Presentation of
Innovation Actions aligned
I. Dor (CEA), J. Koch (Hahn-Schickhard)

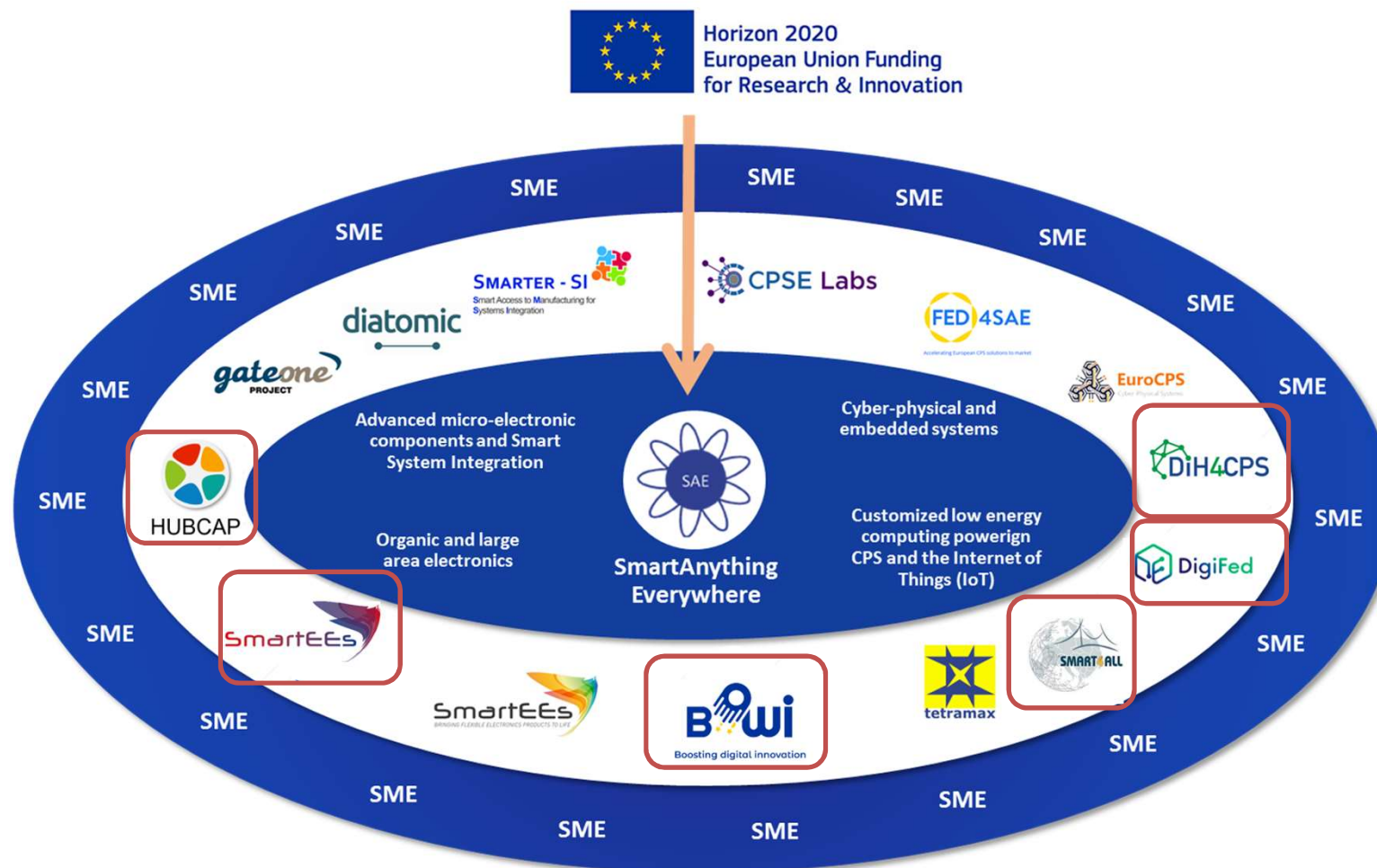# SAE ecosystem

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26 November 2020

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SAE ecosystem

6 Innovation Actions (IAs) aligned in various Technology Areas such as

Cyber-Physical and Embedded Systems

Customised Low Energy Computing powering Cyber-Physical Systems and the Internet of Things

Flexible and Wearable Electronics/ Organic Large Area Electronics

Widening Digital Innovation Hubs

The IAs offer funding to **SMEs and mid-caps** to enhance their products and services through the inclusion of **innovative digital technologies**.

Digitising Europe's industry together

- 3 open calls combining
  - Application Experiments
  - Digital Challenge
  - Generic experiment community
- Target: 38 AE, 3 DC and 40 SMEs GE engaged
- *Services: Cascade funding, technology & Innovation management* support

  ✓ For Non-digital" company that want to create a 1st product/service demonstrator based on digital technologies
  ✓ For Company already using digital technologies that want to integrate new digital technologies or increase their digital maturity

- 3.9 M€ cascade funding

https://digifed.org/

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DigiFed 3 main innovation pathways

Application Experiment	**Digital Challenge**	**Generic Experiment Community**
Get funding and technical and expertise to develop your CPS prototype Access to innovation management training program Target **38 projects**	Get funding to develop a CPS prototype answering a large company need and get access to new market Target **3 projects**	Participate to the technical roadmap of main RTO. Stay in the loop of latest technological results to be ready for market movements. Target **40 SME engaged**

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DigiFed

3 calls for projects :
- 1st call (March 17, 2020 - June 9, 2020)
- 2nd call (September 2020 for 12 weeks)
- 3rd call (March 2021, for 12 weeks)

3 types of challenges

Generic experiment
- Raising digital maturity of groups of SMEs with support from regional funding.

Application Experiment
- Focus on Scale-ups and SMEs that already have clear vision of their digital (CPS) service.
- For non digital SMEs / Start-ups; advancing cybersecurity measures in digitalised SMEs; providing expert solutions.

Digital challenge
- Large enterprises will join forces with SMEs for a digital challenge solution.

Calls

Funding

Focus on Key Enabling Technologies

TRL+1

Results

Bootcamp

Evaluation

DigiFed Innovation & Tech Expertise

DigiFed Funding

Implementation

Optional: Twin SME/MC

55k€ x 2 funding if second partner brings tech expertise

TRL+1

Results

Enterprise

Innovation management expertise by regional Digital Innovation Hubs.

Technical expertise by major CPS research centres and industrials.

55k€ Funding to carry out Digital product/service demonstrators.

Six Technology Partner offers

- **CEA** : Cybersecurity of hardware systems

- **IKERLAN**: Industrial cybersecurity; Dependable Embedded Systems; Information and Communication Technologies; HW and communication systems.

- **ST- F:** STM32 MPU and STM32 MCU enabling innovative applications for Smart Industry, Smart City, Smart Home and Smart Things

- **ST- I:** Physical Digital Transformation support with HW&SW tools for fast prototyping addressing innovation on different application domains.

- **Univ Ljubjana :** Cloud DevOps; Electrical blockchain switch; Big Data analytics tools; IoT Prototyping & Sensing Automation System; 5G Experimentation, Quality and Intervention Monitoring System;

- **DGC:** 5G and IoT network testbeds, IoT benchmarking, AI compute, Machine Learning and AI ethics

Consult Partners Technical offer on DigiFed website
https://digifed.org/explore/digifed-offer/

Innovation management support

All selected projects will receive Innovation Management support :

→ To prepare the new product/service Go-to-market strategy,

→ To get access to further funding or to attract private investors.

- **Blumorpho:** Innovation Management Training program

- **Ikerlan** : Cybersecurity sensibilization training programm to companies that needs it

- DigiFed **Digital Innovation Hubs** open their network to identify new partner for your company
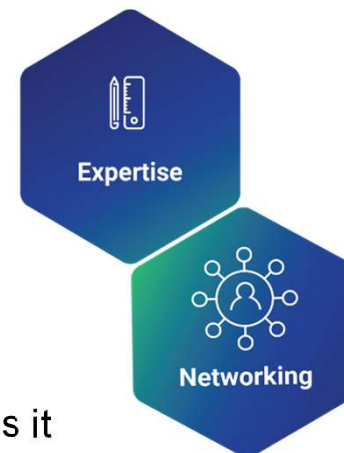
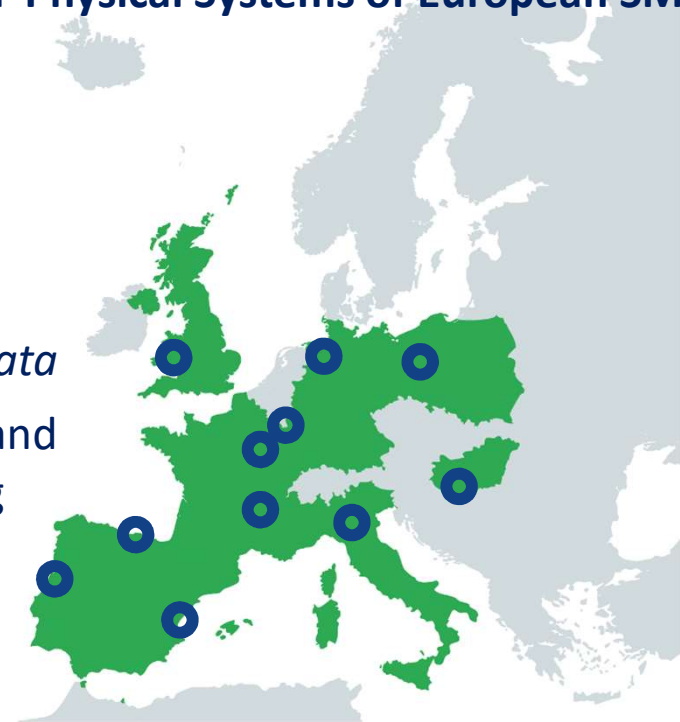|	
❖ **Digital Catapult** – UK	❖ **University Ljubjana** - Solvenia
❖ **Steinbeis** – Germany	❖ **BME** - Hungaria
❖ **MINALOGIC** - France	❖ **Ikerlan** - Spain

Fostering DIHs for Embedding Interoperability in Cyber-Physical Systems of European SMEs

- 33 partners, 10 EU countries

- 13 initial DIHs, 9 countries

- 2 open calls

- Target: 21 AEs, 15 DIHs

- *Services: Ecosystem, Technology, business, skill and data*

  - ✓ To support European companies, mainly SMEs and Mid-Caps, aiming to establish Europe as leading innovator of the 4th Industrial Revolution.
  - ✓ To create an interdisciplinary network of DIHs, solution providers and regional clusters, by identifying and materializing service-based collaboration processes among them.

- 1.8 M€ for open calls

https://dih4cps.eu/

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OPEN CALLS

**Open Call A
2020**

Add 10 AEs

Validate CPES in different environments

**Open Call B
2021**

Add 15 DIHs to the network

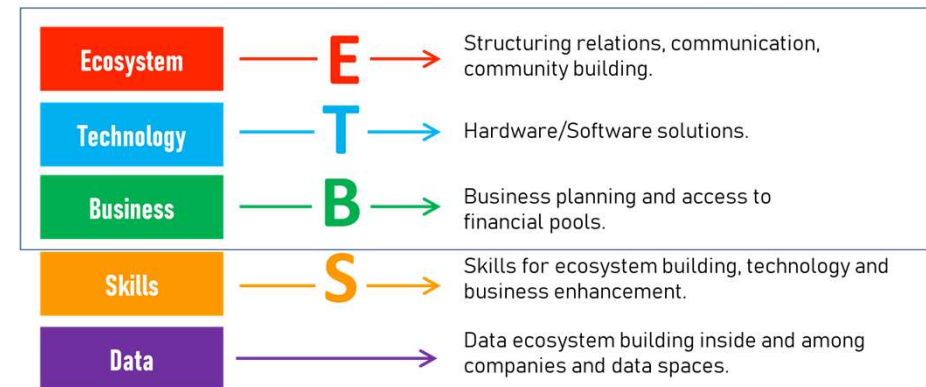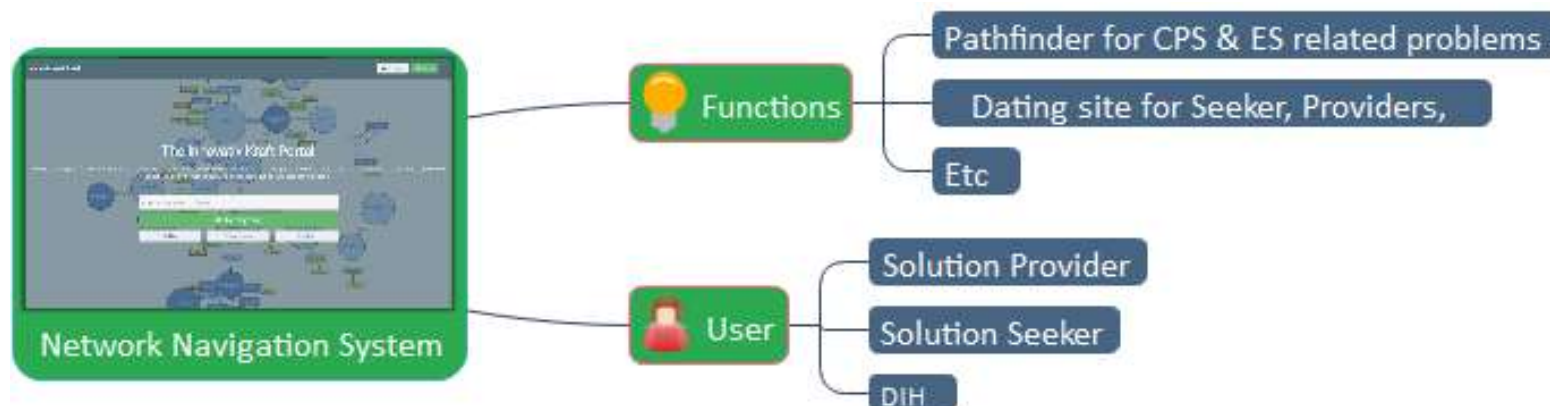Expand the DIH4CPS ecosystem

Network Mapping

ETB model

Ecosystem	**E** →	Structuring relations, communication, community building.
Technology	**T** →	Hardware/Software solutions.
Business	**B** →	Business planning and access to financial pools.
Skills	**S** →	Skills for ecosystem building, technology and business enhancement.
Data	→	Data ecosystem building inside and among companies and data spaces.
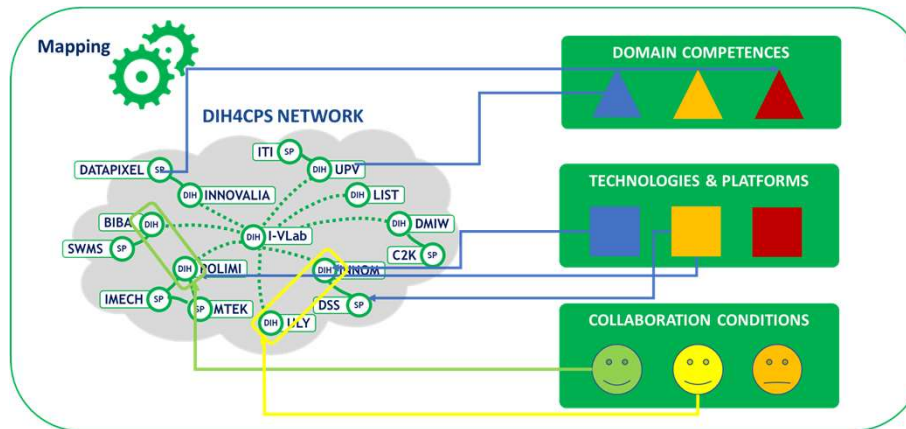
User-Friendly Network Navigation System

Join us in the Cyber-Physical Systems revolution!

- 17 partners, 10 EU countries

- 3 open calls
  - #1 Pull
  - #2 Experiment
  - #3 Innovate

- *Services: knowledge, technology, fast prototyping & validation, ecosystem building, access to market & funding*
  - ✓ For SMEs to experiment and innovate with MBD CPS solutions and technologies.
  - ✓ Get the tools and resources to scale ideas and grow business

- 3.2 M€ for open calls

https://www.hubcap.eu/

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HUBCAP offer

Network of DIHs:
- Inventory of service offerings
- Ecosystem building
- Cross-DIH collaboration
- Network sustainability

Seed SMEs
- Enabling quicker start for the platform
- Early-stage prototypical usage of HUBCAP
- Awareness-raising demonstrations

Collaboration Platform:
- Cloud-enabled, based on DIHIWARE
- "Access to" and "Collaborate with":
  - Ecosystem
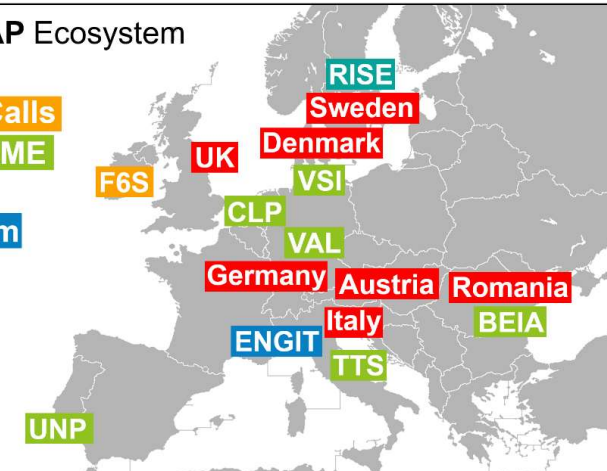 - Community-building
  - Marketplace
  - Sandbox

Open Calls
- Engage early-adopters
- 3 open call series

Model-Based Design:
- Populating the platform
- Enabling model-based services in sandbox
- Multi-user, validation and logging capabilities

HUBCAP Ecosystem
- DIH
- Open Calls
- Seed SME
- MBD
- Platform

RISE — Sweden — Denmark — UK — VSI — F6S — CLP — VAL — Germany — Austria — Romania — BEIA — Italy — ENGIT — TTS — UNP

HUBCAP has a €3.2 million equity-free fund for SMEs to experiment and innovate with digital technologies

Call #1 Pull

Does your SME/midcap provide existing and marketable CPS & MBD tools and services? Integrate your asset in the HUBCAP platform and find potential new customers and collaborators in the subsequent open calls.

1000€
per SME

Call #2 Experiment

Is your SME/midcap looking to embrace digital innovation? Connect with a supplier from the HUBCAP platform and receive tailormade support and services to co-create and experiment with CPS & MBD tools.

30,000€ to **75,000€**
per consortium of 2 SMEs

Call #3 Innovate

Develop and implement highly innovative and challenging CPS & MBD experiments. Create new products and services and benefit from business and tecnical support from the HUBCAP experts for highest impact.

Up to **200,000€**
per consortium of 2-3 SMEs

Non-EU/SMEs are also welcome to share their assets, but cannot apply to the OCs!

An extensive network of Digital Innovation Hubs for boosting technology and business development in South, Eastern and Central Europe

- **25 partners, 15 EU countries** (South, Eastern & Central Europe)

- **9 open calls (3 per type)**
  - Knowledge Transfer Experiments
  - Technology Transfer Experiments
  - Cross-domain Technology Transfer Experiments
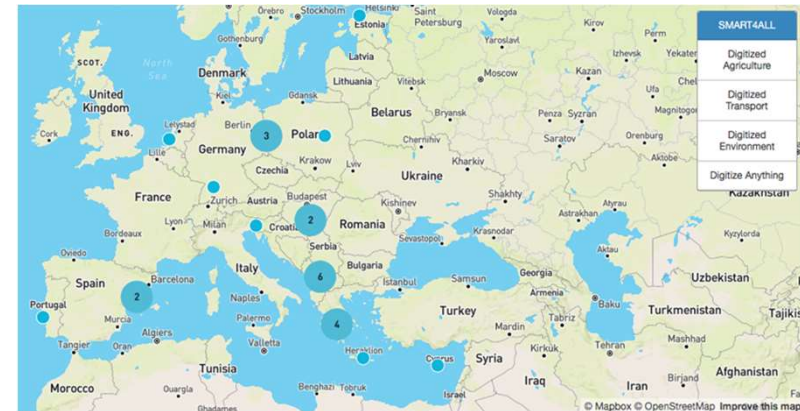
- Target: 88 Pathfinder Application Experiments (PAEs) in the domain of Digitized Transport, Digitized Agriculture, Digitized Environment, Digitized Anything

- *Support : Novel coaching services from world lead experts in ethics, technology, funding and business development*
  - ✓ To accelerate digital transformation and increase digital skills in Europe
  - ✓ To develop self-sustained, cross-border pathfinder application experiments

- **2.2 M€ funding through open calls**

https://smart4all-project.eu/

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SMART4ALL An Extensive Network of DIHs

Ecosystem Services:

- Access to SMART4ALL network/ecosystem
- Identify funding opportunities
  - ✓ SMART4ALL Open Calls
  - ✓ Local and European funding frameworks
- Application oriented **ethics coaching**
- Interconnection with other networks/ecosystems

Business Services:

- Application oriented **coaching for business development**
- Partner search and business matchmaking
- Online training courses

Technological Services:

- Application oriented **technological coaching**
- Access to state-of-the-art infrastructures & services
- Technological matchmaking
- Online training courses

SMART4ALL Tools – Marketplace-as-a-Service

Marketplace-as-a-Service provides an **one-stop-smart-shop** for:

- Applying to Pathfinder Application Experiment (PAE) for funding
- Monitoring, supporting and advertising the PAEs funded via SMART4ALL open calls
- Coaching for identifying business development and funding opportunities
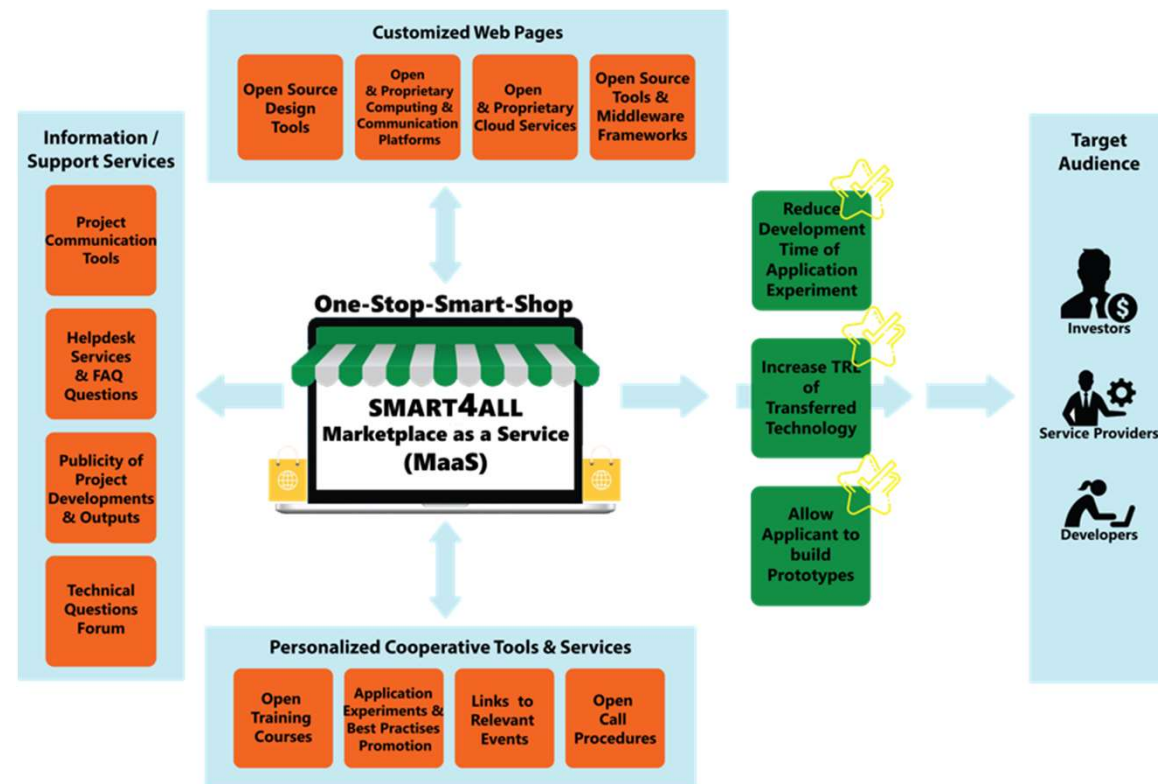
SMART4ALL PAE Types (88 in total)

PAE
Pathfinder Application Experiments

KTEs *Knowledge Transfer Experiments*	FTTEs *Focused Technology Transfer Experiments*	CTTEs *Cross-domain Technology Transfer Experiments*
Funding: 8K Euros **Type:** Internship	**Funding:** 80K Euros **Type:** Project	**Funding:** 80K Euros **Type:** Project

- **Internal:** 21 FTTE (vertical) will be developed by SMART4ALL
- **External:** 67 KTEs/FTEs/CCTEs will be developed via open call funding

Bringing Flexible Electronic products to life

- Target: 47 Application Experiments
- *Services: Testing, Prototyping or Up-scaling*
  - ✓ To easy access to digital innovation
  - ✓ To provide high-value services to innovative companies
  - ✓ To foster pan-EU collaboration network for flexible and wearable electronics
- Open Calls with 5 cut-off dates
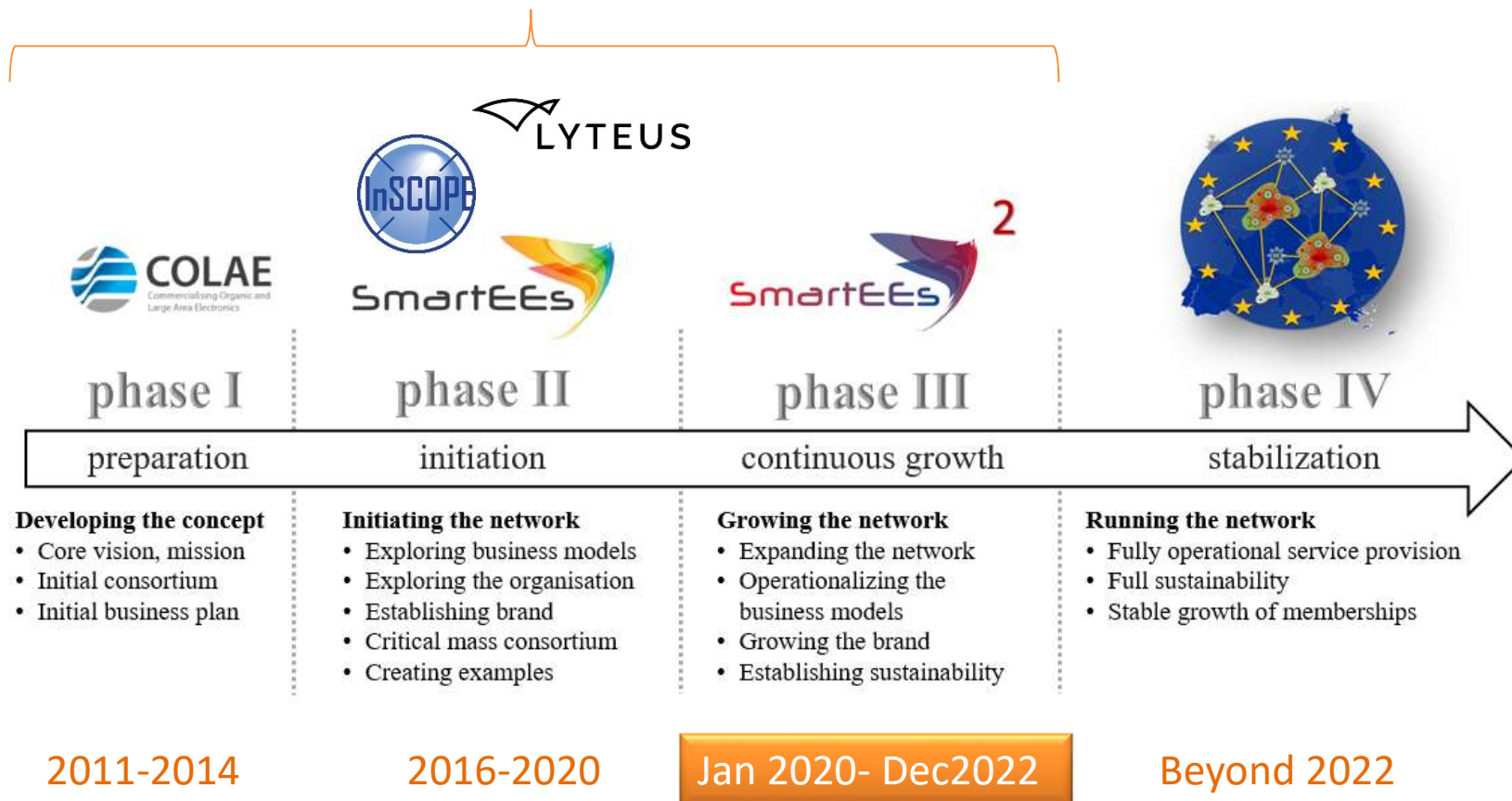- 2.9 M€ cascade funding

https://smartees.eu/

Eligible to FSTP:
SME/MidCap end-users
+ SME/MidCap suppliers of innovation services

FP7, H2020
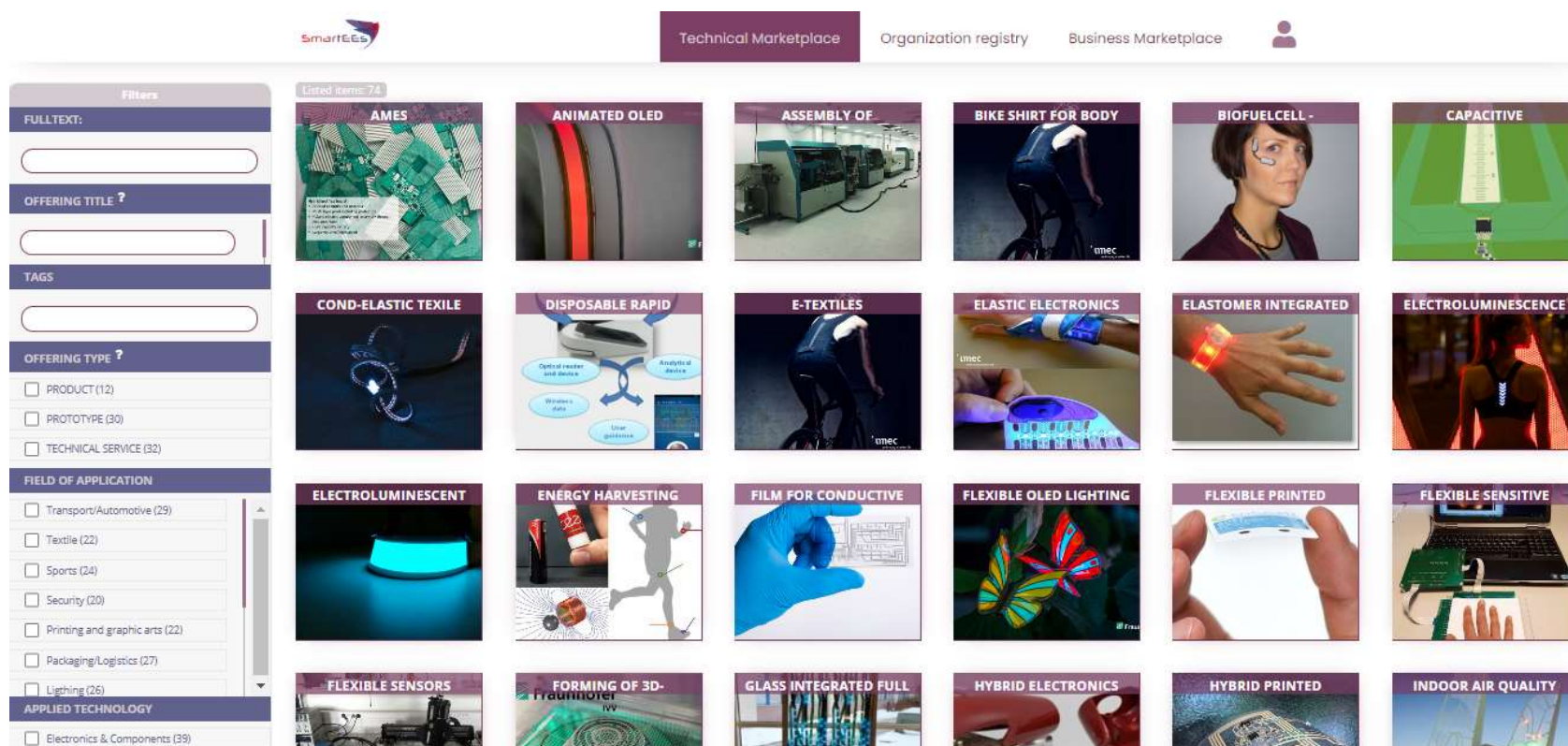
Self-sustainable service

LYTEUS

phase I — preparation
Developing the concept
- Core vision, mission
- Initial consortium
- Initial business plan

phase II — initiation
Initiating the network
- Exploring business models
- Exploring the organisation
- Establishing brand
- Critical mass consortium
- Creating examples

phase III — continuous growth
Growing the network
- Expanding the network
- Operationalizing the business models
- Growing the brand
- Establishing sustainability

phase IV — stabilization
Running the network
- Fully operational service provision
- Full sustainability
- Stable growth of memberships

2011-2014   2016-2020   Jan 2020- Dec2022   Beyond 2022

SmartEEs ecosystem

https://ecosystem.smartees2.eu/technical-marketplace/

Customer journey

❏ SDA duration with *hard deadline* for completion
❏ AE duration adjusted from 6-9 months (SmartEEs) to 9-12 months

Approximately 9 to 12 Months in Duration

Preparing Innovation Ideas & Submission

ICs can discuss their innovation ideas and needs with the consortium

Download Application Information Pack

helpdesk Address IC Inquires

Evaluation & Selection

Selected experts

Following evaluation process, the most promising ICs will be invited to proceed

Innovation Idea Submitted by IC

1 Month

IC Successfully Passed Evaluation

Joint Service Planning

Service Delivery Manager Assigned to IC

Co-development of Joint Implementation Plan

2 Months

Service Delivery Agreement (SDA)

Service Delivery

Start Assist within 2 weeks of SDA signing

Monthly Status Reporting

9– 12 Months

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Widening concept in Digital innovation hubs

- 11 partners, 11 countries

- 3 open calls
  - TTEs
  - Developping DIHs from industrial regions underrepresented in S4E/I4MS from Widening Member States and Associated Countries

- Target: 60 TTEs, 9 developing DIHs

- *Support*: F*unding for technology transfer, for supporting and fostering cooperation between DIHs from mature & emerging regions*
  - ✓ To share collaboration options and build self-sustainable DIH widening network
  - ✓ To develop and test a viable business model for DIH cooperation
  - ✓ To create a blended financing roadmap

- 4.8 M€ for funding

https://www.bowi-network.eu

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Applying widening in practice

1

Build connections between established and developing DIHs to facilitate access to advanced digital solutions across Europe

2

Support the developing DIHs to become the first technology access points for local companies

3

Support developing DIHs in becoming their region's opinion leaders

About the experiments

2 sets of experiments carried out to test and refine the DIH cooperation business model

- **Call 1: Pioneer phase** involves hubs from the project's consortium
- **Call2: Extended phase** involves newly attracted DIHs to validate the findings of the 1st phase.

During the experiments, the established and the developing hubs will closely cooperate to assist companies with testing and implementation of specific solutions.

Experiment participants – SMEs and mid-caps and developing hubs that will support the extended phase – will be selected during open calls that will be published on BOWI website.
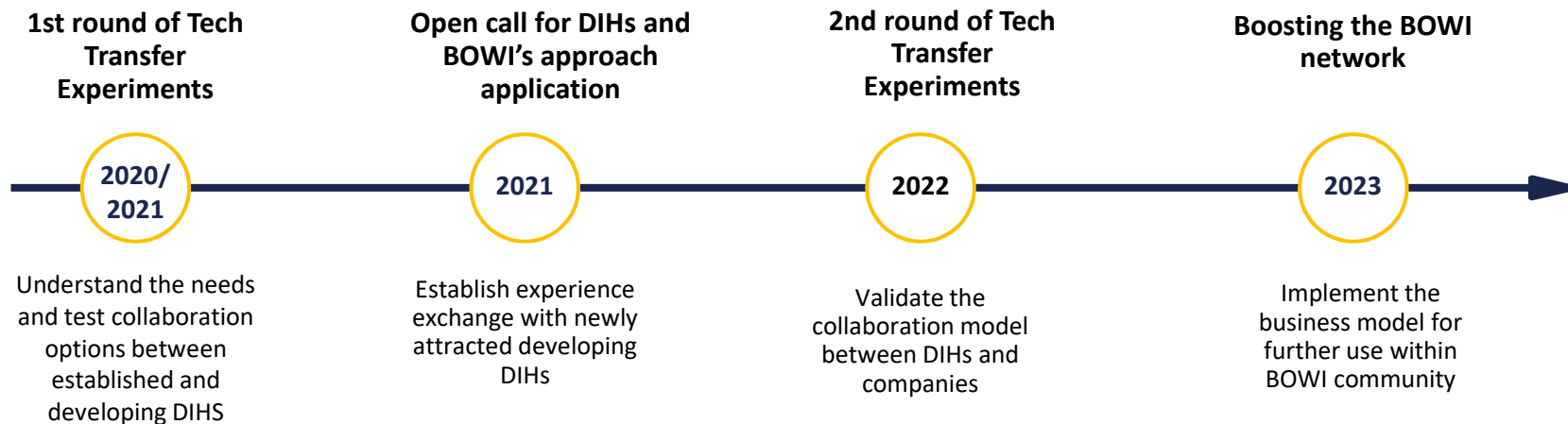
About the experiments

Implementation timeline

1st round of Tech Transfer Experiments

2020/ 2021

Understand the needs and test collaboration options between established and developing DIHS

Open call for DIHs and BOWI's approach application

2021

Establish experience exchange with newly attracted developing DIHs

2nd round of Tech Transfer Experiments

2022

Validate the collaboration model between DIHs and companies

Boosting the BOWI network

2023

Implement the business model for further use within BOWI community

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Thank you for your attention!