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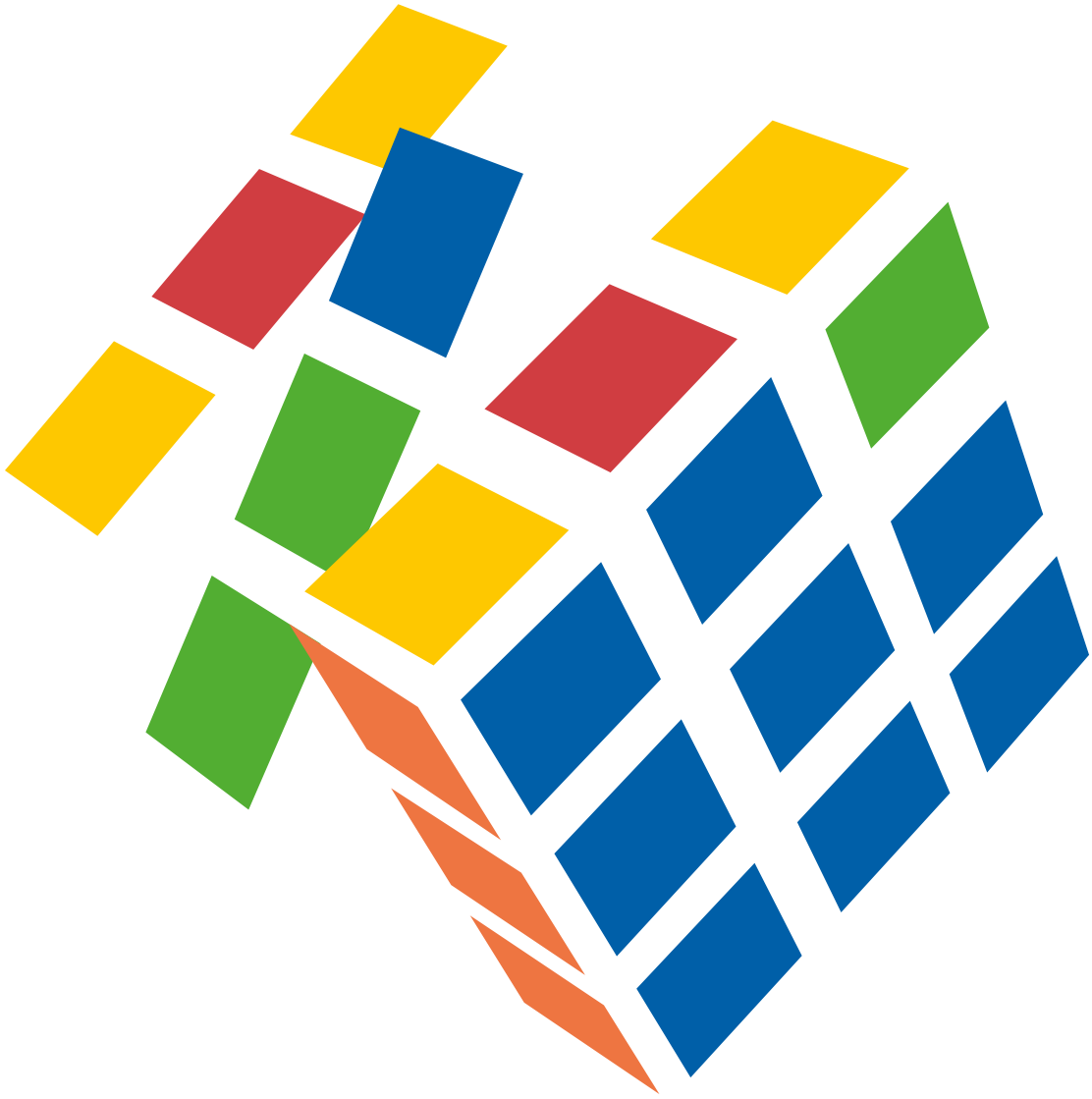


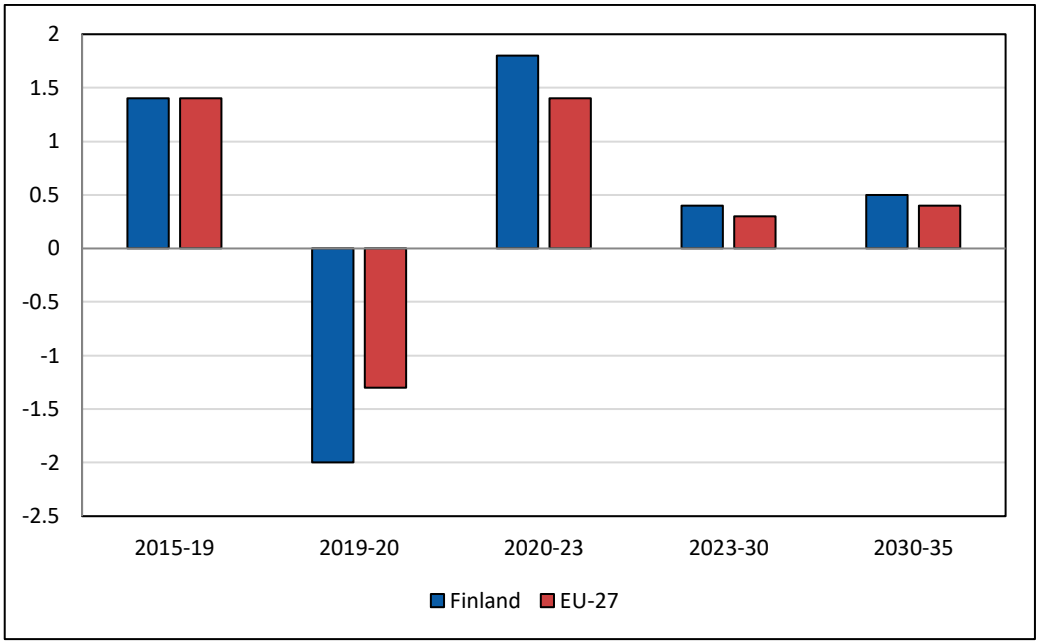
2025 skills forecast

Finland

1. Employment outlook

Employment in Finland is forecast to grow slightly faster than the EU-27 average, albeit at much slower rates than seen over 2015-19. Figure **1** shows that employment in Finland grew at the same rate as the EU-27 average over 2015-19 but fell more sharply in 2020 as the Covid-19 pandemic hit. Employment in Finland is then estimated to have bounced back more strongly than the EU-27 over 2020-23. Across the forecast period, employment in Finland is forecast by the model to grow by 0.4-0.5% pa compared with growth of around 0.3-0.4% pa for the EU-27 as a whole.

Figure 1**.** **Annual percentage employment growth in Finland and the EU-27, 2015-35**



Source: Cedefop (2025 Skills Forecast).

2. Labour force overview

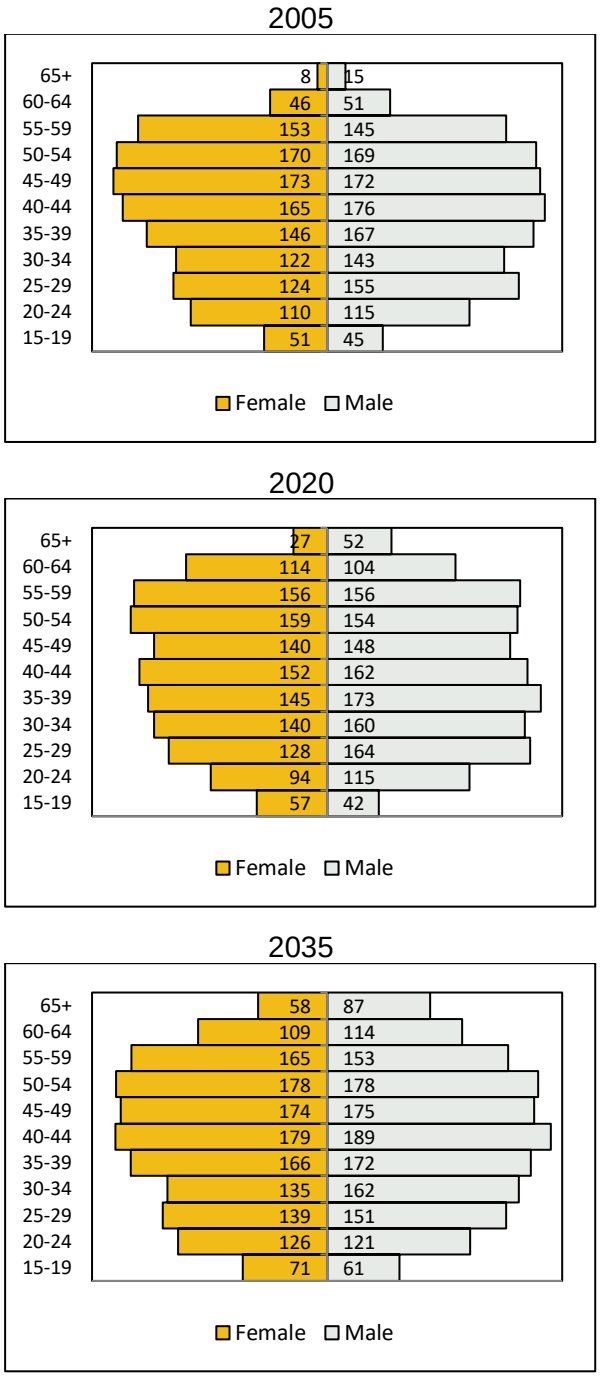
Figure **2** shows Finland's labour force by age group in 2005, 2020 and 2035. Changes in the labour force in Finland over the forecast period will continue to be driven by the ageing population, although less than in the EU as a whole, and increasing participation rates in most age groups. The total labour force in Finland is projected to increase by 12% over 2020-35 compared with growth of 5% over the previous 15 years. This compares with an expected increase in the labour force of just under 10% over 2020-35 for the EU-27. The total participation rate in Finland is forecast to increase by 4 pp over 2020-35, the same as forecast for the total rate for the EU-27. The total population is forecast to grow by 4% over 2020-35, compared with a growth of 8% over 2005-20.

The population aged 15-19, 25-39 and 55-64 in Finland is forecast to decline during 2020-35, but, even though the population aged 40-49 and 65 and over is forecast to grow quite strongly, the population in Finland is not forecast to age as much as the EU-27 as a whole over this period.

The participation rates of all age groups in Finland are forecast to increase over 2020-35, with the strongest increases projected for the 15-19 (15 pp), 60-64 (13 pp) and 20-24 (10 pp) age groups.

As elsewhere, female participation rates in Finland are generally forecast to increase more than male rates. Overall, the total participation rate for females is projected to increase by 6 pp and the male rate to increase by 3 pp, over 2020-35.

Figure 2. **Distribution of the labour force (thousands), 2005-35**

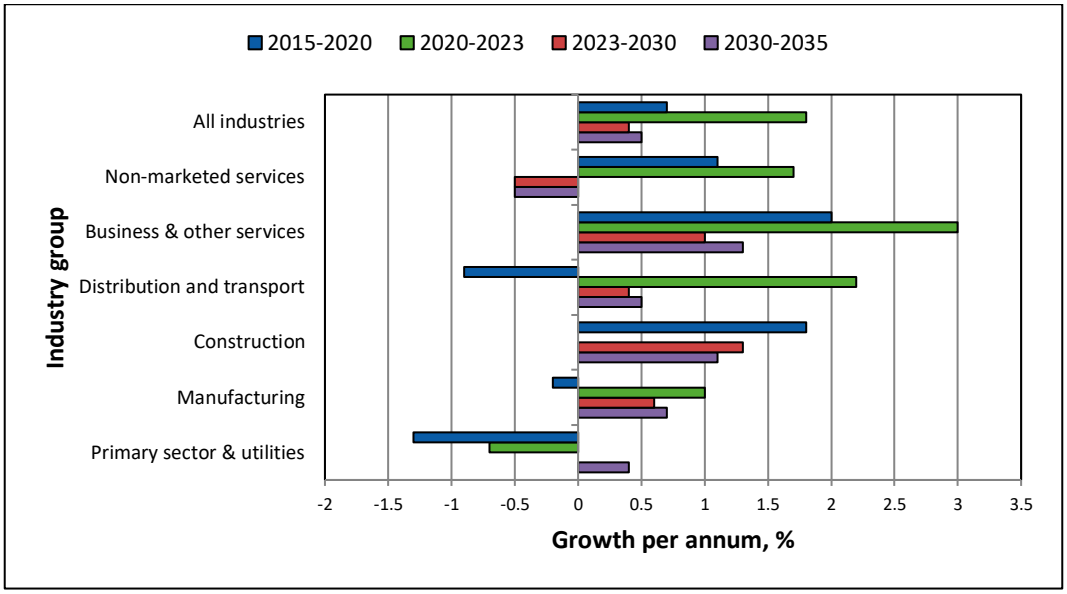


Source: Cedefop (2025 Skills Forecast).

3. Sectoral employment trends

Figure **3** shows annual average employment growth by broad sector in Finland between 2015 and 2035. Although total employment in Finland is expected to continue to grow over the forecast period, the picture among the broad sectors is mixed, with employment in *primary sector & utilities* forecast to remain static and in *non-marketed services* to see an overall decline. the remaining broad sectors are forecast to see relatively strong growth in employment over the whole forecast period. Growth in Finland is impacted, among other factors, by the war in Ukraine, the outcome and duration of which is very uncertain.

Figure 3**.** **Employment growth by broad sector of economic activity, 2015-35**



Source: Cedefop (2025 Skills Forecast).

In terms of sub-sectors (i.e. below the level of the six broad sectors discussed above), the pattern of growth is slightly more mixed. All sub-sectors within *Business & other services* are forecast to see relatively strong growth over 2023-30, apart from *real estate activities, telecommunications* and *legal, accounting & consulting services*, which are forecast to see weak growth or a decline. The pattern is similar in *distribution & transport*, except that employment in the large (accounting for 11% of total employment in Finland in 2020) sub-sector of *wholesale & retail trade* is forecast to decline slightly over 2023-30. Within *non-marketed services*, employment in the *health* (17% of employment) sub-sector is forecast to remain static over 2023-30, while employment in *public administration & defence* (7% of employment) and *education* (6% of employment) is forecast to

decline over the same period. Within the larger (around 2% or more of total employment) sub-sectors of *manufacturing*, employment in *other machinery & equipment* and *wood, paper, printing & publishing* is forecast to grow quite strongly over 2023-30, while employment in *basic metals & metal products* is forecast to fall slightly over the same period. Within *primary sector & utilities*, the *agriculture* subsector, which accounts for more than two-thirds of employment in the broad sector, is forecast to fall over 2023-30.

Cedefop skills forecasts estimate the total job openings by occupational group as the sum of net employment change and replacement needs. Net employment change refers to new jobs created or lost due to the expansion or contraction of employment in that sector or occupation. Replacement needs arise as the workforce leaves the occupation due to retirement or career changes. Replacement needs, generally, provide more job opportunities than new jobs, meaning that significant job opportunities arise even in occupations declining in size (i.e. agricultural workers are a typical example, as ageing workers employed in the sector will need to be replaced).

4. Job openings by occupational group

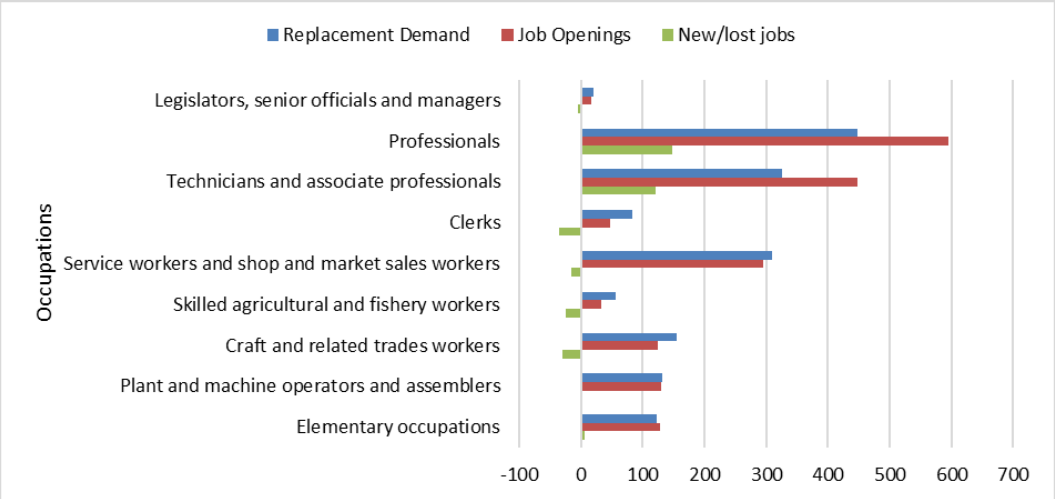
Most broad occupations, except for *professionals, technicians and associate professionals* and *elementary occupations* are expected to see a decrease in the number of jobs during this period. Despite this decline, replacement demand will still drive numerous job openings.

Professionals and *technicians and associate professionals* are the two broad occupations anticipated to generate the largest number of job openings over the forecast period, accounting for 33% and 25% of total job openings respectively. Specifically, employment for *professionals* is forecast to grow from 731 000 in 2022 to 878 000 in 2035, creating 147 000 new jobs. Combined with replacement demand, the total requirement for *professionals* will provide approximately 595,000 job openings. Similarly, employment for *technicians and associate professionals* is projected to rise from 514 000 in 2022 to 635 000 in 2035, generating 121 000 new jobs and 447 000 job openings, including replacement demand (326 000).

Among the detailed occupations, *business and administration associate professionals, health professionals,* and *personal care workers* are projected to account for a substantial share of all job openings*. business and administration associate professionals* are expected to represent 8% of all job openings. This will be driven by a substantial number of job openings resulting from both new

positions and replacement demand. Similarly, *health professionals* and *personal care workers* will contribute a relatively large number of job openings.

Figure 4. **Total job openings, 2022-35**



Source: Cedefop (2025 Skills Forecast).

Even among *eementary occupations*, *labourers in mining, construction, manufacturing and transport* are projected to see a significant number of job openings, accounting for 2% of the total.

5. Drivers of occupational change

Within the Cedefop skills forecast, future employment growth (or decline) of occupations is further broken down by separating national economic components from regional industrial and economic effects, helping to interpret what is driving the change. From this perspective, employment growth can be explained by three possible drivers: (a) overall economic trends (i.e., growth or decline), (b) shifts of employment between sectors, and (c) changes in the occupational structure within sectors (i.e., factors making some occupations more important than others).

Among high-qualified roles, *science and engineering professionals* are forecast to experience substantial growth. Their numbers are expected to increase by 26%, with strong high qualification and occupation effects reflecting the expanding specialisation in these fields. This trend aligns with Finland's emphasis on technological advancement and innovation, leading to a greater demand for science and engineering expertise. Similarly, *business and administration*

professionals are also forecast to see an increase of 27. This is driven by the increasing complexity of business operations and the growing need for advanced managerial skills. Other high-qualified occupations that will see growth are *drivers and mobile plant operators, health professionals,* and *legal, social, cultural and related associate professionals.*

In contrast, medium-qualified occupations are showing more mixed results. For instance, *administrative and commercial managers* are projected to experience a decline in employment, despite an overall positive occupation effect. This is indicative of a sector shift where the roles requiring medium qualifications are not growing as robustly as high-qualification positions. Additionally, production and specialised services managers are anticipated to see a considerable decrease, of 29%, primarily due to technological advancements and automation reducing the need for these roles.

On the other end of the spectrum, lower-qualified occupations are also undergoing significant changes. For instance, *building and related trades workers* are expected to see a moderate increase, reflecting the continued demand for hands-on manual skills in construction and related fields. However, roles such as *metal, machinery, and related trades workers* are facing a decline, attributable to increasing automation in these sectors. This trend underscores the broader movement towards more automated and specialized production processes.

The impact of digitalisation and a shift towards a more service-oriented economy further underscores the importance of high-skilled occupations. As various sectors evolve, the demand for higher-level skills grows, while the need for intermediate qualifications diminishes. This is particularly evident in clerical work, where the employment share is expected to decrease, with customer service clerks being one of the exceptions.

6. Demand for and supply of skills

Within the Cedefop skills forecast, skills are proxied by the highest level of qualification held by individuals in the labour force and employment. Three levels are distinguished: high, medium, and low, corresponding to the official ISCED classification. The occupational group also indicates the skill level required, as some occupations (e.g. professionals) typically require high-level skills, while others (e.g. elementary) typically require only basic ones. Therefore, occupational groups are also linked to a skill level.

In Finland, the anticipated job openings up to 2035 reflect a nuanced demand for various levels of qualifications. According to Figure **5**, a substantial proportion of job openings in Finland will require medium-level qualifications. Specifically,

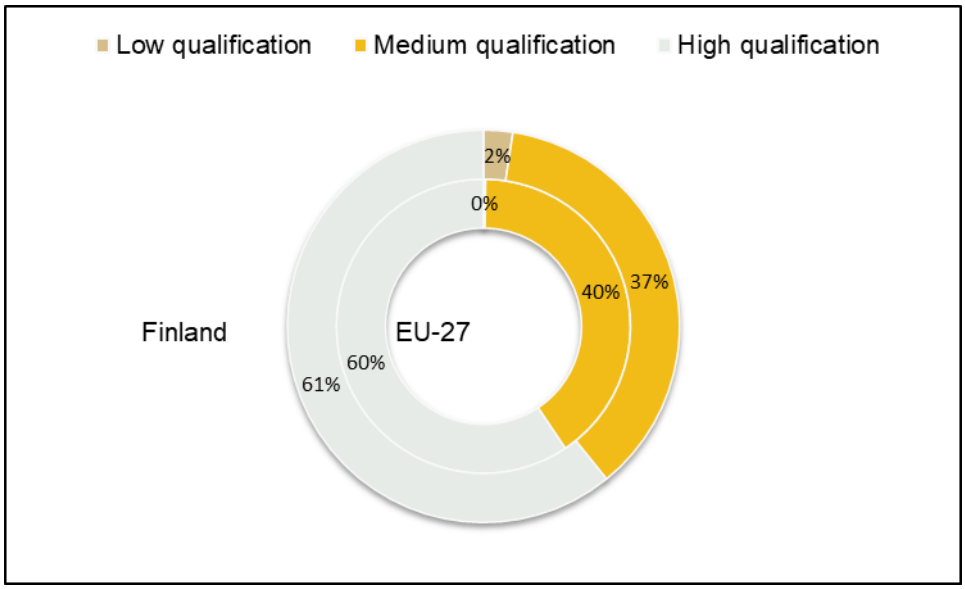
medium-level qualifications will account for approximately 37% of total job openings, slightly below the EU-27 average of 40%. This difference highlights a more modest demand for medium-level qualifications in Finland relative to the broader EU-27 context.

In contrast, high-level qualifications are expected to see a notable increase in demand. High-level qualifications will represent about 61% of all job openings in Finland, exceeding the EU-27 average of 59%. This indicates a stronger emphasis on high-level qualifications within the Finnish job market, reflecting a greater proportion of roles that will demand advanced skills and expertise.

The demand for low-level qualifications in Finland is relatively minimal. Only about 2% of job openings will require low-level qualifications, above the EU-27 average of 0%. This underscores a limited requirement for low-level qualifications within Finland's future job market.

Overall, the data suggests that Finland's job market up to 2035 will see a considerable focus on high-level qualifications, with a moderate demand for medium-level qualifications and a negligible demand for low-level qualifications. This pattern indicates a shift towards more skilled roles, aligning with broader trends of increasing specialisation and expertise requirements across Europe.

Figure 5. **Shares of total job openings by level of qualification, 2022-35**

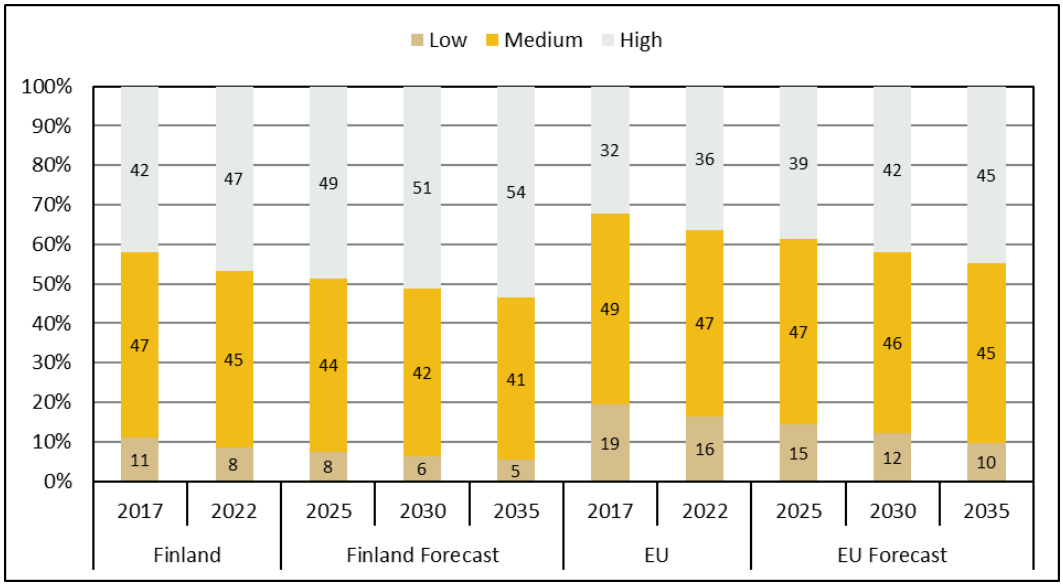


Source: Cedefop (2025 Skills Forecast).

Future labour supply trends depend on the size of the working-age population (defined as those aged 15 or older), labour market participation rates, and the extent to which people acquire formal qualifications.

Figure 6 depicts the development of qualifications within the labour force in Finland and the EU-27. In Finland, the share of highly qualified workers is expected to increase significantly, from 47% in 2022 to 54% by 2035. This growth reflects a stronger emphasis on advanced skills and expertise within the Finnish labour market, surpassing the EU-27 average, which is only projected to increase to 45% by 2035.

Figure 6. **Labour force by qualification level**



Source: Cedefop (2025 Skills Forecast).

Conversely, Finland's medium-qualified workers share is expected to decline from 45% in 2022 to 41% by 2035. This decrease is anticipated to benefit the share of high-skilled workers and go along with a minor reduction in low-qualified workers. Specifically, Finland's proportion of low-qualified workers is projected to fall from 8% in 2022 to 5% by 2035. This reduction aligns with broader trends of decreasing demand for lower-level qualifications.

Finland's labour force is expected to experience a notable shift towards higher qualifications, with an increasing share of high-qualified workers and a decreasing share of both medium and low-qualified workers. This trend indicates a growing emphasis on advanced skills and a corresponding decline in the need for lower-

level qualifications, positioning Finland with smaller shares of lower and medium qualifications compared to the EU-27 average.

The **labour shortage index** is a method to summarise three elements of potential labour shortage: (1) employment growth, (2) replacement demand, and (3) Supply/Demand imbalance (IFIOD). The outcomes at the occupation level are grouped into four quartiles: those with a low indication of shortage get the value 1, and those with the highest indication of shortage will get the value 4. The total outcome of the individual elements is a simple average of the elements. In Figure 6, the length of the bar gives the overall outcome, where higher levels indicate more shortage. The outcomes of the three elements are also given to quickly evaluate the influence of employment growth - replacement demand, and - supply-demand imbalances.

The labour shortage index, calculated at the ISCO 2-digit level and then aggregated to the ISCO 1-digit level, provides a detailed analysis of labour market imbalances. Among the various occupational groups, the highest value of the labour shortage index is found among *technicians and associate professionals*. This high index value is driven by robust employment growth and substantial replacement needs in these occupations.

In Finland, the labour market is expected to experience substantial imbalances by 2035. The supply of low- and medium-skilled workers is projected to fall short of the demand, while the supply of high-skilled workers is projected to meet the demand more adequately. This situation indicates that labour market tightness will persist, primarily affecting jobs requiring low and medium-qualified workers, for which there will be hiring difficulties throughout the forecast period.

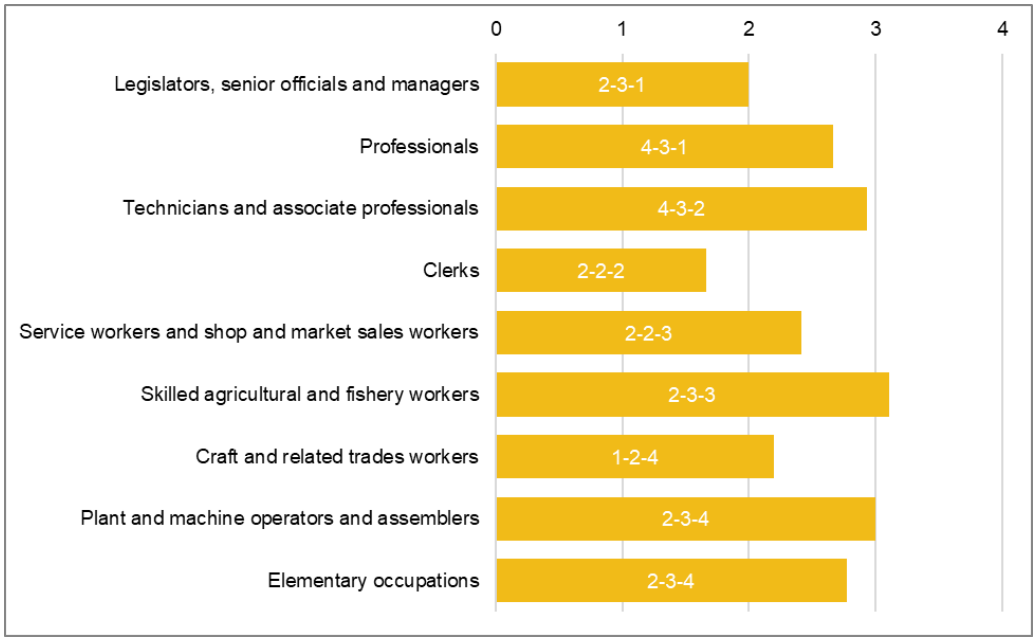
For skilled manual occupations, significant shortages are expected among plant and machine operators and assemblers (2-3-4). This group shows a significant imbalance due to high employment growth and replacement needs. In the skilled non-manual category*, personal service workers* face severe shortages, driven by high replacement demand and notable employment growth.

Skilled agricultural and fishery workers are forecast to have high replacement demand and moderate growth. Plant and machine operators and assemblers also have a high score, reflecting shortages driven by high growth and imbalances.

High-skilled workers also experience notable shortages, particularly among *professionals* and *associate professionals*. The shortages among *professionals* are primarily due to high employment growth and replacement demand. In contrast, for *associated professionals*, the imbalance is due more to the employment of workers with intermediate qualification levels.

Shortages for *technicians and associate professionals* reflect high growth and replacement demand alongside demand and supply imbalances. Labour shortages in Finland are particularly concentrated in businesses where the working language is Finnish. The availability of labour is much better in ICT jobs that use the English language. *Clerks* face moderate shortages due to declining employment and moderate replacement needs. *Service workers and shop and market sales workers* also face notable shortages, driven by high replacement demand despite a slight decline in employment.

Figure 7. **Labour Shortage Index, 2022-35**



Source: Cedefop (2025 Skills Forecast).

Chief executives, senior officials, and legislators also have a high shortage index vale *administrative and commercial managers* have a lower index value, while *health professionals* are forecast to continue to experience significant shortages, driven by high growth and replacement needs. *Legal, social, and cultural professionals* also face substantial shortages.

Cedefop methodology

The Cedefop Skills Forecast offers quantitative projections of future trends in employment, by sector of economic activity and occupational group. Future trends in the level of education of the population and the labour force are also estimated. Cedefop's forecast uses harmonised international data and a common methodological approach allowing cross-country comparisons between employment trends in sectors, occupations and qualifications. The forecast and methodology is validated by a group of national experts. The forecast does not substitute national forecasts, which often use more detailed methodologies and data, while they also incorporate in-depth knowledge of a country's labour market.

The latest round of the forecast covers the period up to 2035. The forecast takes account of global economic developments up to November 2023. The European Economy is expected to grow despite monetary tightening on phasing out of fiscal support.

The key assumptions of the baseline scenario incorporate the Eurostat population forecast available in June 2023 (Europop 2023) ([1]), and the short-term macroeconomic forecast produced by DG ECFIN in November 2023 ([2]). The source of historical labour force data is the European Labour Force Survey, which in 2022 underwent important methodological changes, causing a break in the time series for several variables, including the labour force. Consequently, in many Member States, the participation rates in 2021 are noticeably above/below historical trends. Moreover, some Member States experienced significant revisions in the historical data series for sectoral employment from the National Accounts.

The Cedefop Skills forecast 2025 is consistent with the objectives set by the European Green Deal by incorporating suitable assumptions about additional investment, power sector technologies, energy balances, and carbon pricing.

Energy and commodity price forecasts from the World Bank and the IEA are used as inputs to the Cedefop Skills Forecast.

([1]) https://ec.europa.eu/eurostat/web/population-demography/population-projections/database

([2]) https://economy-finance.ec.europa.eu/economic-forecast-and-surveys/economic-forecasts/autumn-2023-economic-forecast-modest-recovery-ahead-after-challenging-year_en

For the latest update and access to more detailed Cedefop skills forecast data please visit:
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