FED4SAE 3rd Call
GUIDE FOR APPLICANTS

Participating in the competitive third call for Application Experiments in an ICT innovation action (IA) (FED4SAE, Grant agreement number: 761708)

Closing date for the 3rd Open Call: 05.03.2019, 5pm (Brussels Time)
Important: This will be FED4SAE's <u>final call</u>

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General Information

The **Guide for Applicants** contains the basic information needed to guide you in preparing a proposal for submission to the FED4SAE Open Calls. It gives an introduction on how to structure your proposal. It also describes how the proposal should be submitted, and the criteria on which it will be evaluated.

Please note:

Every selected applicant will be required to sign a standard agreement, a model example of which can be found at the https://fed4sae.eu/innovative-projects/open-calls/ website.

This Guide for Applicants does not supersede the rules and conditions laid out, in particular, in Council and Parliament decisions relevant to the H2020 framework programme.

1.1   FED4SAE Consortium

The FED4SAE consortium consists of the following project members:

- CEA Leti (France)
- Intel Research and Development Ireland (Ireland)
- STMicroelectronics SRL (Italy)
- STMicroelectronics Grenoble (France)
- Thales SA (France)
- AVL List GmbH (Austria)
- Digital Catapult (UK)

- Fraunhofer-Gesellschaft (Germany)
- fortiss (Germany)
- CSEM (Switzerland)
- KTH Royal Institute of Technology (Sweden)
- Budapest University of Technology and Economics (BME) (Hungary)
- University of Cantabria (UNICAN) (Spain)
- Blumorpho SAS (France)

2   Scope of the Open Call

Accelerating European CPS Solutions to Market

Federated CPS Digital Innovation Hubs for the Smart Anything Everywhere Initiative

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Third open call for Application Experiments – Up to €58K funding, technical and business coaching available to support European companies to develop smart applications.

Through the Smart Anything Everywhere initiative, the European Commission is helping digitize European industry. FED4SAE is part of this strategy, targeting a large network of 'small' companies (startups, small/medium enterprises and midcaps), including both technology specialists and low-tech companies.

We are looking for companies that want to:
- Develop novel and innovative smart solutions to take a leading position in their target markets.
- Use the most advanced technologies and industrialized solutions to link the physical world with the virtual world in combining hardware and software expertise.
- Gain premium access to resources, competencies and reduce development time.
- Enter into a unique European ecosystem gathering leading industrial companies, world-class research organizations, innovation accelerators and private investors.

To do this, FED4SAE offers companies:
- Product support via industrial platforms - existing products provided by market leaders (AVL, Intel, ST and Thales) - in the domain of cyber-physical and embedded systems that can bring the innovation to a state of maturity.
- Technical expertise via advanced platforms by RTOs (BME, CSEM, Digital Catapult, Fraunhofer IISB, fortiss, KTH, Unican) - either innovative technical solutions or testbeds - which will add value to the product.
- Innovation management - focusing on business - to help your innovation get to the market via the FED4SAE and the Smart Anything Everywhere ecosystem.
- Up to €58,000 in funding - representing 70% of the declared budget in your proposal.

FED4SAE welcomes proposals addressing one of our focus areas (described below) or any other smart application domain (mobility, city, health & well-being, industry, agriculture, food, etc.). They shall be pan-European, allowing awarded companies to collaborate cross-border with the providers of our industrial and advanced platforms. FED4SAE is already supporting 16 projects with SMEs coming from all over Europe and is looking forward to granting 15 additional experiments.

If you have a promising idea for an innovative solution, we will help you get it to market **– do not miss this opportunity and apply to our open call to develop your innovative solution**! Register in our portal and contact one of our networking partners now who will be pleased to help you in submitting your proposal and finding the right industrial platforms, advanced technologies or testbeds that best suit your needs!

Important guidance on our process, rules and the offered technologies and platforms can be found on our website www.fed4sae.eu and in our Guide for Applicants.

Call deadline: March 5th 2019, 5pm (Brussels Time)

Call acceptance: April 25th 2019

Call identifier: FED4SAE03 call

Proposal language: English

Web page (full call text/proposal guidelines/standard agreement): www.fed4sae.eu

For further information please contact: info@fed4sae.eu

Through our open calls, FED4SAE provides a unique marketplace organized as a one-stop-shop with access to leading edge industrial platforms along with access to several advanced technologies and testbeds as well as support through expertise, know-how, coaching, design support and tech transfer from our partners.

FED4SAE welcomes proposals addressing any smart application domain (mobility, city, health & well-being, industry, agriculture, food, etc.) involving both advanced and industrial platforms. Additionally, in the 3rd open call FED4SAE is introducing **three dedicated focus areas** to encourage the development of CPS and embedded systems solution in fields presenting growth opportunities in Europe and to support highly innovative experimentation:

- *Artificial Intelligence and Software-Oriented projects*
- *Smart Cities and Smart Infrastructure projects*
- *Smart Sensor projects*

In order to cover the envisaged range of topics in the supported Application Experiments, an accompanying indicative percentage of selected experiments per focus area is given below. The FED4SAE consortium keeps the right to modify the final distribution, so that priority will be given to the best proposals in the areas of CPS and embedded systems in the targeted focus areas and domains.

FED4SAE offers several different leading edge industrial platforms:

- *TIME4SYS* from Thales
- *Integrated and Open Development Platform* from AVL
- *WeSu platform* and *ODE-STM32 Nucleo Expansion Boards* from STMicroelectronics Italy
- *Neural Compute Stick* from Intel – Computer Vision at the edge.
- *Compute Card from Intel* – a credit card sized computer.
- *STM32F platform* from STMicroelectronics France

Application Experiments can run from 9 to **12 months**, but in any case have to be completed by 31.08.2020. The expected outcome of our Application Experiments is a demonstrator prototype with high technology readiness level (TRL). The prototype may also be used as a first generation product.

Interested European startups, SMEs and mid-Caps are encouraged to review details of our platforms, technologies and testbeds on www.FED4SAE.eu and contact our project members to find out more:

- CEA Leti (France)
- Intel Research and Development Ireland (Ireland)
- STMicroelectronics SRL (Italy)
- STMicroelectronics Grenoble (France)
- Thales SA (France)
- AVL List GmbH (Austria)
- Digital Catapult (UK)
- Fraunhofer-Gesellschaft (Germany)
- fortiss (Germany)
- CSEM (Switzerland)
- KTH Royal Institute of Technology (Sweden)
- Budapest University of Technology and Economics (BME) (Hungary)
- University of Cantabria (UNICAN) (Spain)
- Blumorpho SAS (France)

Focus Area:	Artificial Intelligence and Software-Oriented projects
Indicative percentage of selected Experiments:	40 – 50 %

FED4SAE's Artificial Intelligence and Software oriented projects are can rely on the industrial platforms
- *Integrated and Open Development Platform* (IODP) by AVL
- *TIME4SYS* by Thales

in conjunction with extensive coaching for these platforms.

Alternatively, they can use any of our industrial platforms (including TIME4SYS and IODP) in combination with the advanced technologies
- *Neural Network Dependability Kit* or *Eclipse 4Diac* by fortiss
- *AIDE* by KTH

Focus Area:	Smart Cities and Smart Infrastructure projects
Indicative percentage of selected Experiments:	30 – 40 %

FED4SAE's Smart Cities and Infrastructure projects are relying on a combination of one of our industrial platforms with the testbeds
- *Low Power Wide Area Network based CPS solutions Testbed* (*Lorawan LPWAN*) by DigiCat
- *CPS Massive urban infrastructure in technology and service assessment testbed* (*Smart City*) by Unican
- *Research Concept Vehicle* - An Open Platform for Sustainable Transportation R&D (RCV) by KTH
- *Smart Home, Health and Transportation* Testbed (PTL) by CEA

Focus Area:	Smart Sensor projects
Indicative percentage of selected Experiments:	20 – 30 %

FED4SAE's Smart Sensor projects are relying on a combination of one of our industrial platforms with the advanced technologies or testbeds
- *Gas Sensor Testbed*, *Corrosive Gases Testbed*, *Energy Electronics Testbed*, *π-Fab infrastructure* from Fraunhofer IISB
- *Reliability Testbed* by BME
- *Sensinact Middleware*, *Sigma Fusion* or *LINC* Middleware by CEA.
- *Localization Solver, Vision in a Package, Wise-NET, WiseDEP and WiseMAC, Advanced nano-technology for chemical sensing, Advanced manufacturing/ packaging* by CSEM

3 Rules and Conditions

To avoid conflicts of interest, applications will not be accepted from persons or organizations who are partners in the FED4SAE consortium or who are formally linked to partners of the consortium.

3.1 Eligible Countries

Legal entities established in the following countries are eligible to receive funding through this Open Call:

- Member States (MS) of the European Union (EU), including their overseas departments
- The EU Associated Countries

The EU Associated Countries participate in Horizon 2020 under the same conditions as EU Member States. A list with all eligible Associated Countries can be found here:

http://ec.europa.eu/research/participants/data/ref/h2020/grants_manual/hi/3cpart/h2020-hi-list-ac_en.pdf

Legal entities established in any other country or region cannot receive funding in this open call.

3.2 Targeted Companies

FED4SAE is targeting the following types of companies from the eligible countries mentioned above:

- Startups
- Small and Medium Sized Enterprises[1]
- Midcaps[2]

It is possible to group together with other companies to create a temporary consortium (consisting of independent partners) for the duration of the proposed experiment and submit a joint experiment proposal.

A consortium should nominate one partner as the coordinator; this partner takes responsibility for managing the contributions of the separate partners and liaising with the FED4SAE project during the experiment duration.

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[1] http://ec.europa.eu/growth/smes/business-friendly-environment/sme-definition_en
[2] Following the H2020 Work Programme 2016-2017, "Access to Risk Finance" definition, midcaps are companies with 250 to 3000 employees

Please note that this does not change the budget limitations for the Application Experiment as described in the next section. In case a proposal is submitted by a consortium, the funding will have to be shared between the applying companies appropriately.

3.3   Funding of proposals

Important:

The maximum total funding that may be allocated to any individual legal entity via open calls from any H2020 I4MS (ICT Innovation for Manufacturing SMEs) or SAE (smart Anything Everywhere) cannot exceed 100.000 €.

FED4SAE will receive assistance from the European Commission to cross check if an organization that has been shortlisted for getting funding under the third open call of FED4SAE has already received funding via an open call from any H2020 I4MS and SAE project and to ensure that no funding is allocated to an Application Experiment in case an entity exceeds the above threshold (including any FED4SAE potential funding).

The maximum funding per Application Experiment – under the condition that the above-mentioned limits to FSTP do not apply - is 58k€ for one Application Experiment, at a funding rate of 70% of the budget.

If the above-mentioned limits do apply to the applying company, the maximum funding is dependent on the sum of the already received funding via open calls from any H2020 I4MS and SAE project of the involved third party.

Any company that has already received a total of 100.000 € or more funding via open calls from any H2020 I4MS (ICT Innovation for Manufacturing SMEs) or SAE (smart Anything Everywhere) cannot receive funding through the 3rd open call of FED4SAE.

Multiple Application Experiments per applicant are possible, with a total maximum funding of 100k€ per third party - respecting the above-mentioned limits to FSTP in I4MS and SAE.

Each application experiment will include justifications of cost and resources. The total European Commission available funding per Application Experiment will represent 70% of the total cost involved by selected company(-ies).

The amount of financial support will be calculated on the basis of the estimated costs. Each AE will include an implementation plan including milestones and deliverables, and a cost estimate justifying the costs and resources in relation to the implementation plan. The industrial third party will be funded 70% of their respective cost. The selected company can receive pre-

financing of up to 25% of their respective total funding amount. The remaining payments will be made upon successful completion of milestones and/or deliverables.

The budget must follow H2020 rules, among them:
- It must respect the limit of 15% for specific subcontracting tasks that neither the FED4SAE partners nor the Third Party can carry out
- The Third Party shall not make profit from the EC funding
- The funding rate is 70% of the budget.

It is strongly recommended that travel costs for dissemination in the "*other direct costs"* budget are included in the budget.

Please consider that all budgeted costs must comply with the applicable national law on taxes, labor and social security and must be in compliance with the rules and conditions laid out in Council and Parliament decisions relevant to the H2020 framework programme, in particular - but not exclusively - "REGULATION (EU) No 1290/2013 OF THE EUROPEAN PARLIAMENT AND OF THE COUNCIL of 11 December 2013"

Provisions for possible future losses or charges, exchange losses, costs related to return on capital, costs reimbursed in respect of another Union action or programme, debt and debt service charges and excessive or reckless expenditure are **ineligible costs** and **cannot be included** into the budget.

The expected duration of an Application Experiment is 9 to a **maximum of 12 months.**

Regardless of the planned duration of the Application Experiment has to be finished by the end of the FED4SAE project (31.08.2020) - including any possible delays.

3.4   Partners in Application Experiments

Our partners support third parties in different ways and roles. In general, a successful Application Experiment is built on a collaboration of three parties:

- Third Party (= the applying company(-ies))
- Networking Partner
- Competence Partner

The FED4SAE Networking Partners support and serve as a single point of contact for the third parties during the creation of the proposal until the closure of the call. The following consortium members are Networking Partners: CEA, AVL, THALES, Digital Catapult, Fraunhofer IISB, FORTISS, CSEM, KTH, BME, UNICAN and BLUMORPHO

The FED4SAE Competence Partners will support and will serve as a single point of contact for the third parties during the execution of the selected Application Experiments. In most cases, the competence partner will be the member of the FED4SAE consortium that does

provide access to the advanced technologies or testbeds (or extensive coaching). The following consortium members can act as Competence Partners: CEA, AVL, THALES, Digital Catapult, Fraunhofer IISB, FORTISS, CSEM, KTH, BME and UNICAN.

Application Experiments shall be pan-European, allowing awarded companies to collaborate cross-border with the providers of our industrial and advanced platforms.

3.5 Available Platforms, Advanced Technologies and Testbeds

FED4SAE offers access to the following technologies and platforms:

Industrial Platforms:
- TIME4SYS from Thales
- Integrated and Open Development Platform from AVL
- Neural Compute Stick from Intel –Computer Vision at the edge.
- Compute Card from Intel – a credit card sized computer.
- STM32F platform from STMicroelectronics France
- WeSu platform and ODE-STM32 Nucleo Expansion Boards from STMicroelectronics Italy

Advanced Technologies:
- LINC, Sensinact and SigmaFusion from CEA
- WiseNET ,GPS free localization solver, Vision in a Package, WiseDep Chemical Sensing, Adv Manufacturing & package from CSEM
- π-Fab from Fraunhofer IISB
- AIDE from KTH
- Neural Network Dependability Kit or Eclipse 4diac from fortiss

Testbeds:
- Reliability testbed from BME
- Products and Technologies Living-lab testbed from CEA
- Lorawan LPWAN testbed from Digital Catapult
- Research Concept Vehicle testbed from KTH
- Santander Smart City testbed from UNICAN
- Corrosive Gases, Gas Sensor and Energy Electronic testbed from Fraunhofer IISB

For more information about them and their technical capabilities, please consult the website (www.FED4SAE.eu) or contact the relevant partner(s) – with the help of your networking partner.

3.6   Building blocks of an Application Experiment

In addition to the administrative rules mentioned above, a proposal has to comply with the following preconditions to be fundable:

1. One of the industrial platforms has to be used
   a. A combination of the industrial platforms by different FED4SAE consortium members is - in principle - possible with the pre-condition that this has to be cleared with the partners before sub-mission of a proposal. This will depend on the available budget for these platforms.

2. Either one of the Advanced Technologies or Testbeds has to be used.
   a. The only exception possible: In case TIME4SYS or IODP are used, the Application Experiment can rely on extensive coaching for these platforms alone
   b. A combination of Advanced Technology and Testbed by different FED4SAE consortium members is - in principle - possible with the pre-condition that this has to be cleared with the partners before submission of a proposal. This will depend on the available budget for these technologies/testbeds

3.7   Focus Areas

FED4SAE welcomes proposals addressing any smart application domain (mobility, city, health & well-being, industry, sensors, etc.) involving both advanced and industrial platforms. Additionally, in the 3rd open call FED4SAE is introducing three dedicated focus areas to encourage the development of CPS and embedded systems solution in fields presenting growth opportunities in Europe and to support highly innovative experimentation:

- Artificial Intelligence and Software-Oriented projects
- Smart Cities and Smart Infrastructure projects
- Smart Sensor projects

FED4SAE's Artificial Intelligence and Software oriented projects are can rely on the industrial platforms
- *Integrated and Open Development Platform* (IODP) by AVL
- *TIME4SYS* by Thales

in conjunction with extensive coaching for these platforms.

Alternatively, they can use any of our industrial platforms (including TIME4SYS and IODP) in combination with the advanced technologies
- *Neural Network Dependability Kit* or *Eclipse 4Diac* by fortiss
- *AIDE* by KTH

FED4SAE's Smart Cities and Infrastructure projects are relying on a combination of one of our industrial platforms with the testbeds

- *Low Power Wide Area Network based CPS solutions Testbed* (*Lorawan LPWAN*) by DigiCat
- *CPS Massive urban infrastructure in technology and service assessment testbed* (*Smart City*) by Unican
- *Research Concept Vehicle* - An Open Platform for Sustainable Transportation R&D (*RCV*) by KTH
- *Smart Home, Health and Transportation* Testbed (PTL) by CEA

FED4SAE's Smart Sensor projects are relying on a combination of one of our industrial platforms with the advanced technologies or testbeds

- *Gas Sensor Testbed*, *Corrosive Gases Testbed*, *Energy Electronics Testbed*, *π-Fab infrastructure* from Fraunhofer IISB
- *Reliability Testbed* by BME

- *Sensinact Middleware*, *Sigma Fusion* or *LINC* Middleware by CEA.
- *Localization Solver, Vision in a Package, WiseNET, WiseDEP and WiseMAC, Advanced nanotechnology for chemical sensing, Advanced manufacturing/ packaging* by CSEM

4 Proposal Creation and Submission

4.1 Registration on the Submission Portal

Applicants are encouraged to register in the FED4SAE proposal submission portal as early as possible: https://fed4sae.eu/upload/

This way, the FED4SAE consortium is aware of the interest of a company in the open call and can support the applicants even if they have not yet contacted a networking partner.

4.2 One stage submission

Proposals for a FED4SAE Application Experiment are submitted in a single stage, by submitting a complete proposal through our submission portal.

4.3 Proposal language and length

The proposal has to follow the structure of the proposal template provided in Annex 1 of this document. The template can be downloaded from the open call website as a Microsoft-Word file: https://fed4sae.eu/innovative-projects/open-calls/

The proposal has to be written in English. Proposals submitted in any other language will not be evaluated.

The proposal should be approximately 10 to 12 pages (not including the title page, the administrative declarations and section 4 (Ethical Issues) of the proposal). Applicants are free to provide **limited** additional information such as letter of support or additional data or references in the Appendix that does not count to this page count.

4.4 Support during the creation of the proposal

Applicants are strongly encouraged to contact one of the FED4SAE networking partners in order to get more information on the required platforms, the advanced technologies, testbeds and competences and advice on how to create a successful proposal prior to submitting.

The Networking Partners are pleased to help applicants with registration, submitting proposals and finding the right industrial platforms, advanced technologies or testbeds that best suit their needs, establish and facilitate contact between third parties and the relevant FED4SAE consortium members – and to make sure that the proposal complies to all rules in the open call.

If contacted in time, they can give feedback on certain aspects of a proposal to enable possible improvements to a proposal before it is submitted.

Past experience indicates that proposals with engagement before submission are more likely to succeed.

4.5   Submission of proposals

Proposals in FED4SAE are submitted through our dedicated proposal submission portal: https://fed4sae.eu/upload/

Only proposals submitted through this portal before the closure of the call will be evaluated after its closure. Proposals must be received by the closing time and date of the call (a Tuesday at 5:00pm Brussels Time). Late proposals or proposals submitted to any other address or by any other means will not be evaluated.

If you discover an error in your proposal you can at any time - provided the call deadline has not passed - submit a new version of your proposal in our portal. Only the last version received before the call deadline will be considered in the evaluation.

All proposals will be evaluated as submitted; after the close of a call, no additions or changes to received proposals will be taken into account.

Do not wait until the last minute to submit the final version of you proposal. Failure of your proposal to arrive on time for any reason, including communication delays, is not acceptable as a delay circumstance. The time of receipt of your submission as recorded by the portal system will be definitive.

4.6   Acknowledgement of receipt

The submission of a proposal will be confirmed by the proposal submission system through an automated email.

The acknowledgement of receipt will be emailed to you by FED4SAE project (see Annex 2 of this document).

The sending of an acknowledgement of receipt does not imply that your proposal has been accepted as eligible for evaluation.

5 Proposal Evaluation and Selection

5.1 Admissibility and Eligibility checks

A proposal is eligible if it complies with the following requirements:

a) It is written in English
b) It was submitted by a legal entity established in one of the countries mentioned in section 3.1
c) It confirms that the "Standard Agreement" on the website has been read and is intended to be signed if the proposal will be selected
d) Its content corresponds to the call topic description (in scope/out of scope)

A proposal will only be deemed "out of scope" in clear-cut cases when there is no obvious link between the proposal and the call topic. If the proposal is partially within the scope of call, it will be evaluated in any case.

If any of the above criteria renders a proposal ineligible, the applicant will be informed about it and the proposal will not be furthered into the evaluation process. In any other case, the proposal will be evaluated as described in section 5 of this document.

5.2 Proposal evaluation overview

The FED4SAE project will evaluate proposals received in the open calls in the light of the criteria that govern the Europeans Commission's original evaluation and selection of their projects. All evaluations are carried out in the light of the same basic principles:

- **Excellence**: The proposals selected for funding must demonstrate a high quality in the context of the topics and criteria set out in the call
- **Transparency**: Funding decisions are based on clearly described rules and procedures, and all applicants will receive adequate feedback on the outcome of the evaluation of their proposals
- **Independence**: Evaluators assess proposals on a personal basis. Evaluators represent neither their employer, nor their country.
- **Impartiality**: All proposals submitted to a call are treated equally. They are evaluated impartially on their merits, irrespective of their origin or the identity of the applicants[3].
- **Objectivity**: Evaluators assess each proposal as submitted[4] not on its potential if certain changes were to be made.
- **Accuracy**: Evaluators make their judgment against the official evaluation criteria of the call or topic the proposal addresses, and nothing else.
- **Consistency**: Evaluators apply the same standard of judgment to all proposals.

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[3] In the frame of any restrictions provided for in the call
[4] This includes the input made during phone interview for the business case evaluation as described below

- **Confidentiality**: All proposals and related data, knowledge and documents are treated in confidence

The evaluation of Application Experiment proposals is based on scores given according to four criteria:
- Excellence
- Impact
- Quality
- Business Case

The evaluation criteria and the scoring system are described in detail in the next section of this document. The evaluation process in FED4SAE follows the three basic steps:

- Three external experts will evaluate the proposals in regards to the criteria of *Excellence*, *Impact* and *Quality*.
- An Internal Evaluation Committee (IEC) (or a sub-group of it) formed by members of the FED4SAE consortium will evaluate the proposals in regards to the criteria of *Excellence*, *Impact* and *Quality*.
- The consortium member BLUMORPHO will evaluate the proposals in regards to their *business case* through a phone interview.

The external experts are individuals from different sectors: science, industry or academic and with experience in the field of innovation. These experts are internationally recognised authorities in the relevant specialist area and are independent of any member of the consortium and of any proposer. They will also sign a non-disclosure form with FED4SAE to ensure the confidentiality of the proposals.

The evaluation by the Internal Evaluation Committee will be performed by at least one person of the committee, who is not directly involved in the proposed Application Experiment.

Each of the three steps described above will assign a score to each proposal in the following way:

- Each external expert will assign a score between 0 and 5 to each of the criteria mentioned above. The assigned scores of the experts will be averaged for each criteria to get one single score for each criteria
- Each member of the IEC (or a sub-group of it) that is evaluation a proposal will assign a score between 0 and 5 to each of the criteria mentioned above. In case more than one person in the IEC evaluates the same proposal, the scores will be discussed and a consensus reached that will assign one single score for each criteria
- The business case evaluation will assign a score from 0 to 5 to the criteria mentioned above

During a consensus meeting, each proposal will be discussed and a consensus formed on the scoring. To achieve a single score for each of the criteria of *Excellence*, *Impact* and *Quality, the scores by IEC and the score of the external experts (which has been combined into a single score for each criterion as described above) will be averaged.*

A total score of a proposal is reached by calculation the sum of all individual scores of the evaluated criteria of a proposal. Each criteria is weighed the same, therefore, the overall maximum score for an experiment proposal is 20.

For a proposal to be considered for funding, each individual score must meet a minimum threshold, which is 3 out of 5 points. The total sum of the individual scores must reach the minimum threshold of 13 points.

5.3   Evaluation criteria and scores

The evaluation of Application Experiment proposals will be based on scores given according to four basic criteria: *Excellence*, *Impact*, *Quality* and the *business case* of the AE.

The **Excellence** is evaluated according to the following criteria:
- How well does the proposed solution address the challenge as detailed in the open call text?
- Are the proposed objectives clear and **pertinent?**
- How well does the proposed solution integrate the required functionalities?
- How intuitive is the technology for the end users? How easy can the technology be integrated in the environment? How robust is the technology?
- Does it solve specific technological challenges (mobility, communication, etc.)?
- How well does the proposed work integrate the industrial platform with the advanced technology (if applicable)?
- Is the proposed work validated on one of the FED4SAE testbeds (if applicable)?
- To what extent is the proposed work **ambitious**, has **innovation potential**, and is **beyond the state of the art** (e.g. ground-breaking objectives, novel concepts and approaches)?
- **Is the** concept sound and shows a clear plan for development of a working solution

The **Impact** is evaluated according to the following criteria:
- **Does the proposal enhance innovation capacity and the integration** of new knowledge?
- **Are the proposed measures** to exploit and disseminate the project results (including management of IPR), to communicate the project, and to manage research data where relevant effective?
- Are any other **environmental and socially important impacts** not already covered relevant?

The **Quality** and the efficiency of the implementation will be evaluated according to the following criteria:

- How effectively will be the Application Experiment be managed? Is the proposed work plan coherent and effective?
- Are task dependencies identified and planned appropriately (if applicable)?
- Are deliverables, milestones and deadlines defined and adapted to the goals of the proposals?
- Is the allocation of tasks and dedicated resources (e.g. human capital, equipment, man hours, etc.) appropriate and necessary to necessary to perform the scope of the proposal and achieve its objectives?
- Are the costs clearly defined and aligned with the required efforts?
- Have crucial risk (technological and other) to the success of the Application Experiment been identified and how effectively will those be managed.
- Does the third party possess the technical skills and abilities necessary to perform the scope of the proposal?

The **Business case** evaluation of the proposal will be performed during a 30 to 60 minute interview to evaluate the following parameters:

- **Market attractiveness** taking into account the market size, expected growth and your expected market positioning
- **Differentiation (UVP)** highlight your unique value proposition compared to competition
- **Business model** explaining your revenues generation model
- **Complementarity of the team** that will be involved in the project
- **Strategic fit for the company** explaining why this project is important for your company
- **Assessment of resources required** to demonstrate you have taken into account all key elements for the success of your project to reach exploitation
- **Expected funding scheme** to explain if you will consider further public or private financing after your participation to the FED4SAE project.

The scores used during the evaluation process indicate the following with respect to the criterion under examination:

- 0 – Proposal **fails** to address the criterion or cannot be assessed due to missing or incomplete information.
- 1 – **Poor**. The criterion is inadequately addressed, or there are serious inherent weaknesses.
- 2 – **Fair**. Proposal broadly addresses the criterion, but there are significant weaknesses.
- 3 – **Good**. Proposal addresses the criterion well, but a number of shortcomings are present.
- 4 – **Very Good**. Proposal addresses the criterion very well, but a small number of shortcomings are present.

- 5 – **Excellent**. Proposal successfully addresses all relevant aspects of the criterion. Any shortcomings are minor.

5.4   AEs selection

The outcome of the evaluation will be a ranked list of all proposals, ordered in descending order by the total score obtained by the proposal.

In order to cover the envisaged range of topics in the supported Application Experiments in the third call, FED4SAE has introduced focus areas in the third Open Call. The targeted percentage of selected Experiments per focus area is:

- Artificial Intelligence and Software Oriented Projects: 30 – 40 %
- Smart Cities and Smart Infrastructure Projects: 30 – 40 %
- Smart Sensor Projects: 20 – 30 %

The final distribution will depend on the received proposals and the FED4SAE consortium keeps the right to modify this distribution, so that priority will be given to the best proposals in the areas of CPS and embedded systems in the targeted focus areas and domains.

Depending on the available budget for funding, the available resources for the individual platforms, technologies and/or testbeds of the FED4SAE consortium members, the envisaged number of proposals per focus area, as well as the number of eligible and fundable proposals in the call, the appropriate number of proposals - based on this ranked list - will be selected for funding. The selection process will aim at two objectives: select the best proposals and fulfill at best the focus areas targets. Thus, these two criteria will be taken into consideration to prioritize and then select the awarded proposals.

The selected proposals will be reported to the FED4SAE project officer of the European Commission for a final granting decision.

5.5   Feedback to Applicants

After the evaluation of the proposals all proposers will be informed if their application experiment was accepted or not.

In case a proposal was selected, the applicant will receive a short summary of the evaluation outcome along with further information about the upcoming steps. In case a proposal was not granted, they will receive a full evaluation report, including an extended summary with the main remarks of the evaluation to allow the improvement of the proposal for future submissions.

6   Additional Information

6.1   Call Helpdesk

For further information on the call, contact our help-desk:

Name: Maximilian Jung

Email: Maximilian.Jung@iisb.fraunhofer.de

Phone: +49 (0) 9131-761-284

6.2   Ethical issues

FED4SAE, to be ethically compliant, did not forecast any ethical issues in the project. Conse-quentially proposals that have ethical issues – even if these are handled in line with the regu-lation of the European Commission – cannot be funded by FED4SAE.

All data that is brought into an Application Experiment or that is processed in an AE must be completely anonymized beforehand.

For more information on ethical issues please consult the document provided by the European Commission: http://ec.europa.eu/research/participants/portal/doc/call/h2020/h2020-msca-itn-2015/1620147-h2020_-_guidance_ethics_self_assess_en.pdf

All applicants have to confirm that their proposal does not have ethical issues by selection the check-boxes in the proposal template. If you suspect that you have to answer "Yes" to any of the questions in the template, please contact your Networking Partner for guidance on how this issue could be resolved.

The FED4SAE consortium may check during the evaluation of a proposal if this declaration is in line with the contents of the proposal itself and reserves itself the right to take necessary steps if an ethical issue is discovered.

6.3   The Intellectual Property Rights

All partners involved in a funded and implemented Application Experiment will sign a standard agreement and a non-disclosure agreement before the Application Experiment starts. All in-formation of whatever nature and in whatever form or mode of communication, which is dis-closed by a Party to any other during the implementation of the Application Experiment and which has been explicitly marked as "confidential" at the time of disclosure, or when disclosed orally, has been identified as confidential at the time of disclosure and has been confirmed and

designated in writing within fifteen (15) calendar days from oral disclosure, is "Confidential Information" and shall not be disclosed to any other third party.

Ownership of the developed product of an Application Experiment will remain with the third party. In case any IP is transferred or developed during the implementation of the Application Experiment, a bilateral contract between the involved parties will be concluded to define the exploitation rules.

For all questions on intellectual property rights please see the standard agreement and the NDA, which is available at https://fed4sae.eu/innovative-projects/open-calls/.

7   Checklist for Successful Proposals

Please consider this checklist as a helpful tool to maximize the chances of your proposal to be successful:

1) **Register in our portal** and **contact a Networking Partner for support.** Past experience indicates that proposals with engagement before submission are more likely to succeed. Each applicant should contact a networking partner as soon as possible for guidance and register in our portal.

2) **Does your planned work fit with the call for proposals?** Check that your proposal does indeed address the topic in this open call.

3) **Does your proposal address the industrial platforms, advanced technologies or testbeds offered by FED4SAE?** Check that your proposed work does indeed comply with the requirements on the usage of the offered technologies, platforms and testbeds.

4) **Is your proposal eligible?** The eligibility criteria are given in chapter 3 of the guide for applicants. Make sure that you satisfy the formal participation requirements (eligible country, written in English)

5) **Readability:** Check that your proposal printable and all information (especially in charts, figures etc.) is readable.

6) **Budgetary limits:** Check that you comply with the budgetary limits.

7) **Did you use the current template?** All proposals have to be based on the current proposal template available on the website.

8) **Is your proposal complete?** Have you completed all mandatory questions?

9) **Does your proposal answer all requests/comments?** Proposals should be precise, concise and should answer to requested questions. Omitting requested information will almost certainly lead to lower scores in the evaluation.

10) **Did you maximize your chances?** The FED4SAE consortium members can give valuable feedback during the creation of your proposal that can significantly increase the quality of a proposal

11) **Have you submitted your proposal before the deadline?** It is strongly recommended not to wait until the last minute to submit the proposal. **The deadline is March 5th, 2019 at 5 p.m. Brussels time**.

Annex 1 – Proposal Format

Call Information:

Identifier: FED4SAE03 Call

Project full name: Federated CPS Digital Innovation Hubs for the Smart Anything Everywhere Initiative

Acronym: FED4SAE

Grant agreement number: 761708

Deadline: **05.03.2019, 5pm (Brussels Time)**

Title: *[Application Experiment Name]*

Acronym for your project: *[Application Experiment Short Name]*

Participant Organisation*: *[Organization Name]*

Organisation Number*: *[Company Number or national equivalent if available]*

Contact Person Name*: *[Name]*

Contact Person Phone Number*: *[Phone Number]*

Contact Person e-mail*: [Email-address]

Contact Person position in the organization*: *[Position in Company]*

* In case more than one company is involved, please add this information for all participating companies. In that case, please also indicate the coordinating company. Assign each company a Participant Number (1,2,3,…) to clearly identify the distribution of the planned work to the participants

Please make sure that your information here is the same that you entered in the submission portal

Networking partner: *[Networking Partner]*

Competence partner: *[Competence Partner]*

Industrial Platform: *[industrial platform]*

Advanced Technology or Testbed: *[Advanced technology or Testbed - in case TIME4SYS or IODP was selected, this is not applicable]*

Date of Preparation: *[Proposal Date of Preparation]*

Email address to which the Acknowledgement of Receipt should be sent:
[insert]

Administrative Declarations

Please answer the following questions. Failure to answer them might render the proposal ineligible to be selected for funding.

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1. Funding will not be awarded to individual legal entities that have already received more than 100.000 Euro via open calls (Financial Support to Third Parties) from H2020 I4MS and SAE projects.

a) We confirm that we understand this and are required to declare any such funding:

☐ Yes   ☐ No

If you select "No" or do not select anything here, the proposal might be ineligible to be selected for funding. Please contact your Networking Partner for guidance if you do not know how to answer this.

b) Have you previously or are you currently receiving funding via open calls (Financial Support to Third Parties) from H2020 I4MS and SAE projects?

☐ Yes   ☐ No

If yes, please state the total amount of receiving funding:

If you select "Yes" please declare the total amount of funding you have received (or will receive) through the respective open calls. Please contact your Networking Partner for guidance if you do not know how to answer this.

If appropriate or necessary, please add a comment here, explaining your answer to the questions above.

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2. We confirm that the proposed work has not previously, or is not currently been funded under any other (Regional, National or EU) programme:

☐ Yes   ☐ No

If you select "No" or do not select anything here, the proposal might be ineligible to be selected for funding. Please contact your Networking Partner for guidance if you do not know how to answer this.

If appropriate or necessary, please add a comment here, explaining your answer to the question above.

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3. We confirm that we have read the "Standard Agreement" and that we intend to sign it in the event the Application Experiment is selected for funding:

☐ Yes   ☐ No

If you select "No" or do not select anything here, the proposal might be ineligible to be selected for funding. Please contact your Networking Partner for guidance if you do not know how to answer this.

Proposal Abstract

Mandatory (max. 2000 characters including spaces)

Table of Contents

Section 1:   Excellence

1.1   Objectives

*Describe the specific objectives for the application experiment, which should be clear, measurable, realistic and achievable within the duration of the application experiment (max. duration **12 months** – regardless of its duration, each AE has to be finished by the end of FED4SAE on 31.08.2020, including all possible delays in the experiment). Objectives should be consistent with the expected exploitation and impact of the application experiment.*

RECOMMENDED 0.5 PAGE

1.2   Concept and Approach

Describe and explain the overall concept underpinning the application experiment. Describe the main ideas, models or assumptions involved.

Reference the industrial platform, advanced technologies or testbeds (when applicable), that you intend to use for the application experiment and describe the technology and the outcome of your proposed implementation in detail (for example with a block diagram to illustrate the integration).

RECOMMENDED 1.5 PAGE

1.3   Ambition

Describe the advance your proposal would provide beyond the state-of-the-art, and to what extent the proposed work is ambitious.

Describe the innovation potential, which the proposal represents. Where relevant, refer to products and services already available on the market. Please refer to the results of any patent search carried out.

RECOMMENDED 1 PAGE

Section 2:   Impact & Business Plan

2.1   Expected impact

Describe how your project will contribute to:
- *The objectives of the present call;*
- *Potential impact on industry, including the improvement of the innovation ca-pacity;*
- *Socially and environmental or other impacts not already mentioned.*

Please be specific, and provide only information that applies to the proposal and its objectives. Wherever possible, use quantified indicators and targets
RECOMMENDED 0.5 PAGES

2.2   Business plan

The business case evaluation will be performed through a 30 to 60 minute phone/ web interview with experts covering the following points:

- *Description of the use case and the final product*
- *Targeted market and its size*
- *Drivers and expected growth*
- *Expected company sales, yearly volumes, market share (when available)*
- *Competition*
- *Expected differentiation and unique value proposition*
- *Business model*
- *Expected target price (selling price)*
- *Resources required towards commercialization (total budget required)*
- *Expected time to market for the company*
- *Expected impact for the company*
- *Innovation project expected funding sources (after FED4SAE support)*
- *Alignement of the project with the company's strategy*
- *Team involved in the project*
- *Does the demonstrator comply to standards? Are there standards to be considered?*

Please also prepare a short text or a pptx presentation to be used during the interview process.
RECOMMENDED 1.5 PAGES

Section 3: Implementation

3.1 Description of the work plan including the project duration

Please provide the following:
- *Brief presentation of the overall structure of the work plan and timing of the work plan (The duration of the proposed work plan cannot exceed **12 months**.)*
- *Please add a GANTT-Chart to visualize the duration of the individual WPs over the duration of the Application Experiment.*
- *Detailed work description (use the template provided below; 1 table per WP)*
- *Please add a list of deliverables using the provided table.*

RECOMMENDED 2 PAGES

Work package number:		Start Date:	
Work package title:			
Planned Person-months[5]:			

Objectives

Description of work (where appropriate, broken down into tasks)

Deliverables (brief description and month of delivery)

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[5] In case of more than one participating company, please assign values for all involved participants here.

Table 1:   **List of Deliverables**

Deliverable (number)	Deliverable name	Work package number	Participant number	Type[6]	Dissemination level	Delivery date

3.2   Justification of Costs and Resources

Please provide a summary of required efforts per WP using the table below.
RECOMMENDED 0.5 PAGE

Participant Number	WP Number	Estimated eligible costs					
		Effort (PM)	Personnel Costs (€)	Other Direct costs (€)	Indirect costs (€)	Total costs(€)	Requested Funding (€)
Total							

In column 'Effort', insert the required person months for the work involved.

In column 'Personnel Costs', insert your personnel costs for the work involved.

In column 'Other Direct costs', insert any other direct costs, for example material or travel costs (technical meetings, dissemination activities, etc.)

In column 'Indirect costs', insert your indirect (overhead) costs, 25 % of all your direct costs.

---

[6] Use one of the following codes:
    R: Document, report
    DEM: Demonstrator, prototype
    DEC: Patents filing,   press & media actions, videos, etc.
    OTHER: Software, etc.

In column 'Total costs', calculate the sum of all your indicated costs.

In column 'Requested Funding', insert your requested EC contribution.

You may request up to 70% of the total costs*.

Up to 15% of the cascade funding may be used for specific subcontracting tasks that neither the FED4SAE partners nor the Third party can carry out. Please provide sufficient justification on what and why you need to subcontract some of your tasks.

*) The maximum funding per Application Experiment is 58k€ at a funding rate of 70% of the budget. Multiple Application Experiments per applicants are possible, with a total maximum funding for all experiments of 100k€ that the applicant is involved in (through all three open calls)- respecting the limits to FSTP in I4MS and SAE. Please consult our guide for applicants for more details. Further in-kind support – as described in the open call text and the guide for applicants - is provided on top of the funding contribution.

Please consider that all budgeted costs must comply with the applicable national law on taxes, labor and social security and must be in compliance with the rules and conditions laid out in Council and Parliament decisions relevant to the H2020 framework programme, in particular - but not exclusively - "REGULATION (EU) No 1290/2013 OF THE EUROPEAN PARLIAMENT AND OF THE COUNCIL of 11 December 2013"

*Provisions for possible future losses or charges, exchange losses, costs related to return on capital, costs reimbursed in respect of another Union action or programme, debt and debt service charges and excessive or reckless expenditure are **ineligible costs** and **cannot be included** into the budget.*

The maximum total funding that may be allocated to any individual legal entity via open calls from any H2020 I4MS (ICT Innovation for Manufacturing SMEs) or SAE (smart Anything Everywhere) cannot exceed 100.000 €. Please consult our Guide for Applicants for more details.

3.3   Company description

For each third party provide a brief description of the legal entity (e.g., the type of company, age, size, country, focus domain(s), tech/non-tech, "newcomers" to EU programs or have prior experience), the main tasks they have been attributed, and the previous experience relevant to those tasks. Provide also a short profile of the individuals who will be undertaking the work.

RECOMMENDED 0.5 PAGE

Section 4: Ethical Issues

FED4SAE, to be ethically compliant, did not forecast any ethical issues in the project. Consequentially proposals that have ethical issues – even if these are handled in line with the regulation of the European Commission – cannot be funded by FED4SAE.

All data that is brought into an Application Experiment or that is processed in an AE must be completely anonymized beforehand.

Please answer the following questions.

Does your proposed work involve:

1. Human embryos and foetuses	Yes ☐ / No ☐
2. Humans	Yes ☐ / No ☐
3. Human cells/tissues	Yes ☐ / No ☐
4. Personal data	Yes ☐ / No ☐
5. Animals	Yes ☐ / No ☐
6. Third countries	Yes ☐ / No ☐
7. Environment & Health and Safety	Yes ☐ / No ☐
8. Dual use	Yes ☐ / No ☐
9. Misuse	Yes ☐ / No ☐
10. Other ethics issues	Yes ☐ / No ☐

If the answer is 'YES' to any of the questions, please contact your Networking Partner for guidance on how this issue could be resolved.

PROPOSALS INDICATING ETHICAL ISSUES WILL NOT BE TAKEN INTO CONSIDERATION FOR GRANTING.

For more information on ethical issues please consult the document provided by the European Commission:

http://ec.europa.eu/research/participants/portal/doc/call/h2020/h2020-msca-itn-2015/1620147-h2020_-_guidance_ethics_self_assess_en.pdf

Annex 2 – Acknowledgment of receipt

Dear xxx,

Thank you for submitting our proposal for consideration as Application Experiment in the H2020 project FED4SAE.

The evaluation will take place in the next few weeks. You will be notified as soon as possible after this whether or not your proposal has been successful.

On behalf of my colleagues in the project I would like to thank you for your interest in our activities.

Yours sincerely,