

Interregional Partnership for Smart Specialization on Artificial Intelligence and Human Machine Interface

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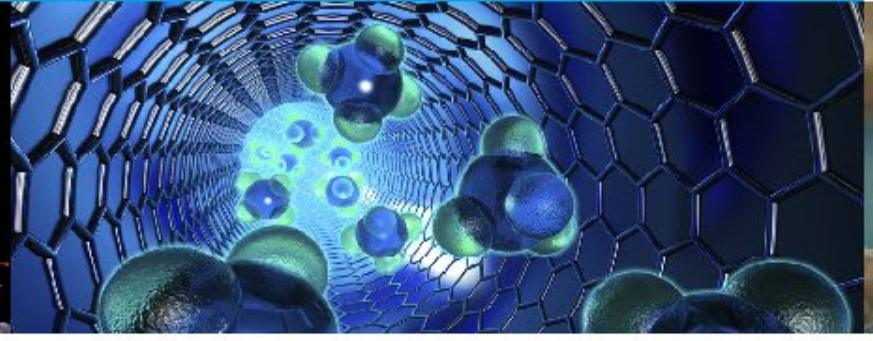
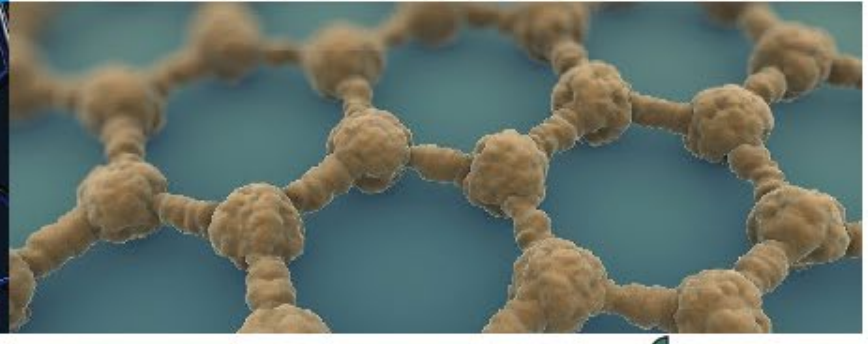
Strateško razvojno inovacijsko partnerstvo
TOVARNE PRIHODNOSTI

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SLOVENIAN TOOL AND DIE DEVELOPMENT CENTRE

Smart Specialisation Thematic Platforms

Slovenian Smart Specialisation Strategy (S4)

DIGITAL | CIRCULAR | INDUSTRY 4.0

Join the SMART SPECIALISATION PLATFORM

REPUBLIKA SLOVENIJA
MINISTRSTVO ZA GOSPODARSKI RAZVOJ IN TEHNOLOGIJO

Institut "Jožef Stefan" Ljubljana, Slovenija

kcstv

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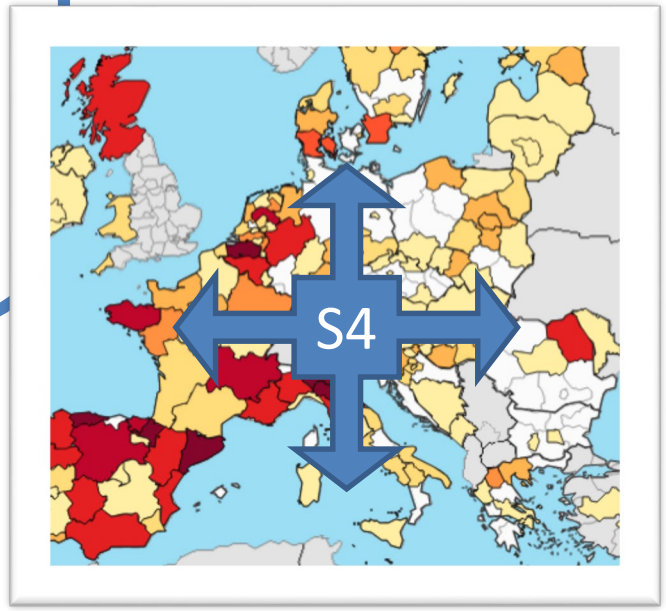


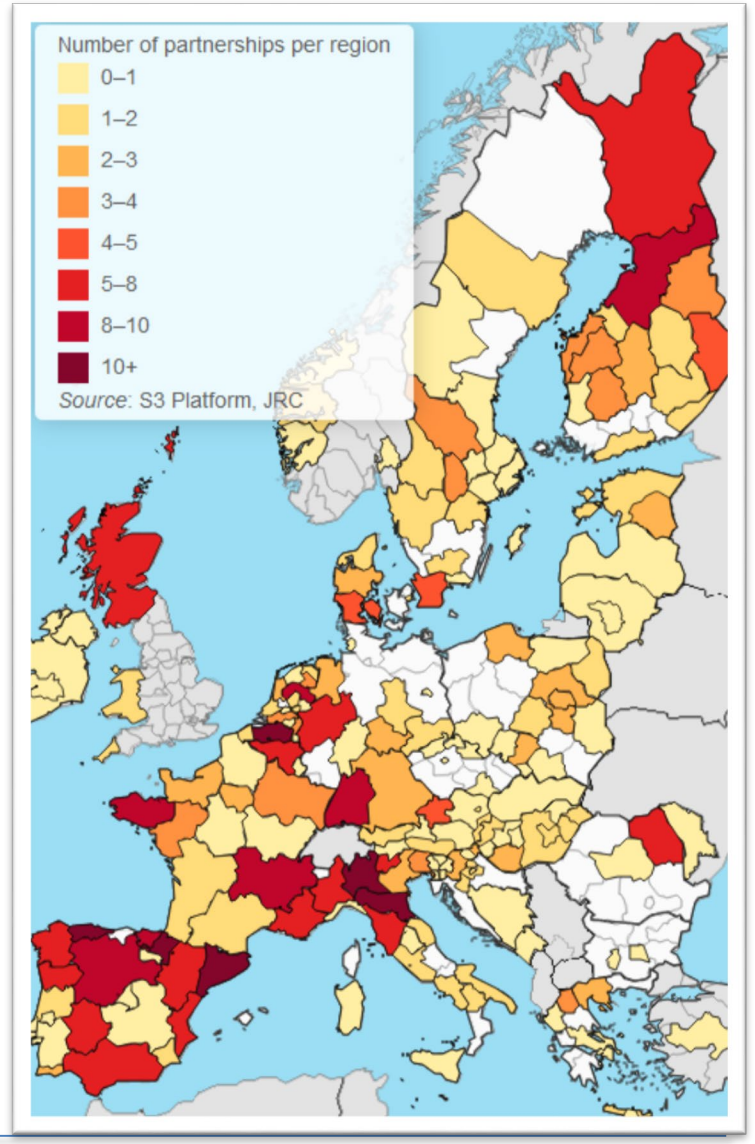
S3 Thematic Platforms

- to support interregional cooperation in the context of S3
- build synergies with other regional/national and EU initiatives (Horizon 2020, COSME, EFSI etc.)

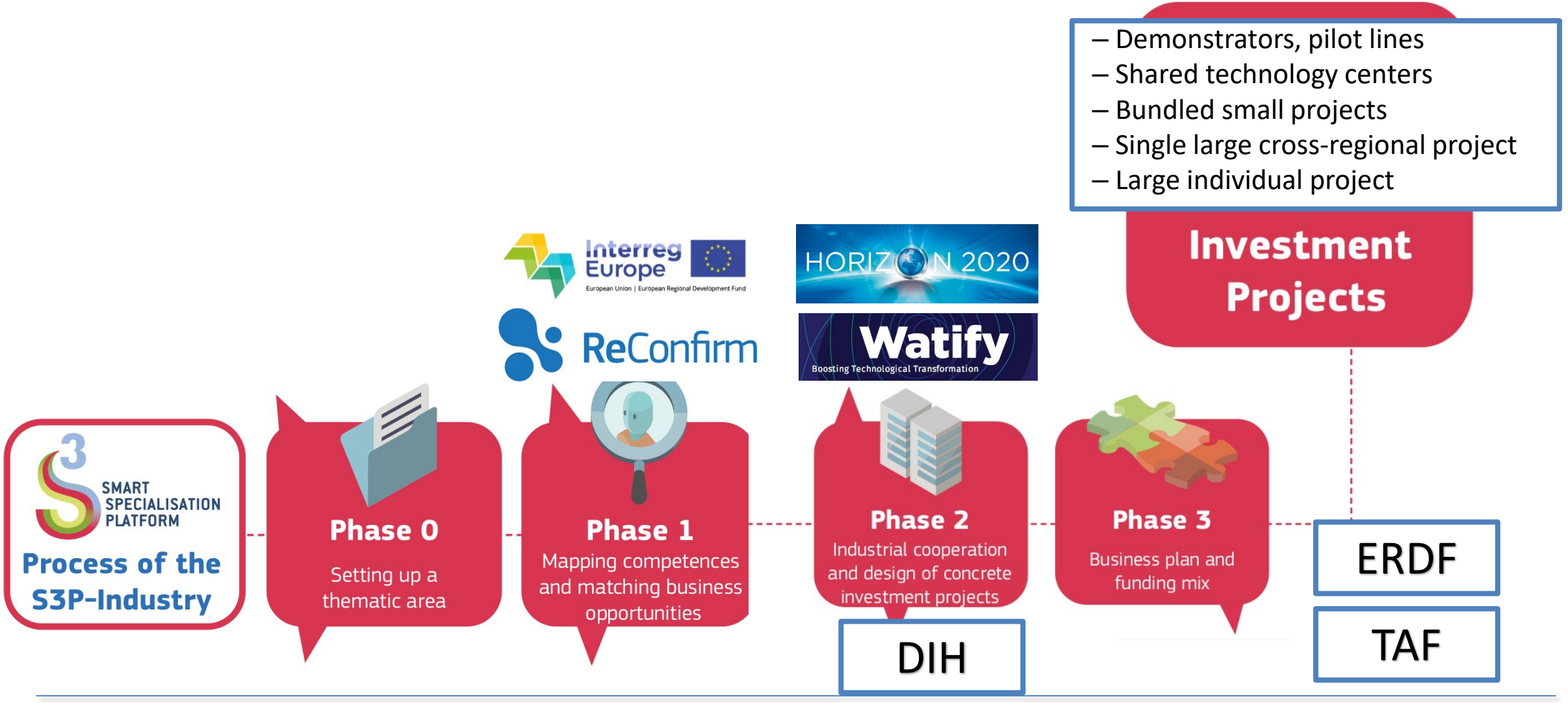
S3 Thematic Platforms: overview

- Interregional joint demonstration projects
- Cooperation between the clusters, companies and knowledge institutions in specific technology, field or application
- Building of value chains through a pipeline of investments projects
- Three layer investment model inspired by the Vanguard Initiative
  - **Targeted investments** (regional/national)
  - **Network of demonstration and pilot projects** (examples)
  - **Follow-up business investments** (upscaling with financial instruments)

S3P-Energy	Energy (6)
S3P-AF	Agri-Food (5)
S3P-IM	Industrial Modernization (21)



S3 Thematic Platforms: how does it work?



S3P–Industrial Modernization: Thematic Areas

Advanced manufacturing for energy applications	Interregional cooperation on innovative use of non-food Biomass	Efficient and Sustainable Manufacturing	High Performance Production through 3D-Printing	New Nano-Enabled Products	Smart Regional Investments in Textile Innovation
Medical Technology	Photonics	SME integration to Industry 4.0	Sport	Digitalisation and Safety for Tourism	Cybersecurity
Social Economy	Artificial Intelligence and Human Machine Interface	Personalised Medicine	Chemicals	Safe and sustainable mobility	Advanced materials for batteries
	Mining industry	Water Smart Territories	Hydrogen valleys		

SLO participating

SLO co-leading

S3P-IM: AI&HMI partnership

http://s3platform.jrc.ec.europa.eu/artificial-intelligence

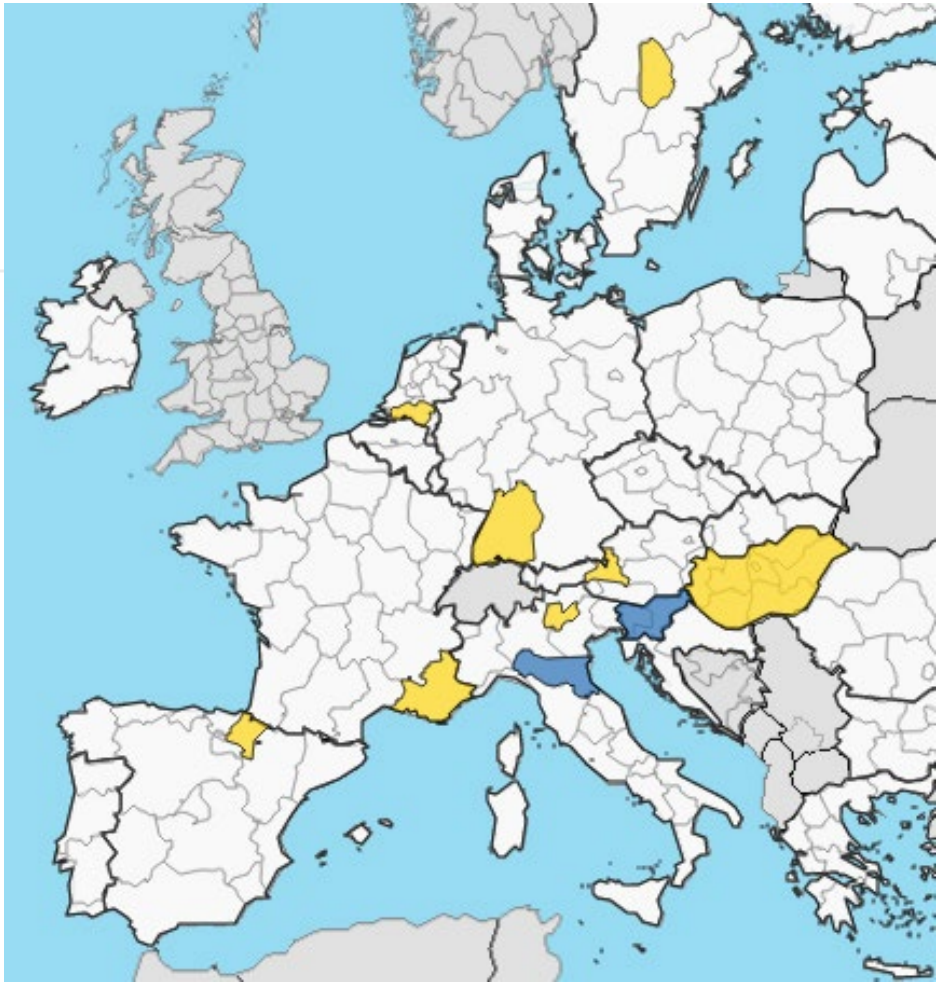
Join the SMART SPECIALISATION PLATFORM

Leading regions

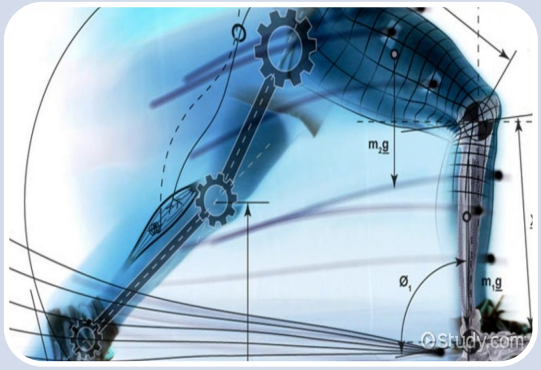
- Emilia-Romagna (IT)
- Slovenia

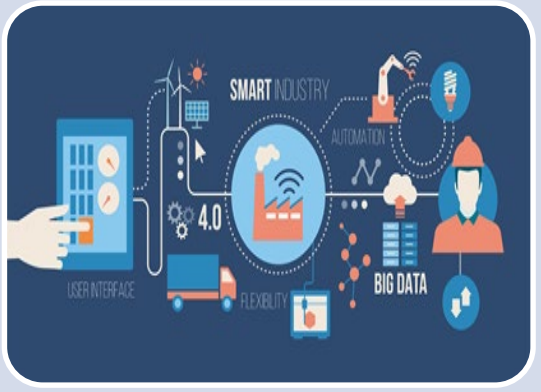
Participating regions

- BADEN-WÜRTTEMBERG (DE)
- Comunidad Foral de Navarra (ES)
- Hungary
- Noord-Brabant (NL)
- PROVENCE-ALPES-CÔTE D'AZUR (FR)
- Provincia Autonoma di Trento (IT)
- Salzburg (AT)
- Örebro län (SE)



AI&HMI partnership: general scope





User experience data analytics

- Physiological and biomechanical data analysis
- Physical and mental stress/strain detection
- More comfortable and satisfying working conditions

User centered Design

- Human-machine intelligent coordination
- Support to frail users
- AI driven mechatronics

AI-enhanced Cyber Physical Automation

- AI-driven Processes
- AI-accelerated cyber-mechatronics
- AI-Autonomous and Collaborative Robotics

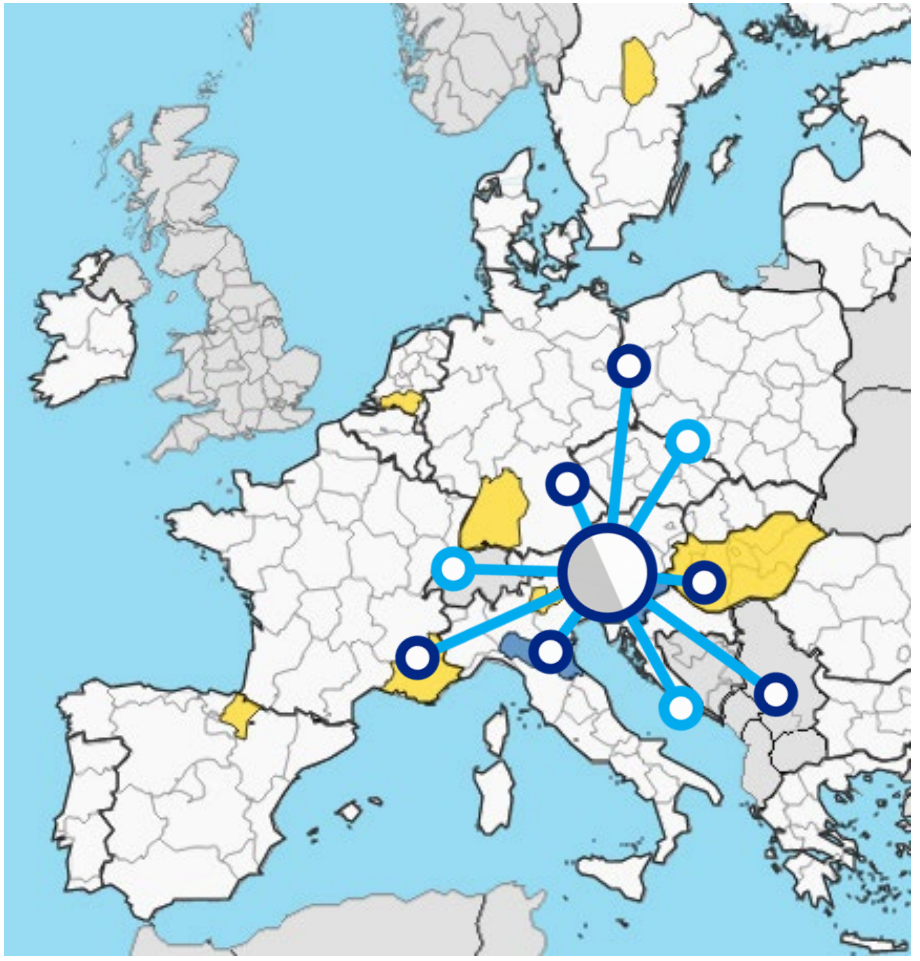
HMI evolution

- Cognitive systems and computational cognitive architectures
- Multisensory Augmented Reality
- Virtual presence for remote operations

AI&HMI partnership: Demo LABs as demo cases

Why Demo LABs

- AI as enabling technology, transversal to almost all industrial applications
- a LAB structure may let ALL kind of industrial enterprises (including SMEs) to address needs and develop specific AI enabled solution
- A LAB structure as replica or be specialized to regional priority sectors

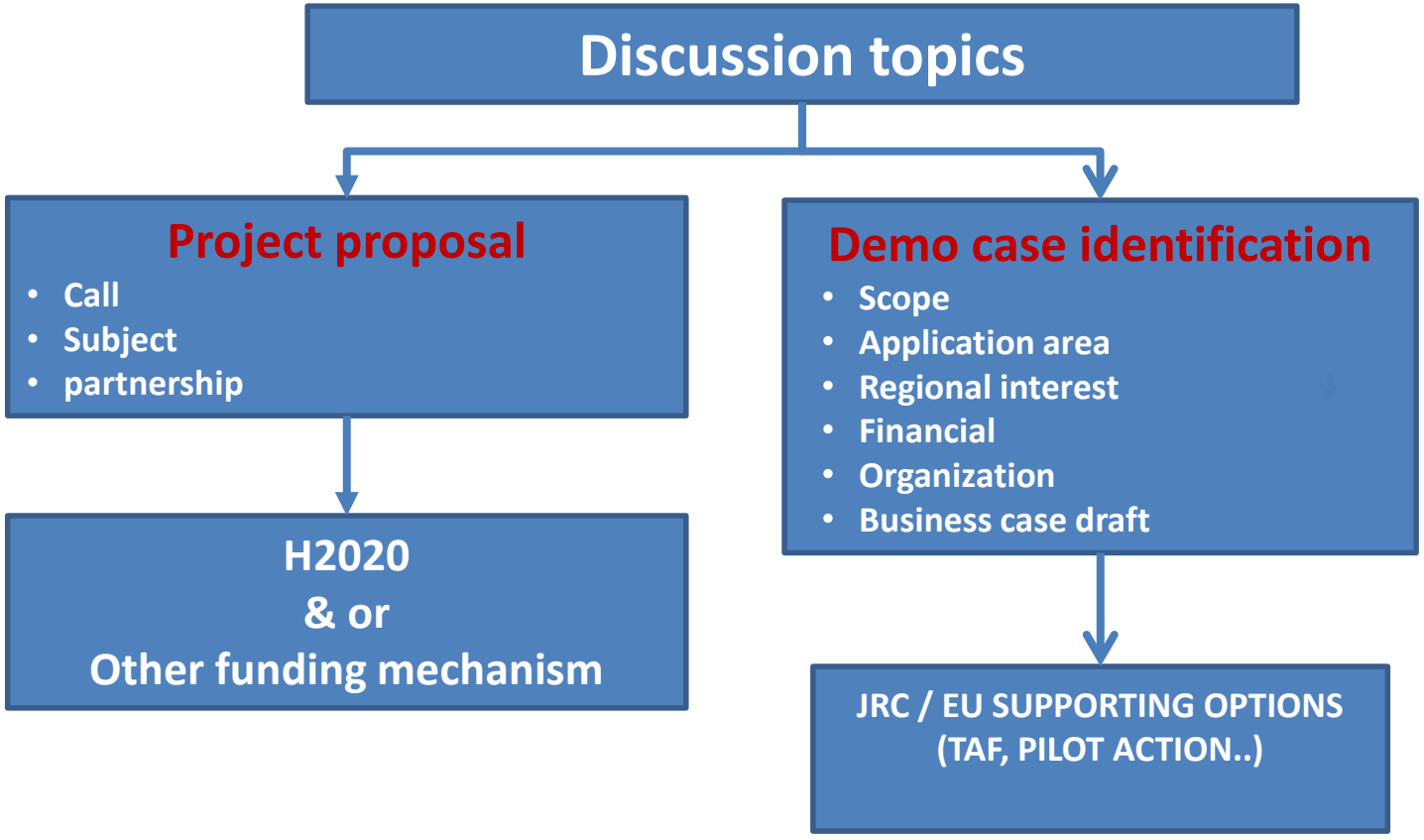


LAB objectives

- Technology demonstration (test before invest)
- Service provider (develop tailored solution)
- (Co)operate inter-regionally

AI&HMI partnership: work diagram

Bottom up approach from regional discussion topics (technology, competences) to demo cases



Demo Labs business model

Phase 1: Building up the LAB(s)

- Facility, Consortium, Staff
- Expected to be a spin-off from existing lab/DIH

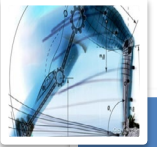
Phase 2: Working with industry/SMEs

- Co-working mode
- Ad-hoc experts in the team
- Regionally co-founded voucher system

Phase 3: Continuous LAB evolution

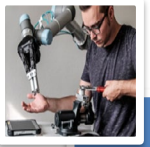
- R&D&I projects participation

AI&HMI partnership: Demo Labs development



USER LAB

- User experience facility lab
- data handling, multiple site operations, methodology and ethical aspects



COBOT LAB

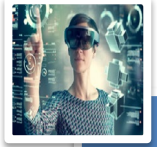
- Cooperative facility lab
- cooperative robots, machines and production lines

INDAT LAB

- Inclusive and enhanced industrial data collection
- efficient collecting of heterogeneous data from the production

CONTRAI LAB

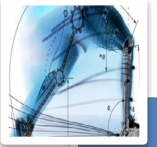
- AI-enhanced machine controlling strategy lab
- quality, maintenance, automation improvement



HMI LAB

- Transition from interface to assistance facility lab
- Interface evolvement based on AR/VR/MR technologies

AI&HMI partnership: Demo Labs development



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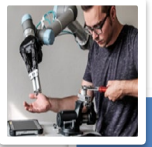

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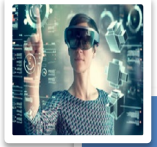

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Current status:

- regional mapping of interest and competences
- development of business case for each network of LABs
- preparation for TAF instrument, H2020 proposals

AI&HMI partnership

WHY to participate?

- **become a member** of interregional network of labs
- **promote** your products/services **interregionally**
- identify new **trans-regional synergies and new projects partnerships**
- identify **new** sources of **founding** (business case development – TAF, founding mix, Interreg C5)

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WHO should be interested?

- **technology/knowledge/solution providers** at high TRL levels (TRL>5)
- industry, DIHs, ROs, clusters, ...
- provide **services, support** industry/SME, **demonstrate** technology/solutions

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HOW to get involved?

- list yourself on the **competence map** (expression of interest to the regional coordinators – SRIP-ToP)
- join the AI&HMI **regional board**
- **join existing** demo lab OR **propose new** demo lab

Hvala za vašo pozornost!

SRIPTOP

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