

February 2024. Sector snapshot

The Digital Economy in Catalonia

The Digital Economy in Catalonia

ACCIÓ
Government of Catalonia



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Carried out by
Strategy and Competitive Intelligence Unit of ACCIÓ

Barcelona, February 2024

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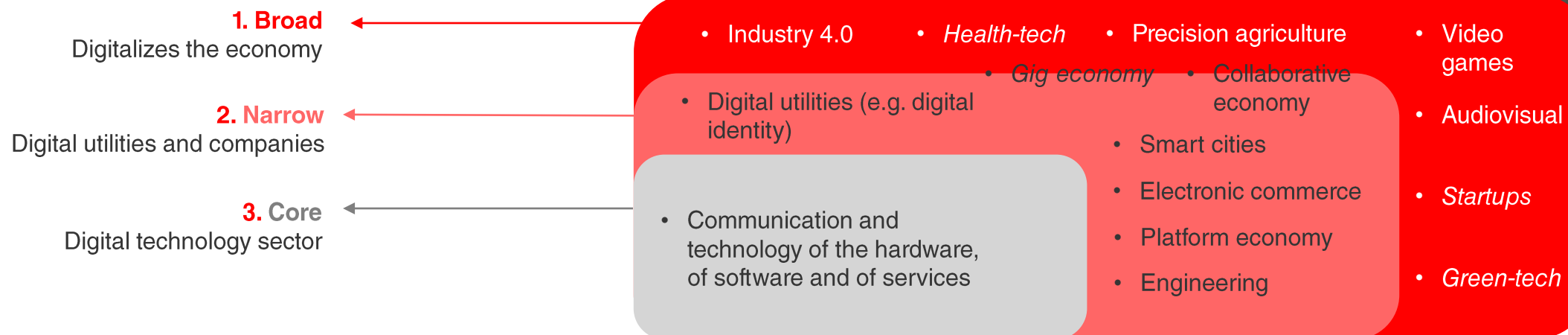
Global trends in the Digital Economy

1. Overview of the Digital Economy

Definition of the Digital Economy

- The **Digital Economy** encompasses all the economic activity that results from the **everyday online connections among people, businesses, devices, data and processes**.
- It refers to all producers and consumers, including the governments that use digital inputs in their economic activities, digital technologies, digital infrastructure, digital services and economic activities related to data.
- The **digital world** includes the **economic activity created by producers and suppliers** and it can be defined on three levels, with special emphasis on the sectors that exist thanks to digital technology.

Visualization of the digital world in three parts: core, narrow and wide

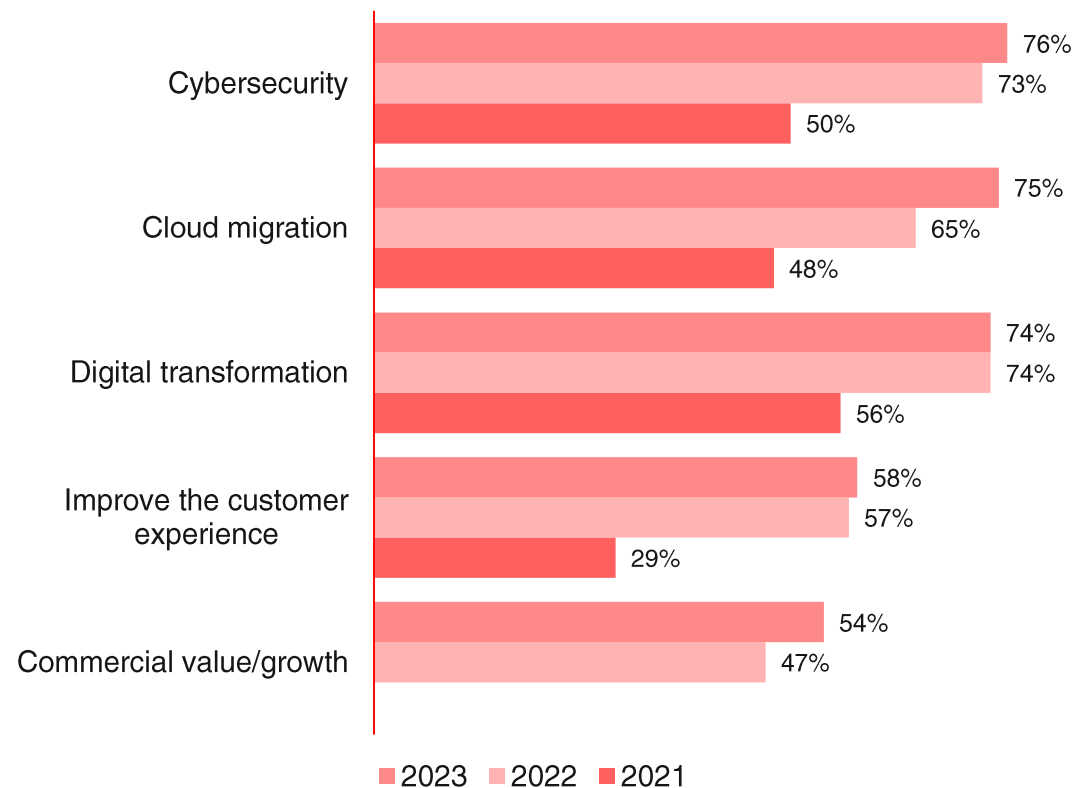


Notes: The "gig economy" is a labor market characterized by the prevalence of short-term contracts or freelance work as opposed to permanent positions

Source: ACCIÓ based on "Charting Opportunities in the Digital Economy Growth", Boston Consulting Group, 2022

Digital transformation is one of the top three technological priorities of companies

Priorities of ICT initiatives in companies around the world, 2021-2023



Cyber security, cloud migration and digital transformation are the top three priorities for ICT initiatives in companies around the world

Digital transformation was, between 2020 and 2022, the first priority of ICT initiatives carried out by companies on a global scale. In any case, in 2023 it dropped to third position in the ranking.

On the one hand, **cyber security** has risen to first position: 76% of companies have reported that it is the main priority of this type of initiative in their companies.

On the other hand, **strategic cloud migration** has undergone a remarkable rise in the ranking. It is in second place, with 75% of companies citing it as a priority.

Source: ACCIÓ, based on Statista, 2023

Main countries and companies in the digital field

World Digital Competitiveness Ranking, 2023

 1 USA (+1)	 7 Sweden (-4)
 2 Netherlands (+4)	 8 Finland (-1)
 3 Singapore (+1)	 9 Taiwan, China (+2)
 4 Denmark (-3)	 10 Hong Kong, China (-1)
 5 Switzerland (=)	
 6 South Korea (+2)	 31 Spain (-3)

The IMD's World Digital Competitiveness Ranking measures the ability and readiness of countries to **adopt and explore digital technologies** as a key driver of economic transformation in companies, public administrations and society in general.

Main companies in the Digital Economy, 2024



Source: ACCIÓ, based on World Digital Competitiveness Ranking, 2023; Orbis, 2024; Reaching New Heights in Uncertain Times, Boston Consulting Group, 2023

2. The Digital Economy in Catalonia

2. The Digital Economy in Catalonia

2.1. A powerful digital and ICT ecosystem

Catalonia's industrial, tech based & Digital Economy makes it a top global tech hub

A powerful ICT and digital ecosystem

23,482
companies



€34,783 M
revenue



185,851
People in
employment



- Catalonia is the **largest ecosystem** for startups in Southern Europe and second-favorite hub of founders wishing to create a startup in the EU. (StartupBlink and Startup Heatmap Europe, 2023).

A leading tech hub

- Catalonia is the 7th most digitized region in the EU (Digital economy and society index, DESI, 2022).
- Catalonia hosts many renowned international tech events and features prestigious R&D centers supporting tech transfer, clusters and universities.
- Catalonia offers many regional initiatives like Digital Innovation Hubs and DIH4CAT to support digital

tech companies.

- From 2012 to 2030 the Mobile World Congress is located in Barcelona. This initiative turned Barcelona into a permanent global center for mobile technologies and a global benchmark for mobile transformation.

On the global radar for tech investment

- With more than 408 technological projects and €6,472 M of capital invested between 2019 and 2023, Catalonia is a leading destination of Digital Economy in the EU.
- Talent, market and location make a difference for companies when choosing Catalonia for their technology investment.
- Tech investments represent 43% of Catalonia's total foreign investment projects from 2019 to 2023 (408 of 953).

A pool of digital talent

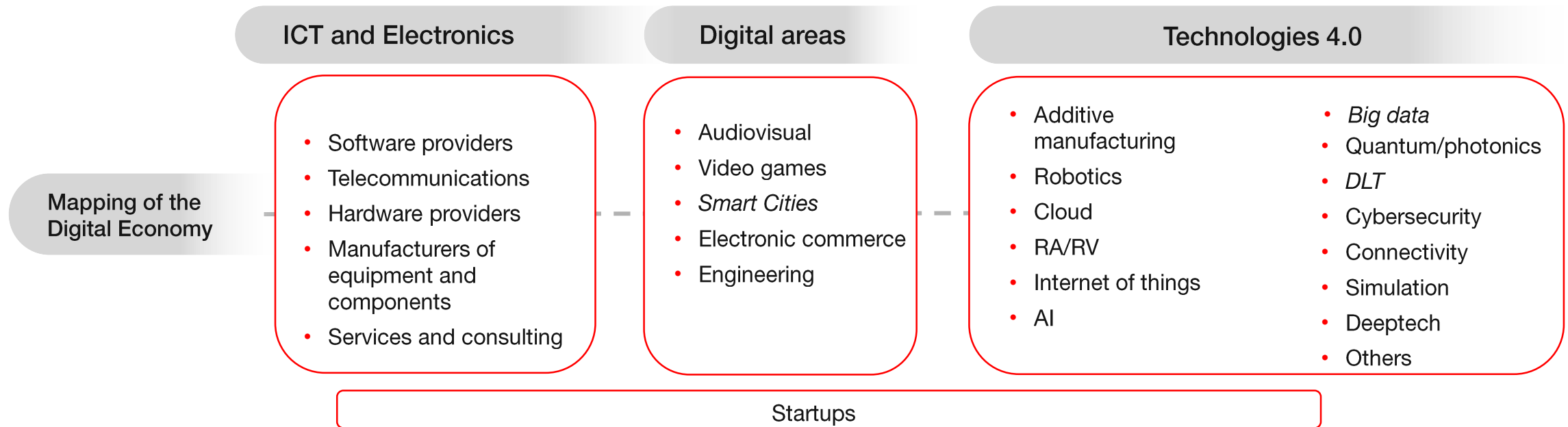
- Large international companies such as Microsoft choose Barcelona due to the availability of digital talent.
- Barcelona enjoys a high quality of life, as well as a wide digital ecosystem.
- Catalonia and Barcelona concentrate most renowned universities and educational centers.
- Barcelona is the 7th most attractive city in the world for technological talent (Savills Executive Nomad Index, 2023).

Source: ACCIÓ

The Digital Economy in Catalonia

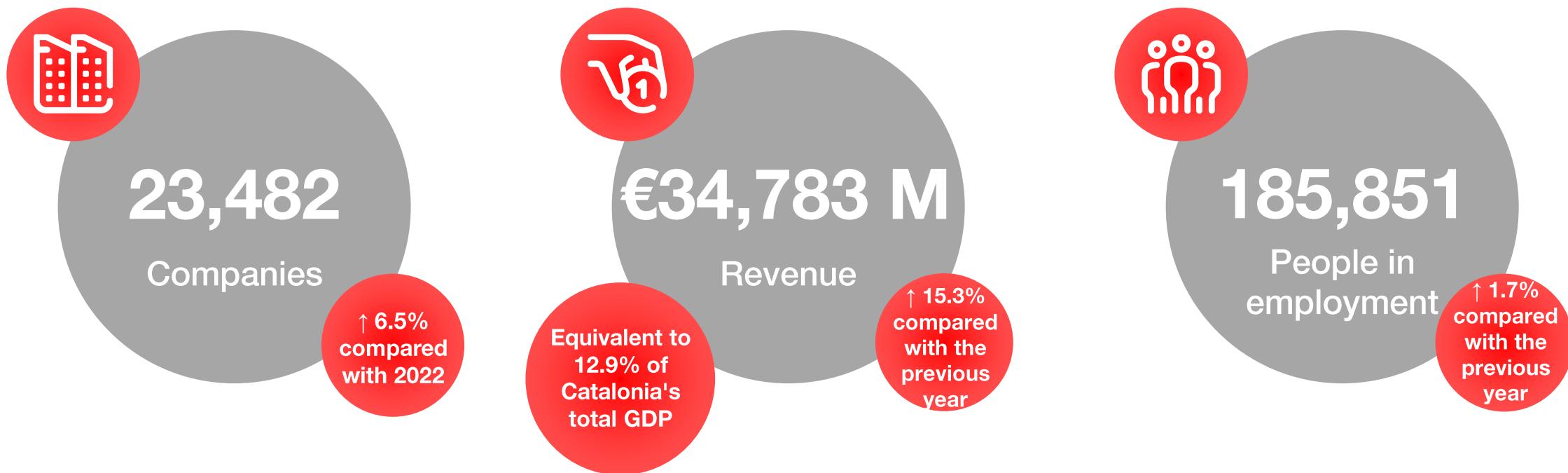
In this study, Digital Economy means the combination of the companies included in the IT sector and the rest of the digital areas such as video games, the audiovisual industry, e-commerce, startups, industry 4.0, smart cities and IT engineering.

The Digital Economy is advancing at an ever-increasing pace, while continuing to innovate and create new expectations, with smarter and more connected technological devices and infrastructures.



Source: ACCIÓ

Key data of the audiovisual industry in Catalonia (I)



Note: economic data from the last year available, mostly 2022. **Source:** ACCIÓ

The mapping of the audiovisual sector was carried out from companies selected from the following CNAE groups; 2611, 2612, 2620, 2630, 2640, 2680, 4651, 4652, 5821, 5829, 6110, 6120, 6130, 6190, 6201, 6202, 6203, 6209, 6312, 6312, 9511, 9512, 2731, 2732, 2733 and 2790; companies from the following ACCIÓ reports are also included; audiovisual, e-commerce, engineering (ICT-related), industry 4.0, smart cities (ICT-related) and startups; companies that have more than one classification were considered only once

Key data of the audiovisual industry in Catalonia (II)

23,482 companies



- **98.9%** of the companies are small or medium-sized firms (less than €50 M in revenue).
- **56.0%** of the companies were founded more than 10 years ago.
- **14.1%** of the companies are exporters and **6.2%** are regular exporters.
- **5.3%** of the companies are foreign affiliates.
- **8.7%** of the companies are SMEs.

Territorial distribution



- **86.6% of the companies are located in the area of Barcelona.**
- **78.2%** of the total revenue and **79.8%** of the total number of people employed in the industry come from companies in the province of Barcelona.
- The counties of **Barcelonès, Vallès Occidental, Baix Llobregat, Maresme and Vallès Oriental** are those with the most companies related to the audiovisual industry.

Revenue: €34,783 M



- The turnover is equivalent to **12.9% of Catalonia's total GDP.**
- **Large companies** (1.1% of the total of companies) invoice **53.2%** of the industry's total revenue.

185,851 jobs



- **72.3%** work in **consolidated companies** (10 years or less).
- **34.2%** work in **large firms** (more than 50 employees).

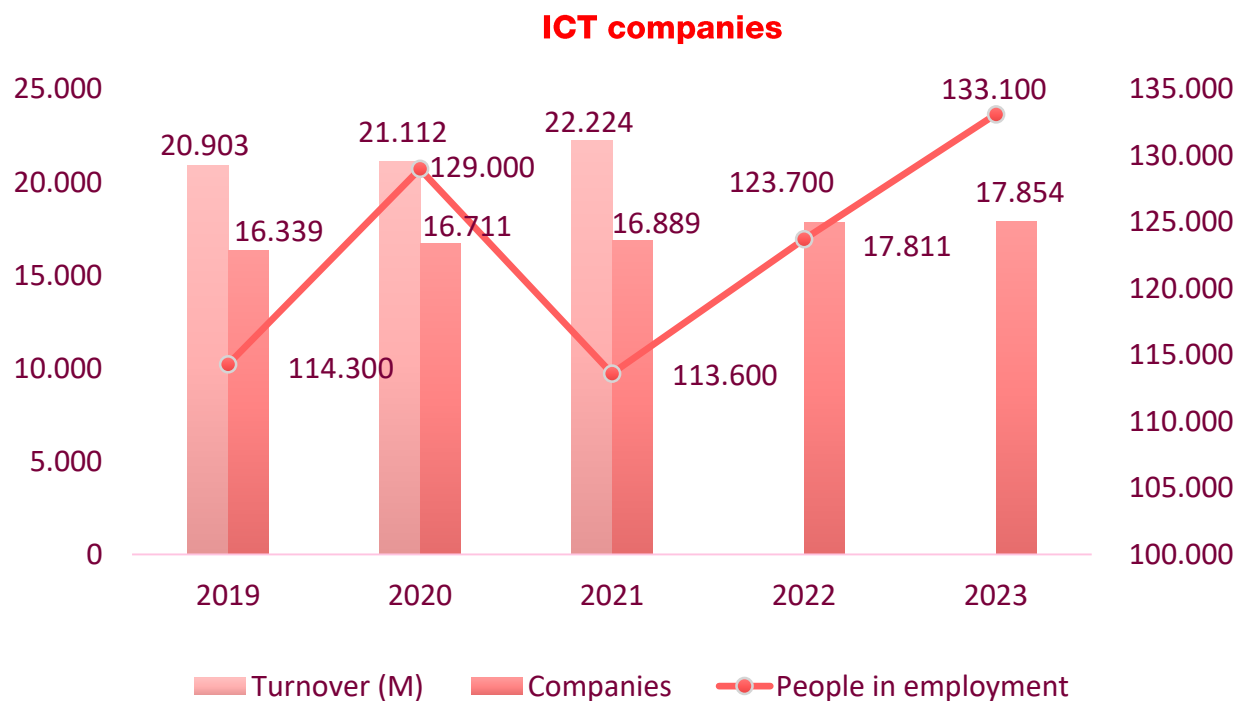
Catalonia, one of Europe's most important ICT hubs

Data of ICT companies

17,854
companies in 2023

€22.224 M
turnover in 2021

133,100
employed people in 2023



- The number of companies in the ICT sector in Catalonia increased by **0.2%** compared to last year, much higher than in the case of Spain, where it decreased by **0.7%** compared with 2022. Regarding the five-year period, the number of ICT companies in Catalonia increased by **9.3%**, 2 points more than Spain (7.4%).

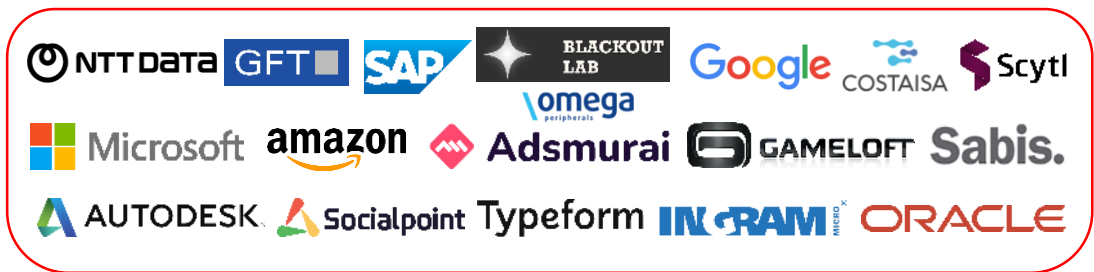
- The turnover of the IT sector increased by **5.3%** compared with last year and **25.1%** in the last 5 years. The employed population increased by **7.6%** and **21.3%** respectively.

- The Catalan ICT sector stands out in Spain with **22.6%** of all the companies in the sector and **18.9%** of the total number of workers in Spain.

Source: latest data available from INE and IDESCAT

Main ICT companies in Catalonia

Software providers



Telecommunications



Hardware providers



Manufacturers of equipment and components



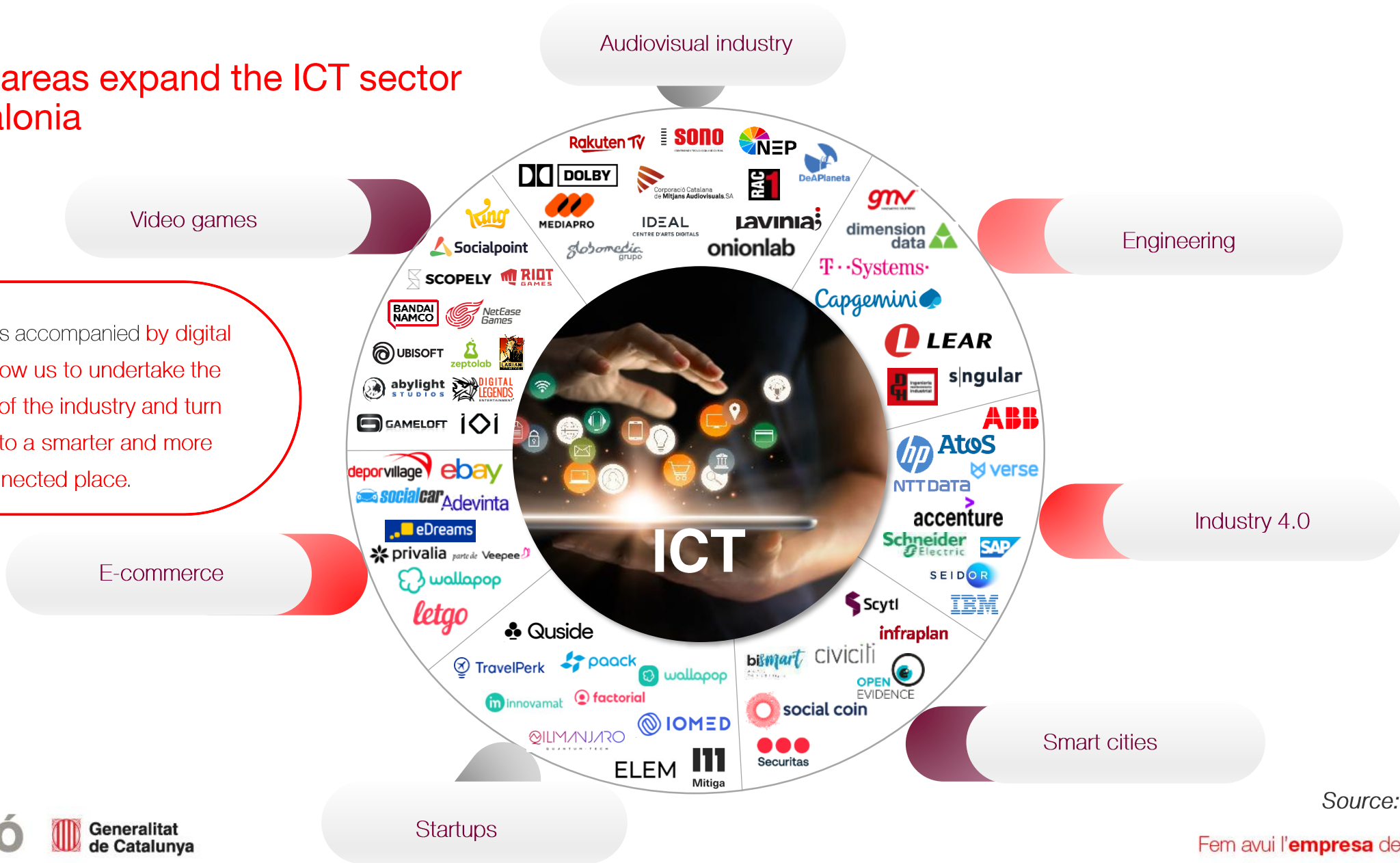
Services and consulting



Notes: the companies listed are only a sample of each category by sample title
 Source: ACCIÓ, based on Orbis

Digital areas expand the ICT sector in Catalonia

The IT sector is accompanied by digital areas that allow us to undertake the digitalization of the industry and turn Catalonia into a smarter and more connected place.



With 2,102 startups, Catalonia is the largest ecosystem for startups in Southern Europe



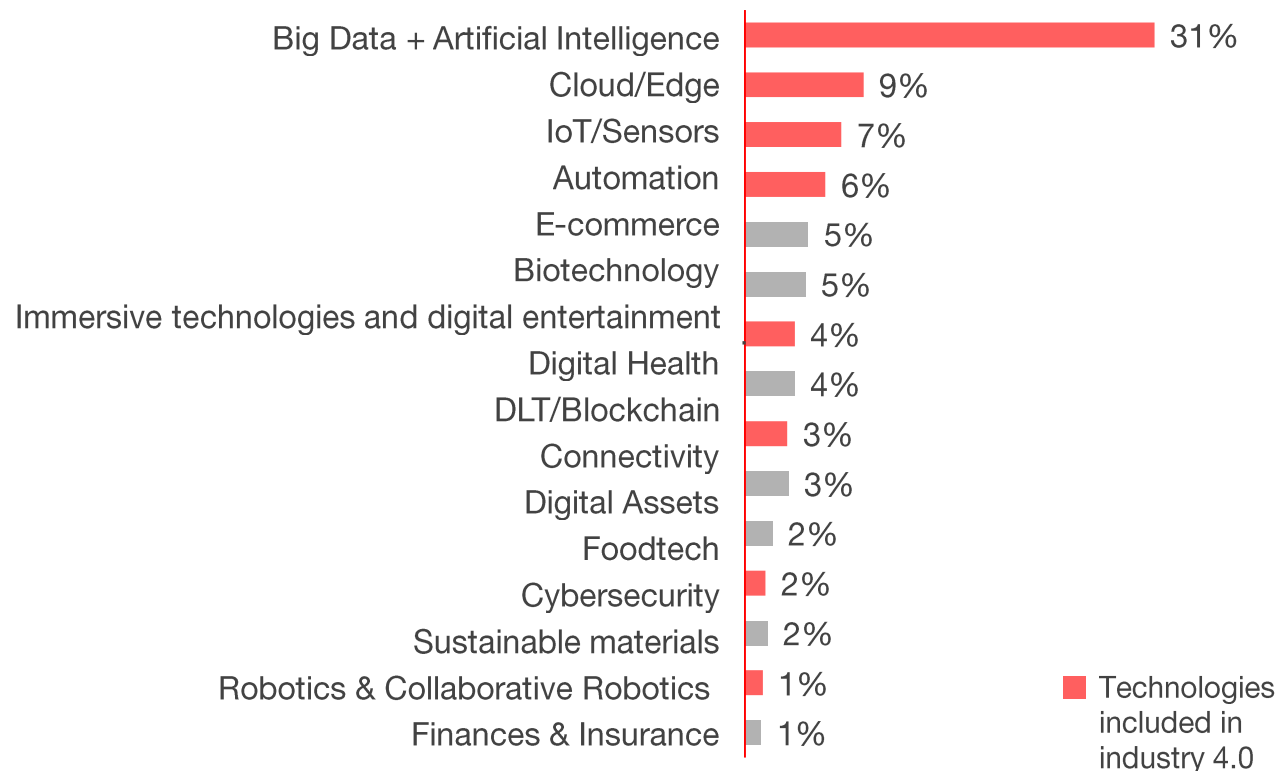
The **2,102 startups identified in 2023** almost double those in 2016, the year in which the **Barcelona & Catalonia Startup Hub** was created.

48% of the startups at the Barcelona & Catalonia Startup Hub have been created in the last five years.

Second-favorite hub of founders wishing to create a startup in the EU

Second-largest startup hub with the highest number of founders from local universities in the EU

Top 15 technologies (percentage of startups)



Note: this chart has been drawn up using the main technology data of each of the 2,102 startups at the Barcelona & Catalonia Startup Hub.

Source: Barcelona & Catalonia Startup Hub, 2023, ACCIÓ.

A robust ecosystem that supports the Digital Economy of Catalonia

Associations and initiatives

Clusters

Public Administration

Business organizations

Fairs and congresses, 2023-2024

Universities



Barcelona will be the venue of the **Mobile World Congress**, the most important event in the world in the field of technology and communications, until 2030. The city will continue to be "the world's mobile capital" for another six years, at least.



Barcelona has hosted four editions of **Integrated Systems Europe**, the global flagship event in the audiovisual sector and integrated systems. The last edition brought together 73,891 professionals from 162 different countries.

Notes: partial non-exhaustive representation of some of the main actors for each of the categories of the Catalan digital ecosystem

Source: ACCIÓ



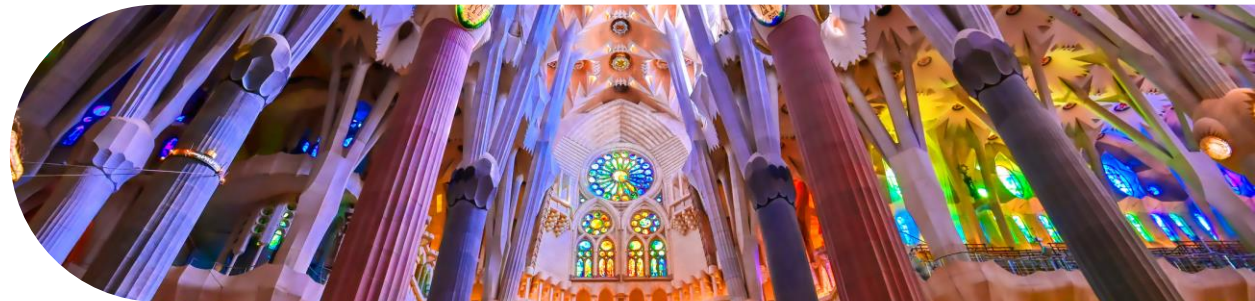
Fem avui l'empresa del demà

MWC and 4YFN have forged a successful alliance with Barcelona



MWC Barcelona 2023 in numbers

- Over 88,500 people attended in-person from 202 countries and territories.
- More than 2,400 exhibitors, sponsors and partners
- Over 1,000 speakers and thought leaders
- Over half of attendees at director level and above, of which 21% were C-suite
- On average, 10,000 networking meetings set up daily through the app
- 4YFN welcomed almost 800 exhibitors, more than 375 speakers and over 250 pitching sessions



The economic impact of Barcelona's last edition

- 461 million euros in economic impact (above the 350 million initially forecast).
- Represents a return to pre-pandemic levels in terms of the economic contribution of the event, which in 2019 generated 473 million euros.
- Over 9,100 part-time jobs (1,700 more jobs than in 2022)
- An estimated economic impact of 5,800 million euros has been generated by the event since 2006, with over 150,000 part-time jobs created all around Catalonia.

Source: ACCIÓ based on MWC Barcelona, 2023; Barcelona City Council, 2023

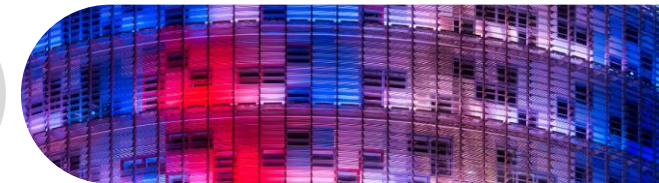
2. The Digital Economy in Catalonia

2.2. A leading technology hub in the world

Catalonia: an internationally recognized technology hub

Barcelona is the 7th most attractive city in the world for technological talent
Savills Executive Nomad Index, 2023

Catalonia reaches the category of 'strong innovator' in the European innovation ranking
European Innovation Scoreboard, 2023



8th position in the EU-27
 Human capital



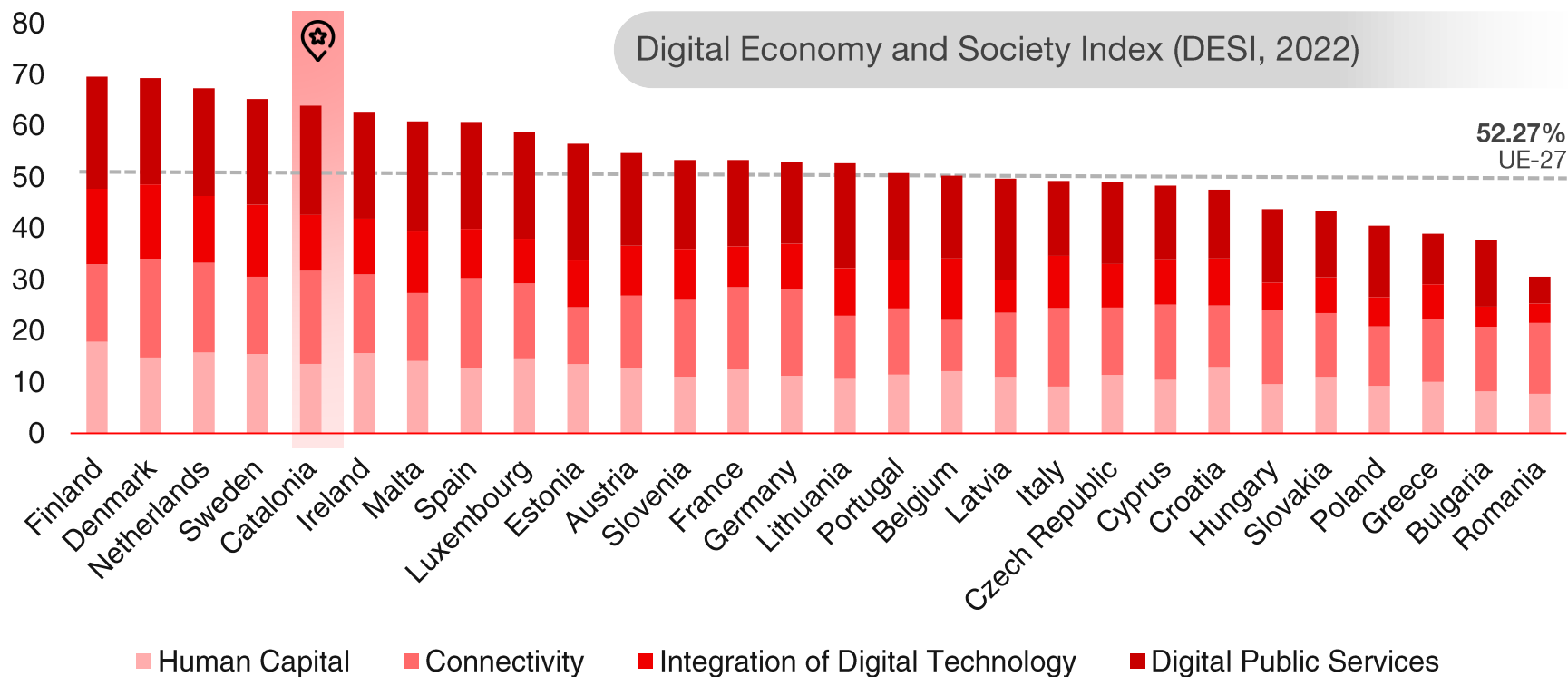
2nd position in the EU-27
 Connectivity



7th position in the EU-27
 Integration of digital technology



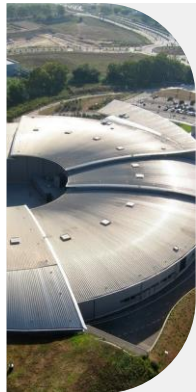
4th position in the EU-27
 Digital public services



Source: ACCIÓ based on Digital Economy and Society of Catalonia, 2022

First-class scientific and technological infrastructures

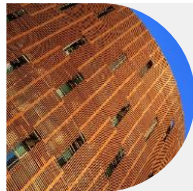
Prestigious applied and basic research groups that support technology transfer and a complete network of scientific and technological centers form the basis of Catalonia's research and innovation program.



ALBA synchrotron

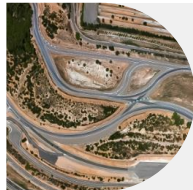
ALBA is the most important electron accelerator complex in the Mediterranean region.

The ambitious project ALBA II: a program that will transform ALBA into a 4th generation synchrotron with the overhaul of its accelerator and instrumentation and the construction of new light lines.



Biomedical Research Park

The PRBB has established itself as one of the major centers of biomedical research in southern Europe.



Applus+ IDIADA

IDIADA has, in Catalonia, the most complete automotive testing facilities in Europe.



Institute of Photonic Sciences

ICFO is considered one of the world's leading institutes in its research area.



Catalan Institute for Chemical Research

The ICIQ is a research center of international excellence.



LUMI



MeluXina



Vega



Leonardo



Karolina



Deucalion



MareNostrum 5



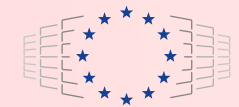
Discoverer



JUPITER

Currently, the EuroHPC JU has nine supercomputers distributed throughout Europe

The Barcelona Supercomputing Center (BSC-CNS) hosts the **MareNostrum 5**, the eighth most powerful supercomputer in the world. This state-of-the-art facility positions the city in the elite of global supercomputing.



EuroHPC
Joint Undertaking

Source: ACCIÓ based on VIA Empresa and The European High Performance Computing Joint Undertaking (EuroHPC JU), 2024

The company: more technological and competitive thanks to developers and facilitators

ACCIÓ

Generalitat
de Catalunya
tecnio
catalonia



ACCIÓ has identified, under the TECNIO label, the developers of the most innovative technologies in the RDI system of Catalonia with differential technological capabilities and the ability to transfer them to companies.

Technology centers
with TECNIO
accreditation related to
ICT



Other technological
centers or entities
related to the ICT sector
in Catalonia



Source: ACCIÓ

Other initiatives to support digital companies in Catalonia

Strategies of the Government of Catalonia to boost the Digital Economy



NewSpace strategy



AI strategy



Blockchain strategy



5G strategy



Cyber security policy



Quantum t. strategy

Digital Catalonia Alliance (DCA)

Alliance that brings together, provides knowledge to and guides emerging digital economy sectors to help consolidate them.

It focuses on six technology communities: Internet of Things (IoT), Drones, AI, NewSpace, Cybersecurity and Blockchain.

Digital Innovation Hub of Catalonia (DIH4CAT)

Regional non-profit innovation ecosystem formed by the main agents supporting the digitalization of Catalonia.

It aims to promote the technological transformation of small and medium-sized companies, technological startups and public entities.

The Digital Decade of the European Union Digital milestones for 2030

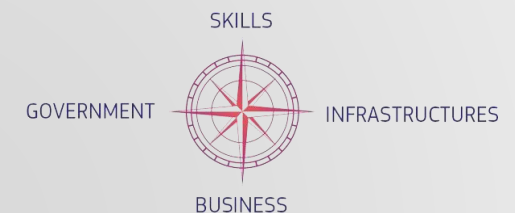
The European Parliament, the Member States and the European Commission have jointly established specific goals and milestones in four key areas for the development of the digital economy:

Digital skills

Secure and sustainable digital infrastructures

Digital transformation of companies

Digitalization of public services



Notes: the quantum technologies strategy of Catalonia is currently in the drafting phase

Source: ACCIÓ based on Digital Policies (Government of Catalonia), 2024; European Commission, 2024

2. The Digital Economy in Catalonia

2.3. An excellent global location for tech investments

In 2023, technological FDI will account for 46% of all FDI projects in Catalonia

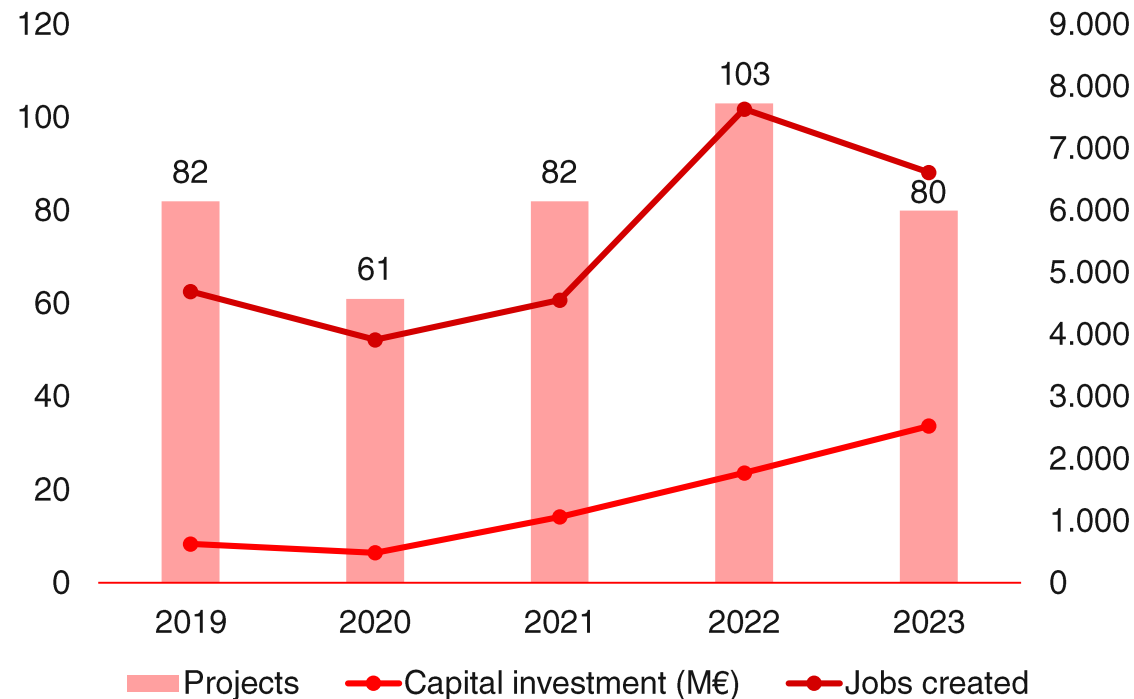


Technological investments account for 43% of total FDI projects in Catalonia from 2019 to 2023 (408 out of 953), an increase over the 35% recorded between 2014 and 2018.

Leading countries by number of FDI projects



FDI in audiovisual fields in Catalonia, 2019-2023



Notes: the following sectors were considered: "Business machines & equipment", "Communications", "Consumer electronics", "Electronic components", "Semiconductors" and "Software & IT services", the sub-sectors "Advertising, PR, & related" and "Semi-conductor machinery" and the activities "ICT & Internet infrastructure", "Research & Development" and "Technical Support Center"

Source: ACCIÓ, based on fDi Markets, 2024

Catalonia, on the European podium in receiving technological FDI in 2023



2019-2023
Projects
5th region
 4.7% of the total

2019-2023
Invested capital
11th region
 2.1% of the total

2019-2023
Jobs
4th region
 4.4% of the total

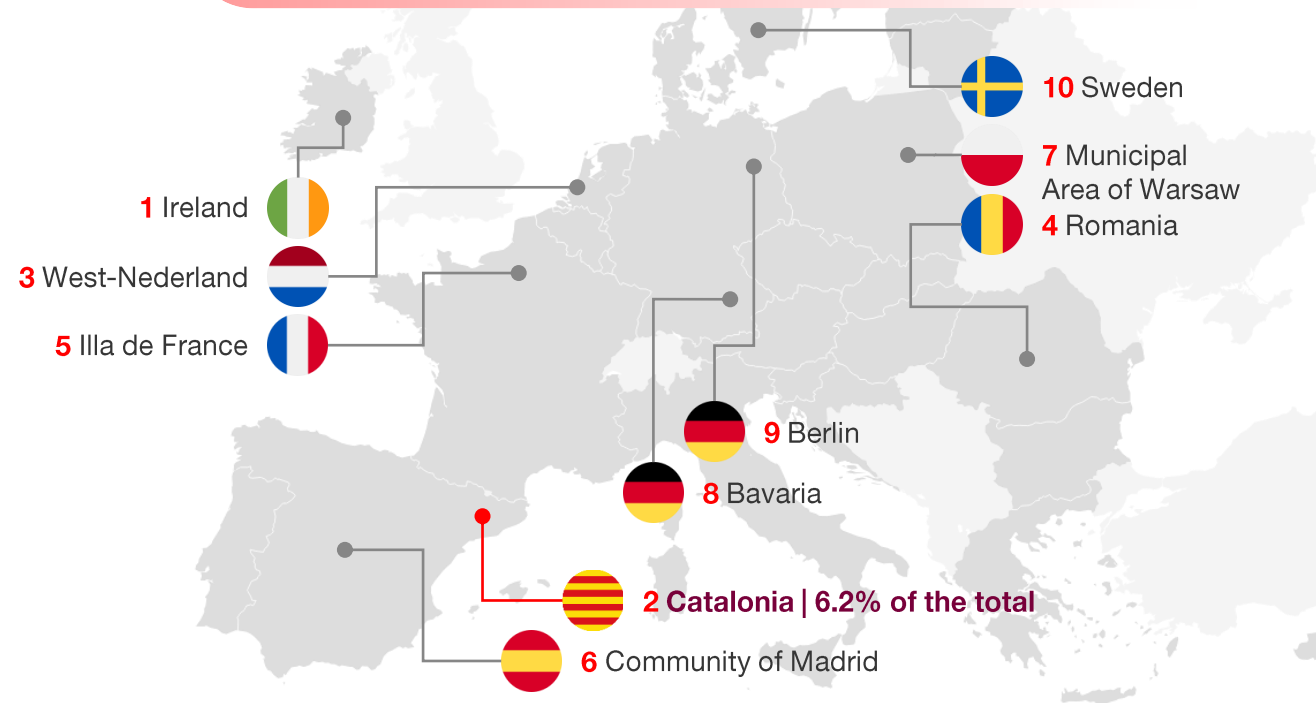


2019-2023
Projects
1st region
 37.3% of the total

2019-2023
Invested capital
1st region
 23.5% of the total

2019-2023
Jobs
1st region
 30.8% of the total

Technological FDI in the EU by number of projects, 2023

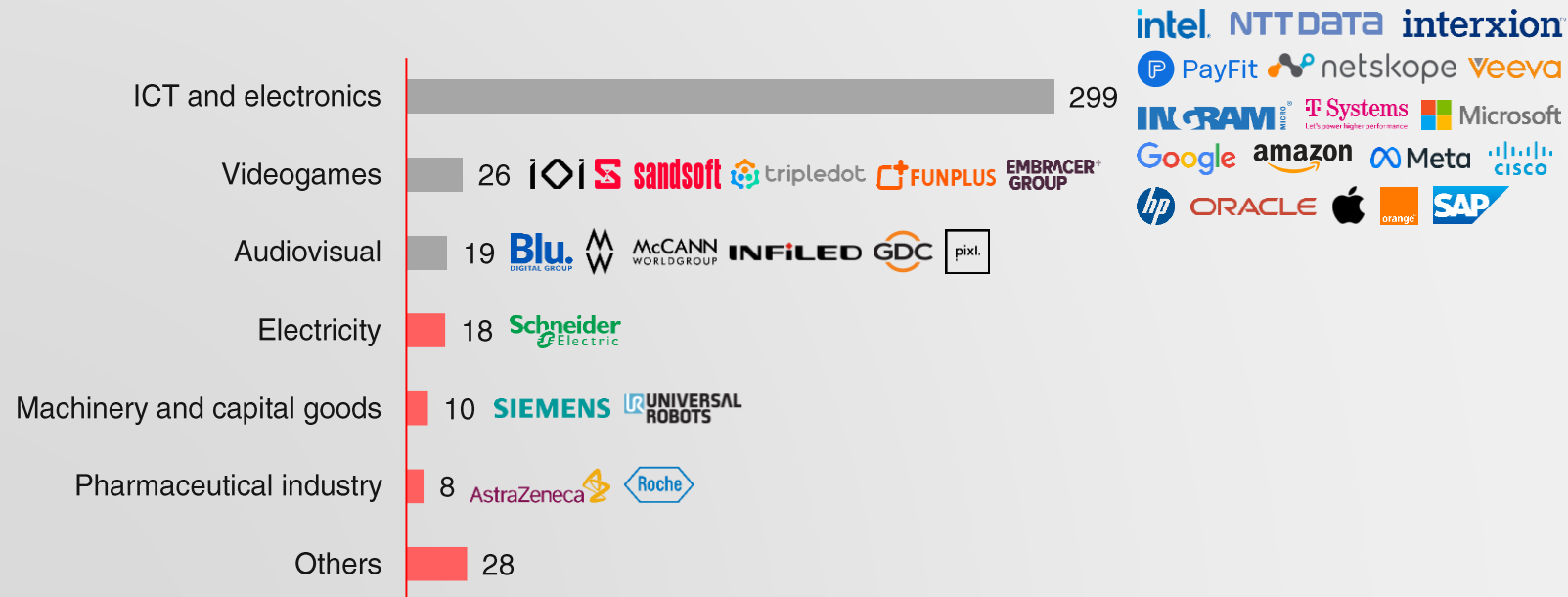


Notes: the following sectors were considered: "Business machines & equipment", "Communications", "Consumer electronics", "Electronic components", "Semiconductors" and "Software & IT services", the sub-sectors "Advertising, PR, & related" and "Semi-conductor machinery" and the activities "ICT & Internet infrastructure", "Research & Development" and "Technical Support Center"

Source: ACCIÓ, based on fDi Markets, 2024

Profile of technological FDI projects in Catalonia between 2019 and 2023

Main sectors, by projects



Note: In gray: the sectors directly related to the Digital Economy

Main sub-sectors

Subsector 1 | 130 projects

Software editors, except video games

Subsector 2 | 54 projects

Custom computer programming services

Subsector 3 | 35 projects

Other (software and IT services)

Subsector 4 | 30 projects

Internet publishing and broadcasting and web search

Subsector 5 | 26 projects

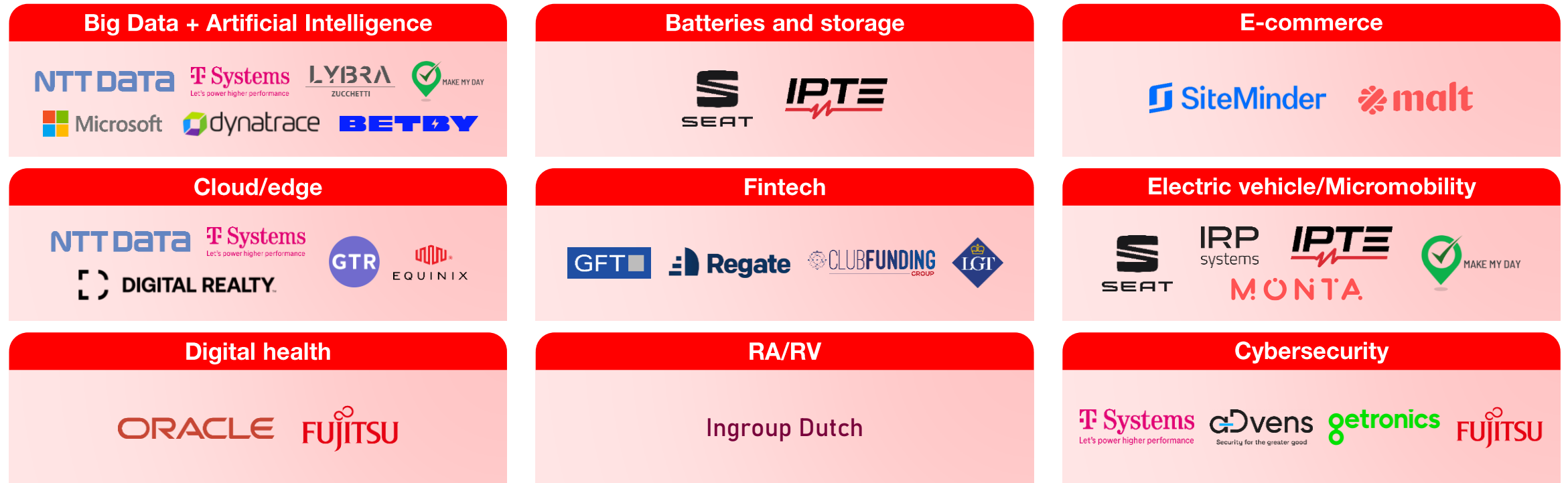
Video games, applications and digital content

Notes: the following sectors were considered: "Business machines & equipment", "Communications", "Consumer electronics", "Electronic components", "Semiconductors" and "Software & IT services", the sub-sectors "Advertising, PR, & related" and "Semi-conductor machinery" and the activities "ICT & Internet infrastructure", "Research & Development" and "Technical Support Center"

Source: ACCIÓ, based on fDi Markets, 2024

Foreign companies that have allocated technological FDI to Catalonia in 2023, by technologies

2023



Notes: the following sectors were considered: “Business machines & equipment”, “Communications”, “Consumer electronics”, “Electronic components”, “Semiconductors” and “Software & IT services”, the sub-sectors “Advertising, PR, & related” and “Semi-conductor machinery” and the activities “ICT & Internet infrastructure”, “Research & Development” and “Technical Support Center”

Source: ACCIÓ, based on fDi Markets, 2024

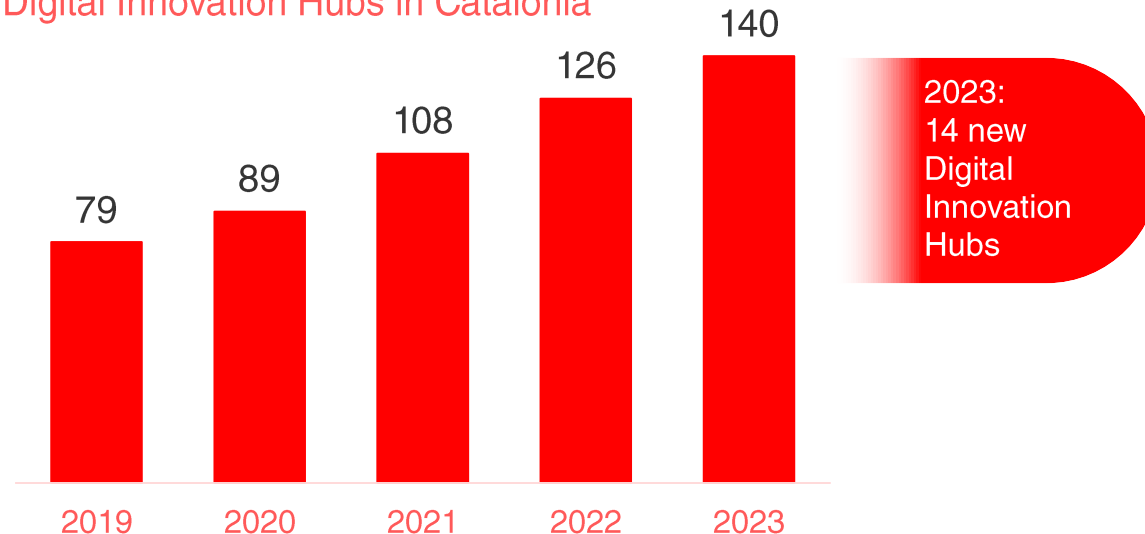
Digital Innovation Hubs in Catalonia

In 2023, 14 new Digital Innovation Hubs have been announced in Catalonia, which will join the 126 already operating in the territory in 2022.

This figure is part of a growing trend of business investments of an innovative and technological nature in Catalonia, which in the case of Digital Hubs has accelerated in recent years.

Between 2019 and 2023, a total of 66 Digital Innovation Hubs have been established in Catalonia, bringing the total number of digital hubs of foreign companies in Catalonia to 140.

Digital Innovation Hubs in Catalonia



The 14 new digital hubs in 2023 have generated more than **800 jobs** and are expected to create more than 2,400 jobs by 2026.

The economic impact of the new hubs in 2023 is estimated at **€2,544 M** per year. The forecast for 2026 is to exceed €3,600 M in turnover.

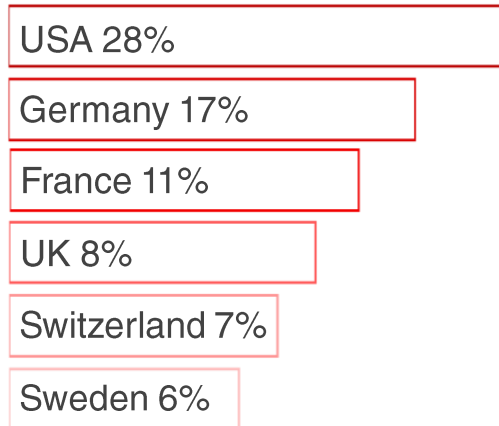
Notes: Digital Innovation Hubs are considered to be those investments by foreign companies (whether greenfield or acquisitions, licenses, etc.) aimed at developing digital products, R&D, innovation or prototyping, which have their own equipment and offer global services to the entire business group or have an international scope.

Excludes those that only operate in commercial value chains or sales

Source: Tech Hubs Overview 2024, MWC-ACCIÓ-Barcelona City Council and compilation of investments made public (announced) in the press by ACCIÓ

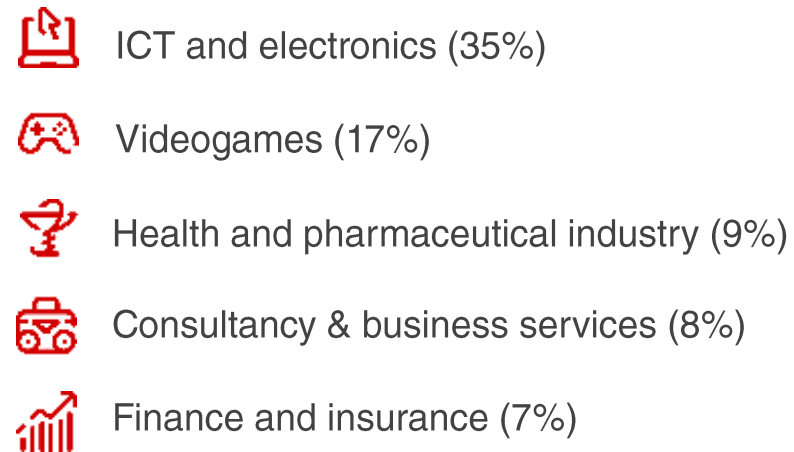
Characteristics of the 140 Digital Innovation Hubs in Catalonia

Geographical origin



The **USA** accounts for more than a quarter (39 projects) of the total number of Digital Innovation Hubs.

Sectoral distribution



ICT and electronics is the most important sector. Up to **51** Digital Innovation Hubs are accounted for.

Location in Catalonia



Barcelona concentrates **76%** of Digital Innovation Hubs. The rest of the municipalities in the metropolitan area account for a further 18%.

Source: Tech Hubs Overview 2024, MWC-ACCIÓ-Barcelona City Council and compilation of investments made public (announced) in the press by ACCIÓ

Companies that have installed Digital Innovation Hubs in Catalonia

Digital Economy and industrial systems



Health



Mobility and logistics



Audiovisual and videogames



Food and beverages



Chemicals, packaging and textile



Finance and insurance



Notes: the companies are a representative sample of each sector

Source: Tech Hubs Overview 2024, MWC-ACCIÓ-Barcelona City Council and compilation of investments made public (announced) in the press by ACCIÓ

Companies that have installed Digital Innovation Hubs in Catalonia in 2023 (I)

93% of the new 2023 hubs that have been installed in Catalonia have done so with the support of ACCIÓ. Overall, 87% of the 140 digital hubs in Catalonia have received support from ACCIÓ.

Mobility

VOLKSWAGEN
D:H Volkswagen will build a Digital:HUB in Barcelona as part of the international network of Software Development Centers.



IRP
systems IRP Systems, a leader in electric powertrain solutions, opens a new office in Barcelona that will provide support to customers in the region.



Lufthansa Lufthansa, Europe's largest airline group, opens its first digital subsidiary in Barcelona, creating 300 jobs and new technological solutions.



Health

AstraZeneca AstraZeneca will transform its research center in Barcelona into a global innovation hub focused on five therapeutic areas.



TOWA Towa, the company specialized in the manufacture of generic drugs, invests 85 million in its international hub in Martorelles.



ORACLE
Health Sciences Oracle locates a new digital health hub in Barcelona, thanks to the success of the NetSuite hub.



Communications

TELAVOX The technology group Telavox has opened a digital hub in Barcelona, investing 2.7 million euros to develop strategic projects.



Source: Tech Hubs Overview 2024, MWC-ACCIÓ-Barcelona City Council and compilation of investments made public (announced) in the press by ACCIÓ

Companies that have installed Digital Innovation Hubs in Catalonia in 2023 (II)

Videogames



Sandsoft Games opens a new mobile game development studio in Barcelona, employing 60 professionals over three years.

ACCIÓ Catalonia Trade & Investment



Rovio will open its first studio in Barcelona, generating some thirty jobs and specializing in new experiences.

ACCIÓ Catalonia Trade & Investment



NetEase Games opens a new game studio in Barcelona, which will hire up to 100 people across Europe and North America.

ACCIÓ Catalonia Trade & Investment



Financial services



LGT Private Banking will open a digital hub in Barcelona with the expectation of employing around 40 people and developing new products and services.

ACCIÓ Catalonia Trade & Investment



Unnax, which specializes in online financial services software, will turn its Barcelona headquarters into an international financial services hub.

ACCIÓ Catalonia Trade & Investment



Chemical industry



Arxada inaugurates its global center of excellence in Barcelona and expects to reach a staff of 100 people for this global hub.

ACCIÓ Catalonia Trade & Investment



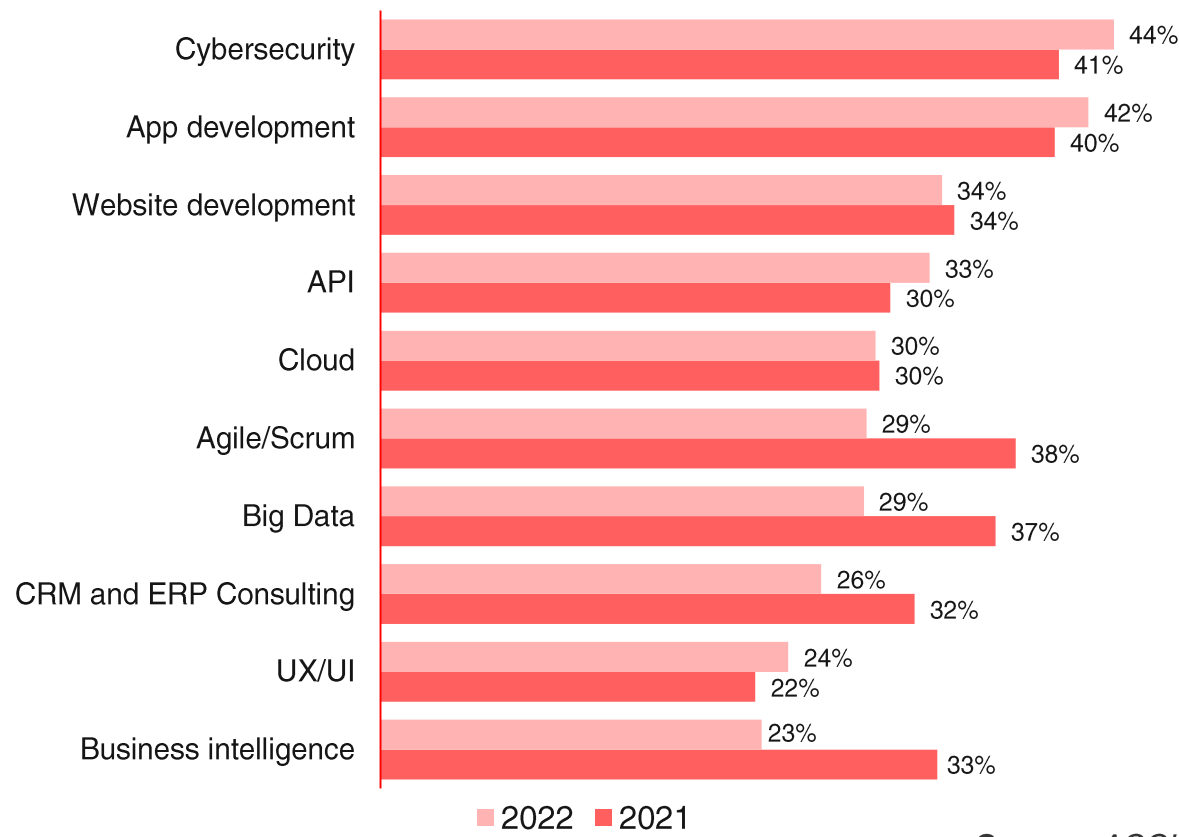
Notes: there is an investment project in the audiovisual field that cannot yet be made public and is not described as a case, although it has been accounted for
Source: Tech Hubs Overview 2024, MWC-ACCIÓ-Barcelona City Council and compilation of investments made public (announced) in the press by ACCIÓ

2. The Digital Economy in Catalonia

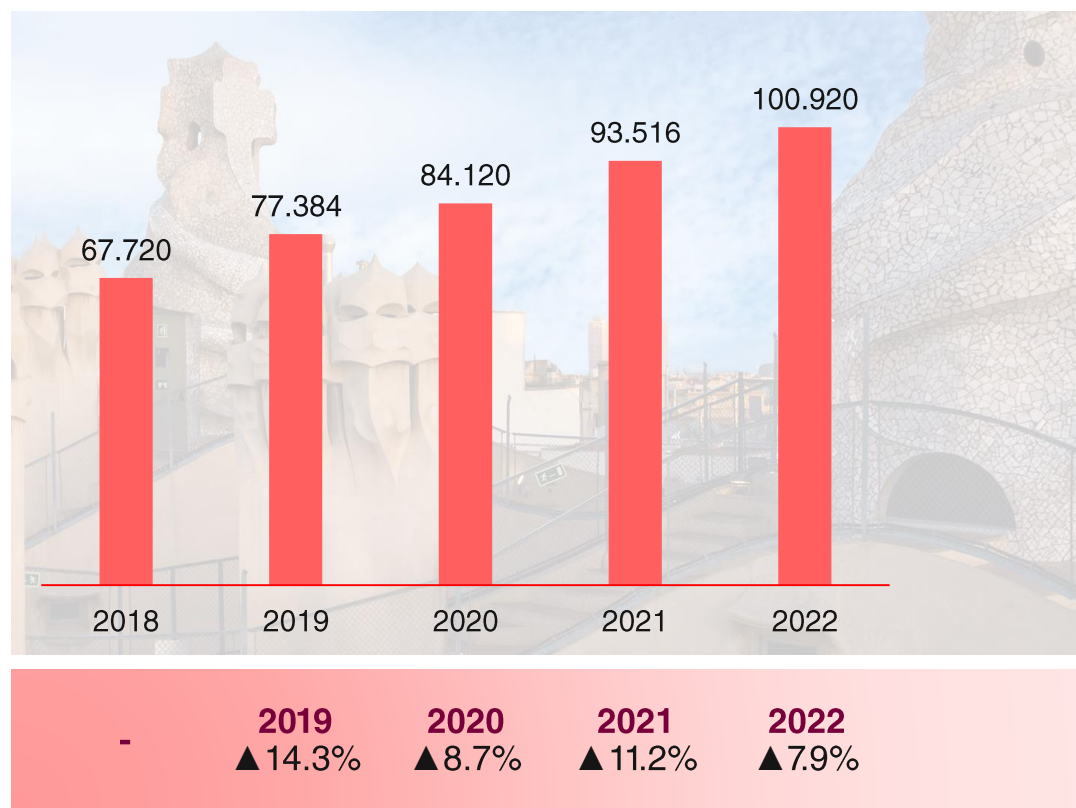
2.4. Point of reference for digital talent

Digital talent, abundant and highly available in Catalonia and Barcelona

Digital specialties that drew foreign digital talent to Barcelona in 2021-2022



Number of digital professionals in Barcelona, 2018-2022



Source: ACCIÓ based on "Digital Talent Overview 2023", Mobile World Capital Barcelona

Catalonia has a powerful educational ecosystem (I): Bachelor's degrees in ICT

University(ies)	Name of degree (university degrees)
UAB, UPC, upf.	Bioinformatics
UAB, UPC, UOC	Data Science and Engineering
UPC	Digital Design and Creative Technologies/Multimedia
UdG, UPC, upf.	Design and Development/Production of Video Games
UPC, upf.	Engineering in Audiovisual Systems
UAB, UPC	Telecommunication Systems Engineering
UPC	ICT Systems Engineering
upf.	Telecommunication Networks Engineering
UAB, UPC	Telecommunication Electronic Engineering
UPC	Engineering in ICT Organization
UdG, UPC	Engineering in Industrial Technologies
UAB, UdG, UPC, upf., UOC	Computer Engineering
upf.	Audiovisual Media
UVIC	Multimedia. Applications and Video Games
UOC	Software Application techniques






















2,350 graduates in the 2021-2022 academic year
 ▲ 25.7% compared with the 2020-2021 academic year
 (1,869 graduates)



Notes: sample of the university programs offered in Catalonia related to the digital and ICT field

Source: ACCIÓ based on "Digital Talent Overview 2023", Mobile World Capital Barcelona; Universities Channel, 2024

Catalonia has a powerful educational ecosystem (II): Master's degrees in ICT

University(ies)	Name of degree (university master's)
	Applications and Management of Telecommunication Engineering
 	Bioinformatics
 	Cybersecurity
	Web Site and Applications Development
	Videogame Design and Programming
	Big Data Engineering (<i>Big Data</i>)
  	Telecommunications Engineering
 	Computer engineering
	Innovation and Research in Computing
   	Artificial Intelligence
	High Performance Web Programming
	Digital Health
	Intelligent Interactive Systems
	Sound and Music Technologies
    	Computer vision

1,800 graduates in the 2021-2022 academic year
 ▲ 13.0% compared with the 2020-2021 academic year
 (1,593 graduates)



Notes: sample of the university programs offered in Catalonia related to the digital and ICT field

Source: ACCIÓ based on "Digital Talent Overview 2023", Mobile World Capital Barcelona; Universities Channel, 2024

Large international companies choose Barcelona for its availability of digital talent



"Barcelona is home to a thriving community of video game creators and is the perfect place for talented developers from all over Europe"

David Fernandez
CEO, Sandsoft

"Barcelona is an attractive city both to live and to work and a great hub of innovation and talent attraction"

Jordi Ribas
Corporate Vice President, Microsoft

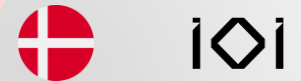


"Barcelona is very attractive for international talent because of its quality of life and its commitment to innovation and technology"

Carla Ruiz
HR Director, AstraZeneca in Spain

"Barcelona meets all the conditions to attract talent. There are professionals trained in video games and it is an attractive place to attract workers from all over the world"

Eduard López Plans
Studio Head of IO Interactive a Barcelona



"Barcelona is a center of innovation and technology. For this reason, we also have a talent acquisition system for our digitalization"

Cristina Anderiz
Site Managing Director, Alstom, Santa Perpetua

"Barcelona brings together many different cultures and attracts the highly qualified people we are looking for to drive the digital ambitions of the Lufthansa Group"

Christian Spannauer
Chief Technology Officer, Digital Hangar



3. Global trends in the Digital Economy

Global trends in the Digital Economy (I)



Digital business models will help companies deliver value and build resilience

The World Economic Forum estimates that 70% of the value created in the next decade will come from business models based on digital platforms, given the rapid digitalization of economies around the world.

Soon almost all companies will have to think like technology companies or risk disappearing. Efforts will have to address transformation as a fundamental tool to create new value.



Technological advances will change consumer behavior

The convergence of trends such as the rise of e-commerce, store closures and the emergence of new technologies will lead to a more intuitive online shopping experience and a modernization of returns.

Shoppers are increasingly looking to online platforms geared toward finding the best deals. There is also a rise in "recommerce", the online buying and selling of second-hand goods.



Technology must be a tool to promote an inclusive, green and more efficient future

Businesses must address growing concerns about how technology affects inequality, personal freedoms and access to decent jobs by deploying it in ways that positively contribute to the general public.

Global greenhouse gas emissions and traffic congestion, among others, indicate that 21st century mobility is not yet smart. The solution lies in smart mobility technologies.

Source: ACCIÓ based on "Digital Economy Compass 2022", Statista, 2023; World Economic Forum, 2024; "Top Five Digital Consumer Trends in 2024", Euromonitor, 2024; ACCIÓ technological trends dashboard 2022-2025

Global trends in the Digital Economy (II)



New technologies will make it possible to adopt new models of care, improve diagnostics and therapies, and prevent disease

Technological progress paves the way for the development of digital health, which includes categories such as mobile health (mHealth), health information technology, wearable devices and telemedicine, among others.

The use of technologies such as AI, Big Data and bioinformatics make it possible to monitor the appearance of resistant bacteria, recognize and differentiate viral and bacterial infections and, therefore, curb antimicrobial resistance.



NewSpace will democratize space and bring about a remarkable transformation of the industry

Space systems with high-reliability designs, long cycle times and high expense are giving way to more flexible models with reduced time-to-market, high replenishment rate and much lower production costs.

This new scenario is known as New Space or SpaceIndustry 4.0 and represents a certain "democratization" of space and the aerospace industry, with initiatives such as nanosatellites, microsatellites, picosatellites, etc.



Source: ACCIÓ based on "Digital Economy Compass 2022", Statista, 2023; World Economic Forum, 2024; "Top Five Digital Consumer Trends in 2024", Euromonitor, 2024; ACCIÓ technological trends dashboard 2022-2025

10 technology trends to look forward to in 2024

Artificial Intelligence

One of the most promising technological areas. Generative AI represents the engine of change in business and society.



Cybersecurity

The priority for companies, governments and individuals.



Quantum

They will revolutionize informatics, cryptography or sensorics, solving problems now impossible for classical computing.



Industry 4.0

The industry will continue to move towards digital transformation in order to make real-time decisions, gain productivity and flexibility.



Chips and semiconductors

Their evolution sets the pace of digital transformation.



Personalized medicine

A paradigm shift in healthcare to improve disease prevention, diagnosis and treatment.



Decarbonization

The need to accelerate the development of technologies linked to decarbonization will continue to grow.



Hydrogen

Clean hydrogen is the cornerstone of the energy transition and its applications are expanding into many sectors.



Blue economy

The sustainable and responsible use of marine and coastal resources is one of the great challenges ahead of us.



Water technologies

The climate emergency forces us to look for technologies, devices and materials that improve water efficiency, recovery and reuse.



Thank you!

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Més informació sobre el sector i notícies relacionades
<https://www.accio.gencat.cat/ca/sectors/tic/>

