Summary of Demand from Industry for Skills / Training – February 2023

The SERSF has complied the following information from feedback from industry, industry clusters/associations and data available from the Skills and Labour Market Research Unit (SLMRU) of SOLAS and other sources.

Nationally employment is at a record level (2.55 million in Q3 2022) and there is now 217,000 employed in the South East (CSO Q3 2022). The unemployment rate for January 2023 stood at 4.4% (10.4% for 15-24 year olds). The rate of staff turnover / churn has been accelerated by the pandemic. Given the tight labour market, in addition to skills and training needs some sectors are now experiencing significant labour shortages.

> ### ICT Sector – 9,270 employed (CSO QLF Average 4 quarters to Q3 2022)

This sector includes a range of dedicated ICT companies. Furthermore, most medium to large (>50 employees) have dedicated ICT staff managing the company's ICT requirements internally. The demand for ICT skills throughout 2022 has been strong with significant competition from large Dublin based employers made possible by remote and flexible working. However, the spate of international ICT job losses that started in Q4 2022 and has continued in Q1 2023 will likely have a cooling effect in the labour market in 2023. Nonetheless the economic fundamentals in Ireland of ongoing economic growth and a diversified industrial base are likely to ensure an ongoing demand for ICT skills.

The variety of ICT roles advertised are broadly categorised as follows:
- Software Development & Analysis
- Computer Use
- Database and network design and administration

Availability of Graduates

The Higher Education Authority statistics reveal a strong pipeline of graduates (Note 1) in **'Information & Communication Technologies (ICT)'** graduating in the South East in recent years.

HEA Statistics - Information & Communications Technologies							
	2015/16	**2016/17**	**2017/18**	**2018/19**	**2019/20**	**202/2021**	**2021/22**
National Graduates	11972	11703	11594	11012	10941	11120	11308
SETU Graduates (Note 1)	**1134**	**1025**	**993**	**887**	**884**	**984**	**896**
SETU Percentage	9%	9%	9%	8%	8%	9%	8%
National PostGraduates	2677	3127	3083	3444	3757	3905	3902
SETU PostGraduates	**164**	**218**	**256**	**232**	**188**	**291**	**182**
SETU Percentage	6%	7%	8%	7%	5%	7%	5%

Note 1. Undergraduate honours degrees, ordinary degrees, certs & diplomas awarded in All HEA-Funded Institutions in the Calendar Year by field of study (ISCED): full-time & part-time (including distance and e-learning).

Roles in demand within the region include:

- ➢ IT Systems Engineer
- ➢ IT Support Engineer
- ➢ Data Analyst / Business Analyst
- ➢ IT Security
- ➢ Cloud / Data Architect
- ➢ Software Developer

Identified skills shortages and a need to upskill staff in the following disciplines has been identified:

- ➢ Software Development Technologies (Tech Stack incl Python, .NET, SQL, Java and Javascript) for product and service design.
- ➢ Cyber Security
- ➢ Data Analytics – various data platforms incl Tableau, Power BI,
- ➢ Machine Learning & Artificial Intelligence
- ➢ Mobile Technology
- ➢ Cloud Computing
- ➢ IT Operations & Governance
- ➢ Blockchain Technology
- ➢ Digital Marketing
- ➢ Telecoms: Design Engineers, GIS Technicians, Field Surveyors and Project Managers

# Extracts from the National Skills Bulletin 2022

10.2 ICT Occupations

Overall employment: approximately 118,300 persons (76% male) were employed in the selected ICT occupations, representing 5.0% of the national workforce.

- **Sector**: 65% of overall employment was concentrated in the ICT sector, with a further 11% in financial activities and 10% employed in industry
- **Employment growth (5-year)**: between 2016 and 2021, overall employment increased by 39,700 (8.5 on average annually compared to 2.3% nationally). The strongest rate of employment growth was observed for programmers & software developers (11.6%) during the period
- **Age**: the 25-54 year age group accounted for the majority of persons employed, at 84%. The share of workers aged 55 and over was 8%, well below the national average of 19%
- **Education**: the share who had attained third level qualifications (85%) was significantly above the national average share (53%), while a further 13% had attained a higher secondary/FET qualification
- **Full-time/part-time**: of those employed in ICT occupations, 96% were in full-time positions
- **Nationality**: the share of Irish national workers was 66%, well below that of the national average of 83%.

Numbers employed, 2021 (annual average)
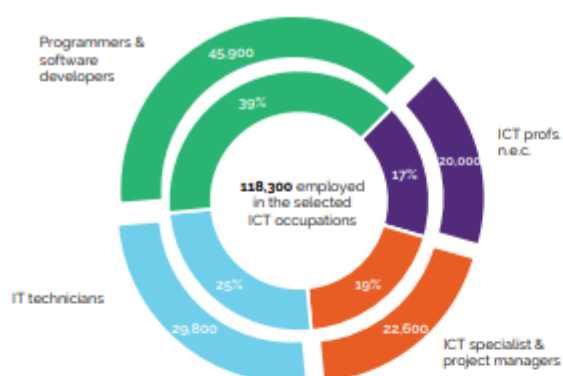
Average growth rates (%) 2016-2021
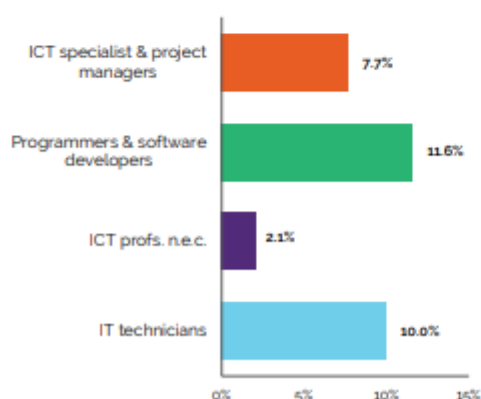
Between 2016 and 2021, overall employment increased by 39,700 (8.5% on average annually compared to 2.3% nationally).

Source: SLMRU (SOLAS) analysis of CSO data

Overall Outlook for these Occupations

ICT occupations had both the highest annual average growth over the five-year period compared to all other occupational groups and the highest absolute growth since 2020. The growth in 2021 was driven primarily by those employed as programmers and software developers and IT technicians. This occupational group had the second highest share of new employment permits issued in 2021, after healthcare occupations, at almost 3,600. Supply from the education/training system continued to grow steadily with almost 8,000 graduates emerging from the third level system in 2020, primarily at NFQ levels 8-10.

The COVID-19 pandemic does not appear to have negatively impacted employment for those in ICT occupations. The significant take-up of working from home amongst those in ICT occupations[30] may have alleviated some of the issues in sourcing suitably qualified staff for these roles through accessing skills from outside Ireland without the requirement to be located here. If employment continues to grow at the rate seen in recent years, however, significant shortages for those with the specific skills in demand may intensify.

Occupation	Economic summary
ICT specialist & project managers **Shortage: IT project managers**	Over the five-year period, employment growth was above the national average for this occupational group, with relatively strong growth between 2020 and 2021. New employment permits issued in 2021 related to a variety of roles including program and project managers with one mention in the Recruitment Agency Survey of difficulties in filling vacancies for IT project managers. Although shortages continue to arise for this occupation, the volume is likely to be relatively small compared with the other IT professional roles.
Programmers & software developers **Shortage: Software developers/ engineers**	Employment for programmers and developers has grown particularly strongly since 2019. Over 1,600 new employment permits were issued for software engineers and developers and there were frequent mentions in the Recruitment Agency Survey of difficult-to-fill vacancies (see Table 9.1 for details of skills). These roles were also frequently cited as difficult-to-fill by employers in the Skills for Growth and Spotlight on Skills data across a range of sectors (e.g. parcel distribution. E-commerce, fintech). There was a high volume of advertised vacancies in the OVATE data, with a 14% increase since 2020. The sustained employment growth, not only in the ICT sector, but across the economy, along with the rapid pace of change in this occupation, are likely to lead to a continued issue in sourcing suitably qualified and experienced candidates for these roles.
ICT profs. n.e.c. **Shortage: IT analysts/ engineers**	The below average annual employment growth over the five-year period for this occupation is partly related to changes in the LFS in 2017; however, employment declined slightly in 2021, the only occupation in this group to experience a fall since 2020. Despite this, a large volume of employment permits were issued in 2021 for IT business analysts, data analysts, IT engineers (data, network, systems, security, support, cloud) and IT architects (solutions, technical). Difficulty in filling vacancies for developers in web, test, security, mobile develop, front-end were mentioned in the Recruitment Agency Survey. The volume of advertised vacancies in the OVATE data grew by 19% since 2020, for vacancies including IT business analysts. While issues are occurring in recruiting for certain roles (e.g. IT business analysts and IT engineers in security/testing), the low employment growth since 2020 may signal that the high volume of vacancies relates to both job opportunities and some level of job churn.
IT technicians **Shortage: IT technicians with foreign languages**	The above average employment growth over the five-year period relates primarily to strong growth between 2020 and 2021, particularly driven by growth for IT operations technicians (e.g. database/ network administrator) rather than those engaged in user support. Employment permits issued for this occupation in 2021 were for roles including community operations analysts, technical support engineers and customer support. Both the Recruitment Agency Survey and data from Skills for Growth point to issues in sourcing candidates in IT support (with and without language skills) and for those providing support in manufacturing and fintech (with German skills). Data engineers were cited in the Shifting Sands report as roles with a growing volume of vacancies with skills in SQL, Python, extraction transformation and loading (ETL), and data engineering. Furthermore, vacancies advertised for these occupations in the OVATE data increased by 17% since 2020. While shortage issues currently relate to roles with foreign language skills, if employment continues to increase at levels seen in 2021, shortages may occur across a broader range of roles.

Figure 9.7: Most frequently mentioned ICT skills (ESCO skill level 3 and detailed skills) in online job vacancy adverts, 2021

National Skills Bulletin October 2022