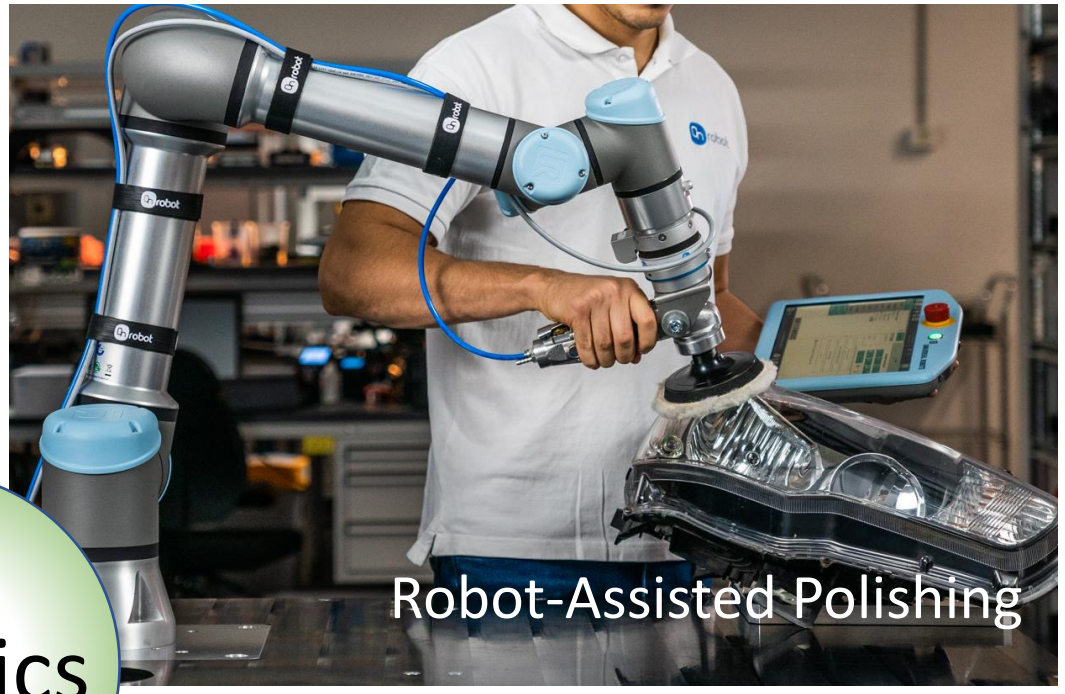
JPL
Jet Propulsion Laboratory
California Institute of Technology

Massachusetts Institute of Technology

Northwestern University

SMU

ODTÜ METU

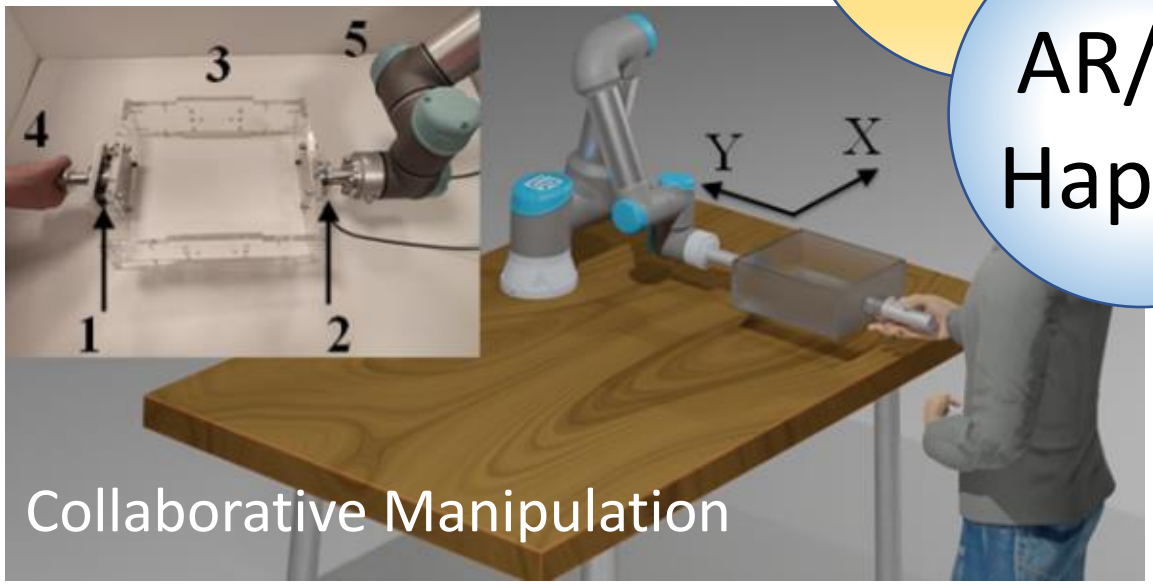


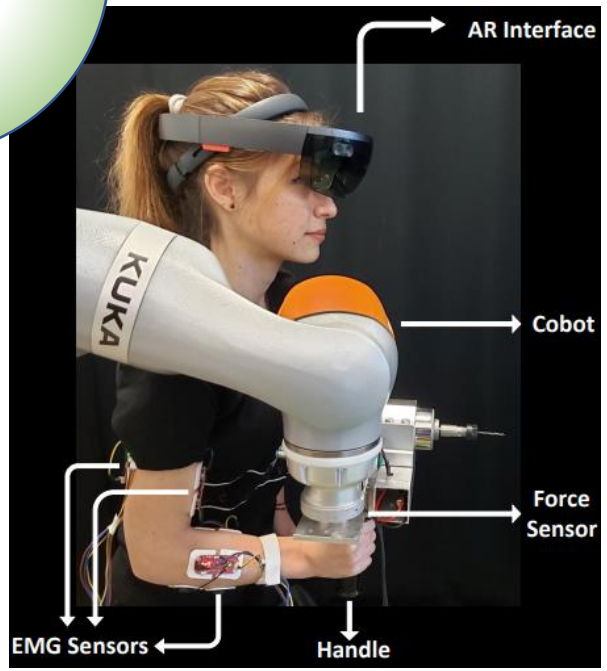
AI

Robotics

AR/VR

Haptics





Extensive experience with:

KUKA LBR iiwa 7

UR5

Hololens (AR)

ATI Force Sensors

EMG Sensors

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INGOSA

Conversational display ads: A new frontier in digital advertising

Gökçe Duman

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E: gokce@ingosa.ai

ingosa

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PROJECT IDEA

Topic: *A human-centred and ethical development of digital and industrial technologies (HORIZON-CL4-2024-HUMAN-01)*

Type of project: *RIA*

Project objectives:

- Demonstrate the value of human-machine collaboration and interaction by improved effectiveness, intuitiveness, efficiency, completeness, limits of knowledge indication and other objective or quantifiable subjective measures.
- Demonstrate how collaborative decision-making improves over human decision-making and that the collaborative decisions cover all stages of reasoning (that they are based on an improved coverage of data and knowledge sources, on an improved analytic ability to reason from input to output, and on a well-communicated decision).

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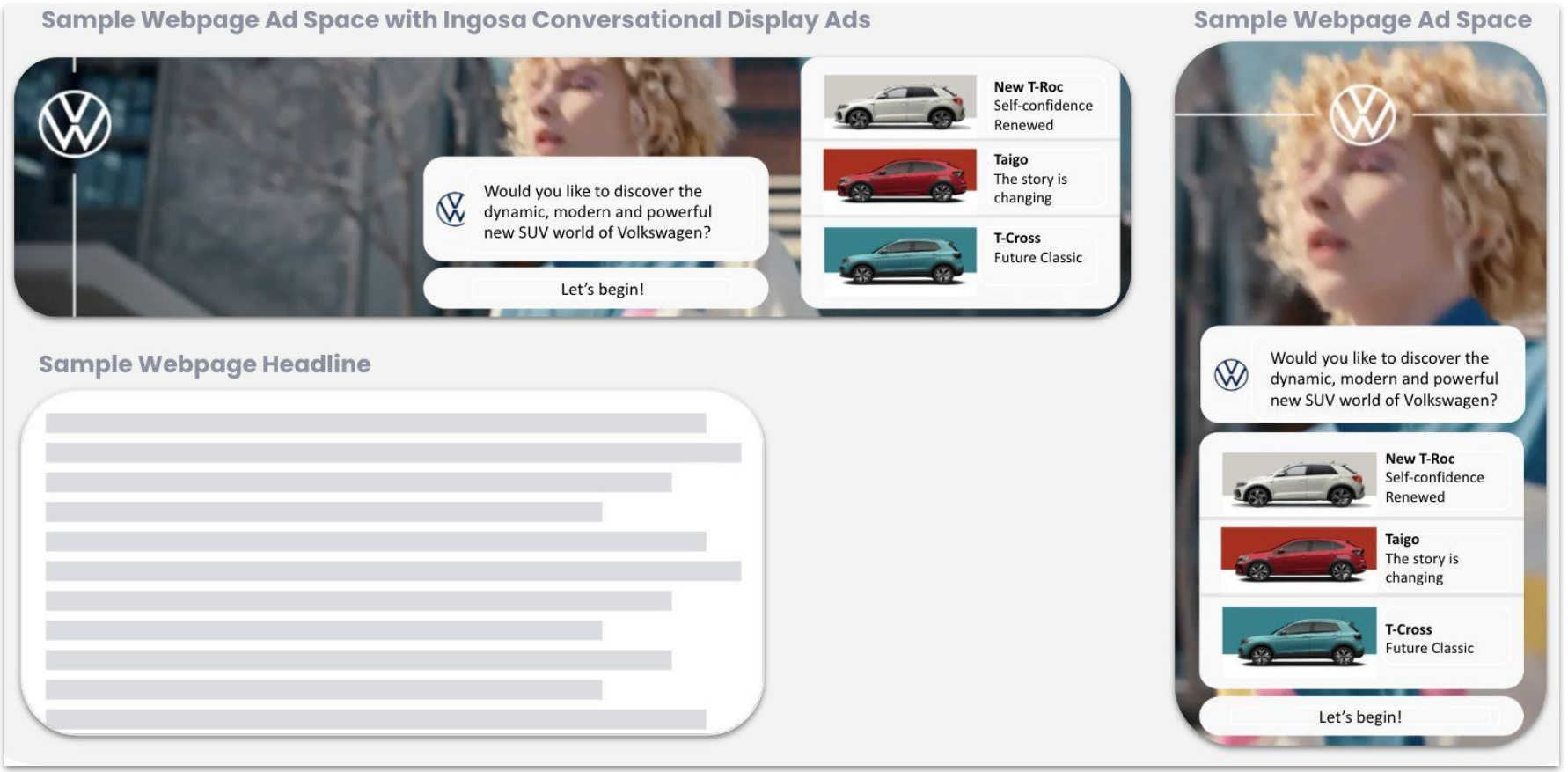

WANTED

Competences & Skills wanted

(Technical, Writing)

Types of partners sought

Industry (automotive, e-commerce, health-tourism, banking etc.), SME (who has a digital advertising budget), University (academics working on big data, synthetic data and usage of that data)

Work to be performed

(Sales, Mentoring)

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Phase I - Awareness

Awareness

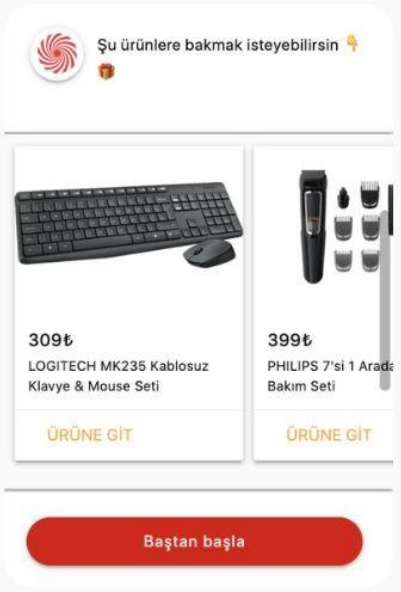
Customers see invitation to chat in the ad

Phase II - Consideration

Brand Perception

They can indicate their preferences or get more info

Phase III - Action



Purchase Intent

They get recommendation and can click out to buy

Phase IV - Segmentation

1st Party Data & Remarketing
Brand Lift
Always On strategy

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Farplas Otomotiv A.Ş/FARPLAS

Innovation Strategies

Zeynep Yumrutas

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E: zeynep.yumrutas@farklabs.com

farplas

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Overview

With its 50 years experience, Farplas is a leading automotive Tier1 company in its region and an international player in the global automotive supply industry.

Farplas
- designs,
- develops and
- manufactures vehicle sub-assemblies.

Customers

TOYOTA, RENAULT Passion for life, HYUNDAI, Ford FORD OTOSAN, FIAT, VOLVO, MAN, KARSAN, BMC, TEMSA, ISUZU

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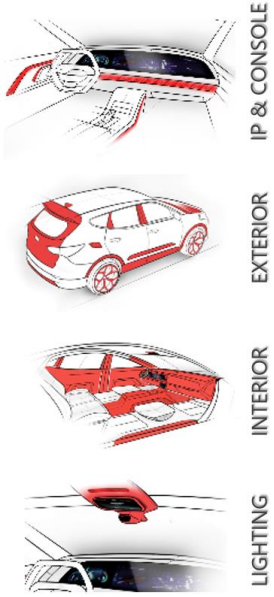
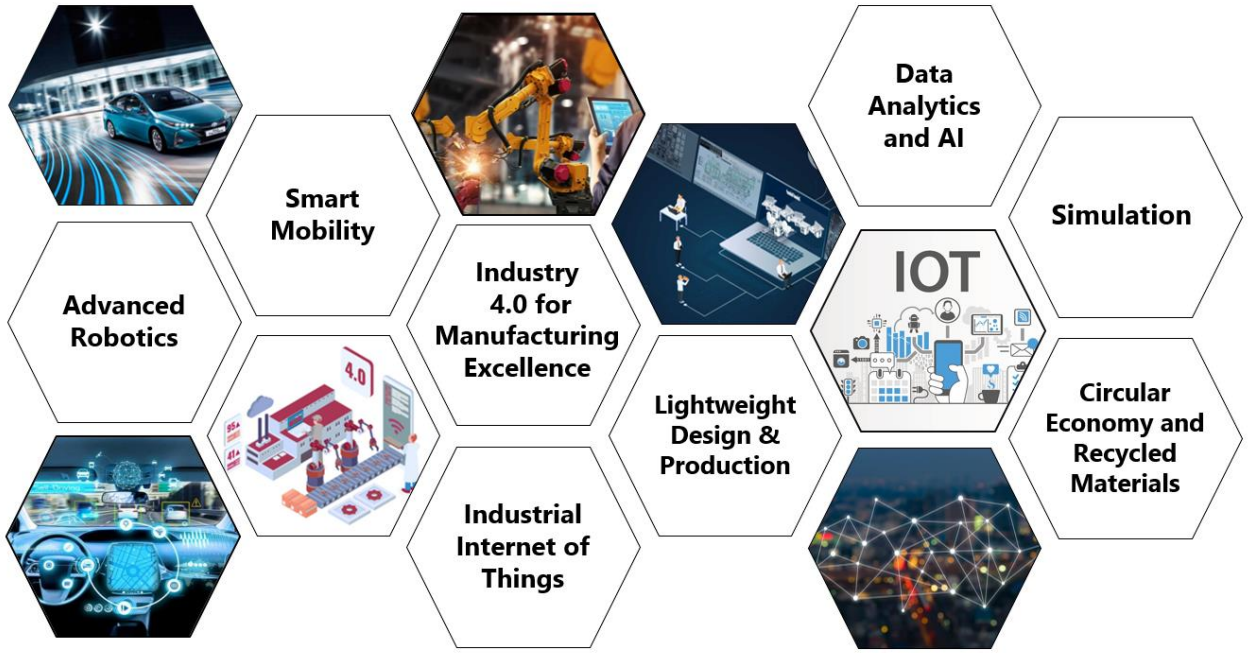
EXPERTISE OFFER

Products





- Design & Development
  - Concept Design
  - Product Development
  - Simulations and FEA
- Manufacturing Technologies
  - Injection Molding
  - Painting
  - Bonding
  - Finishing
  - Assembly
- Electronics
  - Electronic Design and Development
  - Production

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INTERESTED CALL TOPICS

Topic(s):

- *HORIZON-CL4-2023-DATA-01-04: Cognitive Computing Continuum: Intelligence and automation for more efficient data processing (AI, data and robotics partnership)* ***(RIA)***
- *HORIZON-CL4-2024-DATA-01-01: AI-driven data operations and compliance technologies (AI, data and robotics partnership)* ***(IA)***
- *HORIZON-CL4-2023-DIGITAL-EMERGING-01-02: Industrial leadership in AI, Data and Robotics – advanced human robot interaction (AI Data and Robotics Partnership)* ***(IA)***
- *HORIZON-CL4-2023-HUMAN-01-01: Efficient trustworthy AI - making the best of data (AI, Data and Robotics Partnership)* ***(RIA)***

Previous and Related Projects:

teaming.ai

Human-AI Teaming Platform for Maintaining and Evolving AI Systems in Manufacturing

Industrial Data Services for Quality Control in Smart Manufacturing

BIAS

Mitigating Diversity Biases of AI in the Labor Market

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Koçtaş Yapı Marketleri Ticaret A.Ş.
Koctas

Hilal Özdemir

T: +90 536 359 91 51

E: hilal.ozdemir@koctas.com.tr

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PROJECT IDEA

Topic: •*HORIZON-CL4-2023-DIGITAL-EMERGING-01-01: Novel paradigms and approaches, towards AI-driven autonomous robots (AI, data and robotics partnership)*

Alternatives:

- *HORIZON-CL4-2023-HUMAN-01-02: Large Scale pilots on trustworthy AI data and robotics addressing key societal challenges (AI Data and Robotics Partnership)*
- *HORIZON-CL4-2023-DIGITAL-EMERGING-01-02: Industrial leadership in AI, Data and Robotics – advanced human robot interaction (AI Data and Robotics Partnership) (IA)*

Type of project: RIA

Use Case Offer

Koçtaş is developing Robots which can:

- Move autonomously
- Have the ability to map the store from end to end
- Make gap analysis to detect the finished products on a spesific ray
- Mark down analysis
- Control processes to inform the users / Create alert

With the following objectives which are aligned with the calls:

- To produce an autonomous operational robots which move on dynamic, complex environments
- Handle the routin repeated tasks according to the sector it is used.

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Use Case Offer

Topic: *HORIZON-CL4-2023-HUMAN-01-03: Natural Language Understanding and Interaction in Advanced Language Technologies*

In addition to Koçtaş's robots, voice response systems (NLP) can be integrated to

- Kiosks near cash boxes
- Selected rays

So that they can provide information on selected products and answer questions of customers.

WANTED

Looking for Consortia to Join for these Calls

Competences & Skills wanted

AI developers for complex tasks
New Usecase partners from different sectors

Types of partners sought

Industry, SME, RTD center, University, User-groups, etc

Work to be performed

Prototyping, Programming, System Integration, Dissemination, Engineering

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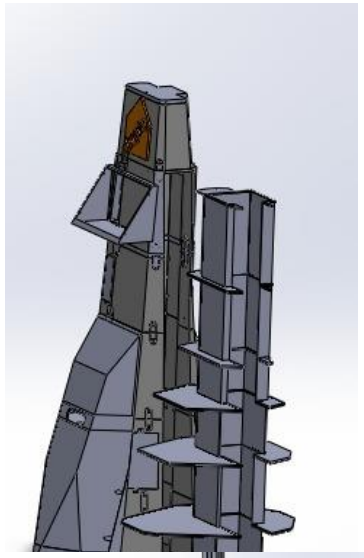
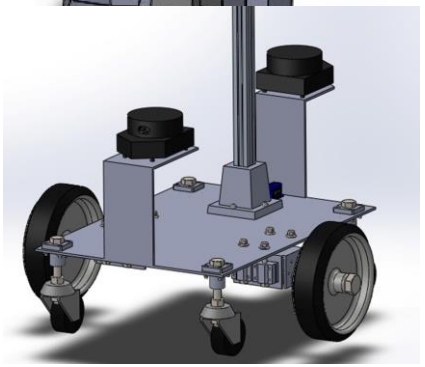
- The leader company of home improvement sector in Turkey
- 350 stores in both large and fix concept
- Online store: www.koctas.com.tr





EXPERTISE OFFER

- ROS
- ARTAP
- Move base developments
- Hardware design (3D printing)
- Autonomous charging

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METU-ROMER

Strong Robotics and AI partner in Turkey

Erol Sahin

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E: erol@metu.edu.tr

ROMER
Center for Robotics and Artificial Intelligence

ORTA DOĞU TEKNİK ÜNİVERSİTESİ
MIDDLE EAST TECHNICAL UNIVERSITY

IDEAs: Robotic Inspection, Social Collaborative robots, etc.

Topics:

- *HORIZON-CL4-2023-DIGITAL-EMERGING-01-01* (Novel paradigms and approaches, towards AI-driven autonomous robots (AI, data and robotics partnership) (RIA)
- HORIZON-CL4-2023-HUMAN-01-04: Addressing Grand challenges in AI (AI Data and Robotics Partnership) (CSA)
- HORIZON-CL4-2023-HUMAN-01-02: Large Scale pilots on trustworthy AI data and robotics addressing key societal challenges (AI Data and Robotics Partnership) (IA)

Type of project: *(RIA, IA, CSA)*

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EXPERTISE OFFER

ROMER has a large range of expertise in robotics and AI, with more than 60 faculty members under its umbrella.
Expertise includes, legged robotic system, swarm robotics, human-robotics, collaborative robots, robotic inspection, autonomous driving, deep learning, computer vision, reinforcement learning
Infrastructure includes a wide range of robotic platforms, UGVs, UAVs, Legged platforms, USVs, Mobile Manipulators, Collaborative robots, Mechatronic Workshop, Motion Capture systems etc.
Proposed activities

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Oredata

Sare Melek Yalçınkaya
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E: sare.yalcinkaya@oredata.com

B2Match Profile

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EXPERTISE OFFER

We are a **Cloud Services & Consultancy Company** delivering services to enable our clients in their digital transformation journey. With Large and Experienced team;

- 90+ Cloud & Data Engineers
- 30+ Data Scientists
- Implemented / ongoing projects in US, EU, META (KSA, UAE, Qatar, Turkey, Nigeria)

Retail

Telecommunications

Manufacturing

Gaming

Banking

An Agile Google Cloud Partner with E2E service capabilities

- Cloud Migration
- Cloud Data Warehouse
- Cloud Workload
- DWH implementation / Migration
- Big Data Environments Hadoop, Kafka, Spark, Flink, Druid, nifi, etc
- Analytics
- Use Case Implementation

- Data Science
- Digital Twin
- AI
- Machine Learning
- Data Integration
- Data Reporting
- Business Intelligence
- Data Modelling
- IoT

Google Cloud CLOUDERA CONFLUENT IBM Informatica data iku elastic OREDATA

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EXPERTISE OFFER:

- HORIZON-CL4-2024-DIGITAL-EMERGING-01-21
- HORIZON-CL4-2023-DATA-01-02
- HORIZON-CL4-2024-DATA-01-01
- HORIZON-CL4-2024-DATA-01-05

E2E services – Data collection, processing & visualization

	Infrastructure services & Cloud migration	Data & Analytics	AI & Machine Learning
Use-Cases	• Gap analysis between current IT infrastructure and customer business requirements	• Netezza, Exadata, Teradata, Vertica, Cloudera or from other cloud providers such as **AWS** or **Azure** and **Google Big Query**	• Use-Case and scoping Workshop • Multiple replicable AI use cases
Design	• Provide cloud transformation + data journey consultancy		• Multi-industry use case implementations.
Implementation	• Lift & Shift, Optimize & Modernize using **cloud services.**	• Assessment of current data models & best migration methodology, batch or real-time	• Machine Learning with **Google Vertex AI and BigQuery AutoML**
Services offered	• Provide Cloud managed services + support to enable enterprises to focus on their core business instead of managing their platforms	• Visualize customized data reports	• Vision AI, Video Processing, Speech to Text
Timeframe	• **2 -4 weeks** POC period • **3 -12+ months** implementation	• **2-6 weeks** POC period • **3 -12+ months** implementation	• **2 - 6 weeks** POC period • **3 - 6 months** implementation

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Carinthia University of Applied Sciences (CUAS)

Smart Gripping Technology in Lightweight Design

Mathias Brandstötter

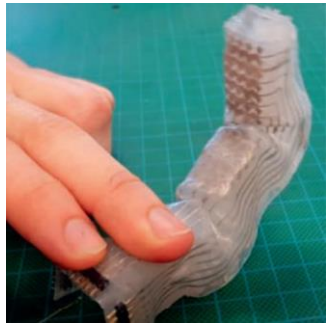
T: +43 664 5608501

E: m.brandstoetter@fh-kaernten.at

KÄRNTEN University of Applied Sciences

ADMiRE Additive Manufacturing, intelligent Robotics, Sensors and Engineering

www.admire.center



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PROJECT IDEA

Topic:

- HORIZON-CL3-2023-DRS-01-04 - Robotics: Autonomous or semi-autonomous UGV systems to supplement skills for use in hazardous environments
- HORIZON-CL4-2023-DIGITAL-EMERGING-01-02 – Industrial leadership in AI, Data and Robotics – advanced human robot interaction

Type of project: *(RIA, IA)*

Project objectives:

Physical support for helpers in disaster areas; Smart grippers for manipulation of any object

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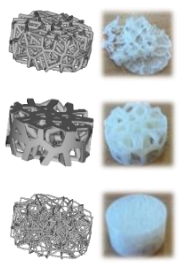
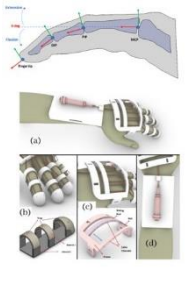
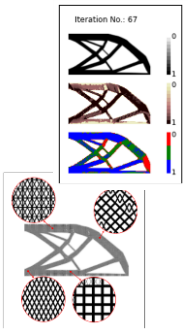
EXPERTISE OFFER

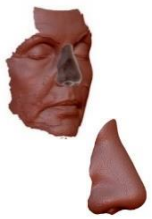
Our research is dedicated to additive manufacturing, intelligent robotics, sensors and engineering.

- Material
- Design
- Technology
- Process

Materials and Structures for AM	Lightweight Design	Biomechanical Systems and Design	Computational Mathematics: Simulation, Optimization	Grippers, Sensors, Wearables, Robotic AM	Industrial Robotics, Applied Kinematics	AM for Medical Applications



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A Sicily-based team of industrial innovation advisors

Domenico Guida

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E: guidadom@gmail.com

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WHO and WHERE

A team of 4 skilled and experienced professionals active in **Digital and Sustainable Innovation** projects

Based in Sicily (IT), with ongoing collaborations with manufacturing SMEs and Innovation agencies from other Italian and EU Regions

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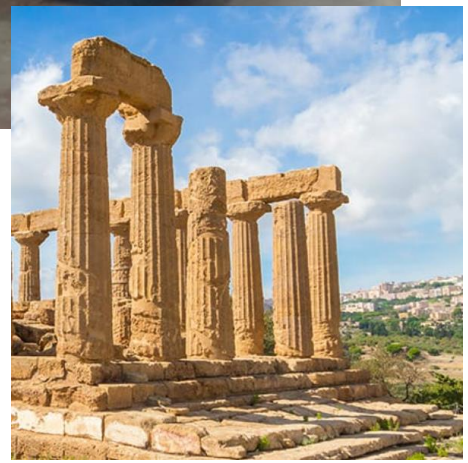
SKILLS and EXPERTISE in

- EC funded projects writing and coordination (H2020, CEF, INNOSUP, DigitalEurope)
- CONSORTIUM BUILDING and PARTNER SCOUTING
- ECOSYSTEM BUILDING

<u>TECHNICAL KNOWLEDGE</u>

- DIGITAL TECHNOLOGIES FOR
  - INDUSTRIAL INNOVATION
  - CULTURAL HERITAGE
  - SMART HEALTH
- PROCESS & PRODUCT DESIGN
- PROTOTYPING
- DE-REMANUFACTURING
- SUSTAINABLE MATERIALS AND PROCESSES



Our operative connections:

IN ITALY

- Enterprise Europe Network local nodes
- Regional industrial associations
- European Digital Innovation Hubs

  In Sicily: 1 awarded EDIH and a node of an EDIH with national coverage

  2 other EDIHs in Italy
- **National Recovery Plan / Regional Funds -funded projects**
- Cultural heritage preservation foundations

IN EUROPE

- Vanguard Initiative / EC TSSP Pilot Actions
- 2 running H2020 and HE projects on AI industrial applications

Our Client SMEs are from

- Automotive sector (special vehicles for health sector)
- Recreational crafts sector / shipyards
- Winery and agricultural sector
- Tourism sector

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We are AVAILABLE for:

- Consortium building
- Proposal writing
- Task coordination
- Technical Advisory
- Product and Process Design

…or for discussing the involvement of one of our client manufacturing SMEs in your consortium!

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Dell Technologies

Securing the Supply Chain in Edge Computing with Zero Trust and AI-Driven Data Processing

Aidan O Mahony

T: +353 21 4281500

E: aidan.omahony@dell.com

Dell Technologies

PROJECT IDEA

Topic: *HORIZON-CL4-2023-DATA-01-04: Cognitive Computing Continuum: Intelligence and automation for more efficient data processing (AI, data and robotics partnership) (RIA)*

Type of project: *RIA*

Project objectives:

- *Enhance the security of the supply chain in edge computing by implementing zero trust principles.*
- *Improve data processing efficiency at the edge by leveraging AI, data, and robotics.*
- *Ensure that sensitive information is protected and data privacy is maintained throughout the supply chain.*

WANTED

Competences & Skills wanted

Zero trust, supply chain, edge computing, AI-driven data processing

Types of partners sought

Universities/Research institutes, SMEs, standards organisations

Work to be performed

Theoretical research, research to technology transfer, software development

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EXPERTISE OFFER

Supply chain, edge, zero-trust, data management, AI

…….relevant to the call topic / project idea

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AUDENCIA Business School (France)

Human, Social, Societal & Ethical aspects of Technology / AI

Caroline Lancelot Miltgen (PhD, HDR)

T: +33 6 65012704

E: clancelot@audencia.com

Audencia BUSINESS SCHOOL

TOPICS TARGETED

Topics:

HORIZON-CL4-2023-HUMAN-01-01 (RIA) – Efficient Trustworthy AI
HORIZON-CL4-2023-HUMAN-01-02 (IA) – Trustworthy AI & Robotics & Key Societal Challenges
HORIZON-CL4-2024-HUMAN-01-06 (RIA) – Explainable and Robust AI
HORIZON-CL4-2024-HUMAN-01-07 (RIA) – Combining the best of Machine and Human

Type of projects: *RIA / IA*

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BACKGROUND

- Researcher (Academia)
- SSH Expert & Digital Identity, Data Privacy and Data Protection Expert (UX Perspective)
- Experience as Participant in H2020
- 10 years Experience as Expert Evaluator for the EC

EXPERTISE OFFER

- Human, Social, Societal and Economic Impact
- Users' Requirements & Trustworthiness
- AI & Ethics

WANTED

Joining a consortium with a need for a SSH Expert

Types of partners sought

All: Industry, SME, RTD center, University, User-groups, etc

Work we can perform

SSH Work Package Leader

- Users' needs and requirements
- Users' assessment and evaluation of the solution

Communication & Dissemination Activities

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University of Liège

AI-based robotic solutions

Tom Ewbank

T: +32 477 612 854

E: tom.ewbank@uliege.be

(BELGIUM)

IntegrIA

LIÈGE université

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EXPERTISE OFFER

Robotics

Artificial Intelligence

Deep Learning & Reinforcement Learning

Simulation & Digital Twins

PyBullet
&
Isaac Sim (Nvidia)

Software Engineering

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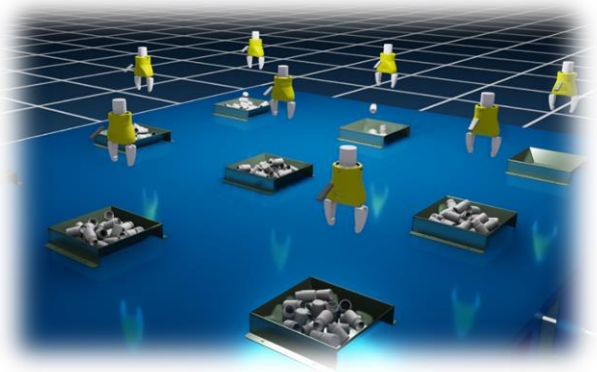
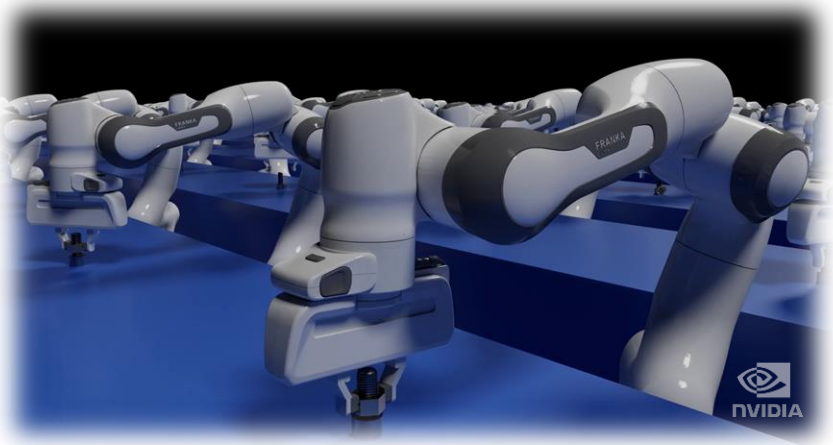
OUR SOFTWARE

Robot training in simulation (RL)



Direct transfer in real world



Focus on picking systems,
But not limited to!
(Example of other applications:
assembly, fastening,…)

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WE ARE LOOKING TO…

Collaborate on projects

Other channels than Horizon Europe possible!

Find use cases

On which to showcase our technology

Potential Horizon Europe Topics:

- *HORIZON-CL4-2023-DIGITAL-EMERGING-01-01: Novel paradigms and approaches, towards AI-driven autonomous robots (AI, data and robotics partnership) (RIA)*
- *HORIZON-CL4-2024-DIGITAL-EMERGING-01-03: Novel paradigms and approaches, towards AI-powered robots– step change in functionality (AI, data and robotics partnership) (RIA)*

Łukasiewicz
Przemysłowy
Instytut
Automatyki
i Pomiarów PIAP

Competencies in AI, data and robotics

Grzegorz Kowalski
Warsaw, 03.02.2023
+48228740229, grzegorz.kowalski@piap.lukasiewicz.gov.pl

Mobile robotics

- Inspection, surveillance, threat detection, support for crisis management, search and rescue
- Integration of third-party devices
- Integration with higher-level IT systems
- Autonomy, SLAM
- 2D and 3D mapping
- Custom HMIs

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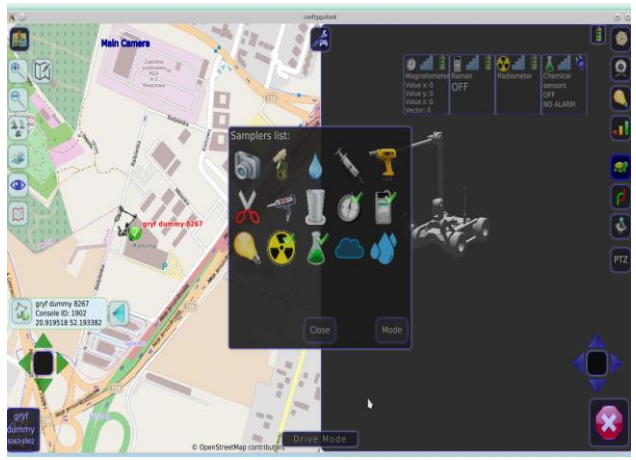
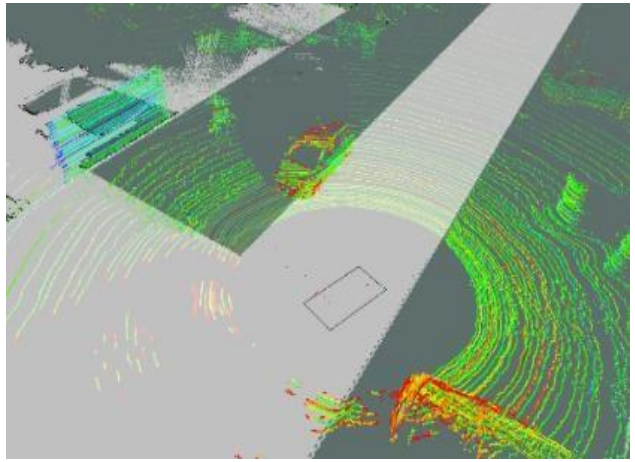
Software, embedded systems

- Software:
  - Custom software from scratch
  - Simulators
  - Data fusion and processing
  - Machine intelligence
  - Virtual and augmented reality
  - Robot Operating System (ROS)
- Embedded systems:
  - Intelligent cameras
  - Motherboards
  - Custom devices





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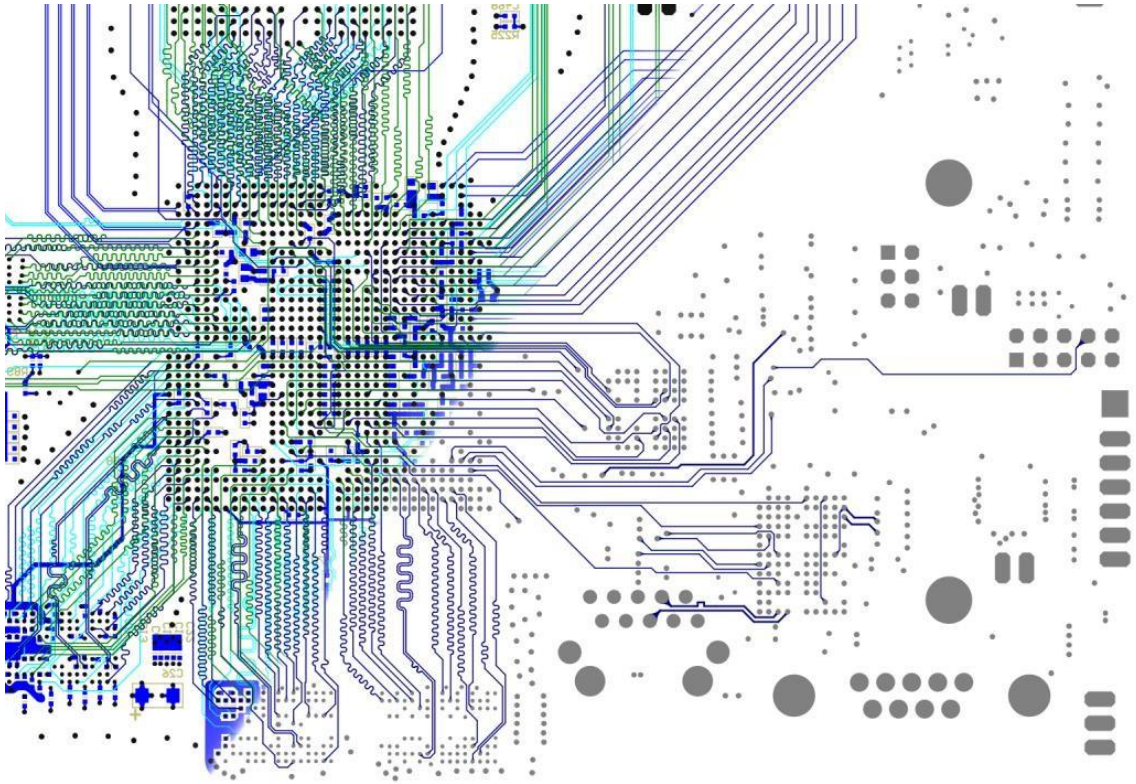
Our potential involvement

- Project partner
- Task and workpackage leader
- Integration leader
- Dissemination leader
- Definition of architecture, reqs, interfaces
- Use-case provider / end-user cooperation
- Contribution to all parts of proposal

- HEU, EDF, EDA, ESA, EIT



Łukasiewicz
PIAP

Thank you!

Grzegorz Kowalski
Security and Defence Systems Division
Łukasiewicz Research Network – Industrial Research Institute for Automation and Measurements PIAP

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Erika Fülöp

Professor of Contemporary Literature, Digital Humanities and Creative Writing
University of Toulouse 2 Jean Jaurès
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https://babelhead.github.io/DisHop/

Research/project interests:

- Generative art and literature
- Natural language processing and creativity
- Preservation of digital artefacts (digital art and literature): (How) can we archive AI?

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Coşkunöz Kalıp Makina / Coşkunöz

CLUSTER 4 TOPICS

Coşkunöz

COŞKUNÖZ KALIP MAKİNA

T: +90 534 263 97 45

E: ebilaloglu@coskunoz.com.tr

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Topics:

- **HORIZON-CL4-2023-DIGITAL-EMERGING-01-01:** Novel paradigms and approaches, towards AI-driven autonomous robots (AI, data, and robotics partnership) (RIA)
- **HORIZON-CL4-2023-DIGITAL-EMERGING-01-02:** Industrial leadership in AI, Data, and Robotics - advanced human-robot interaction (AI, Data, and Robotics Partnership) (IA)
- **HORIZON-CL4-2023-HUMAN-01-22:** eXtended Reality for Industry 5.0 (IA)
- **HORIZON-CL4-2023-DIGITAL-EMERGING-01-12:** Adaptive multi-scale modelling and characterisation suites from lab to production (RIA)

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WANTED

Competences & Skills wanted

Coordinator

Types of partners sought

Industry for Scalability, SME, RTD center, University, User-groups

Work to be performed

User Case Ownership, Test and Validation

EXPERTISE OFFER

2 ongoin - 1 completed EC projects; 2 ongoing 2 Completed Eureka Projects

- Use Case Definition and Validation regarding to Sheet Metal Forming Industry

- Robotic Welding (Laser, Laser-Hybrid, Friction Strir Welding), Robotic Additive Manufacturing (DED-WAAM and DED-LMD(L-P))
- Close Systems for manufacturing processes
- AI Assisted Simulation Modelling for processes

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INEGI - Institute of Science and Innovation in Mechanical and Industrial Engineering

Daniel Pina

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E: dpina@inegi.up.pt

inegi driving science & innovation

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RESEARCH & DEVELOPMENT

INNOVATION & TECHNOLOGY TRANSFER

SERVICES

Consulting
Laboratory Services
Advanced Training

INEGI

2021 Figures & Facts

582 Customers

118 Innovation Projects with Industry

232 International Partners

12,1 M EUR Turnover

9.267 m2 Facilities - Porto

76% Projects with Companies

47% Invoicing

24% International

6 Spin-off Companies in the Market

8 Patents Pending

1,8 PhD Thesis per Researcher

3,7 ISI Papers per Researcher

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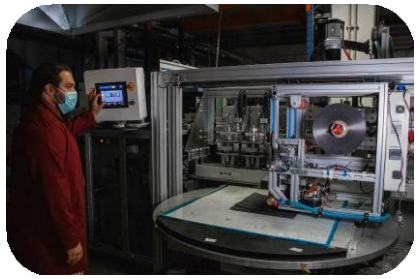
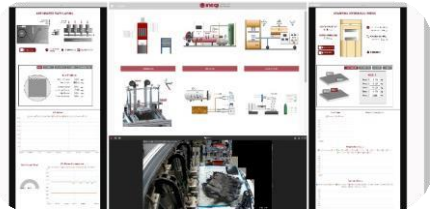
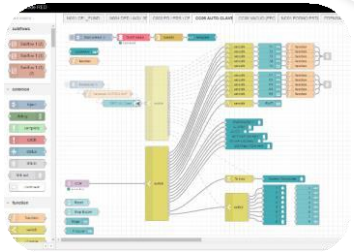


DIGITAL OFFER





- Augmented Reality Interfaces
- Remote Monitoring
  - *Dashboards / Frontends*

INEGI

AI, Data & Robotics Expertise

- Self-Regulating Processes
  - Neural Networks
- Inspection, Measurement, Quality Control
  - Artificial Vision
- Optimization and Control of Manufacturing Processes
  - Advanced Robotics, *Cobots*
  - Additive Man.
- Sensorization, Integration
- Simulation, *Digital Twins*
- *IIoT e Edge Computing*

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INEGI
Experience in EU Funded Projects

Horizon Europe Projects with relevancy for ADRA

- ***AI, Data and Robotics Partnership*** | **EARASHI** - Embodied AI/Robotics Applications for a Safe, Human-oriented Industry
- *Key Digital Technologies Partnership* | **NerveRepack** - Intelligent neural system for bidirectional connection with exoprostheses and exoskeletons
- *Made-in-Europe Partnership* | **FLASH-COMP** - Flawless and sustainable production of composite parts through a human centred digital approach
- *2Zero Partnership* | **ESCALATE** - Powering EU Net Zero Future by Escalating Zero Emission HDVs and Logistic Intelligence
- *Batteries Partnership* | **REINFORCE** - Standardised, Automated, Safe and Cost-Efficient Processing of End-of-Life Batteries for Second and Third Life Re-Use and Recycling (*INEGI coordination*)
- *EDIHs* | **Produtech DIH** – Digital Innovation Hub
- *EIT-Manufacturing* | **Confacts** – Multi-layer Connected Factories with hybrid conventional and digital components

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MachineSight

Expertise in Robotics and Intelligent Vision

Marc LENGELÉ

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www.machinesight.eu

MachineSight

PROJECT IDEA

Topic(s): *we focus our interest on "virtual operator", a smart alliance between co/ro-botics and vision, including AI, especially in the context of Visual Inspection.*
So, we could offer our expertise on several calls with TRL4+.

Type of project: *RIA & IA*

HORIZON-CL4-2023-DIGITAL-EMERGING-01-02
HORIZON-CL4-2023-DIGITAL-EMERGING-01-57
HORIZON-CL4-2023-DIGITAL-EMERGING-01-01
HORIZON-CL4-2023-HUMAN-01-51
HORIZON-CL4-2023-HUMAN-01-02

Project objectives:
Visual Inspection of pharmaceutical vials/ flasks, quality control of parts or assembly,…

EXPERTISE OFFER

MachineSight is the concatenation of two areas of expertise:

- Machine, as we are a “complete” integrator of special machines: Mechanics, Automation, Robotics,…

- Sight, as we have a high end expertise in Vision, from basics to AI approach

Optical Setups, Algorithms and Software Integration

From PoC to Industrial Equipments

MachineSight’s R&D is dedicated to designing, developing and industrialize innovative solutions related to virtual operators in visual inspection and defect control. Our aim is to support humans in their daily quality control tasks, by lowering the mental load and increasing performance and quality. Our strength is pragmatism, using the latest technologies in robotics, automation and vision.

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Ineris

Safety assessment of AI Based Safety Devices

François Massé

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E: francois.masse@ineris.fr

INERIS

maîtriser le risque pour un développement durable

PROJECT IDEA

Topic: HORIZON-CL4-2023-HUMAN-01-01: Efficient trustworthy AI - making the best of data (AI, Data and Robotics Partnership) (RIA)
HORIZON-CL4-2024-HUMAN-01-06: Explainable and Robust AI (AI Data and Robotics Partnership) (RIA)
HORIZON-CL4-2023-HUMAN-01-02: Large Scale pilots on trustworthy AI data and robotics addressing key societal challenges (AI Data and Robotics Partnership) (IA)

Project objectives:

Define evaluation and certification processes, means and criteria for AI embedded in safety devices in industrial application (e.g. IEC 61508/61511, Machinery Directive)

WANTED

- Competences & Skills wanted
  HW, SW and AI development, V&V, reliability and trustworthiness assessment, certification
- Technologies focused on machine learning and image recognition

Types of partners sought

Suppliers, End Users, Academics, Certification Bodies

- Work to be performed
  formalization of development processes, test, V&V integrating data sets and learning processes
- definition of risk acceptability metrics
- setting up of specific test benches
- Standardization and certification schemes

EXPERTISE OFFER

Ineris is a public establishment under the supervision of the Ministry of the Environment, which mission is to contribute to the prevention of risks that economic activities pose to the health and safety of people and the environment

In this project we will mobilize:

- Our expertise in functional safety: SIL certification of software and electronic safety devices, Notified Body for the Machine Directive, participation in standardization (Machinery sector and IEC)
- Our preliminary work on the issues related to the integration of AI in embedded devices

…….relevant to the call topic / project idea

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German Aerospace Center (DLR)

Robot learning in space and terrestrial domains

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E: joao.silverio@dlr.de

DLR

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WANTED - Consortium to join

ABOUT US

German Aerospace Center
Deutsches Zentrum für Luft- und Raumfahrt (DLR)

~9000 employees, 50 institutes/facilities, 30 sites
research**:** Aerospace, Energy, Traffic, Security, Digitalization

Institute of Robotics and Mechatronics (RM)

~200 employees in Oberpfaffenhofen, near Munich
6 departments: https://www.dlr.de/rm/

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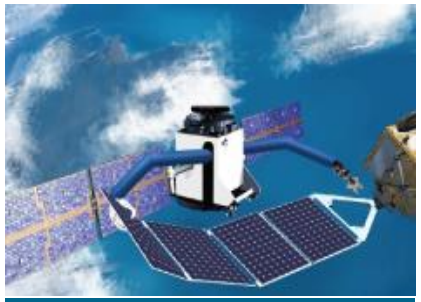
EXPERTISE OFFER

Space use cases

Space Assistance



Orbital Robotics

Planetary Exploration Robotics

Terrestrial use cases

Service & Medical & Healthcare

Future Manufacturing

Field Robotics

State-of-the-art robots and systems

SARA
New generation light-weight robot

Justin
humanoid with reusable modules

MIRO
minimally invasive surgery

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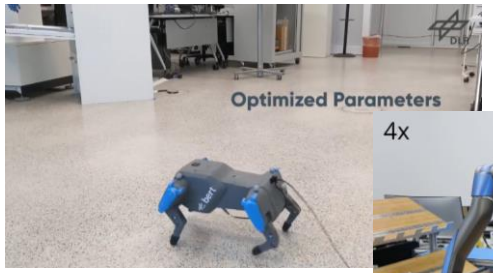
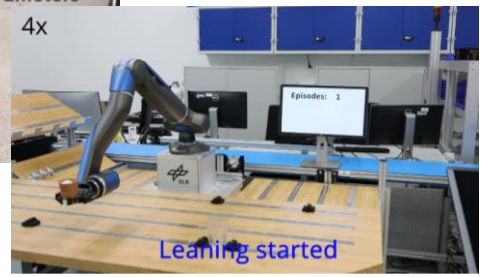
EXPERTISE OFFER

Interactive skill learning group
Dr. João Silvério

Learning from demonstration

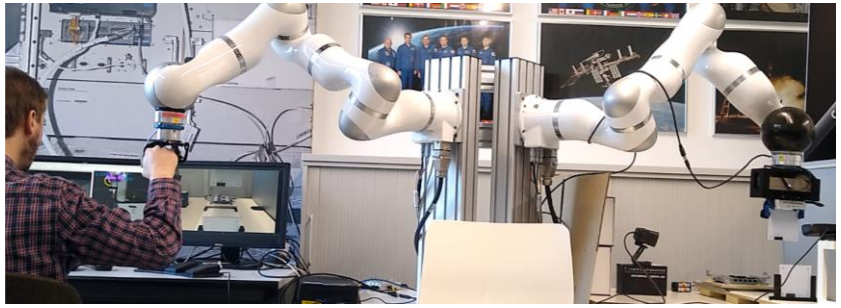
Reinforcement learning





Stable Baselines

Shared control and assisted teleoperation



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4i Intelligent Insights (Spain) /4i

Providing multimodal dialogue capabilities to Industry 4.0 solutions and to (social) robots

Dr. Guillermo Pérez (CEO, PI)

T: +34 620-517-419

E: g.perez@4i.ai

EXPERTISE OFFER

- Experts in conversational dialogue systems.
- Focus on multimodal interactions (voice and vision) running on the edge.
- Partners in research projects: Airbus, IBM, Cisco, Indiana University, Universidad de Sevilla, Sydney University.

PROJECT IDEA

Main target topics in HORIZON-CL4-2023- (by order of preference):

1) -HUMAN-01-03: **Natural Language Understanding** and Interaction in Advanced Language Technologies (RIA).

2) -DIGITAL-EMERGING-01-02: Industrial leadership in AI, Data and Robotics – **advanced human robot interaction** (IA)

3) -HUMAN-01-22: eXtended Reality for **Industry 5.0** (IA)

4) -HUMAN-01-51: Pilots for an innovative **human-centric industry** (RIA)

5) -HUMAN-01-52: Drivers and success factors for progress towards **Industry 5.0** (RIA)

6) -DIGITAL-EMERGING-01-01: Novel paradigms and approaches, towards **AI-driven autonomous robots** (RIA)

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WANTED

Partners sought for

Industry (4.0 & 5.0) | (Social) Robotics |
Psychologists & Pedagogues |
Natural Language Processing | Artificial Vision | Multi-modal Sensors |
Ethics |
Artists | …

OUR ROLE

Partner / WP Leader