

# i2cat<sup>R</sup>

Research  
& Innovation  
Centre

# 2025 Annual Report



**CERCA**  
Research Centres

ACCIÓ  Generalitat  
de Catalunya  
**T** tecnio  
catalonia  
Vigència: 29/12/2028

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## ■ i2CAT is helping shape a future where innovation improves people's lives and strengthens social cohesion

We are living through a period of profound global transformation, marked by the reconfiguration of industrial value chains, technological competition between international blocs and the growing need to ensure Europe's digital sovereignty. The accelerated emergence of artificial intelligence, advanced communications and distributed computing is not only redefining production models but also reshaping the priorities of public administrations in safeguarding citizens' rights and strengthening social cohesion. In this context, innovation ceases to be a luxury and becomes a structural political necessity, and centres such as i2CAT are key instruments for translating knowledge into strategic capabilities in the service of the country.

From the Government of Catalonia, we are working to ensure that this translates into tangible realities of social progress, territorial cohesion and collective well-being. To achieve this, we must not limit ourselves to adopting technology; we must also spearhead its creation. In this regard, the past year has been a historic turning point for both i2CAT and our technological ecosystem. The relocation of its headquarters to Tech Barcelona's Pier 01 marks the beginning of a new era. Located in the heart of one of Europe's most dynamic technology hubs, this new space significantly expands the

centre's research facilities and advanced laboratories, and strengthens its ability to connect research with the business community. In the digital age, we demonstrate our firm commitment to innovation, including how we physically connect.

As for the projects we have advanced, the Government has launched the new Catalonia Space 2030 Strategy, a testament to the incredible talent of Catalan companies and research centres in this field and a step towards technological strategic autonomy. Undoubtedly, i2CAT is one of the main players in the space sector. This is demonstrated by the launch of 6GStarLab, Europe's first 6G research satellite in low Earth orbit. The new space laboratory, designed and built entirely in Catalonia, reinforces our industrial capabilities and our commitment to a future in which connectivity is a universal right. Through hybrid networks and satellite communications, we are working to close the digital divide, ensuring that even the most remote areas of our territory have access to the opportunities this new decade brings.

Real innovation must also generate economic value and talent. The birth of Volum Technologies, i2CAT's new spin-off dedicated to 3D holographic solutions, is an example of how applied research brings business value in a highly competitive environment.

From immersive videoconferencing to new forms of digital presence, we are demonstrating that the knowledge and research generated in Catalonia can compete and lead in global markets.

None of these milestones would be possible without i2CAT's human talent. From the digital transformation of the Administration through the Govtech programme to the deployment of experimental infrastructures across the territory, i2CAT remains an essential pillar for knowledge transfer across the region. Their achievements are stepping stones that will allow us to deploy the Government's strategic priorities to drive a fundamental transformation of the country through both physical and digital infrastructures.

We will continue working shoulder to shoulder to ensure that innovation is, above all, a tool for equity, social justice and shared prosperity. Together, we are building a Catalonia prepared to face the challenges of the future and to serve all its citizens.

**Albert Dalmau,**  
Minister of the Presidency





## ■ Expanding Catalonia's digital future through research and innovation

The year 2025 has marked a watershed moment in the i2CAT Research and Innovation Centre's trajectory. If 2024 was the year of strategic consolidation, this past year has been one of physical and technological expansion. We have moved beyond our traditional borders, both terrestrial and institutional, to reaffirm our position as a pillar of Catalonia's digital research and innovation ecosystem. Our mission remains clear: to lead the development of advanced digital technologies that guarantee our digital sovereignty and foster a more connected, secure, and resilient society.

This ambition has materialised through several transformative milestones that define our current era. In early 2026, we completed our relocation to our new headquarters, located within Tech Barcelona's digital innovation hub at Pier 01 in Barcelona's Marina Port Vell, a strategic move that represents much more than a change of scenery. It has significantly increased our operational

capacity, providing us with over ten new specialised laboratories. Dedicated to advancing 6G, AI, cybersecurity, quantum technologies, and media networks, among others, these facilities better equip our teams with state-of-the-art instrumentation, technology and testbeds, bridging the gap between experimental research and real-world applications.

This physical growth is mirrored by our digital evolution. At the end of 2025, we implemented an internal Global Research and Innovation Roadmap and launched our new digital home, a renovated website designed to better showcase our research excellence and innovation, our impact on the public and private sectors, and the human-centric approach to our activities. Furthermore, we reached a new technological frontier with the launch of 6GStarLab, Europe's first open 6G research laboratory in Low Earth Orbit (LEO). By validating non-terrestrial network technologies from space, we are working to bridge the digital divide and ensure that secure, resilient connectivity remains a universal right.

These achievements bring us closer to technological sovereignty. In an increasingly complex global landscape, we must ensure that our society is empowered to lead and govern its own digital future. By cultivating strong partnerships across academia, industry, and government, we continue to position Catalonia as a global leader in digital innovation.

The driving force behind every achievement outlined in this report is our community of professionals and researchers, whose multidisciplinary talent and shared purpose turn ambitious research into reality. It is through their dedication that we translate complex challenges into tangible progress for society. Supported by the strategic guidance of our Board and the continued trust of the Department of the Presidency and the CERCA institution, we move into 2026 with a renewed sense of responsibility. We are not just anticipating the digital future; we are actively co-creating a resilient and sovereign ecosystem where innovation serves the common good.

**Sergi Figuerola, PhD**  
Director of i2CAT

# 01

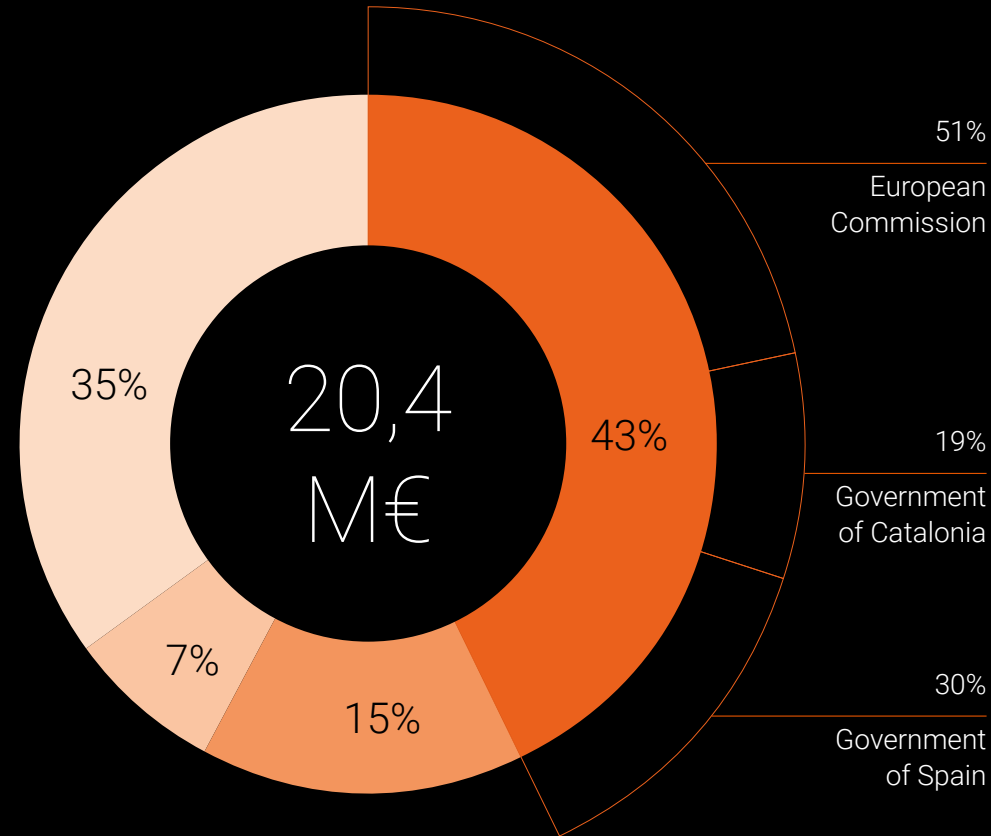
# Facts & Figures

Exploring I2CAT's 2025 performance across funding, research and organisational development.



## Funding

### Total funding



- Total public competitive funding
- Government of Catalonia core funding
- R&D Services
- Public & private contributions

## Research

### Horizon Europe

New projects

8

1 Coordinated project

### Competitive projects in execution

Total

95

European projects  
33

Spanish projects  
36

Catalan projects  
26

### R&D projects in execution

Total

146

Competitive projects

95

R&D on-demand services

27

Projects and initiatives with public administrations

24

### New projects

Competitive project proposals submitted

190

New competitive projects

36

### Our organisation

Total staff

249

Research staff

51%

33% PhD staff

42 doctors

25 pre-docs

Nationalities

19

Women in staff

30%

# 02 Highlights

In 2025, i2CAT reached new heights, launching Europe's first open 6G laboratory in orbit and relocating to a new home at the heart of Barcelona's innovation ecosystem. We have advanced research, deepened partnerships and delivered real-world impact. By bridging cutting-edge technology with the needs of society, business and public administration, i2CAT has continued to demonstrate that bold research and meaningful change go hand in hand.



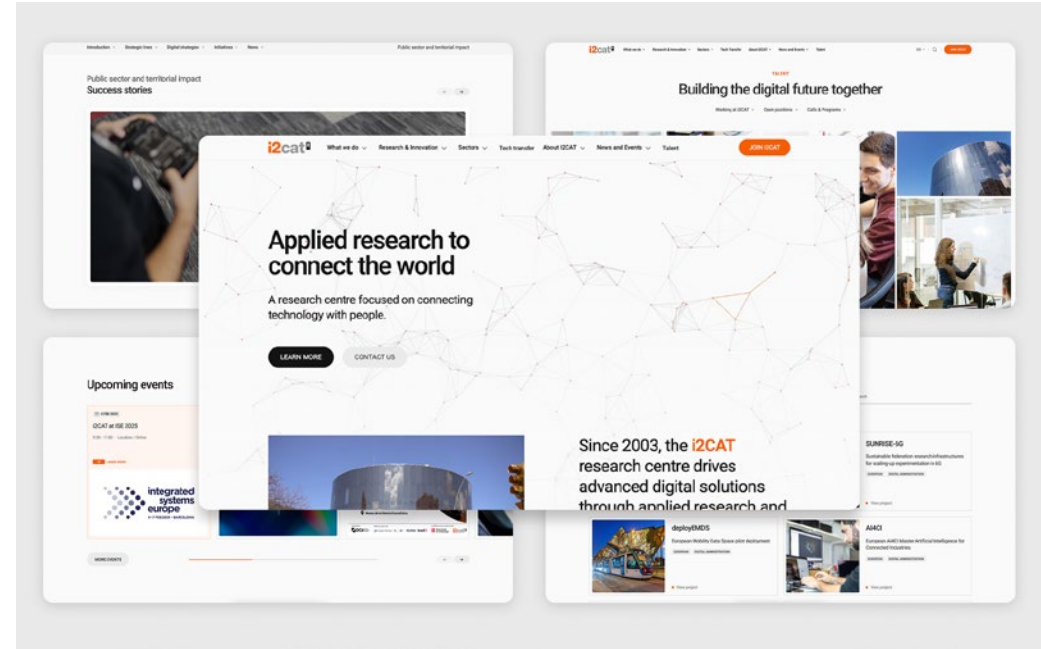
## Corporate and Institutional Highlights

### New headquarters at Tech Barcelona's Pier 01

In 2025, i2CAT announced the relocation of its corporate headquarters to Tech Barcelona's Pier 01, situated in the Palau de Mar, a landmark building on Barcelona's seafront. After 20 years at the Campus Nord of the Universitat Politècnica de Catalunya (UPC), i2CAT moved into one of Europe's most dynamic digital and technological hubs in February 2026.

The move resulted in a 30% increase in facilities, including state-of-the-art laboratories for experimental research and innovation in NTN & Satellites, 5G-Advanced & 6G, Quantum Networks, Immersive Multimedia, Mobility V2X and Smart Sensing.

It also marks a step forward in the deployment of experimental laboratories across the Port de Barcelona area, spanning from Pier 01 to the World Trade Center, through strategic collaborations with both organisations.



### Our new digital home: i2CAT's new website

At the end of 2025, i2CAT launched a completely renovated website, designed to better connect with the research ecosystem, companies, public organisations and citizens, and to showcase the human impact of its projects on daily life and regional competitiveness. The new space aspires to be more than a portal: an open conversation about how technology can build a better society. It was designed in collaboration with the Catalan agency WHADS.

## Research Excellence

### Launch of Europe's first open 6G in-orbit research laboratory

In late 2025, i2CAT led the successful launch of **6GStarLab, the first European open 6G research laboratory in Low-Earth Orbit (LEO)**. The satellite serves as a flexible, space-based testbed for validating non-terrestrial network (NTN) technologies. Developed in collaboration with **Open Cosmos**, the mission incorporates high-tech payloads designed by i2CAT and **Microwave Sensors and Electronics (MWSE)**, along with an advanced radio-frequency antenna array developed by the **NanoSat Lab at the Universitat Politècnica de Catalunya (UPC)**. This orbital laboratory also features a cutting-edge space-to-ground optical communication laser terminal and ground station provided by **Transcestial**. By enabling the scientific community to conduct remote experiments, 6GStarLab bridges the gap between terrestrial and satellite communications, enhancing secure, global connectivity.



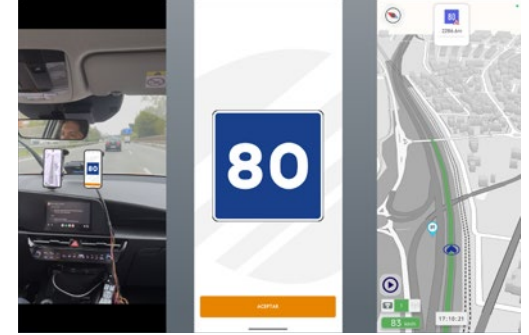
### i2CAT completes six UNICO I+D 6G projects, advancing the future of connectivity

i2CAT has successfully concluded **six coordinated programs under the UNICO I+D 6G programme**, delivering a comprehensive suite of breakthrough technologies that redefine the telecommunications landscape. Through these initiatives, i2CAT has validated pioneering solutions including real-time multi-user hologportation for immersive media, zero-touch O-RAN architectures with integrated sensing (ISAC), and ultra-reliable deterministic networking for Industry 5.0. By integrating non-terrestrial networks (NTN), neuro-symbolic AI and vehicular digital twins for smart mobility, **the programme bridges the gap between advanced research and industrial application**, securing i2CAT's position at the forefront of the global transition to a 6G ecosystem.



### Digital twin technology enhances safety and emission control on the C-32 highway

The **DIMOS 5G** project, a collaboration between i2CAT and **Autopistas (Abertis)** under the **UNICO Sectorial 5G programme**, has successfully validated a digital twin on the C-32 highway to improve road safety and environmental sustainability. By monitoring real-time data from infrastructure and connected vehicles, the system proactively detects congestion and implements dynamic mitigation strategies, such as recommending speed limits via the **YUNEX Drive** and **AWAI** applications.



### Drone demonstration for rural safety

As Technical Coordinator of the **Horizon Europe XGain project**, i2CAT demonstrated a 5G-equipped drone solution for locating missing persons in rural areas. Tested at the **COEbre LAB** in Tarragona, the system combines high-precision 5G connectivity with AI-based real-time image

analysis. This innovation is part of a broader effort to bridge the digital divide, providing rural communities with advanced tools for emergency response, forest fire detection, and smart agriculture through a dedicated rural drone operations centre.



## Public Sector Digital Transformation



### GovTech Catalunya mobilises start-ups to tackle public sector challenges

In 2025, i2CAT advanced the definition and deployment of the Open Digital Innovation Platform, a key tool for **structuring and scaling innovation within Catalan public administration**. Promoted by the Secretariat of Telecommunications and Digital Transformation and the Secretariat for Digital Policies of the Government of Catalonia, the platform connects public challenges with technological solutions, facilitating their identification, development and deployment.

During the year, the methodological foundations of the model were established and its first functional module developed, focused on challenge management and connection with the innovation ecosystem.

The first GovTech Catalunya competition mobilised **24 startups and 47 proposals** to address strategic administrative challenges. Selected solutions, based on artificial intelligence, digital accessibility and knowledge graphs, will be **deployed in real pilots** to validate their impact and potential for scaling.

The programme's community, **DCA-GovTech**, now counts **176 members**, reinforcing the public-private collaboration model and positioning public administration as a driver of innovation.

### Driving Territorial Transformation through the Nuclear Transition Fund

This programme aims to support the transformation of the areas affected by the closure of the Ascó and Vandellòs nuclear power plants. Promoted by the Secretariat for Digital Policies under the Nuclear Transition Fund and implemented by i2CAT, the initiative fosters innovation, talent development and new economic opportunities to strengthen the region's long-term competitiveness.

The programme promotes a development model based on advanced digital technologies, designed to attract and retain talent, strengthen business competitiveness and position the affected regions as new innovation hubs. It incorporates a clear social dimension, with particular attention to **reducing the gender gap and generating real opportunities at a local level**.

The model is structured around four complementary strands covering the full innovation value chain: talent development, innovation infrastructure, use case development and technology adoption.

### i2CAT takes the Living Labs model to Senegal and the United Nations



i2CAT contributed to the deployment of **Senegal's first national Living Labs network**, a pioneering initiative jointly promoted with FDSUT and the Catalan Agency for Development Cooperation of the Government of Catalonia to foster digital and social innovation.

The project will establish **four innovation labs** in Dangalma, Kaolack, Ziguinchor, and Saint-Louis, enabling local communities to co-create digital solutions tailored to territorial challenges.

In February, i2CAT presented the initiative at the United Nations Science Summit in New York, reinforcing its **international leadership in Living Lab methodologies**.

### Catalonia launches its AI and Space Strategy 2030 with i2CAT's strategic support

In 2025, the Government of Catalonia presented its **Catalonia AI Strategy 2030**, aiming to position the country as a European leader in responsible AI and mobilise up to **one billion euros** in investment.

Structured around **88 actions across eight strategic priorities**, the strategy drives the development of infrastructure, talent and AI applications across both

the public and private sectors. i2CAT contributed as a strategic partner in its design and deployment, leading key initiatives including the AI Accelerator, Àrees Digitals and various GovTech AI projects.

The Government also presented the Catalonia Space Strategy 2030, aimed at consolidating Catalonia's position as a relevant player in the new European space economy. i2CAT plays a key role, contributing to **Catalonia's positioning as a reference in secure and resilient communications** based on non-terrestrial networks, and driving use cases that connect space with real-world applications in public services and the territory.



## Market-oriented Innovation

### Launch of Volum Technologies, i2CAT's 3D holographic solutions spin-off

In 2025, i2CAT launched Volum Technologies, a spin-off that offers high-quality 3D holographic solutions using standard commercial cameras, **enabling immersive, real-time videoconferencing at a competitive cost.**

Volum's product range includes HoloBooth, a plug-and-play capture booth that simplifies 3D human capture for volumetric presence; HoloTotem, a compact holographic capture and display system; and HoloMIT SDK, which integrates volumetric technology with the **Unity platform**, enabling developers to create immersive experiences.



### Strategic partnership with INDRA to pioneer global connectivity

i2CAT and Indra were awarded a European Space Agency project to design a **5G/6G satellite constellation for global connectivity**. Framed within the ESA's Advanced Research in Telecommunications Systems (ARTES) programme and financed through the Spanish Space Agency, the two organisations are leading **CONSTELINK**, a strategic project to define, analyse and verify a robust 5G/6G satellite system architecture capable of supporting a constellation to achieve global connectivity and advanced network solutions in Low Earth Orbit (LEO).

i2CAT is contributing the specification and preliminary design of an onboard Software Defined Radio (SDR) for a 5G regenerative payload, as well as the definition of validation scenarios and testbeds.



# 03

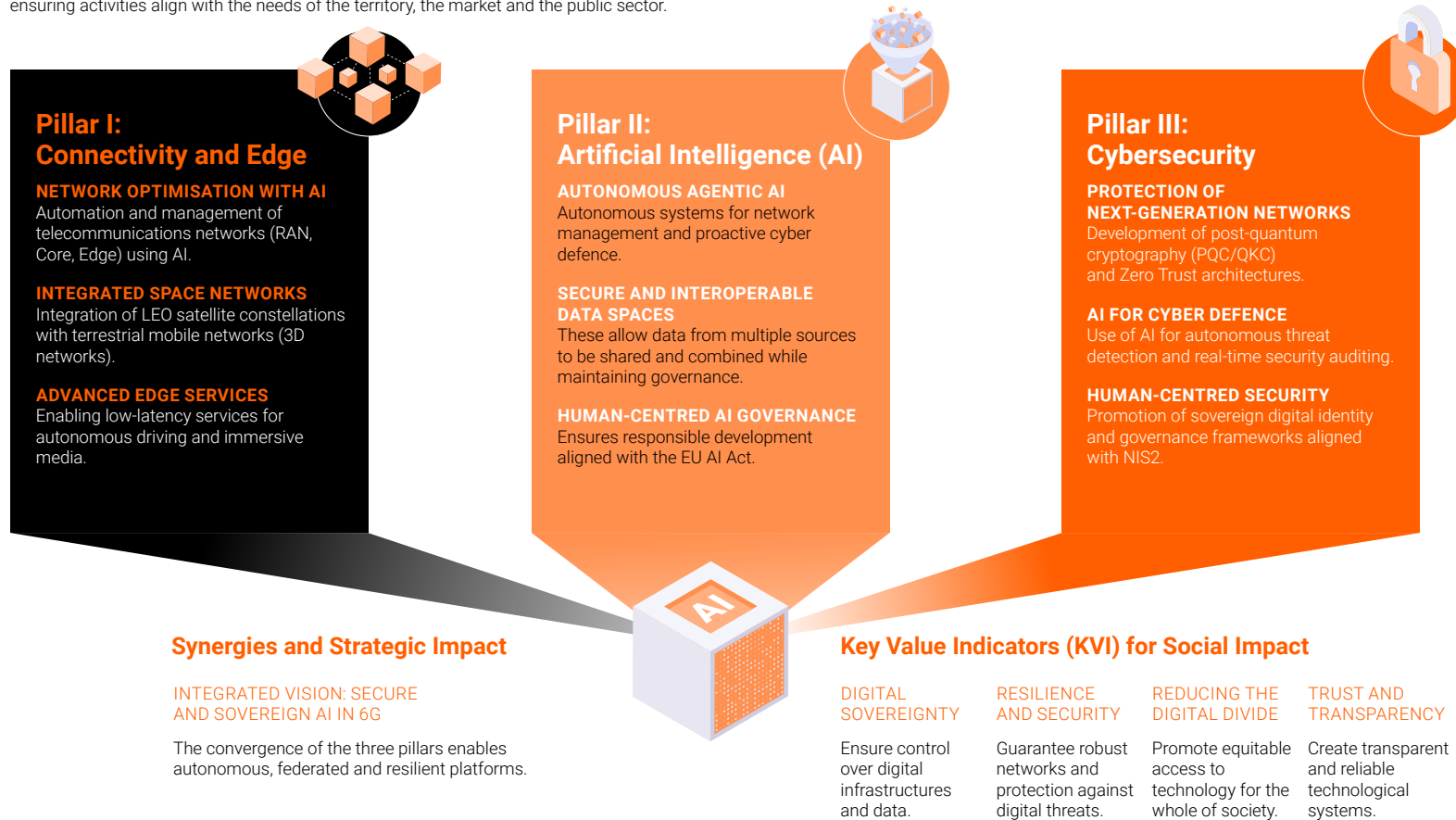
## Research Excellence

Since 2006, i2CAT has participated in over **136 European research projects** and secured more than **€36 million** in funding from the European Commission. The centre ranks among Spain's top 15 research institutions for Horizon Europe participation and is the third organisation in Catalonia to have attracted the most ICT funding from the Commission within H2020 and Horizon Europe. In 2025, i2CAT was active in **36 Horizon Europe projects** and successfully concluded its activities under the UNICO I+D 6G programme, a €16.5 million initiative spanning six major coordinated research projects.



## Research Groups Roadmap

i2CAT's strategic vision is guided by a new **Global Research and Innovation Roadmap (GRIR)**, built around three pillars of technological sovereignty: **connectivity and edge computing, artificial intelligence and cybersecurity**. Working across these fields, the centre advances applied research to address complex challenges for society, industry and the public sector. The roadmap is a collective effort across all of i2CAT's research, innovation, business and technology transfer groups, ensuring activities align with the needs of the territory, the market and the public sector.



## EU Funding Programmes for Research and Innovation

i2CAT plays a leading role in numerous European research projects, working across cutting-edge technologies including **5G/6G, immersive and interactive technologies, IoT, AI, Cybersecurity, Blockchain, Space Communications and Digital Society Technologies**. The centre has become a European benchmark for mission-oriented R&D, consistently achieving high-impact results within the **Horizon Europe, 6G SNS JU and Digital Europe Programme** funding frameworks.

## Horizon Europe

i2CAT is currently active in **36 Horizon Europe projects**, holding 8 leadership positions: coordinating 4 initiatives and serving as Technical Coordinator on 4 others. **Fifteen projects** fall under the **6G Smart Networks and Services Joint Undertaking (SNS JU)**, Europe's primary programme for next-generation mobile network technologies.

In 2025, the centre was awarded **four new projects under the fourth SNS JU call**, scheduled for execution from 2026, focusing on experimental platforms and technology validation. Three successful **Open Call** awards also brought in over **€250,000** in additional funding.

With over two decades of expertise, i2CAT is a cornerstone of digital excellence in Europe. Since 2006, i2CAT has participated in **136 European projects** and secured more than **€36 million** from the European Commission. These efforts continue to drive the development of a more secure, autonomous, and connected society for everyone.

Secured funding (2021-2025)

# €15M

Projects

# 36

### Projects

#### GENOME

##### GENOME

i2CAT coordinates this **Marie Skłodowska-Curie Action (MSCA)** Doctoral Network, bringing together **12 European partners** to pioneer the use of **Large Language Models (LLMs)** for the autonomous management of complex network domains including O-RAN, edge and cloud. GENOME aims to validate an intelligence framework enabling rapid, conflict-free decision-making across future 6G infrastructures.



##### PRESENCE

i2CAT coordinates this **Horizon Europe** project, which delivers intuitive and hyper-realistic Extended Reality (XR) experiences by bringing real humans into interactive virtual worlds. Involving **17 European partners**, it provides a toolset of technologies including **holoportation, haptics** and virtual humans to enhance the sense of presence in virtual scenarios, with ethics, safety and privacy built in throughout.



Funded by  
the European Union

##### CERTAIN

This **Horizon Europe** project develops a comprehensive safety assurance framework for CCAM systems, prioritising **Safety, Trust, Acceptance and Comfort** throughout the vehicle lifecycle. By designing systems that adapt to the cognitive complexity of human road users, the project aims to foster user trust and accelerate market adoption.



##### MultiX

This **6G SNS** project aims to transform 3GPP Radio Access Network design and operation through a pioneering MultiX fusion Perceptive 6G-RAN system (MP6R). It supports an **integrated multi-sensor, multi-static, multi-band and multi-technology paradigm** to enable multi-sensorial perception for future 6G sensing applications.

#### PCP WISE

##### PCP-WISE

This **Horizon Europe** project enhances Earth observation-based information for regional water management and cross-border resilience. Focusing on local water availability dynamics, it anticipates extreme climate conditions through an **integrated water intelligence system** to help mitigate water-related crises.



Funded by  
the European Union

### Other Programmes

i2CAT also participates in **two new projects within the Digital Europe Programme**, which aims to bridge the gap between digital technology research and market deployment, as well as other European funding instruments.



##### DIH4CAT AI Connect

Led by ACCIÓ, this strategic regional ecosystem brings together **12 partners** including RTOs, universities and industry associations to **accelerate the digital transformation of SMEs, start-ups and public sector organisations**. Building on a track record of over 600 technology services delivered and a **22% increase in digital maturity** among participants, the project continues through 2026 to 2028.

##### CIPHER

This project provides **advanced information assurance for Europe's critical sectors** through a standardised, as-a-service testing facility, directly supporting the EU's **Cybersecurity Strategy for the Digital Decade**.



Funded by  
the European Union

##### GUIDE

Concluded in 2025, this **Connecting Europe Facility** project saw i2CAT lead the development of the **Strategic Deployment Agenda** for 5G across cross-border transport corridors, harmonising cooperation between the telecommunications, automotive and rail sectors in line with the EU's 2030 Digital Decade goals.



##### SAGE-Hub

Funded through the European Commission's **I3 Instrument** programme, this project addresses the challenge of an ageing population by developing and scaling **Smart Ageing solutions across six European regions**, bringing together SMEs, public authorities, research institutions and Digital Innovation Hubs.



Funded by  
the European Union

## SNS Projects

In 2025, i2CAT was awarded **four new projects** within the fourth call of the **6G Smart Networks and Services (SNS) Joint Undertaking (JU)**, expanding the portfolio to **15 active projects** across the lifespan of this flagship European initiative. Set to commence in 2026, the new projects focus on large-scale trials and infrastructure, marking the programme's transition from early research to real-world validation.

# 6GSNS

### Stream A

Within **Stream A**, oriented at developing advanced 5G solutions, 2025 saw the successful conclusion of the **BeGREEN** and **NANCY** projects. BeGREEN completed its mission to reduce energy consumption in mobile networks, while NANCY finalised its framework for improving network security and privacy through AI and blockchain. Their results now serve as a foundation for the 6G architectures currently under development.



### Stream B

In **Stream B**, focused on 6G technology enablers, i2CAT now participates in **six projects**. The newly awarded **6G-NTN NEXUS** merges satellite technology with ground-based networks into a seamless 6G infrastructure, complementing the work of **ETHER**, **INSTINCT**, **iTrust6G**, **ORIGAMI** and **MultiX** across coverage, security, architecture and sensing.



### Stream C

**Stream C** aims to build experimental platforms for 6G. The **6G-XR** project concluded in 2025 after successfully validating extended reality services including holography and digital twins. **6G-BRICKS** continues to integrate groundbreaking technologies such as Reconfigurable Intelligent Surfaces (RIS), while i2CAT maintains its role as co-technical manager for **SUNRISE-6G**, which federates European experimental platforms into a scalable network of networks.



### Stream D

In **Stream D**, focused on large-scale validation, **TARGET-X** closed in 2025 after demonstrating the potential of 5G and 6G in energy and manufacturing. Three new projects follow: **SOVEREIGN-6G** will deliver the **first 6G Telco Cloud in Europe**; **GENIUS** will evaluate 6G technologies in automated logistics at the Port of Barcelona, Athens Airport and the City of Aveiro; and **6G-CARE** will demonstrate healthcare and emergency response solutions across six European countries.



## UNICO I+D 6G Programme

In 2025, i2CAT successfully concluded its activities across the six coordinated projects awarded under the **UNICO I+D 6G programme**, representing a total investment of **€16.5M**. Since January 2022, the centre has led **19 research subprojects** structured into these six major coordinated projects, designed to advance 5G and future 6G technologies in Spain. The programme was promoted by the Ministry for Digital Transformation and the Civil Service within the Recovery, Transformation and Resilience Plan, funded by the European Union through **NextGenerationEU**.

Investment

# €17M

Research Subprojects

# 19



### Projects

#### 6G-OpenVerso

Development and validation of a **real-time multi-user holoportation platform**, alongside **6G and Edge Computing** mechanisms for immersive services. The platform was successfully integrated into commercial systems for television production and immersive education.

#### OPEN6G

Demonstration of **highly automated Open Radio Access Networks (O-RAN)**, achieving native integration of Integrated Sensing and Communications (ISAC) and wireless control of Reconfigurable Intelligent Surfaces (RIS) through AI algorithms.

#### 6GSMART

Design and deployment of **6G network and Edge Computing mechanisms for Industry 4.0 and 5.0**, delivering ultra-low latency and high-reliability connectivity. Developed mechanisms include Multi-RAT convergence, Time-Sensitive Networking and intelligent orchestration of the cloud continuum in industrial environments.

#### 6GSatNet

Construction of key technological building blocks to **integrate Non-Terrestrial Networks (NTN) into mobile infrastructure**, including hybrid inter-satellite links, virtualised payloads, satellite IoT systems and Quantum Key Distribution (QKD).

#### 6GENABLERS

Design of an **autonomous network architecture** with native neuro-symbolic AI, a decentralised Smart Marketplace based on Distributed Ledger Technologies and an advanced framework for cybersecurity, privacy and trust.

#### 6GTWINROAD

Creation of **three-dimensional vehicular digital twins** to optimise urban and interurban traffic management, validating next-generation **V2X connected mobility services** including remote driving, cooperative manoeuvre coordination and protection of vulnerable road users.

#### Plan for the Promotion of Telecommunications Studies (PPET)

Design and execution of a **national strategy to promote vocations and attract talent** to the telecommunications sector, through open educational resources, visibility for female role models and international mobility and doctoral training programmes.

## UNICO Infraestructuras

Through nearly **€10 million** across two calls of the Infrastructure and Scientific-Technical Equipment sub-programme, i2CAT has integrated its specialised laboratories into a **unified, open-access experimental infrastructure for 5G-Advanced and 6G research**. The result is an interconnected ecosystem of five facilities:

Investment

# €10M

Experimental Infrastructures

# 5

### 6GEN

Serving as the central axis, this **unified testbed** allows universities and companies to experiment in real-world environments, facilitating applications requiring near-zero latency through **Cloud Continuum** distributed processing, **Extended Reality (XR)** and highly programmable networks.

### 6GEN-ORAN

This platform drives the **virtualisation and automation of mobile networks** through open architectures and intelligent controllers (RIC), enabling the development and deployment of **AI-based solutions** into commercial operator environments.

### 6GCAMLab

Dedicated to **Cooperative, Connected and Automated Mobility (CCAM)**, this lab integrates advanced perception systems including **LiDAR** sensors and artificial vision for V2X communication validation and real-time teleoperation.

### 6GStarLab

**Europe's first Low-Earth Orbit (LEO) laboratory for 6G research**, combining an in-orbit CubeSat with optical and radio frequency ground stations to validate the integration of terrestrial and satellite networks.

### 6GQuCryptoLab

Specialised in **quantum optical communications**, this laboratory researches **Quantum Key Distribution (QKD)** systems across fibre-optic and free-space links, combining post-quantum cryptography with adaptive optics to protect critical infrastructures.

The completion of this infrastructure marks a significant step for the centre. By integrating space, terrestrial and quantum communications with artificial intelligence and autonomous mobility, i2CAT is now well placed to address the complex technical challenges of the next decade from a comprehensive, multidisciplinary perspective.

## Talent in Research

i2CAT strives for excellence to increase the centre's scientific competitiveness. In 2025, we continued to invest in research and innovation talent to maintain our scientific and technological leadership.

In 2025, i2CAT hosted three visiting researchers from the Universidad Católica de Brasília, working alongside the Distributed Artificial Intelligence, Digital Social Technologies and Cybersecurity research groups. Six researchers from i2CAT also participated in visiting programmes at Boston University, the National Institute of Informatics in Japan, Saint Louis University, the University of Zagreb and NEC HQ in Germany.

### Marie Skłodowska-Curie Doctoral Networks

In 2025, i2CAT hosted two researchers from the **Marie Skłodowska-Curie Innovative Training Networks (MSCA-ITN)** who developed their secondment PhD stages within the **5GSmartFact** project.



### AGAUR Grant Programmes

In 2025, i2CAT was awarded an **AGAUR grant** supporting researcher Estel Ferrer, who is carrying out her project *Towards Autonomous Collaboration in Heterogeneous Satellite Systems Using Machine Learning* within the Distributed Artificial Intelligence research group.



## Research Publications

Excellence, cooperation, openness, inspiration and commitment are i2CAT's hallmarks. In 2025, our research groups worked to produce relevant scientific results to contribute to the advancement of digital technologies and to support standard bodies such as ETSI and ISO. We are committed to making our scientific outcomes available to everyone and to giving further visibility to the results achieved by our researchers.

### Journals

36

30  
Q1 Journals6  
Q2 Journals

### Conferences

76

6 A and A\*

### Workshops

6

### Book

1

### Book Chapters

3

### The main publications of 2025 are as follows:

- 1 Palomares, J., Coronado, E., Tzenetopoulos, A., Lentaris, G., Cervelló-Pastor, C., & Siddiqui, M. S. (2025). Hardware-accelerated Edge AI Orchestration on the Multi-Tier Edge-Cloud Continuum. *Journal of Network and Systems Management*. doi: 10.1007/s10922-025-09959-4
- 2 Antoun, M., Elhadj, I. H., Sayour, M., et al. (2025). Interactive digital twins enabling responsible extended reality applications. *Scientific Reports*, 15(1), 34539. <https://doi.org/10.1038/s41598-025-17855-9>
- 3 Encinas-Lago, G., Sciancalepore, V., Wymeersch, H., Di Renzo, M., & Costa-P, X. (2025). RiLoCo: An ISAC-oriented AI Solution to Build RIS-empowered Networks. *IEEE Transactions on Wireless Communications*.
- 4 Carmona-Cejudo, E. and Iadanza, F. (2025). Energy-Aware Offloading of Containerized Tasks in Cloud Native V2X Networks. *IEEE Transactions on Cloud Computing*, vol. 13, no. 1, pp. 336-350. doi: 10.1109/TCC.2025.3529245
- 5 Encinas-Lago, G., Devoti, F., Rossanese, M., Sciancalepore, V., Di Renzo, M., & Costa-Pérez, X. (2025). COLoRIS: Localization-agnostic Smart Surfaces Enabling Opportunistic ISAC in 6G Networks. *IEEE Transactions on Mobile Computing*.
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- 7 Jordan-Parra, J., Garcia-Romero, M., Gil-Lopez, J., Ruiz-De-Azua, J. A. and Paradells, J. (2025). Satellite quantum key distribution: analysis, modelling, performance evaluation, and validation. *IEEE Open Journal of the Communications Society*. doi: 10.1109/OJCOMS.2025.3614698
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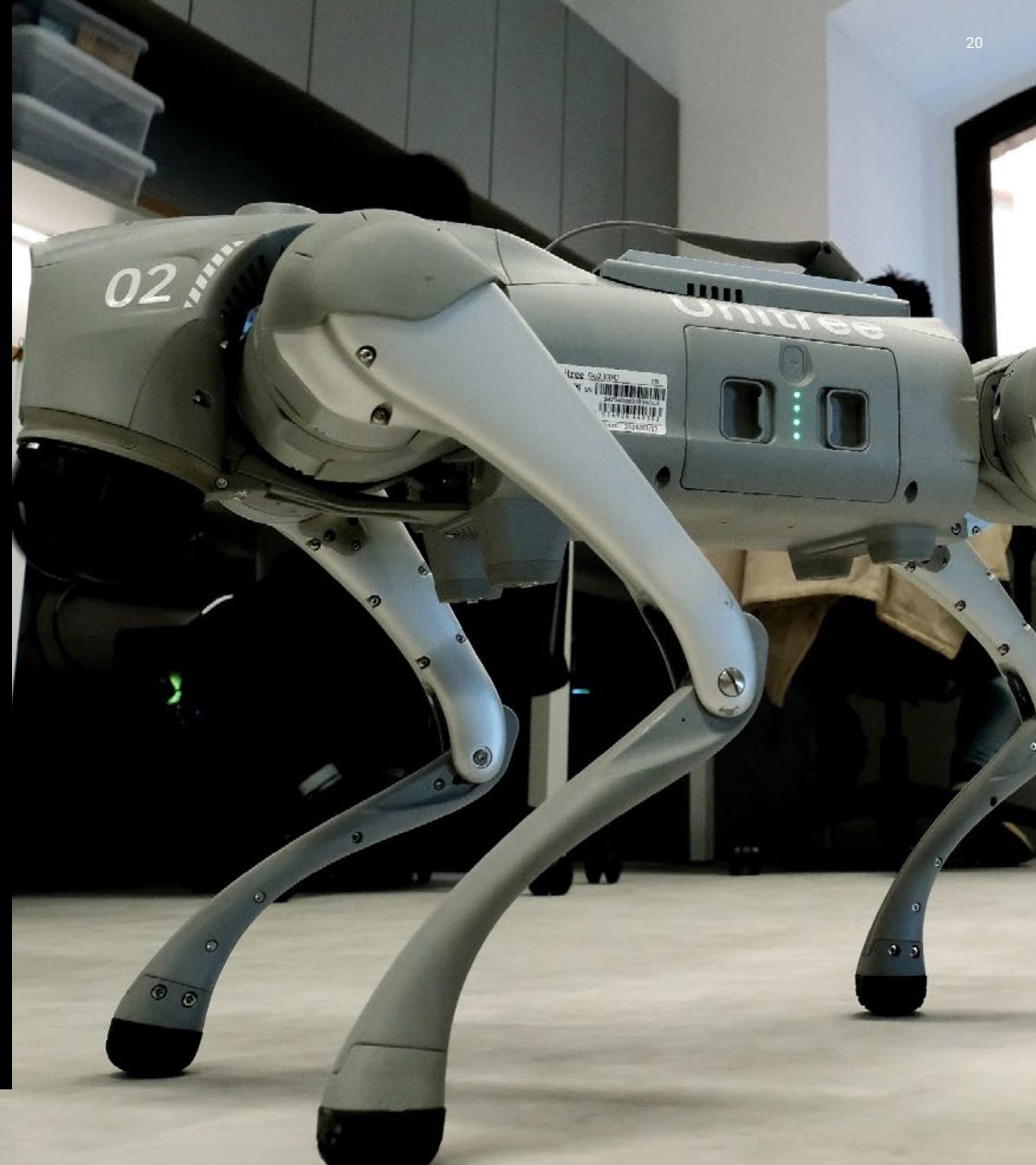


RESEARCH PORTAL OF CATALONIA (CORP.PRC)

# 04

## Technology Transfer

i2CAT works hard to ensure that research doesn't stop at the lab door. In 2025, that commitment translated into concrete results: royalties income grew by 45% to reach €75K, two further assets were licensed, and three new assets joined the portfolio. The year also marked a milestone with the launch of Volum Technologies, our fifth deeptech spin-off, commercialising HoloMiT® holographic technology developed over four years of research. New internal quality processes were also introduced to make our results more readily transferable to the private sector.



## Technological Ecosystem

In 2025, royalties and technology transfer deals reinforced our position as a partner of choice for entrepreneurship and spin-off creation. We also introduced new internal quality processes to strengthen the transferability of our results to the private sector, including code refactoring, improved documentation standards and greater involvement from our Software Engineering Group.

### Royalties

In 2025, we grew our royalties income to €75K, a 45% increase compared to 2024. Two further assets were licensed and we welcomed three new assets into the portfolio, bringing the total to ten. The centre also supported three spin-offs.

2

New licensed:  
Content Proxy  
and HoloMIT®

3

New assets:  
MOTCAM, NAS  
Counter, ISNOS

3

Active spin-offs

## Research Outcomes

### Assets and Valorisation

#### Volum Technologies

NEW

Volum Technologies is i2CAT's fifth **deeptech spin-off**, commercialising HoloMIT®, a platform that **delivers high-quality 3D holographic solutions using standard commercial cameras**. Authorised by the Board of Trustees in January 2025, it was founded through an **intrapreneurship process**, with researchers from the centre leading its creation and commercialisation, backed by four years of research and over €3.7 million of investment.

HoloMIT® enables immersive, real-time multi-user videoconferencing at a competitive cost, spanning applications in healthcare, education, training, cultural experiences and commercial demonstrations, **combining remote connection with the sense of face-to-face presence**.



#### NAS Counter

NEW Patent Application

NAS Counter **dynamically selects an optimal subset of satellites to manage User Equipment context in LEO satellite Store and Forward Non-Terrestrial Networks**. It ensures service continuity and minimises costly re-registration procedures by optimising for synchronisation opportunities and reducing context dissemination overhead. A patent application is currently underway to protect the method.

#### ISNOS

NEW

ISNOS (Integrated Satellite and Network Operations Scheduler) is **the autonomous intelligence layer for standard Mission Control Systems**. It is a unified model that balances satellite survivability and network quality of service to enable converged operations and maximise service capacity. It is designed to support the growing complexity of multi-orbit and hybrid space-ground environments.

#### MOTCAM

NEW

MOTCAM is a software component designed to **transform passive cameras into active intelligence sources through single-camera video analysis**. Deployed as a containerised application on the client's own infrastructure, it processes a single video stream to detect, track and analyse object behaviour. Results are delivered as a data stream via a REST API.

#### RGBPM Codec

NEW Patent Application

The RGBPM Codec is a method for **real-time compression of volumetric video point clouds of over 100,000 points without loss of visual quality**. It enables efficient handling of dense spatial data, making it a practical tool for immersive media applications.

### Valorisation networks

The Catalonia Valorisation Networks help organisations to valorise their assets, contribute to funding patent applications, execute proofs of concept and disseminate their milestones. i2CAT is now a member of 4 Valorisation Networks, conceived to bring project results to the market.



# 05

## Public Sector Digital Transformation

At i2CAT, we play an active role in advancing the Government of Catalonia's digital policies and strategic priorities. Our work contributes to the region's ongoing technological transformation by supporting new societal challenges across, and the growth of a robust digital innovation ecosystem. Underpinning these efforts is a clear commitment to strengthening technological autonomy and to shape a just, transparent and sustainable society that serves everyone.



## Digital and Technological Transformation of Public Administration

i2CAT is instrumental in advancing the digital transformation of Catalonia's public sector, translating emerging technologies into efficient, inclusive and citizen-focused services. Spanning the full innovation cycle, from applied research to real-world scenarios, we work in close partnership with all levels of government to turn technological innovation into tangible public assets.

### The programme integrates 4 strategic lines



#### At the forefront of innovation in public services

We work closely with the Government of Catalonia to develop high-impact projects that address public-sector challenges and generate tangible value for society. Initiatives such as the GovTech programme showcase how digital technologies can modernise public services, enable new service models, and scale innovation across the territory.

This collaboration has led to several success stories, including the application of AI for image recognition, the use of satellite technologies for agricultural monitoring and water management, and the launch of the first mobile citizen service unit equipped with resilient 5G and satellite connectivity (OAC Mòbil).



#### Driving an emerging digital ecosystem

Through ecosystem-building and cross-sector collaboration, we foster the adoption of innovation and attract digital talent. In 2025, the **Digital Catalonia Alliance (DCA) surpassed 770 members**, consolidating its position as a leading hub within the region's digital landscape. Flagship initiatives such as the AI Accelerator and GovTech Catalonia further strengthened collaboration among start-ups, research centres and public institutions, enabling the co-creation of technology-driven solutions to public-sector challenges.

The year also marked the launch of a new digital transformation programme aimed at stimulating the local economy in the Terres de l'Ebre region.



#### Promoting territorial equity and digital cohesion

We collaborate closely with municipalities, county councils, and regional administrations to pilot digital services tailored to local needs and realities. With a firm commitment to equity and economic impact, recent initiatives have addressed challenges such as detecting illegal landfills, monitoring tourist flows, and developing data-driven solutions for small municipalities.

At the same time, through the Àrees Digitals programme, we actively promote the adoption of Advanced Digital Technologies (ADT) across key economic sectors in each territory, working with local ecosystems, clusters, and businesses to enhance competitiveness and avoid the emergence of new digital divides.

In 2025, we expanded our territorial presence, reinforcing our role in ensuring digitalisation reaches every corner of Catalonia while fostering a more balanced and resilient digital economy.



#### Innovating with impact: from pilots to policy

Thanks to the Government of Catalonia's innovation policies and strategies for the adoption of emerging technologies, such as the Catalonia AI 2030 Strategy and Catalonia Space 2030 Strategy, in which i2CAT plays an active role, proof-of-concept projects can be developed to demonstrate the positive impact of advanced digital technologies on the digital transformation of the economy and the territory.

Developed in collaboration with companies and public administrations, these initiatives highlight how emerging technologies can generate tangible public value while enabling data-driven, evidence-based decision-making across sectors and territories.

## GovTech Catalonia

GovTech Catalonia is a strategic initiative led by the Secretariat for Telecommunications and Digital Transformation of the Government of Catalonia, in which i2CAT actively participates, designed to accelerate the public sector's digital transformation through open innovation.

In 2025, the programme consolidated its role as a driver of innovation, delivering tangible results across a range of strategic areas.

Its main areas of focus in 2025 were:



### Axis 1. AI serving governance and wellbeing

Optimisation of citizen service processes, improvement of data-driven decision-making, exploration of new automation models, and training for both public sector employees and citizens in the use of AI.



### Axis 2. Simplification of complex procedures through BIM (Building Information Modelling)

Automation and simplification of complex Building Information Modelling (BIM) procedures, and extension of the model into new areas.



### Axis 3. Promotion of the Catalan language and digital inclusion

Promotion of technological solutions for the Catalan language, and improvement of accessibility and interaction with public services.



### Axis 4. A resilient and self-sufficient digital infrastructure

Exploration of solutions for future operational deployments in real-world environments, and identification of next-generation needs and opportunities for a resilient, secure and robust national infrastructure.



### Axis 5. Intelligent management of the natural environment and biodiversity

Improvement of wildlife and ecosystem monitoring, operational support tools, and generation of reliable data for land management.

## Key Achievements in 2025

**Growth of the GovTech ecosystem through Digital Catalonia Alliance:** Creation and activation of a new community (DCA-GovTech) as a reference point for companies in this emerging sector. Promotion of new activities and initiatives to strengthen and consolidate spaces for networking and collaboration between companies and public administration.

**Competition Project Execution:** Execution of the winning projects from the GovTech Catalonia competition launched in 2024, deploying pilot schemes in real-world environments to validate innovative solutions for improving access to government services and enhancing energy efficiency in public buildings:

- ① Mobile network prioritisation in high-congestion situations (America's Cup)
- ② Creation of a personalised Gencat content space
- ③ Automatic adaptation of Gencat content for people with disabilities
- ④ Citizen support with simultaneous multilingual translation
- ⑤ Virtual and personalised assistant for digital services
- ⑥ Automatic assessment of digital forms
- ⑦ BIM for simplifying complex procedures – Environmental authorisation processing

- ⑧ BIM for simplifying complex procedures – Urban planning licence processing
- ⑨ ONA – AI for paediatric emergencies
- ⑩ Optimisation of data use and management to improve energy management in public government buildings
- ⑪ Brown Bear monitoring in the Pyrenees
- ⑫ AI-generated Robot Portraits
- ⑬ Improved forecasting and planning of degree programmes using Artificial Intelligence
- ⑭ CiutadanIA

**Presence in events and international projection:** The GovTech programme has been present in activities such as international congresses, additionally accompanied by Catalan companies specialised in the sector; joint participation is a key part of the DCA-GovTech Community's success.

**Advancement of the Open Innovation Platform:** The pillars of the innovation model were defined and the development of the platform began, with the aim of centralising the management of innovation challenges and projects, and structuring a unified model for innovation initiatives—acting as a sort of innovation One-Stop Shop for the Government of Catalonia.

## Digital Catalonia Alliance

The Digital Catalonia Alliance (DCA) is an initiative promoted by the Government of Catalonia through the Secretariat for Digital Policies of the Department of Business and Labour, and the i2CAT Research Centre. It acts as a hub for Catalonia's advanced technology ecosystem, fostering growth, innovation, and the development of new digital solutions through collaboration among its members.

The DCA collaborates with the Catalonia AI 2030 and Catalonia Space 2030 strategies, prioritising its specific technological fields in its outreach and ecosystem-building activities.

### Principal KPIs in 2025

770  
members

+35  
growth in membership

€6.12  
million in economic  
impact:

170  
business-collaborator  
connections generated

■ Mobilised economic volume:  
€5.8 million

■ Cost savings for members:  
€350K

■ B2B business generated:  
€230K (Artificial Intelligence  
€131K and Space €87K)

41  
success stories  
34% of these are linked to  
the Government of Catalonia  
initiatives

### Members distribution by sector Companies/entities

DCA-IoT  
309

DCA-Drones  
156

DCA-Cybersecurity  
118

DCA-AI  
348

DCA-Space  
130

DCA-Blockchain  
46

DCA-GovTech  
178

### DCA-GovTech community

In 2025, the DCA incorporated the DCA-GovTech community to support the business development of the Government of Catalonia's GovTech Catalonia programme, reaching 176 members in its first year of activity. It brings together companies, research centres, public administrations, and other organisations that develop, integrate, and implement technological solutions to drive digital innovation in the public sector.

### DCA and RETECH funding

In 2025, the DCA received a significant allocation of RETECH funds to strengthen Catalonia's artificial intelligence ecosystem. The initiative focused on expanding regional outreach and knowledge transfer to support the implementation of AI, fostering stronger connections across the region's advanced technology ecosystem, and enhancing the international positioning of Catalonia's AI landscape through participation in key global events.

### Main KPIs

Total number  
of activities  
30

Total number  
of attendees  
1,317

Total RETECH  
funds received  
274K

#### Main collaborators:

Eurecat, Clúster Digital, Cercle Tecnològic, ACCIO, Worsley, Barcelona Centro Logística, Consorci de la Zona Franca, DFactory, CIMALSA, Incubadora 4.0, ICFO, DIH4CAT, Fira de Barcelona, NEBEXT, Mobile World Capital, IOT Stars, BSC, UPC, Mossos d'Esquadra, CIDAI, ESA Phi-Lab, IECC, Fundació la Caixa, ICGC, Tech Barcelona.

## ■ Catalonia Space 2030 Strategy

In 2025, the Government of Catalonia presented the Catalonia Space 2030 Strategy to consolidate the region as a key player in the new European space economy.

The strategy promotes the development of industrial capabilities, the creation of skilled employment, the attraction of talent and the deployment of advanced infrastructure, reinforcing technological sovereignty in a strategic sector. It reflects the commitment to mobilise the entire sector: from large corporations to start-ups, SMEs and research and innovation agents, all while fostering a diverse, robust and productivity-oriented ecosystem, with business as the engine of growth and value. It also guides public and private action towards a sustainable, technologically advanced growth model aligned with global needs.

i2CAT plays a key role, contributing to the positioning of Catalonia as a benchmark in secure and resilient communications based on non-terrestrial networks, and driving use cases that connect space with real-world applications on the ground and in public services.

In 2025, we contributed to the Catalonia Space 2030 Strategy through the following milestones:

- 1 strategic alliance with European space entities (European project on 6G NTN networks)
- 2 PoCs (proofs-of-concept) with the public sector executed
- 2 PoCs with the private sector conceptualised
- 3 Catalan companies were involved
- 3 sectors benefited from NewSpace applications
- 4 deployments of 5G NB-IoT prototypes via satellite
- 4 new services generated by the administration thanks to the use of satellite technologies
- 5 validated user cases with satellite technology
- 8 academic publications in journals & 17 academic publications in conferences

**Catalonia Space 2030 Strategy**

## ■ Artificial Intelligence: from ecosystem dynamisation to real-world impact

At i2CAT, we play a key role in strengthening Catalonia's artificial intelligence ecosystem by combining ecosystem dynamisation, technology transfer, and the deployment of high-impact use cases across both the public and private sectors.

Through our active contribution to the Digital Catalonia Alliance (DCA), particularly the DCA-IA community, we foster collaboration among research centres, start-ups, corporations, and public administrations, helping position Catalonia as a leading hub for trustworthy, applied AI. This ecosystem approach is further reinforced through initiatives such as the AI Accelerator, which connects research talent with market opportunities and supports the creation of new deep-tech start-ups based on AI. In this context, i2CAT also leads the Catalan chapter of the AI for Good initiative promoted by the United Nations Development Programme, fostering the development of AI solutions with social impact. In 2025, one of the companies from the DCA ecosystem reached the programme's global finals, reinforcing the international positioning of the Catalan ecosystem.

In parallel, we develop and deploy AI-driven solutions with a direct impact on public services and citizens. These projects demonstrate how advanced digital technologies can improve efficiency, decision-making, and service delivery. Notable examples include AI-based solutions to support medication adherence, developed in collaboration with companies such as Grup Saltó, as well as predictive and decision-support systems in critical sectors such as mobility and emergency services.

A key lever in this strategy has been the RETECH programme, through which we have contributed to the development of data-driven and AI-enabled use cases across strategic sectors such as health, mobility and industry. Within this framework, i2CAT has played a key role in the development of the **Centre Demostrador d'Espais de Dades de Catalunya**, an initiative promoted by the Government of Catalonia that supports organisations in exploring, validating and implementing secure and interoperable data-sharing models through technical expertise, demonstration activities and methodological guidance, fostering innovation based on trusted data ecosystems.

At the same time, we have continued our close collaboration with CIDAI, contributing to the development of high-impact AI projects and proofs of concept. This includes initiatives such as the predictive modelling of emergency incidents with the Servei d'Emergències Mèdiques (SEM), as well as new applications in mobility and public service optimisation.

Beyond project execution, we actively contribute to knowledge dissemination and ecosystem capacity-building. We regularly organise and participate in masterclasses, specialised training sessions, and leading events such as the AI & Big Data Congress Barcelona, where we showcase real use cases and promote the adoption of AI across sectors.

Overall, our approach combines ecosystem building, talent acceleration, and real-world deployment, ensuring that artificial intelligence not only advances technologically but also delivers tangible economic and societal impact across Catalonia.

**Catalonia AI 2030 Strategy**

# 06

## Market-oriented Innovation

We believe research only truly succeeds when it creates real-world impact. In 2025, we built on established collaborations and forged new ones, turning advanced R&D into market-ready solutions across Space, Mobility, Industry 5.0 and Telecom. From satellite communications to AI-driven architectures, our work this year has helped bridge the gap from lab to market.



## ■ Co-creating with industry to drive impact

At i2CAT, we accelerate the leap from deep-tech research to market reality. Through strategic alliances with private companies and innovation leaders, we co-create transformative solutions across Space, Mobility, Industry 5.0 and Telecom, among others. By bridging advanced R&D and commercial application, we ensure that cutting-edge breakthroughs, from 6G networks to AI-driven architectures, empower our partners to thrive. We generate tangible impact by transferring specialised knowledge through proof-of-concept and valorisation activities, strengthening the Catalan ICT ecosystem and turning complex research into competitive, market-ready products.

### Public-Private Alliances

#### DIH4CAT

Launched in May 2022, **DIH4CAT is one of the leading European Digital Innovation Hubs (EDIH)** and a reference EDIH in Spain. A regional non-profit innovation ecosystem, it brings together Catalonia's main digitalisation support agents to drive the technological transformation of SMEs, with a particular focus on the industrial sector and technology suppliers, as well as technological start-ups and public entities. In 2025, within the DIH4CAT project, i2CAT executed 14 projects with Catalan SMEs, 3 with mid-cap companies, and 3 with public administrations.

DIH4CAT has consolidated its role as critical infrastructure for advancing digital adoption across the region, enabling businesses to test and explore technologies such as photonics, robotics, 3D printing and smart connectivity before committing to investment.

The i2CAT Research Centre, in cooperation with Mobile World Capital Barcelona and UPC, leads the Smart Connectivity node, delivering viability studies, testing, prototyping and training across AI, cybersecurity, 5G, IoT, new media formats and space communications.

**i2CAT also coordinates the project's ecosystem development activities**, fostering alliances with organisations such as the DCA and initiatives like Àrees Digitals.

#### Key milestones in 2025:

- Pilots with public administrations in the Boí Valley, Ter Basin and Cerdanya, advancing intelligent mobility and remote medical monitoring in rural environments
- Strategic sector pilots with Airbus and Idneo, including the validation of next-generation satellite communications for high-altitude platforms and a V2X collective perception demonstrator
- Secured DIH4CAT-AI Connect, the project's successor, which will run from 2026 to 2028

#### CIDAI

The Centre of Innovation for Data Tech and Artificial Intelligence (CIDAI) delivers networked services for businesses and institutions, promoting technology transfer across the innovation ecosystem from universities and research centres to companies and public bodies seeking applied AI solutions. Modelled on the Digital Innovation Hubs established by the European Commission, it is a key instrument within the Government of Catalonia AI 2030 Strategy.

As a founding member, **i2CAT plays a central role in CIDAI's mission to accelerate the adoption of AI and data technologies across sectors**. In 2025, this included contributions to high-impact projects such as predictive modelling of emergency incidents with the Servei d'Emergències Mèdiques (SEM) and new applications in mobility and public service optimisation, alongside knowledge-sharing through masterclasses, specialised training and participation in events such as the AI & Big Data Congress Barcelona.

**CIDAI** Centre of Innovation for Data Tech and Artificial Intelligence

## R&D Projects & Strategic Alliances

Within the framework of market-oriented innovation, i2CAT drives high-impact solutions through a curated selection of relevant R&D projects and key strategic alliances with companies and industry leaders. This collaborative approach focuses on transforming advanced research into market-ready applications, with a clear priority on fields such as Space and Connected Mobility. By combining deep-tech expertise with private partnerships, these initiatives ensure the transfer of specialised knowledge, drive technological modernisation, and strengthen the competitive edge of the entire ecosystem.

### Abertis Autopistas

**Pioneering advances in connected mobility: the DIMOS 5G project becomes a reality on the C-32**

The strategic alliance between Abertis Autopistas and i2CAT has begun to deliver tangible results, reinforcing both organisations' leadership in shaping the motorways of the future. Pioneering solutions have been deployed in connected and sustainable mobility, transforming conventional infrastructure into a smart ecosystem. The DIMOS 5G project is a landmark example: now live on the C-32, it demonstrates how next-generation connectivity and real-time data exchange can anticipate the needs of roads and their users. Concrete use cases targeting road accident reduction and improved emergency management validate the technical model and place Catalonia at the forefront of road innovation in Europe, while laying the groundwork for autonomous and assisted driving.



### IDNEO

**V2X and Collective Perception: expanding the limits of vehicle vision**

The collective perception pilot using V2X (Vehicle-to-Everything) technology marks a significant advance in smart mobility, showing how cooperation between vehicles and infrastructure can expand the boundaries of individual vision. Vehicles share sensor data in real time, giving all road users a complete picture of what lies beyond their direct line of sight and effectively eliminating blind spots in critical situations. Beyond improving road safety today, the project validates the effectiveness of Collective Perception Messages (CPM) and affirms the role of infrastructure as an active safety element, laying solid groundwork for the next generation of autonomous and connected driving.



### SIRT

**dsCitizenConnector: a data space connector for mobile devices**

dsCitizenConnector is a solution designed to enable citizen participation in data spaces via iOS and Android devices. Led by SIRT, the project provides a GAIA-X/IDSA connector for mobiles, with libraries and APKs allowing people to connect to data spaces, access a catalogue and receive notifications. i2CAT contributes to the technical architecture to ensure interoperability with European data spaces, provides the testbed of the Catalan Data Spaces Demonstrator Centre for validation, and develops methodologies to bring citizens and other stakeholder groups meaningfully into the design process, supporting more transparent and user-centric data use.



### TIM

**TIM and i2CAT advance standardisation in API management through successful field validation**

In 2025, TIM and i2CAT successfully concluded a strategic collaboration to verify TIM Developer's Consent Management flow against global GSMA/CAMARA standards. Through rigorous in-field validation, the project analysed logs from live API invocations to confirm the integrity of both the Identity OpenID Connect Authorisation Code Flow and the Consent Management Code Flow. Combining i2CAT's research capabilities with TIM's engineering expertise, the initiative reinforces TIM's API Exposure Framework and sets a new benchmark for interoperability, security and trust within the digital ecosystem, moving from theoretical requirements to validated operational excellence.



### Airbus

**i2CAT and Airbus validate next-generation satellite communications for high-altitude platforms**

i2CAT is supporting the evolution of Airbus GeoTech's High Altitude Platform Station (HAPS) payload technology on two fronts. First, i2CAT is developing a custom communication system built for the specific constraints of the stratosphere, capable of operating at altitude and in motion, connecting onboard payload components to the ground. Second, i2CAT is developing onboard AI algorithms to detect features in captured images, reducing data volumes by discarding non-qualifying images directly onboard and improving the accuracy of subsequent captures. These developments are supported by the European Commission through DIH4CAT and by the Centre for the Development of Industrial Technology and Innovation (CDTI) through the Space Technology Programme.



### Indra

**Indra and i2CAT awarded a European Space Agency project to design a 5G/6G satellite constellation for global connectivity**

Under the European Space Agency's ARTES programme and financed through the Spanish Space Agency, Indra and i2CAT are leading CONSTELINK, a strategic project to define, analyse and verify a robust 5G/6G satellite system architecture supporting a constellation for global connectivity in Low Earth Orbit (LEO). i2CAT's contribution covers the specification and preliminary design of an onboard Software Defined Radio (SDR) for a 5G regenerative payload, alongside the definition of validation scenarios and testbeds to verify the design, advancing Europe's ambitions for next-generation space-based communications infrastructure.



## R&D Projects & Strategic Alliances

### Rewind Organics

Bringing space communications to the agricultural and industrial sector

Rewind Organics is a Catalan SME reducing the environmental footprint of compost manufacturing, relying on in-situ sensors to monitor pile temperatures. Ensuring reliable data transmission from isolated rural environments poses real challenges for conventional networks. i2CAT designed, developed and validated a custom satellite-based IoT solution collecting sensor data via a local LoRaWAN network and routing it through a smart gateway that switches between terrestrial and satellite networks depending on availability, guaranteeing service continuity. The project demonstrates how space communications can deliver practical, scalable answers to real-world challenges in agriculture and industry.



### Blueroom Innovation

Digitalising the circular economy with privacy-preserving technology

The collaboration between Blueroom Innovation and i2CAT focuses on digitalising the circular economy while protecting data privacy through decentralised cryptographic technologies. Key achievements include a Proxy Re-Encryption (PRE) system enabling secure data sharing without exposing private keys, and a proof of concept using Zero-Knowledge Proofs to audit ISCC Mass Balance compliance, cutting verification times from minutes to seconds. Through the RETECH Data space programme, the team validated a data space for the construction sector built around a Digital Waste Passport, enabling end-to-end material traceability and automated sustainability reporting. All systems align with the EU Cyber Resilience Act, the UN Transparency Protocol and Security by Design principles.



# 07

## Social and Territorial Impact

In 2025, i2CAT continued to strengthen its social and territorial impact by driving digital transformation where it matters most: people, public services and local ecosystems. Through our work, we connected regional research facilities, public administrations and industry to deploy advanced digital technologies with tangible societal value. A key focus of the year was the consolidation of Àrees Digitals, an initiative promoted by the Government of Catalonia to accelerate innovation beyond metropolitan areas. Through collaborative ecosystem-building, pilot projects and real-world experimentation, i2CAT contributed to more inclusive, resilient and connected territories throughout Catalonia.



## Driving digital transformation where it matters most: people, services, and territories

At i2CAT, we understand that digital transformation is only meaningful when it generates tangible impact on people's lives and strengthens the resilience and competitiveness of territories.

Through our work in Digital Society Technologies (DST) and Public Sector Innovation (PSI), we connect research, public administrations, and industry to ensure that Advanced Digital Technologies (ADT) are deployed where they are most needed: improving public services, supporting local ecosystems, and addressing challenges such as depopulation, access to services, and economic diversification.

Our approach combines ecosystem dynamisation, GovTech innovation, and real-world experimentation through pilots and user cases. This lets us validate technologies in real contexts and progressively evolve them into scalable solutions with potential impact on public policies and territorial development.

From rural and remote areas to urban environments, i2CAT contributes to a more cohesive and balanced digital country, where innovation supports social progress and territorial equity.

## Àrees Digitals

### Driving innovation and digital transformation across the territory

The Àrees Digitals initiative, promoted by the Government of Catalonia with the support of Mobile World Capital Barcelona and implemented by i2CAT, was consolidated in 2025 as a key instrument to bring ADT closer to the territory and support digital transformation beyond metropolitan areas.

Built on a quadruple helix model, the initiative connects public administrations, companies, research centres, and citizens to identify real challenges and translate them into concrete innovation projects adapted to each territory.

### From ecosystem activation to deployment

Throughout 2025, Àrees Digitals strengthened its focus on execution, combining ecosystem activation with direct support to public administrations and companies when adopting ADT.

#### The initiative contributes to:

- Supporting public administrations in the adoption of ADT (GovTech territory)
- Strengthening local economic sectors
- Activating territorial innovation ecosystems
- Promoting the development of applied digital solutions

#### Key figures 2025

**+10**  
projects in execution  
or advanced ideation

**+12**  
advisory processes  
to public administrations

**36**  
active organisations  
in the ecosystem

**+300**  
people trained in ADT

**+180**  
meetings and visits  
to territorial agents

**+€500 K**  
mobilised in technological projects  
and proofs of concept

### From challenges to transformative and scalable projects

More than 40 innovation challenges have been identified across the territory, addressing areas such as mobility, environment, health, agro-food, and tourism.

These challenges are addressed in projects that go beyond the initial development phase, with a clear focus on **scalability and replicability across territories**. The initiative works to ensure that solutions are not limited to a single context, but can evolve into reusable models, contributing to more efficient public services and broader territorial impact.

### Applied innovation across sectors

Projects developed within Àrees Digitals illustrate the application of ADT, such as AI, IoT, 5G, NewSpace, and XR, to real needs, including:

- Remote monitoring of medication compliance
- Smart mobility solutions in rural environments
- AI-based systems for environmental management
- Digital tools for agriculture and water efficiency
- Immersive technologies for culture and tourism

### A consolidated territorial approach

Àrees Digitals continues to work towards a model rooted in local needs, close collaboration with territorial stakeholders, and the transformation of challenges into long-term digital solutions. The programme remains focused on accelerating the adoption of advanced digital technologies, supporting public administrations and businesses, and scaling high-impact initiatives across Catalonia.

**PIRINEU I ARAN**



**ÀREES DIGITALS**

- Improving Connectivity for Local Television in Rural Areas
- Satellite Communications for People Management at Aiguestortes i Estany de Sant Maurici National Park

**DIH4CAT**

- Remote Monitoring of Medication Compliance
- Smart Mobility in Vall de Boi
- Rural Air Logistics: Drone Delivery for Remote Areas

**GOVTECH TERRITORI**

- Improving Wildfire Risk Maps through Environmental Monitoring
- Digital Platform for Public Forest Planning and Management in Catalonia
- Rural Protection: Intelligent Wild Boar Detection

**PONENT**



**ÀREES DIGITALS**

- IoT and Data Analytics for Improved Water Efficiency

**GOVTECH TERRITORI**

- Rabbit Burrow Detection via Drones and AI for Wildlife Management

**TERRES DE L'EBRE**



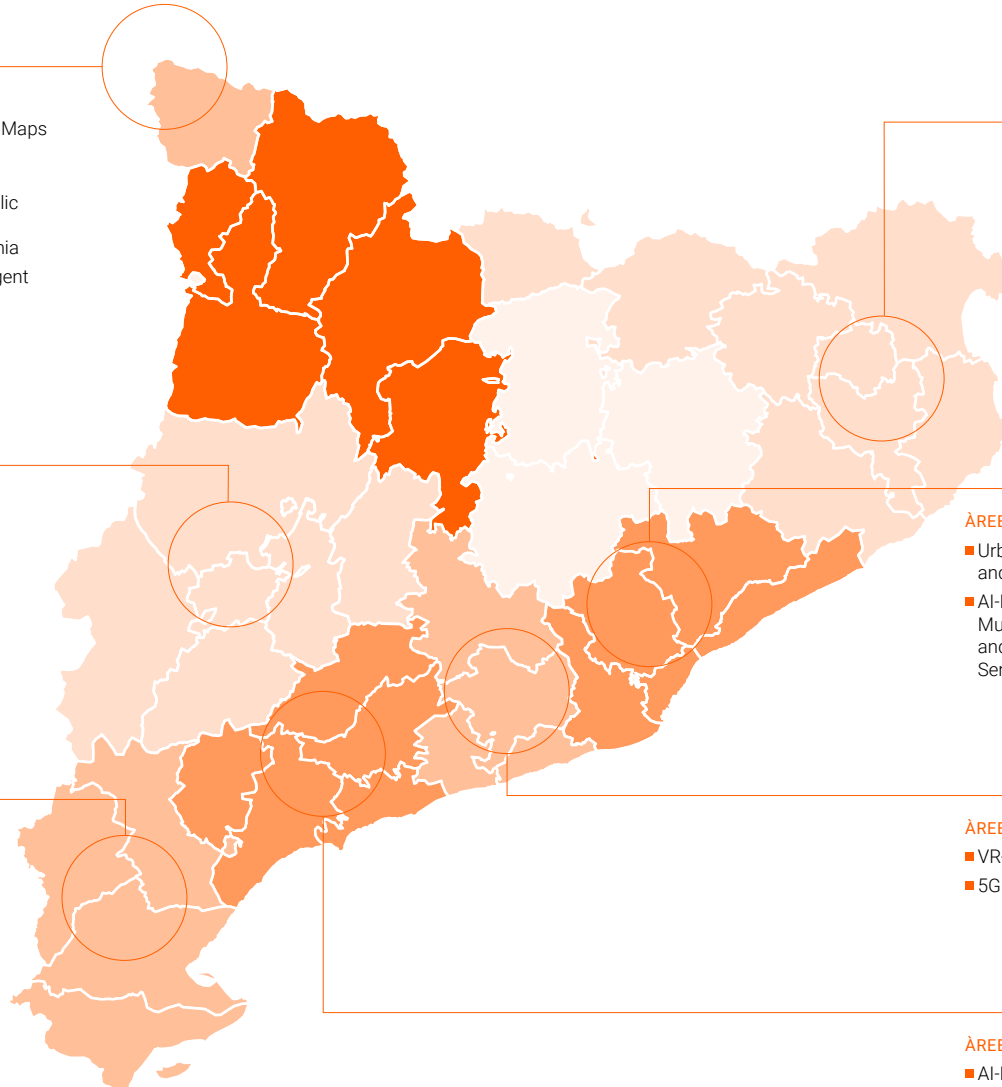
**ÀREES DIGITALS**

- Experimental Farms for Climate Resilience
- Sensor Deployment for Wildfire Prevention
- Blockchain Platform for IoT Data
- 5G Digital Talent: Content Creators for Local Television

- AI-Based Detection of Red Peach Maturity
- VR and 5G-Based Support for Eating Disorder Treatments

**ADT 5G RURAL**

- Healthcare at Home: Portable Diagnostics with 5G Connectivity



**GIRONA**

**ÀREES DIGITALS**

- Virtual Reality Enhancement of the Torre Gironella Site
- VR Rediscovery of the Iberian Village of Ullastret
- Immersive VR Concert
- AI-Powered Dermatology for Early Melanoma Detection

**DIH4CAT**

- Smart Monitoring of River Bathing Areas

**GOVTECH TERRITORI**

- IA@URGÈNCIES



**BARCELONA**

**ÀREES DIGITALS**

- Urban Heat Island Monitoring and Mitigation
- AI-Based Monitoring of Municipal Street Cleaning and Waste Collection Services - Àrees Digitals

**GOVTECH TERRITORI**

- Detection and Mitigation of Urban Heat Island Effects through Smart Mapping
- Digital Assistant for Electronic Administrative Procedures



**PENEDÈS**

**ÀREES DIGITALS**

- VR-Connected Nursing for Patient Monitoring in Care Homes
- 5G Digital Talent: Content Creators for Local Television



**TARRAGONA**

**ÀREES DIGITALS**

- AI-Based Detection of Illegally Dumped Bulk Waste

## ■ Innovation Programme for the Transformation of Society and Economy

Promoted by the Secretariat for Digital Policies of the Government of Catalonia and implemented by i2CAT, this programme aims to foster the digital and economic transformation of the municipalities affected by the closure of the Ascó and Vandellòs nuclear power plants. Through advanced digital technologies, innovation and talent development, the initiative seeks to position the territory as a hub for rural digital innovation and new economic opportunities.

### 2025 marked the launch of the first initiatives across its four strategic pillars:

#### Incuba Talent Digital

In 2025, the programme launched Incuba Talent Digital, an incubation initiative designed to support technology-based projects rooted in the territory through training, mentoring and technological support. As part of the initiative, a Startup Weekend held in Vandellòs brought together entrepreneurial talent and promoted the development of innovative digital projects connected to local challenges and opportunities.

#### Use Cases with Advanced Digital Technologies

The programme identifies and deploys pioneering and transformative use cases in key health, agri-food, sustainability, and logistics sectors. A team of experts supports developing and implementing scalable digital solutions that address real local challenges.

#### AINA Intel·ligència Territorial

In 2025, the programme launched an initiative to promote AI solutions in Catalan addressing social and territorial challenges in the areas benefiting from the Nuclear Transition Fund. The initiative focused on three key challenges: tackling unwanted loneliness, reducing digital divides through more accessible AI services, and preserving the territory's oral and cultural heritage through language technologies.

#### Hub d'Innovació Digital

CoEbreLab facilities are being expanded with advanced digital infrastructures and specialised laboratories to help local businesses adopt advanced digital technologies and improve their competitiveness.

### Móra la Nova, Strategic Hub for Europe's Future 6G Connectivity

Beyond the satellite mission itself, the initiative, co-funded through the Nuclear Transition Fund, includes the deployment of a ground segment in Móra la Nova, in the Terres de l'Ebre region.

The infrastructure, located in the Molló industrial area and linked to the CoEbreLab ecosystem, will control the 6GStarLab experiments and become operational in parallel with the satellite's activities.

The project will also incorporate a pioneering optical ground station in Catalonia for bidirectional laser-based space-to-ground communications, a precursor technology for future quantum communications. The infrastructure will form part of an open testbed available to the scientific and technological communities for experimentation in areas such as 6G connectivity, hybrid terrestrial and non-terrestrial networks (NTN), and next-generation digital communications.

These technologies are expected to contribute to reducing the digital divide and improving connectivity and territorial cohesion in rural and remote areas.

## ■ International Leadership in Living Labs and Digital Cooperation

In 2025, i2CAT drove the international deployment of the Living Lab model by supporting the creation of Senegal's first national Living Labs network. This initiative, developed jointly with FDSUT and the Catalan Agency for Cooperation and Development, establishes four innovation laboratories in the regions of Dangalma, Kaolack, Ziguinchor and Saint-Louis.

The project enables local communities to co-create digital solutions tailored to their social and territorial challenges, consolidating an innovation model based on participation, proximity and real impact.

This experience was presented at the United Nations Science Summit in New York, positioning i2CAT as an international benchmark in the application of Living Lab methodologies to digital cooperation policies.

# 08

## Events & Media 2025

In 2025, we continued our efforts to share knowledge through industry events and media outreach. From participating in leading tech forums to collaborative workshops with students and special interest groups, these events and actions are vital for education, networking, the exchange of ideas, and forging future partnerships and collaborations. The media played a pivotal role, serving as a key channel for communicating news and outcomes and amplifying the benefits of our research and innovation.



## Connecting Research, Technology and People

2025 was a dynamic year for events and outreach. The i2CAT team took part in leading international research congresses, while also organising workshops, knowledge exchange sessions and presentations focused on technology and innovation. Media coverage remained consistently positive, helping to bring new insights and developments closer to a wider audience.

A key highlight was our participation in targeted events across strategic sectors.

We hosted gatherings dedicated to supporting female talent in technology, advancing the digitalisation of the agricultural sector, and exploring how innovation can improve lives in remote and developing communities. The space sector also featured prominently, with events examining the latest advancements and emerging opportunities in this rapidly evolving field.



Total events

+140

Public sector events

21

Corporate events

9

High impact research conferences

6 A and A\*

## 1 January

### Research

#### Volum Technologies Spin-off Launch

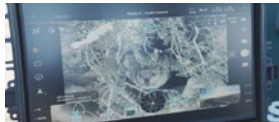
i2CAT launched the spin-off Volum Technologies to commercialise affordable 3D holographic videoconferencing. The startup aims to democratise "holoportation" for business, health, and education using standard camera hardware.



### Public

#### Drones and AI for wild rabbit population control: project presentation

Within the Govtech Catalonia framework, we collaborated with the government and local authorities to develop thermal mapping and data analysis tools that automate wildlife tracking, providing a scalable digital solution that optimises decision-making and accelerates the digital transformation of the agricultural sector.



## 2 February

### Corporate

#### Integrated Systems Europe 2025

i2CAT participated in the ISE congress to present the centre's holographic communications technology, Holomit®. Visitors could experience a 3D volumetric representation through VR glasses.



### Research

#### Keynote at i2CAT by the Director of Engineering at Qualcomm

Jordi Ros-Giralt, Director of Engineering at Qualcomm, joined us to offer a keynote talk on "Enabling On-Device Generative AI at the Edge".



## 3 March

### Corporate

#### Mobile World Congress Barcelona 2025

i2CAT returned to MWC to showcase its expertise and pioneering projects in non-terrestrial connectivity, highlighting the possibilities offered by NTN to make access to communications anywhere, at any time, a reality.



### Research

#### NTN and the future of global communications event

i2CAT hosted a high-level summit in its District Administration headquarters to unite European space and tech leaders and explore the future of non-terrestrial networks (NTN) and global, seamless connectivity.



### Public

#### AI Accelerator at 4YFN Demo Day

Three AI Accelerator teams presented their AI-based solutions at 4YFN 2025, showcasing innovations in healthcare, musical education and e-commerce after six months of mentorship within the Catalan AI ecosystem.



## 4 April

### Research

#### XGain project final demonstration at CoEbreLab

As part of the Horizon Europe project XGain initiative, our researchers demonstrated a cutting-edge solution that combines AI, 5G, and drones to locate people in remote areas.



#### i2CAT trip to Senegal to support the country's first Living Labs

Representatives from the Catalan Agency for Development Cooperation (ACCD), the Delegation of the Government to West Africa, and i2CAT visited the Living Labs of Dangalma, Kaolack, and Ziguinchor in Senegal to assess the progress of ongoing projects and their impact on local communities.



### Public

#### DCA-GovTech presentation

In April, DCA launched a new community that connects technology companies with public administrations and fosters innovation in the GovTech sector. The event was attended by the Secretary for Telecommunications and Digital Transformation, Albert Tort, and the Secretary for Digital Policies, Maria Galindo.



## 5 May

### Corporate

#### Agreement i2CAT-Giga

i2CAT signed a two-year partnership with Giga, the association supported by UNICEF's Office of Innovation and ITU's Telecommunications Development Bureau, to foster knowledge sharing, research and technology development in the field of connectivity.



### Public

#### Presentation of the Torre Gironella and Ullastret Museum projects within the Arees Digitals initiative

The Government of Catalonia, together with Mobile World Capital Barcelona, i2CAT and local institutions, presented this initiative, which enables visitors to rediscover the original appearance of Girona's medieval Torre Gironella and the Iberian city of Ullastret through immersive Augmented Reality (AR) experiences powered by 5G technology.



#### Immersive concert experience with virtual reality and 5G

This Arees Digitals project, promoted by the Government of Catalonia with the support of Mobile World Capital Barcelona and i2CAT, used virtual reality, 5G connectivity, and i2CAT's SyncX technology to enable patients with reduced mobility to experience a live concert remotely from a hospital.

## 6 June

### Corporate

#### Official announcement of the relocation to Pier 01

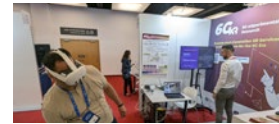
In June 2025, i2CAT announced the relocation of its corporate headquarters to Tech Barcelona's Pier 01, a landmark building on the city's seafront that houses one of Europe's most dynamic technology and digital hubs.



### Research

#### i2CAT participates at the EuCNC & 6G Summit 2025

Our researchers showcased their cutting-edge research and contributions to several Horizon Europe flagship projects at the 2025 EuCNC & 6G Summit in Poland, helping shape the future of Beyond 5G and 6G systems.



## 7 July

Corporate

**Women in ICT: Rewriting the Code**

Framed within the No es feina de dones? project, i2CAT and Telecos.cat gathered professionals and experts in Barcelona to discuss the challenges and opportunities of female participation and leadership in the ICT sector.



Public

**Digital Innovation Programme for Nuclear Transition Areas presentation**

The Secretariat for Digital Policies of the Government of Catalonia presented a new territorial innovation programme funded through the Nuclear Transition and led by i2CAT to foster digital transformation, innovation and social cohesion in the regions affected by the closure of nuclear power plants.



## 9 September

Corporate

**TechBcn4Women**

TechBcn4Women brought together female professionals, researchers and digital innovators to foster dialogue, visibility and networking around female talent in the tech ecosystem. The event featured inspiring talks by i2CAT professionals Laura Sanz and Clàudia Mateo, who shared their journeys, insights, and reflections on the challenges women face in the digital sector.



Research

**Open Living Lab Days**

i2CAT attended the Open Living Lab Days (OLLD) in Romania to discuss policy, governance, and citizen participation, all essential to building inclusive digital ecosystems. Emphasis was placed on the capacity of Living Labs to foster digital innovation that prioritises social impact, inclusion, and sustainability.

## 10 October

Research

**i2CAT goes to Sydney to participate in IAC2025**

Researchers from the Space Communications and Mobile Wireless Internet research groups shared their work at the 76th International Astronautical Congress (IAC) in Sydney (Australia). They gave 6 talks on Non-Terrestrial Networks for 6G and presented the 6GStarLab, Europe's 1st low-orbit 6G open research laboratory.



Public

**Startup Weekend**

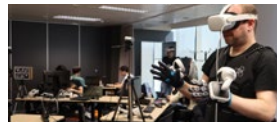
Promoted by the Secretariat for Digital Policies within the framework of the Nuclear Transition Fund (FTN), the initiative brought together entrepreneurs, innovators and local stakeholders to foster innovation and entrepreneurship in the regions affected by the nuclear transition through collaborative sessions, mentoring and the development of digital and sustainable solutions.

**1st PirineuTech & Outdoor Sports Hackathon**

Organised within the framework of the Àrees Digitals initiative promoted by the Government of Catalonia with the support of Mobile World Capital Barcelona and i2CAT, the first PirineuTech & Outdoor Sports Hackathon brought together more than 60 students in La Seu d'Urgell to develop innovative digital solutions for mountain sports, tourism and sustainability.

**Technical Workshop on Data Spaces and Use Cases**

Within the framework of the RETECH programme promoted by the Government of Catalonia and i2CAT, and co-organised by the Centre Demostrador d'Espais de Dades de Catalunya, the Data Space Support Centre and ITI, this technical workshop brought together professionals to explore the business and technological foundations of data spaces, learn from existing pilot use cases and discover the infrastructure and services developed by i2CAT to support the implementation of new data space initiatives.



## 11 November

Corporate

**Smart City Expo World Congress 2025**

i2CAT landed at SCEWC 2025 to present a complete picture of transformation under the title "Transforming our territory from space". We demonstrated an entire innovation cycle with a clear protagonist: the 6GStarLab, the first low-Earth-orbit 6G research laboratory in Europe.



Research

**i2CAT at Space Tech Expo Europe 2025**

Our delegation travelled to Bremen to boost the Catalonia Space 2030 strategy and connect the Catalan innovation ecosystem with the European space sector. We worked alongside partners to build the connectivity of the future and transform the territory through resilient and sustainable space technologies.



## 12 December

Research

**Leading discussions on the future of 6G and connected mobility**

Pouria Khodashenas, Director of the Software Networks Research Group, hosted a session organised by The 6G Smart Networks and Services Industry Association (6G-IA) on regulatory frameworks and 6G deployment strategies for Connected and Automated Mobility (CAM).



Public

**Presentation of the Alt Pirineu telemedicine pilot**

Researchers from i2CAT, in collaboration with Group Saltó, presented a digital telemedicine system that combines 5G, AI, and IoT to facilitate the monitoring of medication intake for patients with chronic conditions residing in rural areas of the Pyrenees.

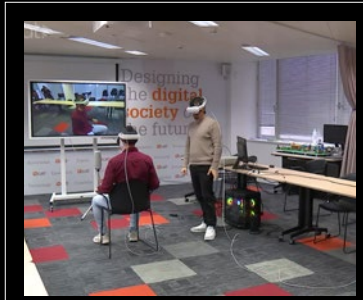
**Presentació de la Comunitat DCA GovTech**

The GovTech community of the Digital Catalonia Alliance (DCA) marked its first annual event in Barcelona, consolidating its role as Catalonia's leading public sector innovation ecosystem. The gathering highlighted strong growth, the expanding role of AI and automation in public services, and the importance of ethical, transparent approaches to innovation.

# Media Impacts

Total media impacts

# 765



### Solucions hologràfiques 3D a preu reduït amb aplicacions en el sector sanitari, educatiu o cultural

Informatius 3cat | 26.01.2025



### Un nou nanosatèl·lit català, pioner a Europa

Informatius 3cat | 26.07.2025



### Videoconferències hologràfiques a cost reduït

Diari Ara | 19.01.2025



### Cataluña lanzará en otoño un satélite para el primer laboratorio europeo 6G

El País | 26.07.2025



### 6GStarLab, el petit satèl·lit català de comunicacions 6G

Ràdio 4 | 14.03.2025



### i2CAT traslada su sede corporativa al Pier 01 en Barcelona

Expansión | 07-08.06.2025



### Un dron equipat amb 5G permet localitzar persones perdudes en zones rurals

Canal TE | 25.04.2025



### Móra la Nova tindrà un laboratori tecnològic espacial amb cinc antenes que rebran les dades dels satèl·lits del Govern

La Vanguardia | 16.10.2025

EL PAÍS    Expansión    LA VANGUARDIA

3 TELEBÚ DE CATALUNYA    rne    ara.cat    canalte

# 09

## About Us

i2CAT is Catalonia's leading digital research and innovation centre, driving advanced technological development through applied research and collaboration. The centre continues to strengthen large-scale digital infrastructure and to nurture knowledge transfer and sector training across three strategic channels: Communication, AI, and Cybersecurity. Whatever the field, every one of our actions is guided by an overall ambition to create a fair, inclusive and open society and elevate the well-being of everyone.



## Research that Connects

The i2CAT research and innovation centre drives advanced digital solutions through applied research and innovation in three strategic knowledge fields: Communications, AI and Cybersecurity.

With over 20 years of multi-technology expertise, we thrive at the convergence of diverse technologies to deliver tangible economic impact and improve people's lives.

Our approach focuses on generating knowledge and applying it to drive Catalonia's leadership in digital infrastructures and services. We power our region's technological development and sovereignty by connecting public administrations, private companies, academic organisations and citizens.

i2CAT is part of the CERCA network and is accredited by TECNIO.

### Strategic Goals



#### Applied research and innovation:

Our research in advanced digital technologies allows us to lead the digital transformation, contributing to a sustainable and inclusive digital ecosystem.



#### Connecting and transferring knowledge:

We connect businesses and public administrations to transfer knowledge and create tangible solutions with a real impact.



#### Digital technologies to transform society:

We work towards technological solutions that drive business competitiveness, government efficiency, and the digital inclusion of citizens.



#### Collaboration with key sectors to design technological solutions

tailored to local needs and to improve people's lives, contributing to the well-being and future of Catalan society.

### Our Mission



To contribute to defining and structuring a universal digital innovation system that strengthens sovereignty in Catalonia and Europe as a whole, and promotes an advanced, safe, and fair society.

### Values

Research  
Excellence

Humanistic  
Perspective

Creative & Quality  
Solutions

Collaboration

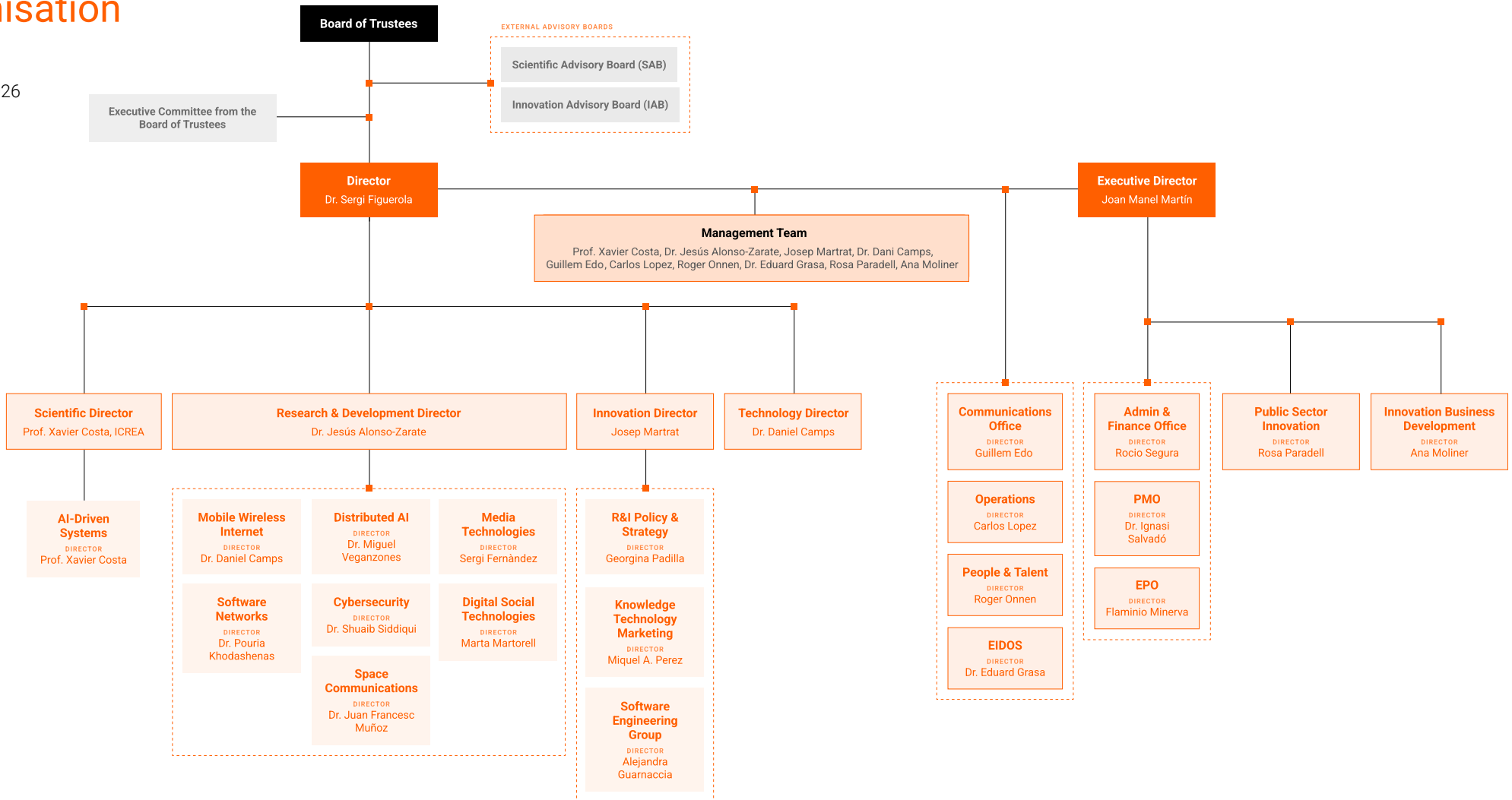
Professional  
Excellence

Integrity

Trust

# Organisation Chart

As of May 2026



## Board of Trustees, Executive Committee & Scientific Advisory Board

### Board of Trustees

#### As of May 2026

**Mr Albert Dalmau**, President; Minister of the Presidency, Government of Catalonia

**Mr Francesc Torres**, Vice President, Rector, Universitat Politècnica de Catalunya

**Mr Albert Tort**, Secretary of Telecommunications and Digital Transformation, Government of Catalonia

**Mrs Maria Galindo**, Secretary of Digital Policies, Government of Catalonia

**Mrs Eva Giménez**, Vice President II; Secretary General of the Presidency, Government of Catalonia

**Mr Jaume Baró**, Vice President III; Chief Executive Officer, ACCIÓ

**Mrs Teresa Sanchis**, General Director of Research, Government of Catalonia

**Mr. Pedro Díez**, Vice-Rector of Research, Universitat Politècnica de Catalunya

**Mr Jordi Berenguer**, Vice-Rector for Transfer, Innovation and Entrepreneurship, Universitat Politècnica de Catalunya

**Mr Javier Selva**, Director General for Knowledge Transfer and the Knowledge Society, Government of Catalonia

**Mrs Cristina Campillo**, General Director of Digital Infrastructures, Government of Catalonia

**Mrs Laia Pellejà**, Director, Institució CERCA

**Mr Jordi Valls**, Commissioner for Innovation, Barcelona Council

**Mr Demetri Rico Aguila**, Managing Director for the Centre of Telecommunication and Information Technologies, Government of Catalonia

**Mrs Laura Caballero Nadales**, Director of the Cybersecurity Agency of Catalonia, Government of Catalonia

**Mr Pol Pérez**, Director of the Information Systems Area, CatSalut

**Mrs Gemma Ribas**, Member of the Governing Council, CCMA

**Mr Carles Pérez**, Rector, Universitat Ramon Llull

**Mr Boris Bellalta**, Professor, ICT Department, Universitat Pompeu Fabra

**Mr Josep Pallarès**, Rector, Universitat Rovira Virgili

**Mr Carlos Solana**, Innovation, Digital Transformation & Business Director, Grup MediaPro

**Mr Andreu Vilamitjana**, Director, CISCO

**Mr David Noguer**, Director of Strategic Global Marketing, Juniper Networks

**Mrs Montserrat Cereza**, Director of Institutional Relations, – Catalonia and Aragon MasOrange

**Mr Alejandro Carballo**, Director for Public Administration - Catalonia and Aragon, Vodafone

**Mr Óscar Pallarols**, Innovation & Product Strategy Director, Cellnex

**Mr Ernest Perez-Mas**, President, Parlem Telecom

**Mr Chema Casas**, Managing Director, Territori Est, Telefónica

### Executive Committee

#### As of May 2026

**Mr Javier Selva**, Director General for Knowledge Transfer and the Knowledge Society, Government of Catalonia

**Mrs Cristina Campillo**, General Director of Digital Infrastructures, Government of Catalonia

**Mrs Maria Galindo**, Secretary of Digital Policy, Government of Catalonia

**Mr Albert Tort**, Secretary of Telecommunications and Digital Transformation, Government of Catalonia

**Mr Jordi Berenguer**, Vice-Rector for Transfer, Innovation and Entrepreneurship, Universitat Politècnica de Catalunya

**Mr Jordi Castellà - Roca**, Open Government and ICT Commissioner, Universitat Rovira i Virgili

**Mrs Laura Caballero Nadales**, Director of the Cybersecurity Agency of Catalonia, Government of Catalonia

**Mr Josep Lluís Molina**, Director of Digital Transformation, Consultancy and Projects Division, Government of Catalonia.

**Sr. Emili Rubió, Manager**, Institut Municipal d'Informàtica (IMI), Barcelona Council

**Mr Carlos Solana**, Innovation, Digital Transformation & Business Director, Grup MediaPro

**Sr. Fernando García**, Key Account Manager AA.PP, Vodafone

**Mr Julián Vinué**, Digital Innovation Manager and Institutional Relations, Telefónica

**Mrs Montserrat Cereza**, Director of Institutional Relations, – Catalonia and Aragon MasOrange 1

**Mrs Marta Rubí**, Sales Director, Cellnex Telecom

### International Scientific Advisory Board

#### As of May 2026

**Professor PhD Dimitra Simeonidou**, High Performance Networks, Faculty of Engineering, University of Bristol

**Inder Monga**, Executive Director ESnet; Division Director, Scientific Networking

**Professor Antonio F. Skarmeta**, University of Murcia

**Professor Alessandro Vanelli**, IT, Università di Bologna

**Professor Marja Matinmikko**, Research Director of Infotech Oulu Institute; Director of Sustainability and Regulation at 6G Flagship, University of Oulu

**Professor Muriel Medard**, Software Science & Engineering, MIT Bell Labs Advisory Council

## At i2CAT, we are committed to fostering equity, diversity, and respect across every part of the Centre, creating an environment where there is no place for discrimination

We approach equality from a broad perspective. Beyond gender, this includes origin and nationality, age, family circumstances, cultural background, religion and beliefs, and sexual orientation. We believe these differences should never be barriers to talent in the workplace. Instead, they are strengths to be valued and encouraged, enriching who we are as a community. Diversity is not only important, but a valuable professional asset.

Along with ongoing activities and campaigns in 2025, i2CAT organised two key programmes – *No és feina de dones?* and TechBcn4Women – to address the acute gender gap in the technology and digital sectors.

Despite an abundance of professional opportunities and strong sector growth, women fill only 30% of ICT roles in Catalonia. Both these programmes looked at the issue from multiple angles: cultural, professional and societal.

### Key Programmes

In 2025, i2CAT co-led two events designed to build knowledge, visibility and community to help close the gender gap in ICT in Catalonia.

### Equality Commission and Anti-Harassment Committee

i2CAT's Equality Commission and Anti-Harassment Committee work to ensure equal treatment and opportunities for people of all gender identities. Their efforts include advancing the centre's equality policies, providing training and awareness on gender equality, and offering support to anyone who may be experiencing harassment.

The i2CAT Equality Commission is also part of CERCA's Gender Commission.

### Activities and Campaigns

#### TRAINING

- 3 staff trainings on LGBTI equal rights and diversity
- 1 staff training on equal opportunities: gender and LGBTI perspective
- 1 staff training on inclusive and non-sexist language
- 1 training on new masculinities
- 1 staff training on anti-harassment protocol at work

### Gender balance

Women

30%

Men

70%

## ■ *No és feina de dones?* Not a woman's job?

Organised by i2CAT and **Telecos.cat**, this initiative brought together research, mentoring, awareness-raising and community-building to tackle gender bias from multiple angles.



Over the course of the programme, a series of sector events, mentoring activities and community-led initiatives were delivered, featuring more than 40 women speakers and engaging over 550 participants. Highlights included participation in leading technology and engineering events, the development of a collaborative digital network for women in ICT via a Decidim-based platform, and mentoring schemes linking students with women professionals from i2CAT.

A key outcome of the initiative was a research study led by i2CAT's Digital Society Technologies research group in collaboration with Telecos.cat. Drawing on surveys and interviews with ICT professionals across Catalonia, the study found that 65% of women perceive gender inequalities within the sector. More than 70% identified the lack of female role models and the persistence of stereotypes as significant barriers to career progression. It also pointed to work-life balance and discrimination as ongoing societal challenges. It set out a series of measures, including in-company training, increased visibility and leadership development, to support greater participation of women in the field.

### Female Talent videos

- ↓ DONES EN LES TIC: REESCRIVIM EL CODI
- ↓ DE L'AULA AL CENTRE DE RECERCA
- ↓ PARELLES DE FUTUR, AMB CLÀUDIA MATEO I ADA RUIZ



## ■ TechBcn4Women

In 2025, i2CAT and Tech Barcelona jointly launched **TechBcn4Women**, an initiative focused on promoting female talent and creating new role models.



Supported by the Government of Catalonia and funded through the European Next Generation EU programme, the project brought together professionals, researchers, entrepreneurs and students through a month-long programme of activities centred on visibility, networking, inspiration and professional development.

As part of the TechBcn4Women programme, i2CAT hosted two specialised Tech Talks aimed at increasing the visibility of women experts in strategic technology fields and inspiring new female vocations in emerging digital sectors.

Alongside this, the centre advanced its Fostering Research Careers programme, welcoming two young female engineering students into the Mobile Wireless Internet research group through university collaboration agreements. This initiative offered them valuable, first-hand experience within applied research and innovation environments.

### Tech Talks video

↓ L'ALTRA CARA DE L'ESPAI AMB LA CLÀUDIA MATEO



# Local Partners

### Community

### Companies

### Public Organisations

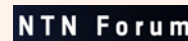
### Research and Universities

## Official Certifications and Associations

### Official Certifications



### Associations, Standardisation Organisations, and Platforms



# i2cat<sup>R</sup> Research & Innovation Centre



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