THE FRAMEWORK PROGRAMME FOR RESEARCH AND INNOVATION

HORIZON 2020

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

Cécile Huet, PhD
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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- DIH
- DIH CATALOGUE
- CALL DETAILS
- TIPS/IMPORTANT POINTS
5 ACTIONS

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

COORD & SUPPORT

APPLICATION AREAS

Inspection & Maintenance

Agri-food

Agile Production

Healthcare
TIMELINE

**DT-ICT-02-2018**

**DIGITAL INNOVATION HUBS**

17 April 2018

- IA – 64M€
  1 Network of Robotics DIHs per Priority Area:
  - Healthcare
  - Inspection and maintenance of infrastructure
  - Agri-food
  - Agile production.
  Budget: 16M€/proposal

- CSA – 2M€
  1 Central Robotics DIH CSA
  Budget: 2M€/proposal
Outline

- CALL FOCUS
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- CALL DETAILS
- TIPS/IMPORTANT POINTS
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

- TECHNICAL SUPPORT (development, integration, etc.)
- INFRASTRUCTURE
- TESTING
- ACCESS TO USERS
- ACCESS TO FINANCE
- KNOWLEDGE
- INNOVATION COACHING
- TRAINING

COMPETENCE CENTER
DIGITAL INNOVATION HUB: INGREDIENTS

- Technical Support (development, integration, etc.)
- Knowledge
- Innovation Coaching
- Testing
- Training
- Infrastructure
- Access to Finance
- Access to Users
- Supply Chain
- Brokering: Users, Suppliers, Investors
DIGITAL INNOVATION HUB: ACTORS

- Academia
- Entrepreneur
- Incubator
- Industry
- Government
- Users Community: SMEs, citizens, local economic actors,…
- Competence Center: Shared Physical Infrastructure & Support (technical, legal, administrative, business,…)

INVESTORS
DIGITAL INNOVATION HUB: ACTORS

- Academia
- Entrepreneur
- Incubator
- Industry
- Government
- Users Community: SMEs, citizens, local economic actors...
- Competence center: Shared physical infrastructure & support (technical, legal, administrative, business,...)
- Investors
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

National, regional, local Funding

EU Regional funding

PRIVATE

PUBLIC

EC Investment Plan

EARTO – HEALTHCARE
27 JUNE 2017
COMBINED FUNDING: PRIVATE & PUBLIC

National, regional, local Funding

EU Regional Funding

EC Investment Plan

PUBLIC

PRIVATE

PUBLIC SECTOR SHARING RISK WITH INDUSTRY IN INNOVATION
"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
Outline

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DIH Catalogue

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](https://ec.europa.eu/futurium/en/content/digital-innovation-hubs-catalogue-project) 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
Digital Innovation Hub

![Map of Europe showing the Digital Innovation Hub locations](image-url)
# DIH Catalogue: results

<table>
<thead>
<tr>
<th>Overview</th>
<th>Total numbers</th>
</tr>
</thead>
<tbody>
<tr>
<td>Identified DIHs</td>
<td>531</td>
</tr>
<tr>
<td>In preparation DIHs</td>
<td>113</td>
</tr>
<tr>
<td>Candidate DIHs</td>
<td>234</td>
</tr>
<tr>
<td>Operational DIHs</td>
<td>184</td>
</tr>
</tbody>
</table>
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.
167 DIHs have a technology focus on Robotics and autonomous systems.

## DIHs focused on robotics established in 26 EU Member States

<table>
<thead>
<tr>
<th>Country</th>
<th>Nr of DIHs</th>
<th>Country</th>
<th>Nr of DIHs</th>
</tr>
</thead>
<tbody>
<tr>
<td>Austria</td>
<td>3</td>
<td>Italy</td>
<td>7</td>
</tr>
<tr>
<td>Belgium</td>
<td>15</td>
<td>Latvia</td>
<td>1</td>
</tr>
<tr>
<td>Bulgaria</td>
<td>1</td>
<td>Lithuania</td>
<td>2</td>
</tr>
<tr>
<td>Croatia</td>
<td>2</td>
<td>Luxembourg</td>
<td>4</td>
</tr>
<tr>
<td>Cyprus</td>
<td>2</td>
<td>Netherlands</td>
<td>11</td>
</tr>
<tr>
<td>Czech Republic</td>
<td>2</td>
<td>Poland</td>
<td>4</td>
</tr>
<tr>
<td>Denmark</td>
<td>6</td>
<td>Portugal</td>
<td>2</td>
</tr>
<tr>
<td>Estonia</td>
<td>3</td>
<td>Romania</td>
<td>3</td>
</tr>
<tr>
<td>Finland</td>
<td>8</td>
<td>Slovak Republic</td>
<td>1</td>
</tr>
<tr>
<td>France</td>
<td>13</td>
<td>Slovenia</td>
<td>3</td>
</tr>
<tr>
<td>Germany</td>
<td>25</td>
<td>Spain</td>
<td>25</td>
</tr>
<tr>
<td>Greece</td>
<td>2</td>
<td>Sweden</td>
<td>4</td>
</tr>
<tr>
<td>Hungary</td>
<td>2</td>
<td>United Kingdom</td>
<td>7</td>
</tr>
</tbody>
</table>
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”
Click on the following link if you want to propose new HUB.
UPDATE INFO ON YOUR DIH
Outline

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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.
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 demonstrators.

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).
- 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.
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)

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)

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


- Networking: Plan for cooperation with CSA – other relevant projects/initiatives
2. What do you **NOT** want?

<table>
<thead>
<tr>
<th>What do you <strong>NOT</strong> want?</th>
<th>What do you want?</th>
</tr>
</thead>
<tbody>
<tr>
<td>Standard RIA/IA project Proposals &quot;dressed in DIH proposals&quot;</td>
<td>The focus is on developing networks of DIHs to foster the digitization of industries (esp. SMEs and non-tech)</td>
</tr>
<tr>
<td><em>Crossed out</em></td>
<td></td>
</tr>
</tbody>
</table>
| To fund DIHs themselves (this is Regional/National competency)                          | H2020 focuses on the “EU layer” :  
  • 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 | *Crossed out*                                                                                                                                          |
| Small consortia with 1 – 2 locations                                                    | Should be inclusive and involve the relevant DIHs from the start                                                                                                                                                    |
| *Crossed out*                                                                           |                                                                                                                                                                                                                      |
| Research focus                                                                        | This is Innovation Action – the focus is on showcasing/feasibility/tech transfer/use-cases                                                                                                                            |
| *Crossed out*                                                                           |                                                                                                                                                                                                                      |
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 ROBOTT-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)

Projects implementing FSTP

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


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:
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

Cecile.Huet@ec.europa.eu