



APPLICATION EXPERIMENT TITLE

Application Experiment Proposal for CloudiFacturing Open Call 2 (CloudiFacturing-2)¹

PARTNER TABLE

Number	Partner acronym	Partner name	PIC ²	Role in experiment	Organisation type ³	Country	New to EC projects ⁴	New to CloudiFacturing technology ⁵
1	Partner 1			End user	e.g. SME		Yes/No	Yes/No
2	Partner2			e.g. ISV	e.g. Large company			
N	Partner n			Etc.	Etc.			

In case the proposal is selected for funding all partners in the consortium accept terms and conditions as specified in the **CloudiFacturing Model Contract** available at

<https://www.cloudifactoring.eu/wp-content/uploads/2019/06/ModelContract-w2.pdf>

Please note that in case you answer 'no' below then your proposal will not be considered for funding.

Yes:

No:

¹ Please note that although brief instructions are provided with this template, we strongly recommend that you read our detailed Guide for Applicants (GfA) that is available at <https://www.cloudifactoring.eu/open-call-application-system-w2/>. Once this proposal template is completed please delete all instructions to reduce length.

² See <https://ec.europa.eu/research/participants/portal/desktop/en/organisations/register.html> for registration of your organisation. Since consortium partners in an application experiment become 3rd parties to the CloudiFacturing project, they do not need to undergo a formal validation by the respective EC services. However, the proposing parties need to register with the EC to get a Participant Identification Code (PIC) number.

³ Typical organisation types include SME, large company or research organisation that will affect the corresponding funding rate. Proposers are encouraged to determine their status by themselves according to the EC rules as part of the proposal. For details regarding the EC definition of SMEs please visit http://ec.europa.eu/growth/smes/business-friendly-environment/sme-definition_en.

Please note that high level of SME participation is desired in the CloudiFacturing Open Call.

⁴ Experiments do not require that all partners are new to EC projects, but we would like to encourage new experiment consortia to bring in companies that have not yet been involved in EC projects.

⁵ End users must be new to CloudiFacturing technology (i.e. not have participated in previous project experiments).

Please indicate in the table below which Digital Innovation Hub (DIH) you plan to work with if the proposal is accepted. You can only select and name one DIH.

Name of DIH	Indicate consulting and collaborating DIH
DFKI (Germany)	
Innomine (Hungary)	
Insomnia (Spain)	
IT4I (Czech Republic)	
STAM (Italy)	
Other ⁶	

How did you learn about the ClouDiFacturing Open Call?

⁶ Please note that if you selected “other” then you have to provide full details of your selected DIH with detailed justification in “Section 7 – Consortium” of this proposal.

COORDINATOR / EXPERIMENT LEADER

Name:

Affiliation:

Phone:

Email:

ABSTRACT (5 lines)

KEYWORDS (max. 5 keywords)

Keyword 1, ..., keyword 5

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Call information

Identifier:	CloudiFacturing-2
Call title:	New application experiments for CloudiFacturing – 2 nd Open Call
Project full name:	Cloudification of Production Engineering for Predictive Digital Manufacturing
Project acronym:	CloudiFacturing
Grant agreement number:	768892
Call deadline:	30 th September 2019, 17:00 (Brussels local time)

1 INDUSTRIAL RELEVANCE

Length: Maximum 2 pages (KPI table below excluded)

Which production / manufacturing processes and / or manufacturing tools are to be simulated or optimised?

What is the duration and cost of the current production / manufacturing process?

Which software is to be used/cloudified on a Cloud/HPC resource?

Does the simulation / optimization / analytics model already exist or are you planning to develop it during the project (please note that the emphasis should be on the utilisation of cloud / HPC resources and not on initial model development)?

How much compute time / data processing time is currently required? To which extent does this render the current process to be unprofitable?

*Which benefits are intended to be achieved **for the end user(s)**?*

Please quantify in terms of:

- *Process / tool / solution innovation*
- *Cost savings*
- *Time reduction [engineering hours / engineering duration / production time / production duration / compute time / compute duration]*
- *Process / product quality improvements*
- *Job creation*
- *Other*

In which market is the resulting product positioned? What is the market size and your market share? What is the expected growth of your market share, considering that the above advantages will be achieved in a period of 1 to 5 years? Please characterise potential adjacent market segments that you want to address with the results of this experiment in a similar way.

*Which benefits are intended to be achieved **for the independent software vendor(s) / value-added reseller**?*

Please quantify in terms of:

- *Software product innovation / improvement*
- *New distribution possibilities*
- *Scalability / flexibility*
- *Interoperable workflows*
- *Job creation*
- *New business models*
- *Other*

In which market is the above software positioned? What is the market size and your market share? What is the expected growth of your market share given that the above benefits are achieved in a 1 to 5 years perspective? Please characterise potential adjacent market segments that you want to address with the results of this experiment in a similar way.

What do you think is the [technical / economic] impact of your experiment on the CloudiFacturing Solution? Please discuss from the end user and independent software vendor / value-added reseller perspective.

- Please complete the following table for each partner in the consortium individually:

	KPI Metrics									
partner name	year after experiment	enhanced/ new products/ services	increase in turnover [K€]	increase in employment	new contacts/ partners	more efficient business processes	reduction in time to product / market	improvement in customer satisfaction	increase in business practice	partners in new countries
Partner1	1									
	5									
Partner2	1									
	5									
Partner...	1									
	5									

2 DISSEMINATION AND EXPLOITATION STRATEGY

Length: Maximum 1 page

How are you going to address the previously mentioned markets?

Which dissemination activities are planned during and after the lifespan of the experiment?

How are the results going to be exploited during and beyond the lifespan of the experiment? Provide a clear roadmap and exploitation plan. (Please note that commercial exploitation of results is mandatory for each experiment.)

How will you utilise the ClouDiFacturing Digital Marketplace for the exploitation of the results? Do you aim for

- a) a direct commercialization with your customers (i.e. independent frontend with owned marketing, support, and billing) or*
- b) an indirect commercialization via the operators of the ClouDiFacturing solution (i.e. common frontend with marketing, support, and billing conducted by the operators of the ClouDiFacturing solution).*

Note that using the ClouDiFacturing Digital Marketplace as part of the commercialization and exploitation is mandatory.

How would you like to scale up after the end of the experiment to include other users, markets, countries, etc.?

How are you going to continue the partnership of this experiment after the end of the project?

Please discuss the above-mentioned points from the end user(s), independent software vendor(s)/value-added reseller(s), and any other relevant stakeholder(s) perspective.

Please note that the exploitable results (i.e. software) are to be made available (on a commercial basis) on the ClouDiFacturing Digital Marketplace after the end of your experiment under the conditions to be defined in the Business Model of this experiment.

3 EXPERIMENT DESIGN

Length: Maximum 1 page

What are the driving questions for the experiment? What do you want to learn/know/prove?

How will the experiment provide evidence and answers to the driving questions?

What are the key aspects (ingredients) to your experiment?

What are the steps (recipe) of your experiment?

What are your performance indicators?

How will you measure them?

*Please answer and discuss the above questions for economic AND technical aspects, possibly from the end user and independent software vendor / value-added reseller perspective. You should provide a description of **what** the experiment shall demonstrate / develop, and in the next section you need to describe **how** the experiment shall be developed from a technical point of view.*

4 TECHNICAL APPROACH

Length: Maximum 2 pages

Explain **how** you want to implement and run the experiment.

- *What are the building blocks of your solution, e.g. the components of your software, the steps of the process?*
- *Which changes do you plan to perform on the building blocks, e.g. modularisation and cloudification of your software?*
- *How are the building blocks related, how is their interplay, and how will they be integrated?*
- *How are you going to integrate your developments with the CloudiFacturing Solution and make them sustainable beyond the CloudiFacturing project duration?*
- *How does the experiment expand existing workflows, services, applications? Which existing ones is it building-on?*
- *How is it complementary to existing ones within CloudiFacturing?*
- *Please specifically refer to challenges (if any) related to:*
 - *use of on-line data / real-time data stemming from manufacturing processes / sensors;*
 - *working with data streams;*
 - *combination and utilisation of various processes and software tools in a workflow;*
 - *establishing collaboration / data sharing / integration / data feedback along the production chain, across sites in the company or across companies;*
 - *working on challenging data sets (dimensionality, size, variance of data, ...);*
 - *use of data analytics as part of your experiment;*
 - *advanced security requirements of your experiment.*
- *Please estimate the computing resources (cloud and / or HPC resources) that you will need to conduct your experiment. How many core computing hours and how much storage will you require?*

Please describe the technical approach, introduce the corresponding activities and involvement of partners, so you can relate to them in the tables in section 5. Note the tables in section 5 do not provide enough space for activity descriptions. We expect the activities to be described here.

Introduce titles for your experiment activities so you can use them as table entries in the next section.

5 WORK PLAN

Length: Maximum 1 page

Please fill the tables for the activities described in Section 4 introducing milestones and deliverables.

5.1 ACTIVITIES

Activity No	Activity name	Lead participant no.	Person-months	Start month	End month
<Activity #>	<name>	<Participant #>	<#>	<#>	<#>
	TOTAL				

NB: There are four mandatory activities:

- (1) to collect technical and usability requirements (typically run in the first 3 months of the course of the experiment),*
- (2) to design and analyse suitable business model(s) for the commercial exploitation of the results (typically accompanies the full duration of the experiment),*
- (3) to evaluate the outcomes of the experiment (typically run in the last 3 months of the course of the experiment), and*
- (4) to monitor progress and results by writing quarterly progress reports, and attend and contribute to the relevant project review meeting as organised by the European Commission (typically accompanies the full duration of the experiment, whereas the review may take place after the experiment).*

These four tasks will be carried out in collaboration with the relevant CloudiFacturing Competence Centres and DIHs (for more information of CloudiFacturing Competence Centres please refer to our detailed Guide for Applicants)

5.2 MILESTONES

Milestone No.	Milestone name	Activity(-ies) involved	Due month	Means of verification
<Milestone #>	<name>	<Activity #>	<#>	<text>

5.3 EXPERIMENT INTERNAL DELIVERABLES

Internal Del. No.	Deliverable name	Activity(-ies) involved	Nature ⁷	Dissemination level ⁸	Due month
<I #>	<name>	<Activity #>	R/P/D/ other	PU/PP/RE/CO	<#>

NB:

In addition to the experiment internal deliverables listed above, there are further obligations related to CloudiFacturing, including activity reporting (verbally: every second week / written progress reporting: every three months), a final experiment report and project review contributions.

Internal deliverables are supposed to be used for internal synchronization and their content can be used for the above-mentioned progress reports and the project deliverables.

⁷ Please indicate the nature of the deliverable using one of the following codes:

R = Report, **P** = Prototype, **D** = Demonstrator, **O** = Other

⁸ Please indicate the dissemination level using one of the following codes:

PU = Public

PP = Restricted to other programme participants (including the Commission Services).

RE = Restricted to a group specified by the consortium (including the Commission Services).

CO = Confidential, only for members of the consortium (including the Commission Services).

6 RESOURCES COMMITTED

Length: Maximum 1 page

Participant number	Participant short name	Estimated eligible costs					Reimbursement rate ⁹	Requested EC contribution (€) ¹⁰
		Effort (PM) ¹¹	Personnel costs (€) ¹²	Other direct costs (€) ¹³	Indirect costs (€) ¹⁴	Total costs (€) ¹⁵		
1 (Lead)	<name>	<#>	<#>	<#>	<#>	<#>	<#>	<#>
2								
3								
Total								

Please fill the table. Explain clearly and justify your (types of) costs (other direct, etc.), e.g.:

- travel costs
- software licenses
- etc.

In terms of travel costs, you should take into consideration the following mandatory trips:

- kick-off meeting for the new experiments
- review meeting
- intermediate meeting/code-camp
- final CloudiFacturing 'conference'

Note that additional costs for the CloudiFacturing Competence Centres do not have to be considered here.

⁹ Reimbursement rate is 100% for non-profit legal entities and 70% for everyone else (including SMEs and all other companies).

¹⁰ Requested EC Contribution is maximum: Total costs * Reimbursement rate.

¹¹ Please indicate the estimated effort in Person Months (PM)

¹² This is the overall personnel cost that is calculated by multiplying the effort (in PM) with the average cost of one PM in your organisation. Please note that personnel costs must not contain profit margins.

¹³ Other direct costs include travel, subsidence, software licences, etc. Please note that other direct costs must not contain profit margins.

¹⁴ Indirect costs are calculated as 25% of all direct costs (0.25*(Personnel costs + Other direct costs)).

¹⁵ Total costs are the sum of Personnel costs, Other direct costs, and Indirect costs.

7 CONSORTIUM

Length: Maximum 2 pages – maximum ½ page per partner

Please describe the consortium as a whole.

Please describe what each partner brings to the experiment and to the CloudiFacturing project.

Please describe how the consortium comply with the cross-border condition.

Please provide a company profile with key personnel (per partner) using the table below.

If you selected “other” as your consulting and supporting DIH then you also have to provide full details of this DIH with justification of their selection, considering the guidelines in the GfA on when the participation of a new DIHs can be justified.

Partner name	<p><description of company / organisation> <size of company, number of employees, revenue (estimated)> <country of headquarters> <international subsidiaries> <area/sector of operation – in case of manufacturing company please specifically state the manufacturing sector></p>
Link to webpage	<web link>
1-2 key person(s)	<p>Max. 5 lines <profile>, <gender>, <who is doing to day-to-day management of the experiment></p>
Prior participation in EC projects	<p>Max. 5 lines if you are new to EC programmes, please explicitly state so. If you have been involved in EC projects, please name them (with ref. to web address).</p>
Administrative contact	Name, Phone and e-mail address
Technical contact	Name, Phone and e-mail address
Involvement in another experiment proposal to CloudiFacturing	Please indicate here if you are involved in another proposal to the call Cloudifactoring-1.

Please fill these tables **completely**, it will allow easier administration of all contacts during future steps.

ANNEX 1: ETHICS

Please answer with simple “yes” or “no” the following questions (delete as appropriate). Please note that in case you answer “yes” to any of the questions below, further justification will also be required after the questions.

1. HUMAN EMBRYOS/FOETUSES

- Does your research involve Human Embryonic Stem Cells (hESCs)? Yes No
- Does your research involve the use of human embryos? Yes No
- Does your research involve the use of human foetal tissues / cells? Yes No

2. HUMANS

- Does your research involve human participants? Yes No
- Are they volunteers for social or human sciences research? Yes No
- Are they persons unable to give informed consent? Yes No
- Are they vulnerable individuals or groups? Yes No
- Are they children/minors? Yes No
- Are they patients? Yes No
- Are they healthy volunteers for medical studies? Yes No
- Does your research involve physical interventions on the study participants? Yes No

3. HUMAN CELLS / TISSUES

- Does your research involve human cells or tissues (other than from Human Embryos/Foetuses, i.e. section 1)? Yes No

4. PERSONAL DATA

- Does your research involve personal data collection and/or processing? Yes No
- Does it involve the collection and/or processing of sensitive personal data (e.g.: health, sexual lifestyle, ethnicity, political opinion, religious or philosophical conviction)? Yes No
- Does it involve processing of genetic information? Yes No
- Does it involve tracking or observation of participants? Yes No
- Does your research involve further processing of previously collected personal data (secondary use)? Yes No

5. ANIMALS

- Does your research involve animals? Yes No

6. THIRD COUNTRIES

- In case non-EU countries are involved, do the research related activities undertaken in these countries raise potential ethics issues? Yes No
- Do you plan to use local resources (e.g. animal and/or human tissue samples, genetic material, live animals, human remains, materials of historical value, endangered fauna or flora samples, etc.)? Yes No
- Do you plan to import any material - including personal data - from non-EU countries into the EU? Yes No
- Do you plan to export any material - including personal data - from the EU to non-EU countries? Yes No
- In case your research involves low and/or lower middle income countries, are any benefits sharing actions planned? Yes No
- Could the situation in the country put the individuals taking part in the research at risk? Yes No

7. ENVIRONMENT & HEALTH and SAFETY

- Does your research involve the use of elements that may cause harm to the environment, to animals or plants? Yes No
- Does your research deal with endangered fauna and/or flora and/or protected areas? Yes No
- Does your research involve the use of elements that may cause harm to humans, including research staff? Yes No

8. DUAL USE

- Does your research involve dual-use items in the sense of Regulation 428/2009, or other items for which an authorisation is required? Yes No

9. EXCLUSIVE FOCUS ON CIVIL APPLICATIONS

- Could your research raise concerns regarding the exclusive focus on civil applications? Yes No

10. MISUSE

- Does your research have the potential for misuse of research results? Yes No

11. OTHER ETHICS ISSUES

- Are there any other ethics issues that should be taken into consideration? Please specify Yes No

In case you answered “yes” to any of the questions above then please provide detailed explanation and justification:

- *submit an ethics self-assessment, which:*
 - *describes how the proposal meets the national legal and ethical requirements of the country or countries where the tasks raising ethical issues are to be carried out;*
 - *explains in detail how you intend to address the issues in the ethical issues table, in particular as regards:*
 - *research objectives (e.g. study of vulnerable populations, dual use, etc.)*
 - *research methodology (e.g. clinical trials, involvement of children and related consent procedures, protection of any data collected, etc.)*
 - *the potential impact of the research (e.g. dual use issues, environmental damage, stigmatisation of particular social groups, political or financial retaliation, benefit-sharing, misuse, etc.).*
- *provide the documents that you need under national law (if you already have them), e.g.:*
 - *an ethics committee opinion;*
 - *the document notifying activities raising ethical issues or authorising such activities*

ANNEX 2: INDIVIDUAL ASSESSMENT REPORT FORM

1. Industrial relevance (Weight 4, Threshold 3)

Score(0,1,2,3,4 or 5)

Justification of score: <Text>	
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2. Dissemination and Exploitation strategy (Weight 1)

Score(0,1,2,3,4 or 5)

Justification of score: <Text>	
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3. Experiment design (Weight 1)

Score(0,1,2,3,4 or 5)

Justification of score: <Text>	
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4. Soundness of technical approach (Weight 1)

Score(0,1,2,3,4 or 5)

Justification of score: <Text>	
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5. Quality of work plan (Weight 1)

Score(0,1,2,3,4 or 5)

Justification of score: <Text>	
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6. Effective and justified deployment of resources (Weight 1)

Score(0,1,2,3,4 or 5)

Justification of score: <Text>	
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7. Appropriateness of the consortium for the experiment (Weight 1)

Score(0,1,2,3,4 or 5)

Justification of score: <Text>	
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The scores of 0 to 5 have the following semantics:

0	<i>The proposal fails to address the criterion or cannot be assessed due to missing or incomplete information.</i>
1	<i>Poor. The criterion is inadequately addressed, or there are serious inherent weaknesses.</i>
2	<i>Fair. The proposal broadly addresses the criterion, but there are significant weaknesses.</i>
3	<i>Good. The proposal addresses the criterion well, but a number of shortcomings are present.</i>
4	<i>Very Good. The proposal addresses the criterion very well, but a small number of shortcomings are present.</i>
5	<i>Excellent. The proposal successfully addresses all relevant aspects of the criterion. Any shortcomings are minor. 0</i>

- *Every category can get a score between 0 and 5.*
- *Threshold for the total score is 30 out of 50.*
- *At most 2 categories can be strictly below 3 point, not including 1 (Industrial relevance) that has a threshold of 3.*
- *In case of a tie of two or more proposals reaching the same numerical score and lying at the cut-off for acceptance imposed by the available funding resources, the ClouDiFacturing project will take the decision which one(s) to accept. For more details on the selection criteria, please see: Guide for Applicants and FAQ. This decision then has to be justified towards the European Commission as represented by the EC Project Officer of the ClouDiFacturing project.*