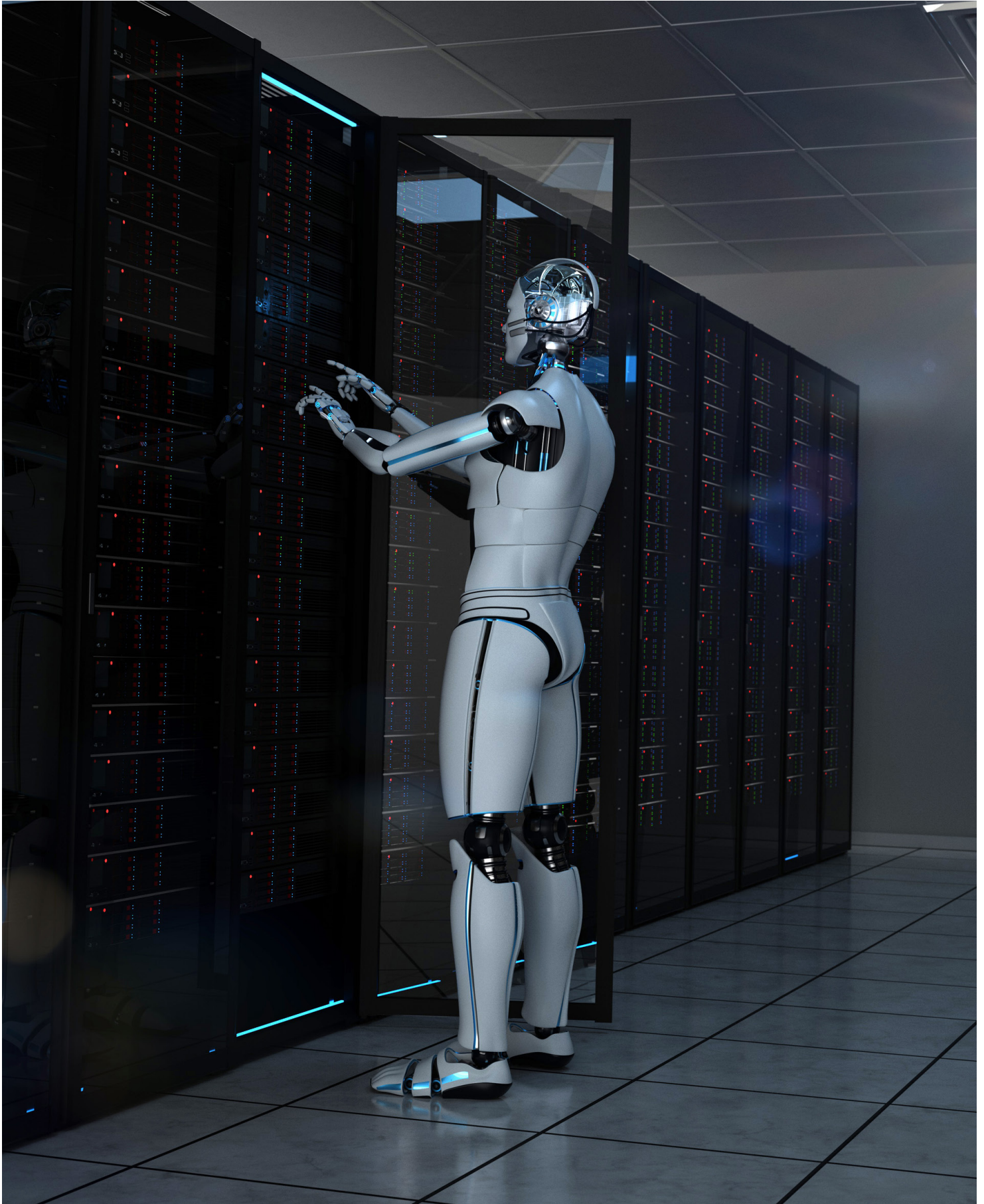


European Commercial - June 2023

SPOTLIGHT  
Savills Research

# European Data Centres: Labour & Talent



## Key takeaways



Strong growth in data consumption will result in an increased demand for data centre specialists with data centre operators already struggling to find qualified talent.



FLAP-D markets are forecasted to grow the strongest due to a relatively high amount of talent available.



Italy, Spain, and the Nordic countries are expected to experience the biggest labour shortages to facilitate the forecasted growth in the sector.



Labour shortages are most likely to result in strong rental growth driven by strong demand and limited supply.



Landlords are most likely faced with increased labour costs for new data centre developments due to a lack of qualified talent and labour to construct new data centres.



# Humans remain vital in data centre operations and developments

Data centres immediately create the typical image of facilities and buildings filled with noisy servers processing data that require large amounts of [energy](#) and [water](#), located on remote sites where a minimum number of people are working, if any at all.

The human element in the data centre sector is, therefore, often neglected whilst crucial, not only for keeping data centres operational but also for developing new data centres. With the rapid increase in data consumption, international bandwidth is forecasted to increase in Europe by 32% each year until 2029, resulting in a growing demand for data centre capacity. This emphasises the need for specialists not only to operate and improve existing data centres but also to develop new data centres to facilitate the growing data consumption.

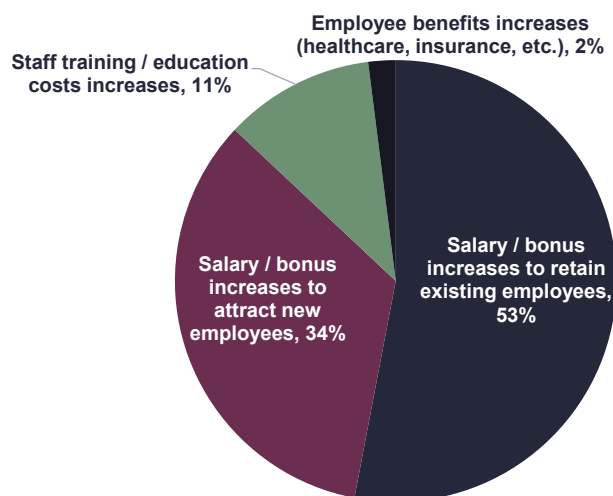
However, labour shortage and the lack of inflow of new talent are one of the biggest challenges facing the data centre sector. A survey by the Uptime Institute shows that ‘staffing and organisation’ is the biggest need amongst data centre operators and that more than half (53%) of the operators report having difficulties in finding new talent, up from 38% in 2018. The survey also reflects the strong competition for labour and the employee retention challenge operators are facing, with 42% of operators experiencing difficulties in retaining staff as they are hired away, up from 17% in 2018.

The lack of available and qualified labour is further highlighted by analysing LinkedIn data\*. The LinkedIn data shows that in Europe, there are at least 6,500 professionals active in the data centre sector, with most professionals located

in the UK, Ireland, and France. The data also shows that a minimum of 1,100 professionals changed jobs during the past year and that currently, more than 1,300 professionals are open for new opportunities, further highlighting the high job turnover and the low employee retention rate with a relatively low median tenure of 1.8 years.

*\*LinkedIn data reflects a search for specified job titles related specifically to the data centre industry. The used job titles include: Data Centre Engineer, Data Centre Architect, Data Centre Operations Specialist, Direct Data Centre Operations, Data Centre Technician, Data Centre Supervisor, Data Centre Manager, Data Centre Administrator, Data Centre Operations Manager, Data Centre Operator, Data Centre Analyst.*

**Chart 1: Primary drivers of increased labour costs per employee over the past 12 months**



Source: Uptime Institute

# The causes of the labour & talent shortages

Multiple factors contribute to the labour shortage in the data centre sector. First of all, there is a lack of qualified talent coming to the sector as there appears to be a mismatch between skills being taught in educational institutions and the needed skills that data centre employers are searching for, often referred to as the 'great mismatch' between the education and industry leaders.

The LinkedIn data shows that the educational institutions producing the most talent for the data centre sector in Europe are the Technological University of Dublin, The Open University in London, the Cisco Networking Academy, Amsterdam University of Applied Sciences, and EXIN. The industry leaders hiring most of the talent in Europe are Amazon Web Services, Microsoft, Equinix, Google, and Oracle.

The second reason for the labour shortage in the sector is the so-called 'silver tsunami'. This concept reflects the wave of retirement expected to hit the data centre sector as the labour pool in the data centre sector is relatively old, highlighted by a DataCenter Knowledge survey where just 13% of the respondents were younger than 44. This wave of retirement causes challenges in mentoring, and educating the younger talent coming into the sector.

Finally, data centre sites are typically located in less attractive work environments (compared to other sectors), as they are typically (deliberately) built in remote locations, primarily for security purposes.

**“ The great mismatch, the silver-tsunami, remote and (sometimes) unappealing locations are the main drivers for the labour and talent shortages in the data centre sector ”**

– Scott Newcombe



# Opportunities to reduce the labour & talent shortages

Different initiatives and opportunities have been introduced and become available to address and reduce the labour shortage in the data centre sector. First of all, recent Eurostat data shows that the number of ICT specialists in the EU has been increasing over the last decade. As an example, from 2012 to 2022, the number of ICT specialists in the EU surged by 57.8% (nearly 6.6 times the growth rate for total employment), with 4.6% of the total EU workforce working as ICT specialists in 2022 (a total of 9.4 million).

Western Europe in particular saw a big increase, with nearly 6% of the workforce working as ICT specialists, up from 4.2% in 2012. Despite the increases, the gender inequality gap persists, with 19% of ICT specialists being female in Europe in 2022 vs 17% in 2017.

The lack of qualified skilled labour is recognised by the European Commission (EC). The Digital Economy and Society Index (DESI) developed by the EC shows that four out of ten adults and every third

person who works in Europe lacks basic digital skills.

The aforementioned gender inequality is also reflected by the data with only one in six ICT specialists and one in three science, technology, engineering and mathematics (STEM) graduates being women. The EC is determined to tackle the digital skills gap, whilst promoting projects and strategies to improve the level of digital skills in Europe.

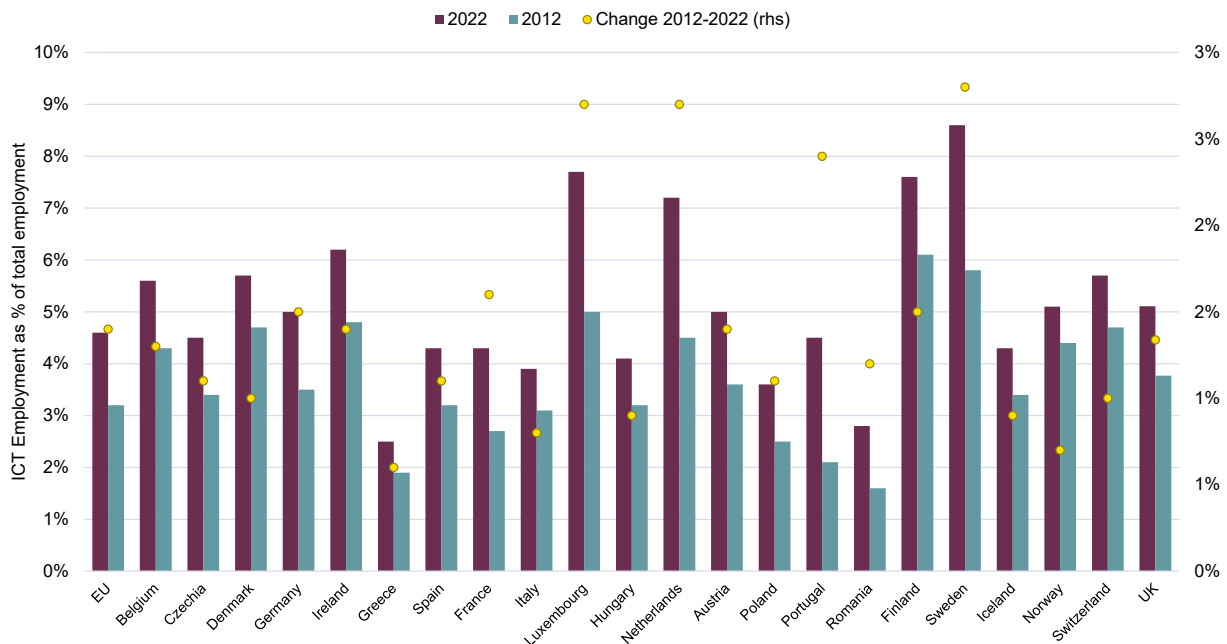
The EC has launched a new Digital Skills and Jobs Platform initiative with the target to ensure that 70% of adults have basic digital skills by 2025, coupled with reducing the level of 13-14 year-olds who underperform in computing and digital literacy from 30% (2019) to 15% in 2030. This will result in a larger digitally skilled labour force all across Europe.

Narrowing the significant gender gap among data centre professionals has the potential to relieve some of the pressure. Gender inequality in the data centre sector is highlighted by the Uptime Institute

survey showing that 77% of the respondents (data centre operators), report that they employ around 10% women or less in their design and operations teams. Surprisingly 20% of the respondents do not employ any women at all.

This significant gender gap is also reflected in the aforementioned DataCentre Knowledge survey, with 85% of respondents being male. LinkedIn data also highlights the gender gap, within Europe. Approximately 91% of professionals in the data centre sector are male. This indicates that there is a potential untapped talent pool among females. However, the challenge of having the right type of skills and qualifications remains.

Chart 2: ICT employment across Europe



Source: Eurostat

“ Education, training, narrowing the gender and age gaps, and artificial intelligence can provide solutions to relieve some pressure from the labour & talent shortages ” - Bram de Rijk

Chart 3: Gender distribution

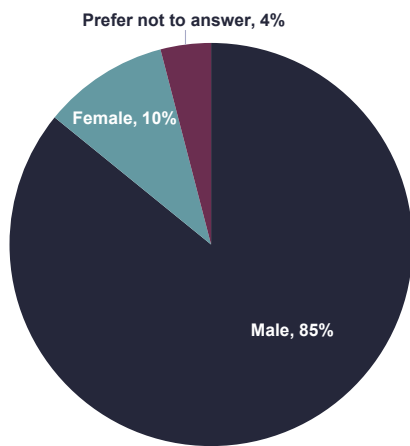
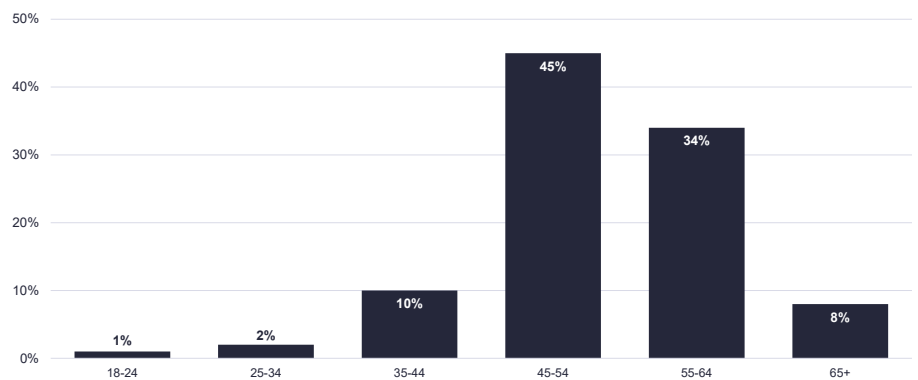
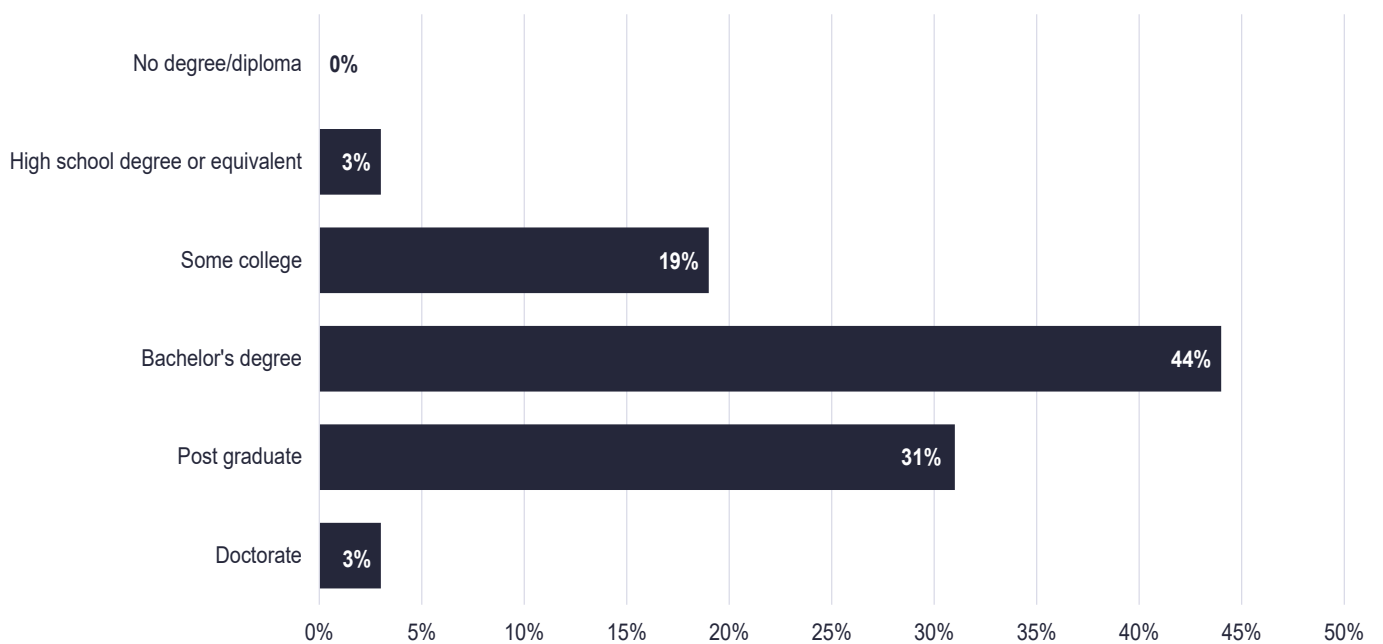


Chart 4: Age distribution



Source: DataCentre Knowledge survey

Chart 5: Education level distribution



Source: DataCentre Knowledge survey

# The potential of freed-up talent & AI

More industry leaders have started to invest in advertising and campaigning in and around educational institutes to attract talent, and recruiters are broadening their scope for available talent by looking beyond the traditional STEM (Science, Technology, Engineering and Mathematics) studies. In addition, a new pool of talent the data centre sector can tap into has become available after the ‘great’ layoff of multiple tech companies such as Meta, Google, Microsoft and Amazon.

Recent data shows that in 2023 globally, there are over 700 tech companies that combined laid off nearly 200,000 employees. This previously hard-to-reach talent has therefore become available and can potentially flow into the data centre sector. However, it must be noted that anecdotally most of the laid-off employees are not direct ‘tech’ workers as these lay-offs are often amongst HR, commercial, administrative and lower-skilled jobs.

The implementation of automation and Artificial Intelligence (AI) can also reduce the labour shortage and can potentially

replace some jobs. In their most recent ‘Future of Jobs’ report, the World Economic Forum (WEF) estimates approximately 23% of jobs globally are expected to be affected by automation and AI by 2027; they forecast that approximately 69 million new jobs will be created and 83 million jobs will be eliminated.

The WEF further reports that the adoption of technology and increased digital access will create job growth. However, job growth will face risk and can be offset by losses from slower economic growth, supply shortages and inflation. The report highlights that the fastest-growing jobs will be found amongst AI and machine learning specialists, sustainability specialists, business intelligence analysts, and information security specialists. These jobs are especially relevant for the data centre sector.

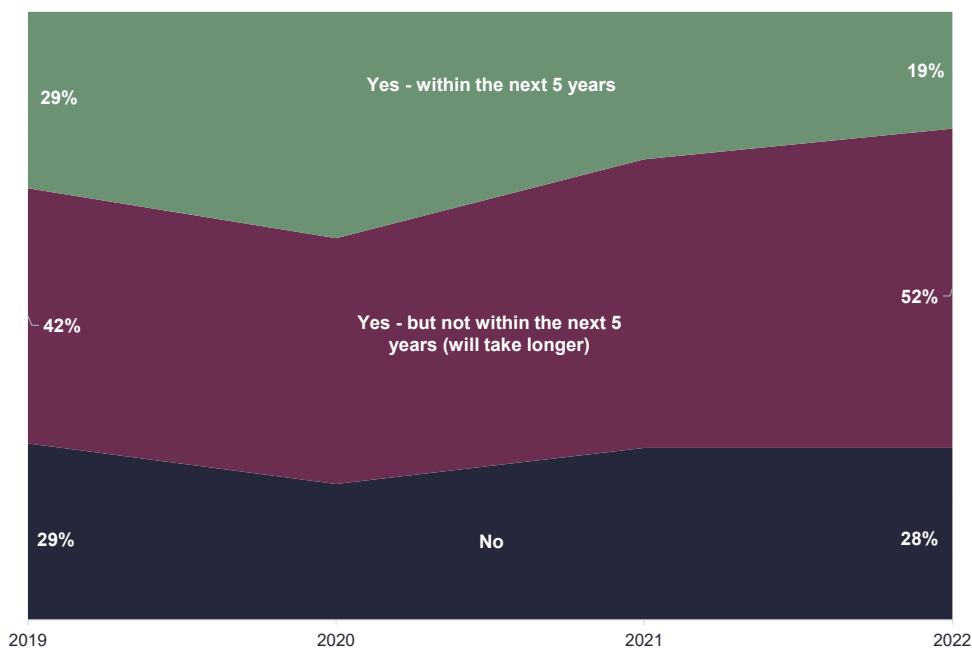
The impact of AI and automation on the labour shortage in the data centre sector is illustrated by the news that International Business Machines Corp (IBM) is expecting to pause hiring as the company expects

roughly 7,800 jobs could be replaced by AI in the coming years. The CEO of IBM quotes that ‘hiring for specifically back-office functions such as human resources will be suspended or slowed, adding that 30% of non-customer-facing roles could be replaced by AI and automation in five years’.

This view is, however, not (yet) shared amongst data centre operators, as the respondents of the aforementioned Uptime Institute survey are less confident about the impact of AI on the data centre staffing sector in the near future. Just 19% of the respondents expect the implementation of AI to reduce their operations staffing levels within the next five years, down from 29% in 2019.

In the longer term, when looking beyond the next five years, however, there is a stronger belief that AI will reduce the number of employees, with more than half (52%) of respondents expecting AI to reduce their staffing numbers in the longer term -, but not in the next five years.

**Chart 6: Believe that AI will reduce data centre operations staffing levels in the future**



Source: Uptime Institute

# Identifying the hot & cold spot markets in Europe

Unsurprisingly, most professionals and universities are located in or around the more established and mature FLAP-D markets (Frankfurt, London, Amsterdam, Paris, Dublin). TeleGeography forecasts that these FLAP-D markets will experience some of the strongest growth in bandwidth usage in Europe in the coming years, with an average CAGR of 32% up to 2029 for these markets.

In these FLAP-D cities, there is a relatively stronger presence and availability of talent coming from universities located in these markets, that offer data centre-related programmes such as information technology, computer science, cloud computing, systems analysis, and/or data network. Therefore, these FLAP-D markets are expected to handle the forecasted growth relatively well.

However, the markets where the bandwidth usage is expected to grow strongly but have a smaller talent pool with a limited inflow of new talent due to a lack of universities offering relatable programmes are set to be faced with more challenges to facilitate the bandwidth usage growth. Especially as the data centre capacity in these markets is already lower compared to the FLAP-D markets.

On a European level, Italy, Spain, and the Nordic countries (except Norway) are forecasted to see their bandwidth usage increase by a minimum of 30% per year until 2030. Whilst the number of currently available data centre professionals is limited, and with a relatively lower number of universities producing new talent for the sector.

Therefore, these countries are expected to face more headwinds and challenges to facilitate the forecasted growth. However, the CEE countries are forecasted to have a relatively stronger bandwidth usage growth whilst there the number of professionals and universities offering data centre-related programmes is growing. This indicates the potential to attract this talent to different countries/regions where there is a severe shortage.

**“The established markets will grow the strongest, driven by the presence of existing talent and talent-producing institutions”** – Bram de Rijk





# The impact on data centre occupiers and landlords in the near future

Labour shortage could limit the sector's ability to grow, as less labour will be available to operate existing data centres -or to develop new data centres. This then could lead to limited available power capacity and a limited development pipeline in Europe. This will impact both data centre occupiers and landlords.

A lack of available talent could put pressure on rental growth due to the forecasted data consumption growth, combined with the lack of supply. Especially, data centre occupiers are faced with increasing costs as they try to attract and retain talent. This could negatively impact profit margins. Data centre landlords will mostly be impacted by higher development costs due to higher labour construction costs.

However, the different initiatives and programmes to address the lack of ICT

specialists and the lack of digital skills among the European population have the potential to relieve some pressure on the labour shortage in the near term. As the silver-tsunami has not yet hit its peak, this means that there are still senior employees that can train and educate the younger workforce.

When looking past the peak of the retirement swell, the labour shortage impact can be reduced by further AI implementation, as shown by the Uptime Institute survey results.

It must be noted that the ICT sector is broad and includes a wide variety of expertise, knowledge and skills. The data centre is a highly niche sector requiring specific and highly skilled talent. The increase in ICT specialists will most likely benefit other ICT sectors more than the data centre sector. Moreover, more digitally

skilled people across Europe will contribute to further growth in data consumption, further fuelling the demand for data centres. This could then result in even higher demand for data centre talent and labour.

Nevertheless, more digitally skilled ICT specialists will benefit the data centre sector to some extent as it is easier to educate and train talent with digital skills than talent without these skills or backgrounds.

Furthermore, the data centre sector can source new talent from freed-up and untapped talent pools in the coming years by narrowing the gender inequality gap, investing in advertising, campaigning in the university talent pool, tapping into recently laid-off tech workers, and by the implementation of increased automation and AI.





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