



CEDEFOP

European Centre for the Development  
of Vocational Training

EN



# 2023 skills forecast Netherlands

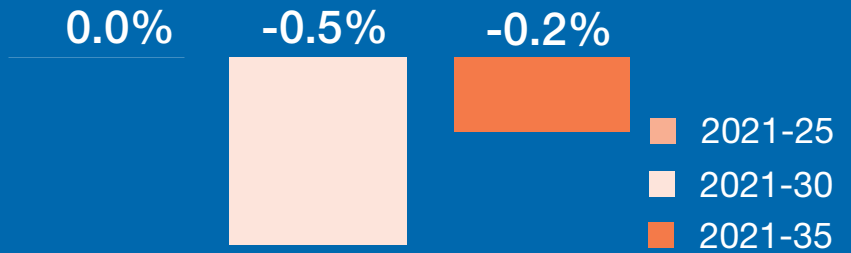




Employment in 2035

9 676 000

% Employment growth 2021-35



**Fastest-growing sectors**  
2021-35% growth



**Total job openings, 2021-35**

5 715 000



**Highest-demand occupations**  
Largest creation of new jobs, 2021-35



**Total job openings by skill level 2021-35**



increase in high-skilled labour demand 2021-35 **34%**



**3.4%**  
employment increase in 2021-35



**Fastest growing occupation**  
Legal, social and cultural professionals



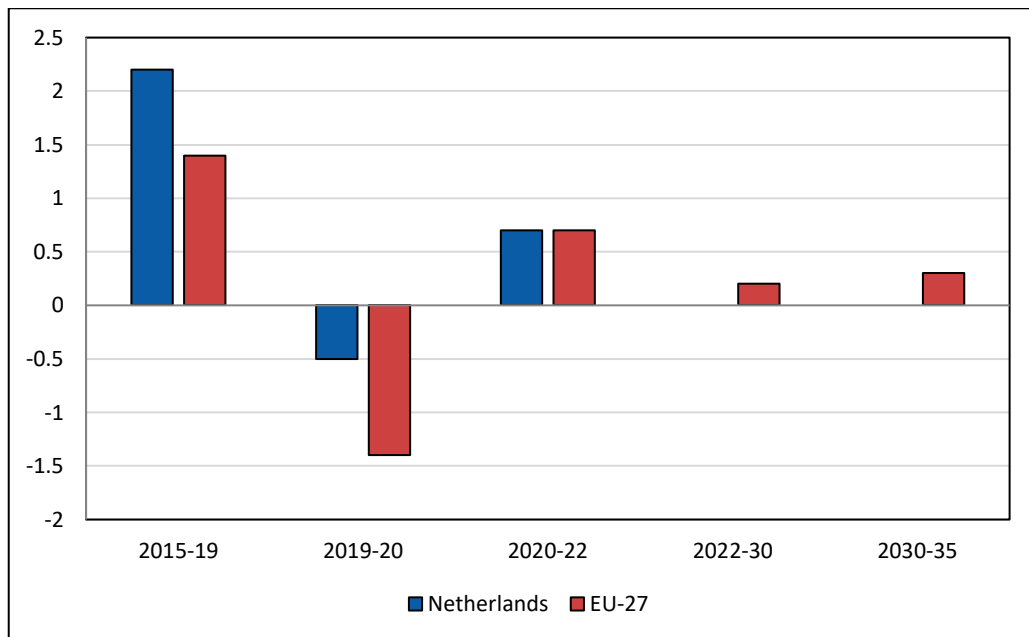
**Fastest growing sector**  
Information and communication

# Cedefop skills forecast: Netherlands

## 1. Employment outlook

Employment in the Netherlands is forecast to remain broadly static to the end of the forecast period. Figure 1 shows that employment in the Netherlands grew slightly faster than the EU-27 average over 2015-19, and fell less sharply in 2020 as the Covid-19 pandemic hit. Employment in the Netherlands is estimated to have bounced back at around the same rate as the EU-27 over 2020-22. Across the forecast period, however, employment in the Netherlands is forecast to remain stable, compared with growth of around 0.2-0.3% pa for the EU-27 as a whole.

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



Source: Cedefop (2022 Skills Forecast).

## 2. Labour force overview

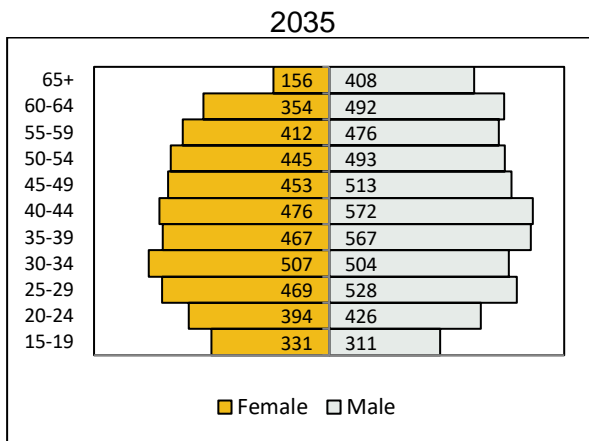
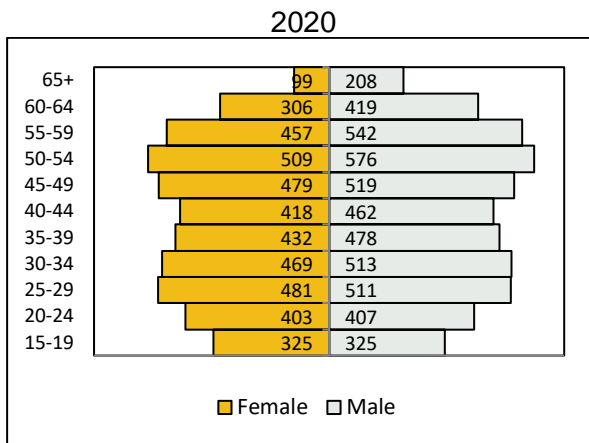
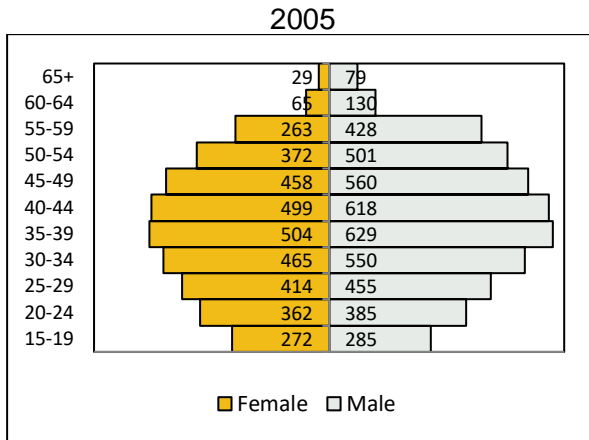
Figure 2 shows the Dutch labour force by age group in 2005, 2020 and 2035. Changes in the labour force in the Netherlands over the forecast period will continue to be driven by the ageing population and increasing participation rates in most age groups. The total labour force in the Netherlands is projected to increase by 4.5% over 2020-35, compared to growth of 12% over the previous 15 years. This compares with an expected increase in the labour force of just under 3% over 2020-35 for the EU-27. The total participation rate in the Netherlands is forecast to remain static over 2020-35, compared with an increase of 1 pp for the EU-27. The total population is forecast to grow by 5% over 2020-35, compared with a growth of 10% over 2005-20.

The population aged 15-29 and 45-59 in the Netherlands is forecast to decline during 2020-35, while the population aged 65 and over, in particular, is forecast to grow strongly, reflecting trends in the relevant younger cohorts in preceding periods.

The participation rates of all age groups in the Netherlands apart from for those aged 30-34 are forecast to increase over 2020-35, with the strongest increases projected for the 60-64 (10 pp), 55-59 (8 pp) and 20-24 (8 pp) age groups.

The differences between male and female participation rates in the Netherlands are not generally as great as the EU-27 average, and, also, unlike the EU-27 average, female participation rates in the Netherlands are not generally forecast to increase more than male rates. Overall, due to changes in population in key age groups, the total participation rate for females is projected to fall by 2 pp, while that for males is projected to increase by 2 pp over 2020-35.

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

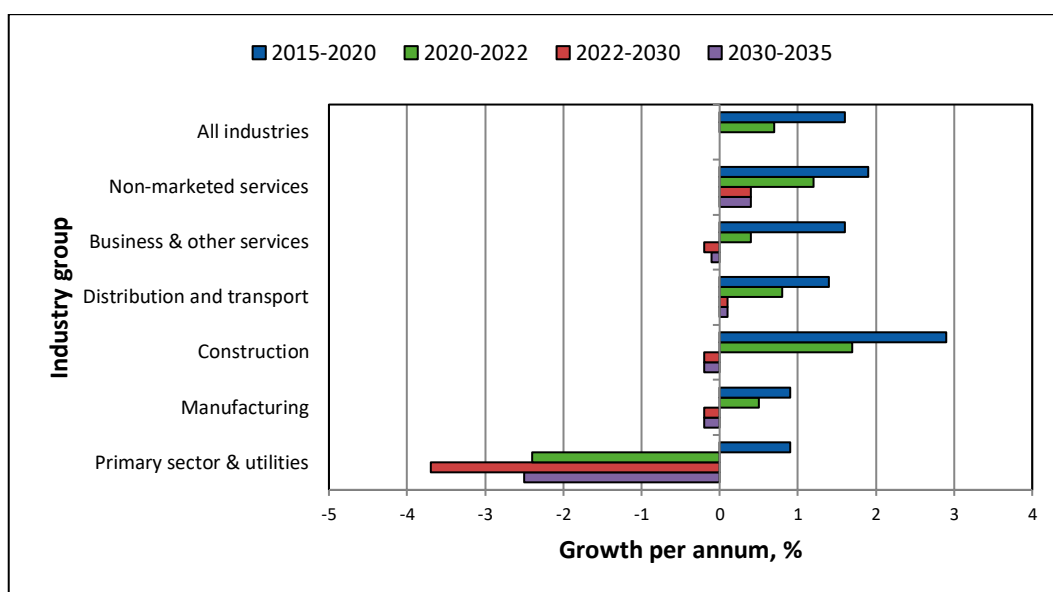


Source: Cedefop (2022 Skills Forecast).

### 3. Sectoral employment trends

Figure 3 shows the annual average employment growth by broad sector in the Netherlands between 2015 and 2035. Only *Non-marketed services* (0.4% pa) and *Distribution & transport* (0.1% pa) are forecast to see positive employment growth over this period. Employment in the relatively small Primary sector & utilities is forecast to see the greatest decline, at -3.7% pa over 2022-30.

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



Source: Cedefop (2022 Skills Forecast).

In terms of sub-sectors (i.e. below the level of the six broad sectors discussed above), the pattern of growth is much more mixed. Within *Non-marketed services*, the two largest sectors of *education* (accounting for 6% of total employment in the Netherlands in 2020) and *health* (accounting for 16% of total employment) are both forecast to see a growth of around 0.5% pa over the forecast period, while public administration & defence (5% of total employment) is forecast to see a small decline over the same period. Within *Distribution & transport*, employment in the relatively large (4% of employment in 2020) *accommodation & catering sub-sector* is forecast to grow quite strongly. However, employment in the much larger (16% of employment) *wholesale & retail trade sub-sector* is forecast to shrink very slightly over the same period. Similarly, within *Business & other services*, employment growth in some sub-sectors, such as *market research & other professional services*, *telecommunications*, *research & development* and *computer programming* is forecast to be quite strong over the forecast period. However,

employment in the large sub-sector (12% of employment) of *administration & support services* is forecast to fall quite strongly over the same period. The fall in employment in *Primary sector & utilities* is expected to be driven by a sharp fall in the *agriculture* sub-sector. The sub-sectors within *Manufacturing* tend to be relatively small. Motor vehicles, other chemicals, optical & electronic equipment, electrical equipment and other transport equipment are all forecast to see strong employment growth over 2022-35. On the other hand, the relatively large (1.2% of employment) *basic metals & metal products* are forecast to see a small decline in employment and food, *drink & tobacco* (1.4% of employment) are forecast to see a strong fall in employment over the same period.

## 4. Job openings by occupational group

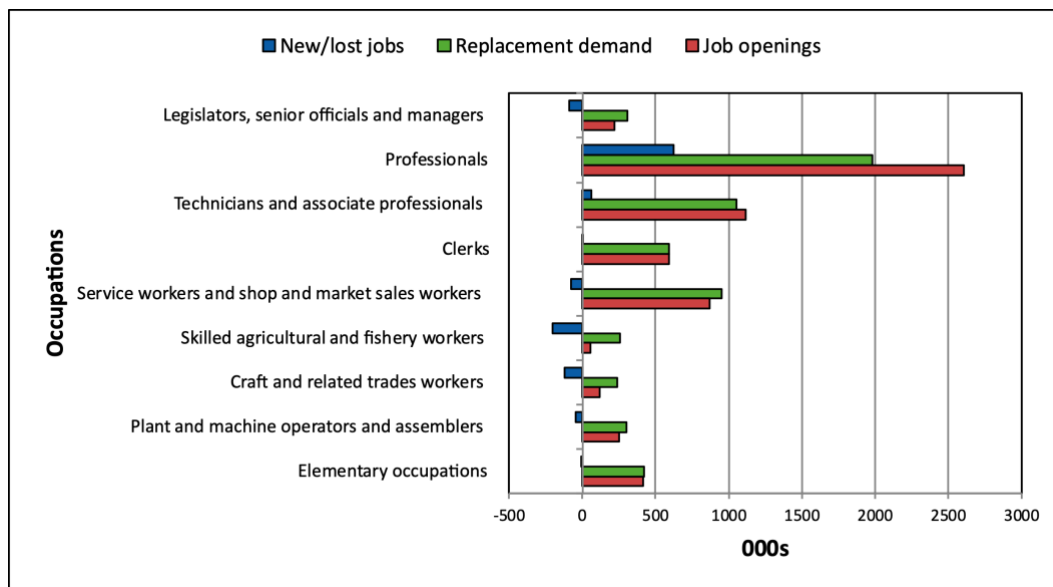
Cedefop skills forecasts estimate the total job openings by occupational group as the sum of net employment change and replacement needs. Net employment change refers to new jobs created or jobs lost due to the expansion or contraction of employment in that sector or occupation. Replacement needs arise 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).

Figure 4 shows total job openings by broad occupational group over 2020-35. The number of job openings indicates the number of jobs required to be filled due to lost/newly created jobs and those requiring replacement workers. Although most broad occupations are expected to see little growth or a decline in jobs, there will still be job openings due to replacement demand. *Professionals* is the only broad occupation forecast to see a relatively large increase in jobs over this period and is also projected to see the largest replacement demand and hence the greatest number of job openings.

At the more detailed level, most job openings (taking both new/lost jobs and replacement needs together) are expected to be in highly skilled occupations such as business & administration and *associate professionals, legal, social & cultural professionals, teaching professionals* and *health professionals*. The skilled non-manual occupations of *personal service workers* and *numerical & material recording clerks* are also expected to see a relatively large number of job openings. Other than business & administration associate professionals, all of the above are forecast to see an increasing number of jobs and replacement demand. Many of the other detailed occupations across the economy are forecast to see a decline

in employment and a lower number of job openings despite some replacement demand.

Figure 4. Job openings by broad occupational group, 2020-35



Source: Cedefop (2022 Skills Forecast).

## 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 trends of the economy (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).

The occupational composition of employment in the Netherlands is mainly characterised by changes in the level of specialisation within occupations and, in fewer cases, by changes in industry size. Stronger occupation-specific and industry effects will lead to an increasing share of *professionals* and some categories of *associate professionals*, but also in occupations which support the service and production process, such as *customer services clerks* and *assemblers*. High-skilled occupations that can benefit from these trends are, for example, *business and other professionals*, *science and engineering professionals*, and



*legal, social, cultural and related associate professionals*. The impact of occupation-specific and industry size effects is positive for the group of highly skilled occupations but remains negative for both medium- and lower-level occupations.

Therefore, the overall effect of occupational change depends on several factors that need to be considered together. Increasing automation and digitisation, moves toward a service-oriented economy will lead to greater use of higher-level occupations at the expense of some medium and low-level occupations.

All relevant lower-level occupations are expected to decrease, apart from a slight employment growth for *cleaners, refuse, street and related occupations*.

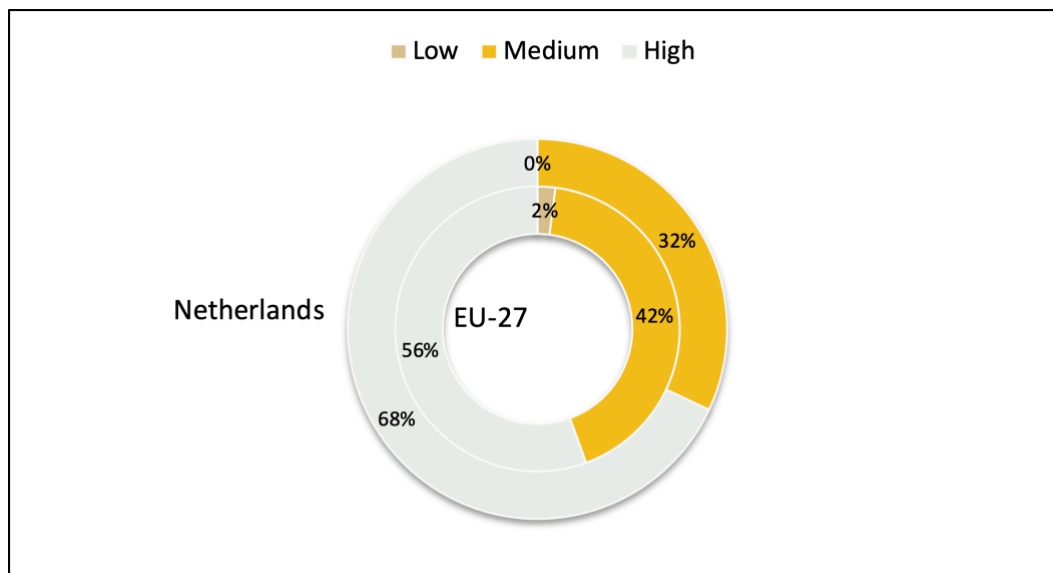
Intermediate occupations will also experience an overall increase. Among the medium-qualified occupations which are expected to see an increase in employment are *customer services clerks* and *assemblers*.

## 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 in employment. Three levels are distinguished, high, medium, and low, which correspond to the official ISCED classification. The occupational group also offers an indication of the skill level required, as some occupations (e.g. professionals) typically require high-level skills, while some others (e.g. elementary) typically require only basic ones. Therefore, occupational groups are also linked to a skill level.

Figure 5 shows the shares of total job openings by qualification level for the Netherlands and the EU-27 over 2022-35. In the Netherlands, more than two-thirds of job openings (68%) are expected to require a high qualification. Compared to the EU-27, a much higher share of job openings is expected to require a high level of qualifications, while a lower share (32%) is expected to require medium qualifications.

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



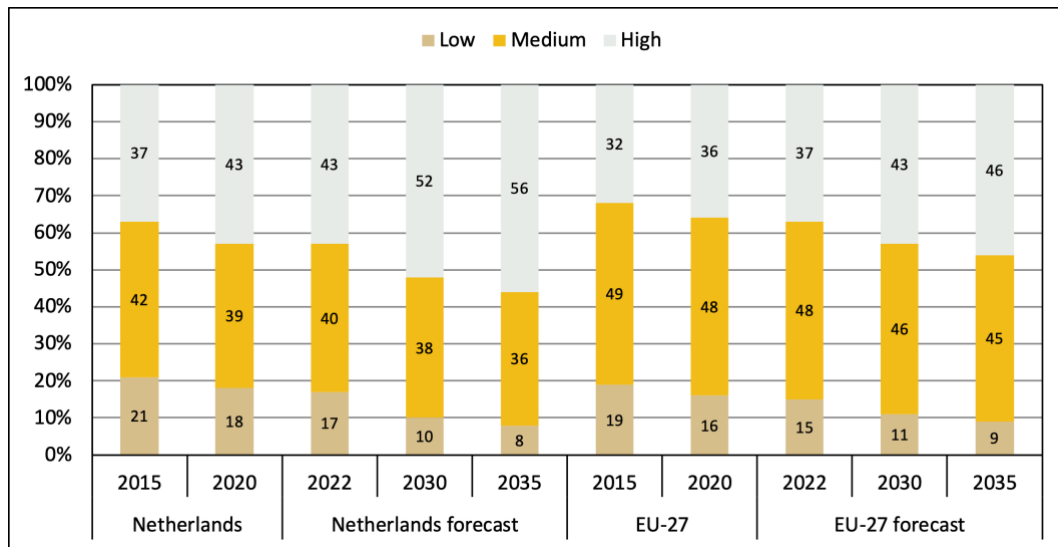
Source: Cedefop (2022 Skills Forecast).

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

Figure 6 shows the development of qualification shares in the labour force in the Netherlands and the EU-27. The Netherlands is rapidly increasing its share of higher qualified in the labour market. While the share was at 43% in 2022, it is expected to increase to 56% of the labour force by 2035.

The increase in the share of the high qualified has been predominantly driven by the outflow of older workers, both low and medium qualified, and to a lesser degree to qualification upgrading. The share of medium qualified workers in the labour force is expected to decrease from 40% in 2022 to 36% in 2035, while the share of low qualified workers is expected to decrease from 17% to 8%. Relative to the EU-27 averages, the Netherlands is expected to continue to have a higher share of the high qualified and a lower share of the medium qualified, with a similar share of low qualified labour.

Figure 6. Labour force share by level of qualification, 2015-35



Source: Cedefop (2022 Skills Forecast).

Overall, the forecast implies an increasing shortage, especially among the lower and medium qualified, while the supply of higher educated is forecast to fill the demand within higher level occupations sufficiently.

Figure 7 shows an indicator, *difficulty of hiring*, whose aim is to approximate shortages of supply by qualifications and its impact on occupations. This measure, shown along the vertical axis, indicates increasing difficulties to fulfil demand given the available supply of qualifications used in the occupation. Along the horizontal axis, the *degree of hiring required* in the occupation is depicted. Higher values indicate that to reach the forecast result that occupation will need to adjust more (in terms of workers with particular qualifications) relative to the base year (2018) levels. These changes (degree of hiring required) can be due to a change in the qualifications required or increases in the number employed. The size of the bubble indicates the *overall employment level*, bigger bubbles indicate more employment while smaller bubbles less employment. Occupations with both a high *degree of hiring required* and a high *difficulty of hiring* (i.e. towards the top right of the figure) are likely to have the most difficulties in achieving a suitable workforce.

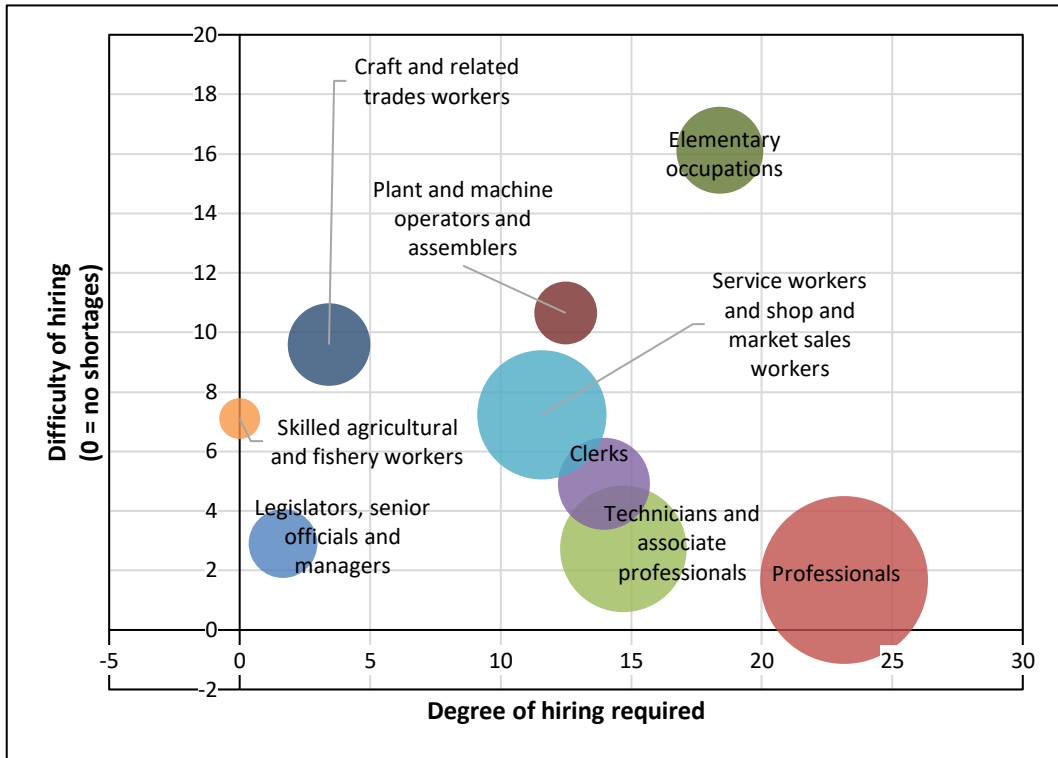
The increasing supply of higher educated workers suggests there could be shortages, especially among the medium and the lower qualified. These shortages could therefore mean that some higher educated workers will have to be employed within occupations at a lower level than they qualify for, or there will be hiring

difficulties. Low and medium level occupations in the *elementary occupations*, as well as *plant and machine operators and assemblers* and *craft and related trades workers*, are expected to see higher levels of hiring difficulties in the forecast (Figure 7). These are expected to be seen alongside medium to high levels of change by qualification.

While *professionals, legislators, senior officials and managers, technicians and associate professionals* are expected to have fewer hiring difficulties, as they usually hire from the supply of higher qualified, they also show a fairly high level of hiring required in the forecast period. This contrasts, however to the national findings and expectations in which a significant labour market shortage in education, healthcare and science and engineering, thus professionals along with technicians and associate professionals, is currently observed and expected to last well into the next decade. Among the high-qualified, specific shortages can be expected among specific skills – which could not be included in the forecast. An example would be a likely difficulty in hiring health professionals despite a high-share of a highly educated workforce, not all of which are specialised in the necessary fields, here medicine and health care.

A high degree of hiring required and moderate difficulties can be found among service workers, shop and market sales workers, and *clerks*.

Figure 7. Indicators of future hiring difficulties, 2022-35



Source: Cedefop (2022 Skills Forecast).

Note: Indicators were calculated at the level of the underlying 2-digit occupation groups. Aggregation was based on the employment weights within each 1-digit occupation group.

## 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 May 2022. The European Economy experienced a sharp downturn in 2020 due to the global pandemic, and partially bounced back in 2021. However, the strength of the recovery in the short term is threatened by global factors such as supply chain disruptions, the consequences of the war in Ukraine and high inflation.

The key assumptions of the baseline scenario incorporate the Eurostat population forecast available in May 2022 (Europop 2019) <sup>(1)</sup>, and the short-term macroeconomic forecast produced by DG ECFIN in May 2022 <sup>(2)</sup>. Several revisions to the data affect the Cedefop Skills forecast 2022, when compared to the 2019 update. For example, the population projections used in the 2022 update are generally more pessimistic than those used in the 2019 update (i.e. Europop 2015), with a corresponding impact on labour force figures. The source of historical labour force data is the European Labour Force Survey, which in 2021 underwent important methodological changes causing a break in the time series for several variables, including labour force. As a consequence, in many Member States the participation rates in 2021 are noticeably above/below historical trends, which causes the Cedefop Skills forecast 2022 to be revised in the same direction, compared to the 2019 update. Moreover, some Member States experienced significant revisions in the historical data series for sectoral employment from the National Accounts.

The Cedefop Skills forecast 2022 is made consistent with the objectives set by the European Green Deal by incorporating suitable assumptions in terms of 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, which therefore incorporate the recent surge in prices.

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

(2) [https://ec.europa.eu/info/business-economy-euro/economic-performance-and-forecasts/economic-forecasts/spring-2022-economic-forecast\\_en](https://ec.europa.eu/info/business-economy-euro/economic-performance-and-forecasts/economic-forecasts/spring-2022-economic-forecast_en)

For the latest update and access to more detailed Cedefop skills forecast data visit our [Skills forecast project page](#).



The country fiche for the Netherlands has been developed in collaboration with Jessie Bakens, Research leader at the Research Centre for Education and the Labour Market, Maastricht University School of Business and Economics, Netherlands.

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