

Digital Innovation Hubs Federation  
For Large Scale adoption of digital  
technologies by European SMEs

Innovative  
Solutions

Advanced  
Technology

“  
Digitalising  
Europe’s Industry  
Together”  
”

Funding

Expertise

Competencies



Information &  
Project portfolio



European Union's  
Horizon 2020  
grant agreement  
No 872088.



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[info@digifed.org](mailto:info@digifed.org)



[www.digifed.org](http://www.digifed.org)

# About DigiFed project

**DigiFed, part of the SAE initiative, is dedicated to supporting EU industries to digitalise their product & services and reaching new markets enabled by Cyber Physical Systems (CPS) & Embedded Systems.**

DigiFed gathers twelve partners with expertise in digital technologies and/or innovation management from nine EU countries.

The main aim of DigiFed is to accelerate and promote the digitalisation of European companies by providing significant support mechanisms for individual and groups of SMEs and midcaps to foster the introduction of digital technologies in their product and service offerings.

DigiFed partnerships are designed to strengthen the European digital ecosystem through the adoption of advanced digital technologies (CPS & Embedded Systems) and a combination of regional, national and European funding instruments so that SMEs and midcaps can benefit from knowledge sharing regardless of their location. Three main interrelated Innovation Pathways are proposed to EU companies.

Until 2022, based on the following three kinds of Innovation Pathways, DigiFed has implemented several projects:

- **44 Application Experiments (AE)** – and the innovative model of “TWIN AE” involving two cross-border SMEs/midcaps, one of which with low digital maturity level – allowed **71 companies** to define an R&I project to disrupt, upgrade or manufacture an innovative digital product or service;
- **4 Generic Experiments (GE)** communities targeting a group of SMEs and mid-caps to implement advanced technology demonstrators through co-financing mechanisms of European and regional funding;
- **3 Digital Challenges (DC)** with a focus on trialling new co-funding mechanisms with companies directly involving the enterprise demand side.

Overall, DigiFed provided a cascade funding of **4,0 million € to European companies as well as technical and innovation management support corresponding to 1,1 M€ of resources provided by the consortium.**



# DigiFed consortium

DigiFed consortium gathers twelve partners with expertise in digital technologies and/or innovation management from nine EU countries, namely: 5 RTOs, 2 industry stakeholders, 2 Innovation Management SMEs and 5 Digital Innovation Hubs (DIHs) from different countries with established ecosystems (some partners function as both digital technology and DIH). Relying on its DIHs' network, DigiFed fosters interactions between stakeholders (among which are other European DIHs), it continues expanding and linking with other DIHs and DIH-networks to create a truly EU-wide offering of sustainable cross-border DIH services

## DigiFed consortium partners





# Innovation pathways



## Application Experiments

Application Experiments (AE) are the core activity of DigiFed. This pathway directly supports SMEs, mid-caps and start-ups with different levels of digital maturity:

- To companies with low digital maturity, it provides the capacity to catch up and upgrade their skills and existing products with dedicated services, tools and solutions.
- To companies with higher digital maturity, it offers further innovative technology integration as well as access to potential customers, including larger industrial stakeholders.

AEs have proven successful in several projects, especially in relation to ICT Innovation for Manufacturing SMEs (I4MS) and SAE Initiatives. DigiFed has proactively encouraged successful practices and amplified their potential by also supporting direct collaboration between SMEs.



## Digital Challenge

Digital Challenges (DC) are match funding opportunities where advanced digital technology SMEs and mid-caps are selected through an open call to solve industry challenges set by corporate businesses. The Digital Challenge Owners (DCO) serve as early adopters of the accelerated innovations and provide additional support to the programme through co-funding, access to innovation support and pilot sites.



## Generic Experiments

Generic Experiments (GE) are designed to test new collaborations between research centres and a group of SMEs and midcaps as well as evaluate new co-financing mechanisms between European and regional funding to foster European industry digitalization. DigiFed has launched 4 GE Communities involving 51 European SMEs. DIHs play a critical role in this pathway, which focuses on de-risking the innovation and technology integration process at an early phase.

# Application Experiment Results

Application Experiments (AEs) provided financial grants of up to €55k per participant as well as technical and business support for the development of smart applications in Europe. Over the three open calls, DigiFed partners have been supporting third parties in different ways and roles through three types of Application Experiments (AE), requesting **cross-border** condition collaboration (between entities legally based in different countries, e.g. a DigiFed technology partner and one or two European SME(s)):

- **Single AE:** the applying company requests technical expertise from a DigiFed Technology partner to generate a new smart product or service;
- **Twin AE:** two applying companies generate a new smart application;
- **Low digital maturity Twin AE:** two applying companies, one of which is of low digital maturity, generate a new smart application.

44 innovative and demonstrative AE projects involving 71 companies that were targeted through 3 Open Calls received funding over the total budget of 3.6M€ with technical and innovation support in order to develop innovative solutions in the domain of CPS and Embedded Systems.

Open call's results breakdown:

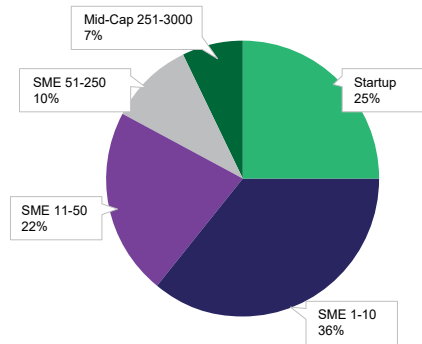


Figure 1. Size of selected companies

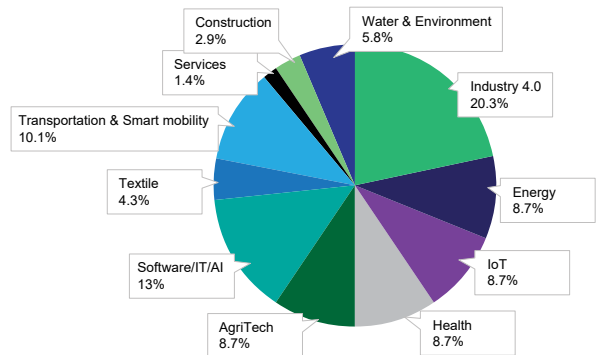


Figure 2. Selected companies per sector

## Showcase

In the following section, 13 selected Application Experiments out of a total of 71 are presented. The complete list is available at the end of AE showcase and through QR link.

Project title

## NTOUCH 2.0

Tagline

**Bringing touchless control to industry 4.0**

Type

**Twin AE**

AE Call

**OC 3**

Total / DigiFed Funding

**€133,000.00 / €99,976.94**

Duration

**October 2021 - September 2022**

Solution

The Ntouch 2.0 team is developing a device that can recognise gestures using embedded Machine Learning. Thanks to innovative Time-of-Flight sensors and state-of-the-art algorithms, we can detect gestures under any environmental conditions and even while wearing gloves. We can detect two types of gestures: dynamic (e.g., swipe or dial) and static (e.g., finger count). In the former, a continuous stream of data is being processed in real time, while in the latter, we are capturing a small depth "map".

AE consortium



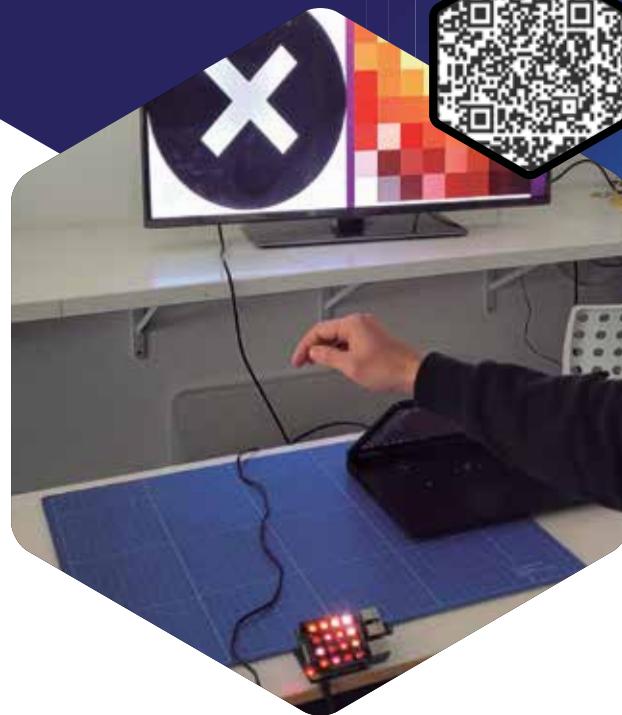
### SC Robotics

- 🏢 Micro (1-10)
- 📍 Spain
- ⚙️ Manufacturing
- 🌐 [www.scrobotics.es](http://www.scrobotics.es)



### Edge Impulse

- 🏢 SME (11-50)
- 📍 Netherlands
- ⚙️ Manufacturing
- 🌐 [www.edgeimpulse.com](http://www.edgeimpulse.com)



Project title

## IOT-SEC

Tagline

**Improve attack detection  
more accurately**

Type

**Single AE**

AE Call

**OC 3**

Total / DigiFed Funding

**€71,250.00 / €49,875.00**

Duration

**October 2021 to September 2022**

Solution

The solution provided by the project consists of the integration of different solutions. Working with both frameworks from each partner, an integration will be made. Binaré offers a cloud-based service that helps your business to anticipate emerging cyberattacks using top-notch binary file analysis, while Ikerlan has a framework based on an open-source SOC architecture with customised modules where both solutions could help each other.

AE consortium



### **Binare**

- Micro (1-10)
- Finland
- IoT devices & firmware
- [www.binare.io](http://www.binare.io)

### **DigiFed technological support by:**



### **IKERLAN**

DigiFed consortium partner



Project title

## Smart Ramp

Tagline

**Reduce the risk on bus access ramps  
for disabled people supported by AI**

Type

**Twin AE**

AE Call

**OC 3**

Total / DigiFed Funding

**€141,479.00 / €99,035.50**

Duration

**October 2021 to October 2022**

Solution

DBUS and HUPI propose to develop a Cyber Physical Systems (CPS) device embedded/connected to the bus, called "Smart Ramp", and run "live experiments", by deploying this new device in 10 buses. The prediction of "failure risk", continuously updated through Smart Ramp data collection, will enable DBUS to perform selected and targeted maintenance operations on the bus before the failures occur, and therefore significantly improve the service towards the disabled people.

AE consortium



### HUPI

- Micro (1-10)
- France
- Transportation & smart mobility
- [www.hupi.eus](http://www.hupi.eus)



### DBUS

- Mid-Cap (251-2000)
- Spain
- Transportation & smart mobility
- [www.dbus.eus](http://www.dbus.eus)



Project title

# Honey AI

Tagline

## Artificial Intelligence for the Honey Industry

Type

**Twin AE**

AE Call

**OC 3**

Total / DigiFed Funding

**€106,481.25 / €74,500.00**

Duration

**November 2021 to September 2022**

Solution

The aim is to automatise the tedious work of pollen analysis for honey's floral source authentication with higher accuracy, using artificial intelligence and a digital robotised low-cost microscopy. This solution standardises the pollen counting measurement, reduces time, allows on-site real-time measurements, increases reproducibility/repeatability of results, and immensely reduces human dependency.



AE consortium



### Stayia Farm

- 🏢 SME (11-50)
- 📍 Greece
- ⚙️ Agritech & foodtech
- 🌐 [www.stayiafarm.com](http://www.stayiafarm.com)



### Sonicat Systems

- 🏢 Micro (1-10)
- 📍 Spain
- ⚙️ Agritech & foodtech
- 🌐 [www.sonicat-systems.com](http://www.sonicat-systems.com)

Project title

## WAISENSE Guard

Tagline

**Developing a system for water monitoring in response to COVID-19**

Type

**Single AE**

AE Call

**OC 2**

Total / DigiFed Funding

**€85,111.25 / €55,000**

Duration

**April 2021 to March 2022**





Solution

The concept and objective of this AE is to develop and validate in real scenarios a new cyber-physical system for the remote control of water installations, WAISENSE GUARD, using IoT connectivity. Users and administrators can control IoT modules using a mobile app or an online platform (WAISENSE Mobile) using big-data analysis, AI&ML for the anomalous consumption prevention.

AE consortium



**Metrica6**

-  SME (11-50)
-  Spain
-  Smart water
-  [www.metrica6.xyz](http://www.metrica6.xyz)



**DigiFed technological support by:**



**ST Microelectronics**  
DigiFed consortium partner



Project title

## TRACKLOG

Tagline

**Smart TRACKing and monitoring  
system for LOGistics management**

Type

**Single AE**

AE Call

**OC 2**

Total / DigiFed Funding

**€78,500.00 / €54,950**

Duration

**May 2021 to August 2022**

Solution

The main building bricks of the TRACKLOG system are the concepts of the Smart Pallet or Basket. The Smart Pallet is equipped with IoT sensors, capable to implement special functionality and services measuring data from these specific sensors, generating added value information regarding the encapsulated goods, as well as regarding the asset itself. The information is collected through the gateway to connect the system to the Web for data collection and display.

AE consortium



**NGS**

- Micro (1-10)
- Italy
- Transportation & Smart mobility
- [www.ngs-sensors.it](http://www.ngs-sensors.it)

**DigiFed technological support by:**



**CEA**

DigiFed consortium partner





Project title

## Touch & Heat

Tagline

### NFC Electric Radiators & Space Heaters

Type

**Twin AE**

AE Call

**OC 2**

Total / DigiFed Funding

**€157,500.00 / €109,950**

Duration

**April 2021 to March 2022**

Solution

Touch & Heat approach relies on the same technology as mobile contactless payments, which, since the spread of Covid-19, has become familiar to most smartphone owners. Users configure their heaters with their smartphone in three easy steps. At first, they tap the phone to the NFC tag to collect the current settings of the heater. In the second step, users can adjust the settings in the app and at last, they have to tap again the NFC tag to transfer the new settings to the heater. It is a convenient, easy and efficient programming method that is very intuitive.



AE consortium



#### **IoTize**

Micro (1-10)  
France  
Energy  
[www.iotize.com](http://www.iotize.com)



#### **Lucht LHZ**

SME (51-250)  
Germany  
Energy  
[www.lucht-lhz.de](http://www.lucht-lhz.de)



#### **Cotherm**

SME (51-250)  
France  
Energy  
[www.cotherm.com](http://www.cotherm.com)

Project title

## Smart BMC

Tagline

### Smart Building Management System

Type

**Twin AE**

AE Call

**OC 2**

Total / DigiFed Funding

**€157.063,00 / €109.944,00**

Duration

**April 2021 to August 2022**

Solution

SMART BMS box REDUXI represents a unique solution to the challenges facing the user needs in electricity consumption, as well as those of electricity distribution and supply. The project is focused on the development of a smart, plug and play building management system box, more robust and capable of forecasting energy consumption and its further redistribution with the help of smart algorithms as the central module of the new solution.



AE consortium



#### AMIBIT

- Micro (1-10)
- Slovenia
- Energy & Smart city
- [www.amibit.si](http://www.amibit.si)



#### PES

- Micro (1-10)
- Austria
- Energy & Smart city
- [www.pes.co.at](http://www.pes.co.at)

Project title

## Safesound

Tagline

**Intelligent edge based  
detection of fire alarms**

Type

**Single AE**

AE Call

**OC 2**

Total / DigiFed Funding

**€71.700,00 / €42,000**

Duration

**May 2021 to August 2022**

Solution

Safecility has developed IP for LPWAN Fire Safety and Emergency Lighting. Their software engineering team is proficient in full-stack web application development as well as embedded software, electronics, signal processing and constrained Machine Learning. ST Microelectronics offers an array of low-power, high performance microcontrollers, MEMS sensors and expertise in edge AI frameworks suitable for edge-deployment, while providing ongoing support for the ST platform to develop machine learning approaches and support prototype design.

AE consortium



### **Safecility**

- Micro (1-10)
- Ireland
- Construction
- [www.safecility.com](http://www.safecility.com)



### **DigiFed technological support by:**



**ST Microelectronics**  
DigiFed consortium partner

Project title

## DYNAGRID

Tagline

### IoT for maintenance and increased capacity of electricity networks

Type

**Twin AE**

AE Call

**OC 2**

Total / DigiFed Funding

**€157,885.00 / €110,000.00**

Duration

**April 2021 to March 2022**

Solution

ENERGIOT has developed a battery-free IoT device that harvests energy from the residual magnetic field of power lines. Thanks to the included sensors, real-time smart monitoring of the grid status is feasible and affordable. ELEMENT, a service partner of ENERCAL, can provide the connectivity, cloud and data analysis system to digitalise ENERCAL grid. Its main objective is to demonstrate an affordable, reliable, wireless and battery-free solution for massive deployment of IoT to digitise the grid in order to reduce maintenance, optimise operation and increase capacity of electricity networks.

AE consortium



#### **Energiot**

- Micro (1-10)
- Spain
- Energy
- [www.energiot.com](http://www.energiot.com)



#### **Element**

- Micro (1-10)
- France
- Energy
- [www.element.nc](http://www.element.nc)



Project title

**USAB**

Tagline

**Universal Security Active Badge**

Type

**Twin AE**

AE Call

**OC 1**

Total / DigiFed Funding

**€192,975.00 / €110,000.00**

Duration

**September 2020 to September 2021**

Solution

The solution is based on a top-notch active authentication badge, performing strong authentication with offline and decentralised mechanisms. The OffPAD active badge is owned and only manipulated by the employee. Contactless communication technologies are used to make the device able to communicate with the existing company system. It is based on a microprocessor that can support multi-applications unlocked via a biometric fingerprint sensor. Communication is done through enhanced secured Bluetooth (BLE) as well as Near Field Communication (NFC).



AE consortium



**Pone Biometrics**

- Micro (1-10)
- Norway
- Cybersecurity
- [www.ponebiometrics.com](http://www.ponebiometrics.com)



**One Wave**

- Micro (1-10)
- France
- Cybersecurity
- [www.onewave.io](http://www.onewave.io)

Project title

## FRIBLOCS

Tagline

### Frame Integrated Bike Location and Communication System

Type

**Twin AE**

AE Call

**OC 1**

Total / DigiFed Funding

**€218,900.00 / €110,000.00**

Duration

**December 2022 to November 2021**

Solution

Friblocs is a bike location and communication system integrated into the frame and not relying on an e-bike system. Both partners initially tested the Sentinel's technology to assess what parts can be used and what new features need to be developed in terms of hardware and software. Subsequently, the partners identified the best position on the frame to install the IoT box. Relying on its experience in low power IoT, Sentinel has re-designed the IoT module to fit inside the frame and optimised the antennas to function inside an aluminium frame. Orbea will further test the samples intensively and, based Sentinel's on feedback, will adapt where needed.

AE consortium



### Sentinel Tec

- 🏢 Start-up
- 📍 Belgium
- ⚙️ Transportation & Smart mobility
- 🌐 [www.sentinel-tec.com](http://www.sentinel-tec.com)



### Orbea

- 🏢 Mid-Cap (251-2000)
- 📍 Spain
- ⚙️ Transportation & Smart mobility
- 🌐 [www.orbea.com](http://www.orbea.com)



Project title

**Albicchiere**

Tagline

**Smart Wine Preservation & Dispenser**

Type

**Single AE**

AE Call

**OC 1**

Total / DigiFed Funding

**€96,288.00 / €54,998.00**

Duration

**January 2021 to November 2021**

Solution

Smart wine dispenser will be deployed around the world in Albicchiere's customer places. Therefore, it is paramount that those devices are equipped with a sound foundation for secure OTA firmware updates, as well as protection against malicious access. The AE focused on the integration of STM32 H7 chip in the design of Albicchiere's System electronics board, design of optimised electronics board, PCBA and testing of the security of the enhanced and optimised board. IoT security was a specific focus of the AE.

AE consortium



**Albicchiere**

🏢 Start-up

📍 Italy

⚙️ IoT

🌐 [www.albicchiere.com](http://www.albicchiere.com)



**DigiFed technological support by:**



**ST Microelectronics**

DigiFed consortium partner

# The list of DigiFed Application Experiments

Apart from the showcased Application Experiment projects you can find all selected projects listed below, segmented by Open Calls. The projects' list includes beneficiary/beneficiaries title and Application Experiment type.

<i><b>Beneficiary/beneficiaries</b></i>	<i><b>Application Experiment Name</b></i>	<i><b>Application Experiment Type</b></i>
<b>Open Call 1</b>		
CYSEC	SEGWAY	Single AE
PI-ER Technical, Fiberty	ATMAN	Twin AE
Energica Motor Company, Virtual Open Systems	ENOCH	Twin AE
Ovon Technology	Ovon Connected Boilers	Single AE
Sentinel NV, ORBEA	FRIBLOCS	Twin AE
Sleep Advice Technologies Detector	AWAKE	Twin AE
BEEXLAB	Albicchiere	Single AE
PRECIFIELD, VITO	SOILMap	Twin AE
eRTSOgener	EGOS	Single AE
Madesign, Centexbel	dAlnaback	Twin AE
DatenBerg	MANURECON	Single AE
Altar, BioSistemika	DIGIEVO	Twin AE
Altar	DONOP	Single AE
OffPAD, One Wave	USAB	Twin AE
<b>Open Call 2</b>		
Nebumind, Authentise	SICMEQ	Twin AE
Element, Energiot	DYNAGRID	Twin AE
IoTize, Lucht, COTHERM	TouchHeat	Twin AE
Advanced Microturbines, Medius	ARNO	Twin AE
Metrica6 Ingenieria y Desarrollos	WAISENSE Guard	Single AE
NevisQ, Aura Andalucia	Smart Nursing Home	TWIN
Waterjade by MobyGIS, Global Omnium Idrica	WatUcast	Twin AE
Quanta & Qualia, Breakpoint One	Next Gen Human Computer Interaction	Twin AE

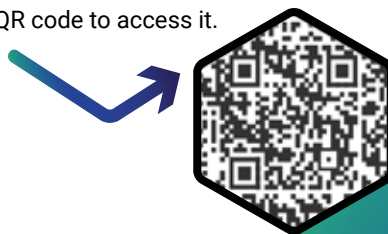


Oxama	Oxama	Single AE
Microbium	Microbium MPN Analyzer	Single AE
Convex Lens Safecility	Safecility Safesound	Single AE
Koyre srl	SENSORize yachting SAILS	Single AE
FLYCOM	Flai - Automated processing of LIDAR data	Single AE
Amibit, PES	Smart Building Management System	Twin AE
MOOVLAB, AREXO Consulting	PLAYFIT Online	Twin AE
NGS	TRACKLog	Single AE

### ***Open Call 3***

Allbesmart, AQLARA	AR4WATER+	Twin AE
INDOMINUS, SC CHIFOR MEDDENT	Dental FEM	Twin AE
SC Robotics, Edge Impulse	NTOUCH2.0	Twin AE
Sonicat Systems, Stayia Farm	Honey.AI	Low Digital Twin AE
Universal Projects and Tools, iBreve	DigiBreath	Twin AE
Termodron sodobne tehnologije, Elif Lab S.R.L.	Farm Scan	Twin AE
Plain Concetps, IberAmbar	GEO-VISUAL MULTI-CAMERA	Twin AE
Autech, Teco	MY EV CHARGER	Low Digital Twin AE
Safehear	SAFEHEAR	Single AE
Primo Principio	WiForAgri2022	Single AE
Binare	IOT-SEC	Single AE
Aslogic	SERENA	Single AE
HUPI, DBUS	SMART RAMP	Twin AE
EVERCAM, ProperGate	StorAlge	Twin AE

Complete projects' list portfolio can be found online. Follow this QR code to access it.



# DigiFed Generic Experiment programme

Generic Experiments (GE) are designed to test new collaborations between research institutes and a group of SMEs as well as evaluate new co-financing mechanisms between European and regional funding to foster European industry digitalization. The goal of each GE is to build a community of SMEs around a specific technical topic proposed by one DigiFed research centre, the GE owner.

GE members share their use case and needs with all members, gain direct access to experts of the technical partner and contribute to GE owner technology roadmap, stay on top of latest findings on GE topics to be prepared for market movements.

## DigiFed GE program launched 4 GEs which

- involved 51 SMEs members from 15 EU countries,
- distributed 230k€ Cascade funding to selected SMEs,
- leveraged 270 k€ of cofinancing from regional authorities.

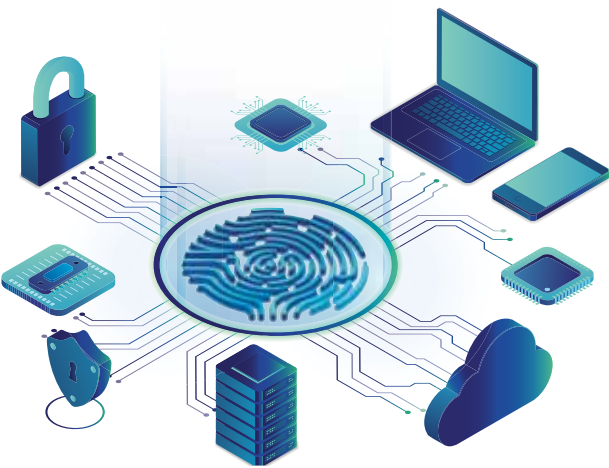


## Cybersecure Platform for IoT

CEA and ST propose a novel secure platform based on STM32MP1 and STSAFE-TPM, easy to use and implement for SMEs to address the critical challenges of security in IoT system and applications. The development started on 21<sup>st</sup> May 2021 includes innovative Cyber-attack monitoring

The community gathers 21 SMEs from the digital and Cyber sectors. 5 of them will test the platform.





## Trust Platform for Digital Assets Management

IKERLAN is developing a Trust Platform based on Blockchain for Industry 4.0 applications. The final objective of this platform is to enable trust across companies involved in the value chain. Use cases: warranty, pay per-use, maintenance, and more.

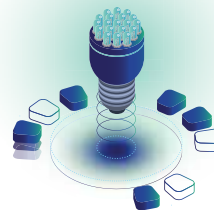
IKERLAN GE community was launched in November 2021, the experiment will last until November 2022 and involves 10 organisations.



## IoT prototyping in agriculture

The basic objective of the project is to establish an innovative know-how, which, with joint efforts, experience and knowledge from relevant stakeholders, will address the efficient approaches, technologies and practices in optimising vineyard management within the concept of "smart vineyards".

The GE community lasts from June 2021 to June 2022 and involves 16 SMEs.



## Energy-efficient smart LED lighting

BME with 6 SMEs from Hungary, France and Slovenia launched an experiment in the attempt to adopt the results of the former H2020 ECSEL project Delphi4LED to the everyday life of SMEs active in solid-state lighting, allowing a wider digitalisation of the LED-based product development workflow and a deeper "smartification" of LED luminaires.



# DigiFed Digital Challenge Innovation Programme

The Digital Challenge innovation programme is designed to create partnerships between industry leaders and technology startups and mid-caps to accelerate the adoption of advanced technologies within the CPS and Embedded Systems sector while addressing some of the key challenges and opportunities across the industry. Through this open innovation initiative, large organisations are invited to participate in the programme and support European companies with funding and access to training, sites to develop a solution for a proposed and realistic business challenge.

## DigiFed Digital Challenge Programme:

- Onboarded 3 Digital Challenge Owners (DCOs): **GE Hydro France**, **Acciona** from Spain and **EDF Hydro France**
- Distributed 115k Euro Cascade funding to selected SMEs
- Leveraged 115K Euro private funding from the DCOs

This is a match funding opportunity where advanced digital technology startups, SMEs and midcaps are selected through an open call to solve industry challenges set by corporate businesses; the selected third parties receive up to a total of Euro 110K programme funding to develop and build new solutions, products, and services to match the DCOs business needs.



## AIOT System of Systems

GE Hydro France is entering Industry 4.0 and looking for solutions to build an AIOT (Artificial Intelligence of Things) system of systems. Critical success factors identified are time to market, set-up time, deployment costs and solution versatility to the GE Hydro's Assets families.

The selected proposal comes from two French companies, CATIE, a digital technology transference centre that brings the 6TRON platform and its expertise in embedded system design, and Aquila Technologies that brings its industrial know-how and industrial design expertise, which are set to offer a complete IIoT solution with embedded AI enabling rapid and customisable prototyping, designed for scalability and industrialisation.

## Next-generation sensors for predictive operation of water treatment

Acciona is looking to establish an end-to-end digital solution for measuring, reporting, and visualising the performance of each reverse osmosis membrane from pressure vessels part of their desalination plants.

Acciona is working with Instrumentation Technologies, a high-tech company from Slovenia, with extensive experience in the field of high energy physics and in developing customised Data Acquisition devices, focusing on Sensorics, Data Acquisition and Processing and Communication , to build an end-to-end digital solution to assess the performance of the reverse osmosis membranes in real-time allowing Acciona to remotely monitor these membranes continuously, without stopping the operation of the plant.

## Drone visual inspection in a confined, metallic, humid, and complex environment

EDF HYDRO seek to improve its turbines' inspection, reducing time and costs whilst enhancing inspection quality and predictive maintenance. This challenge is critical for business operations because electricity generation is key for modern society. In the winter season, Europe just about satisfies its needs in terms of electricity generation. All the countries are relying on an interconnected electricity grid to respond to the demand.

EDF Hydro is working with ISY map, a French start-up whose main expertise is around the conception and realisation of embedded systems for remote and wireless measurements. ISY map is developing a miniaturised, lightweight, and wireless inspection robot with an ultra-high-resolution camera and strong mobility which will be able to navigate inside small and complex environments.



# Digital Challenge Showcase: Acciona

## Next-generation sensors for predictive operation of water treatment

The project fills the gap between technology development and market uptake of products by bringing together main stakeholders along the value chain, from applied technology and innovation management in the role of Digifed Monitoring Partner Digital Catapult, technology development represented by Instrumentation Technologies and end user expertise from the DCO-ACCIONA Agua.

## Digital Challenge Owner

The water business of Acciona is putting its innovative and technical potential into action to create solutions to water scarcity, sanitation problems, access to this vital resource and increased demand.

The company leads the water treatment sector through the design, construction and operation of reverse osmosis desalination plants, drinking water treatment plants, wastewater treatment plants and tertiary treatments for water reuse, and has reinforced its focus on services for cities. It is a worldwide leader in the water treatment sector, especially in the field of reverse osmosis desalination.

In 2020, the company treated almost 1,000 Hm<sup>3</sup> of water, 50.4 % in water stress areas, benefiting more than 100 million people throughout history.

### Acciona

🏢 Enterprise

📍 Spain

⚙️ Water treatment

🌐 [www.acciona.com](http://www.acciona.com)



## Digital Challenge Solution Provider

To tackle Acciona's challenge, the Instrumentation Technologies team provides a solution that will enable Acciona to monitor the membranes remotely, continuously and in real-time without stopping the operation of the plant. More specifically, SWICSSY will allow Acciona to:

- Assess the performance of the reverse osmosis membranes in real-time;
- Have the visibility of the pressure vessel's performance and easily identify the problematic reverse osmosis membrane inside the vessel;
- Integrate measurements as part of active operational strategies.

SWICSSY will represent a significant improvement, especially for large desalination facilities with thousands of RO membranes.

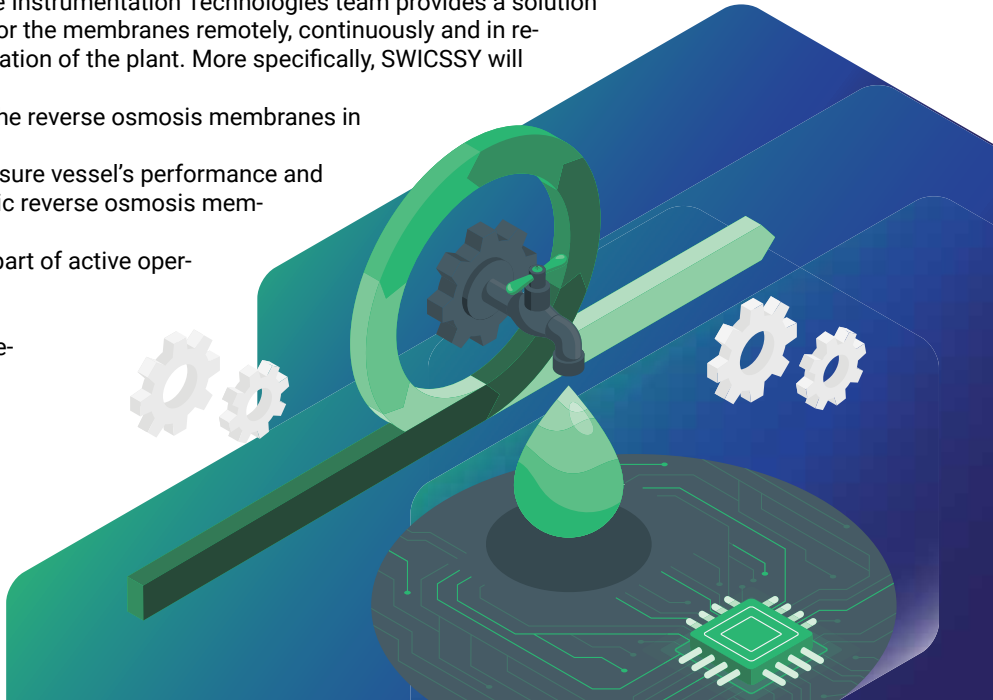
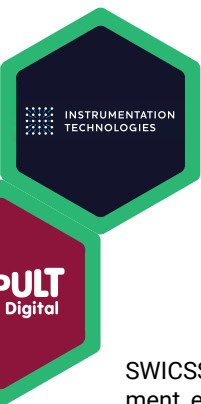
### Instrumentation Technologies

🏢 SME (11-50)

📍 Slovenia

⚙️ IoT

🌐 [www.i-tech.si](http://www.i-tech.si)







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[fb.com/DigiFedHorizon2020](https://fb.com/DigiFedHorizon2020)



[info@digifed.org](mailto:info@digifed.org)



[www.digifed.org](http://www.digifed.org)



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