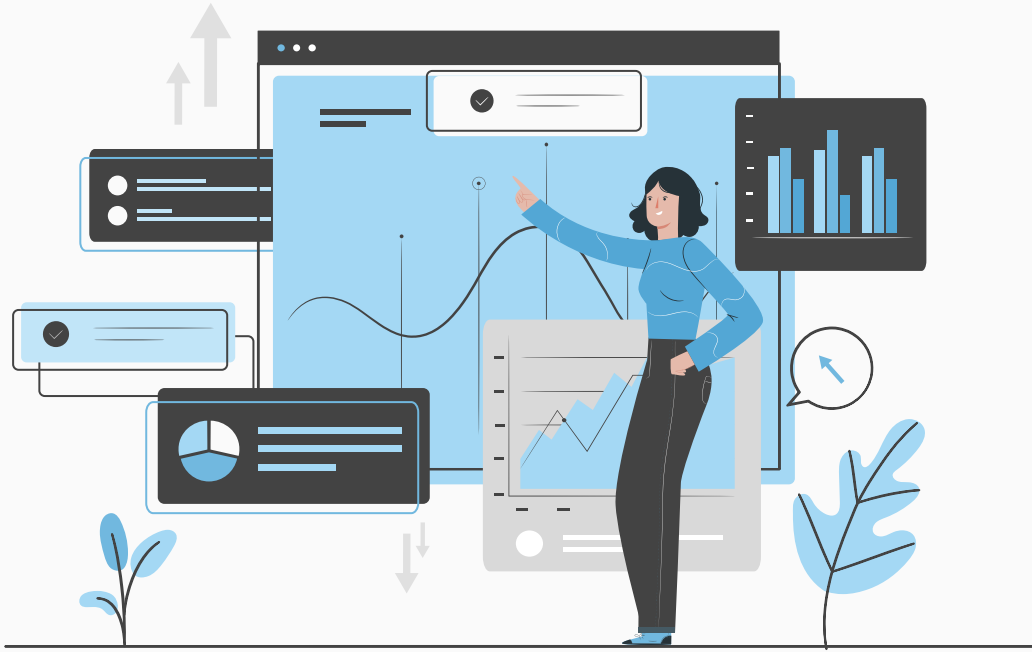
AI REDGIO 5.0

AI REDGIO 5.0 1st Open Call for experiments

19th February 2024



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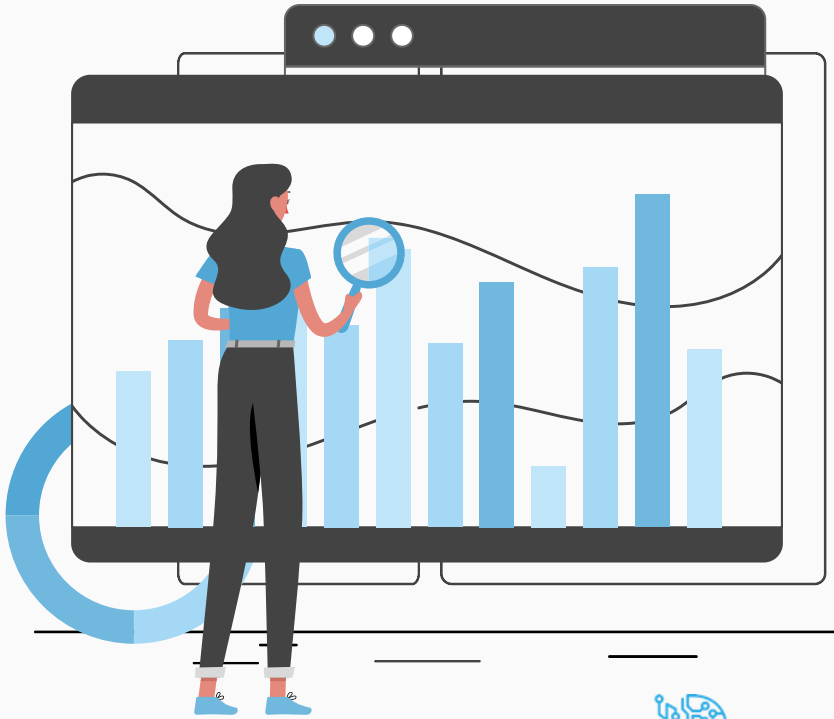
Sergio Gusmeroli, POLIMI



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AI REDGIO 5.0 I4MS

TWIN TRANSITION 01-06 I4MS2

HORIZON-CL4-2022-TWIN-TRANSITION-01-06: ICT Innovation for Manufacturing Sustainability in SMEs (I4MS2) (Made in Europe Partnership) (IA)

Specific conditions	
Expected EU contribution per project	The Commission estimates that an EU contribution of between EUR 4.00 and 8.00 million would allow these outcomes to be addressed appropriately. Nonetheless, this does not preclude submission and selection of a proposal requesting different amounts.
Indicative budget	The total indicative budget for the topic is EUR 30.00 million.
Type of Action	Innovation Actions
Technology Readiness Level	Activities are expected to start at TRL 5 and achieve TRL 7 by the end of the project – see General Annex B.
Procedure	The procedure is described in General Annex F. The following exceptions apply: To ensure a balanced portfolio covering all technology areas, grants will be awarded to applications not only in order of ranking but also to at least one project per technology area, provided that the applications attain all thresholds.
Legal and financial set-up of the Grant Agreements	The rules are described in General Annex G. The following exceptions apply: Beneficiaries may provide financial support to third parties. The maximum amount to be granted to each third party is EUR 60 000. The funding rate is up to 60% of the eligible costs. This funding rate applies both to members and non-members of the partnership, except for non-profit legal entities, where the funding rate is up to 100% of the total eligible costs.

AIRISE.EU

Artificial Intelligence in Manufacturing for Sustainable Applications at SMEs.
The AIRISE project will support European SMEs in the uptake of Artificial Intelligence applied to manufacturing, with a specific focus on the use of AI-enabled applications at the edge. Call for Ambassadors closed end JUL (LMS PBN)

WASABI

White-label shop for digital intelligent assistance and human-AI collaboration in manufacturing.
WASABI aims at providing SMEs with the tools and knowledge to improve workers capacities and performance, providing advanced user interfaces for continuous augmented hybrid-decision-making. Such interfaces assist employees in interacting with complex software, effectively reducing its skill floor. (CARSA)

CIRCULOOS

Circular and Dynamic Manufacturing Supply Chain Orchestration and OptimiSation.
CIRCULOOS aims to deliver circular manufacturing tools which orchestrate and continuously optimise the supply-chain end-to-end and comprehensively integrate planning and execution. (ED, FIWARE, RAMP)

AI REDGIO 5.0

Regions and (E)DIHs alliance for AI-at-the-Edge adoption by European Industry 5.0 Manufacturing SMEs

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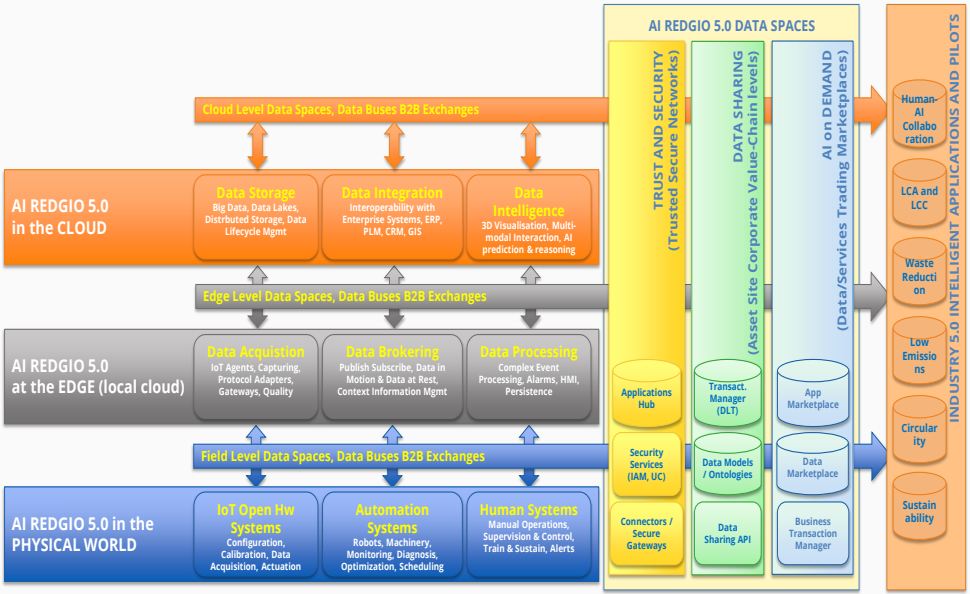
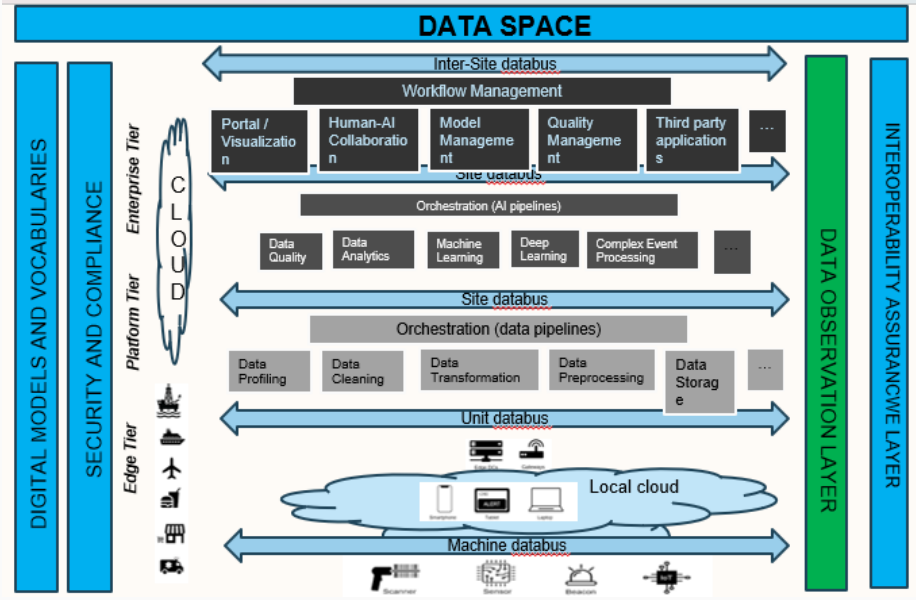
Objectives

1 CONCEPTUAL FRAMEWORK AND REFERENCE ARCHITECTURE FOR AI-AT-THE-EDGE INDUSTRY 5.0 APPLICATIONS AND EXPERIMENTATIONS





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Objectives

2

SECURE AND TRUSTWORTHY EDGE-TO-CLOUD CONTINUUM DATA AND COMPUTATIONAL SPACE FOR HIGHLY DISTRIBUTED AI APPLICATIONS

BONSEYES

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Objectives

3 INTEROPERABILITY BY DESIGN WITH THE PAN-EU AI-ON-DEMAND PLATFORM AND ITS ECOSYSTEM OF H2020 & HEP INNOVATION ACTIONS

Strengthening Digital Innovation Hubs with the European AI-on-demand platform: Recommendations White Paper

What precisely will be the nature of the relationship and interactions between the pan-European on-demand platform and the regional (E)DIHs? What value can they offer one another? And how will they work together to serve the interests of the respective and sometimes overlapping stakeholders?

AI REDGIO 5.0

Objectives

4

SUPPORTING THE EUROPEAN WAY TO AI FOR MANUFACTURING BY GENUINE EU OPEN SOURCE FRAMEWORKS, IMPLEMENTING EU VALUES AND ETHICAL PRINCIPLES IN TERESA SANDBOXES

TERESA

«Mini Factory» TERESA

- **Switzerland**, connection with **SUPSI**
- **Human-robot collaboration through different small experiments** dedicated to Collaborative Robotics and Human-centred Production Systems, with **different scenarios** where a cobot and humans work together in **various tasks** (assembly, screwdriving) and with varying **degrees** of collaboration (separated and independent, sequential, synchronous, etc.)

«BIC – Factory of the Future Experience Center» TERESA

- **The Netherlands**, connection with **BI**
- Fast, flexible and faultless **assembly of different products**, with multiple experiments such as operator support system in a manual assembly workplace and handling machine data, production processes and information exchange along the chain

«SMILE@Lab» TERESA

- **Italy**, connection with **Intellimech**
- **LUISA** - nLp for troubleshooting System interAction: **computer-based troubleshooting system** that, starting from symptoms , determine the causes of the product or process **malfunctioning.** It includes dialogue with the operator (Speech-to-Text & Text-To-Speech Technologies), Automatically find fault component/failure mode, Understand the meaning of operator report Automatically Update questions & probability dataset

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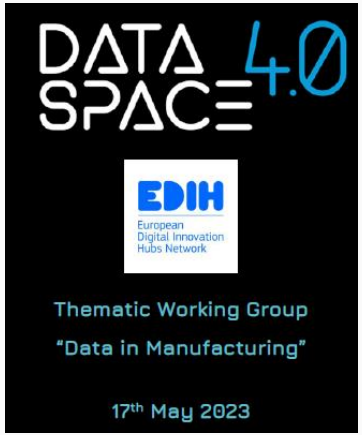
Objectives

5 MANAGE AND GOVERN THE TRANSITION FROM REGIONAL DIHS TO A NETWORK OF EDIHS IN AI FOR MANUFACTURING



Section 1 – Welcome and Motivation	
• *Present the motivation behind the creation of a common Thematic Working Group (TWG) to support the needs of the EDIHs network in the area of Digital transformation, Data & Manufacturing*	
10:00 – 10:10	Welcome (**Oscar Lazaro, Matthias Kuom**)
10:10 – 10:20	Digital Europe Context (**Matthias Kuom**)
10:20 – 10:40	TWG Context & Initial Mission (**Oscar Lazaro,**

Section 2 – EDIHs representatives' presentation	
• *Tour de Table of EDIHs joining the Thematic Working Group: Hubs* • *Moderator: **Maria Rossetti**)*	
10:40-11:00	EDIH pitches – motivation (**ALL**)

Section 3 – Data Space 4.0 presentation	
• *Introduction to Data Space Support Centre (DSSC) & Data Space 4.0 preparatory action*	
11:00 - 11:15	Designing and deploying global data value networks for manufacturing (***Oscar Lazaro***)

Section 4 – TWG operational procedures	
• *Initial vision for the joint activities of the TWG to be carried out, outcomes and how they will be delivered, tasks management and contacts*	
11:15 - 11:30	TWG collaboration and workplan co-creation process (**Maria Rossetti**)

Section 5 – Open discussion	
• *Participants insights, contributions and future outlook to shape the TWG*	
11:30 – 12:00	*Priorities & first opportunities for collaboration(**ALL**)*

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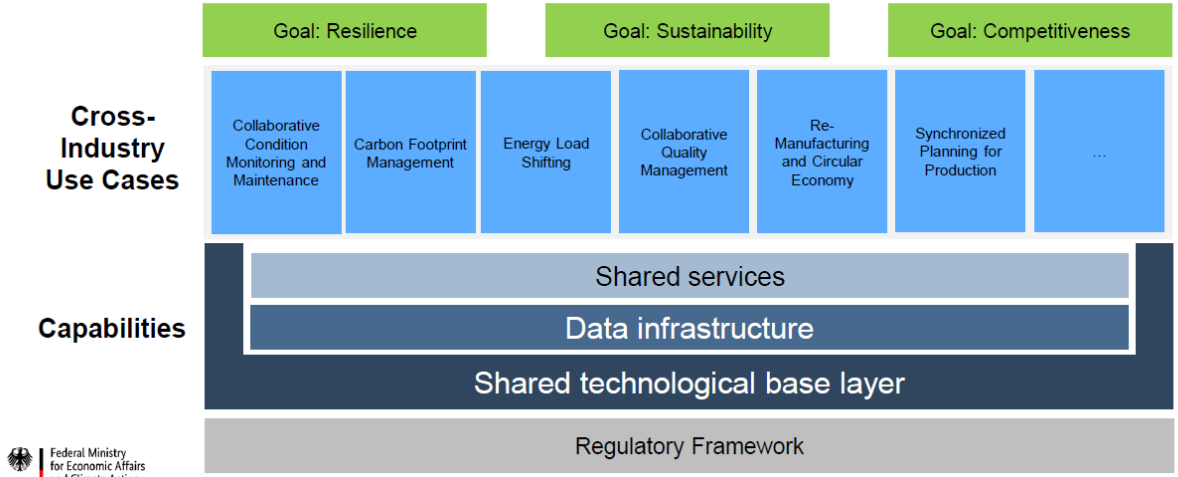
Objectives

6 TEST BEFORE INVEST EXPERIMENTS IN AI DIDACTIC FACTORIES AND TEF

Manufacturing-X Architecture

Manufacturing-X aims to implement important cross-industrial use cases on a common framework.



Federal Ministry for Economic Affairs and Climate Action

AI matters

INDUSTRIA-X the horizontal Data Sharing Space in a pan-eu network of Didactic Factories

AI REGIO

11 Didactic Factories representing 11 regions in the project. Plus additional DFs not related to AI REGIO Beneficiaries (SUPSI SSF). IIOT-AAS-DTWIN-xR-TELE experiments

DIMOFAC

9 Didactic Factories representing beneficiairies in the project (AIMEN(2) CEA(2) DFKI IPC TECNALIA SSF BRAINPORT LMS POLIMI)

Modul4r

3 Didactic Factories representing beneficiairies in the project (AIMEN SSF POLIMI)

DaCapo

8 Didactic Factories representing beneficiairies in the project (AIMEN CEA VTT POLIMI(2) LMS TNO UniMORE SUPSI)

Circular TwAIn

2 Didactic Factories representing beneficiairies in the project (POLIMI SSF)

RE4DY
MANUFACTURING DATA NETWORKS

3 Didactic Factories representing beneficiairies in the project (POLIMI INNOVALIA SSF)

AI REDGIO 5.0

14 Didactic Factories representing VANGUARD Regions in the project

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Objectives

7 VALIDATION AND EVALUATION IN SME-DRIVEN AI FOR MANUFACTURING USE CASES

1. REAL TIME MONITORING FOR CONTROL & DETECTION OF PRODUCTION SCAMM
2. AI AND DIGITAL TWINS FOR AGILITY IN MOULD MAKING PERNOUD
3. AI-BASED AUTONOMOUS MACHINE FOR SAFER FASTER AGRICULTURE GPALMEC
4. PREDICTIVE MAINTENANCE AND ZERO-DEFECT PRODUCTION OF MOULDS POLYCOM
5. AI-ENABLED DIGITAL TWINS FOR VIRTUAL COMMISSIONING QUESCREM
6. INTELLIGENT CONTEXTUALISED VISUAL SYSTEM FOR ERROR REDUCTION CAP
7. QUALITY ASSURANCE OF CLOTHING PRODUCTION KATTY FASHION

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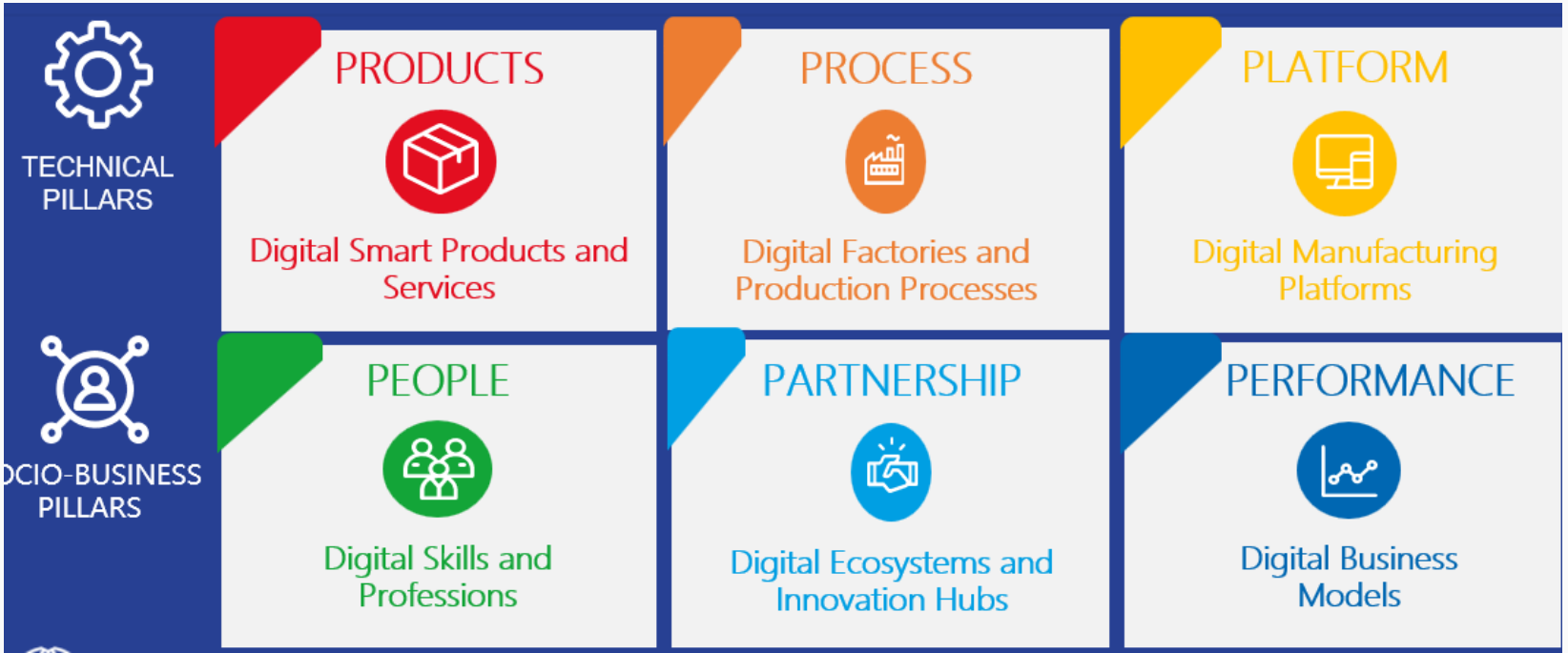
Objectives

8 AI-DRIVEN I5.0 DIGITAL TRANSFORMATION METHODS AND TOOLS, MATURITY ASSESSMENT, 6PS PATHWAY SPECIFICATION AND AI SKILLS FOR I5.0 DEVELOPMENT PROGRAM



AI REDGIO 5.0

Objectives

9 SUSTAINABILITY, ECOSYSTEM DEVELOPMENT AND REPLICATION TO SMES

Alliance for IoT and Edge Computing Innovation

The 7° P: Portability

PRODUCT — How much have the enablers of Replicability and Scalability been taken into account in the design of your Smart Products (if any) ?

PROCESS — How much have Replicability and Scalability of the processes been taken into account in the design of your pilot ? (Processes: Production, Quality Control, Maintaining, Logistics…)

PLATFORM — How much have the enablers of Replicability and Scalability been taken into account in the design of the digital platform supporting your pilot ?

PEOPLE — How much have the enablers of Replicability and Scalability in the User dimension been taken into account when designing your pilot ?

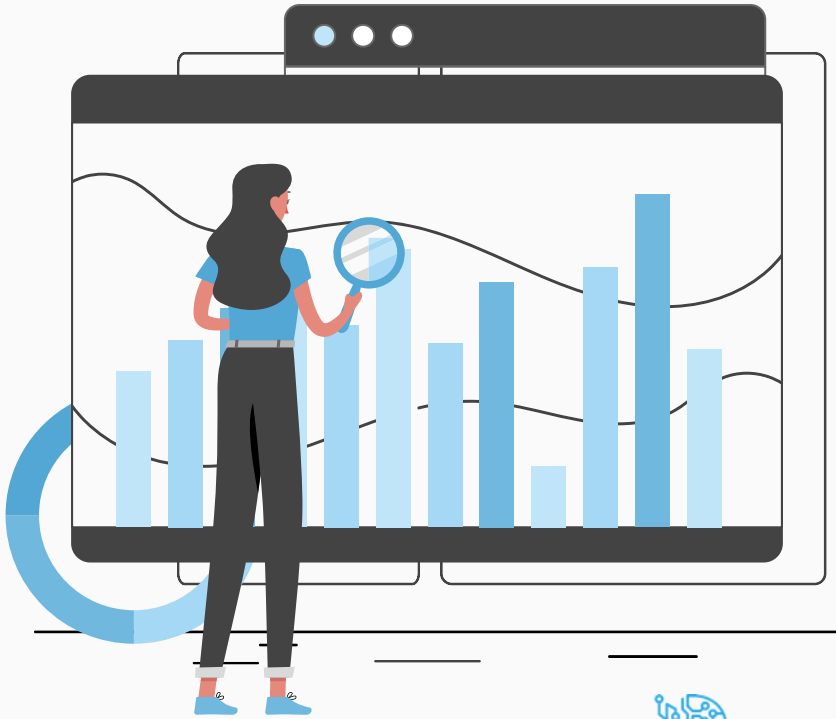
PARTNERSHIP — To what extent the Replicability and Scalability features of the pilot will benefit external stakeholders and partners who took part to the project (such as DIH, R&D Centres, Universities, IT suppliers, commercial partners) ?

PERFORMANCE — In addition to the KPIs developed for the pilot, have you set up new KPIs, foreseeing its replication or scaling-up?

OBJECTIVE:
To support the replicability and the scalability of R&I project platforms to other industrial domains or larger scale

AI REDGIO 5.0 1st Open Call

Nenad Stojanovic, Nissatech
Marina Cugurra, Expert AI
Naia Muruaga, CARSA



AI REDGIO 5.0

TOPIC 1: AI at the Edge applications and edge-to-cloud continuum

AI plays a significant role for almost any industry and the same is a reality for manufacturing. In AI REGDIO 5.0 the main goal is to showcase the advantages AI can bring to manufacturing enterprises when this is performed **at the edge**, making use of the edge-to-cloud continuum, capitalising on the capabilities that are today offered by novel cloud-to-edge execution frameworks and infrastructures, as well as AI models and libraries that are in a position to realise local execution. Using such approaches manufacturing industries and SMEs are able to grasp all the benefits that accompany this approach (e.g., low latency, minimal data transfer, data sovereignty and privacy, etc.).

Experiments to be selected should demonstrate the above-mentioned approach, with providing real-life use cases that call for AI execution at the edge, or using hybrid cloud-edge infrastructures, and building the necessary services and AI models to realise this target. Experiments shall design the necessary AI pipelines to execute their use cases, and local execution of the AI models should be performed on edge computing environments, such as the one specified by the *AI-REDGIO Open Hardware* or similar, which applicants have to deploy. Moreover, the re-use (and at a later experiment stage the publication) of AI models to the *AI-on-Demand platform* is strongly encouraged.

Applications of interest include, but are not limited to, the use of AI for predictive and prescriptive maintenance, automation, manufacturing operations planning and scheduling, waste reduction, energy efficiency, resource optimisation, quality control, circularity, resource optimisation, etc.

In all experiments, applicants should clearly showcase how Human-AI teaming can be achieved in their use case, where AI and human interaction are blended to benefit both the AI system, as well as human operators.

TOPIC 2: Industry 5.0 and human-centric, resilient and sustainable manufacturing

Whereas Industry 4.0 advocates the fostering of industrial activity that transcends technical and economic objectives such as productivity and efficiency, Industry 5.0 seeks to promote other purposes that are also essential for the future of the sector, i.e., human well-being, sustainability, and resilience. Industry 5.0 is a model of the next level of industrialization characterized by the return of manpower to factories, distributed production, intelligent supply chains, and hyper customization, all aimed to deliver a tailored customer experience time after time.

Experiments to be selected should explore how Industry 5.0 and human-centred digitalization can contribute to the flexibility and adaptability of small and medium-sized enterprise (SME) production processes, resulting in more resilient and sustainable systems. The goal is to explain on real use cases the relationship between digital technologies and production system features through progressively more human-centric stages of a digitalized manufacturing system. Experiments should focus on measurable benefits in Industry 5.0 context, such as improving well-being of workers, creating safer workspace, improved ability to adapt to adverse situations with positive results, reducing negative environmental aspects in the entire product life cycle.

Applicants are encouraged to adopt AI REDGIO 5.0 reference architecture (RA) for providing end-to-end solutions. Proposals in this topic shall provide clear business scenarios, reflecting real industry challenges and defining and measuring realistic technical and business KPIs. In this perspective, it is expected that the application experiments provide their own datasets and the commitment of Manufacturing SMEs to define and measure the business benefits from AI REDGIO 5.0 RA.

TOPIC 3: TERESA (TEchnology REgulatory SAndboxes) experiments

In the Industry 5.0 workplace of the future, envisioned by AI REDGIO 5.0, humans and machines are expected to share physical spaces according to the cutting-edge **Collaborative Intelligence** paradigm, working not only sequentially but even with close, physical real-time responses from machines/robots to the operators. The AI-driven autonomous systems will efficiently and effectively interact with the human beings, enabling an immersive AI-based human-machine co-working environment. The work has a pivotal role in most adult lives. Therefore, the ethical, regulatory, psychological and societal impacts of the introduction of Industry 5.0 and CI solutions in the workplace must be taken into account: it is paramount to perform experimentations to ensure that both industrial companies and workers benefit from the advantages of a synergistic collaboration between humans and machines and that the workers (and their rights) are put at the center of the factory, moving ahead towards the ethically-sound and human-centered human-machine co-working environment.

In order to promote the data-and-human-oriented SME digital transformation, the AI REDGIO 5.0 Project is extending the AI REGIO Network of **Didactic Factories** (DFs). In synthesis, an AI REDGIO 5.0 DF is an open testing and experimentation facility which extends the services of a Learning Factory towards the materialization of the EDIH "test before invest" pillar. By providing access to technical expertise and experimentation as well as the possibility to "test before invest", A Didactic Factory, like an EDIH, helps companies innovating their business or production.

The main goal of Topic 3 proposals is to develop a TEchnology and REgulatory SAndbox (TERESA) experiment, exploiting a DF's facilities* and addressing Human-AI interactions and regulatory and ethical issues. The experiments to be selected under topic 3 must cover one or more of the Topics 1 and 2, following the "humans in the loop" train-explain-sustain paradigm. The TERESA experimentation should have a twofold objective: i) a technical validation of the Human-AI interaction through a DFs, following the test-before-invest paradigm, and ii) a regulatory and ethical validation, involving volunteers and at least a competent authority (such as regulators, supervisors, policy-makers, innovation agencies, Vanguard Initiative representatives, regional or local authorities, etc.).

*The full list of Didactic Factory facilities in AI REDGIO 5.0 can be found on our project website: https://www.airedgio5-0.eu/didacticfactoriesexperiments

TOPIC 3: TERESA (TEchnology REgulatory SAndboxes) experiments

One or more of the following so-called WISE aspects have to be addressed by the TERESA experiment:

- Well-being, Comfort and Acceptance, which refer to the impact on mental well-being and self-esteem, frustration, feeling of usefulness, emotional dependence and overconfidence on the machine, human dignity, autonomy and oversight, concerns/willingness in collaborating with a machine;
- Inclusion and special categories of workers, which refers to the effects on older workers, effects on novices, effects on workers with cognitive or physical disabilities/impairment, social isolation, risk of discrimination/bias;
- Safety of the worker, including health and safety of the workers, risks of harm, privacy and other.
- Ergonomics and improving working conditions, comprising the impact on stress reduction, fatigue reduction, effects on workers' skills.

AI REDGIO 5.0

AI REDGIO 5.0 1st Open Call

OBJECTIVE: The objective for the first open call of AI REDGIO 5.0 project is to select **up to 10 SME-driven experiments** focused on the **implementation of AI at the Edge and Industry 5.0 systems** with the aim of improving existing solutions, products or processes in the **manufacturing area**. Additionally, the open call will contribute to extend the domains of AI REDGIO 5.0 and benefit directly manufacturing SMEs and small mid-caps.

TOPIC 3: If the applicant chooses to conduct the experiment at one of the AI REDGIO 5.0's DF's premises, they should indicate it at proposal stage which DF they wish to join. Make sure to include in your budget any foreseen travel costs.

The complete list of DFs part of the AI REDGIO 5.0 project can be consulted here: https://www.airedgio5-0.eu/didacticfactoriesexperiments

REQUESTED FUNDING

Up to EUR 60k per experiment

FUNDING RATE

For profit entities: 60% of eligible costs

PAYMENTS

Pre-financing: 50%
Final payment: 50%

TOPICS

- **TOPIC 1:** AI at the Edge applications and edge-to-cloud continuum
- **TOPIC 2:** Industry 5.0 and human-centric, resilient and sustainable manufacturing
- **TOPIC 3:** TERESA (Technology Regulatory Sandboxes) experiments

DURATION

8 MONTHS: May 2024 – January 2025

AI REDGIO 5.0

AI REDGIO 5.0 1st Open Call

Who can apply?

The AI REDGIO 5.0 open call is addressed to manufacturing SMEs eligible for Horizon Europe. Only one proposal will be accepted for each SME.

ELIGIBILITY CRITERIA

- Based in an EU 27 Member State or Horizon Europe Associated Countries[1].
- The Proposal must be submitted in English.
- The Proposal must be submitted within the stipulated deadline.
- Complete the application following the template provided.

1 https://ec.europa.eu/info/funding-tenders/opportunities/docs/2021-2027/common/guidance/list-3rd-country-participation_horizon-euratom_en.pdf

What is in AI REDGIO 5.0 for the participants?

The selected experiments will benefit from:

- Financial support of **up to: EUR 60.000 per experiment;**
- Taking advantage of existing AI in the Edge components and AI at the Edge expertise for manufacturing already available in AI REDGIO 5.0 consortium;
- Extend and improve the AI REDGIO 5.0 catalogue of advanced AI at the Edge components and tools;
- Participate in innovative experiments in the domain of AI at the Edge for Manufacturing.

AI REDGIO 5.0

AI REDGIO 5.0 1st Open Call

KEY DATES

Activity	Dates
Call opening	01/12/2023
Call closing	**01/03/2024 – 12:00 CET**
Assignation of evaluators	19/02/2024-08/03/2024
Evaluation of proposals	11/03/2024 – 14/04/2024
Communication of results	15/04/2024-22/04/2024
Sub-grant Agreements	23/04/2024 – 19/05/2024
Execution of experiments	20/05/2024-19/01/2025

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AI REDGIO 5.0 1st Open Call

SUPPORTING DOCUMENTATION

The AI REDGIO 5.0 1st Open Call supporting documentation includes:

GUIDE FOR APPLICANTS

AI REDGIO 5.0

AI REDGIO 5.0 OPEN CALL 1

Guide for applicants

Person responsible / Author:	CARSA
Deliverable N.:	-
Work Package N.:	WP1
Date:	01/12/2023
Project N.:	101092069
Classification:	Public
File name:	AI REDGIO 5.0 OPEN CALL 1: Guide for applicants
Number of pages:	17

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FREQUENTLY ASKED QUESTIONS DOCUMENT

AI REDGIO 5.0

AI REDGIO 5.0 OPEN CALL 1

Frequently Asked Questions (FAQs)

Person responsible / Author:	CARSA
Deliverable N.:	-
Work Package N.:	WP1
Date:	
Project N.:	101092069
Classification:	Public
File name:	AI REDGIO 5.0 OPEN CALL 1: Frequently Asked Questions (FAQs)
Number of pages:	9

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PROPOSAL TEMPLATE

AI REDGIO 5.0

AI REDGIO 5.0 OPEN CALL 1

Proposal template

Person responsible / Author:	CARSA
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Work Package N.:	WP1
Date:	
Project N.:	101092069
Classification:	Public
File name:	AI REDGIO 5.0 OPEN CALL 1: Proposal template
Number of pages:	

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EVALUATION AND SELECTION PROCESS

PREPARATION OF THE PROPOSAL

Complete the proposal template, which can be downloaded from the EMS platform.

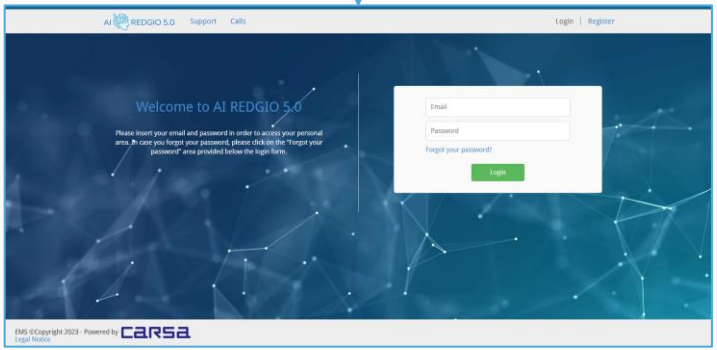
SUBMISSION OF THE PROPOSAL

The proposals will be submitted digitally in a single-stage through the Evaluation Management System platform (EMS).

EVALUATION AND SELECTION

The proposals received will go through the following evaluation process:

- Eligibility check;
- Evaluation; → Excellence, Impact, Implementation
- Ranking and final selection.



EVALUATION AND SELECTION PROCESS

01 – EXCELLENCE	02 – IMPACT	03 – IMPLEMENTATION
• Clear objectives; • Alignment with AI REDGIO 5.0 objectives; • Address the sectors and technologies of AI REDGIO 5.0; • Develop a sound and ambitious experiment consisting on an end-to-end solution, starting from connecting data sources, till “action handling”; • Clear description of the challenge; • Present a draft of the architechture; • Demonstrate innovation capacity to improve the current processes, products or services.	• Contribute to increase the digitalisation level of the SME. • Demonstrate clear technological, economic and commercial impacts. • Set clear and realistic KPIs. • Develop an appropriate dissemination and exploitation plan.	• Develop a coherent and clear work plan. • Have the required capacity to carry out the experiment (budget). • Demonstrate capacity to carry out the experiment (personnel, infrastructure, etc.).

AI REDGIO 5.0

AI REDGIO 5.0 1st Open Call

⚠ 2 WEEKS LEFT!

IMPORTANT DATES:

Information is available on the AI REDGIO 5.0 website and EMS platform:

- ✓ Call general details;
- ✓ Supporting documentation;
- ✓ Thematic areas.

AI REDGIO 5.0 Website:

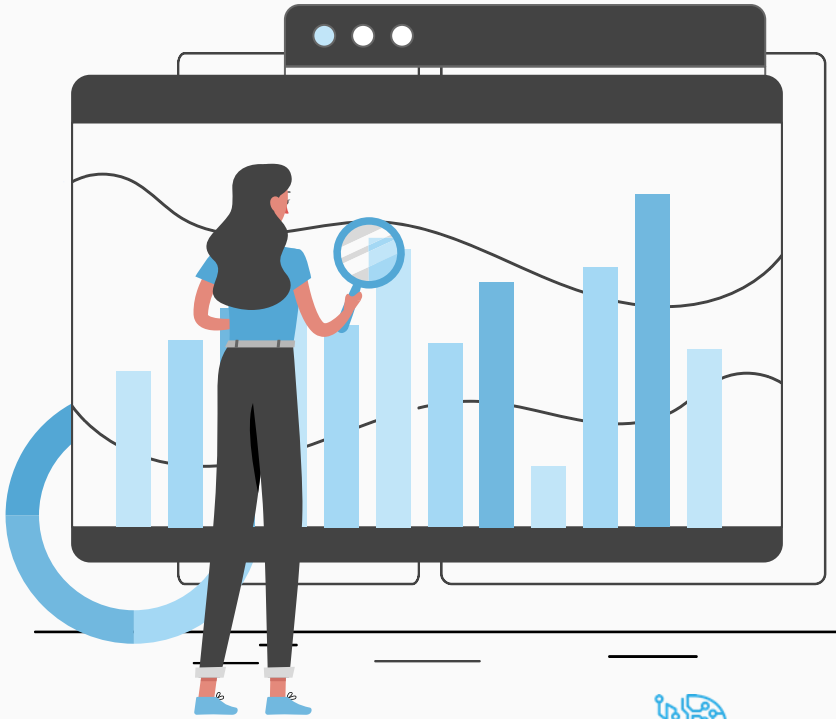
https://www.airedgio5-0.eu/open-call-1

EMS platform:

https://airedgio.ems-carsa.com/login

AI REDGIO 5.0: Inspiring experiments

Dan Martin and Gyula Gál, Hungary
Davide Pasanisi, Italy



AI REDGIO 5.0

AI REDGIO 5.0

REAL TIME MONITORING FOR CONTROL & DETECTION OF PRODUCTION NONCONFORMANCES

Davide Pasanisi

davide.pasanisi@intellimech.it

Consorzio Intellimech

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AI REDGIO 5.0

Experiment team

SCAMM THE SHEET METAL SOLUTION

(#29) SCAMM provides special solutions for forming and assembling sheet metal products for various applications, such as large household appliances
SCAMM will provide access to a reconfigurable pressing line to test optimization and predictive AI tools

INTELLIMECH® CONSORZIO PER LA MECCATRONICA

(#21) IMECH is a Consortium of 51 enterprises devoted to interdisciplinary research in Mechatronics
IMECH will support SCAMM in the AI system development and integration and will ensure knowledge transfer towards other process industries and manufacturing companies within the IMECH consortium

POLITECNICO MILANO 1863

(#1) POLIMI is the most important technical university in Italy and one of the best in Europe. POLIMI is the AI REDGIO 5.0 coordinator
POLIMI will facilitate collaboration within the project team and provide scientific and technological support to improve the solution, ensuring the fulfilment of the project goals

SMC A DGS COMPANY

(#28.1) SMC affiliated to PORINI PT as part of DGS Group, is leader in system integration and application development services based on Open Source technologies. SMC is specialized in data spaces and process management, collaboration and digital experience, optimization of IT performance especially applied to the manufacturing industry.
SMC will support IMECH in the development of the ICT infrastructure.

AFIL Associazione Fabbrica Intelligente Lombardia

(#7) AFIL is an Italian private, non-profit legal entity representing the regional technological cluster for Advanced Manufacturing. AFIL will be responsible for dissemination and exploitation of AI REDGIO 5.0 results
besides dissemination activities towards the Lombardy manufacturing context, AFIL will ensure alignment with the relevant European regulatory framework

AI REDGIO 5.0

Advantages, benefits and experience in AI REDGIO 5.0

- **Adequate Funding:**
- Horizon projects provide significant funding for research and development, enabling organizations to access financial resources that might otherwise be difficult to obtain.

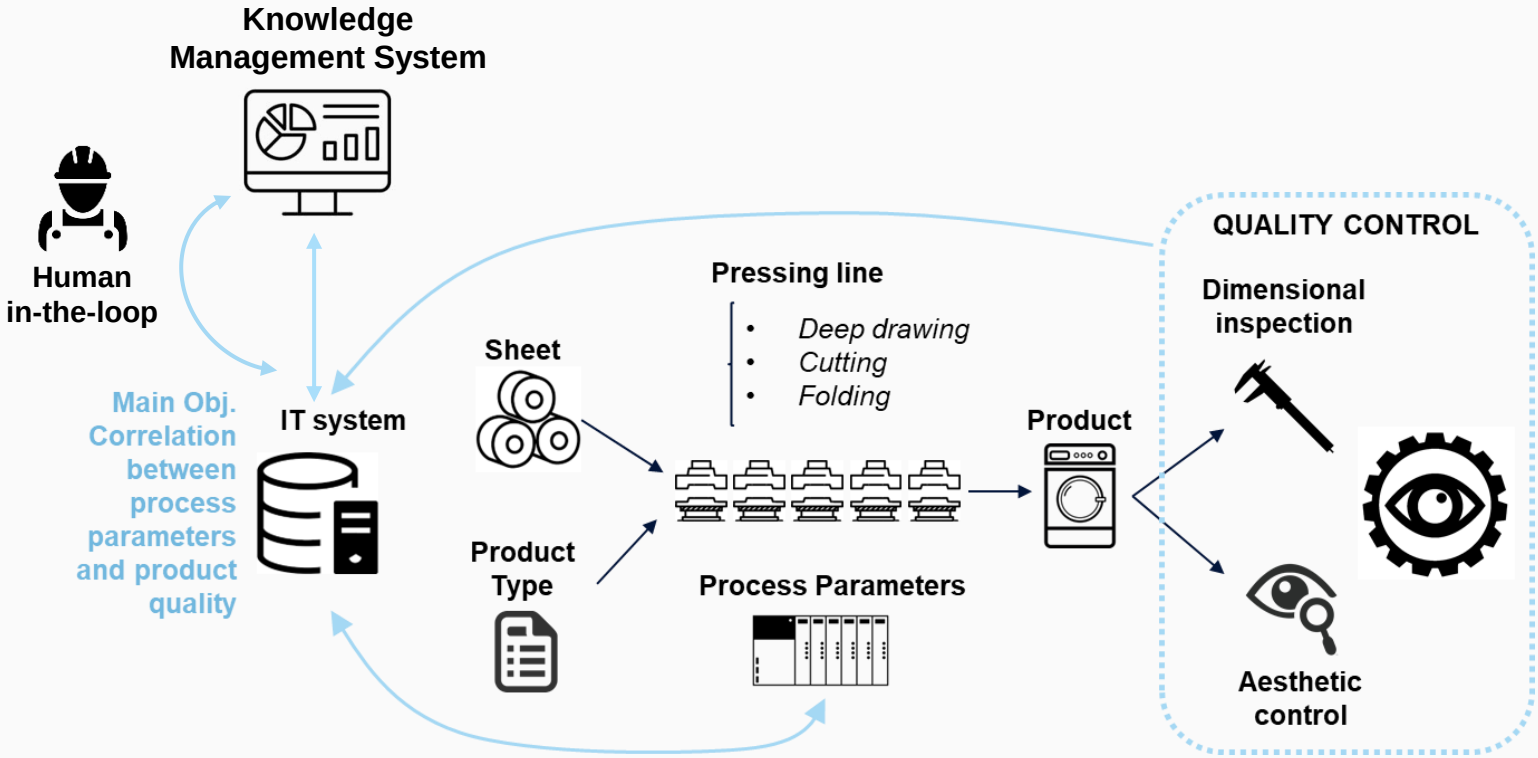
- **International Collaboration:**
- Horizon projects often involve international consortia, promoting collaboration among organizations from different countries. This international dimension can lead to a greater diversity of expertise and perspectives.

- **Skills Development:**
- Participation in Horizon projects provides an opportunity for organizations to develop advanced skills by gaining specialized knowledge and practical experience in leading research and development areas.

- **Visibility and Prestige:**
- Being involved in EU-funded projects can lend prestige and visibility to participating organizations. This can enhance the institution's reputation and image nationally and internationally.

- **Access to Markets and Commercial Opportunities:**
- International collaboration and innovation fostered by Horizon projects can facilitate access to new markets and business opportunities. This can be particularly beneficial for companies involved in the projects.

Experiment concept



Starting from the INTEGRABLE results, the AI REDGIO 5.0 experiment will close the loop through the quantitative characterization of the line's operating conditions and their correlation with the manufactured products' quality.

Experiment expected results and benefits

For SCAMM as an END-USER
- Increase productivity
- Decrease waste production
- Reduce operating costs
- Improve quality by reducing variations among products

For SCAMM as a PROVIDER
- Expand the value proposition with additional services (monitoring and anomaly detection, process parameters optimization, predictive maintenance)
- Increase market competitiveness
- Decrease maintenance costs

For INTELLIMECH
- Deepen its knowledge concerning AI support tools for manufacturing and expand its business offering
- Achieve a scalable and flexible tool that can be extended to other IMECH partners with similar needs

AI REDGIO 5.0

SUNSYNC: AI SOLUTION FOR OPTIMIZING RECYCLING IN INDUSTRY AT THE LEVEL OF AM-LAB'S DF

Dan Martin and Gyula Gál

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PBN

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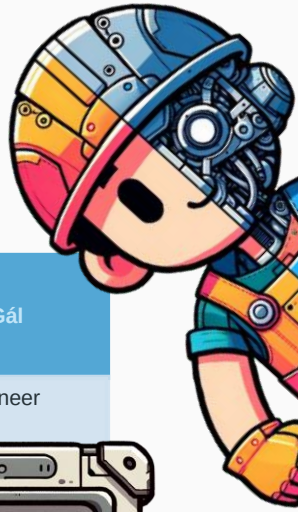
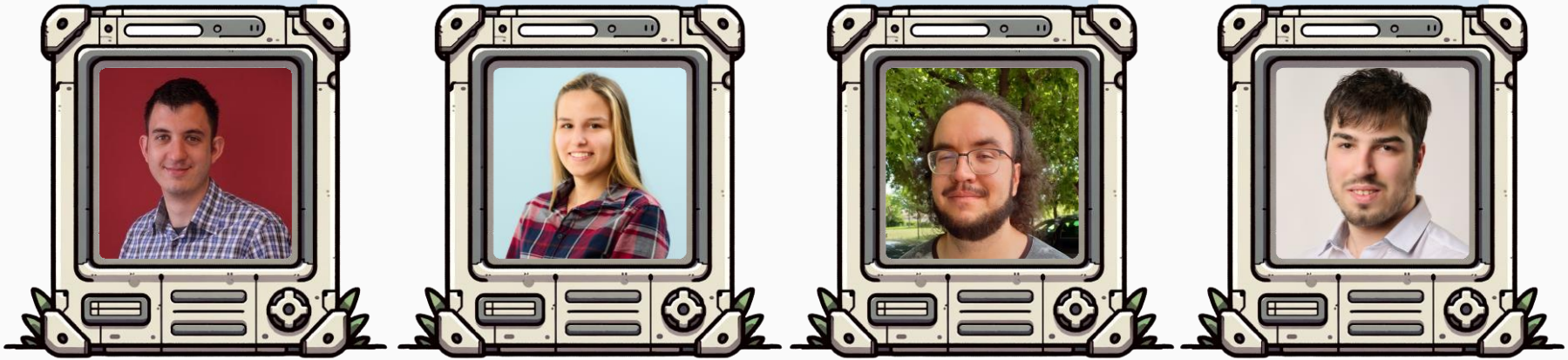
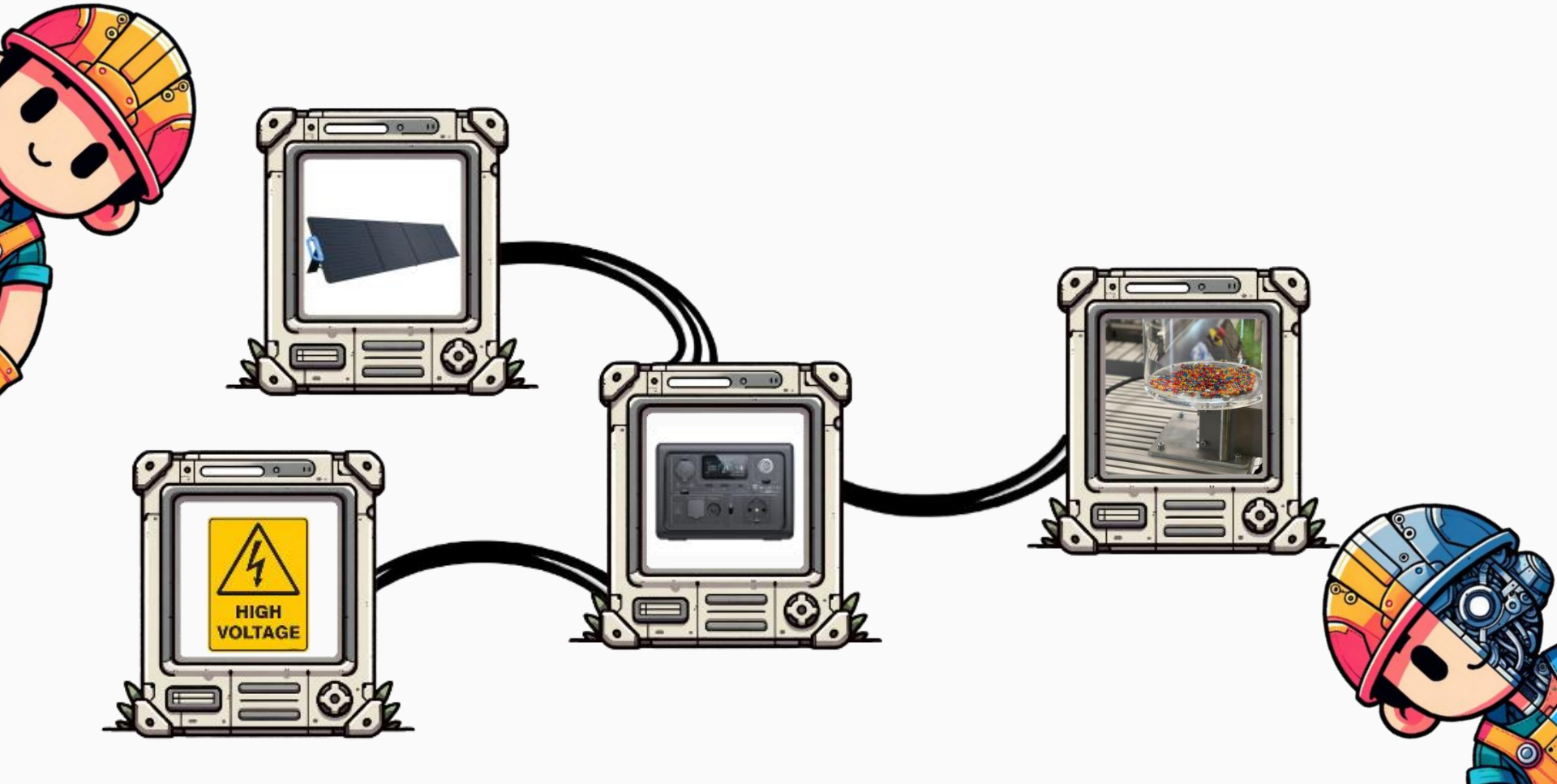
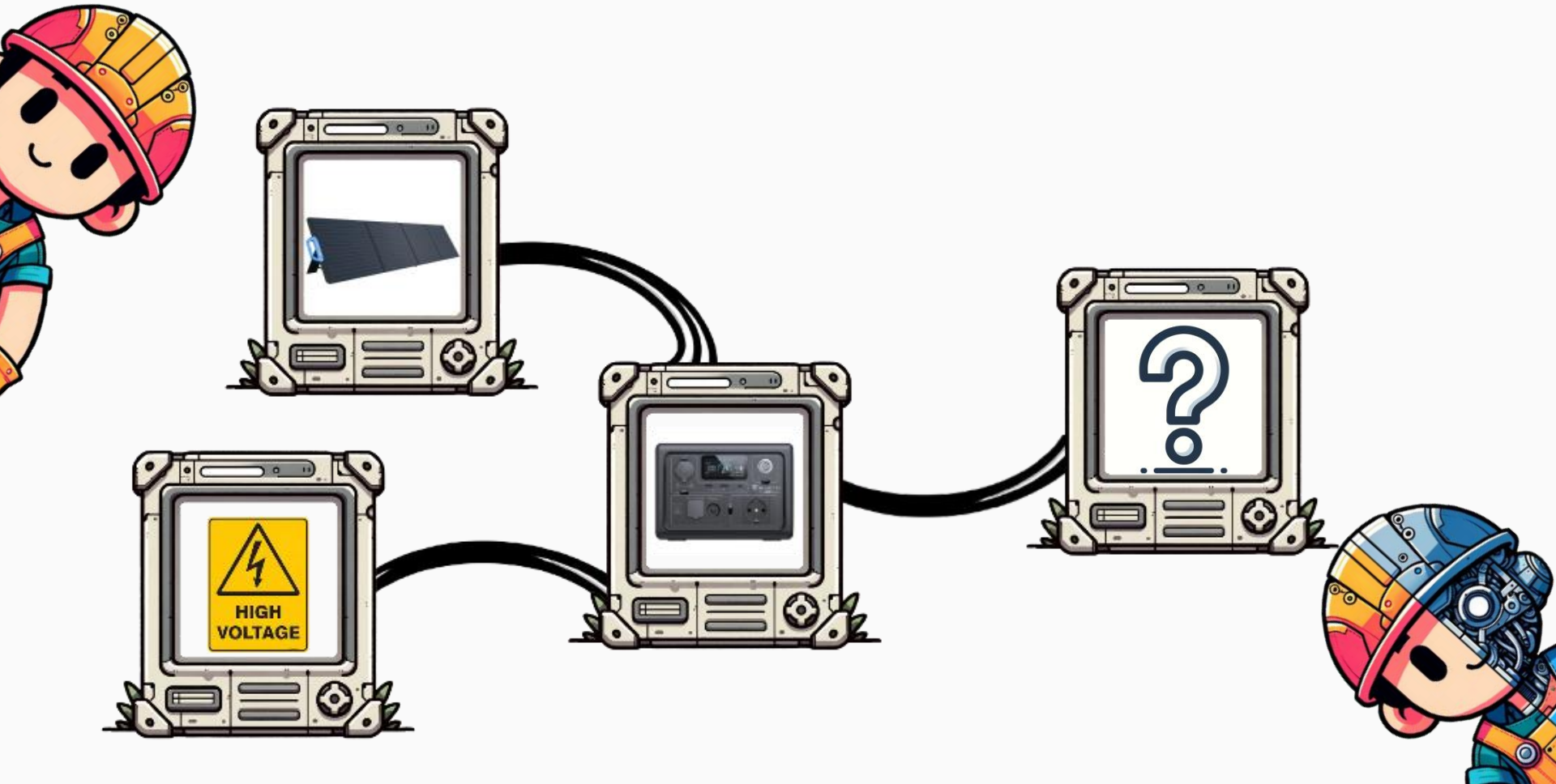
am-LAB
advanced manufacturing



Martin Dan	Vanessza Bódi	Milán Győrffy	Gyula Gál
Project Manager	R&D Engineer	R&D Intern	R&D Engineer




HIGH
VOLTAGE


HIGH
VOLTAGE

AI REDGIO 5.0

Experiment expected results and benefits

- Cost savings, reduced environmental impact.
- Suitable for diverse energy management needs.
- Relevant across industries and energy systems.
- Ensures long-term value and relevance.
- Reduces waste, optimizes energy consumption.

AI REDGIO 5.0

Advantages, benefits and experience in AI REDGIO 5.0

- Expert Knowledge: Connected with AI experts for guidance.
- Community Engagement: Thrived in vibrant AI community.
- Collaboration Opportunities: Fostering future collaborations.

am-LAB
advanced manufacturing

Q&A

AI REDGIO 5.0

AI REDGIO 5.0

AI REDGIO 5.0 1st Open Call

⚠ 2 WEEKS LEFT!

IMPORTANT DATES:

Information is available on the AI REDGIO 5.0 website and EMS platform:

- ✓ Call general details;
- ✓ Supporting documentation;
- ✓ Thematic areas.

AI REDGIO 5.0 Website:

https://www.airedgio5-0.eu/open-call-1

EMS platform:

https://airedgio.ems-carsa.com/login

AI REDGIO 5.0

THANKS

Does anyone have any questions?

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