

## 2. EXECUTIVE SUMMARY

### I. General Context

The Cercle Tecnològic has once again returned to lead the most comprehensive study of the technological ecosystem in Catalonia and has done so with more representation than ever

The Cercle Tecnològic de Catalunya presents the 13th edition of the baseline study of the ecosystem in the country: the Barometer of the technological sector in Catalonia. The 2021 edition has taken place in the context of a new reality that the COVID19 pandemic brought about and has allowed us to measure how the ecosystem has behaved, allowing us to analyze its role as an economic and social transforming engine as well as the main takeaways for the future

The Barometer of the technology sector in Catalonia brings together the perceptions and assessments of a representative sample of the Catalan business network. This year's edition was made up of 1,104 companies 493 of which were supply companies and 611 demand companies within the technology ecosystem.

Once again, we can say that this is the most relevant and representative instrument of the country's supply and demand ecosystem. The opinions and assessments gathered are a valuable tool in understanding the needs and expectations of the business community and help guide decisions to further build a better present and future.

"The Barometer is the tool that the technology sector uses to monitor its status and as a lever to drive initiatives and projects that strengthen it and maximize its transformative impact on the economy and society."

JOAN RAMON BARRERA  
President  
The Cercle Tecnològic

## II. Technological ecosystem as an economic and social engine

The technological ecosystem continues to grow and gain economic and social importance.

Once again, it is important to note that all the available indicators show us a technological ecosystem with an increasingly fundamental position in the country's economy.

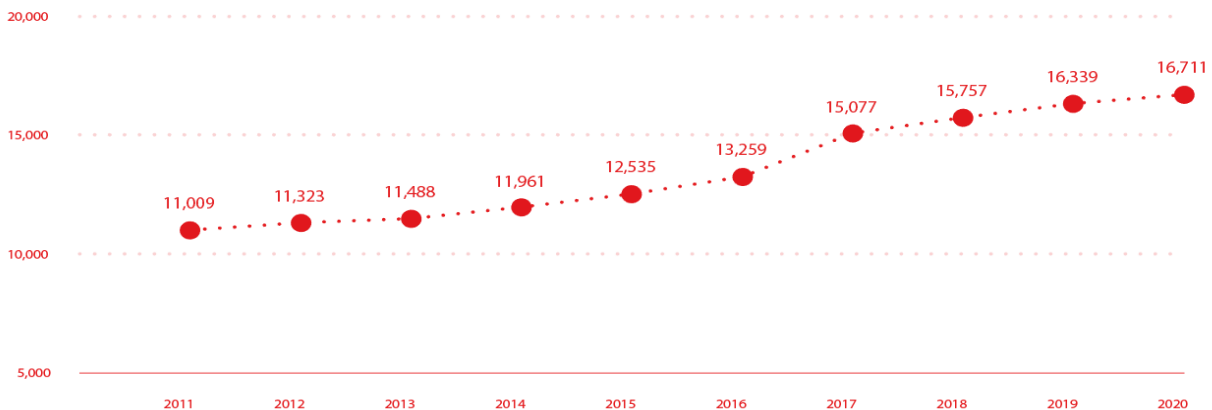
"The ICT sector is strengthening its presence as a clear generator of opportunities. Not only in terms of employment and business creation but also as a driving force for the social change we are experiencing in this new digital revolution."

JORDI PUIGNERÓ

Vice president and Minister of Digital and Territorial Policies  
Government of the Generalitat de Catalunya

The latest published data shows that the sector has been able to create new companies, reaching 16,711 companies in 2020. The trend of recent years allows us to project that this year, 2021, more than 17,000 ICT companies in Catalonia will be created.

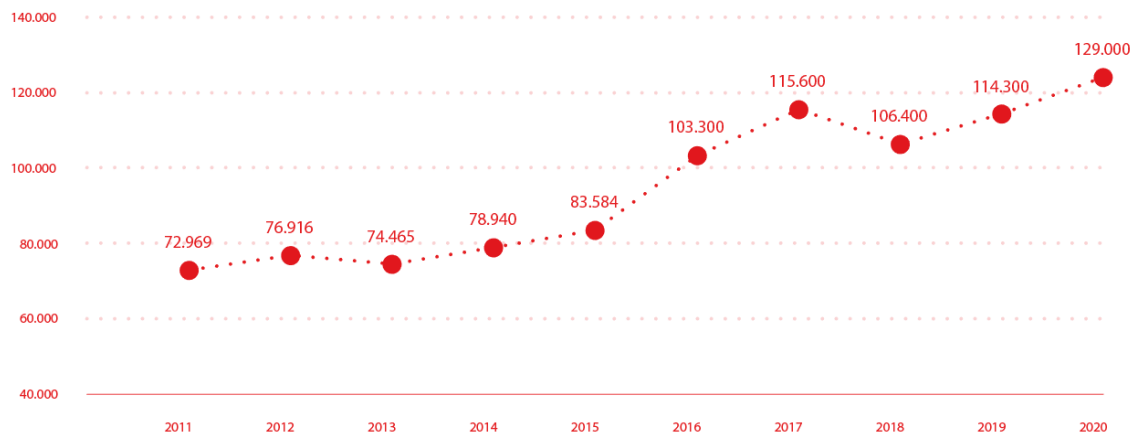
Evolution of the number of ICT companies in Catalonia



Source: IDESCAT based on data from DIRCE/INE data from 2011 to 2016 and Secretariat of Digital Policies according to data from Idescat and INE data from 2017, 2018 and 2019

With regard to the evolution of the number of employees, in 2020 there were 16,771 workers, continuing the trend of constant growth of recent years. However, the most recent information available, corresponding to the Labor Force Survey (LFS) for the third quarter of 2021, shows that there are 114,000 employees in the ICT sector in Catalonia. This figure, lower than the previous year, may reflect a step back, after the growth caused by the pandemic and not a change in the upward trend of recent years.

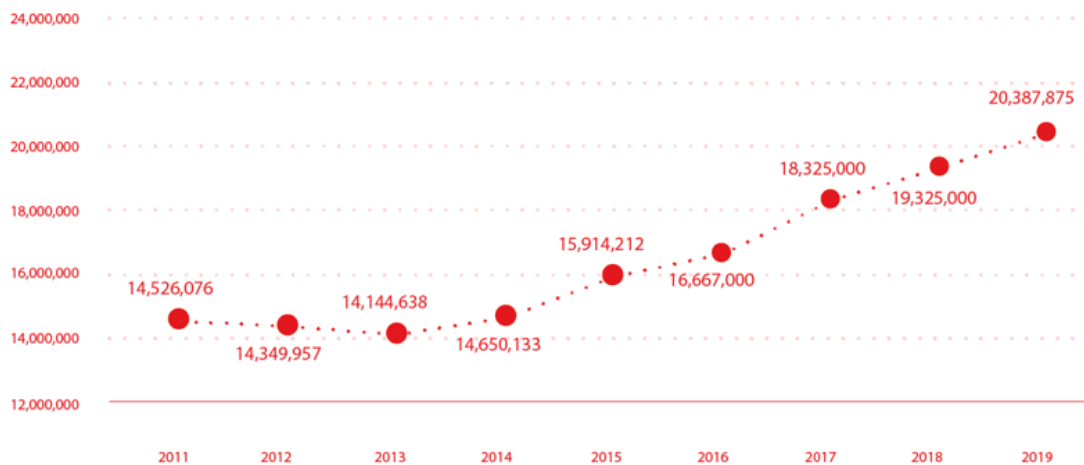
Evolution of the number of workers in ICT in Catalonia



Source: IDESCAT data from 2011 to 2016 and DGI-ACCIÓ data from 2017 to 2020

The sector had a total revenue of 20,387.8 billion euros in 2019, following the upward trend of recent years allows us to project that the sector's revenue is currently around 23 billion euros and makes up an increasingly important weight in the country's GDP.

Revenue of ICT companies in Catalonia



Source: Idescat and INE the data from 2017 to 2020. 2021 projected.

One of the most interesting pieces of knowledge we get with the barometer refers to the business climate. On the one hand, it allows us to contrast and assess the sector's business results, and on the other hand, it allows us to make predictions about its immediate future.

Barometer data confirm that expectations for 2019 have been met, and even with the brutal impact of the pandemic, companies in the sector have performed much better than the vast majority of sectors. 65.10% of Catalan ICT companies have closed the year 2020 equal to or better than the previous year while 24.3% of companies have done so with revenue growth of more than 5%.

How was the annual revenue of the company where you work?  
for the year 2020 compared to 2019:



Source 2021:survey of 493 companies

### III. Technological ecosystem as a transforming element

The technological ecosystem is becoming the transforming element that helps the rest of the country's business sectors meet the challenges of a new and complex reality.

ICTs are undoubtedly a key element, bringing competitiveness and resilience to the country's business network. More and more, companies in all industries are deciding to set up an internal ICT department. These departments were created in the beginning to respond to specific technological needs, but increasingly their function is linked to the objectives and strategic decisions of the company.

The data obtained in this edition of the Barometer allows us to show once again the differences in the forecast of revenue depending on whether or not companies have an ICT department. Those who do have this department, show significantly more favorable forecasts than those who do not.

How was the annual revenue of the company where you work for the year 2020 compared to 2019:



2020 revenue forecast for the previous year:



How was the closing of the annual revenue of the company where you work for the year 2020 with respect to the year 2019:



“It has become clear to everyone that digitalization can help us transform our organizations, from large public admiration to small businesses. The technology sector is up to it.”

LAIA BONET  
Third Deputy Mayor of the 2030 agenda and digital transition  
Ajuntament de Barcelona

"The ICT sector is a leading, innovative, future-oriented sector and its performance during the pandemic was extraordinary"

MANEL BRUFAU  
Indra  
Director-General of Catalonia

"It has been fundamental; the ICT sector has held our society together."

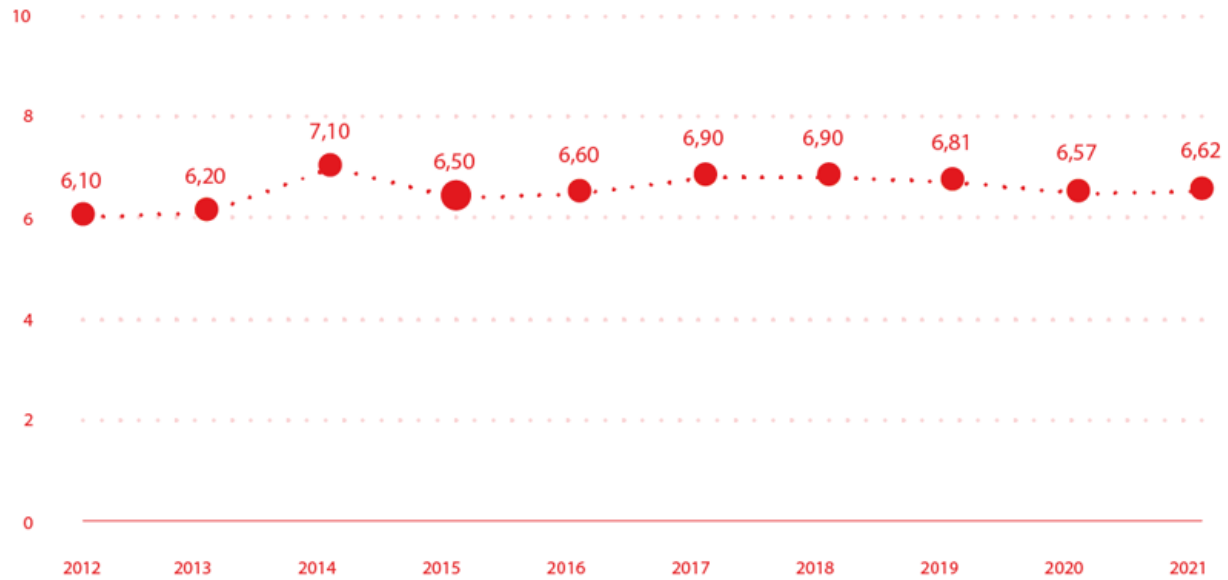
ANDREU VILAMITJANA  
Director General  
CISCO Spain

"Technology has been a facilitator or accelerator of issues that needed to be transformed or updated."

OSMAR POLO  
Director General  
T-Systems Iberia

Although the data and opinions collected are strong concerning the positive and transformative impact of the ICT sector, the assessment of demand of the business network in relation to its degree of satisfaction in this regard does not fully reflect this reality.

Do you think that the Catalan technology sector is fully competitive and meets the needs of demand? Use the scale from 0 to 10 - where 0 is "Totally Negative" and 10 is "Totally Positive".



Source 2021: survey of 611 companies

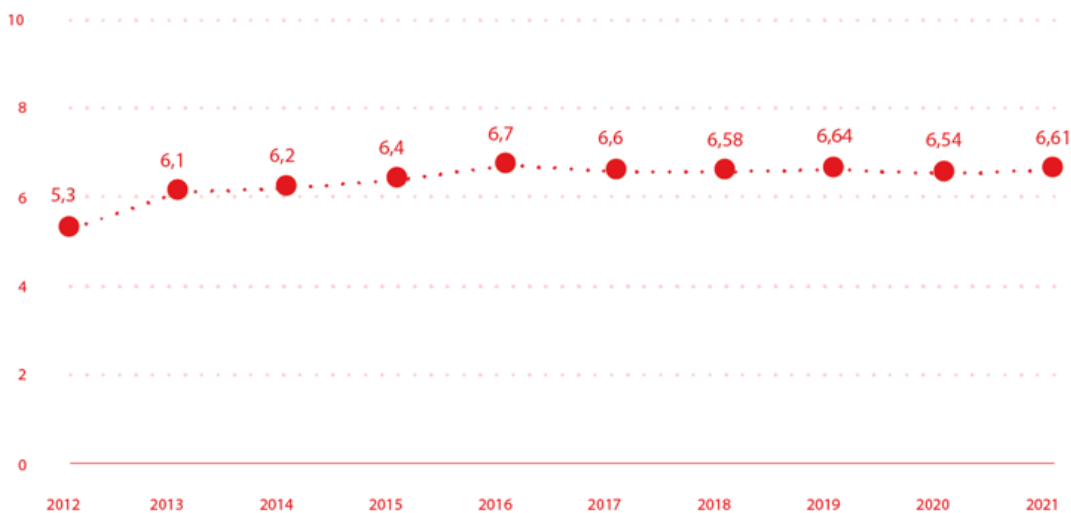
It is, therefore, necessary to promote actions that make visible and tangible the transversal and transformative power of technology for all sectors. Only then will we be able to unleash the full potential of the ecosystem.

## The Urgency to strengthen the ecosystem

The Cercle Tecnològic understands the challenges we face and offers itself as a relevant actor to work alongside all actors on the path to a fairer, more sustainable, and more prosperous future.

The Catalan ICT business network is valued at 6.61 points out of 10, maintaining the levels achieved in recent years. Again, this year, it is universally accepted the value and the need to promote structural improvements that make it possible to make a qualitative leap through the sector.

General preception on the situation of the Catalan ICT sector - Evolution of satisfaction in recent years.



However, what has changed is certainly the urgency with which these structural changes need to be addressed. Beyond the management of the health emergency, we urgently need to take the path of growth, adapting to the new economic and business reality is the current priority of our country.

In addition to the challenges already known such as the lack of talent or the lack of women in technical and responsible positions, there is pressure to take advantage of the important investments and public aid, namely in EU funds, to support companies in the digital and environmental transition. However, we run the risk of failing to bring these funds effectively into the industrial and institutional network. The complexity of digital transformation demands new skills. This transformation requires components, which are hitherto non-existent and demands new technical, relational (ecosystem), and business skills that facilitate the realization and management of transformation projects.

The Cercle Tecnològic de Catalunya with its position in the ecosystem, connecting the technological supply with business and public demand, serves as a liaison between the different parties and brings about the achievement of a fairer, more sustainable and more prosperous country.