



AI REDGIO 5.0 OPEN CALL 1

Frequently Asked Questions (FAQs)

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1. Introduction

The present document provides a list of Frequently Asked Questions (FAQs) and answers related to the AI REDGIO 5.0 Open Call 1. The list of questions is preliminary and the document will be continuously updated in the course of the process.

More information on the Call for Proposals can be found in the Guide for Applicants available on the AI REDGIO 5.0 webpage (<https://www.airedgio5-0.eu/open-calls>) and in the submission portal (<https://airedgio.ems-carsa.com/>).

2. General questions

2.1. What is AI REDGIO 5.0?

AI REDGIO 5.0. is a European project that aims at reinforcing the alliance between Vanguard European regions and EDIH for the adoption of AI-at-the-Edge by European manufacturing SMEs. This project gravitates towards the fulfilment of three main goals:

- Enabling the evolution of Manufacturing SMEs towards Industry 5.0.
- Evolution of cloud AI Technologies to AI-at-the-Edge procedures.
- Evolution and adaptation of H2020 programme into Horizon and Digital Europe programmes.

In order to achieve these goals, AI REDGIO 5.0. leans on the outcomes of the H2020 I4MS AI REGIO programme, adapting it to the requirements of the Industry 5.0. and implementing a competitive AI-at-the-Edge Digital Transformation for Small and Medium Enterprises. The AI REGIO project had a three-year duration and played an instrumental and successful role in the adoption of AI in the manufacturing sector by helping both providers and users of AI solutions. 36 partners from 12 different countries took part in this project, which involved more than 20 SME experiments about AI-driven transformations to build the factories of the future.

AI REDGIO 5.0 will maintain the momentum of AI technology adoption in Manufacturing SMEs, while bringing in depth and breakthrough changes to the ongoing efforts. In particular, the project considers the following aspects:

- Conceptual framework and reference architecture for AI-at-the-edge Industry 5.0 applications and experimentations.
- Secure and trustworthy edge-to-cloud continuum data and computational space for highly distributed AI applications.
- Interoperability by design with the pan-EU AI-on-demand platform and its ecosystem of H2020 and Horizon Europe innovation actions.
- Transition from regional DIHs to a network of EDIHs
- Test-before-invest experiments in AI Didactic Factories and TEF (Testing and Experimentation Facilities) for SME-driven applications.
- Support the transition towards sustainability, through the ecosystem development and replication to SMEs.

3. Questions related to the AI REDGIO 5.0 1st Open Call

3.1. What is the call for proposals/experiments?

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.

3.2. Which are the topics covered in the Open Call?

1. 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 REDGIO 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.

2. 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, e.g. on 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-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.

3. 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-driven 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.). 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.

3.3. Which is the maximum amount of FSTP allowed per experiment?

This Open Call has a budget of EUR 600.000,00 to fund 10 experiments. The maximum amount of FSTP allowed per experiment is **up to EUR 60.000,00**.

3.4. Which are the accepted costs for the budget?

All kind of costs are accepted as long as they are required for the execution of the pilot experiment and the development of the deliverables. The budget requested has to be presented and described in the proposal.

3.5. Which is the expected duration of each experiment?

The experiments will have a duration of 8 months.

3.6. How to apply?

The proposals are submitted digitally, by the SME, in a single-stage through the Evaluation Management System (EMS). Proposals prepared according to the instructions provided, shall be submitted electronically through the EMS platform. Applicants should follow the steps starting from the AI REGIO EMS website (<https://airedgio.ems-carsa.com/>).

3.7. When is the deadline?

The call's deadline is on 1st March 2024 at 12:00 CET.

The key dates of the open call are as follows:

Activity	Dates
Call opening	01/12/2023
Call closing	01/03/2024 – 12:00 CET
Assignment 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

4. Who can apply?

4.1. 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 by each SME.

SMEs: manufacturing SMEs, as defined in the European Commission recommendation 2003/361/EC¹, as published in the Official Journal of the European Union L 124, p. 36 of 20 May 2003.

“The category of micro, small and medium-sized enterprises (SMEs) is made up of enterprises which employ fewer than 250 persons and which have an annual turnover not exceeding EUR 50 million, and/or an annual balance sheet total not exceeding EUR 43 million.” Extract of Article 2 of the annex to Recommendation 2003/361/EC.

4.2. Can entities established in the UK apply and be funded?

Until association agreements start producing legal effects either through provisional application or their entry into force, transitional arrangements may apply if provided for in the particular Horizon Europe Work Programme. The transitional arrangements apply with regard to the following countries and legal entities established in these countries, with which association negotiations are being processed or where association is imminent (listed in the alphabetical order)²:

1. Morocco (applicable for the entire Programme)
2. United Kingdom (applicable for the entire Programme)

4.3. Can entities established in Hungary apply and be funded?

Entities ‘maintained’ referred to in Article 2(2) of the [Council Implementing Decision 2022/2506](#)³ are not eligible to apply. These entities are the following:

1. Entities listed in Annex I of the **Hungarian Act IX of 2021** either by name (usually higher education institutions) or by category (e.g., research centers/institutes, farms/agricultural companies, museums, etc.)⁴.
2. Entities that have been transferred to the public interest trusts through the **individual Hungarian Acts** by which public interest trusts were established and which are **owned by these public interest trusts** (that may have been created or may be created in the future):
 - Entities for which a public interest trust **owns 100% of shares** and;
 - Entities for which a public interest trust can exercise a **decisive influence and control** (case-by-case assessment based on the criteria set by the EU legislation on mergers and anti-money laundering, i.e., [Article 3 of Council Regulation \(EC\) No 139/2004 of 20 January 2004 on the](#)

¹ <https://eur-lex.europa.eu/legal-content/EN/TXT/?uri=CELEX:32003H0361>

² <https://ec.europa.eu/info/funding-tenders/opportunities/docs/2021-2027/common/guidance/list-3rd-country-participation-horizon-euratom-en.pdf>

³ [EUR-Lex - 32022D2506 - EN - EUR-Lex \(europa.eu\)](#)

⁴ <https://njt.hu/jogszabaly/2021-9-00-00>



[control of concentrations between undertakings](#) and [Article 3\(6\)\(a\)\(i\) of Directive \(EU\) 2015/849 of the European Parliament and of the Council of 20 May 2015 on the prevention of the use of the financial system for the purposes of money laundering or terrorist financing](#)).

4.4. Can AI REDGIO 5.0 partners apply to the call?

AI REDGIO 5.0 partners are not eligible and the application will be disqualified.