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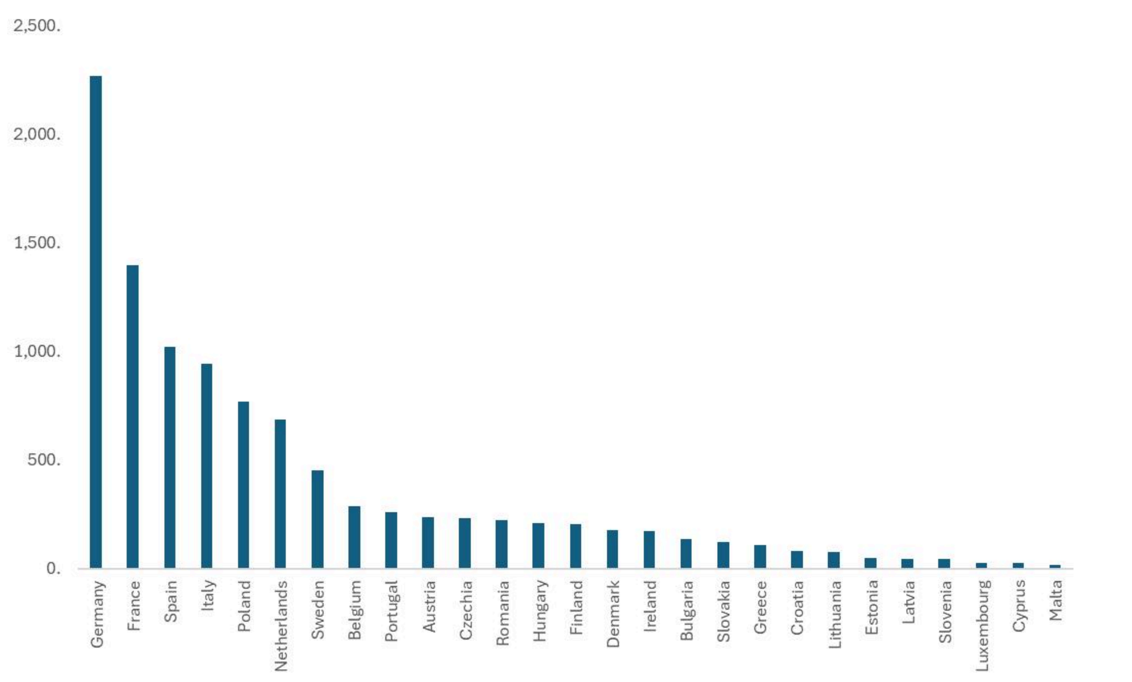
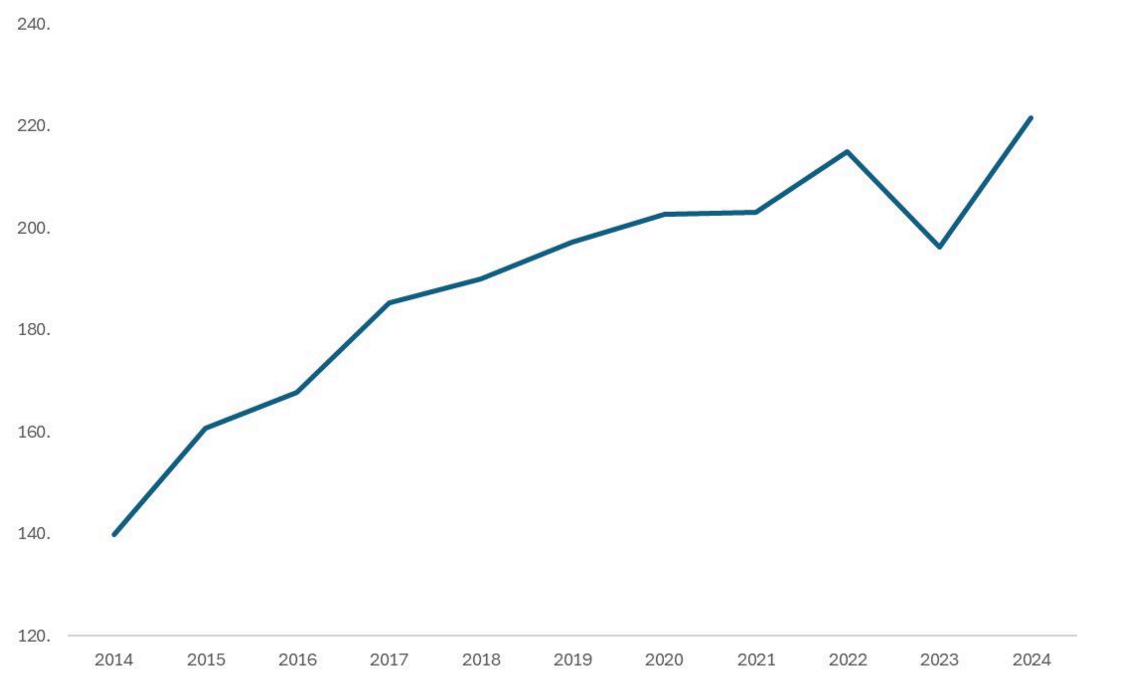


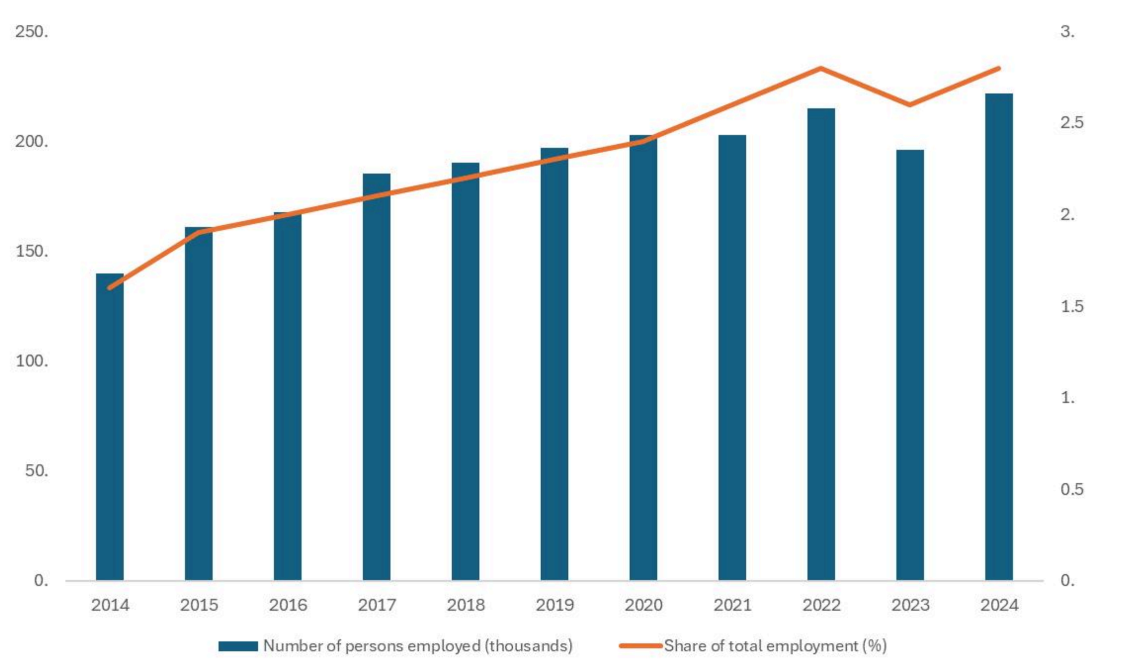
ICT Professionals - Nr. of persons employed (Thousands)

Source: Eurostat



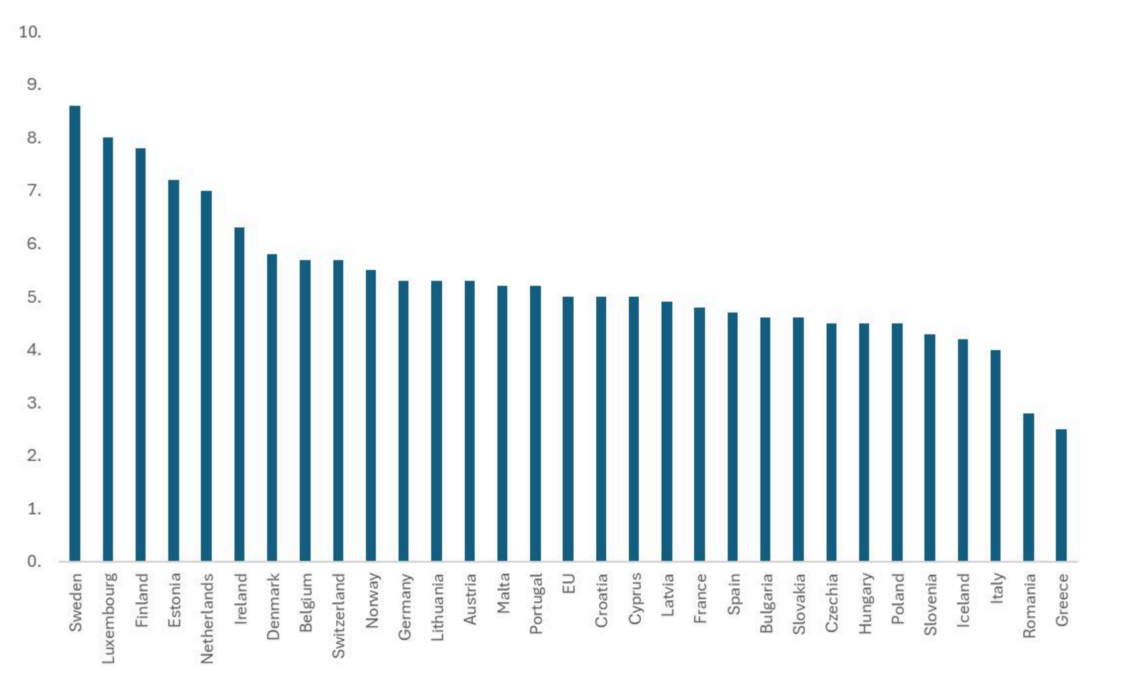
Romania - ICT professionals employed (Thousands)

Source: Eurostat



ICT Professionals - Romania

Source: Eurostat



ICT Professionals - Percentage of total employment 2024

Source: Eurostat

IT EMPLOYMENT IN ROMANIA. PROFILE, PROGRESS AND TRENDS

In recent years, the role of Information and Communication Technology (ICT) professionals has become increasingly vital in supporting digital transformation. Romania, while making notable progress, still lags behind some of its EU counterparts in several key metrics. In what follows, we explore the employment landscape of IT specialists in Romania in 2024, contextualized within the broader European Union framework across multiple dimensions.

Number of professionals

The number of ICT professionals in Romania has grown considerably from 2014 to 2024, reflecting both domestic and European trends. From 139,900 employees in 2014 to 221,600 in 2024, Romania recorded an increase of 58.39%. The EU as a whole saw a 62.21% increase in ICT employment over the past decade, and Romania has followed this upward trajectory, though from a smaller base. In absolute numbers, in 2024, 10.27 million ICT professionals were recorded within the EU, Germany leading with approximately 2.26 million ICT specialists, accounting for 22% of the EU total. France (1.39 million) and Spain (1.02 million) follow. Romania's total is significantly lower (221.600), but its steady rise indicates sustained investment and development in digital skills and employment.

Despite the rising headcount, Romania's relative share of ICT specialists in total employment remains below the EU average. This indicates that while absolute numbers are growing, the digital sector is expanding more slowly than the broader labor market. In 2024, Romania reported that ICT specialists made up 2.8% of its total workforce (221,600 employees). This remains significantly below the European Union average of 5.0%, underscoring Romania's developing ICT sector and the ongoing need for digital workforce expansion.

At the top end of the spectrum is Sweden (8.6%), followed by Luxembourg (8.0%), and Finland (7.8%) with the highest shares of ICT specialists in employment—nearly tripling Romania's figure. Conversely, Greece (2.5%) and Romania (2.8%) are among the EU countries with the lowest proportions, suggesting ample room for improvement in integrating digital professionals into the economy. Although ICT employment grows in absolute terms, it constitutes a smaller portion of the total employment than in more digitally mature economies. Compared to the EU average, fewer Romanian industries may be incorporating ICT roles into their operations at scale. This restricts cross-sectoral digital integration, a key driver of ICT employment growth in other EU countries.

Between 2014 and 2024, the number of ICT specialists employed in the EU increased by 62.2%, a growth rate nearly six times higher than the 10.6% increase observed in total employment during the same period. This significant rise underscores the expanding role of ICT in modern economies. The share of ICT specialists in total employment rose from 3.4% in 2014 to 5.0% in 2024. Notably, the period between 2019 and 2021 saw accelerated growth rates of 7.1% and 6.0%, respectively. Although the growth rate slightly decelerated in subsequent years, it remained strong, with increases of 4.3% between 2022 and 2023 and 4.8% between 2023 and 2024.

Resilience During Economic Challenges

ICT employment demonstrated resilience during economic downturns, including the global financial crisis and the COVID-19 pandemic. Unlike many other sectors, the ICT field continued to expand, highlighting its critical role in supporting remote work, digital services, and technological infrastructure during challenging times.

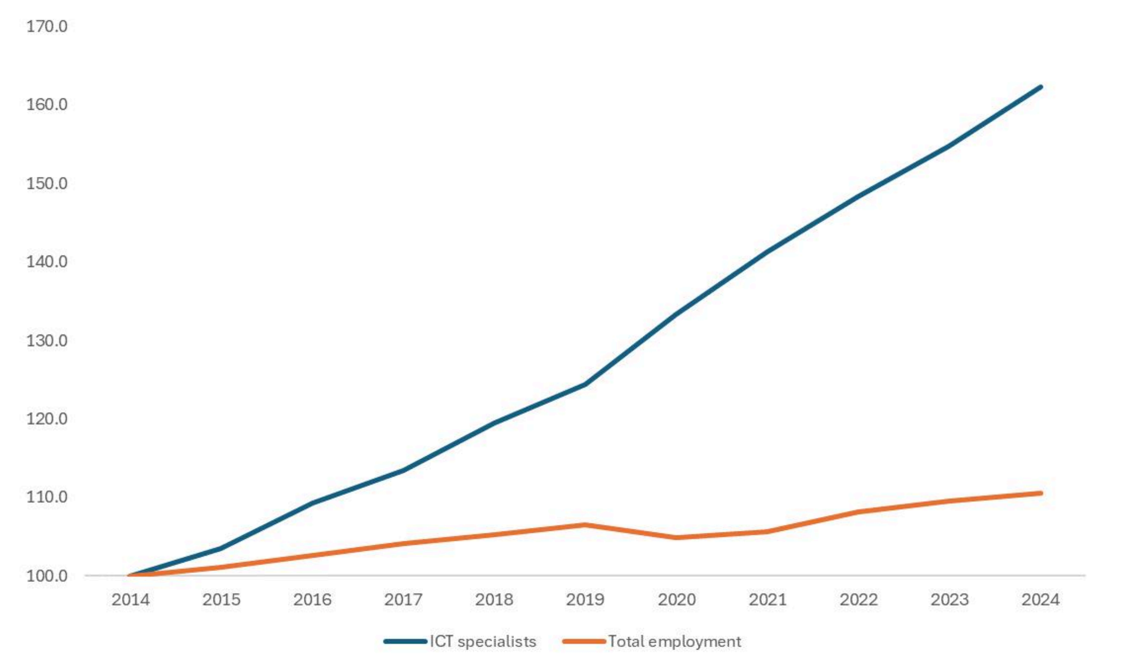
Romania has experienced a clear increase in demand for ICT specialists, driven by national digitalization initiatives and the EU's digital agenda. However, this demand is accompanied by systemic challenges. Chief among them is the "brain drain" phenomenon, where talented professionals seek better opportunities abroad, particularly in high-paying Western European countries.

Ioan Nistor

Chief Economist

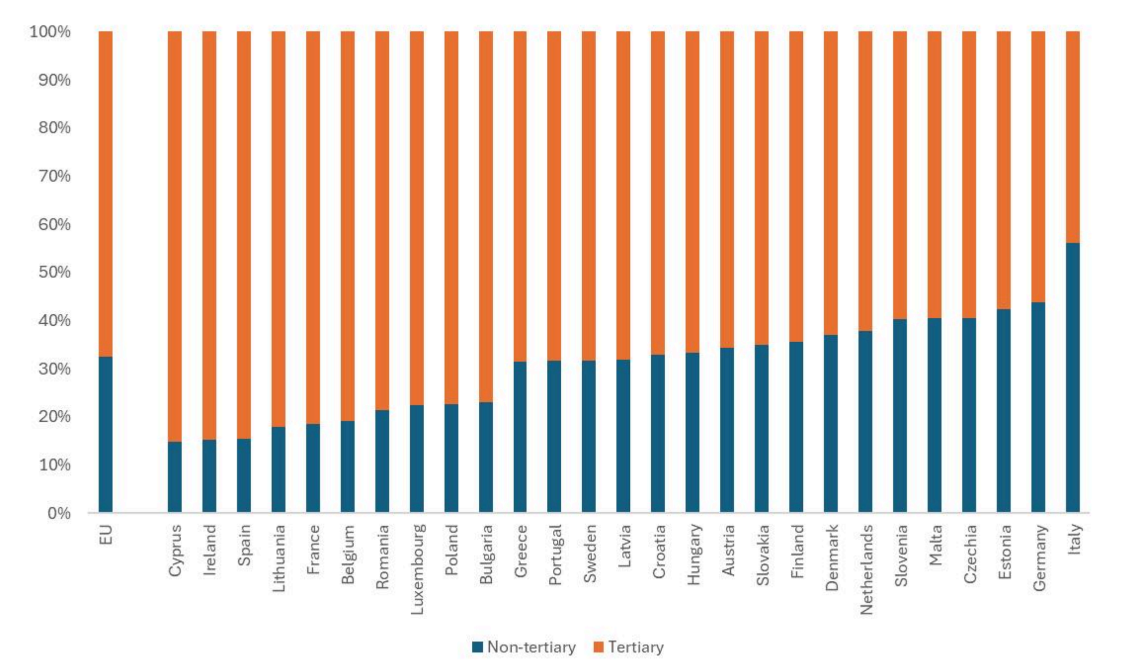
Romania's ICT workforce grew by over 58% in the last decade. A high share of specialist hold tertiary degrees. ICT Professionals are only 2.8% of total workforce. Talent drain limits domestic growth.

CONTACT



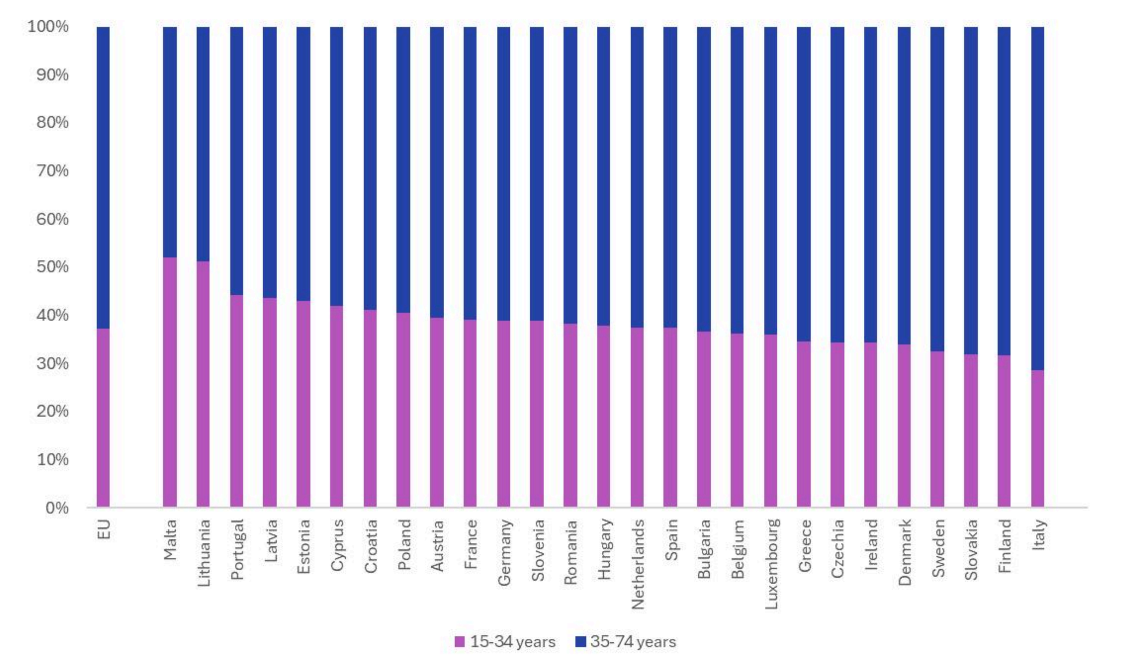
EU, Index of employed ICT professionals and total employment

Source: Eurostat



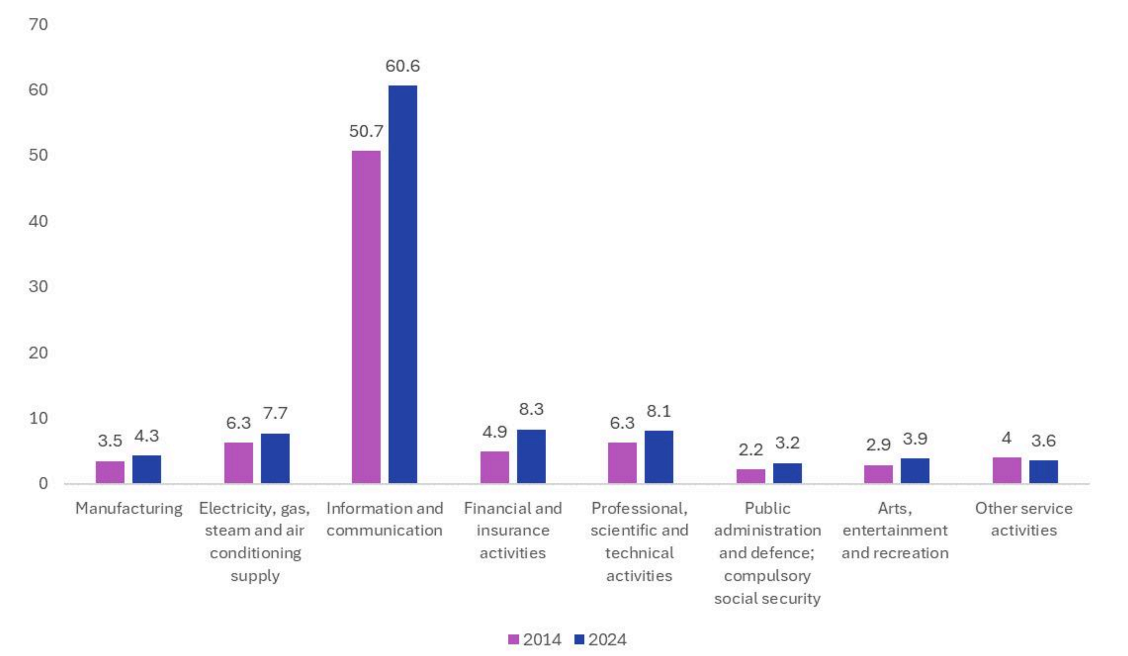
ICT professionals by level of education

Source: Eurostat



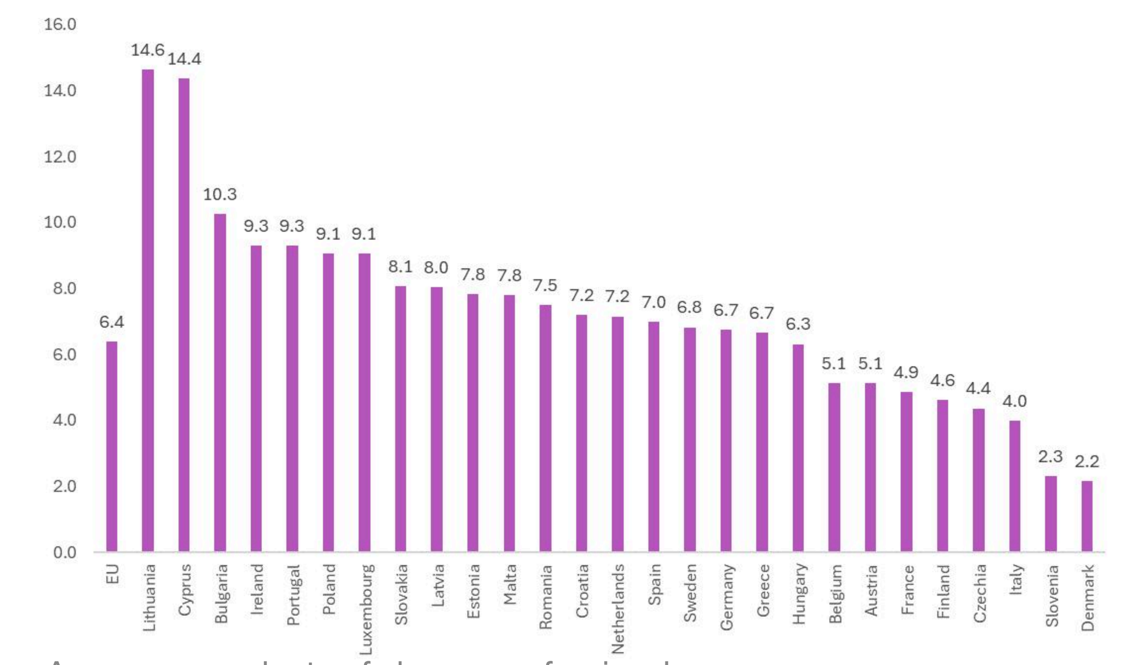
ICT professionals by age, 2024

Source: Eurostat



ICT professionals by activity, EU, 2014-2024

Source: Eurostat



Average annual rate of change professionals employed as ICT 2014-2024, %

Source: Eurostat

Additionally, domestic industries often struggle to offer competitive compensation or career development paths, making it difficult to retain skilled ICT workers. Nonetheless, the overall direction remains positive as Romania continues to align its workforce development with European digital strategies.

ICT Professionals by Gender

Romania stands out positively when it comes to gender representation in ICT. In 2024, women comprised approximately 27.3% of ICT specialists—one of the highest shares among EU member states. Only Estonia (27.6%) surpasses Romania, while Bulgaria closely follows at 27.0%.

This contrasts sharply with countries like Czechia (13.0%), Malta (14.7%), and Hungary (15.2%), which continue to struggle with significant gender disparities in the tech sector. Romania's progress in this area points to effective educational outreach and workplace inclusion efforts.

At EU level, women working as ICT specialist make up 19.5% – an increase of 3.3pp since a decade ago.

ICT Professionals by Level of Education

Romanian ICT professionals are predominantly highly educated, with a strong majority holding tertiary-level degrees (78.6%). This is more than the EU average of 67.4%, reflecting the technical nature of the field and the emphasis on formal qualifications. There is also a notable increase from a decade ago when the tertiary education was 67.4%.

Top performers in this area include Cyprus, Ireland, and Spain, where more than 80% of ICT specialists have completed higher education programs. On the lower end, Italy (43.9%), Germany (56.2%), and Czechia (59.4%), exhibit more varied educational profiles. Romania's educational structure, with a robust emphasis on STEM disciplines, contributes positively to the country's digital competency pool. This high level of academic qualification is a vital asset for Romania's digital transformation, positioning its workforce to meet complex technological demands and align with EU standards.

ICT Professionals by Age Group

Romania's ICT workforce has undergone a demographic shift, with a notable increase in the proportion of professionals aged 35 and older. Between 2014 and 2024, the share of ICT specialists in this age bracket rose by 13.4 percentage points at 61.7% in the range of 35-74 years old while the EU average is 62.8%.

In contrast, countries like Denmark and Luxembourg have seen increases in the proportion of younger ICT specialists (15–34 age group), with gains of 7.0 and 6.4 percentage points, respectively. Romania's demographic trend could be a result of extended academic pathways or the emigration of younger talent, both of which highlight the need for targeted policies to attract and retain young ICT professionals.

ICT Professionals by Economic Activity

In Romania, ICT professionals are predominantly employed in the information and communication sector (66.2%), along with professional, scientific, and technical services (4.3%), and Financial and Insurance activities (4.0%). These industries are the primary engines driving the employment of tech talent and align with broader EU patterns (60.6% for the information and communication sector, 8.1% with the professional, scientific, and technical services, and 8.3% for the Financial and Insurance activities).

This concentration reflects the digital economy's foundation, with demand highest in areas directly tied to software development, cybersecurity, cloud computing, and data analytics. Romania's ICT industry remains closely linked to global outsourcing and nearshoring trends, which continue to fuel demand for skilled professionals.

Conclusion

Romania's ICT employment landscape in 2024 shows a complex but promising picture. While the share of ICT specialists in total employment remains below the EU average, notable progress has been made in workforce expansion, gender inclusion, and educational level. However, structural challenges persist, including talent retention, workforce aging, and the slow growth of the digital sector relative to other EU economies.

The relatively low integration of digital roles across other economic sectors, signals areas needing targeted attention.

By investing further in digital education, improving working conditions, and implementing policies to keep young talent in the country, Romania can bridge the gap and position itself as a competitive digital economy in Europe's future.