

EXECUTIVE SUMMARY

BARÒMETRE

del sector
tecnològic a
Catalunya

20
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CERCLE
TECNOLÒGIC

1. EXECUTIVE SUMMARY

The *Baròmetre del Cercle Tecnològic de Catalunya* of 2025 is the reference study that measures the state and evolution of Catalonia's technological and digital ecosystem. This Edition is a collaboration with the Economic and Infrastructure Studies Department of Barcelona's Chamber of Commerce. The results obtained are based on available official data, qualitative information collected through interviews, and a survey of more than one thousand companies. The combination of these sources allows us to complement official statistics with the perception of the Catalan business community.

This year, **1,007 companies participated** in the *Baròmetre*'s survey. In addition, interviews have been conducted with three public administration officials with competencies in the ICT field and territorial development: María Galindo, Secretary of Digital Policies of the Department of Business and Labor of the Generalitat of Catalonia, Miquel Rodríguez, Manager of Economic Promotion of the Barcelona City Council, and Albert Tort, Secretary of Telecommunications and Digital Transformation of the Generalitat of Catalonia. The interviews have focused on the following topics:

- > Talent in the ICT sector
- > Digitization of the administration
- > The impact of technology on society

Regarding the methodology employed, **this edition incorporates relevant changes compared to previous ones**. On one hand, with the objective of aligning the study with international standards, **we have adopted the definition of the ICT sector agreed upon by the Organization for Economic Cooperation and Development (OECD)**. On the other hand, **this year we have added the analysis of the gross value added (GVA) as a new indicator for the economic analysis of the sector**. This approach allows us to measure more precisely the real wealth generated by the ICT sector. The main results to be highlighted are the following:

● In 2024, ICT sector turnover represented 8.5% of the total GDP

According to estimations by the *Baròmetre*, turnover in the ICT sector reached **27.031 M€ in 2024**. This implies that the sector's turnover represented 8.5% of GDP in 2024.

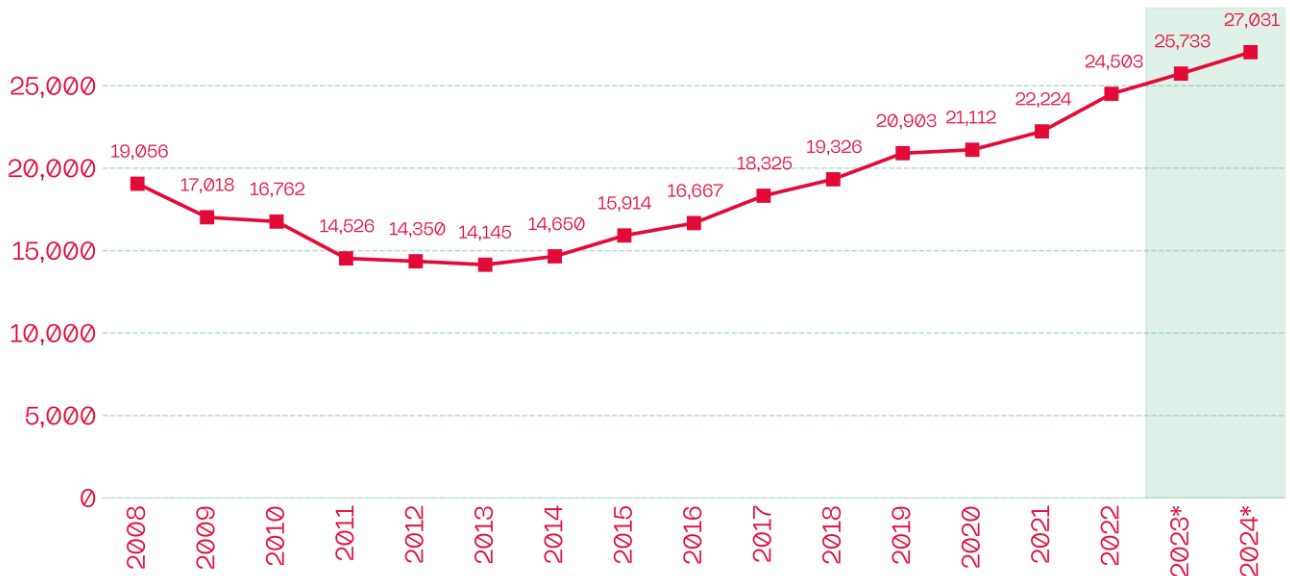


Figure 1. ICT companies' turnover in Catalonia, current prices (Million euros)

Source: IDESCAT [1]

* *Baròmetre* estimates

● ICT Companies expect to continue increasing their revenue during 2025

According to the *Baròmetre*'s survey results, **most companies in the sector anticipate revenue growth**. Notably, 77.8% expect an increase in revenue, whereas only 6.1% anticipate a reduction.

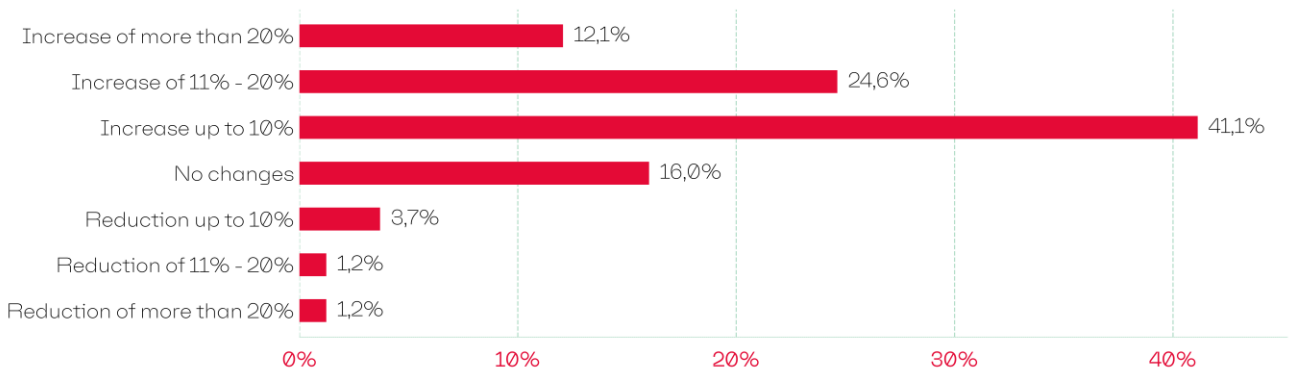


Figure 2. How do you expect your company's revenue in 2025 to compare with 2024 revenue? (% of total companies)

Source: *Baròmetre* 2025 Survey

Base: ICT companies (sample: 406 companies)

This optimistic outlook is partly driven by the sector's increasing commitment to technologies with high value-generation potential. In this context, among the **technological trends already**

generating revenue for ICT companies, artificial intelligence and machine learning (49.0%), cybersecurity solutions (43.8%), and Big Data and data analytics (42.4%) stand out.

Also noteworthy are **technologies related to apps and web development, strategic consulting, custom programming, and business software** such as ERP (Enterprise Resource Planning) and CRM (Customer Relationship Management). These solutions contribute to the modernization of internal processes, the integration of business functions, and the customization of digital tools to meet the specific needs of each company. As such, they are particularly relevant to the **ongoing digital transformation of businesses** that lack an in-house ICT department.

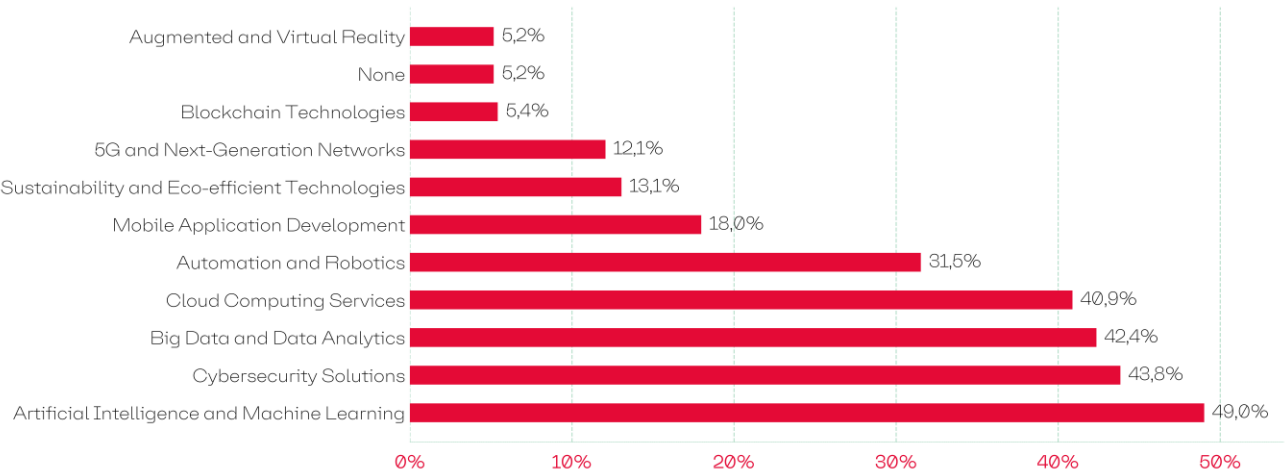


Figure 3. Which of these technological trends is currently generating revenue for your company?
(% of total companies)

Source: Baròmetre 2025 Survey

Base: ICT companies (sample: 406 companies)

► **The ICT sector's GVA has doubled in real terms between 2008 and 2024, reaching €9,955 million. This growth has been much bigger than that of the overall economy and other sectors of similar size**

The gross value added (GVA) of the ICT sector has shown a markedly positive evolution over recent years, demonstrating notable resilience and expansion capacity.

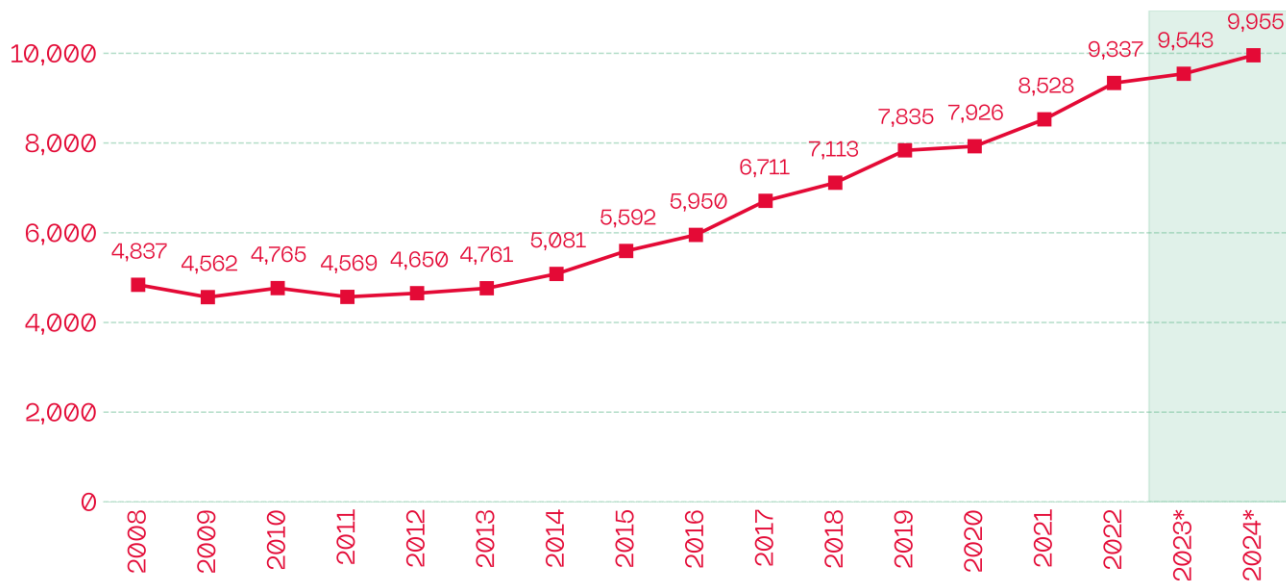


Figure 4. Evolution of ICT companies' GVA in Catalonia, constant prices
(Million euros)

Source: IDESCAT, INE [1] [2] [3]

* Baròmetre estimates

Specifically, **the sector's GVA has doubled in real terms between 2008 and 2024, reaching €9,955 million.** The sector's average annual growth rate during this period has been 4.6%, much higher than that registered by the overall Catalan economy, which was 1% annually.

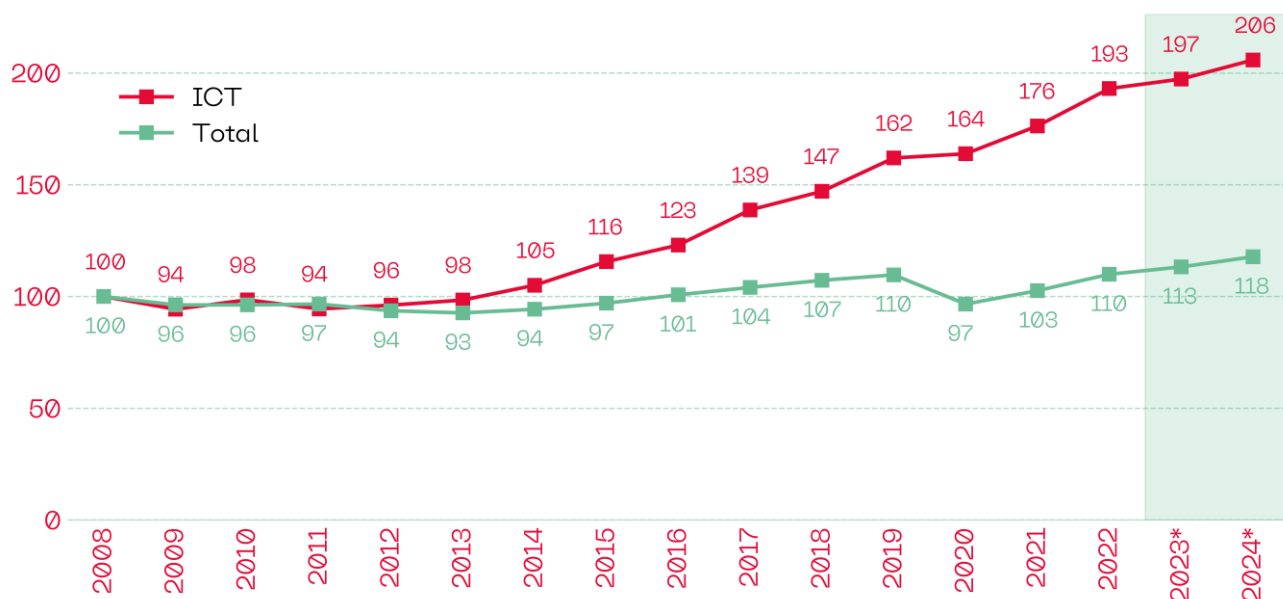


Figure 5. Evolution of the GVA in Catalonia, at constant prices
(Index 2008=100)

Source: IDESCAT, INE [1] [2] [3]

* Baròmetre estimates

This dynamism observed through the GVA evidences the growing importance of the ICT sector within the country's economy. The ICT sector currently **represents 4% of Catalonia's total GVA, more than its automotive and pharmaceutical counterparts.**

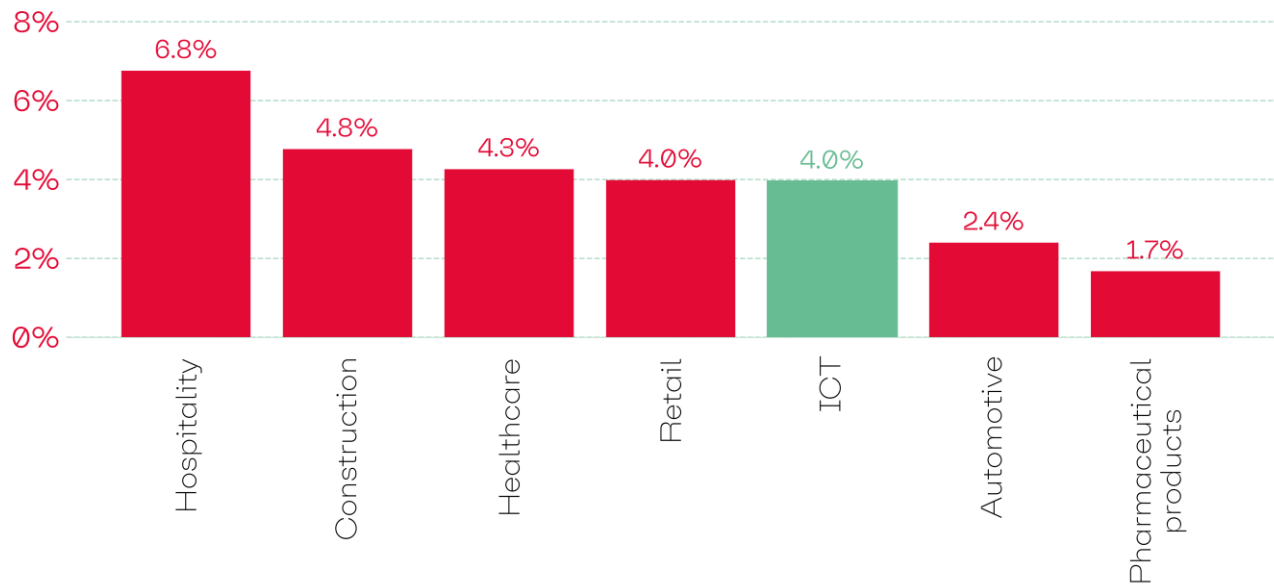


Figure 6. Sector contributions to overall GVA at constant prices, 2022
Source: IDESCAT, INE [1] [2] [3]

Furthermore, the growth experimented by the ICT sector between 2015 and 2022 has been much larger than that of other sectors of similar size, which have grown more slowly and, therefore, have decreased their share over the total.

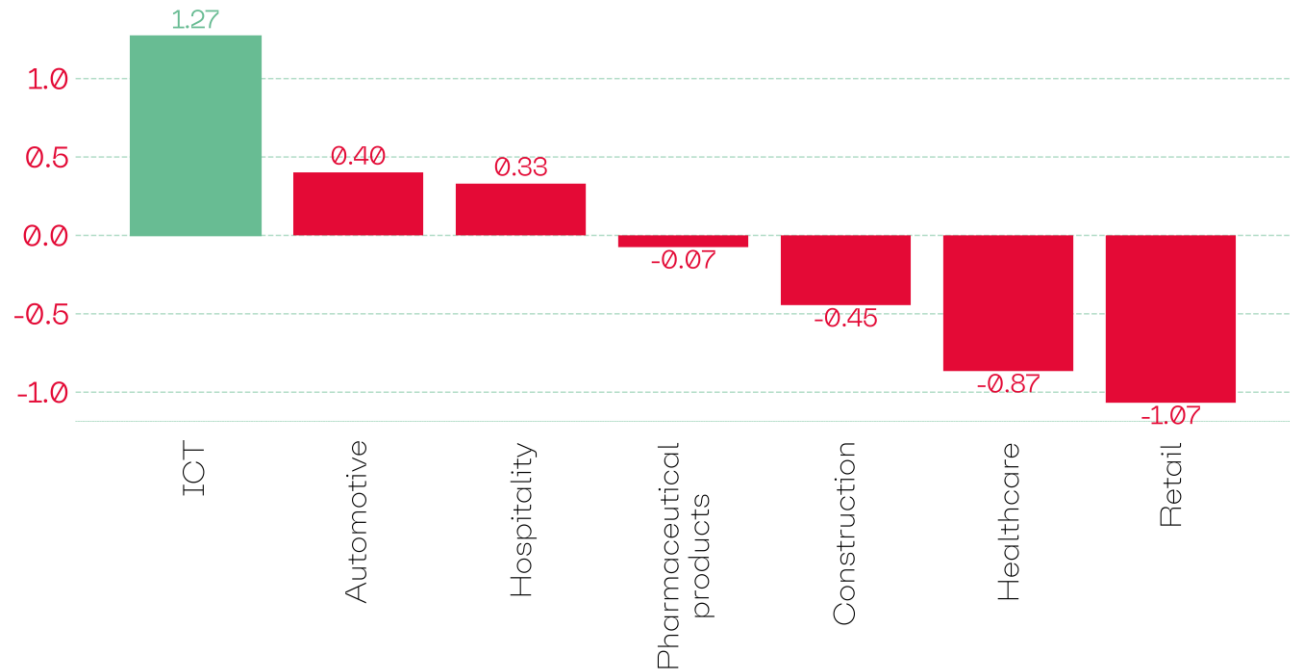


Figure 7. Changes in sector contributions to overall GVA at constant prices, 2015-2022
(In percentage points)
Source: IDESCAT, INE [1] [2] [3]

- The number of ICT companies has increased 72% from 2008 to 2024, compared to the average 2% growth in the overall economy

In 2024, **Catalonia was home to 16,020 ICT companies** —6,873 when excluding self-employed professionals. Despite the sustained upward trend, the most notable development is the sharp increase recorded in the last year, with the addition of 563 companies with employees—the highest annual rise in the historical series.

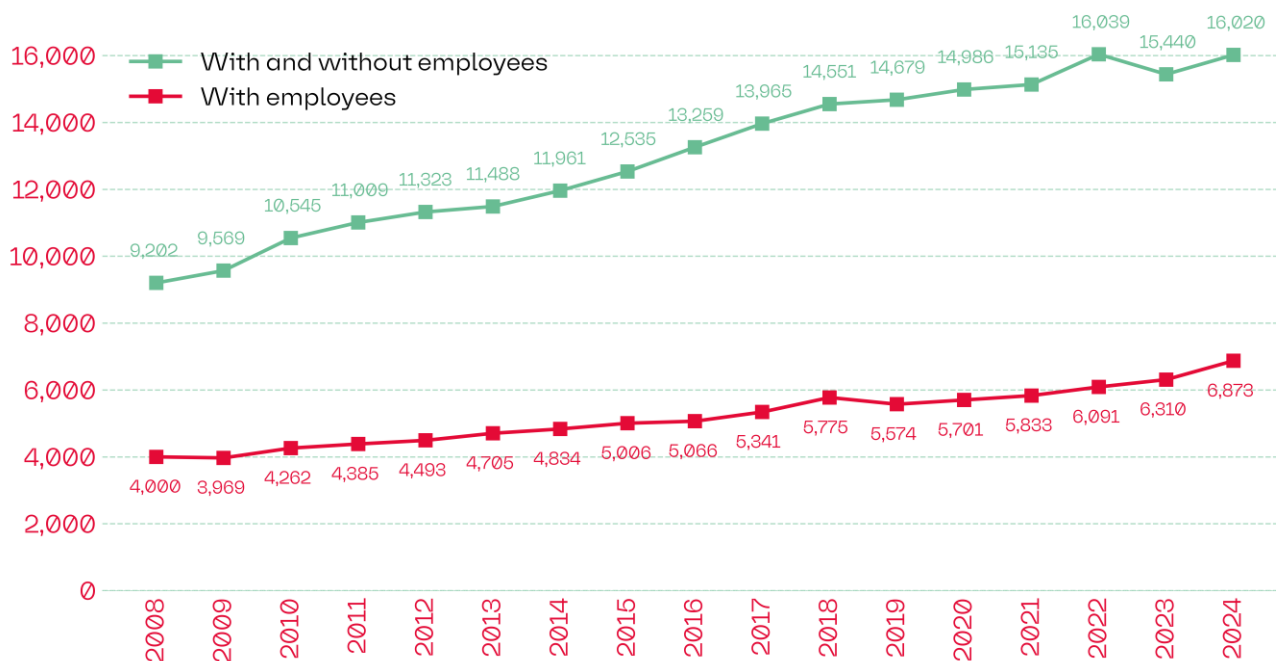


Figure 8. Evolution of the number of ICT companies in Catalonia
Source: INE [4]

The continued appearance of new ICT companies, against a backdrop of overall business creation stagnation, has significantly increased the sector's share over total Catalan businesses, from **1.3% in 2008 to 2.4% in 2024**.

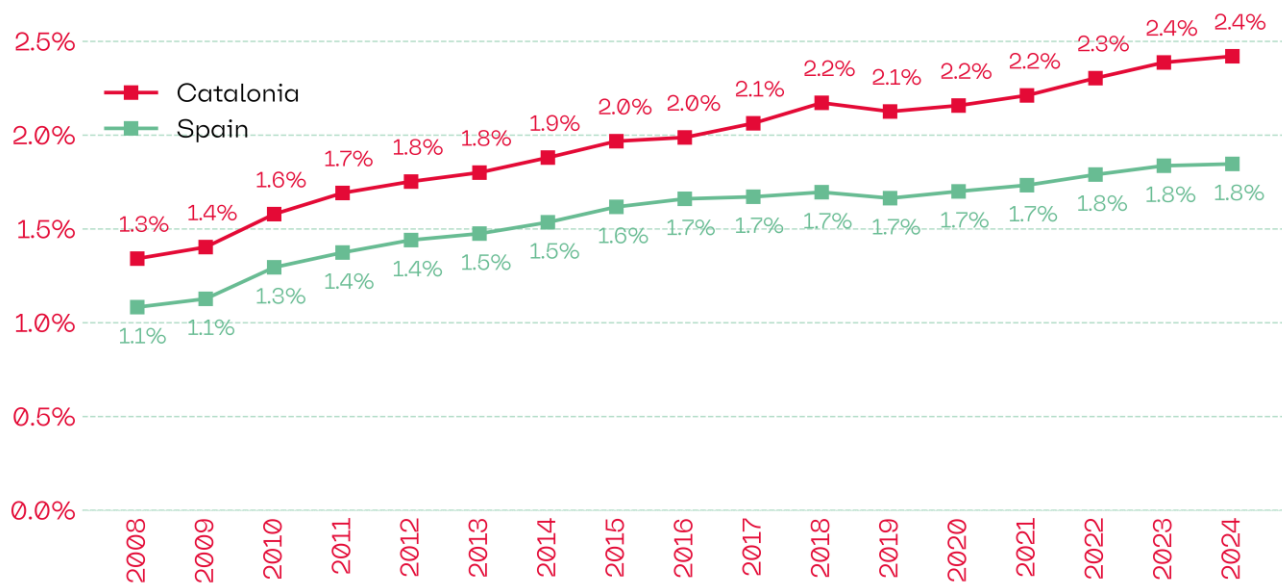


Figure 9. Evolution of the share of ICT companies
(Companies with employees, in percentage)
Source: INE [4]

In terms of company size, most ICT firms in both Catalonia and Spain are microenterprises (fewer than 10 employees), accounting for approximately 80% of the total in both territories. Catalonia shows a slightly higher proportion of technology SMEs than Spain (19.9% versus 18.8%, respectively), while Spain has a greater presence of large companies.

Notably, in 2024, Spain has 12 ICT companies with more than 5,000 employees—2 in telecommunications and 10 in programming, consulting, and IT services—11 of which are located in Madrid. Catalonia, by contrast, has none. This strong prevalence of small-sized enterprises remains one of the sectors' main structural challenges.

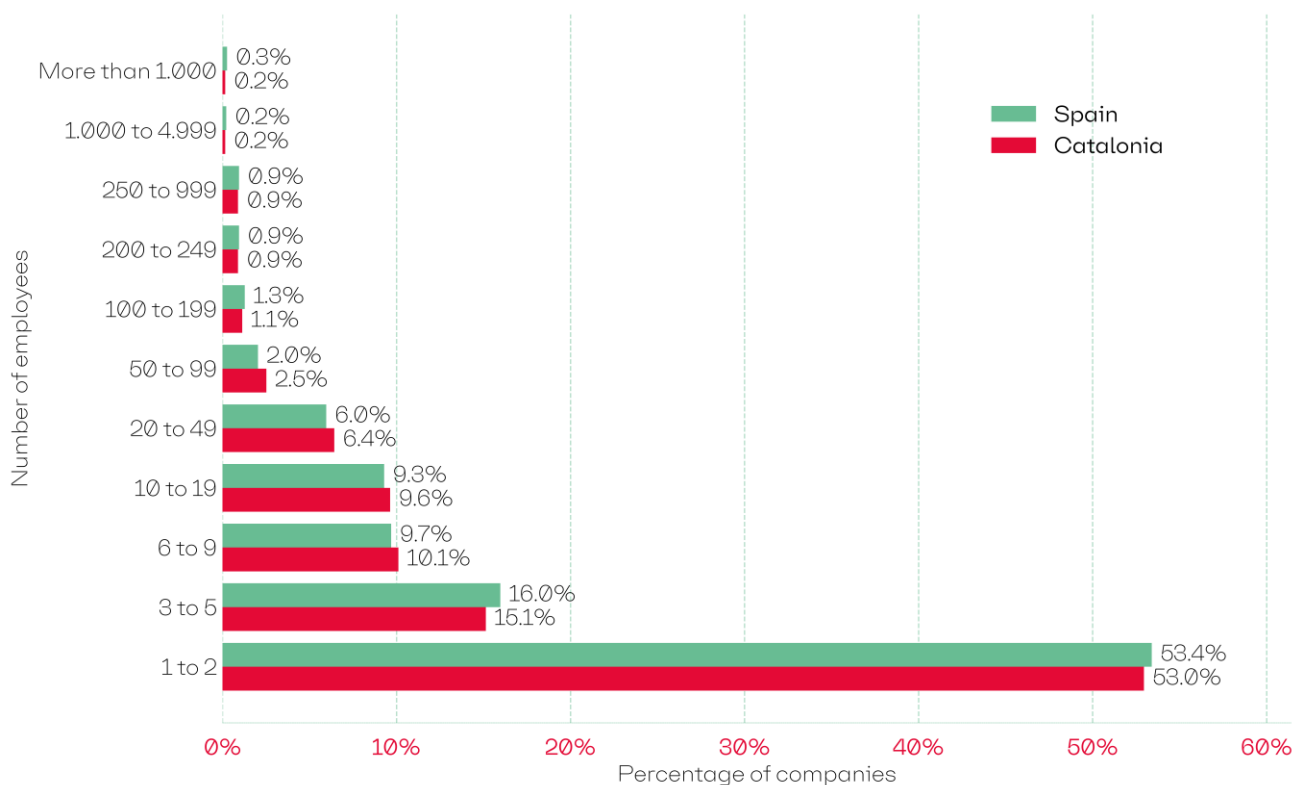


Figure 10. Distribution of ICT companies by number of employees, 2024
(In percentage)
Source: INE [4]

► **The ICT sector represents 3.7% of employed persons in Catalonia, a proportion higher than the European average**

Several factors have contributed to this robust performance: the region's high quality of life and international appeal (particularly Barcelona's), the presence of universities that produce highly qualified talent, and the emergence of a dynamic entrepreneurial ecosystem. These elements have significantly increased the share of ICT employment over the overall labor market.

As a result, in 2022—the latest year for which European data is available—**Catalonia ranked among the top regions in Europe for ICT employment**, trailing only Denmark (4.0%) and the Netherlands (3.9%), **and exceeding the EU average** of 3.5%.

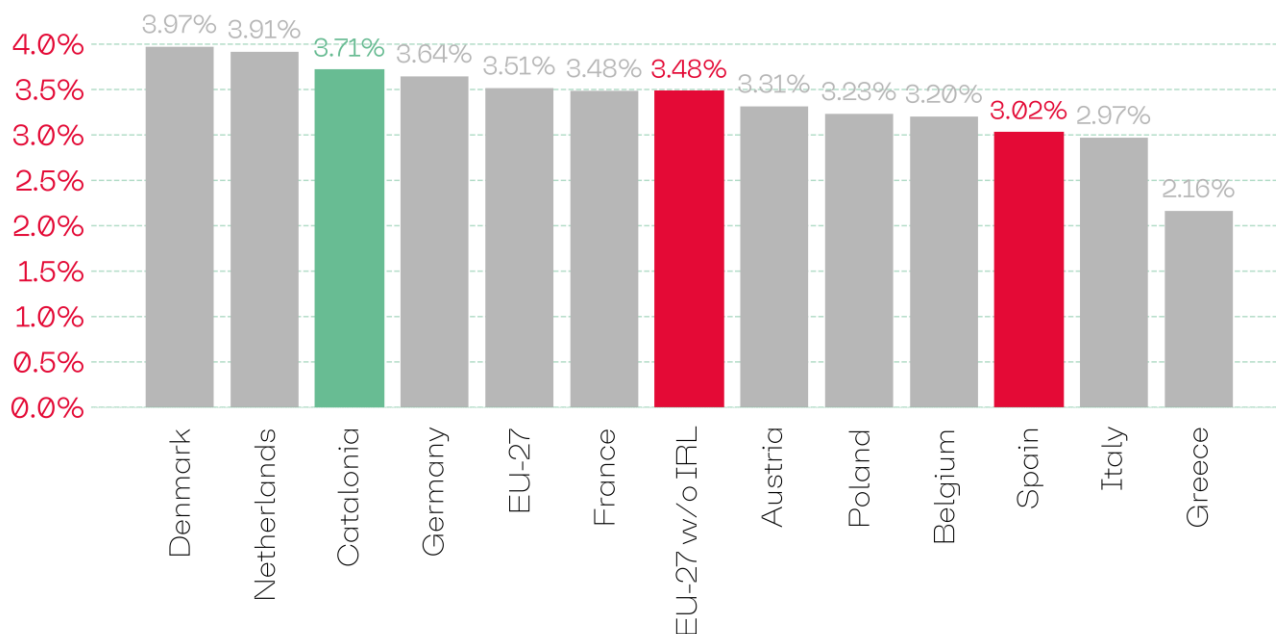


Figure 11. Ratio of ICT workers relative to total workers, 2022
(In percentage)

Source: IDESCAT, INE, EUROSTAT [5] [6] [7] [8] [9]

● **The number of employed persons has evolved very positively, reaching 168,300 workers, despite a persistent talent gap**

Specifically, the number of people employed in the ICT sector has experienced very positive growth, reaching 168,300 workers in the first quarter of 2025.

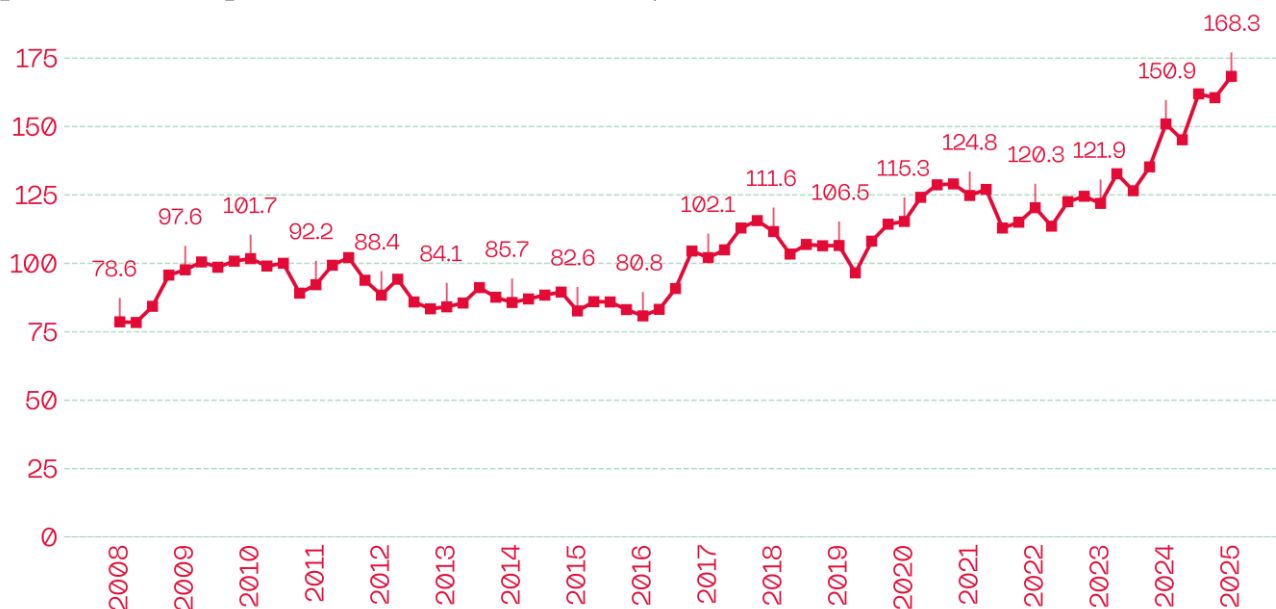


Figure 12. Evolution of the number of employed persons in the ICT sector
(Thousands of employees)

Source: IDESCAT [10]

Between 2008 and 2024, the ICT sector's average annual employment growth rate was 3.6%, significantly outpacing the overall economy's growth rate of just 0.1%. This robust employment increase underscores the sector's labor market appeal and its ability to generate high-quality jobs —characterized by compensation levels well above the average for the broader labor market.

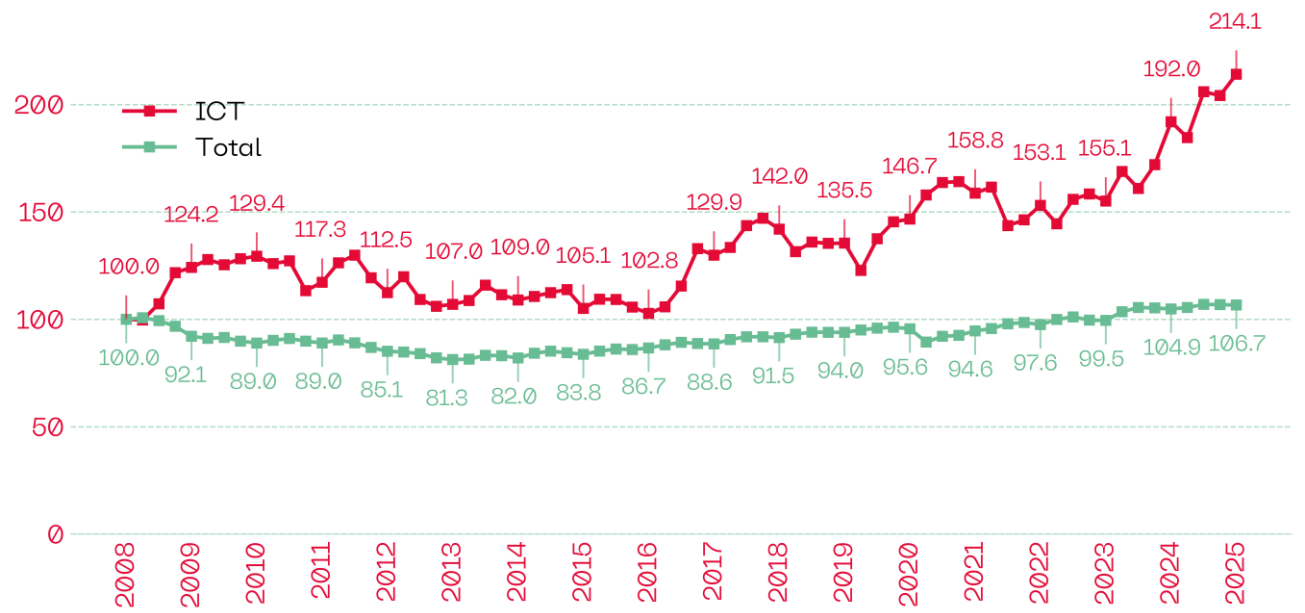


Figure 13. Evolution of the number of employed persons (Index 2008=100)
Source: IDESCAT [10]

According to data collected through the 2025 *Baròmetre* survey, **61.6% of companies in the sector expect the growth trend to continue during 2025**, a percentage notably higher than that registered by companies in other sectors.

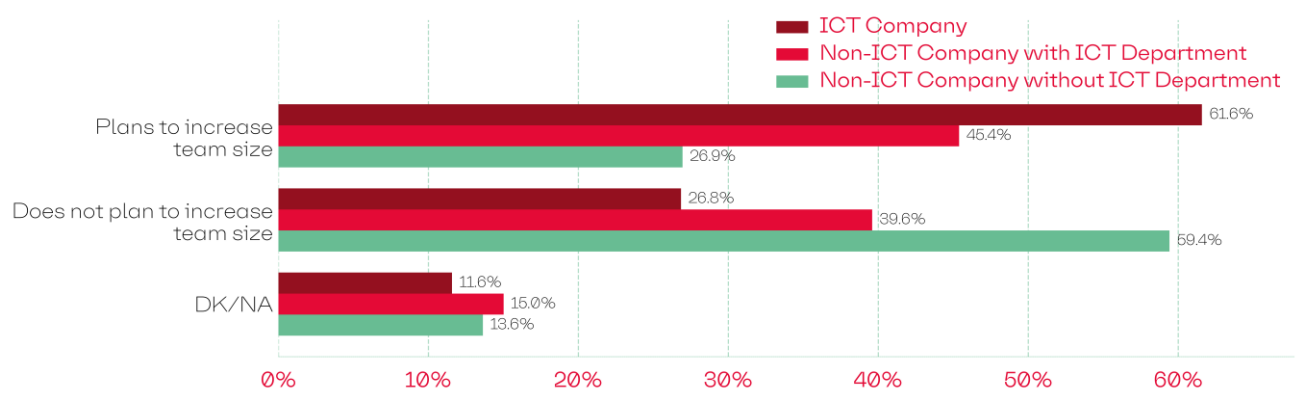


Figure 14. Is it expected that the company's team will increase this year 2025? (% of total companies)
Source: *Baròmetre* 2025 Survey
Sample: 1,007 companies

Companies in the sector express the **need to hire specialized workers, specifically in artificial intelligence** (52.7%), **cybersecurity** (39.7%), and **cloud computing** (27.3%).

Other areas of expertise highlighted by the surveyed companies include consulting, ICT strategy, business management and marketing, specific software developers and engineers specialized in industrial technologies and robotics, and infrastructure.

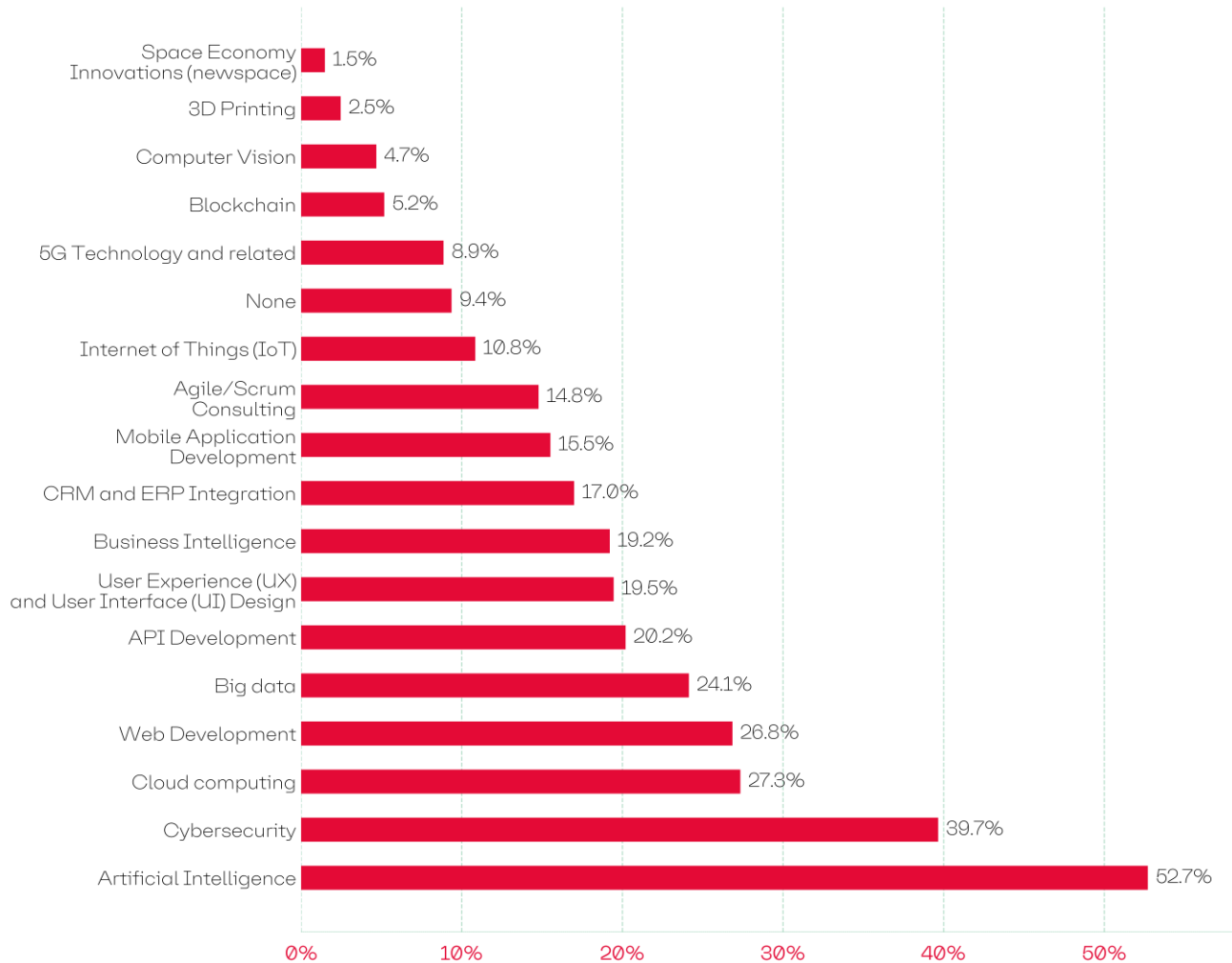


Figure 15. What are the main areas of expertise that the company where you work needs to hire?
(Multiple choice)
(% of total companies)

Source: *Baròmetre 2025* Survey Base: ICT companies (sample: 406 companies)

► The number of unfilled vacancies in the ICT sector remains above the economy's average

The positive evolution of employment in the ICT sector in Catalonia has been accompanied by a growing imbalance between labor supply and demand. **The sector continues to accumulate unfilled vacancies well above the economy's average**, a fact that highlights the need to adapt academic training to the changing needs of the market. Specifically, in the fourth quarter of 2024, 1,811 ICT positions remained unfilled.

This trend is observed through the ratio of unfilled vacancies per thousand employed persons, which shows how the hiring needs of technological companies consistently exceed those of the overall economy.

The demand for workers experienced a decline during the first half of 2020 due to the pandemic, followed by rapid recovery between 2021 and 2022, and a period of stabilization from 2023 onwards. This stabilization is mainly explained by the acceleration in the incorporation of workers (denominator), although a slight decrease in the number of vacancies has also been observed (numerator).

Despite this moderation, **the persistent talent gap remains one of the main challenges for the sustainability of the sector's growth** in the medium and long term.

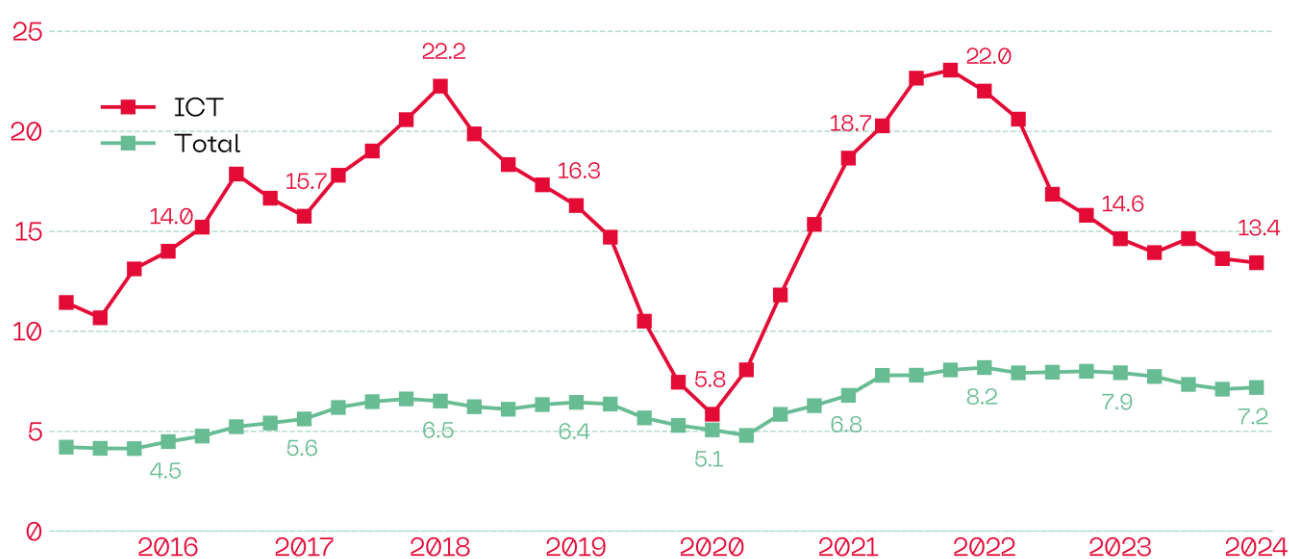


Figure 16. Evolution of the number of vacancies per 1,000 employed in the sector
4-quarter moving average
Source: IDESCAT [11] [12] [10] [13]

The high proportion of unfilled vacancies is partly explained because **the educational system does not yet generate a sufficient volume of graduates in technology-related fields to satisfy labor market needs.**

Catalan universities **have not increased the number of available slots in degrees linked to ICT fields, despite the sustained increase in demand for these studies.** In fact, applications have exceeded enrollment capacity from 2020 onwards, evidencing a persistent mismatch in available educational offerings. Specifically, in 2024 there were 3,173 slots for 3,564 applications.

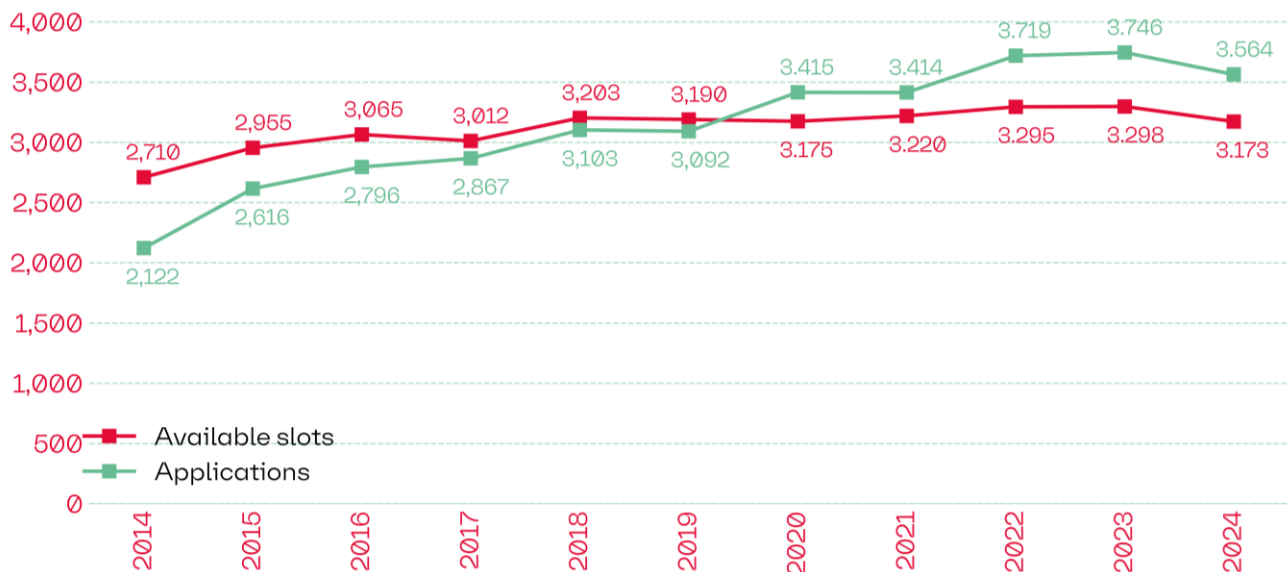


Figure 17. Evolution of supply and demand for ICT degrees
Source: Department of Universities [14]

► Catalonia consolidates its position as an international digital hub

Despite the identified challenges, the performance of the GVA and the increase in employment are clear indicators of an expanding sector. That is why **Catalonia has already become an attraction pole for international technological investment, and it is also one of the preferred destinations for digital nomads.**

Additionally, Catalonia is home to advanced digital infrastructure that should help maintain the ICT sector on the upward trajectory it is on, as well as **increase synergies with other expanding high-value-added sectors, such as biotechnology and the NewSpace sector.**

► The ICT sector has a positive cross-cutting effect in terms of productivity, and it is one of Catalonia's main drivers of economic growth

On the other hand, we must consider the positive effects of the sector as **a provider of digital solutions.** ICT companies have a particularly relevant impact, since **the incorporation of technologies in other sectors has had a positive cross-cutting effect,** whether ICT professionals are employed in-house or engaged as third-party service providers. This process has allowed, in many cases, **the automation of the repetitive tasks, reducing the operational burden on workers and thus contributing to a generalized increase in productivity.**

Overall, despite structural limitations and pending challenges, **the ICT sector consolidates as one of the main drivers of Catalonia's economic growth.** The sector's future is promising, both at the European scale, where it can consolidate as an international technological hub, and at the regional scale, where it can continue exercising its role as a transformer of the economy.

The *Baròmetre del sector tecnològic i el seu ecosistema a Catalunya* in 2025, is a product of:

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