

Expectations for DIHs in the ICT Workprogramme 2018

Cécile Huet, PhD
Deputy Head of Unit A1
Robotics & AI
European Commission

***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."

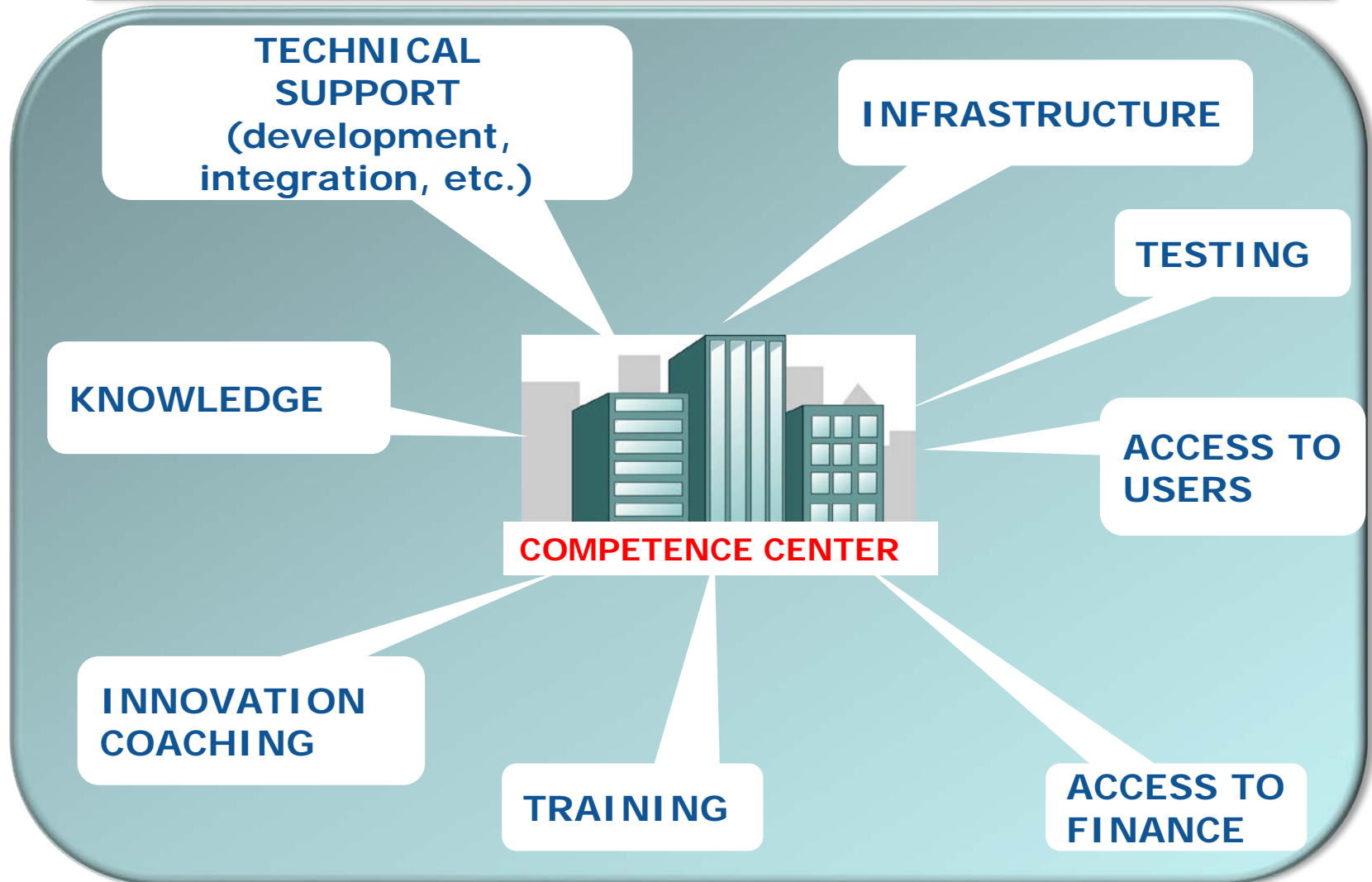
Objective:

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

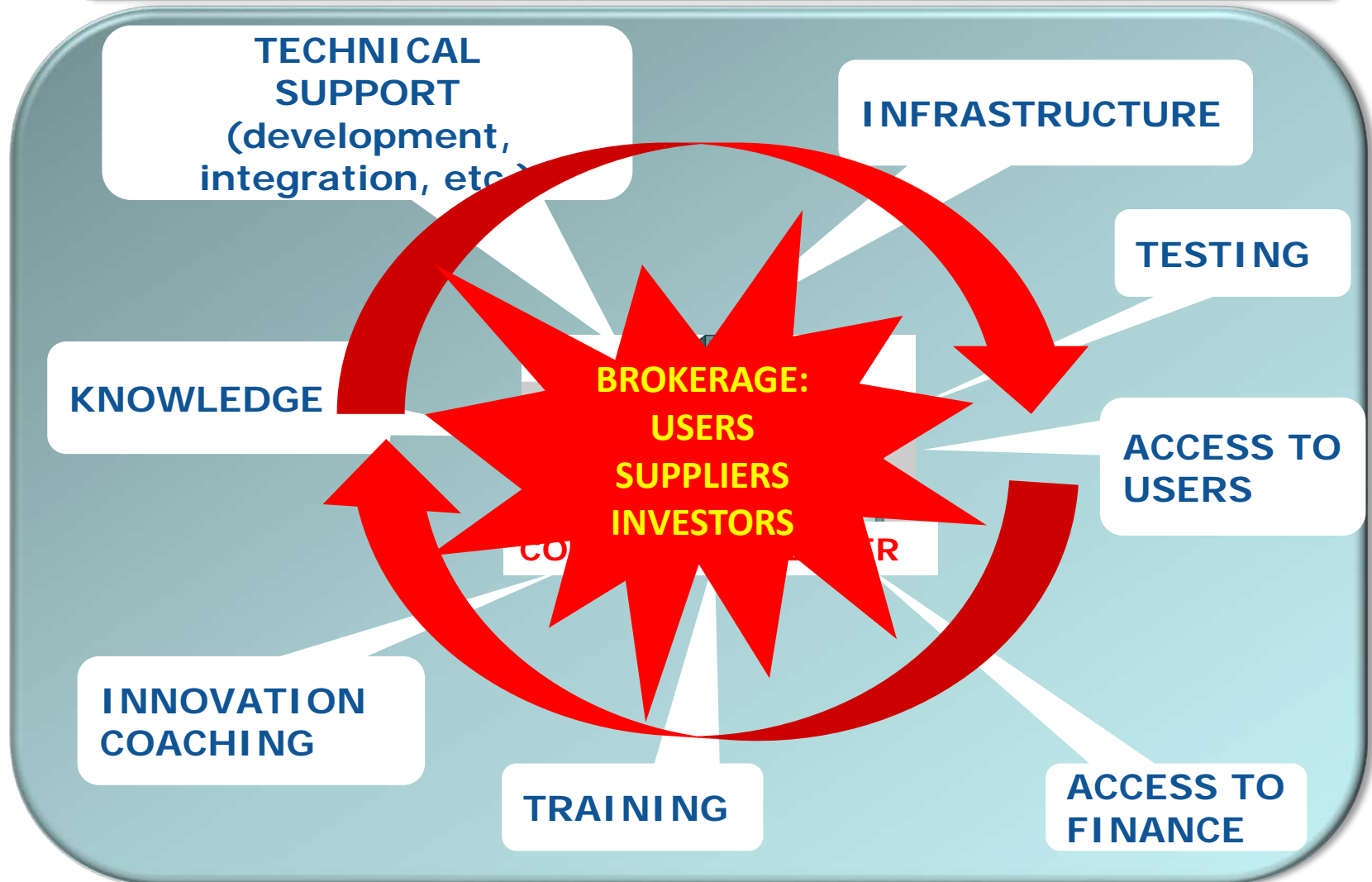
Access to digital technologies and expertise within "working distance" for any industry in Europe, especially SMEs, mid-caps, non-tech

- 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



ACADEMIA



ENTREPRENEUR



INCUBATOR



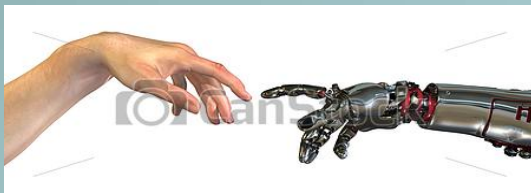
GOVERNMENT



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



INDUSTRY



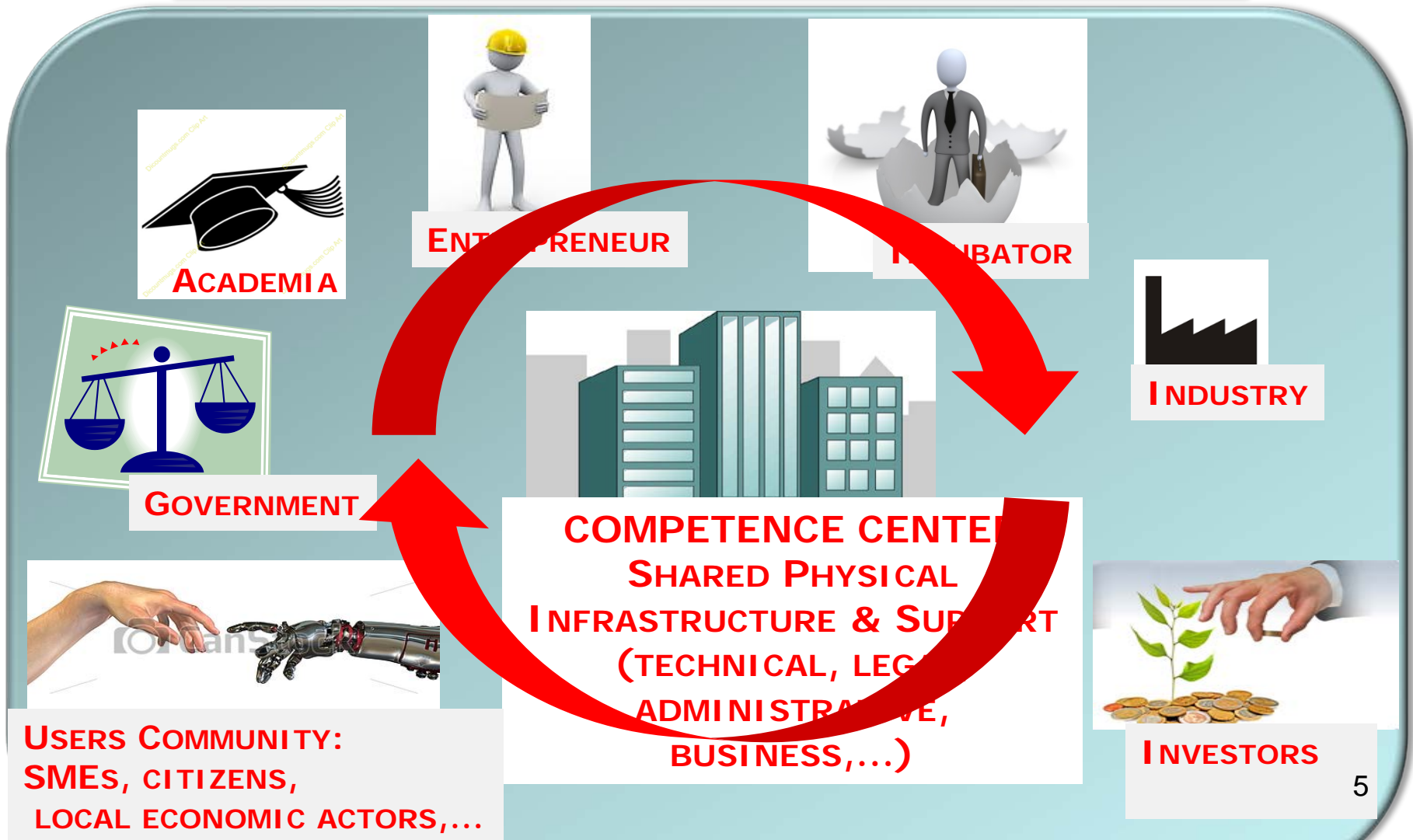
**USERS COMMUNITY:
SMEs, CITIZENS,
LOCAL ECONOMIC ACTORS,...**



INVESTORS

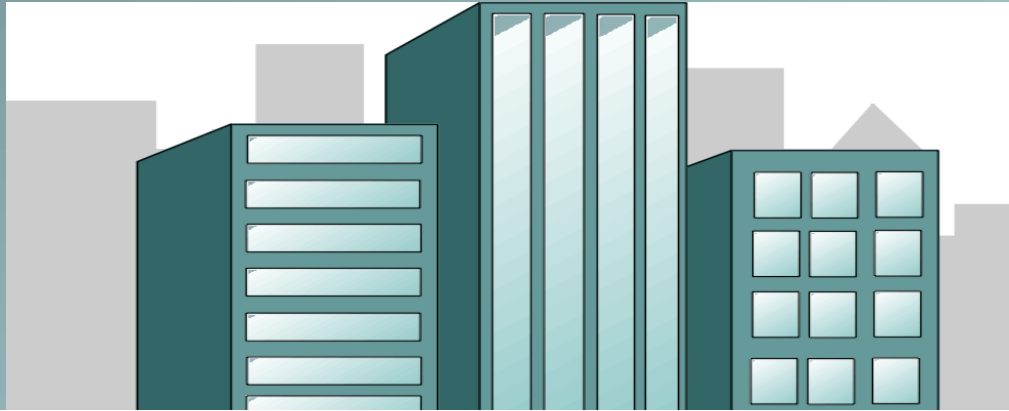


DIGITAL INNOVATION HUB: ACTORS





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



PRIVATE



National, regional,
local Funding



EU Regional funding

PUBLIC



EC Investment Plan

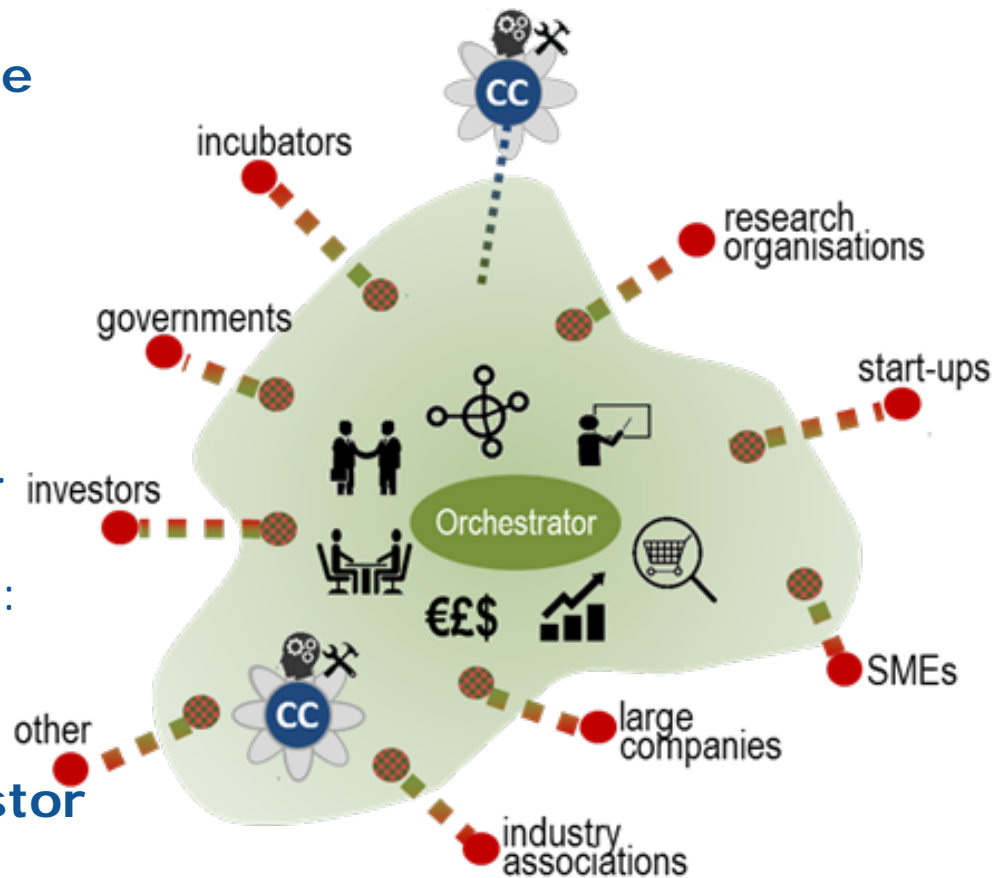
COMBINED FUNDING: PRIVATE & PUBLIC



→ PUBLIC SECTOR SHARING RISK WITH INDUSTRY IN INNOVATION

A one-stop-shop providing services to companies in the region through a multi-partner cooperation:

- Access to Specialist Expertise and Infrastructure
- Brokering/matchmaking
- Awareness Creation around Digital Technologies
- Innovation Scouting
- Digital Maturity Assessment.
- Visioning and Strategy Development for Businesses:
- Mentoring
- Training
- Access to Funding and Investor Readiness Services





Regions/MSs

- ❑ Establish/**reinforce competence centres and DIHs**
 - Across Europe – specific support for regions without DIH
 - Implement relevant activities if needed (incentives, ...)
- ❑ **Collaborate with** digital innovation hubs of **other regions**
 - to fill gaps and facilitate specialisation and excellence

Commission

- ❑ Support pan-European networking of Digital Innovation Hubs
 - Fund highly innovative DIHs in H2020
 - Support cross-border experiments, assistance in the creation of hubs
 - Share best practices, success stories, training
 - Develop catalogue of Hubs, competences, etc
- ❑ Smart specialisation platform for industrial modernisation will provide tailored support to develop joint investment projects.

Industry

- ❑ Engage with DIHs, help set priorities,...

"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*

Funding opportunities for Digital Innovation Hubs



H2020

- 200 M€ in the H2020 work programme 2016-2017
- 300 M€ in the new H2020 work programme 2018-2020, focus area "Digitising and transforming European industry and services"
- Focusing on networking Digital Innovation Hubs and highly innovative cross border experiments

European Structural and Investment Funds

- ESIF support for digital growth is based on national or regional Digital Growth Strategies and Research and Innovation Strategies for Smart Specialisation
 - Around EUR 2 billion will support digitising EU industry, in particular SMEs, to develop ICT products and services e-commerce and the take-up of ICT,
 - Around EUR 1.2 billion will support e-Inclusion, e-Accessibility, e-Learning etc. to enhance human capital for the digitised economy and society,
 - Around EUR 7.6 billion will go into intelligent transport, smart grids, e-health and e-government, offering also procurement opportunities for IT firms,
 - Over 100 regions and 14 countries at national level will also invest in ICT-related research and innovation. Total funding for RIS3 accounts for 42 billion euro.

Other sources of funding (private, innovation funds of regions, loans, etc)

ROBOTICS DIH IN FP7/H2020



FP7 & H2020 opportunities

FP7:

- **Echord+ +** → RIFs – shared infrastructure
- **Euroc** → shared facilities for running common challenges

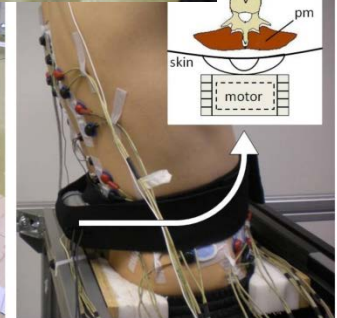
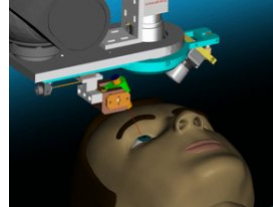
H2020:

- **ICT24: ROBOTT-NET** → Technology transfer: Industry-academia cross-fertilisation (including "shared research infrastructures")
- **FoF: HORSE/RECONCEL**
- **ICT-27-2017: Safety certification** →
 - c. Innovation Actions on shared facilities for safety certification

ROBOTICS DIH IN WP18-20

4 Priority Areas

❑ Healthcare



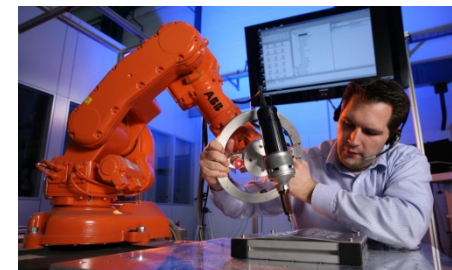
❑ Inspection and maintenance of infrastructure



❑ Agri-food



❑ Agile production



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

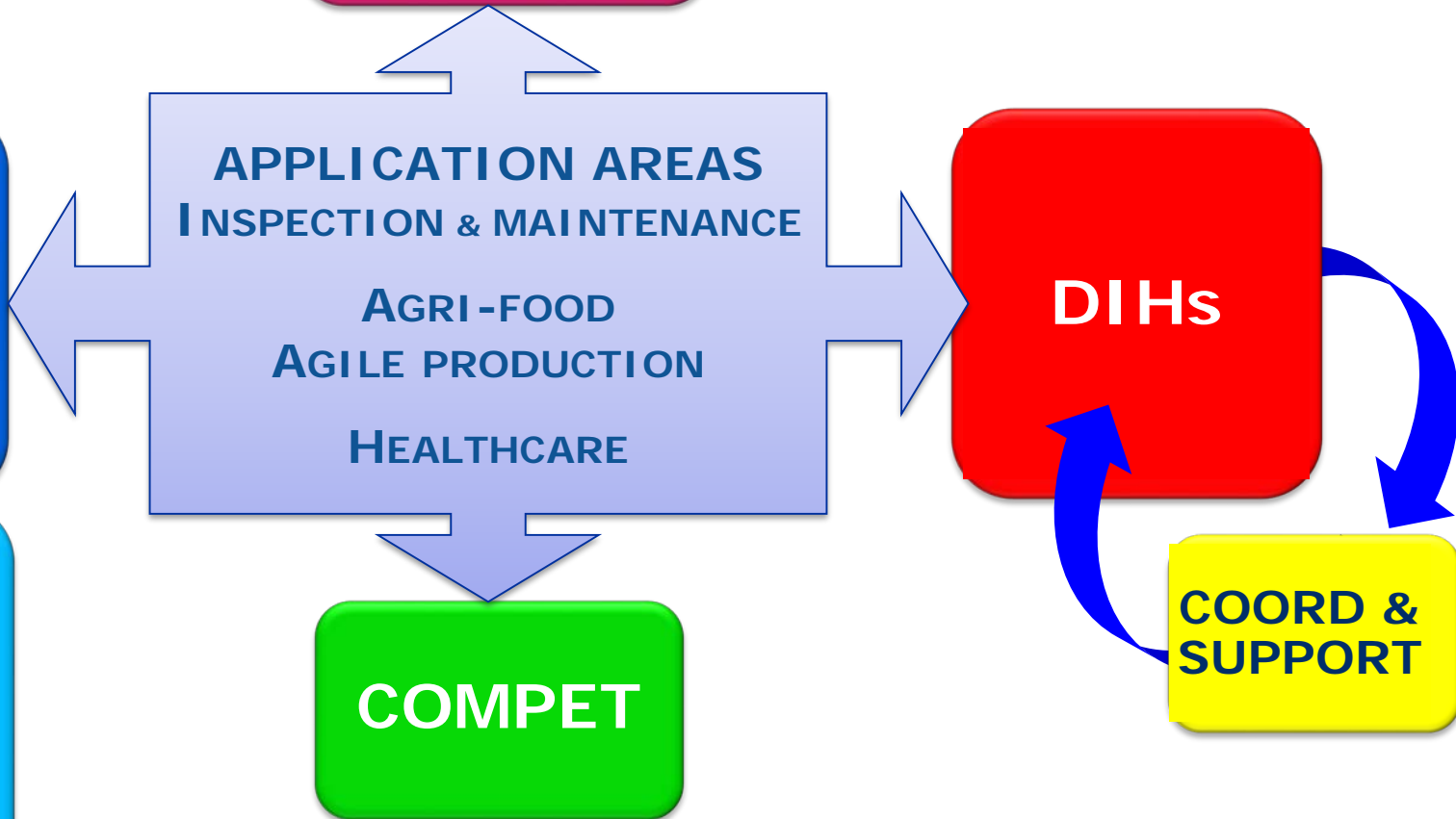
**CORE
TECH**

**R&I
BOOST
APPLI**

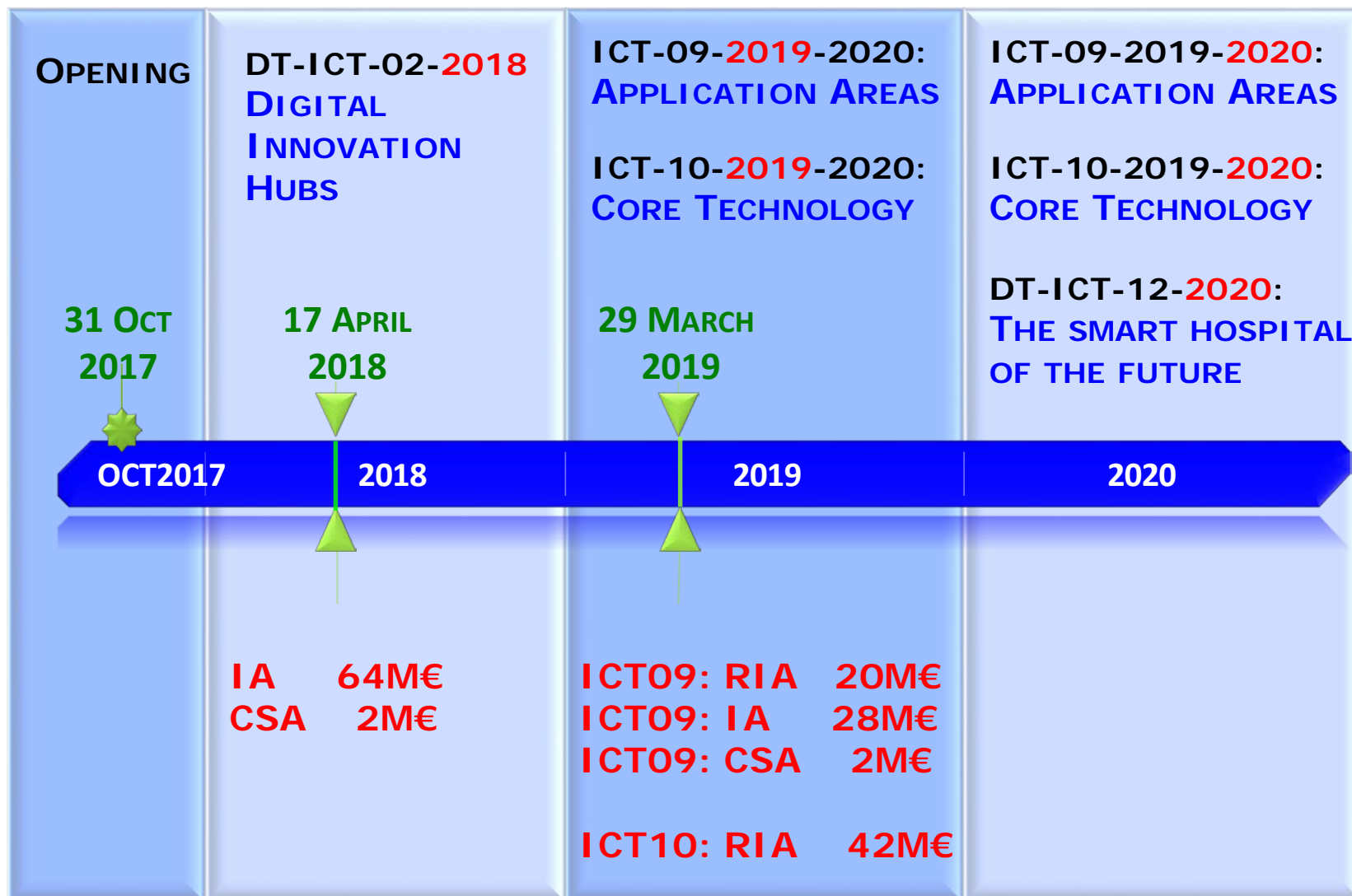
COMPET

DIHs

**COORD &
SUPPORT**



TIMELINE



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

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**.

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.

4 requirements to DIHs

- ❑ 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, to address training and skills development needs and dissemination. Established networks reaching out to SMEs like the Enterprise Europe Network and the NCP network should be used.
- ❑ Selected projects are expected to collaborate on building a **network of Digital Innovation Hubs, covering most regions in Europe**.

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

Work Programme topic :

Robotics - Digital Innovation Hubs

1. 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
- 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

DO NOT MISS

**BROKERAGE EVENT
ROBOTICS - DIHs
DECEMBER 6 2017
BRUSSELS**

<https://www.eu-robotics.net/sparc/>

**PLEASE MOBILISE YOUR "DIHs"
THANK YOU**

Cecile.Huet@ec.europa.eu

A graphic element of the SPARC logo, consisting of several overlapping triangles in blue, yellow, orange, and green, forming a stylized arrow or star shape pointing towards the bottom right.

SPARC

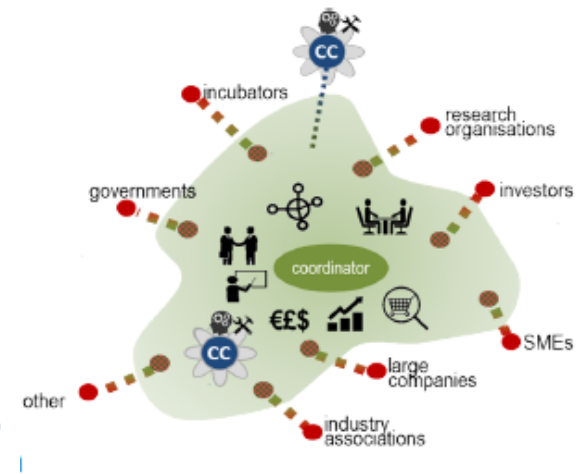
The Partnership
for Robotics in
Europe



DIH Catalogue and Portal

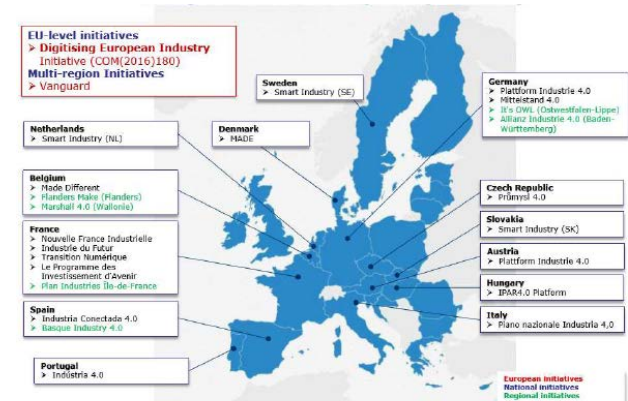
COLLECTION OF DIH- CATALOGUE

- Catalogue of DIHs in EU28 Member States
- To connect DIHs, in network, with policy makers and industry (next step)
- A platform to Competence Centres and DIHs to advertise their expertise and showcase their activities
- Identification of networks in the field of digitalisation in the industry
- Objectives
- 1st step - database with over 100 DIHs in EU28, data gathered by TNO
- 2nd step – online updating function



Three minimum conditions:

- Initiated under on EU, national or regional policy initiative to digitize the industry
- **Governmental funding** (private DIHs are excluded);
- **3 examples of services** available (in case operational DIHs do not provide the 3 examples the DIH have been classified as candidate).





DIH Catalogue and Portal

› DIGITAL INNOVATION HUBS CATALOGUE – FINAL MEETING

Arjen Goetheer & Maurits Butter

TNO innovation
for life

DIH CATALOGUE: RESULTS (1)

In total **531 Digital Innovation Hubs** identified in the EU 28 Member States, as well as in some neighbouring countries.

All DIHs have been assessed according to the **three minimum conditions** and classified to their **evolutionary development phase**

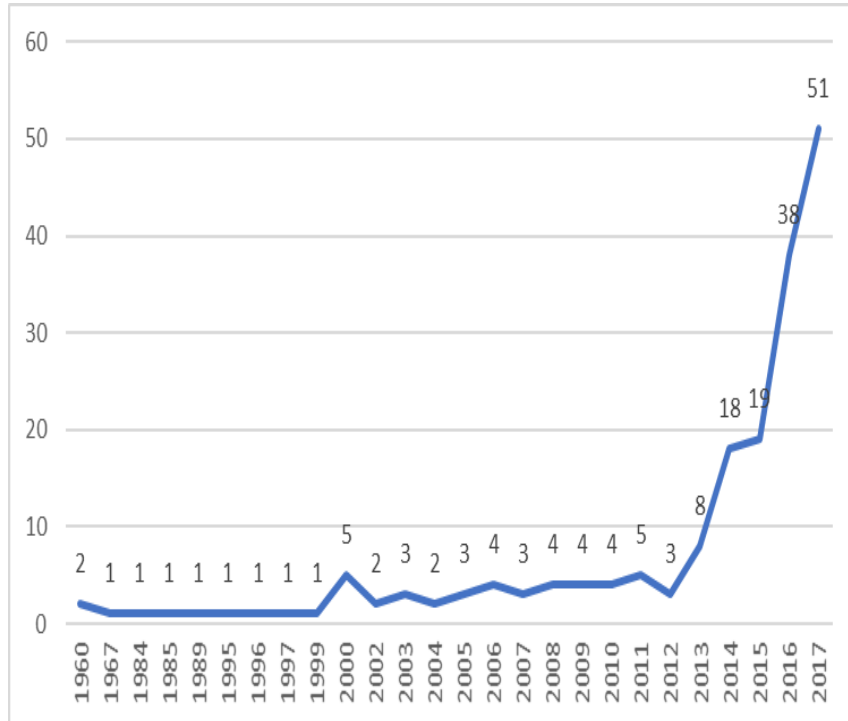
Combined top-down and bottom-up approach worked well:

- top-down **345 DIHs** have been identified
- bottom-up **186 DIHs** have been collected

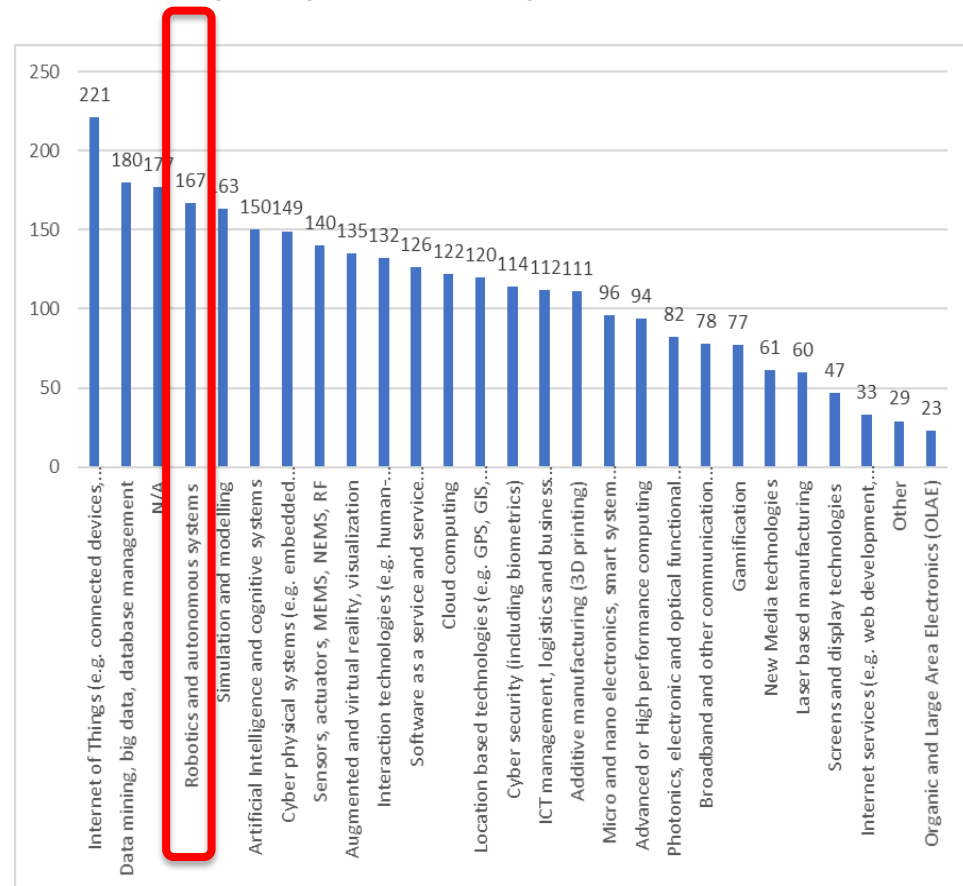
Overview	Total numbers
Identified DIHs	531
In preparation DIHs	113
Candidate DIHs	234
Operational DIHs	184

SNAPSHOTS ON THE EU DIH LANDSCAPE (1)

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

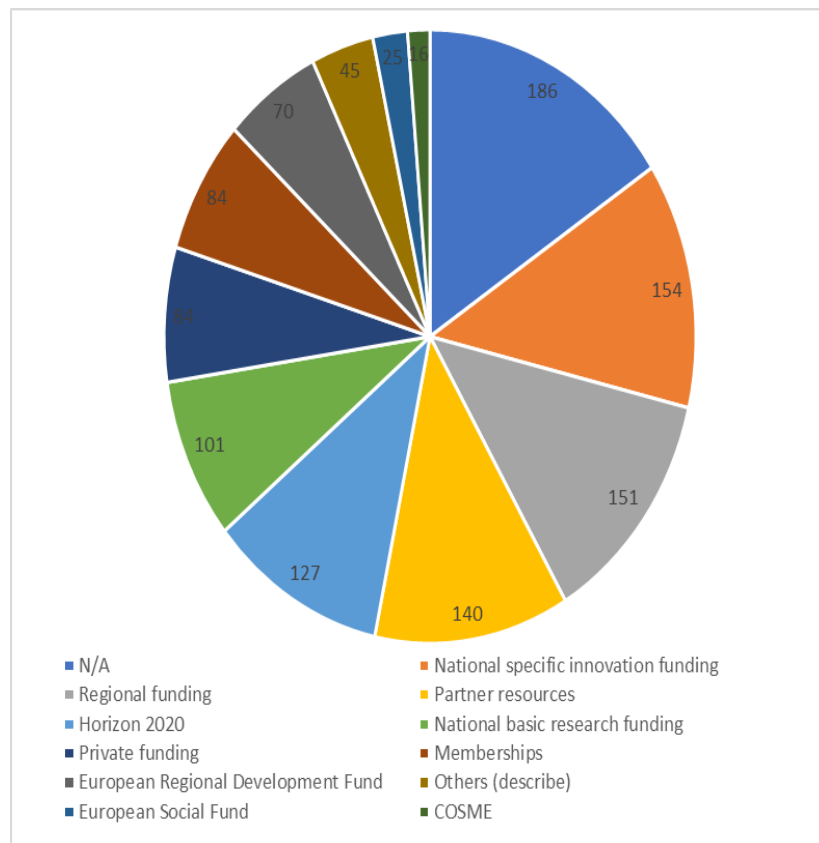


DIHs have a broad technology focus: on average they focus on eight digital technologies

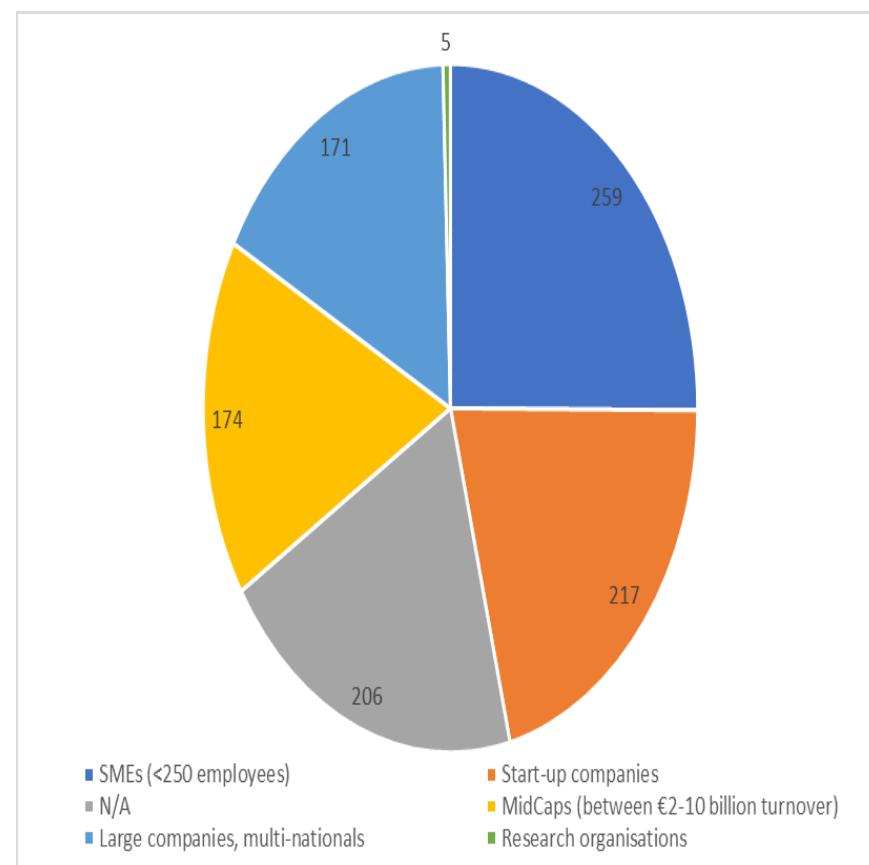


SNAPSHOTS ON THE EU DIH LANDSCAPE (3)

DIHs are funded with a mix of funding sources: 40% of the DIHs receive funding from national specific innovation funding instruments, regional funding instruments, partner resources and Horizon 2020

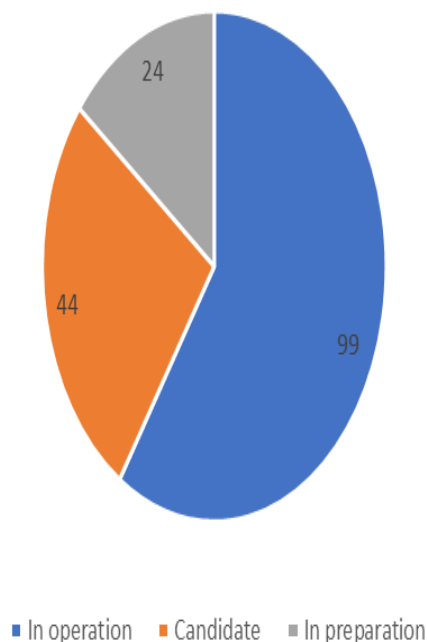


DIHs deliver services to different types of customers: SMEs are the main target customer



SNAPSHOTS ON THE DIH ROBOTICS LANDSCAPE (1)

167 DIHs have a technology focus on Robotics and autonomous systems

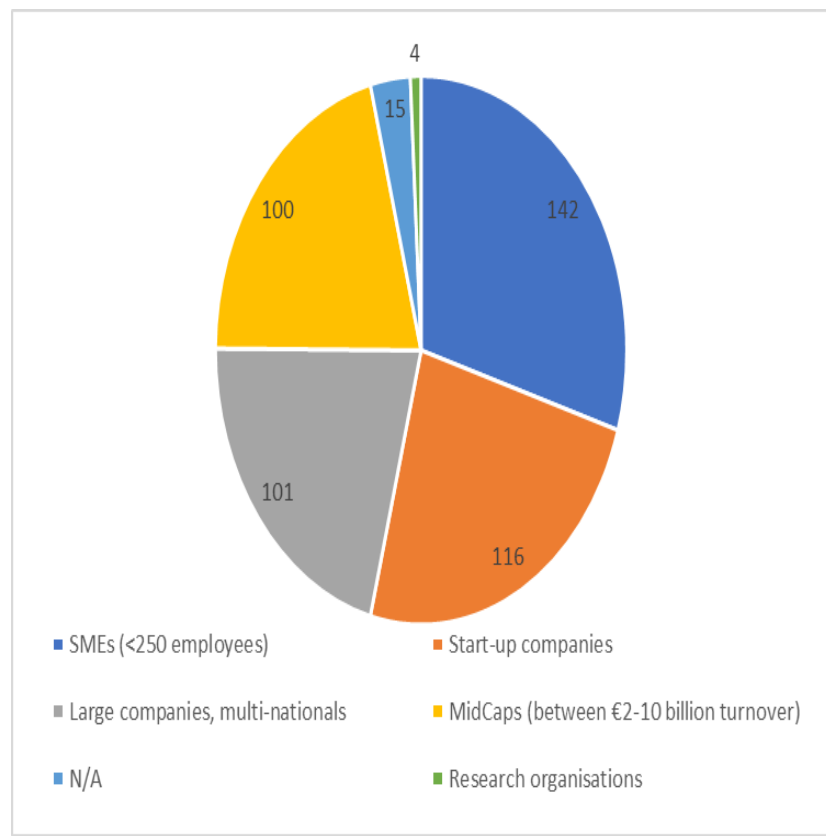


DIHs focused on robotics established in 26 EU Member States

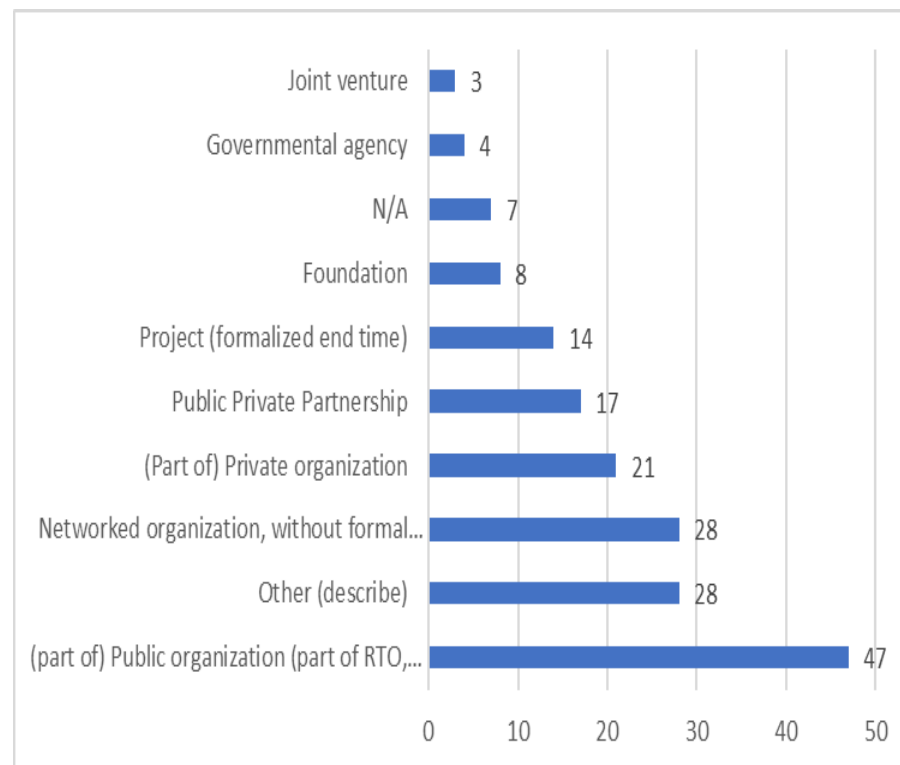
Country	Nr of DIHs	Country	Nr of DIHs
Austria	3	Italy	7
Belgium	15	Latvia	1
Bulgaria	1	Lithuania	2
Croatia	2	Luxembourg	4
Cyprus	2	Netherlands	11
Czech Republic	2	Poland	4
Denmark	6	Portugal	2
Estonia	3	Romania	3
Finland	8	Slovak Republic	1
France	13	Slovenia	3
Germany	25	Spain	25
Greece	2	Sweden	4
Hungary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

SNAPSHOTS ON THE DIH ROBOTICS LANDSCAPE (2)

DIHs deliver services to different types of customers: SMEs are the main target customer



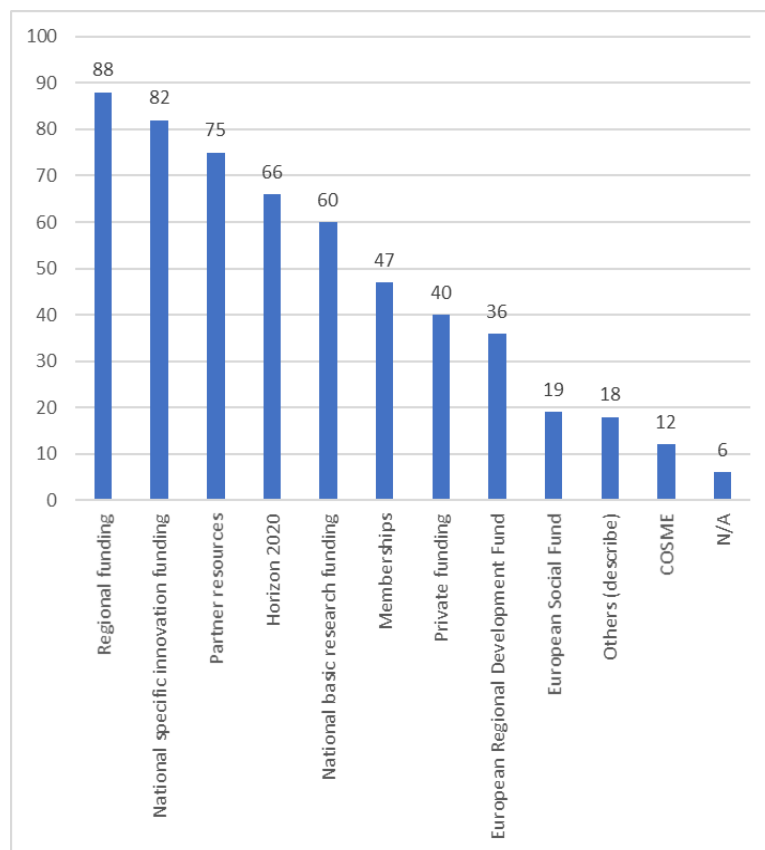
DIHs focused on Robotics vary in their organizational form



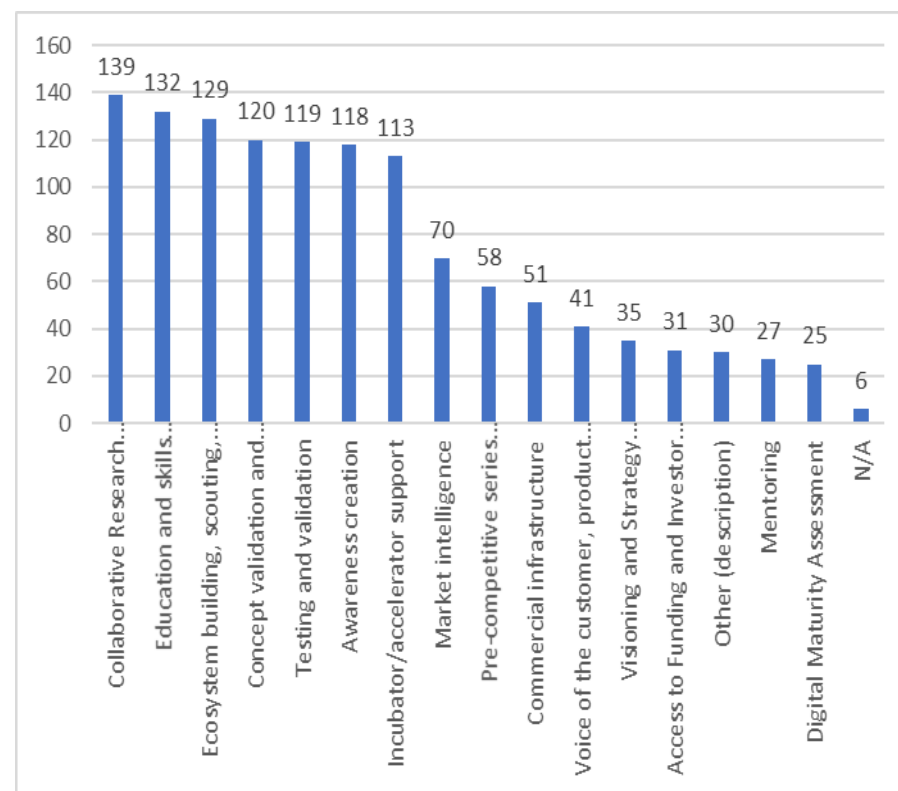
SNAPSHOTS ON THE DIH ROBOTICS LANDSCAPE

(3)

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” “Collaborative research” are offered by the majority of the DIHs



DIH CATALOGUE AND PORTAL

S3-DIGITAL INNOVATION HUBS

GABRIEL RISSOLA / JENS SORVIK JRC



<http://s3platform.jrc.ec.europa.eu/> → Tools → DIHs

- ✓ **Yellow pages on DIHs** – map user interface to identify Hubs, location and contact data – street level map data + exportable list
- ✓ **DIH – fact sheet** – in depth data on HUB, almost all data from catalogue
- ❖ **Upload and editing function** – function for users to upload data on Hubs or edit existing one (Nov'17)
- ❖ **Overview page** provide in-depth information on the state of play for policy makers, in a map, but more focus on regions and regional borders. To illustrate presence of services and capabilities, and to make comparison with other data sets (2018)
- ❖ **Network linkages** – illustrate data on relations between HUBs in a map, based on network analyses (2018)

Map of Europe showing the number of COVID-19 cases per country. The numbers are displayed in orange circles. The map includes labels for various countries and cities.

Country	Number of Cases
Iceland	0
Sweden	2
Finland	6
Denmark	17
United Kingdom	2
Ireland	21
Netherlands	160
Germany	85
Poland	6
Lithuania	15
Belarus	0
Ukraine	0
Romania	21
Bulgaria	3
Greece	3
Turkey	3
Spain	20
France	57
Italy	23
Albania	2
Tunisia	2
Algeria	0
Portugal	8

SEARCH

NEW AA

Deliverable 1: Online tool - JRC B3 will develop an online tool that will visualise the catalogue of Digital Innovation Hubs in a searchable map/database. The tool will be hosted in the Smart Specialisation webpage.

Deliverable 2: Case studies identifying, documenting and diffusing **good practices** of DIH *involved in developing and implementing Smart Specialisation Strategies*, also **mobilising** a community of practitioners in collaboration.

Deliverable 3: Mapping and analysis of DIH investment and collaboration patterns; based on the catalogue of DIHs JRC B3 will analyse the DIH participation **in FP7 and H2020 projects** – to identify what type of experiments they carry out and compare these data sets with data on **Smart Specialisation priorities, regional innovation strengths**, to analyse patterns of regional pre-conditions, services offered to see the DIHs regional embeddedness, networks and value chains.

Deliverable 4: Case studies of DIH strategies depending on socio economic contexts. Based on the analysis from deliverable 2, a selected number of regions will be explored in more depth, to better understand the connection between different forms of pre-conditions and the activities of the DIHs.

DATA CATEGORIES TO GATHER

- Name of the Digital Innovation Hub
- Social Media
- Keywords
- Description of the initiative
- Which organization is the coordinator of the initiative?
- Contact name, email, phone Website, address
- Geographical scope
- Connected to which Digitization strategy
- Partners
- Public funding received
- Type of Funding
- Evolutionary stage (emerging, established)
- Services provided
- Service examples
- Turnover
- Number of employees
- Number of customers
- Type of customers
- Organizational form
- Focus on TRL
- Market areas (Nace related)
- Digitization technological focus (list of around 30 categories)



Pilot of NL

THANK YOU

cecile.huet@ec.europa.eu