FOSTERING DIHS FOR EMBEDDING INTEROPERABILITY IN CYBER-PHYSICAL SYSTEMS OF EUROPEAN SMES

1ST DigiFed DiH-Network Event

UNINOVA

DiH4CPS

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

DIH4CPS supports European companies, mainly SMEs and Mid-Caps, aiming to establish Europe as leading innovator of the 4th Industrial Revolution.

DIH4CPS creates an interdisciplinary network of DIHs, solution providers and regional clusters.

The DIH4CPS Network will become a sustainable network, instantiated within the INTEROP-VLab organization, thus remaining active far beyond the DIH4CPS project duration.
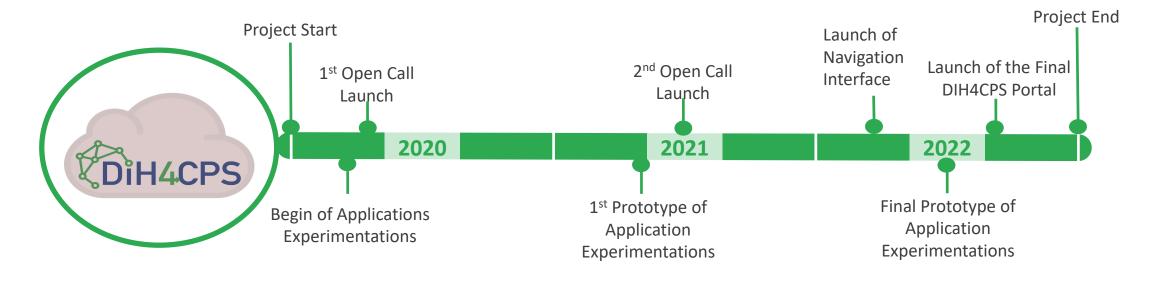
PROJECT OVERVIEW

33 Partners

10 EU Countries

15 SMEs

13 DIH

9 Research Centres

5 Associations

3 Years (2020-2022)

9.1M€ Cost

8M€ Funding

11 Initial Application Experiments

2M€ for Open Calls
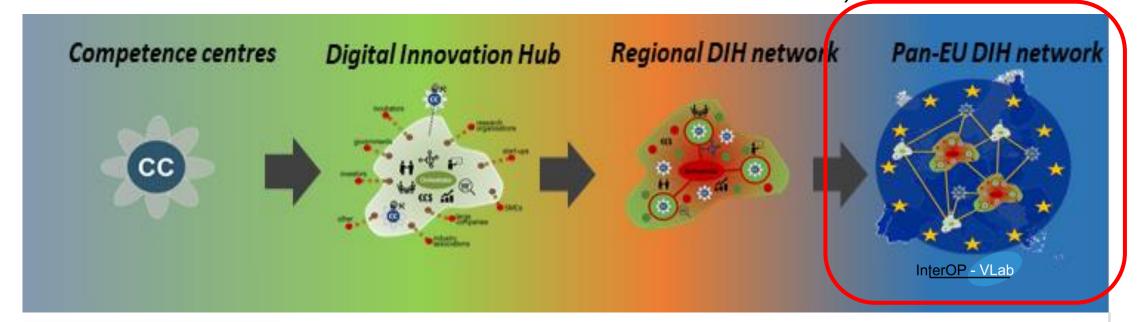
Cyber-Physical and Embedded Systems DIHs Network

- Establish and Empower a Network of Cyber-Physical and Embedded Systems focused DIHs
- Widen and Unchain the Network of Cyber-Physical and Embedded Systems focused DIHs
- Create a System for the Intelligent Navigation in the Network
- Use the DIH4CPS Network to Support Cyber-Physical and Embedded Systems Technology Uptake
- Sustain the Network and leverage Impact

DIH4CPS Tools – ETB Model Adapted

E — Ecosystem

- COMMUNITY BUILDING
- DIH INNOVATION DEVELOPMENT
- ECOSYSTEM GOVERNANCE

T — Technology

- IDEAS MANAGEMENT AND MATERIALISATION
- CONTRACT RESEARCH
- PROVISION OF INFRASTRUCTURE
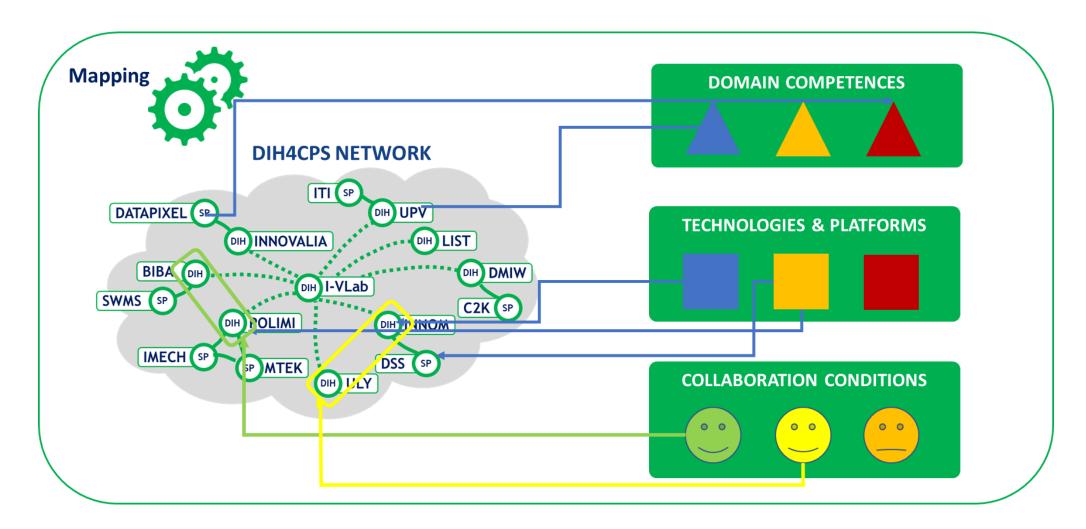- TECHNICAL SUPPORT ON SCALE UP
- VERIFICATION AND VALIDATION

B — Business

- INCUBATION ACCELERATION SUPPORT
- ACCESS TO FINANCE
- OFFERING HOUSING
- BUSINESS TRAINING AND EDUCATION
- PROJECT DEVELOPMENT

S — Skills

- PROCESS & ORGANIZATIONAL MATURITY
- HUMAN CAPABILITIES MATURITY
- SKILLS IMPROVEMENT

D — Data

- DATA ACQUISITION AND SENSING
- DATA PROCESSING & ANALYSIS
- DECISION-MAKING
- PHYSICAL-HUMAN ACTION & INTERACTION
- DATA SHARING
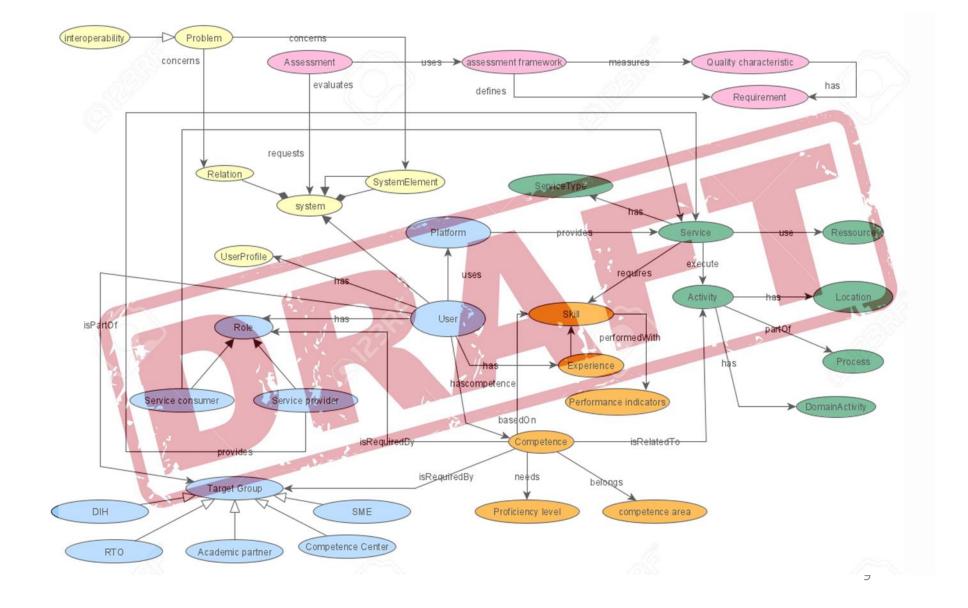
- User
  - Solution Seeker
  - Solution Provider
  - DIHs/Competence Centers

- Functions
  - Pathfinder for CPS & ES related Problems
  - Dating Site for Seekers, Providers and Helping Hands
  - Network Management Tool
  - Etc.

- 13 initial DIHs from 9 countries
  - BIBA – Bremer Institut für Produktion und Logistik GmbH
  - ICT 4 Manufacturing DIH
  - Quai A...
  - Politecnico...
  - Innova...
  - Basqu...
  - Hub 4.0
  - The Da...
  - PRODUTECH... ...orm
  - Digital Manufact... ...Wales
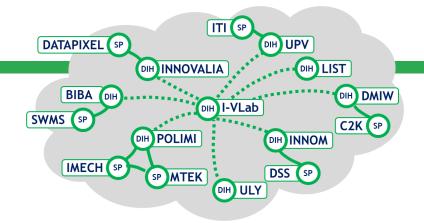 - Luxembourg Institute of Science and Technology
  - HPC4Poland
  - Innomine Digital Innovation Hub
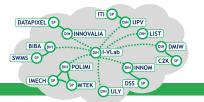 - inNOVA4TECH - UNINOVA

INITIAL APPLICATION EXPERIMENTATIONS

| iAE	Description	Sector	Hub	Partners
1	CPS for safe and sustainable aquaculture farming	Aquaculture	Germany	POLY, SWMS, BIBA
2	Complete clinical data with data from patient environment	Home Health Care	France 1	LYON2, LINDE
3	CPS for personalised interactive Tourist Platform	Tourism	France 2	UL, CCI, ESF
4	Energy management in buildings and residential sector	Energy	Italy	EVO, MIRA, INT, POLIMI
5	Advanced 3D audio-visual installations for hospitality events, trading shows and conferences	Entertainment	Spain 1	KUMO, DPX, INNO
6	Increased productivity in olive processing by implementing CPS and image recognition	Food Processing	Spain 2	UPV, MSCAN, ITI
7	CPS for security and wellbeing of shop floor workers	Healthcare	Portugal	UNINOVA, KBIZ, PRODT
8	Track and trace scheduled product in an open and hostile environment by deploying CPS.	Construction	UK	C2K, BRC, DMIW
9	Smart Mobility using Cyber-Physical embedded systems	Mobility	Luxemburg	LIST, LUXM
10	Sensorised planter boxes for urban orchards	Agriculture	Poland	PSNC, FORA
11	Capacity planning and production optimization for custom machine orders for SMEs	Machine Production	Hungary	INNOM, 4S, DSS
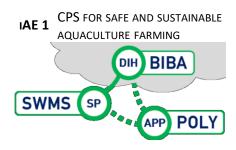
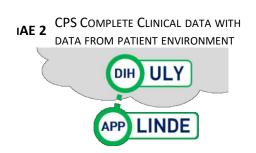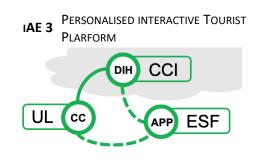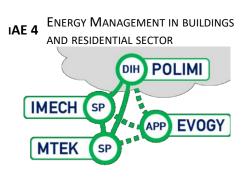- 11 initial Application Experimentations
- 9 countries
- 7 sectors

DIH4CPS 11 initial Application Experiments (iAE)

iAE 1 CPS FOR SAFE AND SUSTAINABLE AQUACULTURE FARMING

iAE 2 CPS COMPLETE CLINICAL data WITH DATA FROM PATIENT ENVIRONMENT

iAE 3 PERSONALISED INTERACTIVE TOURIST PLARFORM

iAE 4 ENERGY MANAGEMENT IN BUILDINGS AND RESIDENTIAL SECTOR

iAE 5 ADVANCED 3D AUDIO-VISUAL INSTALLATIONS FOR HOSPITALITY EVENTS, TRADING SHOWS AND CONFERENCES

iAE 6 INCREASED PRODUCTIVITY IN OLIVE PROCESSING BY IMPLEMENTING CPS AND IMAGE RECOGNITION
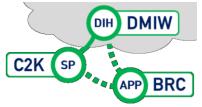
iAE 7 CPS FOR SECURITY AND WELLBEING OF SHOP FLOOR WORKERS

iAE 8 TRACK AND TRACE SCHEDULED PRODUCT IN AN OPEN AND HOSTILE ENVIRONMENT BY DEPLOYING CPS

iAE 9 SMART MOBILITY USING CYBER-PHYSICAL EMBEBBED SYSTEMS

iAE 10 SENSORISED PLANTER BOXES FOR URBAN ORCHARDS

iAE 11 CAPACITY PLANNING AND PRODUCTION OPTIMIZATION FOR CUSTOM MACHINE ORDERS FOR SME's

DIH4CPS is coordinated by

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