

Lessons and experiences from FED4SAE

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First DigiFed DIH-Network event
17 November, 2020

This project has received funding from the European Union's Horizon 2020 research and innovation programme under grant agreement no. 701708



Horizon 2020
Programme

part of the smart anything
everywhere initiative

FED4SAE brings together

- Thirteen partners
- Ten countries
- Eight R&D centres
- Five industrial partners, and
- One SME

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One-stop-shop to accelerate CPS development, Funded by the European Commission

FED4SAE Mission

#1

Bring innovative Cyber-Physical
System technologies to business
from any sectors and any
companies

#2

Link third parties to suppliers
across value-chains and regions in
order to create innovative CPS
solutions

#3

Link third parties to investors
across value-chains and regions
in order to accelerate CPS
solutions development and
industrialization

#4

Reach the sustainability of the
pan-European Digital Innovation
Hub (DIH) network



We help accelerate European CPS solutions to Market

We Provide

- Access to leading-edge CPS platforms, Advanced Technologies, and Testbeds from Industrials and R&D centers
- Technical coaching from domain experts
- Innovation Management support
- Up to €60k in initial financial support, plus access to further VC funding
- Access to potential users and suppliers across value chains throughout Europe

The challenge is to combat the valley of death, when companies struggle to finalise their product development with no or low revenue generation and limited resources to reach the market

70%

FUNDING

To support R&D of EU
SMEs and Mid-caps

18

MONTH MAX DURATION

Maximum duration for
funded projects

3

OPEN CALLS

We will accept
applications every six
months

35

SELECTED

Proposals we will
support in bringing CPS
solutions to market

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OPEN CALL

3 open calls

- Nov'17
- May'18
- Dec'18



165 registrations



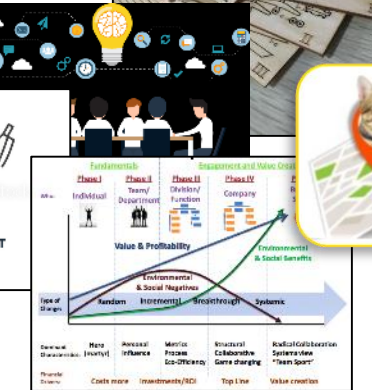
32 granted AEs
from 13 countries

SUBMIT

116 proposals
submitted from 26 countries



3 evaluation & selection meetings



Open call key results

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#1 Open Calls

- Three successful open calls at **M3**, **M9** and **M15**

#2 Proposals

- **116** proposals received
- Targeting all offered Industrial platforms and all competence partners

#3 Application Experiments

- **32** Application Experiments selected – more than initially planned
- Utilizing many of the offered platforms, technologies and testbeds
- Different kinds of companies supported

#4 High Quality Proposals and even distribution of experiments among partners

- **Top 20** scored Application Experiments represent the **top 24** scored proposals
- All FED4SAE partners are involved in several Application Experiments each

#5 Pan-European dimension and cross-border collaboration

- Registrations of third parties from **34** different countries, submissions from **26** countries.
- Selected Experiments from **13** countries
 - 3 AEs from associated countries
 - 27 from FED4SAE consortium countries
 - 5 from countries without a local FED4SAE DIH

Open call lessons learnt

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Increasing number of applications through the calls

- Funding opportunity becomes better known
- Implemented improvements in the process are taking effect.



Proposals from many different European and also some Asian and African countries

- International dissemination strategy does work
 - FED4SAE reaches outside of the local ecosystem of the partners: 75% from countries with FED4SAE partners and 25 % from other countries
- Ratio of selected AEs from non-FED4SAE countries proportional, but slightly lower compared to ratio of submitted proposals: support mechanisms does not necessarily seem to depend on physical availability to produce “strong” proposals: 84% from countries with FED4SAE partners and 16 % from other countries

Open call lessons learnt

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Pan-European collaboration

- Wide “network” of collaborations through all countries instead of localized collaboration between “main” countries
- Vast majority of submitted and selected proposals represent at least a direct collaboration between two European countries and in all cases, a clear pan-European dimension is visible.
- Strategy to boost Pan-European collaboration through the Application Experiments does work
- FED4SAE connects SMEs to partners outside of their local ecosystems and broadens their potential network

Open call lessons learnt

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Company Profile

- FED4SAE is attractive for smaller and younger companies, mostly start-ups with a significant number seeking for the first investor to kick start their activity and reach the status of “scale-ups” (70%)
- Business Case Evaluation is successful in eliminating the very high risk companies with a great chance of failure (65% selected young companies)
- Companies have potential to generate a significant number of jobs and revenue if successful.

Engagement of Non-tech companies

- The implemented open call structure as well as the evaluation and selection process does make it difficult to engage and support non-tech companies directly via Application Experiments – however, partners engaged with non-tech companies to discuss potential proposals.
- Non-tech companies can be supported indirectly through the companies involved in selected experiments.

Open call lessons learnt

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No correlation between technical and business case scoring

- Over all three calls, there was strong correlation between the three technical evaluation criteria, but only very weak correlation of those with the business case score.
- This shows clearly that both parts are important to effectively select the innovative, high quality proposals.
- Technical criteria alone cannot be used to sufficiently judge the potential economic impact of proposals

Technical Showstopper

- Feasibility Assessment together with pre-engagement is important as several applicants misjudge the ability of technologies, platforms or the necessary work to adept them. A more formalized of feasibility assessment in the evaluation process could be a way to mitigate this

Open call lessons learnt

Pre-Engagement & Feedback Reports

- Pre-engagement increases submitted project quality and the chance to be fundable (80%)
- Applying companies clearly benefitted from the implemented feedback mechanisms, the implemented strategy to provide feedback works.
- Vast majority of selected experiments benefitted from the provided support prior to submission (88%)
- Provided Feedback reports to applying companies very appreciated
- The provided feedback to initially rejected applicants has value to them and helps to improve their proposition: 6 out of 17 were eventually selected on the second try.
- More required engagement could help avoid formal mistakes (no advanced technology or testbed targeted for example) – while weight against a too formal process that could discourage potential applicants

AE implementation, lessons learnt

COVID-19 impact

- 6 month delay, strong impact of lockdown on cross-border projects
- 78% projects are closed or nearly closed, 19% delayed to Q4 2020, 1 project aborted but working on new market
- Lockdown impact: 1) technical realization (home working, test phase; product supply); 2) dissemination, events & fair; 3) investors setback, change of market perspectives

AE outcomes

- Tailored innovation management very appreciated
- Company's expectation vs innovation management evolves during AE lifetime
- Networking between FED4SAE AEs, Networking across SAE Innovation Actions/beneficiaries
- Set-up of a methodology to quantify FED4SAE impact
Selection business criteria/interview # KTH Innovation Readiness Level™ at AE closure



Smart sensor for monitoring of scoliosis treatment braces
Italian social security reimbursement
SAE contest award @ INPHO Venture Summit

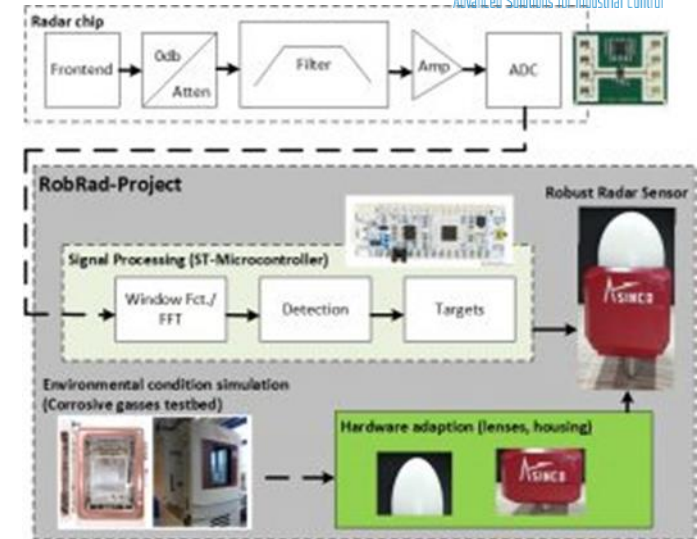


Enhancing Calibration Process in Gas Sensors for Air Quality Smart Application in Smart Cities
Already 300 systems sold, new market opening



ALTHEXIS

Early Stag melanoma Detection.
System already sold to doctors and under assessment



Robustification of radar sensors for application in harsh industrial environments
System qualified and sold to customers, negotiations for sales in 2021



FED4SAE
PRESENTATION
17-Nov-20



FIND OUT MORE

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Programme

Back-up slides

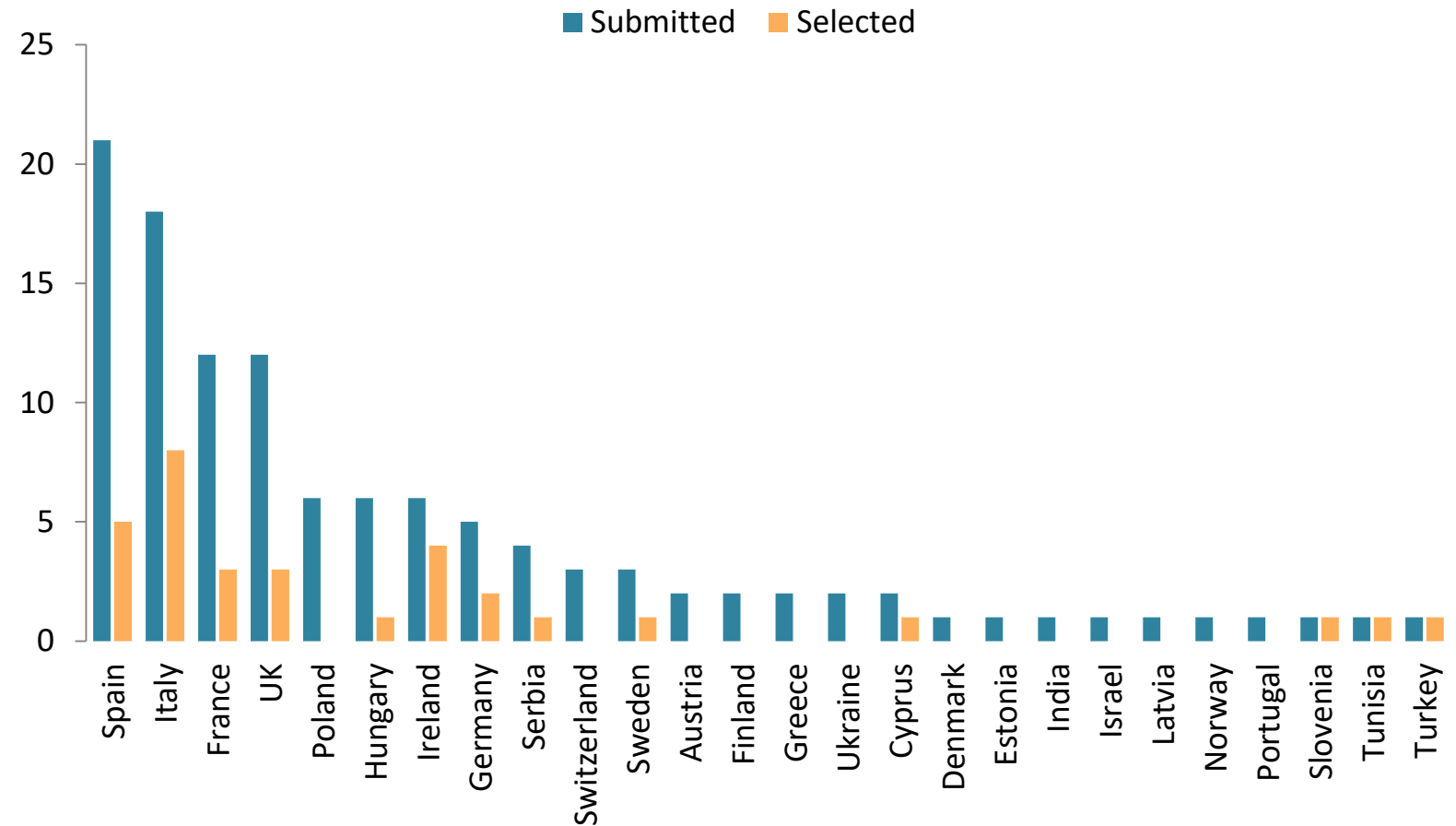
General assessment of the open calls

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Country Distribution

- Spain, Italy, France and the UK represent 54% of all submitted proposals and 59% of selected Application Experiments
- On the other hand, for one third of the countries, only one proposal each was submitted.



General assessment of the open calls

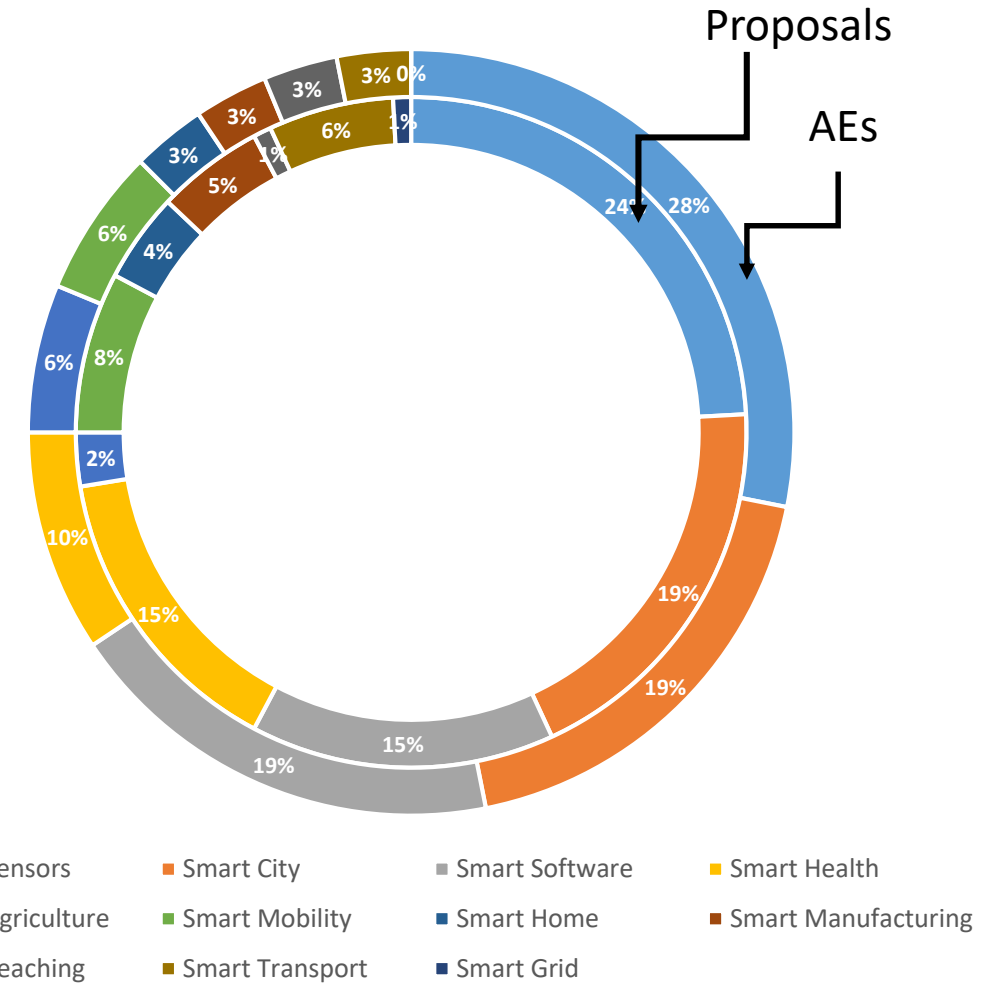
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Targeted Application Domains

Wide range of domains and applications covered by the submitted proposals and the selected Experiments

- Smart Sensors
- Smart City
- Smart Software
- Smart Health
- Smart Agriculture
- Smart Mobility

Distribution for selected Experiments
proportional to the submitted proposals



General assessment of the open calls

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Proposal Submissions

Submissions from 26 different countries

- 16 EU member states
- 7 associated countries
- 2 Asian countries
- 1 African countries
- 75% from countries with FED4SAE partners
- 25 % from other countries

Granted Application Experiments

32 Experiment from 13 different countries

- 10 EU member states
- 3 associated countries
- 84% from countries with FED4SAE partners
- 16 % from other countries

Strong cross border collaborations between all participating countries.



General assessment of the open calls

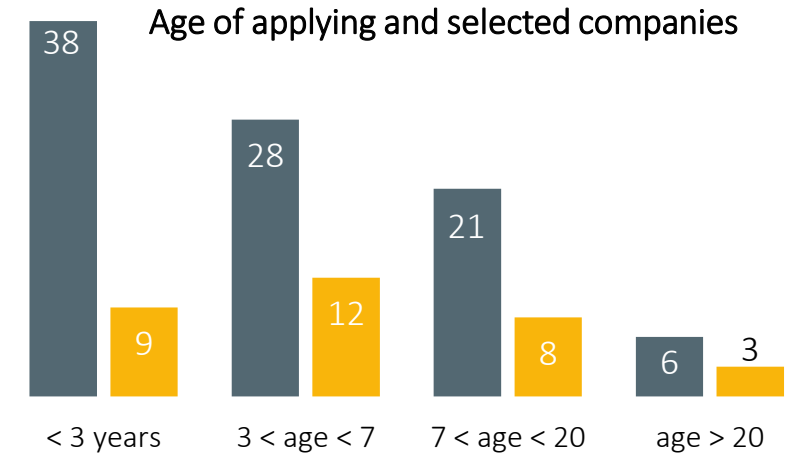
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Applying Company Profile

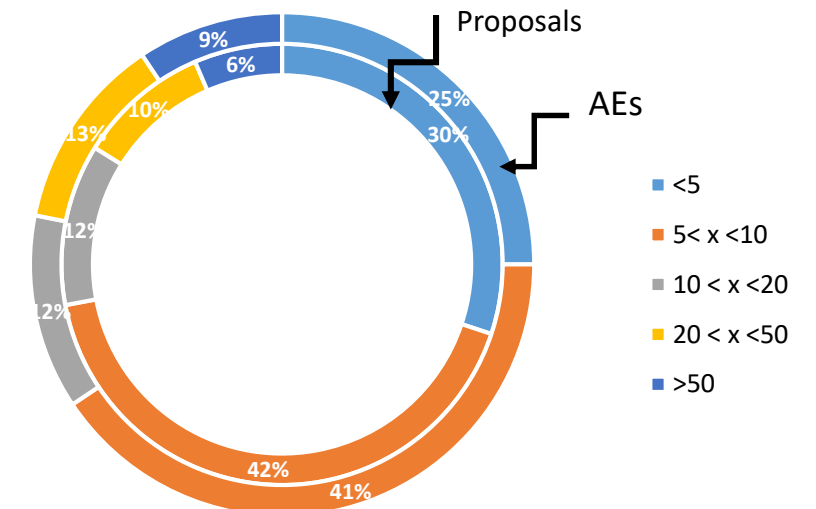
- 94 companies submitted proposals
 - 56 startups
 - 35 SMEs
 - 2 MidCaps
- A majority of companies are younger – 70% are younger than 7 years and 30% younger than 3 years – and small – 72% have less than 10 employees
- Only few larger SMEs and two MidCaps applied

Awarded Company Profile

- 32 companies awarded
- Majority – 65% - are young, but the evaluation process successfully eliminated the very high risk, early stage projects
- Slight shift to older and larger companies in the selection to mitigate the risk of failure of experiments



Headcount of applying and selected companies



Open call lessons learnt

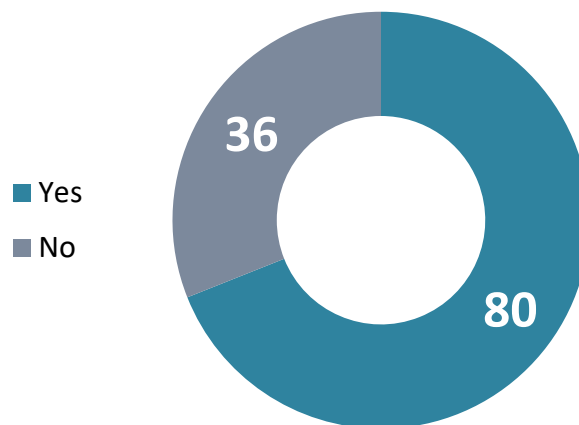
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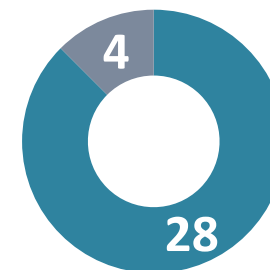
Engagement prior to submission

- FED4SAE offered support to companies during the creation of the proposals prior to submission
- In all calls, the pre-engagement showed results: Overall, proposals that had pre-engagement prior to submission outperformed those who did not.
- The average score of proposals that pre-engaged was significantly higher (between 0,64 to 1,77 difference) in all calls
- Vast majority of funded experiments had pre-engaged with the consortium prior to submission
- Proposals with no pre-engagement had a significantly higher chance to be scored below threshold in the technical criteria

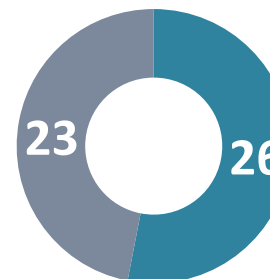
Submitted Proposals



Funded Proposals



Not Fundable Proposals



Fundable Proposals

