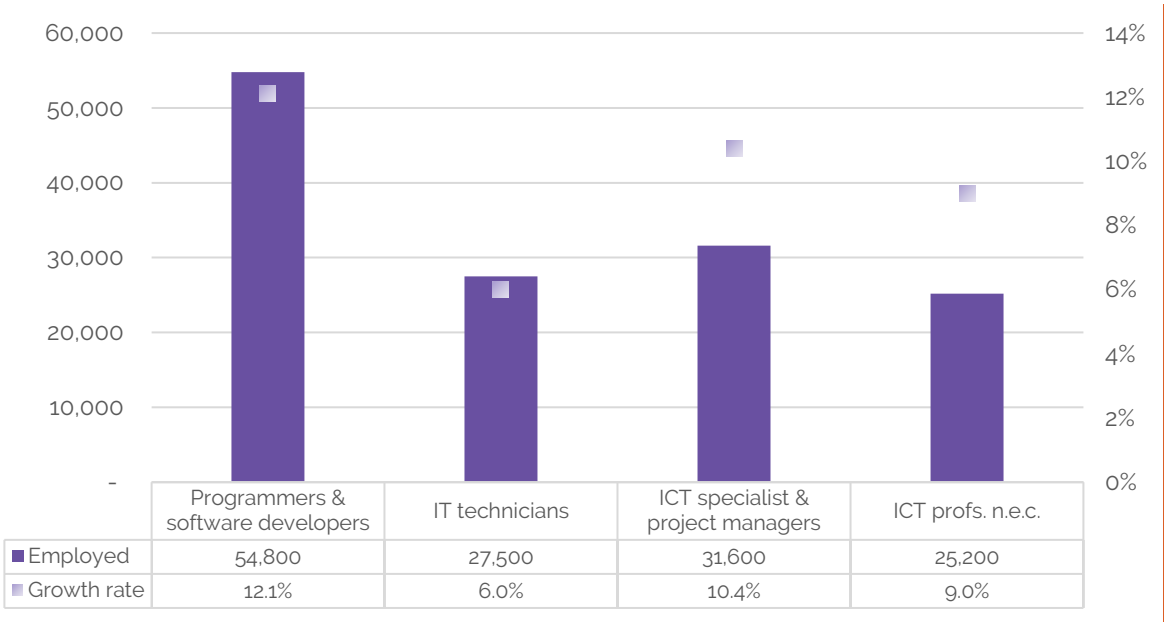
10.2 ICT Occupations

Figure 10.2 Annual Average Employment (2024) & Annual Average Growth Rates (2019-2024)



Overall employment	**139,000**
Share of total workforce	5.0%
Main sectors of employment	65% - ICT 9% - Financial activities 8% - Industry
Employment growth	+51,800 between 2019 and 2024 +9.8% on average annually (compared to +3.4% for total workforce)

2024	**% Female Q4**	**% Full-time Q4**	**% Aged 55 years & over Q4**	**% Irish citizens Q4**	**% Third level graduates Q4**	**Number of new employment permits**	**Recruitment Agency Survey**
ICT specialist & project managers	34%	97%	[15%]	68%	89%	593	
Programmers & software developers	[19%]	99%	..	59%	94%	2,395	✓
ICT profs. n.e.c.	..	92%	..	65%	86%	1,984	✓
IT technicians	[26%]	96%	..	62%	82%	136	✓
Overall total	**25%**	**97%**	**10%**	**63%**	**89%**	**5,108**	

Source: SLMRU (SOLAS) analysis of CSO (LFS) data, DETE, and SLMRU Recruitment Agency Survey (RAS)
Numbers in square brackets should be treated with caution; an ellipsis (..) denotes numbers too small to report

Overall Outlook for these Occupations

This occupational group had the strongest annual average employment growth rate over the five-year period, at 9.8%; much of the growth was between 2019 and 2021 (with an extra 34,000 persons employed), with an average additional 6,000 persons employed each year since 2022. Recent job hires far exceeded employment growth between 2023 and 2024 for these occupations indicating that job churn is a feature for this occupational group. It also signals that at least some of the vacancy notifications for these roles are to replace staff who leave a role rather than due to expansion. Similar to the science and engineering occupational group, the share of females employed is far below average and attracting (and retaining) more women to these roles could, in part, offset issues in finding sufficient candidates to fill roles.

At present, employment permits remain a key source of supply of skills, with over 5,000 new permits issued in 2024, accounting for 15% of all new permits issued. The share of non-Irish citizens employed, at 37%, far exceeded the national average. Supply from the education and training system continues to increase. Between 2022 and 2023, the number of FET and higher education awards in ICT increased by 7% and stood at 11,200 awards. In particular, awards in software development went up by 29% (+735 awards) over the year, 300 of which were at NFQ levels 8-10. For several years, the share of third level graduates in Ireland who had studied IT-related subjects was amongst the highest across the EU, and in 2023 was third largest (after Estonia and Luxembourg).

Despite this, the demand for IT skills continues, not only in the ICT sector but across other sectors including finance and industry. Cyber Ireland report that the cyber security sector employed approximately 8,000 persons in 2024, with demand likely to rise to 17,000 persons by 2030.[1] In addition, cyber security and AI skills have been identified in the Skills for Growth data, with AI skills in particular arising across job roles, both IT and non-IT related. The extent to which new technologies, including AI, disrupt employment levels in other IT-related roles such as software development, is as yet unclear but upskilling/re-skilling may be required in some areas to adapt to the changing technologies.

Occupation	Economic summary
ICT specialist & project managers	Employment growth was above average for this occupation, with steady growth each year. Most employment permits issued were in the ICT sector for roles including IT project/product managers and directors. A third of those employed were female and the share of non-Irish citizens, at 32%, was above the national average. This occupation accounted for the smallest share of online job ads (Eurostat/CEDEFOP) and there were no reported issues with filling vacancies.
Programmers & software developers **Skills shortage:**	Employment grew strongly for software developers/programmers between 2019 and 2022; following a fall in employment in 2023, it grew strongly in 2024 (by 7,400 persons), above 2022 levels. Three quarters of employment was in the ICT sector with the remainder spread across sectors including financial, professional activities and industry. Less than a fifth of those employed were women, and 41% were non-Irish citizens which is over double the national average. Almost 2,400 new employment permits were issued in 2024 for various software developer/engineer roles. The Recruitment Agency Survey

[1] Ireland-Cyber-Security-Sector-Snapshot-2024.pdf

Software developers/ engineers	highlighted issues in filling vacancies for software developer/ engineer roles with Skills for Growth data pointing to issues relating to cyber security, cloud security, AI, and DevOps and those with sales and innovation skills. Future demand for this occupation, especially entry-level roles, may be eased somewhat due to advances in technology, particularly if the adoption of artificial intelligence and increased automation extends to small and medium-sized firms and across sectors. The share of online job adverts for these roles has declined in recent years and Indeed's Job Posting Index for the UK and US[2] shows a sharp fall in postings related to software development. Nonetheless, practical constraints on the widespread implementation of such technologies (e.g. finance, personnel and skills availability), as well as the demand to keep pace with emerging technologies, mean that shortages for this occupation, especially for senior roles, will persist.
ICT profs. n.e.c. **Skills shortage: IT analysts/ engineers**	The annual average employment growth was above average for this occupation over the five-year period, although employment levels have fluctuated over this time; strong employment growth in both 2020 and 2023 more than offset the declines in the other years. The number of non-Irish citizens far exceeded the national average and almost 2,000 new employment permits were issued (in roles including analysts (data, business, IT), data scientists, network and security engineers and web and UX/UI developers. Online job adverts for these roles included network and cyber security specialists (jobsireland.ie) and IT business analysts, architects and systems designers (Eurostat/CEDEFOP). Difficult-to-fill vacancy mentions (Skills for Growth and Recruitment Agency Survey) included digital and data scientists, cloud security engineers, and SOC (Security Operations Centre) analysts. Increasing reliance on digital systems as well as global insecurities in recent years, including the wars in Ukraine and the Middle East, have fuelled demand for cyber security specialists as organisations recognise the need to safeguard systems against potential cyber security breaches. Skills to anticipate, manage and address IT security risks across both private and public sector organisations mean security-related skills will be key for this occupation, with shortages occurring for network and security engineers.
IT technicians	The above average employment growth rate for this occupation can be attributed to strong growth between 2020 and 2021; levels have fluctuated since but in 2024 remained below the 2021 peak. A quarter of those employed were women and the share of non-Irish citizens was double the national average. A small number of employment permits were issued for tech support and customer engineer roles. Online job ads, from both sources, related to ICT user support technicians. Difficult-to-fill vacancies mentioned in the Recruitment Agency Survey related mainly to technical support roles (with language skills). Although some issues with attracting people with specific skills (e.g. languages) is evident, the lack of employment growth suggests that there is no overall shortage of IT technicians at present.

[2] Hiring Lab | Data Portal | Indeed.com