



THE FRAMEWORK PROGRAMME FOR RESEARCH AND INNOVATION

HORIZON 2020

DT-ICT-02-2018: Robotics - Digital Innovation Hubs

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Deputy Head of Unit A1
Robotics & AI
European Commission

Outline

- ☐ CALL FOCUS
- ☐ DIH
- ☐ DIH CATALOGUE
- ☐ CALL DETAILS
- ☐ TIPS/IMPORTANT POINTS

Outline

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5 ACTIONS

- ❑ DIHs (Digital Innovation Hubs)
- ❑ RIAs (Research and Innovation)
- ❑ Large Scale Pilots
- ❑ Competitions
- ❑ Coordination



PILOTS

APPLICATION AREAS
INSPECTION & MAINTENANCE

AGRI-FOOD
AGILE PRODUCTION

HEALTHCARE

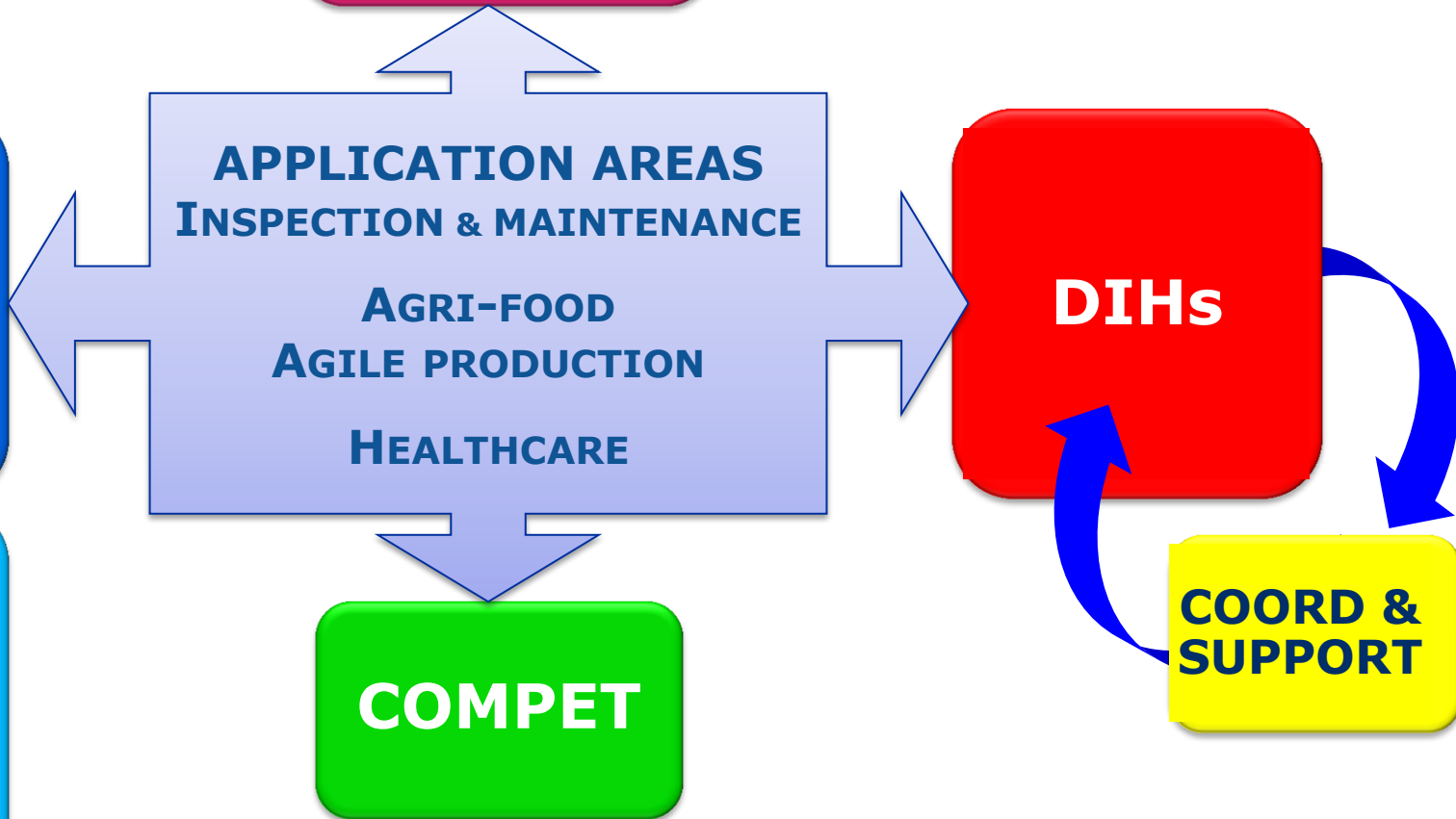
**CORE
TECH**

**R&I
BOOST
APPLI**

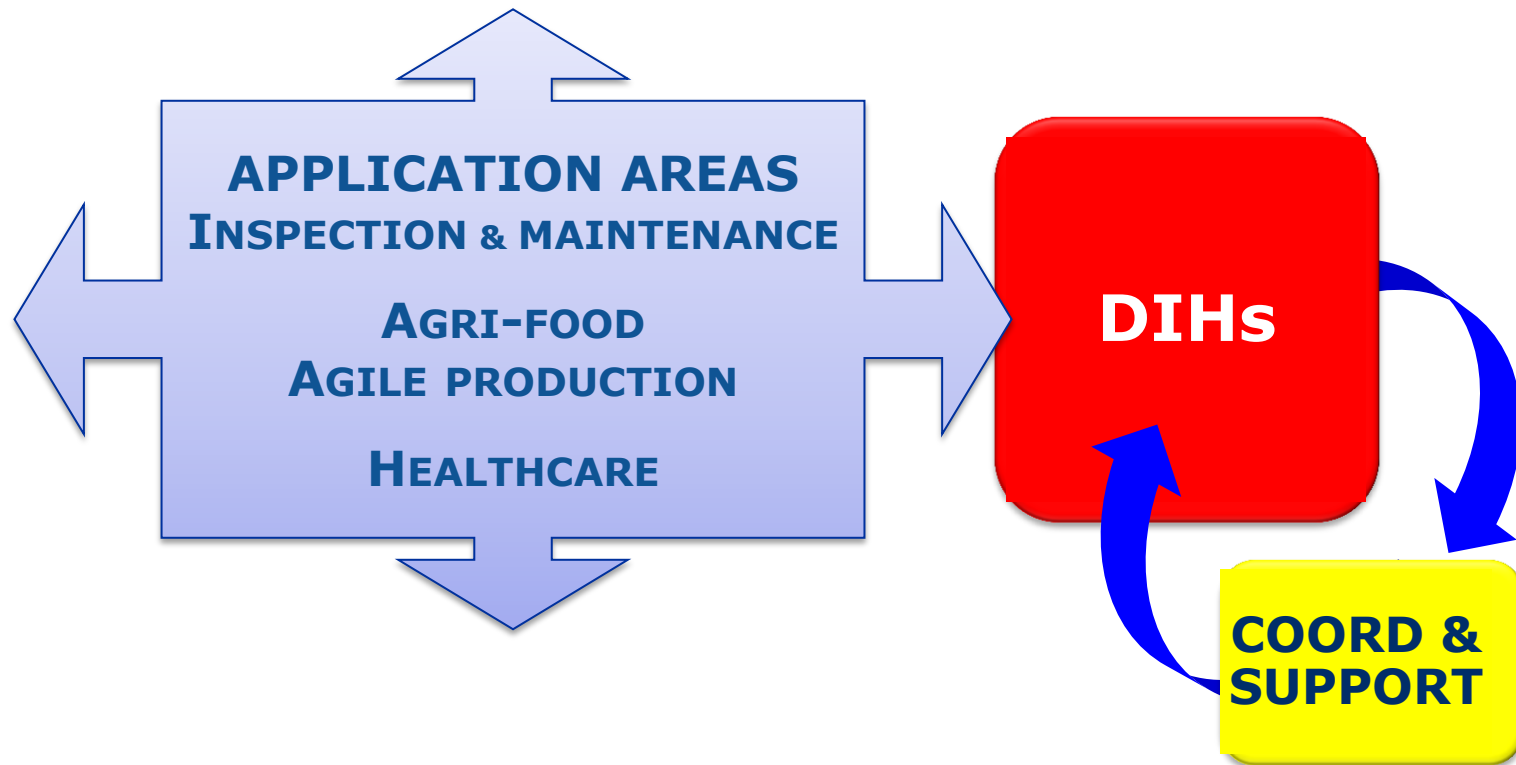
COMPET

DIHs

**COORD &
SUPPORT**



2018



TIMELINE



DT-ICT-02-2018
DIGITAL
INNOVATION
HUBS

17 APRIL
2018

2018

IA 64M€
CSA 2M€

a. IA – 64M€

1 Network of Robotics DIHs per Priority Area:

- Healthcare
- Inspection and maintenance of infrastructure
- Agri-food
- Agile production.

Budget: 16M€/proposal

b. CSA – 2M€

1 Central Robotics DIH CSA

Budget: 2M€/proposal

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Commissioner Oettinger:
"My objective is to have at least one world class
digital innovation hub in every region in
Europe."

Digital Innovation Hubs (DIH) ?

Commissioner Oettinger:

*"My objective is to have at least one world class **digital innovation hub** in every region in Europe."*

Objective

Ensure that **every business** in Europe,

- **whatever its sector of activity**
- **wherever located**
- **whatever its size**

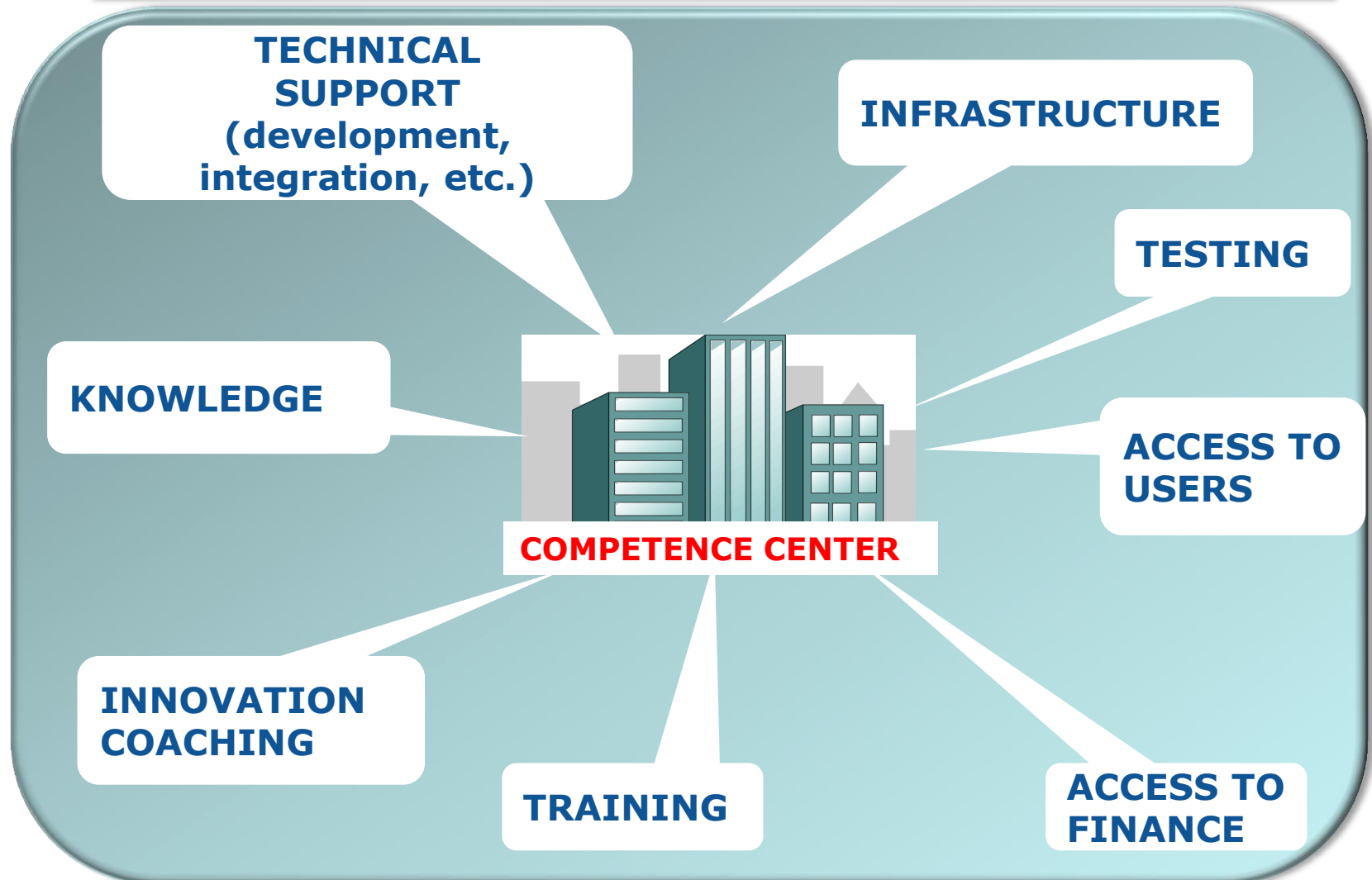
can take full advantage of digital innovations and competences

How

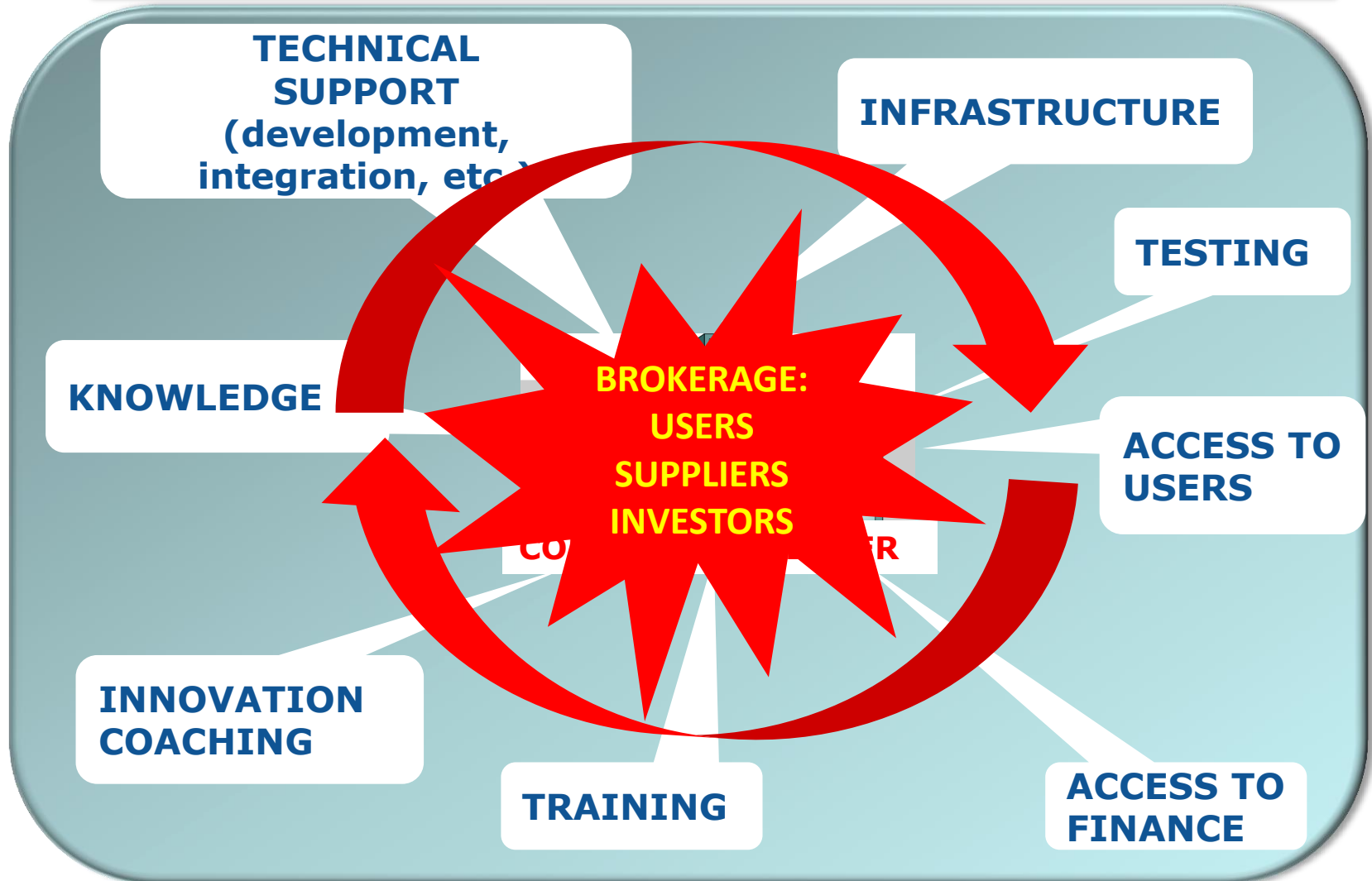
Access to digital technologies and expertise within "**working distance**" for any industry in Europe, especially SMEs, mid-caps, non-tech

- Regions and local authorities have a key role to play
- EU funding: at least 500 million € in the next 5 years

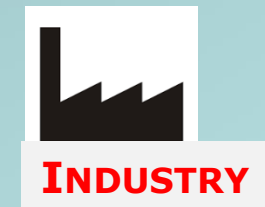
DIGITAL INNOVATION HUB: INGREDIENTS



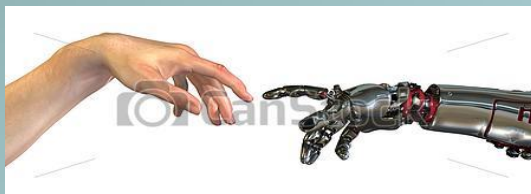
DIGITAL INNOVATION HUB: INGREDIENTS



DIGITAL INNOVATION HUB: ACTORS



**COMPETENCE CENTER
SHARED PHYSICAL
INFRASTRUCTURE & SUPPORT
(TECHNICAL, LEGAL,
ADMINISTRATIVE,
BUSINESS,...)**

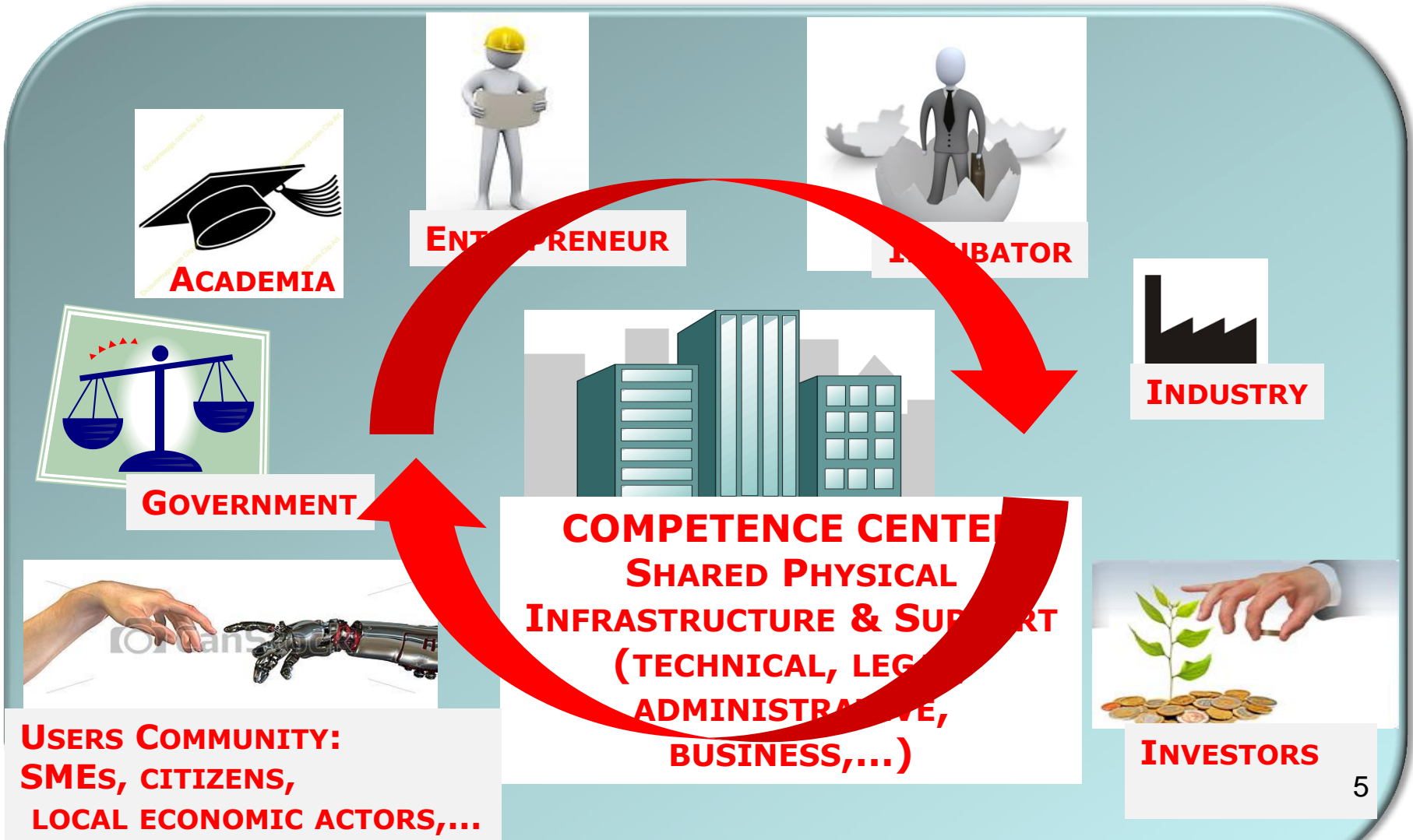


**USERS COMMUNITY:
SMEs, CITIZENS,
LOCAL ECONOMIC ACTORS,...**



INVESTORS

DIGITAL INNOVATION HUB: ACTORS





TYPE OF COMPETENCE CENTERS



COMPETENCE CENTER

SHARED PHYSICAL INFRASTRUCTURE & SUPPORT

- **TECHNO CENTRIC:** RTO, EXCELLENCE CENTER,...
- **USER CENTRIC:** TESTING FACILITY IN SPECIFIC AREA (FACTORY, HOSPITAL, FARM, URBAN AREA, TEST-HOUSE, ...)

THE HUB = CENTER OF A NETWORK EXPLOIT COMPLEMENTARITIES (LOCAL AND EUROPEAN)





COLLABORATION AND NETWORKING BETWEEN CENTRES
→ ONE-STOP-SHOP FOR EXPERTISE, COMPLEMENTARITY & SPECIALISATION

COMBINED FUNDING: PRIVATE & PUBLIC



EARTO – HEALTHCARE
27 JUNE 2017

PRIVATE



National, regional,
local Funding



EU Regional funding

PUBLIC



EC Investment Plan

COMBINED FUNDING: PRIVATE & PUBLIC

EARTO – HEALTHCARE
27 JUNE 2017



→ PUBLIC SECTOR SHARING RISK WITH INDUSTRY IN INNOVATION

Digital Innovation Hubs: Towards organic Growth

"Ensure that every business in Europe, whatever its sector of activity, wherever located and whatever its size, can take full advantage of digital innovations and competences"

Member States & regions:

build-up/strengthening of national and regional structures of digital innovation hubs

- particular attention to **SMEs**
- Ensure companies can **access** advanced technologies and enhance their **digital competences**
- **€100 million per year (EU)** of support to the hubs and **10 times more from the Member States and regions**

Commission:

- Set up a pan-European network of Digital Innovation Hubs
- Support activities *such as cross-border experiments, catalogue and assistance in the creation of hubs*



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DIH Catalogue

<http://s3platform.jrc.ec.europa.eu/digital-innovation-hubs-tool>

DIH Catalogue

During the first stage the emphasis was on DIHs that meet the following **three minimum conditions**:

1. Initiated under on a regional [national or European policy initiatives](#) to digitize the industry
2. Receive **governmental funding**
3. **3 examples of services provided to clients**
(technology, business development and ecosystem development)

<https://ec.europa.eu/futurium/en/content/digital-innovation-hubs-catalogue-project-0>



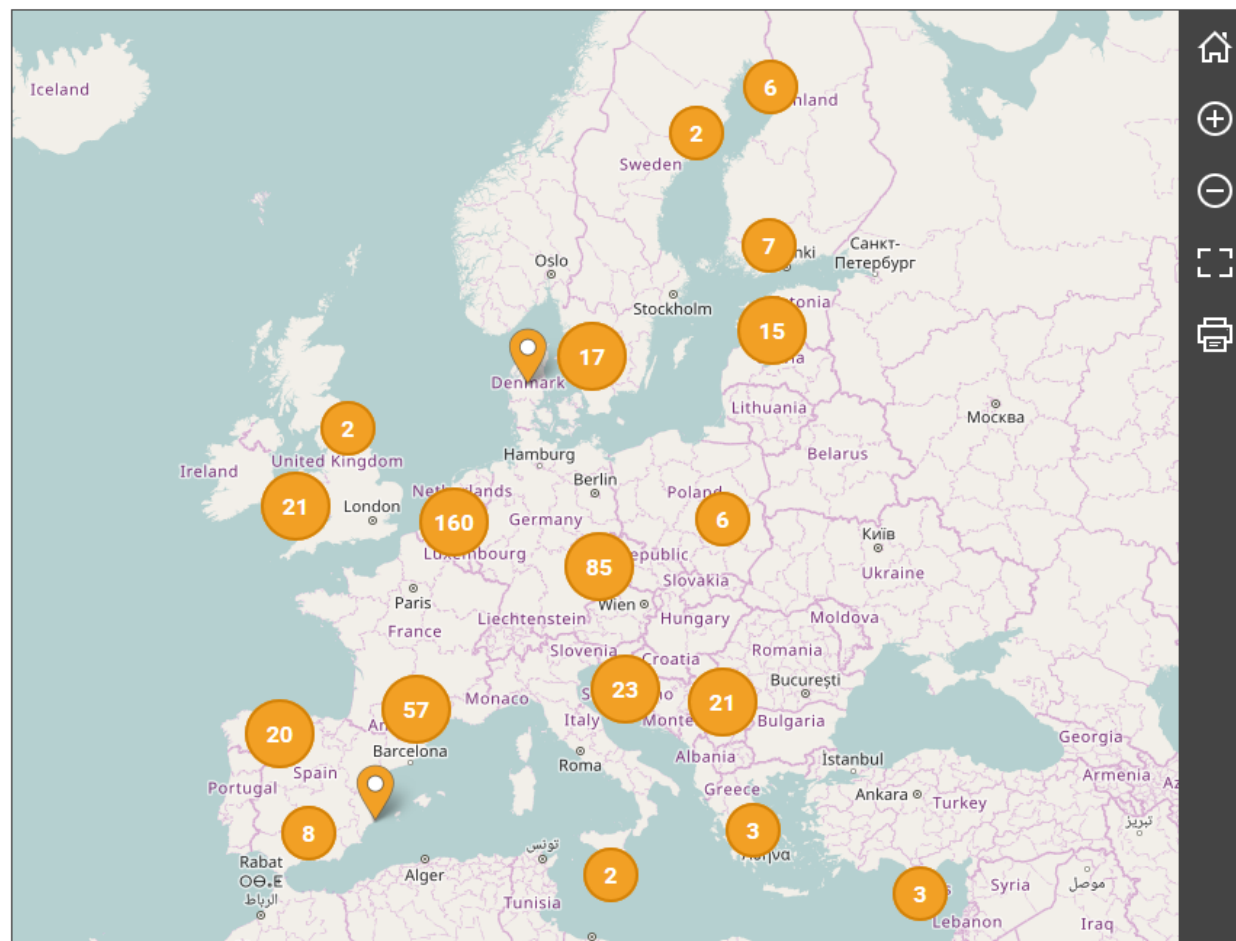
SMART SPECIALISATION PLATFORM



European Commission / Smart Specialisation Platform / S3 Tools / **Digital Innovation Hub**

[Home](#) |
 [S3 Platform](#) |
 [S3 Guidance](#) |
 [S3 Thematic Platforms](#) |
 [S3 Sections](#) |
 [S3 Tools](#) |
 [News](#) |
 [Events](#) |
 [Knowledge Repository](#) |

Digital Innovation Hub



Search

Enter any search term

Technical Competences

None selected ▼

Services Provided

None selected ▼

Focus on TRL

None selected ▼

Market sectors

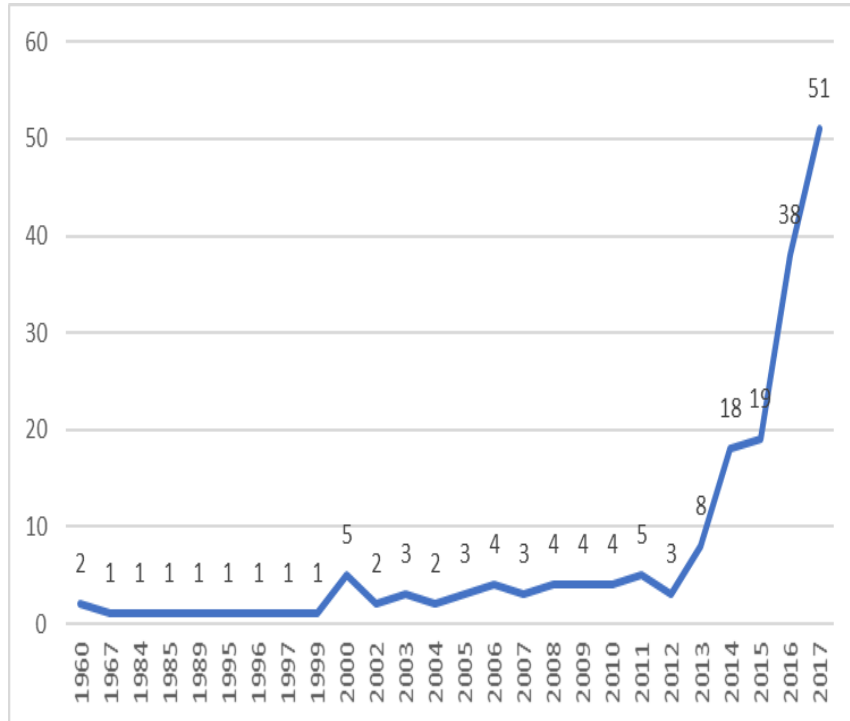
None selected ▼

SEARCH

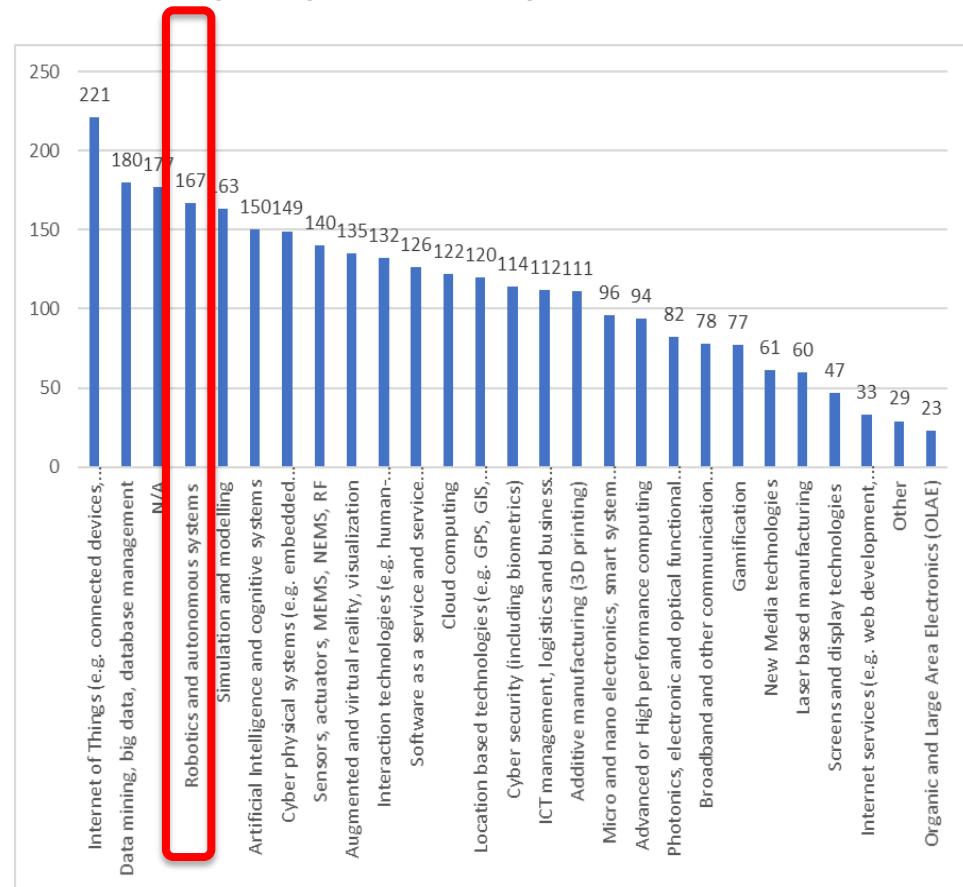
DIH Catalogue: results

Overview	Total numbers
Identified DIHs	531
In preparation DIHs	113
Candidate DIHs	234
Operational DIHs	184

60% of the DIHs have been established in the last three years

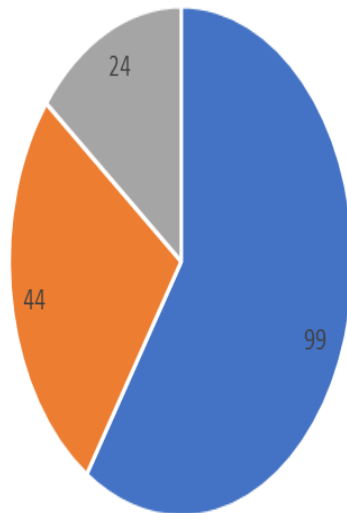


DIHs have a broad technology focus: on average they focus on eight digital technologies



DIH robotics landscape

167 DIHs have a technology focus on Robotics and autonomous systems



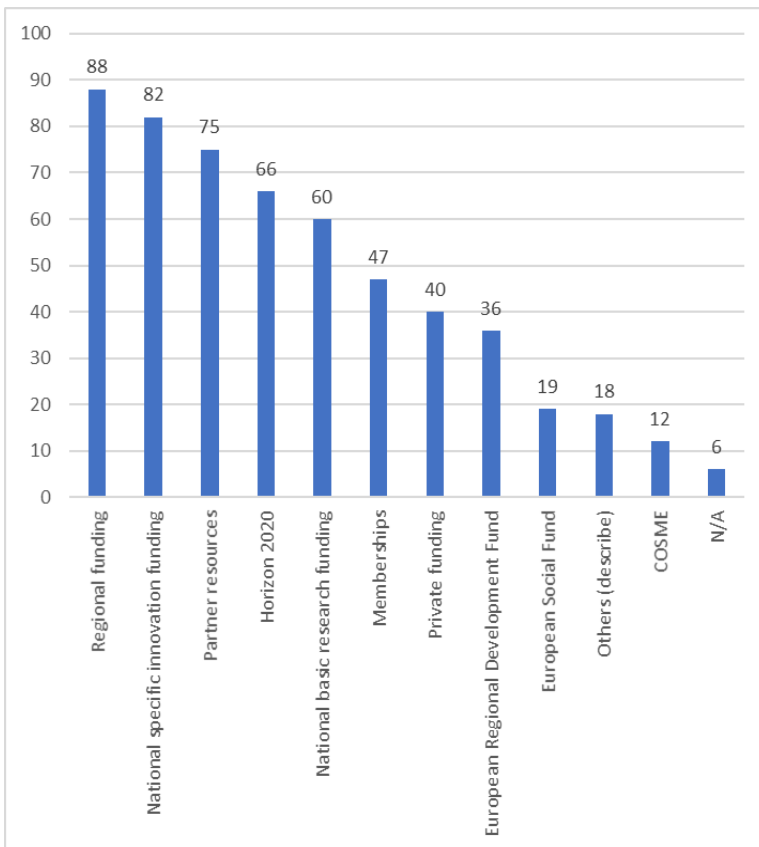
■ In operation ■ Candidate ■ In preparation

DIHs focused on robotics established in 26 EU Member States

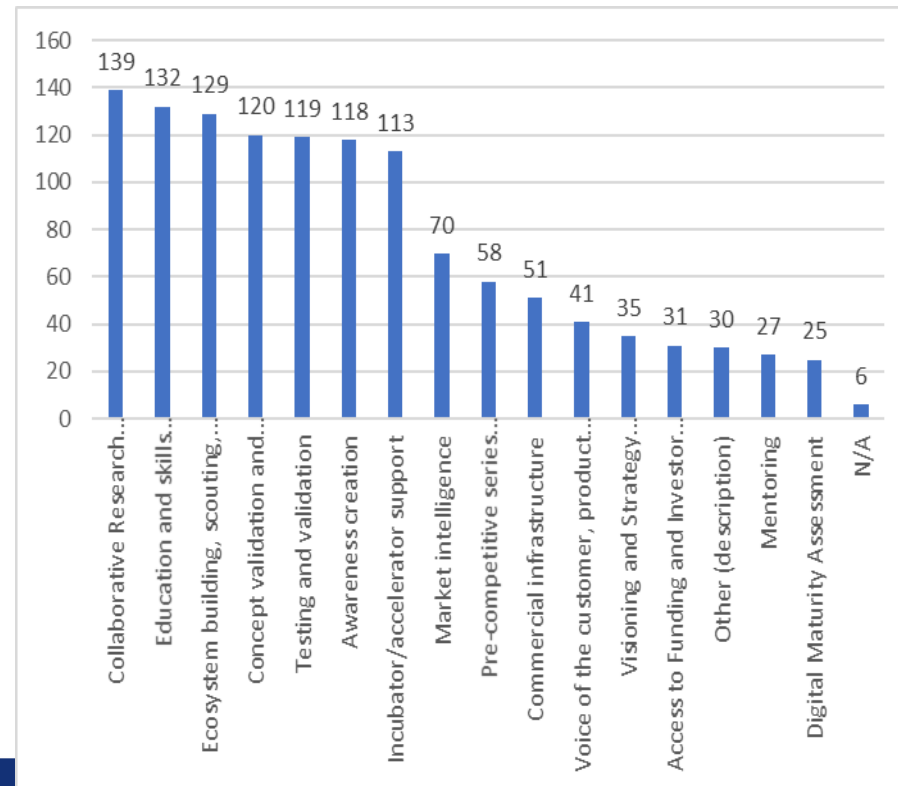
Country	Nr of DIHs	Country	Nr of DIHs
Austria	3	Italy	7
Belgium	15	Latvia	1
Bulgaria	1	Lithuania	2
Croatia	2	Luxembourg	4
Cyprus	2	Netherlands	11
Czech Republic	2	Poland	4
Denmark	6	Portugal	2
Estonia	3	Romania	3
Finland	8	Slovak Republic	1
France	13	Slovenia	3
Germany	25	Spain	25
Greece	2	Sweden	4
Hungary	2	United Kingdom	7

Snapshots on the DIH robotics landscape

167 DIHs have a technology focus on Robotics and autonomous systems



DIHs offer a broad range of services: services related to "Collaborative research, "Education" and "Ecosystem building"



Digital Innovation Hubs

Search

Countries

None selected ▼

Technical Competences

None selected ▼

Services Provided

None selected ▼

Focus on TRL

None selected ▼

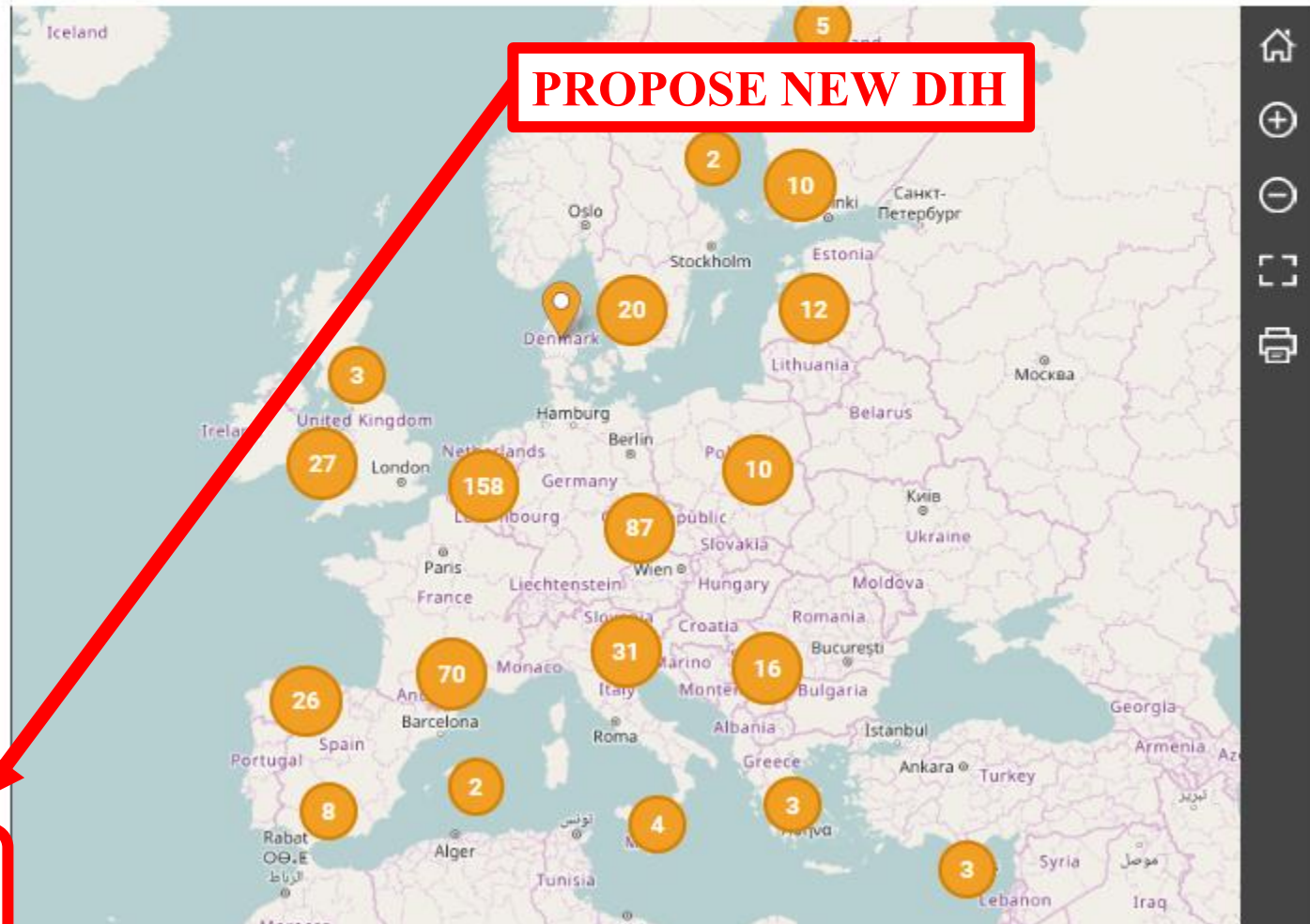
Market sectors

None selected ▼

SEARCH

✉ Contact us in the following email: JRC-B3-DIH@ec.europa.eu

📌 Click on the following link if you want to [propose new HUB](#).



Digital Innovation Hubs

Bretagne development innovation Bretagne development innovation

Contact Data

Coordinator
Bretagne Développement Innovation

Year Established
2002

Location
35010, Cesson-Sévigné (France)

Website
<http://www.bdi.fr>

Contact Name
-

Contact Email
humain@bdi.fr

Contact Phone
-

Description

Description
BDI's action is divided into three main missions :
- Sectors structuration to support competitiveness
- Develop the innovative potential of SMEs
- Monitoring and implementation of the attractiveness strategy
These 3 fields of activity are obviously interrelated.

Objectifs de BDI ses activités sont les missions :
- La structuration de filières fortes pour plus de compétitivité,
- Le développement du potentiel d'innovation des entreprises,
- Le pilotage et la mise en œuvre de la stratégie d'attractivité.
Ces trois domaines d'intervention sont étroitement interconnectés.

Unité d'opération
-

Market and Services

Market sectors
TSL, Pese

Services provided

- Ecosystem building, scouting, brokerage, networking
- Awareness creation
- Visioning and Strategy Development for Businesses
- Concept validation and prototyping
- Access to Funding and Investor Readiness Services
- Market Intelligence

Service Examples

Economic attractiveness strategy
BDI manages the region's economic attractiveness strategy. The agency develops the region's economy, coordinating efforts to attract new investors. It implements promotional activities for the region and highlights sectors of its economy in the context of the Brittany brand that is itself developed and managed by BDI. The brand is intended to be shared with all businesses that use Brittany to increase their visibility and promote their products or services both at home and abroad.

Participation to H2020 programme through the development of collaborative R&D projects

Together with the regional government's economic policy, and alongside the Sreson competition hubs, BDI initiates discussion between stakeholders in all industries (digital, farming and food, automobile and transport, defence, maritime, ocean-based renewable energy) in order to develop new strategies that serve the region as a whole. When applied, these common roadmaps make Brittany more competitive and appealing both in Europe and worldwide, retaining its highly skilled workforce and creating new jobs.

Organization

Organizational form
Governmental agency

Turnover
-

Number of employees
-

Evolutionary State

Candidate

Geographical Scope

Regional

Funding

- COSMIC
- Horizon 2020
- National basic research funding

Partners

Deliver
Bretagne Développement Innovation

Deliver Type
Networked, cluster organization

Digitalization technological focus

- Data mining, big data, database management
- Photonics, electronic and optical functional materials
- ICT management, logistics and business systems
- Micro and nano electronics, smart system integration
- Cyber security (including biometrics)

**UPDATE INFO
ON YOUR DIH**

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DT-ICT-02-2018: Robotics - Digital Innovation Hubs (DIH)

BUDGET: 66M€

a) Innovation Action – 64M€

=> 4 projects expected to be funded

- **1 per Prioritised Application Area – 16M€/each**

b) Coordination and Support Action – 2M€

=> 1 project expected to be funded

CALL DEADLINE: April 17 - 2018

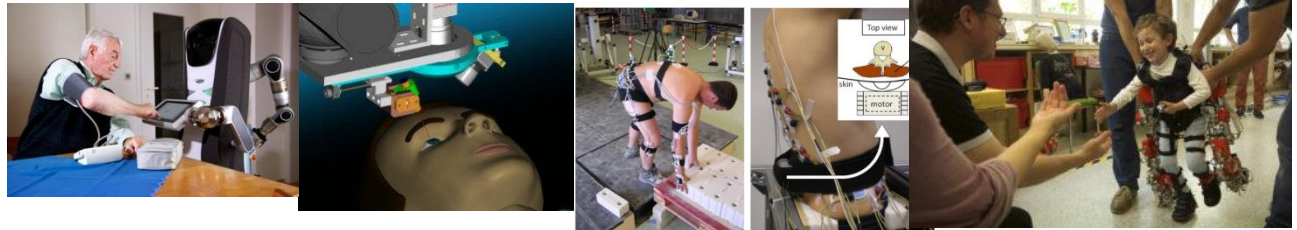
Specific Challenge

- ❑ provide a **sustainable ecosystem** of robotics stakeholders covering the **entire value network** to facilitate and accelerate a **broad uptake** and integration of **robotic** technologies, and supporting the **digitisation** of industry through **robotics**.

a) DIH **Innovation Actions**

Network of robotics DIHs in the four PAA:

☐ Healthcare

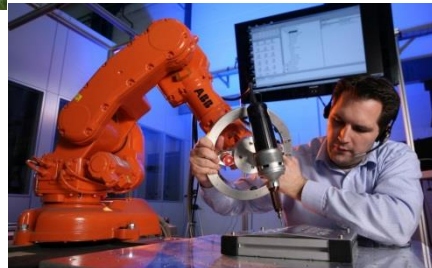


☐ Infrastructure Inspection and Maintenance

☐ Agri-Food



☐ Agile Production



Proposals are expected to:

- ❑ develop a network of DIHs
- ❑ deliver services (technical and non-technical)
- ❑ access to best practice & research results relevant to the application area
- ❑ contribute to common system platforms
- ❑ engaging in the development of industry-led standards
- ❑ develop and disseminate standards demonstrators
- ❑ facilitate access to pilots
- ❑ collaborate with all the robotics actions funded in the WP and beyond, as appropriate.

Proposals are expected to:

- ❑ connect, share expertise, and closely **collaborate** with the DIHs in the other PAAs via the **Central Robotics DIH CSA**.
- ❑ address **ethical, data privacy and protection issues**, and consider **cyber-security** issues (including security by design).
- ❑ support the development of **use-case demonstrators at TRL 5 and above**, preferably based on **open** system platforms.
- ❑ **contribute** to a **Working Group** that connects the actions funded in this WP with the **Central Robotics DIH CSA**
 - ❑ **disseminate best practice**
 - ❑ **coordinate access to technology, resources, demonstrators and open platforms**
 - ❑ **facilitate the cross development of platforms.**

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 - ❑ **coordinate access to technology resources, demonstrators and open platforms**
 - ❑ **facilitate the cross development of systems**

**PLAN A TASK and DEDICATE
SUFFICIENT RESOURCE TO
THIS WORKING GROUP**

Proposals are expected to:

- ❑ connect, share expertise, and closely **collaborate** with the DIHs in the other PAAs via the **Central Robotics DIH CSA**.
- ❑ address **ethical, data privacy and protection issues**, and consider **cyber-security** issues (including security by design).
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 - ❑ **disseminate best practice**
 - ❑ **coordinate access to technology resources, demonstrators and open platforms**
 - ❑ **facilitate the cross development of platforms.**

**USE DIH AS SHOW-CASE FOR
ROBOTICS – TO MAXIMISE IMPACT**

Proposals are expected to:

- ❑ use financial support to third parties (FSTP) to support industry, in particular SMEs, in their digital transformation, through for instance
 - ❑ demonstrators and platforms development
 - ❑ technology transfer experiments
 - ❑ or other services (technical or non-technical), as appropriate.
- ❑ FSTP should comply with the conditions set out in part K of the General Annexes of the Work Programme.
- ❑ At least 50% of the budget is expected to be dedicated to FSTP and the maximum amount of FSTP is EUR 300.000 per third party for the entire action duration.
- ❑ EU contribution: 16 M€ for DIHs in each Priority Area (indicative)
- ❑ At least one action in each Priority Area will be supported.

Why FSTP?

- ☐ Cascades funding more widely into the community.
- ☐ More responsive to emerging challenges
- ☐ Cascade call text set by DIH against priorities
- ☐ Shorter more compact projects
- ☐ Focus on enabling SMEs to experiment and collaborate

How does FSTP operate?

- ☐ Funding for cascade held by DIH consortium
- ☐ One partner manages the call and contract process.
 - ☐ **This is a major undertaking!**
- ☐ Third Parties do not become members of the consortium.
- ☐ Consortium members cannot receive third party funding.
- ☐ Third parties receive funding directly from the consortium

K. Actions involving financial support to third parties (FSTP)

European
Commission

Specify:

- **objectives** and the **results** to be obtained

Include:

- **types of activities** for which a third party may receive financial support
- **persons or categories of persons which** may receive financial support
- **criteria** for **awarding** financial support
- criteria for **calculating the exact amount** of the financial support
- **maximum amount*** to be granted to each third party and the **criteria** for determining it.

*may not exceed EUR 60 000 for each third party unless it is **necessary** to achieve the objectives of the action

K. Actions involving financial support to third parties (FSTP)

European
Commission

Open calls requirements

- **Published widely (calls and results)**
- **Ensure**
 - Transparency
 - Equal treatment
 - No conflict of interest
 - Confidentiality
- **Clear European dimension**

4 requirements to proposals

- ❑ Consortia should be deeply **rooted in regional/national DIH**
- ❑ **Critical mass of highly innovative, cross border experiments.**
 - ❑ At least **50% of the budget** should directly benefit **SMEs** or slightly bigger companies.
- ❑ **Activities should aim at long-term sustainability and include**
 - ❑ a business plan for the digital innovation hubs
 - ❑ a plan to attract investors
 - ❑ a plan to address training and skills development needs
 - ❑ a dissemination plan
- ❑ **Use established networks reaching out to SMEs like the Enterprise Europe Network and the NCP network**
- ❑ **Selected projects are expected to collaborate on building a network of Digital Innovation Hubs, covering most regions in Europe.**

b. Coordination and Support Activities

- ❑ Central Robotics DIH CSA
- ❑ **Support** and **cooperate** closely with the PAA-oriented **DIH actions**
- ❑ **Network** them, to coordinate their activities and to develop synergies among them
- ❑ **Disseminate** best practices in developing pilots, demonstrators and open platforms
- ❑ Championing the development of **open** industry-led system **platform** standards
- ❑ EU contribution: 2M€(indicative)

Expected Impact:

- ❑ Increased **deployment** of robotics in each PAA.
- ❑ Formation of **supply chains** around **platforms** and **modules** that straddle PAA
- ❑ Introduction of cross-industry-based **standards** for modules and systems
- ❑ Generation of **new businesses** based around platform supply
- ❑ The development **supply chains**.
- ❑ **Leveraging effect on other sources of funding**, in particular regional and national funding

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Work Programme topic : Robotics - Digital Innovation Hubs

What are you looking for?

- **Pan-European Network** of DIH in robotics in 4 prioritised areas
- **Inclusive:**
 - Mobilise existing DIHs (funded under H2020 or other initiatives – e.g.: national/regional)
 - Capitalise on existing results/centers
 - Involve Techno-centric & User-Centric DIHs
 - Should become THE REFERENCE NETWORK FOR each PAA
- Build on the Catalogue of DIH
<http://s3platform.jrc.ec.europa.eu/digital-innovation-hubs-tool>
- Networking: Plan for cooperation with CSA – other relevant projects/initiatives

2. What do you NOT want?



What do you <u>NOT</u> want?	What do you want?
Standard RIA/IA project Proposals "dressed in DIH proposals"	The focus is on developing networks of DIHs to foster the digitization of industries (esp. SMEs and non-tech)
To fund DIHs themselves (this is Regional/National competency)	H2020 focuses on the "EU layer" : <ul style="list-style-type: none">• Set up a pan-European network of Digital Innovation Hubs• Support activities such as cross-border experiments, catalogue and assistance in the creation of hubs
Small consortia with 1 – 2 locations	Should be inclusive and involve the relevant DIHs from the start
Research focus	This is Innovation Action – the focus is on showcasing/feasibility/tech transfer/use-cases

WHO? What if my DIH is not in the catalogue?

❑ **"Consortia should be deeply rooted in regional/national DIH"**

- Mention if the DIHs involved are in the Catalogue – and make the case of their strengths as DIHs (rooted in their local ecosystems)
- If not in catalogue – make the case that ecosystems represented in the proposal have the elements of a DIH and are rooted in their ecosystems
- Note that not all the partners involved in DIHs need to be beneficiary in the proposal – involve representative organisations

Work Programme topic – topic evolution

Current project portfolio

RIFs (Robotics innovation facilities) in ECHORD++

- RTOs in ROBOT-NET
- EuRoC (sharing facilities focusing on Challenges)
- Horse/Reconcell (**use FSTP**)
- Robotics projects in
 - **Agri-Food** (e.g.: Flourish, Sweeper, Vinerbot, SoMa)
 - **Healthcare** (e.g.: SmartSurg; EurEyeCase, EndoVESPA, MURAB, XoSoft, SPEXOR, SoftPro, INPUT, DeTOP, EDEN2020)
 - **Maintenance/inspection** (e.g.: Petrobot, AEROBI, AEROARMS, AEROWORKS)
 - **Agile Production** (e.g.: Horse, Reconcell, RAMPup, ColRobot)
 - <https://ec.europa.eu/digital-single-market/en/news/first-robotics-projects-h2020-starting>
 - <https://ec.europa.eu/digital-single-market/en/news/new-robotics-projects-2015-announced>
 - <https://ec.europa.eu/programmes/horizon2020/en/news/new-horizon-2020-robotics-projects-2016>

Projects implementing FSTP

https://www.slideshare.net/I4MS_eu/i4ms-and-sae-overview-of-upcoming-open-calls-and-services

Work Programme topic

Are there any additional / background documents?

- **Working group on Digital Innovation Hubs Report:**
<https://ec.europa.eu/futurium/en/content/report-wg1-digital-innovation-hubs-mainstreaming-digital-innovation-across-all-sectors-final>
- **Catalogue of Digital Innovation Hubs**
<https://ec.europa.eu/futurium/en/content/digital-innovation-hubs-catalogue-project-0>
<http://s3platform.jrc.ec.europa.eu/digital-innovation-hubs-tool>

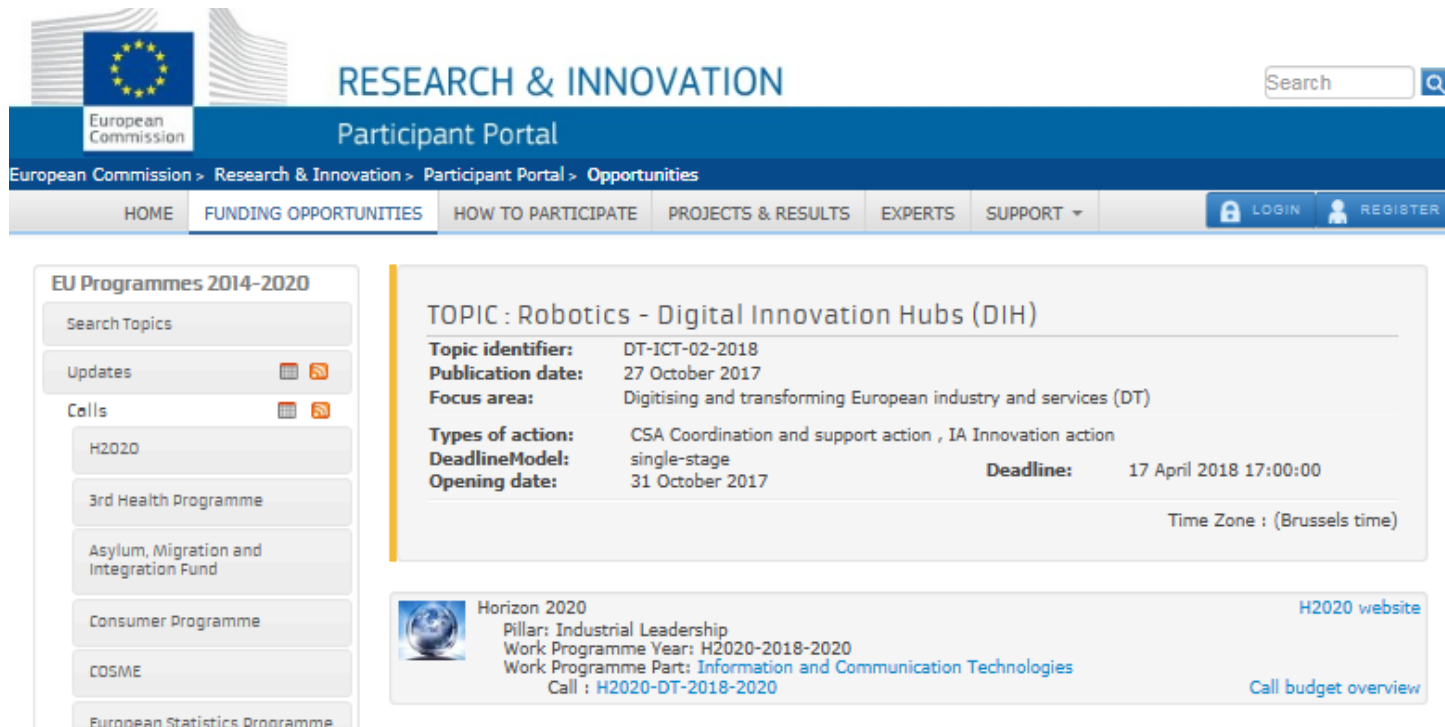
Future Outlook

Do you have information about future trends, emerging initiatives, roadmaps, key players in this area?

- Keep in mind future calls (RIA/Pilots/Competitions) & plan accordingly (projects funded under this call should last long enough to support projects funded under in later calls – 19-20)
- DIHs plays a key role in Digitizing all industries (esp. SMEs – non-tech)

Where to find the information?

- Participant portal:
- <http://ec.europa.eu/research/participants/portal/desktop/en/opportunities/h2020/topics/dt-ict-02-2018.html>



The screenshot shows the 'RESEARCH & INNOVATION Participant Portal' of the European Commission. The header includes the European Commission logo and a search bar. The main navigation bar lists: HOME, FUNDING OPPORTUNITIES, HOW TO PARTICIPATE, PROJECTS & RESULTS, EXPERTS, and SUPPORT. There are also LOGIN and REGISTER buttons. The left sidebar, titled 'EU Programmes 2014-2020', contains links for Search Topics, Updates, Calls, and various program areas including H2020, 3rd Health Programme, Asylum, Migration and Integration Fund, Consumer Programme, COSME, and European Statistics Programme. The main content area displays details for the 'TOPIC : Robotics - Digital Innovation Hubs (DIH)'. The details include: Topic identifier: DT-ICT-02-2018; Publication date: 27 October 2017; Focus area: Digitising and transforming European industry and services (DT); Types of action: CSA Coordination and support action, IA Innovation action; DeadlineModel: single-stage; Opening date: 31 October 2017; Deadline: 17 April 2018 17:00:00; Time Zone: (Brussels time). At the bottom, there is a section for 'Horizon 2020' with a globe icon, detailing the Pillar: Industrial Leadership, Work Programme Year: H2020-2018-2020, Work Programme Part: Information and Communication Technologies, and Call: H2020-DT-2018-2020. Links for 'H2020 website' and 'Call budget overview' are provided.

RESEARCH & INNOVATION
Participant Portal

European Commission > Research & Innovation > Participant Portal > Opportunities

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Consumer Programme

COSME

European Statistics Programme

TOPIC : Robotics - Digital Innovation Hubs (DIH)

Topic identifier: DT-ICT-02-2018
Publication date: 27 October 2017
Focus area: Digitising and transforming European industry and services (DT)
Types of action: CSA Coordination and support action , IA Innovation action
DeadlineModel: single-stage
Opening date: 31 October 2017
Deadline: 17 April 2018 17:00:00
Time Zone : (Brussels time)

 **Horizon 2020**
Pillar: Industrial Leadership
Work Programme Year: H2020-2018-2020
Work Programme Part: Information and Communication Technologies
Call : H2020-DT-2018-2020

[H2020 website](#)
[Call budget overview](#)

Last but not least

- **MAXIMISE IMPACT** of the programme
- **MAXIMISE VISIBILITY** of European Funding
- Specify major **milestones** + corresponding **measurable** objectives + means of **verification**
- Be concrete
- In addition to the "WHAT", CLEARLY describe the "**HOW**"
- Proposals = Ready to be implemented – otherwise penalised
- 70 pages MAX (including references)

**DO NOT MISS THE
OPPORTUNITY**

**MOBILISE YOUR "DIHs"
THANK YOU**

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SPARC
The Partnership for
Robotics in Europe