CONNECTING MACHINES WITH PEOPLE, PROCESS AND TECHNOLOGY

GUIDE FOR APPLICANTS

Open Call for proposals #1

Launch date: 27/04/2022

Deadline: 29/06/2022, 17:00 (CET)

Index

1. PROJECT CONTEXT

The present call is running under the MIND4MACHINES (Manufacturing Industry's Novel Digitalisation value chains FOR connecting MACHINES with people, process and technology) project, financed by the European Commission through the Horizon 2020 Programme for Research and Innovation [Grant Agreement no. 101005711], following the call on INNOSUP-01-2020 Clusters facilitated projects for new industrial value chains.

The MIND4MACHINES project aims to facilitate the cross-sectoral and cross-border support needed by manufacturing SMEs to validate and adopt cross-cutting digital technologies provided by SMEs and start-ups, particularly by addressing holistically the entire digitalisation value chain, combining manufacturing and novel, disruptive solutions in ICT (hardware, software, services and connectivity, Big Data, Cloud Computing, Artificial Intelligence, Blockchain, IoT, Cybersecurity and others).

Manufacturing companies, which represent 41.4% of the EU manufacturing sector's value added and 57.6% of the total workforce, are facing major challenges due to their shortage of energy/ resource efficiency and digitalisation. Smart ICT and Robotics SMEs, including startups, can provide game-changing solutions for many manufacturers, creating new cross-sector interconnections and value chains.

MIND4MACHINES offers a strategic vision towards digitalisation of manufacturing industry, aligned with EU's overall efforts to create new value chains which will shape the *Factories of the Future*, from design to production, sales, customer care and maintenance, within each company, and from the component manufacturer to the equipment manufacturer and systems integrator, between companies.

In this context, the MIND4MACHINES project aims to facilitate cross-sectoral and cross-border support needed by manufacturing SMEs to test and adopt the latest digital technologies for transformation towards smarter, greener and more resource-efficient manufacturing, aligned with the latest EU policies.

MIND4MACHINES allocates EUR 3.3 million to SMEs in the form of **grants** to be distributed as direct financial support to SMEs **via two Open Calls** [the first one published in 2022 and the second in 2023]. Additionally, **acceleration support services** will be provided to help SMEs grow their innovative solutions and/or reach new markets.

Thus, the project aims to accelerate the market up-take of solutions for deep transformation of energy/resource intensive industries into sustainable, climate neutral and intelligent manufacturing, within the context of the *European Green Deal[1]*.

MIND4MACHINES consortium, led by Istanbul Chamber of Industry (ICI) from Turkey, brings together 11 clusters and business supporting organisations from 11 different regions within eight countries, ensuring a complementary balance of sectoral focus, experience and approach in support of SMEs and clustering mechanisms.

---

[1] *https://ec.europa.eu/info/strategy/priorities-2019-2024/european-green-deal_en*
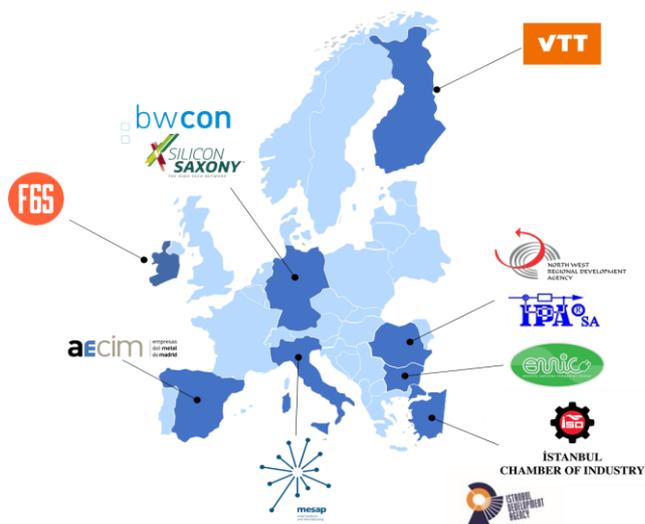
Figure No 1 Map of MIND4MACHINES Partners' location

Table No 1 MIND4MACHINES Consortium and country/ region of origin

MIND4MACHINES Consortium	NUTS2 Regions[2]	COUNTRY
Istanbul Chamber of Industry Istanbul Development Agency	TR10 İstanbul	TURKEY
Bwcon SiSax	DE11 Stuttgart DED2 Dresden	GERMANY
AECIM	ES30 Madrid	SPAIN
North-West Regional Development Agency IPA-SA	RO11 North-West RO31 South Muntenia RO32 Bucharest-Ilfov	ROMANIA
MESAP	ITC1 Piemonte	ITALY
Industrialen Klaster Elektromobili - EVIC	BG41 Yugozapaden	BULGARIA
VTT	FI1B Helsinki-Uusimaa	FINLAND
F6S	IE06 Eastern and Midland	IRELAND

2. DESCRIPTION OF THE OPEN CALL

2.1 Proposed timeline

Table No 2 Key Dates for MIND4MACHINES 1st Open Call

Key Dates for MIND4MACHINES 1st Open Call of Proposals	
Launch of the 1st Open Call	27/04/ 2022
Deadline of the 1st Open Call	29/06/2022, 17:00 CET
Evaluation of the applications	30/06/2022 - 29/08/2022
Announcement of the final beneficiaries	01/09/2022
Contracting procedure of the Sub-Grant Agreements	1/09/2022 - 30/09/2022
Tentative Start date of sub-projects	3/10/2022

2.2. Objectives and approach of the Open Call

The main objective of the call is to raise the efficiency and competitiveness of the manufacturing industry by adopting the latest digital technologies for a smarter and greener transformation aligned with the latest EU policies.

The present call funds the development, testing, validation and market uptake of INDUSTRY 4.0 solutions by increasing the Technology Readiness Level (TRL)/maturity of the proposed solutions in delivering innovative goods, services and processes.

The specific objectives of the Open Call are to address main challenges identified at the level of the manufacturing industry, such as:

- Digitalise information and integrate systems at all stages of product development and utilisation (including logistics and supply);
- integrate autonomous systems into the manufacturing environment;
- promote excellence, eliminating defects in processes and products;
- produce efficiently by means of all resources;
- enable manufacturing servitisation;
- facilitate mass customisation allowing every product to be unique and custom-made;
- enable more agile and flexible approaches in line with Industry 4.0 and Logistics 4.0; and
- create energy and resource efficiency to nurture more sustainable value networks.

The MIND4MACHINES Open Call is addressed **only to SMEs applicants** (startups included) acting as **Industry 4.0 technology service providers** for one or more end-user partners from the **manufacturing industry**.
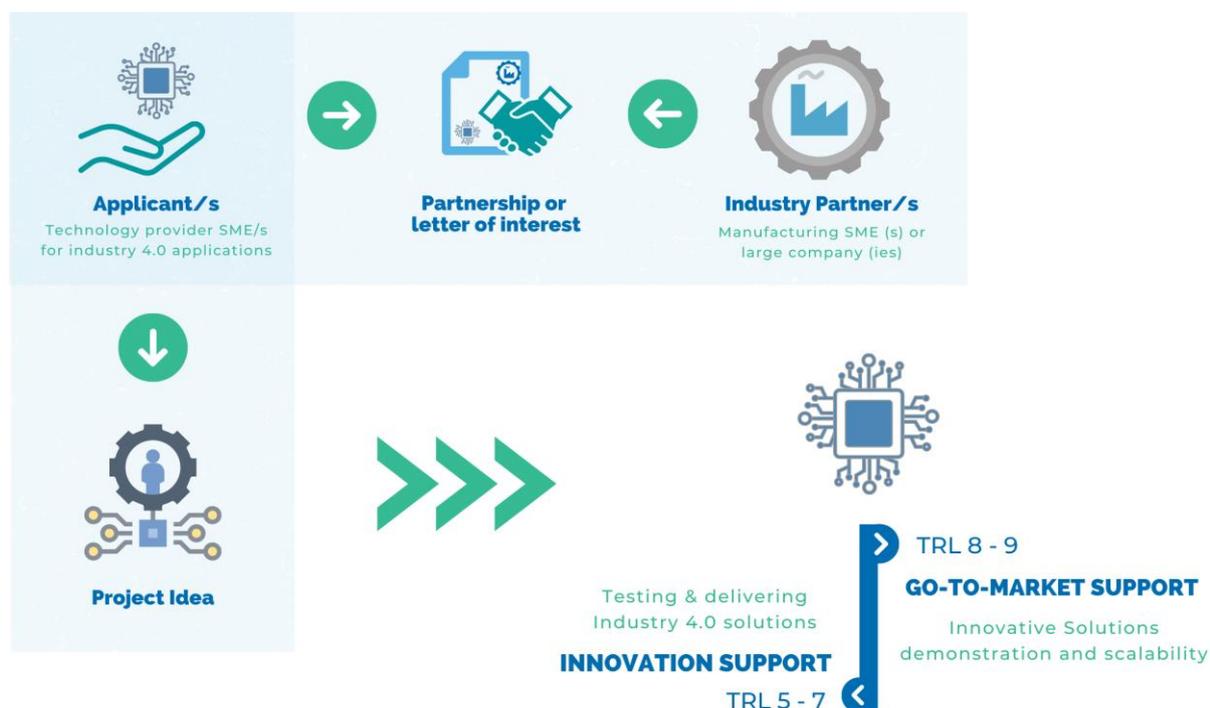
Figure No 2 Typology of applicants

Project proposals can be submitted **individually** by one single APPLICANT as a technology provider SME or by **a partnership** of multiple applicants as technology provider SMEs for complex solutions, having at least one INDUSTRY PARTNER or more. Cross-border partnerships are strongly encouraged.

With a dedicated budget of EUR 1 650 000 for this first open call, MIND4MACHINES aims to support a minimum of 19 sub-projects, within the two financial schemes detailed below, split according to the technology readiness level (TRL) of the solution proposed:

    I. **INNOVATION SUPPORT - Testing and validating Industry 4.0 solutions [TRL 5-7]**
   II. **GO-TO-MARKET SUPPORT - Innovative solutions demonstration and scalability [TRL 8-9]**

Activities such as prototyping, testing, demonstrating, piloting, large-scale product validation, technical consultancy, market replication and other services can be funded for a maximum duration of nine months.

The summary of the two financing schemes is presented in the table below.

Table No 3 Summary of the two financing schemes

Open Call Schemes	I. INNOVATION SUPPORT	II. GO-TO-MARKET SUPPORT
Specific Objective	Development of innovative ICT based solutions for manufacturing industry	Demonstration and growth of the digital solution(s) on the industry market
Targeted TRL	**5-7**	**8-9**
Applicants	One **or more SMEs** acting as technology providers for Industry 4.0 applications in manufacturing industry; eligibility criteria laid down in Chapter 2.4.	
Industry partner(s)	**SME(s)** ● **Large company(s)** with a Letter of Intent to participate in the project, with explicit agreement to test or implement the project solution.	
Budget * of the Proposal	● Up to EUR 60 000 in case of individual applicant ● Up to EUR 120 000 in case of more applicants The maximum grant requested per applicant shall not exceed EUR 60 000	● Up to EUR 30 000 in case of individual applicant ● Up to EUR 60 000 in case of more applicants The maximum grant requested per applicant shall not exceed EUR 30 000
	SME Industry Partner(s): Up to 20% of the overall project budget Large companies are not eligible for funding in this call.	
Type of financial support	**LUMP SUM** Applicants propose the amount of the lump sum contribution on the basis of their estimated cost. The lump sum is fixed during grant preparation. Co-financing is not compulsory.	
Total Allocated Budget	**EUR 1 020 000**	**EUR 630 000**
Estimated number of projects	**13**	**16**
Project duration	**Minimum 6 months - Maximum 9 months**	

*For further details, please refer to Table No 6. In Chapter No 3 Financial Aspects of the Open Call

An Open Innovation Platform for ideas nurturing and applicants' matchmaking is available on the project website: *https://mind4machines.eu/open-innovation-platform/.*
Both manufacturing companies and technology providers can get in contact aiming to build a proposal for the MIND4MACHINES Open Call(s).

III. Acceleration services as additional Support

Complementary to the grants received from the MIND4MACHINES Open Calls, funded SMEs may benefit from tailor-made acceleration support services. These services will be delivered by the project partners in the shape of training, coaching and mentoring sessions to support the maturity increase of the proposed Industry 4.0 idea as well as the business development of the SME applicant. The selection of the acceleration services will be performed after the closure of the Open Call, based on the results of the Investment Readiness Level (IRL) self-assessment online tool. The applicants are required to fill in the IRL self-assessment prior to their application.

The non-funded applicants may also benefit from the acceleration services upon request.

2.3. Industry challenges to be tackled

The proposal should address the main challenges faced by manufacturing companies in relation to their digitalisation needs, such as:

- ❖ **Flexible manufacturing systems (FMS**): Production method designed to easily adapt to changes in the type and quantity of the product being manufactured. Machines and computerised systems can be configured to manufacture a variety of parts and handle changing levels of production.

- ❖ **Predictive maintenance**: Technique that uses data analysis tools and techniques to detect anomalies in your operation and possible defects in equipment and processes so you can fix them before they result in failure.

- ❖ **Resource efficiency: U**sing the limited resources in a sustainable manner to create more with less and to deliver greater value with less input.

- ❖ **Energy efficiency**: Using less energy to perform the same task; eliminating energy waste.

- ❖ S**mart packaging**: Offers extended function to package, involving sensors and indicators that monitor the product condition or provide information about the status.

- ❖ **Decision support systems**: Computerised program used to support determinations, judgments, and courses of action in an organisation or a business.

- ❖ **Security and safety: S**ecurity as protecting computer systems against the threats of the external environment, and safety as protecting the environment from potential dangers of computer systems.

- ❖ S**mart logistics: T**he combination of traffic management structuring and navigating traffic for optimal use of traffic system and logistics management (organising, planning, control and execution of the flow goods) by effective usage of data.

- ❖ **Supply chain management:** Handling of the entire production flow of a good or service, starting from the raw components all the way to delivering the final product to the consumer.

2.4. Industry 4.0 topics to be addressed

Following extended research performed by the MIND4MACHINES partners at European, national and partner regions' level, the following topics revealed as the most emerging technologies for digitalisation of the manufacturing sector which should be addressed in the proposal:

❖ **IoT (Internet of Things)** refers to the connection of devices and objects to the Internet's network of networks using sensors combined with big data analytics and cloud computing; it consists of physical devices that are embedded with electronic sensors, actuators and digital devices with specific software enabling communications.

  ➢ The **Industrial IoT (IIoT)** is a subcategory of the IoT, which also includes consumer-facing applications such as sensor-embedded devices, machines and infrastructure that transmit data via the Internet and are managed by advanced analytics platforms that process the data they produce.[3]

❖ **Sensors/Data Acquisition:** Sensor technology, systems for data acquisition (including visual, vocal, touch) and HCI/HMI, IIoT sensors (e.g.MQTT, Data Lake, DB NoSQL, NewSQL)

❖ **Digital Signal processing:** Communication technology communication protocols, baseband technology, RF Technology.

❖ **Big data and analytics:** Large data sets used to optimise quality of production, improve equipment service and save energy and coming from many different sources—production equipment and systems and organisation and content management system (CMS) to support decision making in real-time.

❖ **Advanced Analytics and artificial intelligence (AI)**: Predictive modelling, statistical methods, machine learning and process automation techniques beyond the capacities of traditional business intelligence (BI) tools, to analyse data or business information artificial intelligence (Machine Learning, Deep Learning). AI is the combination of several technologies, which allow software and machines to sense, understand, act and learn on their own or augment human activities. Through AI, industrial production can achieve higher efficiency compared to human labour by enabling robots to perform tasks that a person would not be able to do (*for example, handling dangerous raw materials or microscopic components*).

  ➢ **Robotic process automation (RPA)** allows configuring and managing software 'robots' that act as synthetic IT application users, automating highly repeatable, highly structured, high volume clerical tasks that involve the use of existing IT systems. RPA technology provides a non-invasive alternative to coding automated task logic for simple processes in a new application or service. Robots may be used as automated assistants, carrying out often-repeated but 'standalone' tasks on the user's behalf, with significantly faster speed and fewer errors; or robots may automate users' desktop applications and execute automating interactions with applications 'behind the scenes'

---

[3] https://www.hpe.com/emea_africa/en/what-is/industrial-iot.html

by carrying out their work when triggered by other software systems, working without any direct input or direction from users.

> **Digital process automation (DMA)** is a method whereby digital technology is used to automate one or more tasks involved in a business process.

❖ **Advanced Robotics:** Machines in the form of robots are used to perform dedicated tasks in manufacturing processes such as product assembly, treatment of hazardous materials, spray painting, cutting, and polishing, travel and transportation, optimising logistics, assets, operations, manufacturing tailored products, shaping warehouses, customer engagement and dealings in different places: loading and unloading of machines, palletizing and depalletizing, spot and arc welding, etc. Smarter decisions at the right time in the manufacturing processes are also significant which gives the requirement of more intelligent systems to make smart decisions. **Adaptive or intelligent robotics** has the ability to react to the environment and adapt its movements to a specific task. Deep learning or machine learning systems manage the information received and control the movements of the adaptive or intelligent robot.

❖ **Digital Twin:** The virtual model designed to accurately reflect a physical device in a smart factory environment is crucial for developing the ability of self-optimising, self-configuring and self-diagnosing abilities in a dynamic way. Before actual devices are built and installed, virtual replicas of physical devices and digital twins can be used to run simulations. Digital twin in real-time suggests improvements in performance and potential problems of factory, shop-floor or warehouse. Virtualisation helps to digitally create a logical copy or digital twin of the physical machine or original factory floor or warehouse by combining sensor data from monitoring physical processes and equipment.

❖ **Blockchain** is a system of recording information in a way that makes it difficult or impossible to change, hack or cheat the system. It is essentially a digital ledger of transactions that is duplicated and distributed across the entire network of computer systems on the blockchain itself. Each block in the chain contains a number of transactions, and every time a new transaction occurs on the blockchain, a record of that transaction is added to every participant's ledger. *As an example of the usage in the manufacturing industry, blockchain technology can enable tracking the entire path of manufactured goods, from the shipping facilities at a factory to customers in stores.*

❖ **Cloud computing** is data storage through internet-connected devices: computers, smartphones, tablets and wearables. Cloud computing providers store and process data in a location that is separate from end users.

❖ **Cybersecurity** is crucial to protect networks, devices and programs, and data from attack, damage, or unauthorised access as well as to secure information technology.

2.5. Activities eligible for funding

The call is adapted to two maturity technology readiness levels: **Innovation support** [TRL 5-7] and **Go-to-Market support** [TRL 8-9], according to the maturity of the solution to be developed.
Applicants will choose the corresponding financing scheme depending on the innovation maturity and on the activities/services to be performed or needed. It is recommended that prior to applying

to the open call, each applicant/consortium performs a self-assessment of the TRL of the proposed solution in the application.

Table No 4 Targeted TRL definition

TRL	Definition
TRL 5	**Laboratory Testing of Integrated/Semi-Integrated System:** System Component and/or process validation is achieved in a relevant environment.
TRL 6	**Prototype System Verified:** System/process prototype demonstration in an operational environment (beta prototype system level).
TRL 7	**Integrated Pilot System Demonstrated:** System/process prototype demonstration in an operational environment (integrated pilot system level).
TRL 8	**System Incorporated in Commercial Design:** Actual system/process completed and qualified through test and demonstration (pre-commercial demonstration).
TRL 9	**System Proven and Ready for Full Commercial Deployment:** Actual system proven through successful operations in operating environment and ready for full commercial deployment.

The following types of activities can be carried out by the applicants and/or their industry partner(s).

Table No 5 Types of Activities

Applicant / Call scheme	Innovation Support Scheme	Go-to-Market Scheme
	Industry 4.0 solution development and testing related activities.	Market and client's engagement related activities linked to an Industry 4.0 solution and/or product.
Applicants (technology providers)	- Prototyping - Testing, experimentation - Demonstration and pilot - MVP building - Validation of the results - Training the industry partner using the solution	- Demonstration in real environment - Training the industry partner using the solution - MVP building - Technical consultancy - Market related consultancy - Market replication - Scalability consultancy - Promotion costs of the innovative product/activities to engage customers
Role of the **Industry Partner**	- Collaboration for solution testing and utilisation - Collaboration for validation of the results	- Collaboration for product testing - Collaboration for validation of the product/service

2.6. Admissibility and Eligibility of the Applicants and proposals

The following admissibility and eligibility criteria shall be regarded all together, by means of legal status, geographic location, fields of activity and financial thresholds.

2.6.1. Admissibility Criteria

- Proposal was submitted online on the F6S Platform. Any other means will not be accepted.
- Proposals must be written in English, the official language for MIND4MACHINES Open Calls. Submissions done in any other language will not be evaluated.
- The application must be submitted until the indicated deadline 29/06/2022, 17:00 CET.
- Proposal includes at least one Industry partner.
- Signed Letter(s) of Intent in case of having large company industry partner(s) (Annex 2).
- Annex 4 and Annex 5 have been uploaded on the F6S platform.
- An applicant can participate in only one application per Call; proposals including the same SME (applicant or industry partner) will be rejected.
- Budget of the proposal does not exceed the defined limits per each scheme explained below:
  - The maximum budget requested per SME is EUR 60 000 under the Innovation Support Scheme.

o The maximum budget requested per project is up to EUR 120 000 under the Innovation Support Scheme.

o The maximum budget requested per SME is EUR 30 000 under the Go-to-Market Support Scheme.

o The maximum budget requested per project is up to EUR 60 000 under the Go-to-Market Support Scheme.

o The maximum combined budget of the industry partner(s) is 20% from the overall project budget.

SMEs that are under liquidation, in difficulty[4], or excluded from the possibility of obtaining EU funding under the provisions of both national and EU law, or by a decision of both national or EU authority are not eligible to apply for funding. *This does not mean that SMEs not registering profit for the last fiscal year(s) are not eligible.*

Applicants shall not have any actual or/and potential conflict of interest with the MIN4MACHINES selection process and during the whole project implementation. All cases of conflict of interest will be assessed case-by-case. MIND4MACHINES consortium partners, its affiliated entities and/or employees cannot become a recipient of financial support via the Open Call.

Double funding shall be avoided! The applicants will not have been funded by national or European public funds with the same activities related to the proposal idea before. It is a fundamental principle underpinning the rules for public expenditure in the EU that no costs for the same activity can be funded twice from the EU budget.

2.6.2. Eligibility Criteria

2.6.2.1. Legal status

MIND4MACHINES Open Call is addressed only to legally established and registered SMEs (including startups), according to the criteria set by the EU regulated definitions below:

● **SME:** "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."[5] These ceilings apply to the figures for individual firms only. A firm which is part of larger grouping may need to include employee/turnover/balance sheet data from that grouping too.

o **Startup:** A sub-category of the SME category having an incorporated legal entity, separate from and independent of owners or shareholders, and is set up to trade actively (not dormant)[6]. Startup companies are at an early development stage, possibly in the process of being set up or having been in business for a short time.

---

[4] *According to the Commission Regulation No 651/2014, art. 2.18*

[5] *Definition under the European Commission Recommendation 2003/361/EC. Art 2:*

[6] *Definition under 2017 European Commission Document 'Assessing Business Startup Procedures in the context of the renewed Lisbon strategy for growth and jobs*

Startups may have completed the product development stage but require funds to initiate commercial manufacturing and/or sales[7].

Large companies can take part in the proposal only with a signed Letter of Intent with explicit agreement to test or implement the project solution. They can take role as industry partner in the projects, but are not eligible for funding.

2.6.2.2. Location of headquarter and subsidiaries

All applicants [technology supplier applicant(s), industry partner(s)] must be registered in one of the EU27 Member States or in Horizon 2020 Associated Countries. The list of the countries associated with Horizon 2020 is available *here*.

2.6.2.3. Field of activity

The MIND4MACHINES Open Call is addressed **to SME applicants** acting as Industry 4.0 technology service providers for one or more end-user partner(s) from the **manufacturing industry** and a clear industrial application is expected to involve a final customer/end user.

- **The applicant(s): A**pplying individually or in partnership, is/are SMEs working in Industry 4.0 fields defined in 2.4. for industrial applications and processes, detailed in Chapter 2.3. They can be**:**
  - o **Smart digital technology developers from the ICT** sector, working in Industry 4.0 topics; or
  - o **producers of machinery, tools and robots (as a technology provider)** for the use of the manufacturing industry.
- **The end-user Industry partner(s)**: At least one end-user (SME or large industry) representing a manufacturing case with activity corresponding to a NACE Code from Category C[8]. There is a strong focus on activities related to industrial sectors, such as metal, mechanics, automotive, hybrid and electric vehicles and mechatronics but it can be extended to factories from any manufacturing field (e.g.agri-food, textile) which need a technological upgrade.

---

[7] Definition of the European Investment Bank's operational guidelines for InnovFin 2016
[8] *https://ec.europa.eu/competition/mergers/cases/index/by_nace_c_.html)*

3. FINANCIAL ASPECTS OF THE CALL

3.1. Allocated Budget and thresholds

3.1.1. Budget of the MIND4MACHINES Open Calls

MIND4MACHINES Open Calls have a total budget of EUR 3 300 000 which will allocate direct financial support to winning SMEs/startups applicants and manufacturing industrial SMEs, both categories considered as third-party beneficiaries (FSTP). Two similar Open Calls will be organised within the MIND4MACHINES project lifetime: one in 2022 and the other in 2023.

The cumulative maximum amount to be granted to each third party shall not exceed EUR 60 000 in both Open Calls.

This 1st Open Call has a budget of EUR 1 650 000 that will be allocated by adopting two funding schemes:

- ➤ EUR 1 020 000 for the INNOVATION SUPPORT Scheme
- ➤ EUR 630 000 for the GO-TO-MARKET SUPPORT Scheme

The consortium reserves the right not to award all available funds or to transfer funds between both schemes or to the 2nd Call depending on the proposals received and the results of the evaluation.

3.1.2. Budget per proposals and per individual SMEs

For proposals submitted by an individual applicant, the maximum amount granted **per project** can be up to EUR 60 000 - Innovation Scheme and up to EUR 30 000 -Go-to-Market Scheme.

For proposals submitted by two or more applicants, the maximum amount granted **per project** can be up to EUR 120 000 - Innovation Scheme and up to EUR 60 000 - Go-to-Market Scheme.

The budget of each applicant cannot exceed 60 000 EUR under the Innovation Scheme and EUR 30 000 under the Go-to-Market Scheme.

The budget of the industry partner(s): the distribution of the project budget is up to the applicant(s) and their corresponding industry partner(s) and will have to be justified in the application form, with the condition that the industry partner(s) (manufacturing SMEs) can receive up to 20% of the total budget for the project.

No co-financing is required from the applicant(s) or from the industry partner(s). Nonetheless, they commit to having the necessary resources needed to carry out the involvement in the project and stable and sufficient sources of funding to maintain their activity throughout its participation in the project.

Table No 6 MIND4MACHINES Financial thresholds budget per categories

Budget / Scheme	Innovation	Go-to-Market
Proposal with single applicant	**Up to EUR 60 000**	**Up to EUR 30 000**
➤ Applicant	Up to EUR 48 000 - EUR 60 000	Up to EUR 24 000 - EUR 30 000
➤ Industry partner/s	Up to EUR 12 000	Up to EUR 6 000
Proposal with 2 applicants	**Up to EUR 120 000**	**Up to EUR 60 000**
➤ Main Applicant	Up to EUR 48 000 - EUR 60 000	EUR 24 000 - EUR 30 000
➤ Second Applicant	Up to EUR 48 000 - EUR 60 000	EUR 24 000 - EUR 30 000
➤ Industry partner(s)	Up to EUR 24 000	Up to EUR 12 000
Proposal with >2 applicants	**Up to EUR 120 000**	**Up to EUR 60 000**
➤ Applicants (split budget between them)	Up to EUR 96 000 – EUR 120 000 No Applicant exceeds EUR 60 000	Up to EUR 48 000 – EUR 60 000 No Applicant exceeds EUR 30 000
➤ Industry partner(s)	Up to EUR 24 000	Up to EUR 12 000

3.2. Type of eligible costs

The grants to be distributed will have to cover the activities described in the Application Form based on a justified cost-budget split. The costs are exclusively meant for performing the activities allowed under the two Open Cals schemes (Innovation Support or Go-to-Market) to achieve the deliverables defined under each project. The list of indicative costs can be found in the tables below. In extension, any costs necessary for achieving set project objectives can be covered and must be justified in the Application Form.

Table No 7 List of eligible costs of the APPLICANT(S)

List of eligible costs of the APPLICANT(S)	
Innovation Scheme	**Go-to-Market Scheme**
● Staff cost for the development and testing /demonstration of the solution and for training the industry partner to use it	● Staff cost for pre-commercial demonstration, productisation, implementation of the solution/product, training the industry partner to use it
● Staff costs for the project management and reporting tasks or other associated activities, such as project promotion	● Staff costs for the project management and reporting tasks or other associated activities, such as project promotion
● Technical services such as prototyping, MVP, testing, technical consultancy	● Technical services such as advanced prototyping, MVP, testing, technical consultancy
● Equipment or consumables needed for developing/testing the solution	● Equipment or consumables needed for demonstration of the solution
● Travel and accommodation costs between applicants or industry partner(s)	● Travel and accommodation costs between applicants or industry partner(s)
	● Pre-commercial services such as: internationalisation, market intelligence research, market studies, IPR, certification

Table No 8 List of eligible costs of the INDUSTRY PARTNER(S)

List of eligible costs of the INDUSTRY PARTNER SME(S)	
Innovation Scheme	**Go-to-market Scheme**
● Staff cost for ensuring the cooperation for the development, demonstration and implementation of the solution	● Staff cost for ensuring the cooperation for pre-commercial demonstration and implementation of the solution
● Equipment or consumables needed for developing/testing/ demonstration of the solution ● Utility costs triggered by the testing	● Equipment or consumables needed for demonstration and productisation of the solution ● Utility costs triggered by demonstration
● Travel and accommodation costs between applicants or industry partner(s)	● Travel and accommodation costs between applicants or industry partner(s)

The budget will be defined as a lump sum at the time of the grant preparation. It will be distributed in two instalments during the project duration, based on milestones achieved and deliverables.

The lump sum funding system provides considerable simplification for the applicants as it removes obligations on cost reporting based on timesheets or invoices.

4. APPLICATION PROCEDURE

The proposal will be submitted electronically by the main applicant using the F6S Platform.

To submit a proposal, the main applicant will first have to register for an account on the F6S Platform, including the company profile where contact data will be asked.

The F6S platform is the sole entry point for all application submissions to the MIND4MACHINES Open Call. Submissions received by any other channel will be automatically discarded.

4.1. Application form

The MIND4MACHINES application form is available on F6S Platform through the following link: *https://www.f6s.com/m4m-open-call-1/apply*

The electronic application form will be accessible once logged in the F6S pre-registered account.

The applications will be filed electronically following the structure presented below.

Table No 9 Structure of the MIND4MACHINES Application Form

Public information of the proposal	➢ Proposal NAME and Acronym ➢ Abstract ➢ Financial Scheme ➢ Type of proposal
Administrative data	● Applicant(s) and Industry partner(s)
EXCELLENCE	● Objective of the project, challenges addressed ● Details of the Industry 4.0 solution ● Innovation component
IMPACT	● Market addresses, competition ● Expected impact on beneficiary partner/industry ● Digitalisation impact ● Regional impact
IMPLEMENTATION	● Activities work plan ● Associated risks ● Financial details ● Team involved
Horizontal criteria	● Environment ● Social ● Equal opportunities
Self-declarations	● Financial liability ● Conflict of interest
Ethics and IPR	● Ethics and IPR
Attachments	● Annex 2- Administrative data for multiple applicants/ partners (if applicable) ● Annex 3– Letter of Intent from large company (if applicable) ● Annex 4 – Activities and Budget [compulsory] ● Annex 5 – Resources [compulsory]

The detailed version of the application form, following the exact chapters required on the Platform, can be found in Annex 1. There are two compulsory Annexes to be uploaded (Annex 4 and Annex 5), while Annex 2 Administrative Data for multiple applicants/partners and Annex 3 Letter of Intent from large company are only uploaded if applicable. All Annexes will be uploaded as PDF files.

Annex 4 contains two tables for the activities to be performed by each member of the consortium and its corresponding planned budget. Annex 5 is a table where estimated resources to be committed will be filled. These annexes are mandatory to be uploaded, when submitting the electronic application on the F6S Platform.

Each section of the application form corresponds to an evaluation criterion. Thus, it is strongly recommended to follow the specifications of the Evaluation Grid from Chapter 5 and to check carefully the specifications of Chapter 2, related to indicative topics and challenges to be addressed (Chapter 2.3.), indicative activities and requirements (Chapter 2.5.) and corresponding indicative costs (Chapter 3.2).

The form has a structure that encourages it to be specific and concise as the sections have a limited number of characters (indicated in the bottom right corner of each field).

The information provided should be actual, true (provable if requested), and complete to allow appropriate and full proposal assessment. Additional material, i.e. not specifically requested in the online application form, will not be considered for the evaluation.

4.2 Electronic submission

The proposal is submitted in a single stage through the online platform, following the indicated steps:
1. REGISTER on the F6S platform (if not registered before).
2. ACCESS the online application form and fill the questions at: https://www.f6s.com/m4m-open-call-1/apply.
3. ACCEPT Terms and Conditions - Applicants will be asked to click on a link to accept the terms and conditions located in the application form, stating that they are willing to participate in the programme and that information contained within this application form has been reported truthfully will not be eligible.

UPLOAD the compulsory Annex 4 and Annex 5 as PDF files

4. UPLOAD if the case, Annex 2 and 3 as PDF file.
5. SUBMIT - Once the Proposal is completed, click "Submit".

Once submitted, the application cannot be modified. It is highly recommended to submit your proposal before the deadline. Failure to submit the proposal on time, for any reason, including network delays or working from multiple browsers or multiple browser windows, is not acceptable as an extenuating circumstance. The time of receipt of the proposal as recorded by the submission system will be definitive.

An acknowledgement of receipt will be sent out via email to all successfully submitted proposals soon after the Call closes. However, this receipt will not be proof that the Proposal is eligible for evaluation.

The applications sent via any other tool (such as direct email) will not be taken into account.

The proposal reception will close at 17:00 CET (Brussels time) on Wednesday 29/06/ 2022. The deadline of the Open Call will not be extended unless a major problem with the platform makes the

system unavailable. Late submissions will not be accepted, returning a "Call closed" message to the proposer.

5. EVALUATION AND SELECTION

A full list of applicants will be prepared containing their basic information for statistical purposes and clarity, which will be also shared with EC for transparency.

The evaluation is expected to take place within two months after the Call closes.

The evaluation process will be transparent, fair and equal to all applicants and is further described below:.
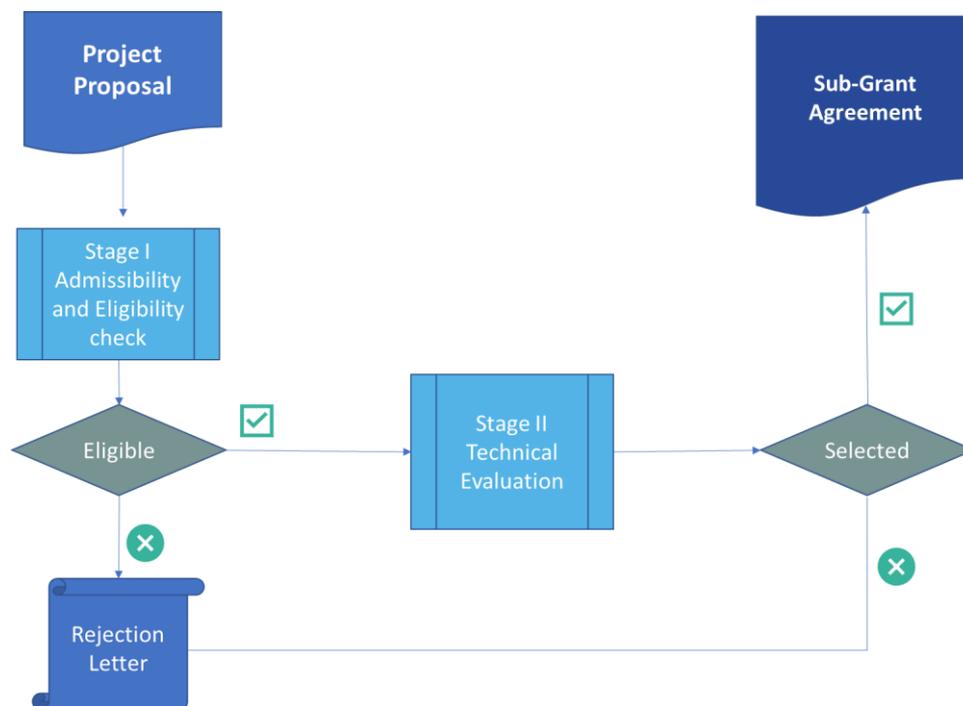

Figure No 3 MIND4MACHINES Evaluation stages

5.1. Admissibility and Eligibility check – Stage I

All applications will be reviewed for admissibility and eligibility.

An **Admissibility and Eligibility Panel** will check the admissibility and eligibility of the submitted proposals and the applicants according to the eligibility criteria set in Chapter 2.6. Project proposals not meeting the admissibility and eligibility criteria will be directly discarded.

The applications which fail the admissibility and eligibility check will be notified.

5.2. Technical evaluation – Stage II

The eligible proposals following the admissibility and eligibility check procedure will be reviewed by the Evaluation Panel, consisting of representatives of the MIND4MACHINES consortium and shortlisted external experts. A Non-disclosure Declaration for the guarantee of the information will be signed by all evaluators.

The evaluators will score the proposals according to the evaluation criteria detailed below in the Evaluation Grid. Applications having cross-border partnerships will be scored.

Table No 10 MIND4MACHINES Evaluation grid:

Evaluation Criteria	Description	Score	Threshold
I. Excellence	**1.1. Concept and vision** ● Define clear objectives and reasons for applying ● Demonstrate alignment with MIND4MACHINES objectives ● Provide a clear description of the challenge(s) addressed ● Provide minimum 3 clear, realistic and measurable technical KPIs **1.2. Technology and innovation** ● Address the sectors and technologies of MIND4MACHINES Open Call ● Clearly address why it fits into the expected TRLs ● Develop a sound and ambitious application/experiment/ prototype consisting of an end-user solution ● Demonstrate the innovation component of the solution	0 – 25	15
II. Impact	● Contribute to increase the digitalisation level of the industry partner or to a specific manufacturing industry ● Demonstrate clear technological, economic and commercial impacts, market opportunity ● Geographical extent of the impact – scalability potential ● Map the competitors and describe competitive advantages ● Ensure appropriate dissemination and exploitation of the results by means of targeted users /industries ● The solution contributes to the environment protection or resource/energy efficiency ● Potential impact on regional strategies	0 – 30	15

III. Implementation	**3.1. Work plan** ● Develop a coherent and clear work plan ● Financial assessment of costs necessary to achieve the solution (staff/equipment/other types of costs) based on real market costs ● Potential risks are identified and risk mitigations defined clearly **3.2. Team & resources** ● Demonstrate capacity and commitment to carry out the services/experiment/prototype (personnel, infrastructure, etc.) ● Demonstrate the appropriateness and the role of each consortium member ●	**0 – 25**	**15**
IV. Horizontal criteria	● Environment and low carbon economy contribution ● Social Impact ● Equal Opportunities and Gender balance	**0 – 15**	**5**
V. Cross-border partnerships	1. All applicants/partners are from the same country 2. Applicant(s) and/or industry partner are from different countries	**0** **5**	
TOTAL SCORE		**0–100 points**	

The evaluation scores for the 3 main criteria (from I – III) will be awarded according to the range description below:

Table No 11 Evaluation scores

SCORE	DESCRIPTION
FAIL **0 - 5**	The Application fails to address the criterion under examination or cannot be judged due to missing or incomplete information.
POOR **6 -10**	The criterion is addressed in an inadequate manner or there are serious weaknesses that will impede success.
FAIR **11 - 14**	While the Application broadly addresses the criterion, there are significant weaknesses that would hinder the project implementation.
GOOD **15 - 18**	The Application addresses the criterion well, although improvements would be necessary and various details are missing on implementation.
VERY GOOD **19 - 22**	The Application addresses the criterion very well, although certain improvements are still possible, and some particular details are missing.
EXCELLENT **23 – 25 /30***	The Application successfully addresses all relevant aspects of the criterion in question. Any shortcomings are minor.

- 30 is the maximum score only for the Impact

On the Criteria IV. each of the three horizontal principles will be scored from 0 to 5. All activities proposed should respect fundamental ethical principles, including those reflected in the Charter of Fundamental Rights of the European Union[9].

To enter the final evaluation stage, minimum 15 points have to be scored in each of the main evaluation components (from I – III) and a minimum of 5 for the horizontal criteria (IV). Only proposals with scores above thresholds for each criterion, as indicated above, will be ranked for funding. Therefore, the score range of the application in the final list will be between 50 –100 points.

---

[9] *Charter of Fundamental Rights of the European Union:*
https://eur-lex.europa.eu/legal-content/EN/TXT/PDF/?uri=CELEX:12012P/TXT&from=EN

Following the technical evaluation process, the ranking of the proposals will be generated according to the highest obtained scores.

In case two applications have identical score following the technical evaluation process and they are on the verge of the shortlist line, the evaluation criteria is listed below in order of importance and considering the spare budget fit:

I). The one submitted by a cross-border consortium of applicants will prevail.

II). The one submitted by a consortium of applicants will prevail against an individual application.

III). The one having an industry SME beneficiary in the consortium will prevail against having a large company as industry partner.

IV). The one with applicant(s) from the MIND4MACHINES partner regions will prevail.

V). The one which obtains the highest score in the Impact category will prevail.

V). The one which obtains the highest score in the Implementation category will prevail.

VI). The one which obtains the highest score in the Horizontal criteria category will prevail.

VII). The one submitted first will prevail (according to the day/hour of the submission).

5.3. Complaints

If, after receiving the results of one of the evaluation phases (when foreseen), an applicant disagrees with the evaluation result, a complaint can be sent (in English and by email) to *m4m@iso.org.tr* within three calendar days following the official receipt of the Evaluation report.

The following information shall be included:

- contact details and name of the application
- the subject of the complaint
- information and evidence regarding the alleged breach

In case of such complaints received, a re-evaluation will only be carried out if there is evidence of a shortcoming that affects the final decision on whether to fund the proposal or not. This means, for example, that a problem relating to one evaluation criterion will not lead to a re-evaluation if a proposal has failed anyway on other criteria.

The evaluation score following any re-evaluation will be regarded as definitive. It may be lower than the original score.

6. CONTRACTING PROCEDURE AND REQUIREMENTS

The winning SMEs/consortia will start the contracting procedure, including validation of the eligibility criteria, to be finalised no later than one month from the formal notification of the final evaluation result.

Before signing the Sub-Grant Agreement (S-GA), each awarded SME will be asked to provide documentary evidence to be checked in detail regarding eligibility conditions met such as SME status and field of activity.

After the validation of the documentary evidence, the S-GA will be signed for each project, between the MIND4MACHINES consortium represented by the coordinator (ICI) and all applicant(s)/partner(s) entitled to receive EU grants, to be considered hereafter *Sub-Grantees.* The S-GA will cover the implementation period of the sub-project, maximum nine months, with some obligations exceeding the implementation period as the selected entities are receiving European Commission funding.

A Consortium Agreement should also be concluded between the project partners.

The payment for the services/experiments will be linked to the accomplishment and approval by MIND4MACHINES Consortium of the defined KPIs and deliverables. Transfer of the awarded financial contribution will be given in two batches, based on milestones and deliverables validated after the submission of an interim report (40% payment, after the first three months) and a final report (60% final payment), following the Working Plan described in the winning proposal.

In addition to the implementation of the winning sub-project, the applicant SMEs will enter the **MIND4MACHINES Acceleration Programme** and receive business and innovation training and coaching based on an agreed calendar and topics.

7. Intellectual property rights

The results and IPR developed during the sub-project implementation will be the exclusive property of the corresponding SME/consortium.

The applicants are advised to include Intellectual Property Rights issues and results dissemination generated from the project teams through MIND4MACHINES funding in their internal Consortium Agreement.

8. Confidentiality and GDPR Data protection

8.1. Application stage

A full list of applicants will be prepared containing their basic information for statistical purposes and clarity, which will be also shared with EC for transparency. The applicants' list will not be public but will serve as statistics in project communication materials.

8.2. Evaluation stages

To process and evaluate proposals, MIND4MACHINES will need to collect personal and industrial data. F6S Network Limited (F6S) will act as a Data Controller for data submitted through the F6S platform. The F6S platform's system design and operational procedures ensure that data are managed in compliance with The General Data Protection Regulation (EU) 2016/679 (GDPR). Each applicant will accept the F6S terms to ensure coverage.

MIND4MACHINES may share the proposals with selected external reviewers, with whom Non-Disclosure Agreements are signed to protect the confidential information given by the applicants.

Please note that MIND4MACHINES requests the minimum information needed to deliver the evaluation procedures or the implementation of the funding programme. Further legal and financial information will only be requested if the SME is accepted in the programme and is briefly described in Chapter 6 regarding the contracting procedure.

Please refer to *https://www.f6s.com/terms* to check F6S platform data privacy policy and security measures.

The final list of the awarded projects and SME applicants/beneficiaries will be made public, including name of the projects, abstract, legal name of the companies, sector, country of origins, results of the project, duration of the projects and project budget.

9. Help-desk contact information

The partner organisations of the MIND4MACHINES project will act as a Help-desk for any potential applicant, irrespective of their nationality.

In relation to the present Open Call, a series of dissemination webinars will be broadcast online as well as InfoDays organised in partner regions.

For further questions and clarifications, you may check and address the following ways:

I.   Frequently Asked Questions [FAQ]: *https://mind4machines.eu/open-calls/*

II.   European Help Desk -MIND4MACHINES Open Call: *https://www.f6s.com/m4m-open-call-1/discuss*

Wording and abbreviations

MIND4MACHINES: Manufacturing Industry's Novel Digitalisation value chains FOR connecting MACHINES with people, process and technology

MIND4MACHINES partners – the 11 organisations part of the MIND4MACHINES project consortium

MIND4MACHINES regions - the eleven regions from where the project partners are coming from

Applicant – Technology provider SME proposing an Industry 4.0 solution

Industry partner – Manufacturing industry SME acting as end-user of the proposed solution

Sub-Grantees – Winning SMEs that will implement the sub-projects and receive grants

Abbreviations

AI – Artificial Intelligence

EC – European Commission

ESR – Evaluation Summary Report

FSTP - Financial Support Third Party/grant received per SME

ICT – Information Communication Technology

IRL – Investment Readiness Level

GA – Grant Agreement

GDPR – General Data Protection Regulation

MVP - Minimum Viable Product

S-GA – Sub-Grant Agreement

SME – Small and Medium Enterprise (including micro-enterprise or startup)

TRL – Technology Readiness Level

Annexes

- [Annex 1](#) Technical Application Form structure
- [Annex 2](#) Administrative data for multiple applicants or industry partners
- [Annex 3](#) Letter of Intent (LoI) template for Industry end-user(s) not part of the consortium
- [Annex 4](#) Tables with activities and budget
- [Annex 5](#) Resources table

List of Figures