Catalonia Digital Innovation Hub
Accelerating SMEs digital transformation

Laura Arribas
laura.arribas@eurecat.org
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Partners:

DIH4CAT - The Digital Innovation Hub of Catalonia

The Digital Innovation Hub of Catalonia ([DIH4CAT - www.dih4cat.cat/en/](http://www.dih4cat.cat/en/)) is defined as a non-profit regional innovation ecosystem, formed by the main agents supporting digitisation in the Catalonia region (Spain), aimed at driving technology transformation of

- **SMEs and small mid-caps (especially industrial sectors** and **technology providers)**

- **Tech start-ups**

- **Public administrations**

WHY DIH4CAT? Catalonia, an economic motor in Europe

DIH4CAT
Digital Innovation Hub
de Catalunya

CATALONIA HAS **1.5%** OF EUROPE's POPULATION.

7.6M, SIMILAR TO SWITZERLAND OR AUSTRIA

IT IS ONE OF THE

"FOUR MOTORS FOR EUROPE"

WITH LOMBARDY, AUVERGNE- RHÔNE-ALPES AND BADEN-WÜTTEMBERG.

INDUSTRY

€250,597M

GDP. HIGHER THAN PORTUGAL AND FINLAND

▲1.9%

Δ GDP ABOVE THE EUROZONE AVERAGE (▲1.3%)

19%

INDUSTRIAL GDP

RESEARCH & INNOVATION

CATALONIA ATTRACTS **2.58%** OF THE INNOVATION FUNDS GRANTED THROUGH THE HORIZON 2020 PROGRAM

CATALONIA, WITH 1.5% OF THE EUROPEAN POPULATION, REPRESENTS **2.6%** OF SCIENTIFIC PRODUCTION
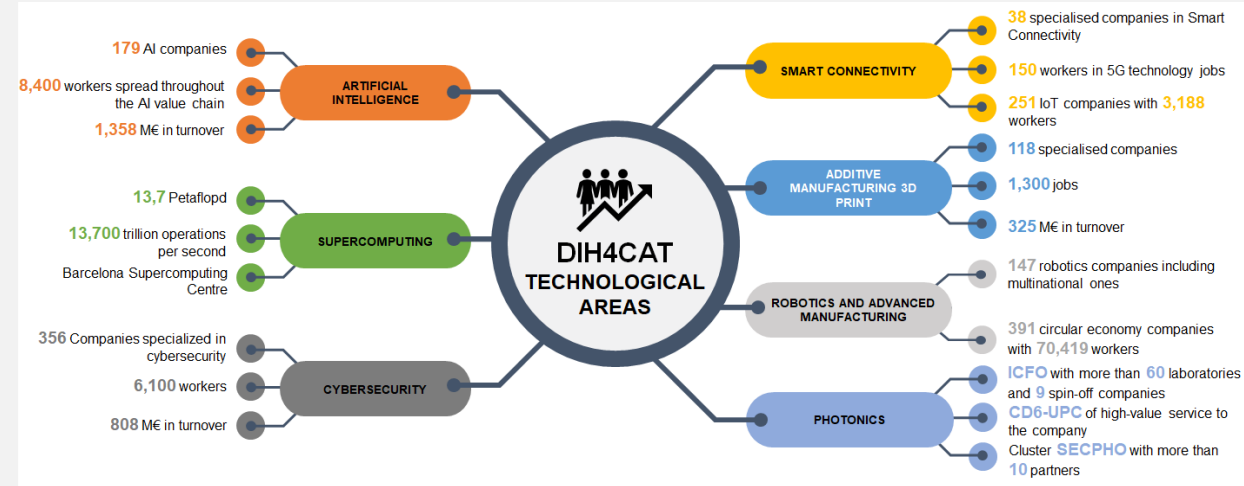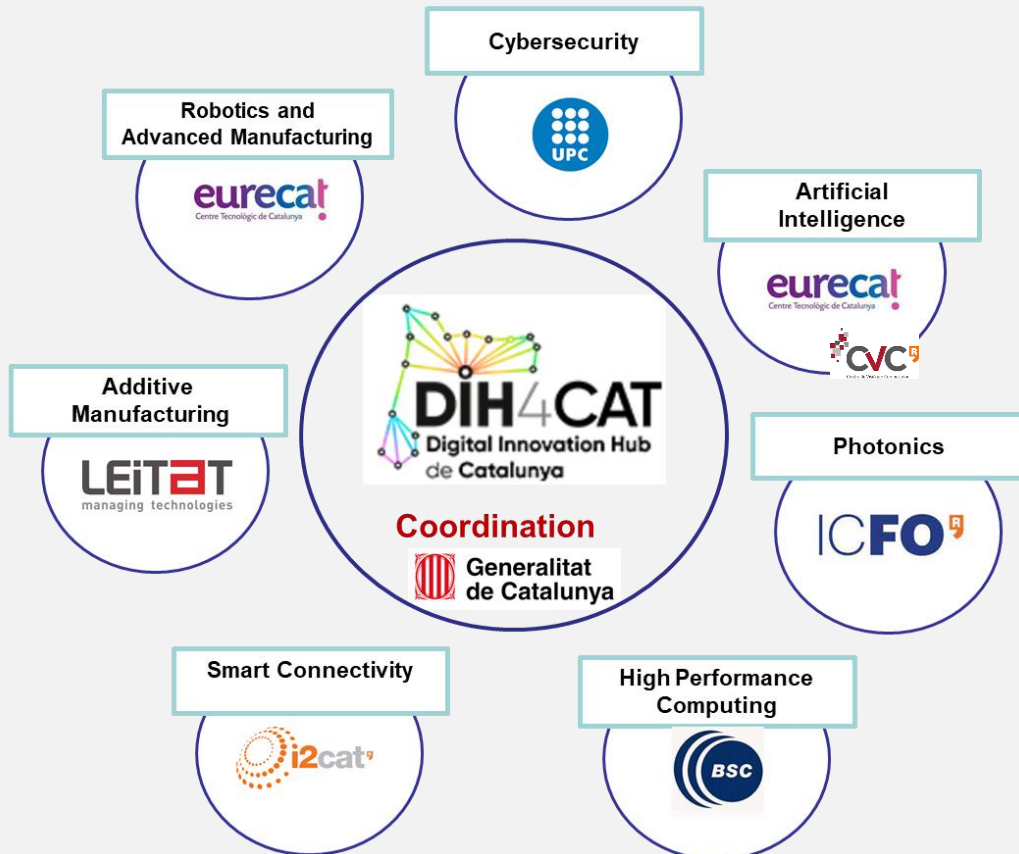
1ST

START-UP HUB IN SOUTHERN EUROPE

Impact goal 2022-2024:

2,000 Catalan companies adopting Advanced digital Technologies

DIH4CAT- Technology driven EDIH

DIH4CAT is structured around **7 advanced technology areas** or Digital Innovation Nodes, each one led by an RTO or a University highly experienced in the field

Committed team, working closely with the company

We have a results-oriented team committed to all our projects to deliver outstanding service to the company
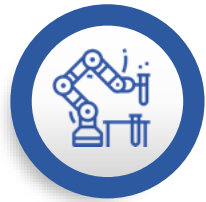
334 in 2015

705 in 2022

58% men

42% women

23% PhDs

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Interdisciplinary integration

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Industrial Area

1. Advanced materials and new manufacturing processes
2. Functional printing and embedded devices
3. Collaborative and cognitive robotics
4. Functional textiles
5. Chemicals
6. Modelling and multiphysics simulation
7. Product innovation

Digital Area

1. Applied Artificial Intelligence
2. Quantum computing
3. Data Science & Big Data Analytics
4. Cybersecurity
5. Multimedia technologies
6. Digital Health

Biotechnology Area

1. Nutrition and health
2. Omic sciences
3. Biotechnology

Sustainability Area

1. Water
2. Soil
3. Air
4. Energy
5. Waste
6. Environmental impact
7. Batteries
8. Climate change

Our standout value:

Our interdisciplinary capabilities enable us to address complex challenges.

Results-Oriented

We mentor businesses from innovation design to pre-commercial scaling.

We use agile methodologies to monitor projects. Targeted towards ROI, quick wins, PoC.

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ASSESSMENT

STRATEGY

BUILDING INITIATIVE

PLANNING

PROOF OF CONCEPT

MARKET TESTING

DEVELOPMENT

INDUSTRIAL SCALING

SUPPORT FOR CHANGE MANAGEMENT
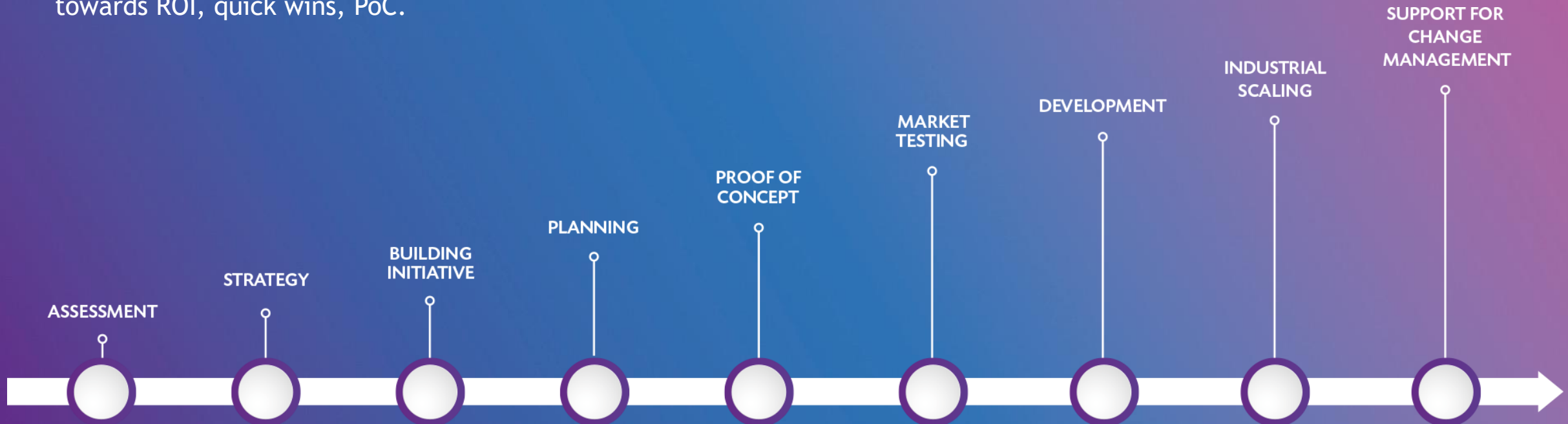
Outstanding Projects

PETROINSTAL

Virtual and augmented reality for the installation and maintenance of electric vehicle chargers and the maintenance management.

The objective of the project is the improvement of PETROINSTAL service provision throught creating virtual simulations of facilities that eventually allow remote assistance to installers and maintenance personnel using Augmented Reality technology. The implementation of the project will allow users (installation and maintenance personnel) to have access to the virtual model of the electric vehicle chargers and its integrated processes and to interact virtually with them, as well as requesting assistance from the technical office and receiving support in a remote and interactive way. The project will include the development of VR training modules for employees and contractors.

SENSOTRAN

Simulation

SENSOTRAN

Simulation tool to determine the origin of gas leaks at industrial environments

The **objective** of this project is to develop a modelling and simulation tool that measures the contaminant dispersion on the air to determine the origin of a chemical gas leak of an industrial environment. The method, that is based on an inverse detection model, uses the data collected from concentration sensors combined with wind information coming from weather stations. The sensors detect a leak, and the tool draws the retro-trajectory model. In this way, the focus of the polluting gas is detected.

Sensotran

ACCIÓ
Generalitat de Catalunya

DIH4CAT
Digital Innovation Hub de Catalunya

ROBOQUÍMIA

Robotics and AI

ROBOQUÍMIA

Cognitive robotics and artificial intelligence for the safe handling of hazardous industrial waste drums

The objective of the project is to develop and implement a robotic system (including the AI for the robot learning) for the management of hazardous substances and waste in mobile containers. This robotic system is aimed at waste transfer, treatment and valorization activities that require meticulous and complex manipulation operations currently carried out manually by workers.

Due to the great heterogeneity of the packaging and contents of the hazardous waste received, the automation of the process is very complex, the operations must be carried out in dangerous environments (explosive, flammable, corrosive).

GOBIERNO DE ESPAÑA — VICEPRESIDENCIA PRIMERA DEL GOBIERNO — MINISTERIO DE ASUNTOS ECONÓMICOS Y TRANSFORMACIÓN DIGITAL — SECRETARÍA DE ESTADO DE DIGITALIZACIÓN E INTELIGENCIA ARTIFICIAL

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TRADEBE

Thank you very much

laura.arribas@eurecat.org

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