DIGITbrain

1st OPEN CALL

Guide for Applicants (GfA)

KEY CALL DETAILS

Call identifier:	1st DIGITbrain Open Call
Submission deadline:	30th June 2021, at 17:00h (Brussels local time)
Expected duration of participation in experiment:	12 months, from 1st October 2021 to 31th September 2022.
Foreseen financial support for 1st DIGITbrain Open Call:	Up to EUR 700,000 financial support for Third Parties. This amount of financial support is planned to be spent on at least seven application experiments. DIGITbrain considers that proposals requesting a contribution up to **100,000 EUR per application experiment** would allow the specific challenge to be addressed appropriately. Nonetheless, this does not preclude submission and selection of proposals requesting other amounts. The maximum amount of financial support to be granted **to one Third Party** for one application experiment **must not exceed 60,000 EUR**. According to the EC rules, no Third Party is allowed to have received more than 100,000 EUR from Horizon 2020 I4MS and SAE Open Calls.

Expressions of interest and questions from participants can be sent to the contact email address opencall@digitbrain.eu

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Document Change History

Version	Date	Reason for change	Sections Updated
1.0	31th March 2021	Initial document	NA
1.1	27th April 2021	Independent Software Vendors profile Mid-caps definition	3.1

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Table of Contents

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1. Introduction

DIGITbrain project, funded by EC under the Grant Agreement number 952071, includes Financial Support to Third Parties (FSTP) under two Open Calls.

DIGITbrain project has the ambition to transform the CloudiFacturing Solution and ecosystem (developed in the H2020 CloudiFacturing Project) towards the requirements of **Manufacturing as a Service (hereafter MaaS),** utilising the Digital Brain and its underlying technology components as the main innovation of the project. MaaS is a smart business model that aims to democratise the access of advanced digital technologies and advanced manufacturing technologies to manufacturing SMEs.

There are six **Digital Innovation Hubs (hereafter DIHs)** participating in the DIGITbrain project, that will become the enablers of such holistic democratisation, by providing access to their own or leased advanced manufacturing facilities or by brokering the advanced manufacturing facilities within their region, which will be equipped with the DIGITbrain technology.

DIGITbrain project will conduct three waves of experiments, that will run over the DIGITbrain Solution. The first wave includes seven internal application experiments that have already started. The second and third waves (the two Open Calls) are planned to **attract new Third Parties** (especially manufacturing SMEs and mid-caps) to perform experimentation, in order to **extend and validate DIGITbrain solution** under development and make SMEs more competitive by transferring innovative solutions into the wider manufacturing community.

Within this guide, we would like to stimulate you to respond to our 1st Open Call by applying experiment with one-year duration that are executed within the scope of the DIGITbrain concept.

2. Application experiments

2.1. The DIGITbrain vision

Grounding on the Digital Twin concept, application experiments will be focused on creating **customized industrial products** and facilitating cost-effective distributed and localized production for manufacturing SMEs or mid-caps, by leveraging **edge, cloud and HPC-based modelling, simulation, optimization, analysis and machine learning tools** by means of augmenting the concept of Digital Twin with a memorizing capacity towards:

a) recording the provenance and boosting the cognition of the Industrial Product over its full lifecycle, and
b) empowering the network of DIHs to implement the smart business model MaaS.

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The experiments should be modelled and simulated using **Digital Twins and Artificial Intelligence-based mechanisms** so that during the experiment's execution, data, models, and algorithms are incorporated and validated in the **DIGITbrain testbed.**

Precise information about the current DIGITbrain testbed, the DIGITbrain Solution (under development) as well as the envisaged final DIGITbrain Solution is explained in a separate technical document, called **"Short Technical Description**" available here.

2.2. Type of experiments expected

Application experiments are expected to cover **any segments in the manufacturing sector at large**, including (but not limited to) discrete manufacturing, continuous production, or construction. Application experiments should aim at covering the development and uptake of digital technologies especially in segments where these are underexploited.

In line with the DIGITbrain solution, **application experiments are expected to model behaviour of an Industrial Product** (manufacturing machine, line or mechatronic system) with the means of a **Digital Twin**. In addition, they are expected to demonstrate benefits in different phases of the life cycle of this Industrial Product, its adaption and/or evolution to new generations of this industrial product.

The **DIHs** and **technical core partners**[1] from DIGITbrain project **will act as business and technical supporters for Third Parties**, for that both need to work together in close collaboration. This collaboration should continue during the application experiments deployment and execution. See Annex for further information.

2.3. Innovative use cases examples

As abovementioned, application experiments can cover different **innovative use cases** in different manufacturing segments. These innovative use cases should be focused on the operation improvement, the life cycle of an industrial product and/or the environmental impact.

A list of use cases is provided **as an example** (they are not exhaustive):

- Guided product design by means of accumulative and structured experience;
- Virtual validation through Design-of-Experiments-driven design;
- Distributed cross-site workload based on dynamic capacity planning;
- Self-preserved predictive maintenance;
- Remote steering and optimisation of industrial products;
- Anticipation of future events for actual conditions;
- Support for decision-making based on what-if analysis;

[1] Current partners in DIGITbrain consortium dedicated to the development of the Digital Brain solution and its integration into the CloudiFacturing Digital Marketplace and Agora.

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- Indexed-based traceability and assessment for different operating conditions,
- Optimization of industrial product and/or processes in terms of energy efficiency and/or circularity through, for example, life-cycle assessment (LCA).

For further information regarding the technical activities to be granted, go to the Short Technical Description document, or contact your respective DIH.

3. Application experiment consortium

All applicants will have to abide by all general requirements described in sections from 3.1 to 3.3 of this Guide for Applicants in order to be considered eligible for the 1st Open Call.

3.1. Who can become a Third Party?

The following types of organizations and companies from countries that are eligible for H2020 are entitled to became Third Parties:

- **End users** (manufacturing companies): SMEs[2] and mid-caps[3]. These end users will pose the use case to be executed in the application experiment proposed via the Open Call.

- **Technical Partners:**
  - Independent Software Vendors (ISVs): SMEs and mid-caps.
    These ISVs provide and adapt the software for solving the challenge of the end user.

  - Engineering or Software Consultants (VARs): SMEs and mid-caps.
    These engineering consultants provide the domain expertise to solve the challenge of the end user with the software provided by the ISV or as Open Source. In some cases, a single company may play both roles: the one of the ISV and the one of the engineering consultant.

  - Research Organizations:
    These organizations may contribute their domain expertise to solve the challenge of the end user. Alternatively, they may also support with their skills the extension of the software to be able to solve the end user's challenge. Again, alternatively, they build one or more behaviour models representing some functionality of the Industrial Product in a Digital Twin. The software may be provided by an ISV, the research organization or an Open Source community.

[2] To check if your organization is an SME, go to: https://ec.europa.eu/growth/smes/sme-definition_en

[3] There is no common EU definition of mid-cap companies. In the context of this Open Call, mid-caps are considered those that have between 250 and 3000 employees.

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- **Others**:

  - Any organization that will act as a Digital Innovation Hub[4].
    DIHs **should** clearly state in the experiments proposal what they do and add to existing activities to open access to new countries, which are not yet represented by current DIGITbrain DIHs and / or partners.

  - High Performance Computing (HPCs) providers:
    These organizations, as well as the DIHs, can provide computing resources to all the experiments.

Current partners from DIGITbrain consortium cannot become Third Parties.

3.2. Location

Third Parties **must** be legally constituted and established in the **European Member States**, **Associated States**[5] or the United Kingdom.

DIGITbrain encourage proposals from new Member States[6]. Amongst proposals that will receive the same total score during the evaluation process, those with the higher rate of partners from new Member States will be preferred in case of ties.

3.3. Requirements to be fulfilled by consortium

The minimum number of partners in an application experiment consortium must include:

- one **end user** (who will lead the application experiment) and;
- one **technical partner** (who will be the main speaker with DIHs and technical core partners).

In the 1st Open Call, Third Parties can participate in more than one experiment provided that comply with the open call requirements.

[4] For further details about the profile of a DIH, go to: https://ec.europa.eu/digital-single-market/en/digital-innovation-hubs-dihs-europe

[5] To see Horizon 2020 country profiles, go to: (https://ec.europa.eu/info/research-and-innovation/statistics/framework-programme-facts-and-figures/horizon-2020-country-profiles_en)

[6] The current DIGITbrain Consortium already covers, besides the United Kingdom and Switzerland, the following Member States: Germany, Spain, Italy, Netherlands, Ireland, Denmark, Romania, Serbia, Finland, France, Austria, Portugal.

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4. Proposal preparation and submission

4.1. Proposal language

The application experiment proposal as well as all corresponding documentation must be written in **English**. Proposals submitted in any other language will not be evaluated.

English is the only official language during the open call process, experiments design, implementation and reporting. This means that all communications and deliverables will only be accepted if in English.

4.2. Proposal template

Proposals for a new application experiment follow a one-step process and must be submitted through the DIGITbrain Open Call portal. This application should follow the indications shown in the proposal template available here.

Proposals submitted by any other means will not be considered or evaluated. Moreover, only the documentation included in the proposal will be considered by the evaluators.

The proposal template has **seven main sections** to support well-structured and concise experiment descriptions on maximum 10 pages (+1 cover page). This page limitation **must** not be exceeded in case it happens the proposal will be cut according to the limits.

The proposal template provides instructions in each section about what shall be described to achieve, consistency and comparability and to render the evaluation process efficiently. Therefore, please be concise, address the topics in the template and follow carefully the indications in each section of the template.

The sections and length (in pages) are given in the following table:

Section name	Industrial relevance	Dissemination and exploitation strategy	Application Experiment design	Technical approach	Work plan with activities & milestones	Resources to be committed	Consortium
Length (pages)	2	1	1	2	1	1	2

Key performance indicators (KPIs) on technical and economic impact will be requested to be stated by the Third Parties at the time of the proposal submission and that they are clearly aligned with the criteria used in the evaluation process – the same which will be shared with the evaluators. These KPIs will be defined by the Third Parties.

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If a proposal fails to reach the evaluation thresholds in the 1st Open Call or is not selected for funding due to high competition rate, applicants could re-submit improved versions of proposals in the upcoming 2nd Open Call.

The ICT solutions resulting from the application experiment are expected to be offered as a service in the Digital Agora [7] to multiply effects and to impact beyond the end user within the experiment, by making the resulting ICT solution accessible to a large number of potential customers.

4.3. Proposal submission

Before starting, applicants must be logged on DIGITbrain Open Call portal, fill basic and administrative information, and accept the ethics conditions. Besides, the application experiment proposal must be attached in PDF format before the closing time and date of the 1st Open Call:

30th June 2021, 17:00h (Brussels local time).

Third Parties can upload their proposal several times, overwriting previous versions. Only the last version received before the closing time will be considered for evaluation. Proposals handed in later or provided by any other means will not be considered.

An electronic receipt of a successfully submitted application experiment proposal will be issued to the email address used at the time of proposal registration. However, please note that the sending of an acknowledgement of receipt does not imply that the proposal has been accepted as eligible for evaluation.

4.4. Additional remarks

Please be aware that submitting your proposal can take some time even if you have all the necessary information ready at hand. Do not wait until the deadline to start the online submission process. Our advice is to complete your proposal sufficiently in advance so as to avoid any last-minute problems.

Please note that failure of your proposal to arrive on time for any reason, including communication delays, is not acceptable as a delay circumstance.

In order to get additional assistance during the preparation of the proposal, such as further clarification on the type of support, feedback on certain aspects of a proposal, applicants are strongly encouraged to contact the DIGITbrain Help Desk (opencall@digitbrain.eu). In addition, applicants can ask directly to their respective DIHs (see Annex) and to participate in the Open Call webinars to be carried out during the call for proposals.

[7] For further information regarding the Digital Agora, go to the Short Technical Description document.

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5. Evaluation and selection

5.1. Eligibility check

Once the 1st Open call is closed, an eligibility check will be done to identify those proposals that do not accomplish the general eligibility criteria specified in section 3, 4 and 6 of the Guide of Applicants.

The eligibility check process will take two weeks maximum from the deadline date (until 15th July). A notification will be sent to all submitted proposals to let them now if they are eligible or not.

The evaluation and selection process will start for eligible proposals as indicated in the following sections.

5.2. Evaluation criteria

Each section in the proposal template is given a mark ranging **from 0 to 5**. To avoid ties, only entire and half points are allowed, for example: 2 points or 2.5 points.

Industrial relevance section has a threshold of 3 points. At most two categories can be strictly below 3 points, not including section industrial relevance.

Industrial relevance section has a weight of 4, i.e. its mark is multiplied by 4 before summing up the total score. **All others have the weight of 1**.

Threshold for the **total score is 30 out of 50**.

The meaning of the marks is as follows:

- 0: **Zero** - The proposal fails to address the criterion under examination or cannot be judged due to missing or incomplete information.
- 1: **Very Poor** - The criterion is addressed in an inadequate manner, or there are serious inherent weaknesses.
- 2: **Poor** - While the proposal broadly addresses the criterion, there are significant weaknesses.
- 3: **Acceptable** - The proposal addresses the criterion, although significant improvements are possible.
- 4: **Good** - The proposal addresses the criterion well, although certain improvements are still possible.
- 5: **Very Good** - The proposal successfully addresses all relevant aspects of the criterion in question. Any shortcomings are minor.

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Other rewarding criteria to consider in the evaluation process:

Amongst proposals that receive the same total score by the evaluators, to avoid ties the ones with the higher rate of one of the criteria mentioned below will be preferred:

- Number of SMEs involved.
- Countries not covered by current DIGITbrain Consortium;
- Cross-border experiments;
- Measures to encourage women in the manufacturing and tech community, researchers and start-ups.
- Participation of external DIH;

To apply the rewarding criteria, the proposal shall be above threshold. In other words: the scores obtained with the rewarding criteria do not contribute to reach the minimum threshold.

5.3. Evaluation process

The proposals evaluation will be done involving independent experts from appropriate fields to assess soundness and impact with respect to the evaluation criteria.

An **evaluation board for each proposal** will be performed by:

- two independent experts (two votes, one vote each)
- one internal expert from the DIGITbrain technical core partners team (one vote)

The two independent experts will oversee the proposals and ensure maximum complementary and impact well as economic feasibility. The internal expert mainly will check technical feasibility and compliance with the technical capabilities of the DIGITbrain solution. The three of them must fill the **assessment form individually,** including justifications for their marks.

The independent experts will be individuals from the fields of industry, science and / or innovation management. They will be selected out of a database of experts[8], considering their expertise, independence from the project and the proposers avoiding conflict of interest, regional distribution and gender aspects to achieve fair and profound assessment of the proposals.

The independent experts will follow the evaluation criteria included in this Guide for Applicants and requirements presented in the proposal template, considering the range of scores to be used and the weights for each criterion.

[8] The independent experts will be selected from the offer experts base available in the European Commission portal: https://ec.europa.eu/info/funding-tenders/opportunities/portal/screen/work-as-an-expert

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6. Budgeting and Financial support

6.1. Eligible costs and experiment budget

Each partner involved in the application experiment must specify their budget, by estimating the resources to be committed during the 12 months of execution to accomplish the activities planned.

Only costs generated during the lifetime of the execution of the experiments are eligible. Expenditures incurred during proposal preparation and reporting period when the experiment is finished are not eligible.

Eligible costs are:

- **Direct personnel costs**: costs of the actual hours worked by the staff of the Third Party, directly carrying out work under the experiment. The estimated effort in Person Months (PM) will be required as part of the work plan in the proposal template. The categories of persons within the organizations, which may work in experiments are supposed to be:
    - Engineers (technical staff),
    - Managers (incl. consultants),
    - Factory workers,
    - Researchers,
    - PhD candidates,
    - Administrative staff.

- **Other direct costs**: further direct incurred costs can be claimed for travel and related subsistence allowances, equipment, infrastructure and consumables and supplies (publications and fairs). Only the part of equipment costs used for the experiment, can be reimbursed, and the usual depreciation rules of the company has to be applied.

- **Indirect costs:** costs incurred within the context the experiment that cannot be attributed directly to the experiment, e.g. room rent, energy costs or general administration costs. A flat rate of 25% of the direct eligible costs can be refunded.

- **Subcontracts costs:** costs of subcontracting external expertise or services. Indirect costs in this category are not allowed and will not be funded.

6.2. Financial support to Third Parties

The EC funding budget available for Third Parties in the 1st Open Call is up to 700.000 EUR. A total of **seven experiments are expected to be granted**.

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DIGITbrain consortium considers that proposals requesting a contribution **up to 100,000 EUR per experiment** would allow the specific challenge to be addressed appropriately. Nonetheless, this does not preclude submission and selection of proposals requesting other amounts.

The maximum amount for financial support must not exceed **60,000 EUR per Third Party**[9]. According to the EC rules, no Third Party is allowed to have received more than 100,000 EUR from Horizon 2020 I4MS and SAE Open Calls.

The maximum financial contribution from DIGITbrain project regarding the EC rules will be calculate with the **reimbursement rate,** being this:

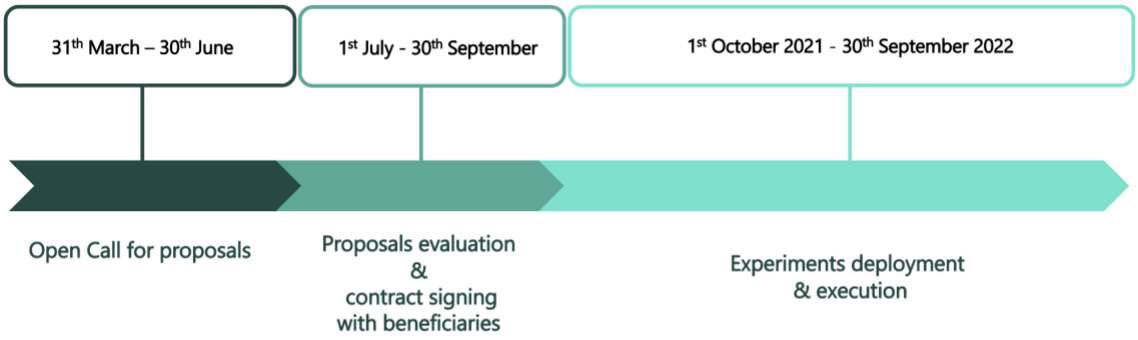
- 100% funding of eligible costs for non-profit legal entities.
- 70% funding of eligible costs, for anyone else.

6.3. Procedure and timing

1st Open Call for experiment proposal will be open for **three** months, from 31th March to 30th of June.

The evaluation and selection process will take **two** months, from 1st July 2021 to 31th August 2021, including the eligibility check process during the first **two** weeks. The contracting process with Third Parties will take **one** month, from 1st to 30th September 2021.

The experiments will start at the beginning of October 2021 and will take **twelve** months, until September 2022.



[9] EC rules about maximum financial support to Third Parties.

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6.4. Contracting Third Parties

The contract will be set up and signed between Corporación Tecnológica de Andalucía (hereafter CTA)[10], **as DIGITbrain cascade funding manager**, and Third Parties participating in the respective application experiment consortium.

One contract per experiment consortium will be signed, with the signature of all parties involved.

This contract will contain, amongst other things:

- The amount of DIGITbrain contribution, to each Third Party.
- Progress monitoring and quality checking regarding the execution of the experiments.
- The pre-payments and payments to be released according to the progress monitoring restrictions.
- IPR arrangements, i.e. the use of background and foreground and ensure the use of the experiment results beyond the duration of the experiment. IPR arrangements will be part of the exploitation strategy under conditions that are worked out as part of the business modelling activity accompanying the experiments.

A financial check will be carried out by CTA before the signature of the contract. During this process CTA reserves the right to ask for financial documentation such as the profit and loss account and the balance sheet of the last three financial years of each Third Party.

Contracted Third Parties will be exposed to all the contractual obligations to be fulfilled on the Third Parties according to the rules of H2020, especially Article 15 — Financial Support to Third Parties of the Model Grant Agreement and Annex K - Actions involving financial support to Third Parties (General Annexes - HORIZON 2020 – WORK PROGRAMME), and make sure that the Third Parties (recipients of financial support - cascaded funding) allow for the Commission measures described in the two documents just mentioned (Article 15 and Annex K).

The contract will ensure, according to the above-mentioned Annex K, that the recipients of the financial support (the Third Parties) allow the European Commission, the European Anti-fraud Office (OLAF), and the Court of Auditors to exercise their powers of control on documents, information, even stored on electronic media, or on the final recipient's premises.

[10] CTA is a Spanish foundation and private Funding Agency partner of DIGITbrain consortium. The main role of CTA is to manage the open calls organisation and the cascade funding process.

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6.5. Progress monitoring, quality checking and payment to Third Parties

Progress monitoring of the experiments with respect to its work plan is the obligation of the DIHs which were collaborated with the Third Party during the application experiment proposal preparation.

Third Parties will be obliged to hand in concise progress reports to their respective DIHs who will check the quality and if the progress is in accordance to the work plan for the application experiment proposal.

DIHs will correspondingly inform CTA about acceptance or rejection of the progress report. Quality checking can also include demonstration of intermediate results of the experiments. If the progress report is accepted, the payment will be triggered.

The experiment proposals will contain activities, deliverables and milestones together with efforts to achieve the financial support will be granted based on progress with respect to the experiment work plan, which becomes part of the contract between CTA and Third Parties in compliance with the rules and regulations imposed by the conditions of the H2020 Work Programme.

The European Commission has strict rules for payments/pre-payments that are taking project phases into account and reserve some budget for cases that are unlikely but still happening, e.g. bankruptcy of a partner, financial irregularity, liquidation, etc. DIGITbrain re-interpret these rules in the following sense for the Third Parties within the project:

- **After contract signature**, a prepayment of **25 % of the requested funding**, in order to avoid cash flow problems especially for SMEs will be issued.
- **Six months** after the experiment starts and after validation of an internally submitted progress report from Third Parties, an interim payment of **45% of the requested funding will be performed**.
- **One month after** the completion of the experiment, the Third Parties will submit a final technical report, as well as evidence of project execution. After acceptance of the final technical report by the DIHs, the **pending 30%** of the requested funding will be transferred to Third Parties. If not acceptable, Third Parties could be claimed to present additional information in short time (up to 1 month); if not acceptable again the previous payments could be declared as withdrawn and the executors could be claimed to repay the advance and interim payments.

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ANNEX. Where to find help and support?

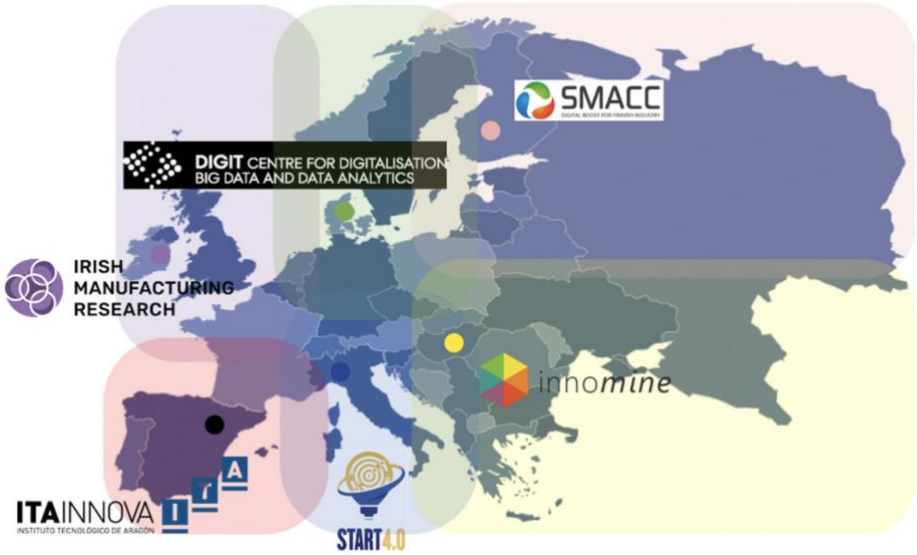
For questions regarding Open Calls process, DIGITbrain Open Call Portal, administrative issues or other general questions, please contact us in the email address: opencall@digitbrain.eu. This email account is managed by CTA, as cascade funding manager.

Regarding your application experiment proposal, you can contact directly with a DIH as abovementioned. These **DIHs will support you with your questions and ideas** and they will help you to prepare a high-quality proposal for your application experiment that well suits our 1st Open Call and have a high potential impact.

DIHs will promote the 1st Open Call, initiate discussions, and know the right people from the technical core partners team involved in DIGITbrain to clarify any remaining questions that they may not be able to answer ad hoc.

The DIHs will become the main facilitators of MaaS, by enabling access to production facilities directly or as a brokerage, evangelising manufacturing and end-user companies on digitalisation and advanced manufacturing and boosting the skills and knowledge of their manufacturing stakeholders.

Furthermore, the following **network of DIHs** will raise awareness within their regions, accompany the execution of the application experiments from the start and reinforce the implementation and execution with regional funds.



Each experiment consortium should contact its respective DIH according to the country from which are from. The table below shows the foreseen **regional coverage of each DIHs** in Europe.

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DIH DESCRIPTION AND REGIONAL COVERAGE	
ITAINNOVA INSTITUTO TECNOLÓGICO DE ARAGÓN	**Centro de Innovación Digital de Aragón** (Spain – South-Western region)
	The Aragon Digital Innovation Hub on HPC-Cloud and Cognitive Systems for Smart Manufacturing processes, Robotics and Logistics (Aragon DIH) is the Aragonese initiative that, within a framework of European cooperation, extends the strategy of Economic and Industrial Promotion of Aragon and the Intelligent Regional Strategy of Aragon towards the digitization of the industry. For this purpose, research institutions, competence centres, innovative companies and clusters are involved, as well as the business development agencies and the authorities in charge of supporting and defining the Aragon Industry Strategy 4.0 (AI4.0).
	Regional coverage: Portugal, Spain and France.
	Contact person and email: Salvador Izquierdo (sizquierdo@itainnova.es) Sergio Mayo (smayo@itainnova.es)
IRISH MANUFACTURING RESEARCH	**Irish Manufacturing Research** (Ireland – North-Western region)
	IMR are perfectly positioned to accelerate the design, development and uptake of advanced digital technologies by European industry, especially SMEs and mid-caps. IMR supports the manufacturing sector in Ireland, helping them use secure digital technologies in their production processes, products, and business. Formalised by industry and government in 2014, IMR is a small, agile, non-profit, independent research organisation at the heart of a regional ecosystem of partners on the periphery of Europe. IMR have two physical locations in Ireland (a Manufacturing Lab in Westmeath and an Innovation Centre in Dublin).
	Reginal coverage: Ireland, England, Northern Ireland, Scotland and Wales.
	Contact person and email: Lise-Ann Sheahan (liseann.sheahan@imr.ie)
	START 4.0 (Italy – Southern region)
	START 4.0 is an association sponsored by the Italian Ministry of Economic Development, focusing on Industry 4.0. START 4.0 is a Public Private Partnership led by the Italian National Research Council (Consiglio Nazionale delle Ricerche, CNR) with the goal of offering services concerning: digital strategy (evaluate the

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START4.0	level of digitization as well as the technology potential of enterprises and SMEs); training (promotion and dissemination of competences related to Industry 4.0); and participation to RD&I collaborative projects to foster the open innovation transition of enterprises and SMEs. START 4.0 has a Europe-wide network of 1000+ partners and among the associated entities, it is worth mentioning STAM, Confindustria DIH, the Italian Institute of Technology (IIT), ABB, and the University of Genoa.
	Regional coverage: Italy, Switzerland, Austria, Slovenia and Croatia.
	Contact person and email: Giacomo Benedetti (giacomo.benedetti@start4-0.it) Matteo Mangini (matteo.mangini@dgsspa.com)
DIGIT AARHUS UNIVERSITY CENTRE FOR DIGITALISATION BIG DATA AND DATA ANALYTICS	**DIGIT** (Denmark – Northern region)
	This DIH focuses on different kind of digitalisation technologies also in the manufacturing context. For instance, the Danish MADE projects virtually involves all Denmark's manufacturing companies, where AU is leading the research in smart products and in relation to Digital Twins (https://www.made.dk/). Initial in-house manufacturing capabilities supporting MaaS has been started up. Research areas includes cyber-physical systems, machine learning, big data, IoT, cybersecurity, digital business models, and blockchains.
	Regional coverage: Denmark, Netherlands, Germany, Belgium, Luxembourg, Norway and Sweden.
	Contact person and email: Xuping Zhang (xuzh@eng.au.dk)
innomine	**innomine** (Hungary – South-Eastern region)
	innomine Digital Innovation Hub is specialised in digital transformation, primarily in area of Industry 4.0 and has a cross-disciplinary team of professionally qualified experts, with research and consultancy expertise in management, technology and European funding. It was launched in 2016 as a separate legal entity with the support of innomine Group and many other stakeholders. innomine DIH has been selected in 2017 by EC within the Support and mentoring program for DIHs in new Member States programme and has completed it in 2018 with success. innomine DIH relates to other local policy initiatives and currently is leader of a Structural fund supported

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	project to scale its DIH activities in the Southern Transdanubia region.
	Regional coverage: Prague, Slovakia, Budapest, Bosnia and Herzegovina, Serbia, Macedonia, Albania, Montenegro, Greece, Romania, Bulgaria and Turkey.
	Contact person and email: Katalin Kovacs (katalin.kovacs@innomine.com)
	Smart Manufacturing DIH (Finland - North-Eastern region)
	SMACC is hosted by State Research Centre VTT and Tampere University (TAU). SMACC is a cooperation platform for both industrial cooperative activities and scientific research activities. SMACC's mission is to combine SMEfavourable (agile) operation model with scientific competence, disseminate enthusiasm, and encourage for innovations, forming an R&D ecosystem. SMACC has eight research areas: Autonomous machines and robots; Data based service innovations; Digital life-cycle management; Digital Twin; Engineering material science; Advanced digital and hybrid manufacturing; and Industrial robotics and production. Prototype manufacturing facilities are available in manufacturing lab for research purposes and pilot production: CNC-machines, 3D-printers, powder piloting services, laser equipment available, measurement equipment, material testing and design. Many manufacturing companies are involved in the network, which have manufacturing facilities and resources all around the Tampere region.
	Regional coverage: Finland, Polska, Lithuania, Latvia, Estonia and Russia.
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