



Tech Market & Job Trends

December 2023



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WELCOME



Bruno Ribeiro, Managing Director at SparkyHeads

Welcome to the December 2023 issue of our Tech Market & Job Trends Newsletter. In this edition we will delve into the dynamic landscape of Information and Communication Technology (ICT) across various global sectors to bring you the latest insights.

The second issue of our newsletter highlights the recent achievements of two European powerhouses: the Netherlands and Austria. We explore and share their strikingly similar trends in the ICT labour market throughout 2022 (Q2) and 2023 (Q2).

Examining some key facets like job vacancy rates, employment dynamics, as well as salaries, our comprehensive insights reveal intriguing patterns and significant shifts within the technological job sphere.

From high job vacancy rates painting a portrait of demand and dynamism to fluctuations in employment figures and the evolving landscape of salaries across continents, this edition uncovers the dynamics of the tech market and workforce.

We invite you to join us as we navigate through the contrasting landscapes of Europe, North America (USA and Canada), and Latin America (Brazil), dissecting trends, variations, and emergent patterns that shape the present and potentially forecast the future of the global ICT workforce.

Finally, it is important to note that our analyses rely on data obtained from trusted sources like Eurostat and the Office for National Statistics UK, supported by additional reliable sources.

About SparkyHeads

At SparkyHeads, we are more than just a tech recruitment company. Our unique expertise enables us to partner with tech organizations of all sizes, ensuring the perfect match between talent and positions.

Our core values of honesty, quality of work, partnership, expertise, empathy, and diversity form the bedrock of our operations. These principles shine through in everything we do at SparkHeads.

For further information about us, please visit our website at <https://www.sparkyheads.com/>.

We hope this reading provides you with an exciting overview about the global tech market along with valuable perspectives on the constantly changing tech job scene.

Furthermore, as we approach the end of 2023, we want to thank you for reading our newsletter and wish you a merry Christmas and a happy new year. 🌲

May the new year bring you new challenges, new achievements, and new happiness. ✨

tech talk with Benjamin Lambert



We are thrilled to have **Benjamin Lambert** as our Tech Talk guest for this second edition.

Benjamin is not only a visionary entrepreneur and investor, but also a master of creating simple and innovative solutions through technology.

He has explored various domains, such as ComplianceTech, FinTech, EdTech, HealthTech, LegalTech, PropTech and SexTech, where he has applied his expertise and passion.

He is currently the founder and CEO of Checkfirst, a company that offers a digital platform for on-site compliance and trust at scale.

In this Tech Talk, he will answer some of our questions and share his insights and experiences in the tech industry.

Brunno: Ben, it's great to have you with us today. You have an amazing journey as a serial entrepreneur. **Can you share with us a bit more about yourself and how you got into this path?**

Ben: Thanks Brunno. Sure! I have always been driven by one mission. Impact the lives of over a billion people with products I build or touch. And that is what led me to be a founder and investor in different businesses.

Brunno: You have launched some very interesting projects like Checkfirst, Zaboo, SexToii, Clocked and Apollo. They are all very different and innovative. **How did you come up with these ideas and what were the challenges you faced?**

Ben: They are all around communication. Everything I have done and plan to do is to help humans or businesses improve communication. Some of the B2C apps I launched were driven by the goal to help people with Health and Mental Health issues. Currently with Checkfirst we help businesses to create inspection workflows to establish trust remotely. The mission is always to help the world become more transparent, trusted and open.

Brunno: You are also the head of the ICE List Lisbon Chapter. That sounds like a great initiative. **What do you do there and what are the benefits of being part of it?**

Ben: This has been one of the best groups of people I have ever met and I feel privileged to be part of this. Again, it is all about being transparent and open, sharing experiences and helping each other on the tough entrepreneurial journey of being a founder!

“ I have always been driven by one mission. Impact the lives of over a billion people with products I build or touch. ”

tech talk with Benjamin Lambert

Brunno: A couple of years ago, you founded Checkfirst and I know you have been heavily involved in this project. **What is the problem that Checkfirst is solving and what are your plans to grow the company in 2024?**

Ben: Yes, this is the entire focus! Businesses are constantly falling behind with compliance. People don't know what to trust. With Checkfirst we build tools to make it easy and powerful for businesses to capture on-site data at scale, which in turn can be used to stay compliant to new laws or regulations, or to drive revenue by installing trust to people.

“ Everything I have done and plan to do is to help humans or businesses improve communication. ”

Brunno: **Do you have any new projects in the pipeline that you can share with us?**

Ben: Not currently. With Checkfirst, a baby, a few real estate projects and supporting my portfolio I have enough on my hands :)

Brunno: **What piece of advice would you give to wanna-be entrepreneurs, who are reading this interview and want to follow your footsteps?**

Ben: Validate cheaply. Hire slowly. Fire quickly. Raise carefully. ▲

“ The mission is always to help the world become more transparent, trusted and open. ”

TECH
TALK



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The Netherlands and Austria: Two Thriving Tech Markets

This December, we spotlight the ICT labour markets of the Netherlands and Austria, two European countries demonstrating parallel traits in 2022.

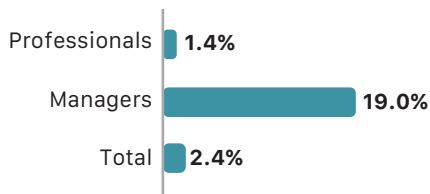
Data shows that both nations have consistently exhibited job vacancy rates above 4% over the past five years. Also, when examining employment changes between 2022 (Q2) and 2023 (Q2), both countries show marginal growth in total employment but notable increases in managerial roles.

Moreover, it is observed a decrease in hired professionals in the Netherlands (-1.1%) and a small increase in Austria (1.4%), which might indicate a potential emphasis on leadership, management roles, and strategic planning during the period.

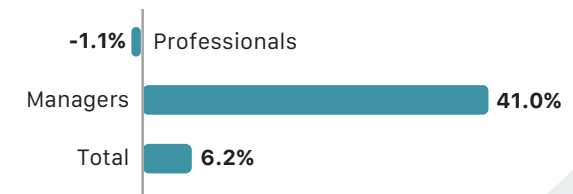
Typically, an increase in managerial positions correlates with a subsequent rise in professional roles.

EUROPE

Austria - Employment Growth
Q2 (2022 - 2023)

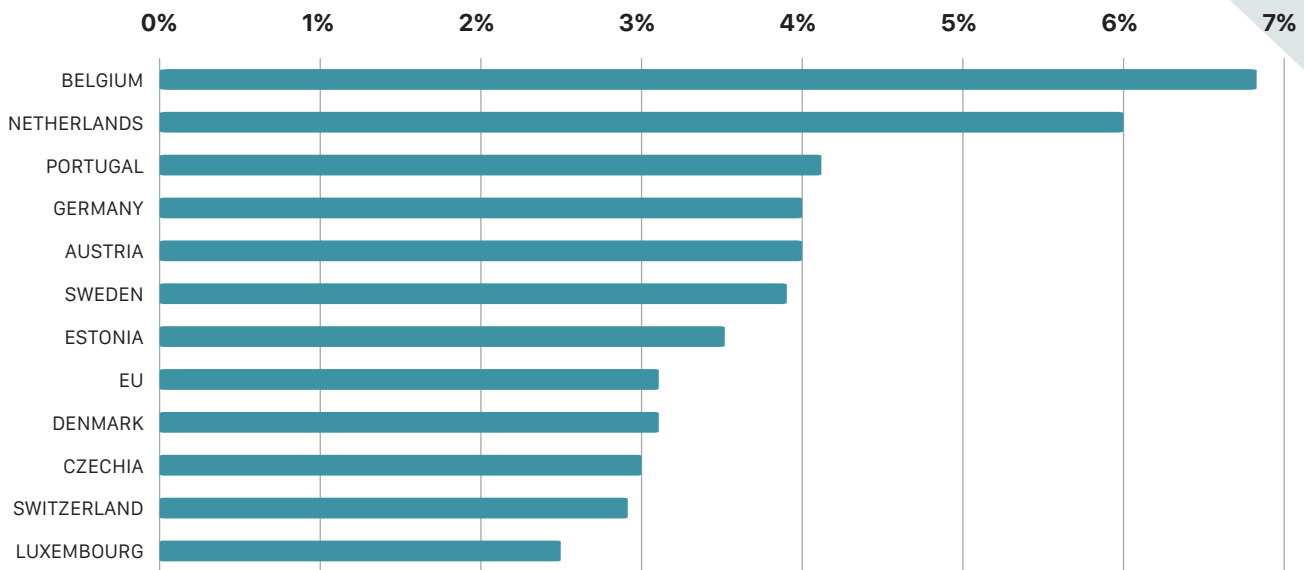


The Netherlands - Employment Growth
Q2 (2022 - 2023)



Job Vacancy Rate

EU - Job Vacancy Rate Q2 (2023)

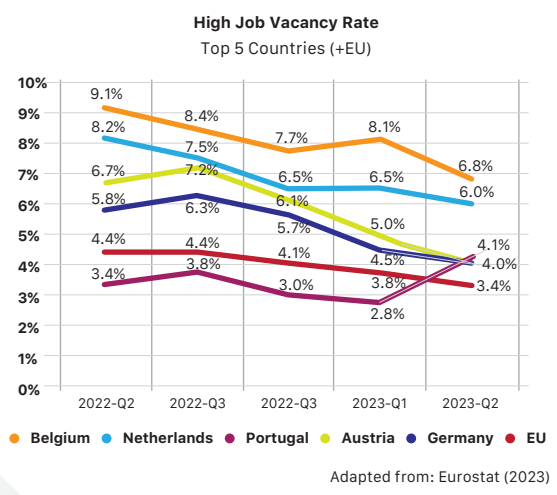


Adapted from: Eurostat 2023

Dividing EU countries into three categories based on job vacancy rates in Information and Communication Technology (ICT), it was noticed that some European nations consistently exhibit

high vacancy rates (above 4%), while others vary between 4% and 2%. Finally, some countries consistently present rates below 2%.

Countries with High Job Vacancy Rates



Data shows that the United Kingdom, followed by Denmark, and Switzerland have been facing consecutive declines in ICT job vacancy rates among the European nations with moderate rates in 2023 (Q2).

Notably, Poland stands out with decreasing rates, which may refer to a dynamic labour market despite rising employment rates. As for Estonia, the country has been displaying stable rates, with a 3.5% vacancy rate in this period.

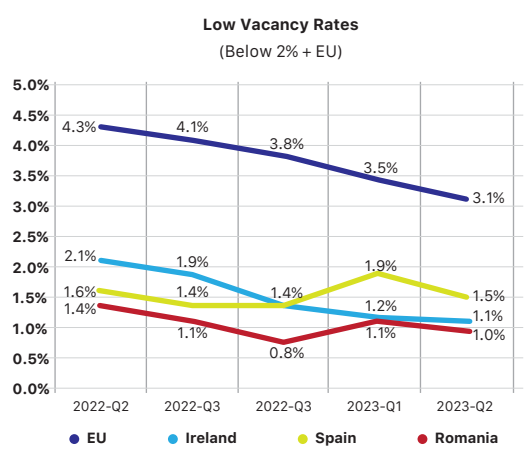
As a whole, the countries belonging to this group show stable job vacancy rates.

Belgium and the Netherlands have shown dominant vacancy rates between 6.0% and 6.8% in 2023 (Q2), mirroring similar trends. Still, the job vacancy rates for both nations have dropped in the second quarter of the current year.

Conversely, Austria, historically with high rates, has recently observed lower yet stable job vacancy rates. That should not be seen as a negative indicator, since employment in ICT has increased over the same period, showing that the needed vacancies are being filled.

Germany's rates have been decreasing along the quarters, hovering around 4.0% in 2023 (Q2), the minimum job vacancy rate to be considered a high-performance country in that indicator. On the other hand, Portugal, a country that showed moderate rates in the previous quarters, now displays a considerable high rate (4.1%).

Countries with Low Vacancy Rates

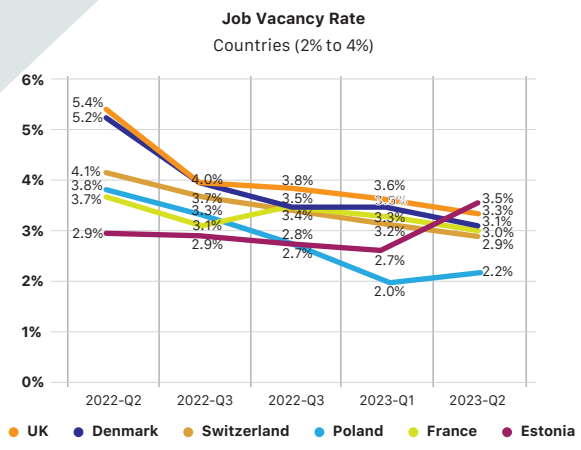


The countries presented in this group consistently show low rates (below 2%), which is lower than the average in the EU and suggests a slack labor market.


Even though Spain and Romania showed a slight increase in their vacancy rates in 2023 (Q1), the current quarter indicates that it was not a long-term tendency, whilst Ireland's rates are converging around 1.0%, echoing a decreasing trend from previous quarters.

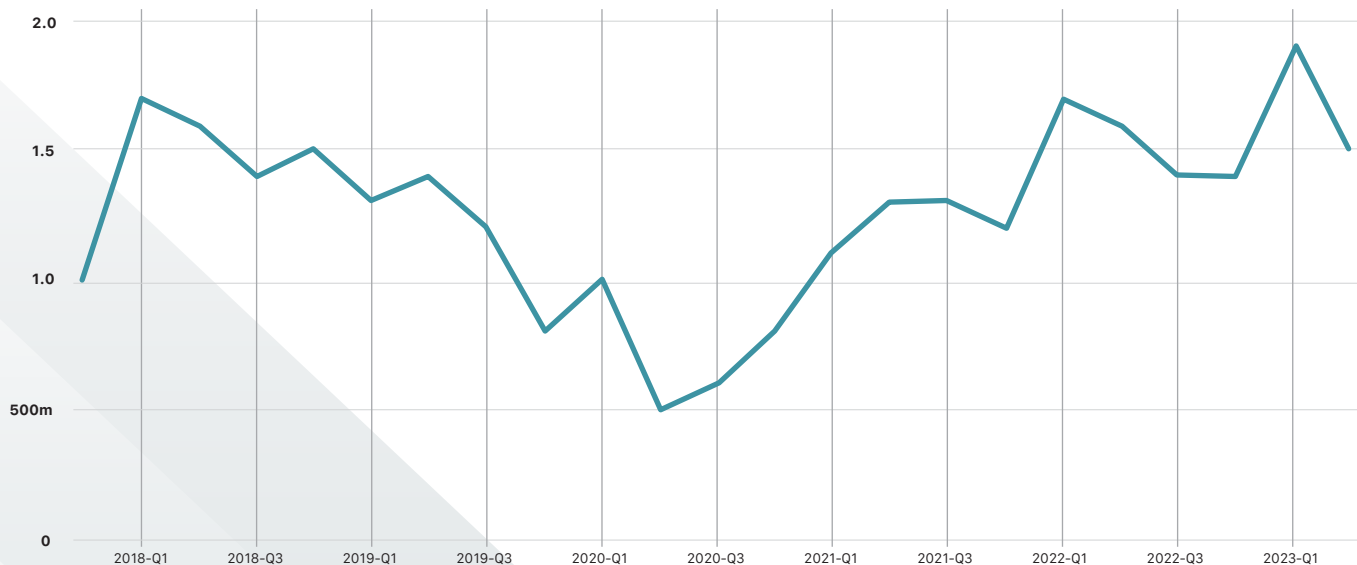
When taking a closer look at the Spanish job vacancy rate for the past 6 years (page 9), the chart shows that the country never registered rates higher than 1.9%. Taking that into consideration, an increase on that specific rate is not expected in the following quarters.

Countries with Moderate Job Vacancy Rates



Source: Adapted from Eurostat (2023) and Office for National Statistics UK (2023) - Disclaimer: The data regarding job vacancy rates in France is only available for companies with more than 10 employees.

 Spain - Job Vacancy Rate
Quarterly data (2018 - 2023)




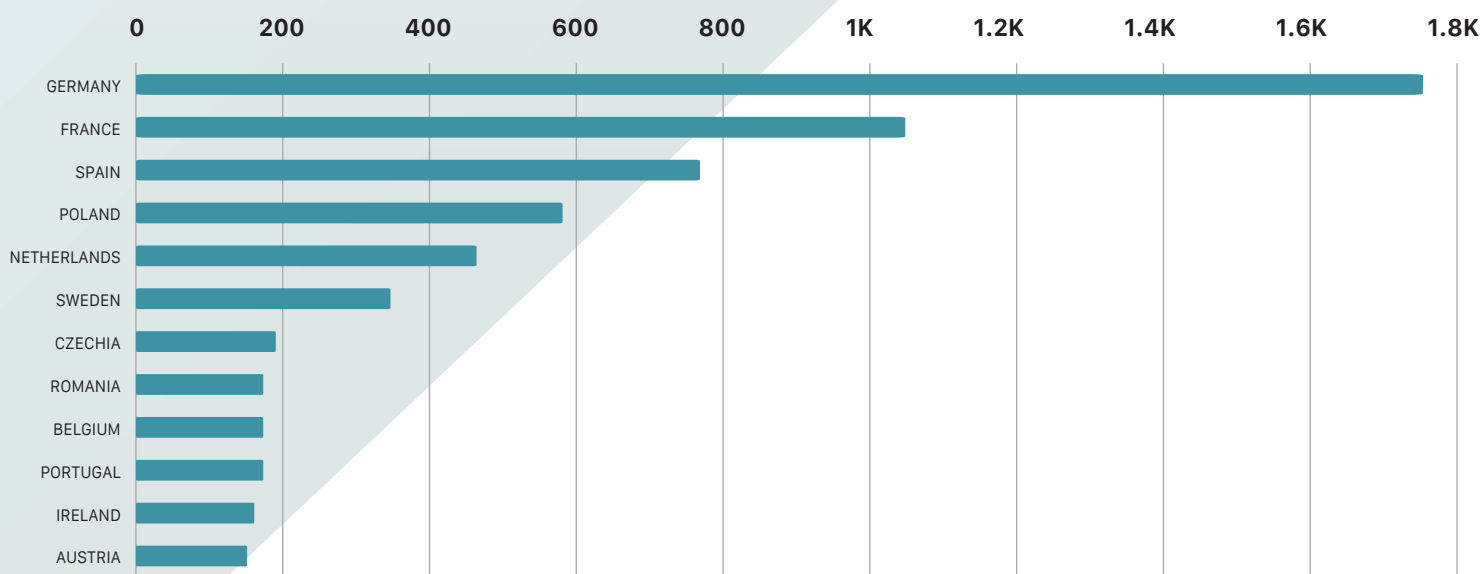
Source: Eurostat (2023)



EU

Employment Rate

 Employment ICT Sector - Q2 (2023)



Source: Eurostat (2023)

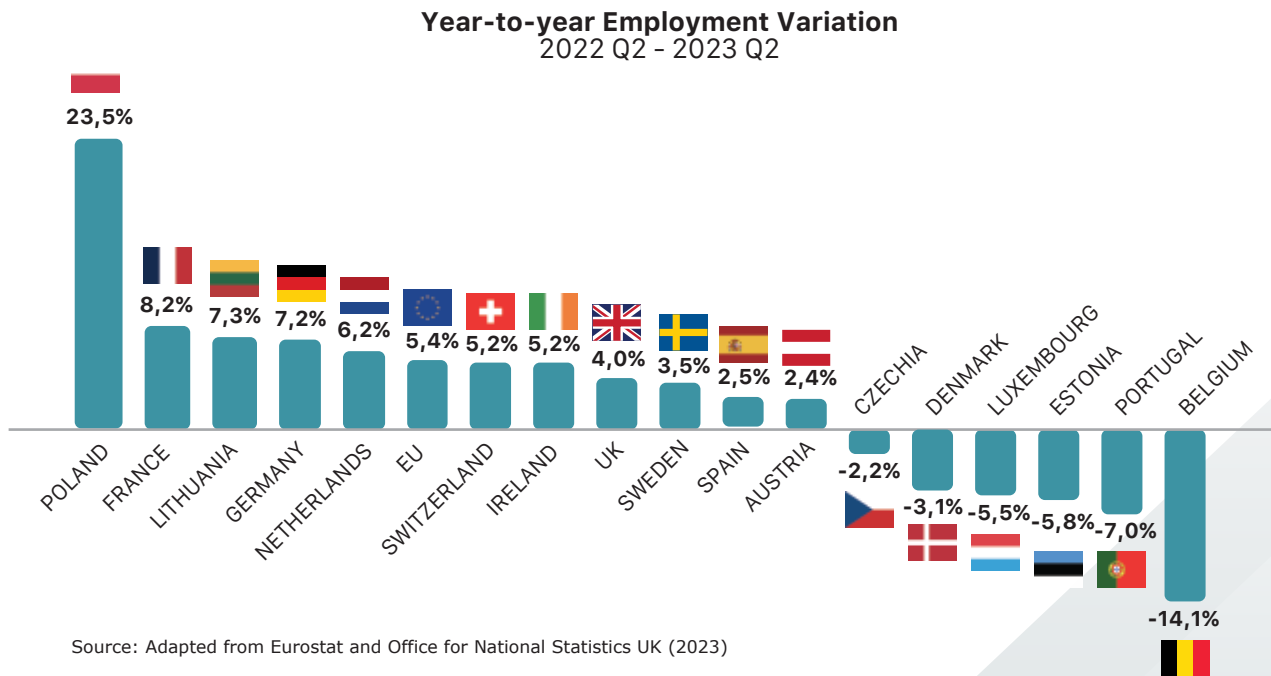
When it comes to the employment rate in the ICT sector, a consistent pattern emerges: larger populations correlate with higher numbers of employed professionals.

However, this is not always the case. For instance, consider the Netherlands and Romania, both

nations with similar populations of around 17 and 19 million, respectively.

Surprisingly, despite this specific similarity, the Netherlands employs more than double the number of professionals in the ICT sector when compared to Romania.

Year-to-year Employment Variation



The employment landscape in the EU saw a 5.4% increase from 2022 (Q2) to 2023 (Q2), with significant growth in Poland, and Germany's ICT sectors. While job vacancy rates declined in some countries, employment growth remains steady, indicating effective labour absorption.

Significantly, employment in Poland surged by 21.4% in Q1 and 23.5% in Q2 of 2023, compared to the corresponding quarters of the previous year. These impressive figures strongly suggest ongoing expansion within Poland's ICT sector.

Moreover, Poland maintains consistent job vacancy rates across quarters. These combined indicators strongly indicate that the labor market efficiently integrates new workers, showcasing its dynamic nature.

Germany also demonstrates noteworthy trends, with a 7.2% annual growth in sector employment and consistently high job vacancy rates. Despite this, Germany's vacancy rate has been steadily declining since its peak in Q3 of 2022.

This decline might suggest the labor market's adeptness in promptly filling these positions, similar to observations in neighboring Poland.

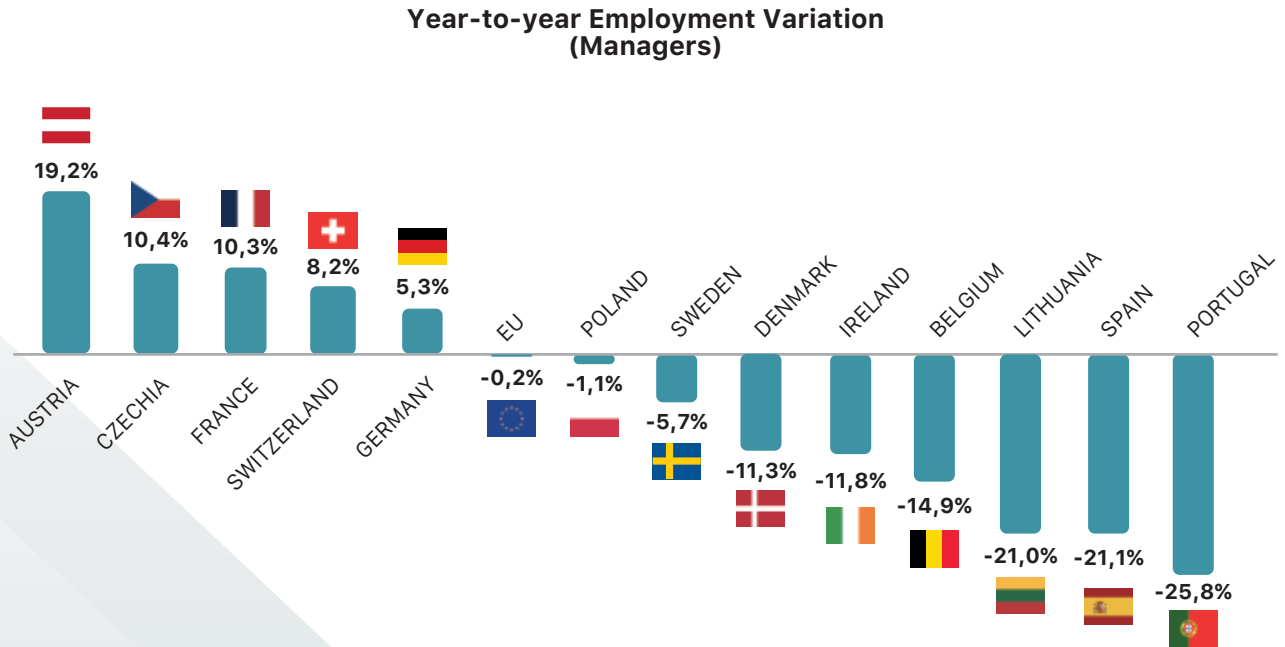
On the other hand, Switzerland shows slowly decreasing job vacancy rates in the analyzed period. However, the total employment in the ICT sector has grown around 5.2% in 2023 (Q2), when compared with the same period of the previous year.



EU

Year-to-year Employment Variation (Managers)

EUROPE



International Standard Classification of Occupations (ISCO) – Tasks performed by managers usually include: formulating and advising on the policy, budgets, laws and regulations of enterprises, governments and other organizational units; establishing objectives and standards and formulating and evaluating programmes and policies and procedures for their implementation; ensuring appropriate systems and procedures are developed and implemented to provide budgetary control; authorizing material, human and financial resources to implement policies and programmes; monitoring and evaluating performance of the organization or enterprise and of its staff; selecting or approving the selection of staff; ensuring compliance with health and safety requirements; planning and directing daily operations; representing and negotiating on behalf of the government, enterprise or organizational unit managed in meetings and other forums.

The rise in managerial positions in Austria (19,2%) is notable, contrasting with Poland's negative (-1,1%) growth, emphasizing a shift in employment dynamics. Reductions in Denmark and Portugal's total employment could be associated with declines in managerial roles.

Austria, besides presenting a high job vacancy rate for the quarter, also seems to be hiring at great speed, as the number of managers grew 19,2% from 2022 (Q2) to 2023 (Q2).

It is also relevant to mention a drop of nearly 15% in Belgium, where the number of managers hired in 2023 (Q1) increased by almost 35%.

Concomitantly, Poland is curiously showing negative growth rates (-1,1%), which might indicate that the employment in the country for the ICT sector is increasing, but for other positions.

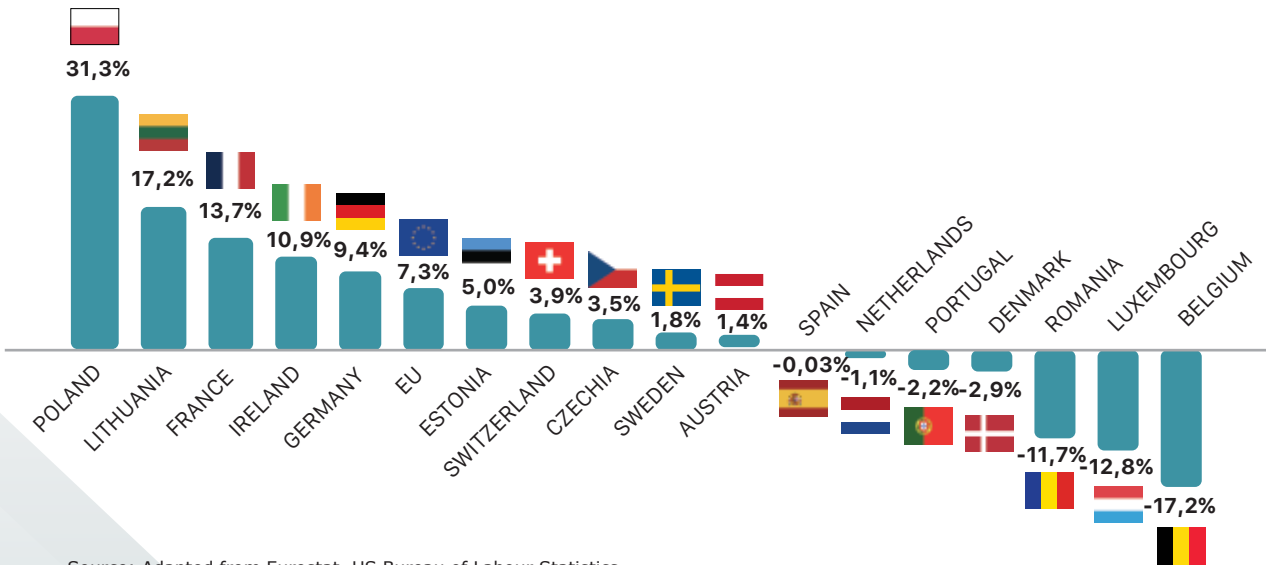


EU

Year-to-year Employment Variation (Professionals)

EUROPE

Year-to-year Employment Growth (Professionals) 2022 Q2 - 2023 Q2



Source: Adapted from Eurostat, US Bureau of Labour Statistics, Canada Statistics and Office for National Statistics UK (2023)

Employment for ICT Professionals in the EU increased by 7.3% in 2023 (Q2), notably led by Poland at 31.3%. However, Belgium recorded a significant 17.2% decrease in professional roles.

Poland was noticeably the only country where the number of employed professionals increased over 20% during the last quarter, reaching 31.3%. That suggests the consistent need for ICT professionals in the country.

Lithuania, France, Ireland and Germany are also other nations contributing positively to the professional employment growth.

Surprisingly following the same pattern of managerial positions, Belgium presents a drop of 17,2% in professional employment growth, when compared to the previous year. ▲

EUROPE

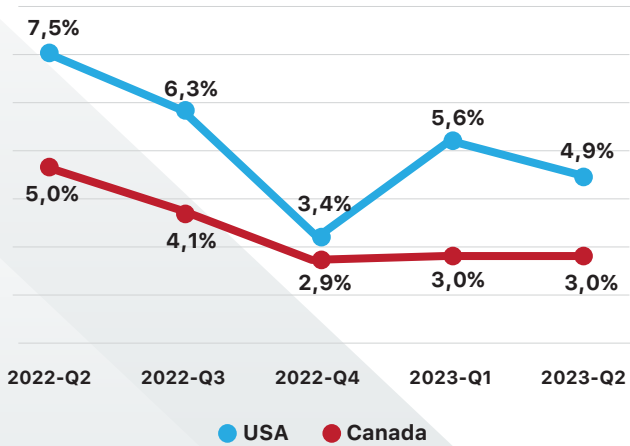
THE AMERICAS





USA and CANADA

Job Vacancy Rate



Source: Adapted from US Bureau of Labour Statistics (2023), Table 1 (Information) and Statistics Canada (2023), Information and Cultural Industries

The evolving landscape of job vacancy rates in North America, specifically within the United States and Canada, during the course of 2023 has revealed interesting patterns and trends.

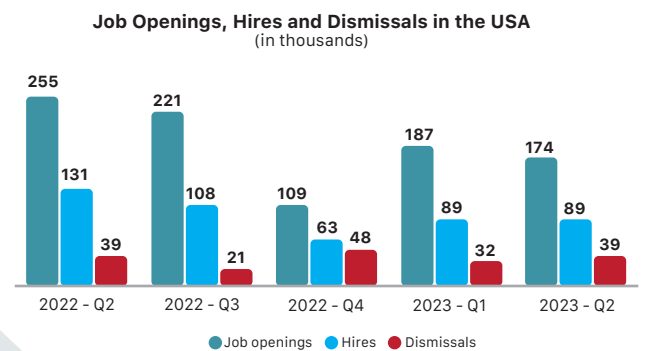
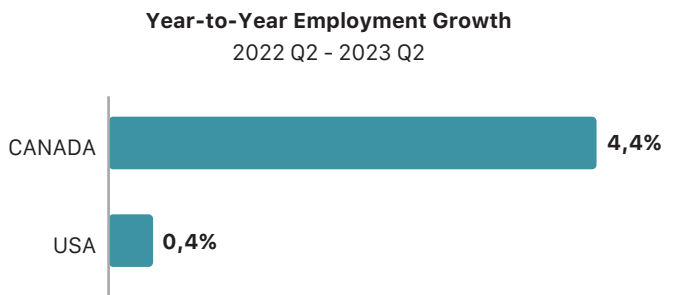
In the last three quarters, Canada showcased a stable job vacancy rate at around 3,0%, complemented by a notable employment growth of approximately 4,4% from 2022 (Q2) to 2023 (Q2).

This overall progress indicates a gradual yet effective absorption of necessary human capital within the Canadian labour market. In contrast, the United States experienced a marginal decline of 0,7% in its job vacancy rate from Q1 to Q2 of 2023.

Despite this decrease, the country's rates remain relatively high. Notably, the employment growth in the ICT sector has slowed down, hinting at scenarios that will only become clearer in the long run.

When job vacancy rates decrease concurrently with minimal employment growth, it often reflects a cautious sentiment among companies regarding the economic landscape. This cautiousness might lead them to be hesitant in expanding their hiring efforts.

Employment Growth



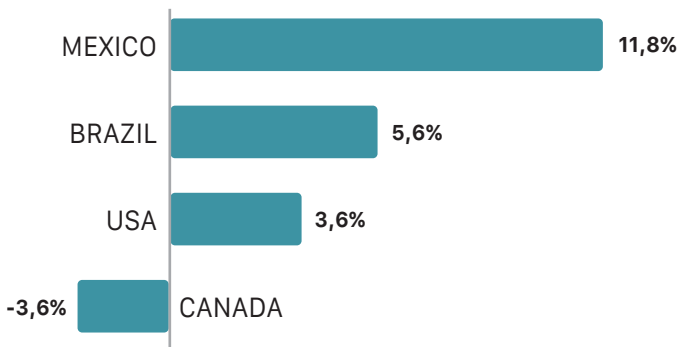
The employment landscape in the United States has undergone noticeable shifts since 2022 (Q2), marked by significant declines in job openings and hires. These changes point towards a potentially cautious hiring strategy adopted by employers amidst a downward trend in job vacancy rates.

Consistent with the preceding analysis, the data reveals a substantial decline in the number of Job Openings (vacancies) since 2022 (Q2). Similarly, hires have witnessed a sharp drop of over 30% when comparing 2022 (Q2) and 2023 (Q2).

As for dismissals, there appears to be relative stability when compared to 2022 (Q2) but a slight rise when juxtaposed with 2023 (Q1). These trends collectively paint a nuanced picture of the evolving employment landscape in the country.

Salaries

Year-to-Year Salaries Growth
2022 Q2 - 2023 Q2



Source: Adapted from ILOSTAT Explorer (2023), Canada Statistics (2023) and Office for National Statistics (2023)

An examination of year-to-year salary growth in the ICT sector across Mexico, Brazil, the USA, and Canada unveils interesting trends and variations in wage increments.


Mexico emerges as the frontrunner in ICT sector wage escalation, boasting the fastest-growing salaries, although experiencing a slowdown in growth rates compared to prior periods.

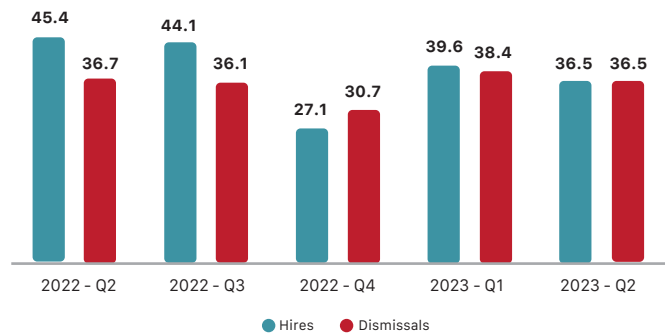
Both Brazil and Mexico display ascending paths in year-on-year wage increases, yet these figures demonstrate a decline when juxtaposed with the first 2023 (Q1). Conversely, the USA stands out, showcasing a robust 3.6% surge in ICT sector salaries within the same period.

As for Canada, the data reveals a notable decline of 3.6% in hourly wages for employees engaged in Data Processing, Hosting, and Related Services (NAICS code 518), Telecommunications (517), and other information services (519) in comparison to 2022 (Q2).

Finally, it is pertinent to emphasize the noteworthy 3.6% average increase in ICT sector salaries in the USA during this period. These comparative insights underscore the diverse and evolving landscape of wages across these nations' ICT sectors.

Hires and Dismissals

 **Hires and Dismissals**
Brazil (in thousands)



Brazil's employment landscape in the ICT sector presents a peculiar blend of balance and adaptability, reflecting a labour market that appears both stable and dynamic in its hiring and dismissal patterns.

In Brazil, the correlation between hires and dismissals delineates a comparatively more balanced employment scenario when compared to the US market.

This balance suggests a stable labour market in terms of maintaining a consistent workforce, yet it also portrays dynamism by demonstrating an apparent ease in replacing individuals who are dismissed.

Notably, 2023 (Q2) witnessed a decline in both hires and dismissals when contrasted with the initial three months of the year (2023 Q1). Moreover, this recent period exemplifies a remarkably balanced relationship between these two indicators, further underlining the nuanced dynamics within Brazil's employment landscape. ▲

DATA SOURCES

Eurostat - <https://ec.europa.eu/eurostat>

ILOSTAT - International Labour Organisation -

<https://ilostat.ilo.org/data/>

Layoffs.fyi - <https://layoffs.fyi/>

Office for National Statistics - <https://www.ons.gov.uk/>

Statistics Canada - <https://www.statcan.gc.ca/>

US Bureau of Labour Statistics - <https://www.bls.gov/>

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