

GREEN MOLECULES: THE UPCOMING REVOLUTION IN THE EUROPEAN EMPLOYMENT MARKET

How Green Hydrogen and Biofuels Can Impact the Employment Prospects in Germany, France, Spain, Italy, The Netherlands, Portugal, and The United Kingdom.



*Work carried out by the ManpowerGroup Spain Research Center for Cepsa.
Registered as 2401166663142, 16/01/2024*

Madrid, January 2024.

TABLE OF CONTENTS



1. WELCOME	05
Cepsa	06
ManpowerGroup	08
2. INTRODUCTION	10
3. EXECUTIVE SUMMARY	13
4. TOWARD TWO MILLION JOBS IN EUROPE	17
4. 1. General Analysis of the Main Economic and Socio-Demographic Factors	18
4. 2. How Green Molecules Impact the World of Work	39
4. 2.a. Spain	40
4. 2.b. France	44
4. 2.c. Portugal	48
4. 2.d. The Netherlands	52
4. 2.e. Germany	56
4. 2.f. Italy	60
4. 2.g. The United Kingdom	64

5. MUCH MORE THAN NUMBERS: QUALITATIVE ELEMENTS OF EMPLOYMENT IN THE ENERGY TRANSITION	68
5.1. Talent shortage or mismatch? Let's talk about the Talent Gap	69
5. 2. Trailing challenges: Upskilling, reskilling, newskilling and other classifications	71
5. 3. Mobility in the labour market	73
5. 4. Socio-demographic challenges: from the ageing of the population to the incorporation of women in traditionally male-dominated sectors	74
5. 5. The most difficult yet: Digital green skills. A challenge turned into an opportunity	76
5. 6. Will we be able to seize the springboard?	77
6. TEN PROPOSALS TO MAKE IT A REALITY	79
6.1. Matching the demand for professionals with the supply of competencies	80
6. 2. Rethinking the university system	81
6. 3. The key role of vocational training	82
6. 4. Non-formal training and talent hubs	83
6. 5. Commitment to diversity	84
6. 6. Partnerships, partnerships, partnerships... and more partnerships	85
6. 7. Talent without borders	86
6. 8. Dissemination	87
6. 9. Attracting and retaining talent	88
6.10. New skills mapping for green molecules	89
7. CONCLUSIONS AND ACKNOWLEDGEMENTS	90
8. ANNEXES	94
8.1. Glossary	95
8.2. Methodological details	96
8.3. Tables	105
9. BIBLIOGRAPHY	187





WELCOME



THE NEW ENERGY AND LABOUR MODEL OF GREEN MOLECULES

Maarten Wetselaar,
CEO of Cepsa



Climate change is one of the greatest challenges in our history. In order to face it and guarantee the future of the planet, the energy transition is unavoidable. However, this paradigm shift is only possible if all of us, companies, administrations and society, drive it together.

At Cepsa we want to be a driving force in this revolution and actively contribute to this transformation, positioning Spain and the European Union as leading hubs in the energy transition. In this process, green molecules, as well as green hydrogen and 2G biofuels, are two of our strongest bets to decarbonise our business as well as those of our customers. These vectors are at the heart of many of the alliances we are building with leading companies in industry, mobility, agriculture and livestock farming, with which we have already launched pioneering energy projects, such as the Andalusian Green Hydrogen Valley.

These commitments are part of our Positive Motion strategy, which we could not fulfil without the commitment of the professionals who form part of Cepsa. Talent with extensive experience in the energy field, which must now also adapt to new energy solutions and new ways of producing, with an open attitude to continuous learning and permanent adaptability that we are encouraging at all levels of the company.

This professional retraining is one of the great challenges facing the Spanish and European labour markets in the face of the

green transition. That is why this study that we have prepared together with ManpowerGroup comes at the best time: it is the result of the most exhaustive research carried out to date in Spain and Europe to detect the skills, knowledge and aptitudes of the professionals who will drive the green economy through green molecules (hydrogen and biofuels).

This study also makes a quantitative and qualitative analysis of the economic and employment impact that green hydrogen and biofuels will have in Spain and Europe. As a result, we already know, with data in hand, that these green molecules will create hundreds of thousands of jobs. Thanks to this study, we now know what these jobs are like and what skills they require. Now we have to look for them, include them and accompany them in their learning process.

I would like to point out that this study comes out at a key moment for Spain, where all the necessary conditions are in place for green hydrogen to flourish. Throughout these pages you will find some of the pioneering energy decarbonisation projects that we have deployed in Spain, which are a benchmark for other countries and which will position Spain as a leader in the generation and export of green hydrogen and biofuels.

For Cepsa it is a privilege to be part of such a detailed paper that will shed light on all those companies, organisations and institutions that are committed to the energy transition and the preservation of the environment. It is an essential tool for anticipating the future and knowing the magnitude of the sustainable revolution in the employment market. We are living a change of era. Welcome to the era of change and to the imminent green molecule revolution.

Madrid, January 2024

POWERING EUROPE'S GREEN FUTURE - JOBS AND OPPORTUNITIES IN THE ENERGY TRANSITION

Jonas Prising

CEO and President of ManpowerGroup



As climate impacts intensify worldwide, the need for urgent collective action grows. European nations have taken decisive steps to transition economies to renewable energy and achieve net zero emissions. This acceleration towards decarbonization represents the next major shift in the world of work.

*To that end, I am proud to present **"Green Molecules: The Upcoming Revolution in the European Employment Market."** This forward-looking report, created jointly by ManpowerGroup and Cepsa, offers critical data and insights into green jobs and skills needs in leading European economies through 2040.*

The findings estimate up to 2 million emerging roles focused on clean hydrogen, advanced biofuels, and adjacent sectors - bringing tangible opportunities spanning the continent's workforce from transport to agriculture. However, seizing these prospects requires preparing people for technically skilled positions.

Its projected that 60% of Europe's current professionals lack adequate green competencies, whether engineering, digital, or sustainability related. Facilitating an equitable and inclusive transition demands significant investments in workforces and skills development initiatives accessible to all.

This report goes beyond analysis; it is a practical guide for leaders across government, education, and business to prepare people with emerging skill sets for the green economy roles of tomorrow. It also examines specific industries powering change and

collaborations needed between institutions to cultivate talent. This combined vision and coordination across institutions remain essential to powering Europe's sustainable future.

I invite you to thoroughly explore the workforce transformations outlined here.

ManpowerGroup has always believed that positive climate action is also good for society and the economy. In this report - together with Cepsa - we share our commitment to a people first green transition and call for employers to rethink how they hire, train, retain, and engage green talent to gain a competitive edge.

Madrid, January 2024



INTRODUCTION



INTRODUCTION

At a time when change and transformation are the only constants, that also poses challenges and uncertainty for professionals and companies, when we are experiencing the greatest challenges in recent human history in social, economic and climate terms, **Green Molecules: The Upcoming Revolution in the European Employment Market**, emerges as a beacon of hope and a guide to action.

This text aims to quantify precisely the location, quality and composition of the jobs that will be created by the energy transition driven by green molecules (green hydrogen, biofuels...). It also breaks down the measures that professionals, companies and public institutions can already put in place, individually and collectively, to take advantage of the full economic potential that the energy transition represents for the European Union and the United Kingdom.

The next two years, until 2025, are each a key moment for the 2040 scenario to be achieved. In this sense, 'Green Molecules' is a call for immediate and coordinated action to achieve the most optimistic framework possible in 17 years. **This text also transcends the boundaries of energy and employment, and enunciates a web of intertwined challenges and opportunities, elevating the energy transition to a global transformation.**

The work follows a simple logic that seeks to provide immediate insights for the reader. We start with a global quantitative overview, examining how the different selected countries (Spain, France, Portugal, Germany, the Netherlands,

Italy and the UK, plus the EU-27 as an aggregate) are addressing the challenge of the energy transition from green hydrogen and biofuels, and how this relates to employment in 2023, 2030 and 2040.

Subsequently, a qualitative analysis is included that delves into the challenges and opportunities facing society as a whole, and of course individual companies, individuals and public bodies. We will talk about talent gaps, training needs, labour mobility, and more, as well as specific issues such as population ageing, the convergence of women in the labour world and the skills needed to thrive in the age of Artificial Intelligence and Sustainability.

Finally, 'Green Molecules' offers a decalogue of suggestions or roadmaps to make the most of opportunities and reduce the risks identified. All of this, under the idea that employment and energy transition are not opposing forces, but elements of the same multiplying binomial.

Each chapter of the report is a piece of this puzzle and an invitation to a global dialogue on how the energy transition is already redefining our lives and careers, European economies and their competitiveness. This document is a preview of the human capacity to adapt and evolve in an ever-changing world. **It is a train heading towards a more sustainable present.**

It is necessary to draw the reader to two key headings of this report: Glossary and Methodological Details, located in the final annexes of the text. Both help to understand the terms used for each



heading, their uniformity and consistency with international bodies and, therefore, their scalability.

The report you have in your hand is the result of in-depth research, from which we have extracted the main data to facilitate understanding. Specifically, the elements taken into account for the drafting of this study are as follows:

- In-depth research into publications and analyses carried out to date by public and private organisations, which are cited in turn in the bibliography at the end of the text
- History of research, owned by ManpowerGroup, at Spanish and global levels, relevant to the object of the study
- Econometric analysis of key sectors, retroactive and predictive up to 2030 and 2040, considering investment data confirmed by employers, companies and public administration
- Interviews and focus groups with the different Cepsa teams, and subsequent coordinated work between Cepsa and ManpowerGroup to define a business transformation model
- Contrast with experts in the field and reference bodies for research.

39A



EXECUTIVE OVERVIEW



EXECUTIVE OVERVIEW

“Green Molecules: the imminent revolution in Europe’s employment market,” drawn up by Cepsa and ManpowerGroup, analyses the employment impact that this new sustainable energy industry will have in Europe up to 2040, as well as the skills, knowledge and aptitudes of the professionals who will fill the jobs created.

- The study points out that investment in green molecules not only boosts the European energy transition, but also contributes to job creation and, therefore, to economic growth. The most in-demand skills in 2040 differ from those required in 2023, indicating an anticipated update, if not a revolution, in the job market.
- **The green molecule industry will create between 1.7 and 2 million new direct, indirect, and induced jobs** in the EU-27 and the UK by 2040.
 - On average, 101,000 jobs related to the sector will be created each year in the EU-27 and the UK, at a rate of 23% (CAGR).
- The GDP of the area analysed would be increased by up to €145 billion in 2040 compared to 2023, which would mean an average annual increase of €8.5 billion.
- In Spain, this sector would contribute €15.6 billion more to GDP in 2040. **This would represent an incremental 1% of GDP vs 2022.**
 - The sum of the economic impact over the next 17 years, as a consequence of the new energy paradigm, could reach a cumulative €1.3 trillion in Europe and the UK (similar to 8% of EU-27 GDP in 2022), at a rate of 22% per year (CAGR).

■ Spain: leader in job creation derived from green molecules in 2030 and 2040

- The 116,000 new positions in Spain in 2030 would account for 18% of the entire region analysed.
- In 2040, Spain could create 181,000 positions, followed by the UK (173,000), Germany (145,000) and France (105,000). The Spanish figure represents **11% of the total jobs created at European level.**

■ The Green Molecule Economy: a driving force for the entire production value chain.

The Green Molecule Economy could create many more jobs and greater economic value for other sectors and industries than for the purely energy sector. Of all new jobs created by green hydrogen and biofuels by 2040, 88% are in the service and commerce sector, in industry, construction or education.

- The energy sector will account for 12% of the 1.7 million new jobs.
- Its supplier companies will account for 44.3% of the new jobs, all of which will be indirect.
- Finally, the remaining 43.7% of new jobs will be distributed throughout the rest of the value chain: passenger transport, commerce, individual mobility, household energy consumption, etc.

What will these new jobs look like?

■ Of new jobs in 2040, 54.5% will require Green Skills.

- Spain (55.4%), followed by Italy (54.8%) and the UK (54.6%) are the countries where green skills are

most relevant for the positions to be created in 2040.

- However, they are also the countries with the largest mismatch between current and future skills: Italy, 2.8 points; Spain, 2.6 p; Germany, 2.2 p; the Netherlands, 1.8 p; Portugal, 1.7 p; the UK, 1.4 p; and France, 1.1 points.
- The new jobs created by the Green Molecule Economy are paving the way for the inclusion of women in traditionally male-dominated professional sectors.
 - The rate of entry of European and UK women is twice that of men in the decade 2030-2040. In the case of Spanish direct employment, this rate is up to 20 points higher than that of men.
 - By 2040, the share of women in direct employment could exceed that of men in some countries such as Spain (51%) and Italy (50.7%).
 - However, the period analysed is too short to observe a change in the representation of women in green molecule employment as a whole: it remains at 37%, compared to 63% of men in the European Union.
- **Pending challenge: attract younger professionals.**
 - The current average age of professionals in the energy sector is 43 years.
 - **In 2030, almost 60% of professionals in hydrogen and biofuels economy jobs will be over 40 years of age.** Some 10% are over 60 years of age.
 - In 2040, we are starting to see a certain amount of change in employment, with a 3-point increase
- in the participation of young people under 39 years of age, who account for 43% of professionals.
- **Demand for technical professionals increases. Only 20 occupations account for 8 out of every 10 new jobs created: these are mainly middle and senior technical occupations.**
 - Over the next 17 years, demand will grow for mid- and senior-level scientists and engineers, electricians, administrative and commercial managers, mining and construction labourers, IT professionals, and metal and machine operators.
 - Professionals who want to take advantage of one of the 1.7 million new jobs need to be trained in one or more of the skills required for these occupations. At the same time, professionals in occupations that will become less relevant need to be mobilised so that they can be retrained in other occupations that are more in demand.
- **A predominantly technical sector also looking for professionals with soft skills**
 - Of the skills most in demand, 46.6% are skills traditionally known as soft skills: Communication, Collaboration and Creativity (25.9%), Information Skills, such as analytical thinking and data documentation (21.2%) and Care and Assistance Provision, understood here as protecting and ensuring compliance with rules, guiding the team and providing information and public support (11.7%).
 - Demand for information management skills (+2.25 points), working with computers (+1.21 p.) and working

with specialized machinery and equipment (+1.93 p.) are growing the most compared to 2023.

■ **We are at a pivotal moment to seize a historic opportunity for wealth creation in the EU and UK.**

As can be seen from the data, Europe, and Spain in particular, has very advantageous starting conditions to boost the economy and job creation derived from green molecules.

Despite this, in 2023 there are still not enough professionals who can carry out the energy transition driven by green molecules, so it is necessary to promote measures to create talent that fixes the added value in the locations where the investment is expected to be made.

The alternatives for building talent are the following:

- From scratch, with specific training in the areas of greatest growth and demand for professionals (skilling)
 - By attracting professionals with experience or knowledge in similar sectors (upskilling)
 - Through a massive training process for professionals in sectors that will decrease in terms of job offers and could take advantage of the opportunity of green hydrogen to remain employable (reskilling)
- For those tasks that can be performed remotely, there is the possibility of attracting international offshore talent. However, there is a risk that these positions could fall into the inflationary salary dynamics that we are currently seeing in technology profiles.

■ **How to seize the opportunity that green molecules bring? We propose 10 measures**

for taking advantage of the potential opened up by the energy transition and meeting economic, social and employment objectives.

- Matching the demand for professionals with the supply of competencies
- Rethinking the University System
- Supporting Dual Vocational Training
- Nurturing non-formal training and the role of companies as talent hubs
- Supporting Diversity
- Fostering public-private partnerships
- Talent without borders, as an opportunity
- Mass dissemination
- Attracting and engaging talent in companies
- New skills mapping for Green Molecules



**THE GREEN ROAD
TO TWO MILLION
NEW JOBS IN
EUROPE AND THE
UNITED KINGDOM**



ANALYSIS OF KEY ECONOMIC AND SOCIO-DEMOGRAPHIC FACTORS

The energy transition forecasts exponential growth in job creation in EU-27 and the UK of **1.7 million positions in 2040**, and 640,000 in 2030, with an average annual growth rate of 170% over the next 17 years (2023-2040)¹.

Around 11% are direct jobs that remain in the energy sector, while 45% are indirect and 43.9% impact the rest of the value chain². In addition, around 40% of direct jobs correspond to biofuels, and the remaining 60% to green hydrogen.

Direct, Indirect, and Induced Employment (2030 – 2040) (thousands)

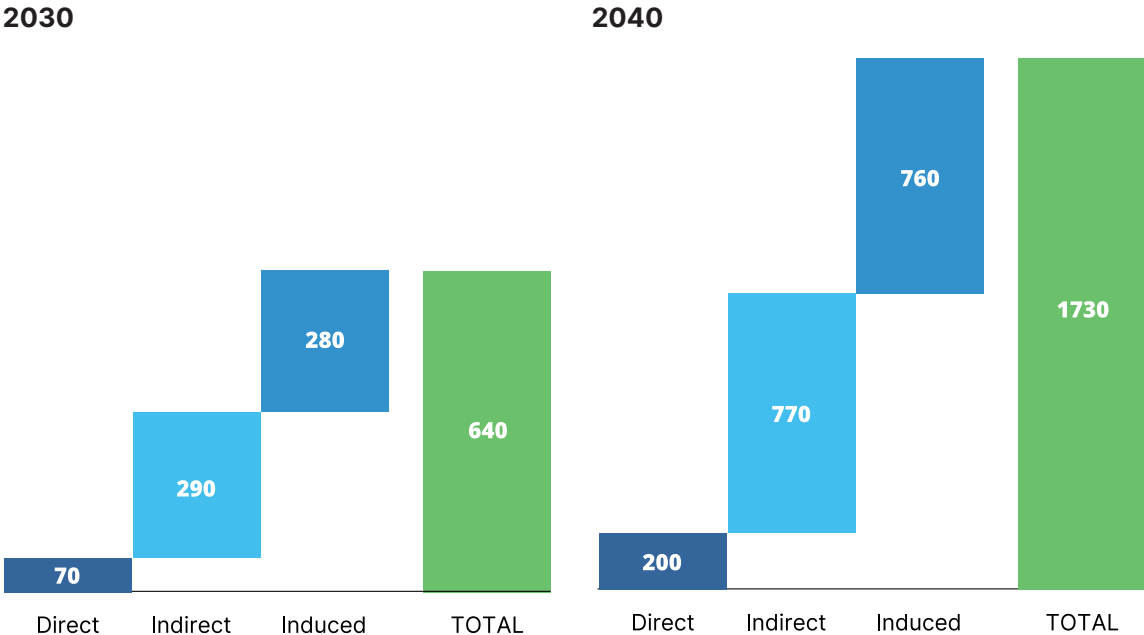


Fig. 1. Projected direct, indirect and induced job creation in the green hydrogen and biofuels sector in 2030 and 2040, for Europe 27 and UK (aggregate).

Note 1. For the preparation of this study, the most recent data from various official organizations regarding investment and expenditure forecasts, green hydrogen prices, or consumption levels in the analyzed countries have been taken into account. Any updates after the writing of this text could alter the estimates published here, so the figures should be considered as indicative at all times. The bibliography includes all consulted sources, with notable references to European Hydrogen Backbone, IRENA, IEA, PWC, FCH, Eurostat, and CEDEFOP.

Note 2. We distinguish three types of employment: i) direct impact is generated by the activity of companies in the green hydrogen and biofuels sector itself; ii) indirect impact is generated among their suppliers; and iii) tractor impact is the one that, as a consequence of the activity of the previous two, is generated along the subsequent value chain, either in dependent sectors or end users. The percentage weight is very similar in the analyzed period: Direct (10.9% and 11.6% respectively); Indirect (45.3% and 44.5%); and Induced (43.8% and 43.9% respectively).



The energy transition is a global transformation with induced effects along its entire value chain and on the economy as a whole. The fact that 75% of all jobs created by investment in green hydrogen and biofuels are not directly in the energy sector is a measure of the large impact of the energy transition across the UK and European economy³. Figure 2 sets out this explanation, with the 2040 scenario highlighted in darker colours.

Employment Impact in Major Sectors (2030-2040) (%)

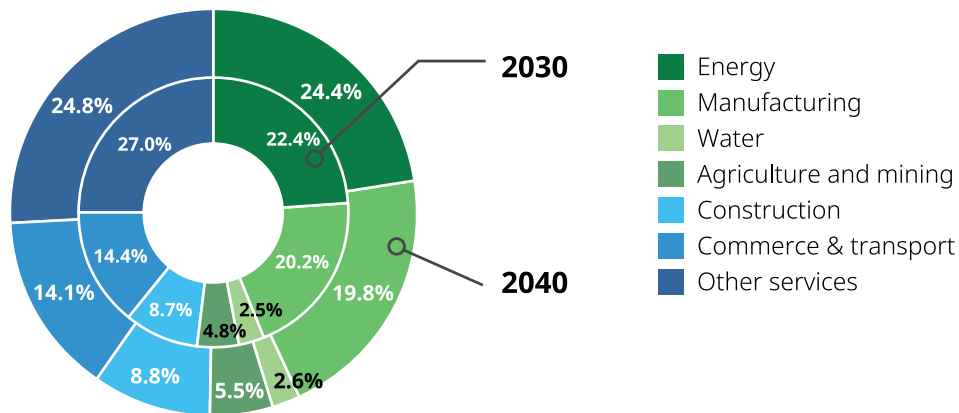


Fig. 2. Weight of jobs created by green hydrogen and biofuels in EU-27 and UK in 2030 (lighter) and 2040 (darker), by sector. Direct, indirect and induced employment are grouped together. Analysis based on Eurostat data.

Note 3. In the hydrogen market research phase, studies and data from various sector sources such as IEA (International Energy Agency), IRENA (International Renewable Energy Agency), EHB (European Hydrogen Backbone), or FCH (Fuel Cells and Hydrogen Joint Undertaking) were analyzed and cross-referenced, in addition to strategic plans and studies from the European Commission and the studied countries.



Detailed Employment Impact by Sectors (2030-2040) (%)

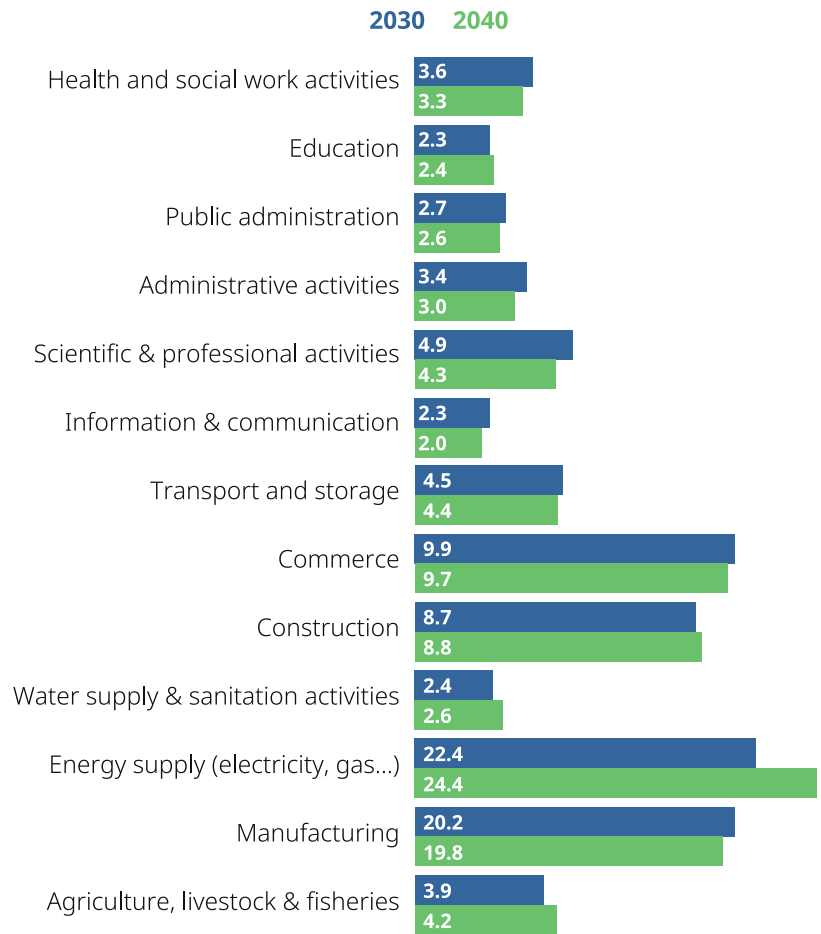
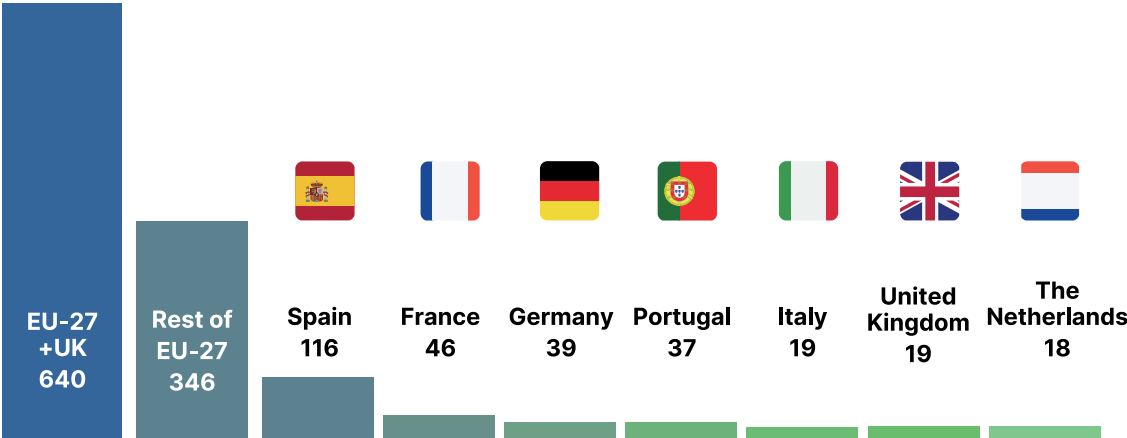


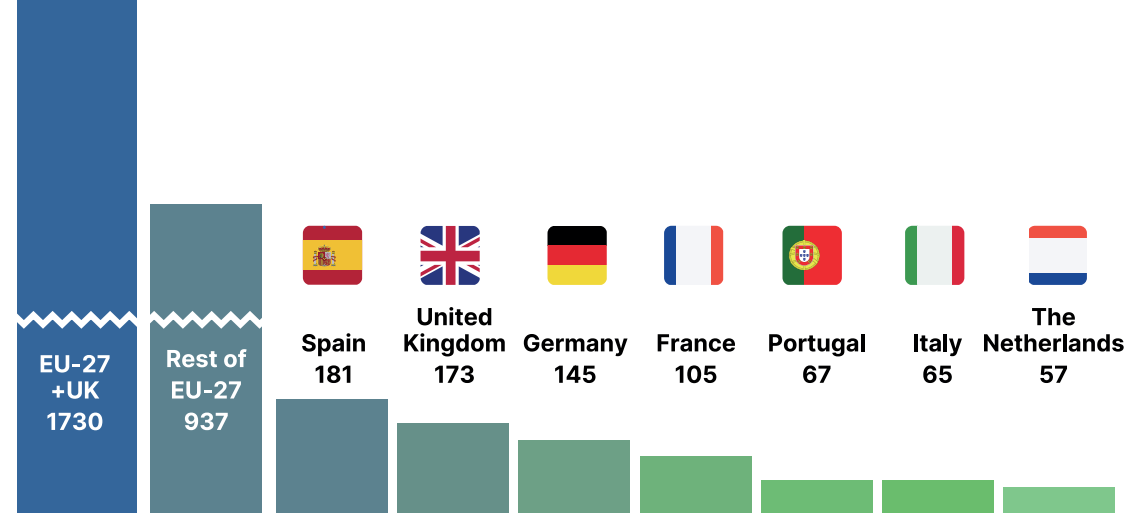
Fig. 3. Weight of jobs created by green hydrogen and biofuels in EU-27 and UK in 2030 and 2040, by sub-sector. Direct, indirect and induced employment are grouped together. Analysis based on Eurostat data.

By country, Spain (116,000), France (46,000) and Portugal (37,000) will create the most jobs in 2030, accounting for 31% of the total by that date. However, Germany and the United Kingdom will create jobs at an above-average rate between 2030 and 2040, reaching 145,000 in Germany and 173,000 in the UK. **Spain will continue to lead in job creation in 2040, with 181,000 new jobs.**

Job Creation in 2030 (thousands, by countries)



Job Creation in 2040 (thousands, by countries)



Figs. 4 and 5. Projected job creation by country analysed, in 2030 and 2040. Figures in millions.

From a broader perspective, the average rate of job creation between 2023 and 2040 is 30% (CAGR), with slight differences between countries: the United Kingdom reaches 35%, compared to 30% in the region and 28% in Spain. In absolute terms, Germany, with 61,000 new jobs on average per year is the country with the second highest impact, ahead of the United Kingdom (54,000) and France (53,000).

Chart 1. Projection of direct, indirect, and induced (tractor) employment generation driven by green molecules in 2030 and 2040 for EU-27 and the United Kingdom (aggregated).

2030-2040 Variation	CAGR	Average annual employment (thousands)
EU-27 + UK	30%	820
Spain	28%	110
France	30%	53
Portugal	29%	39
The Netherlands	31%	26
Germany	32%	61
Italy	31%	28
Rest of EU-27	30%	460
The United Kingdom	35%	54



AND HOW DOES THIS LABOUR MARKET GROWTH TRANSLATE INTO ECONOMIC TERMS?

The GDP of the area analysed (EU-27 and the United Kingdom) will grow to €1.3 trillion cumulatively, which is equivalent to the entire Spanish GDP in 2022. In 2030, the sector will add €63.85 billion to the region's economic balance (0.5% of Europe's GDP in 2022), and in 2040, the figure will reach €145 billion (0.9%).

The cumulative impact on GDP between 2023 and 2040 will mean a growth of 12.7% for Spain compared to the country's GDP figure in 2022, and up to 18.3% for Portugal and 6.7% for the Netherlands.

Accummulated GDP in 2040 (contribution by country, millions of euros)

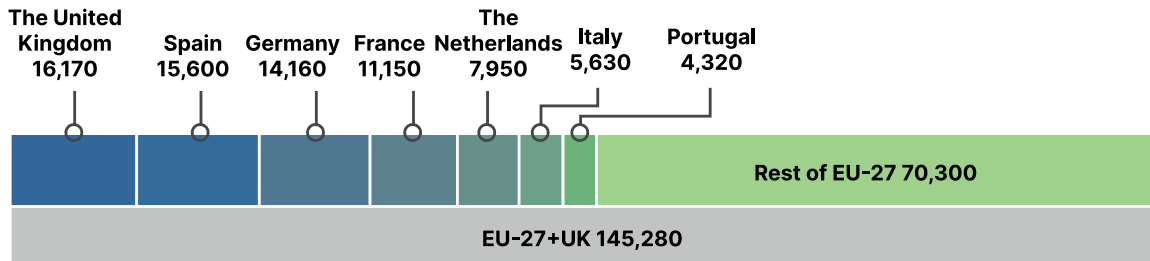


Fig. 6. Cumulative increase in the GDP of each country analysed and its contribution to the total of the geographical area studied, to 2040, in millions of Euros.

AN INCREASINGLY ATTRACTIVE SECTOR FOR WOMEN

The representation of men and women in new jobs created by green hydrogen and biofuels remains at a ratio of 37% (women) - 63% (men) in 2030 and 2040. **In spite of everything, the rate of incorporation of women into the sector between the dates analysed is up to 5 bp higher than that of men, and stands out particularly in direct employment (21 bp higher).**

Chart 2. Projection of direct, indirect, and induced employment generation driven by green molecules in 2030 and 2040 for EU-27 and the United Kingdom (aggregated).

Change 2030-2040	Men	Women
EU-27 + UK	169,5%	174,2%
Direct	179,6%	201,0%
Indirect	164,9%	168,7%
Induced	172,0%	173,4%

Representation of men and women employed by green hydrogen and biofuels

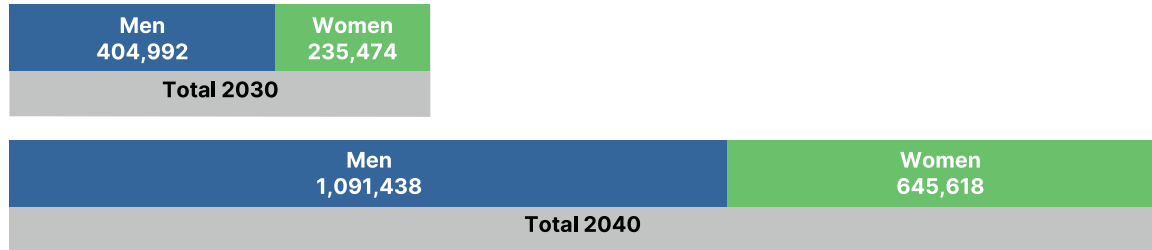


Fig. 7. Distribution of jobs in 2040 by gender.

% Men and women employed by typology in 2030-2040 (%)

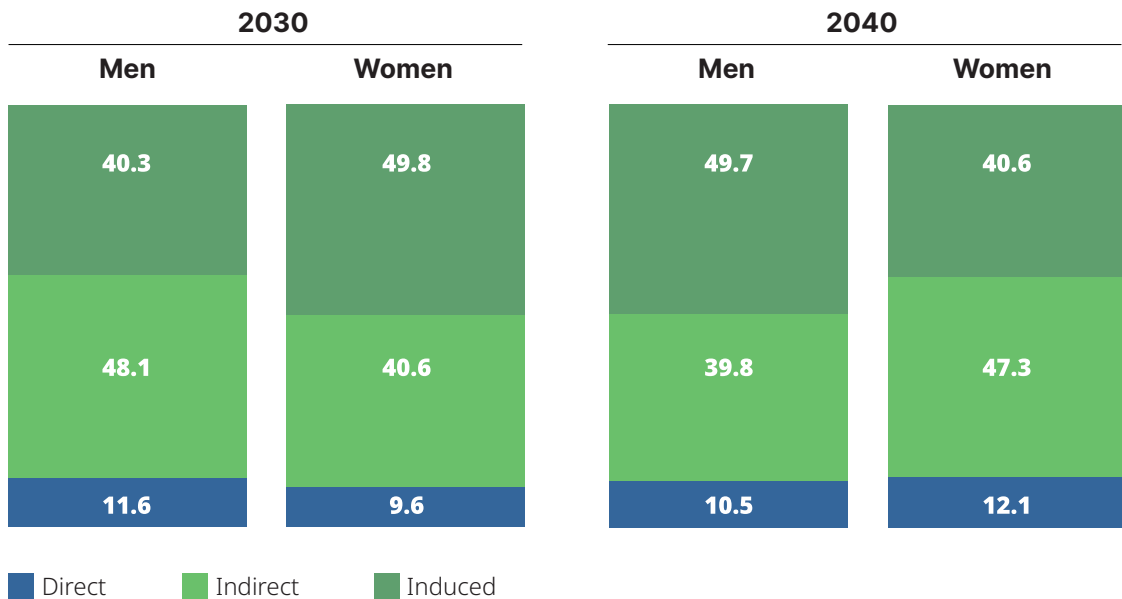


Fig. 8. Men and women in direct, indirect and induced jobs in 2030 and 2040.

We will see later in the text how the differences between countries stand out. Please note **we can only anticipate that women hold the majority of direct jobs in Spain (51%) and Italy (50.7%) in 2040⁴**. There are countries with a predominantly male employment throughout the series, as in the case of the Netherlands (men hold 66.2% of jobs in 2040 and up to 73.9% in the case of direct jobs).

Note 4. Analysis based on production projections from the European Hydrogen Backbone, Levelized Cost of Hydrogen (LCOH) projections from the European Commission and independent consulting firms, and price projections developed by PwC. Variables such as renewable energy prices by country and the expected reduction in the price of electrolyzers for the years 2030 and 2040 have been considered.



Women employed (2030-2040) (%)

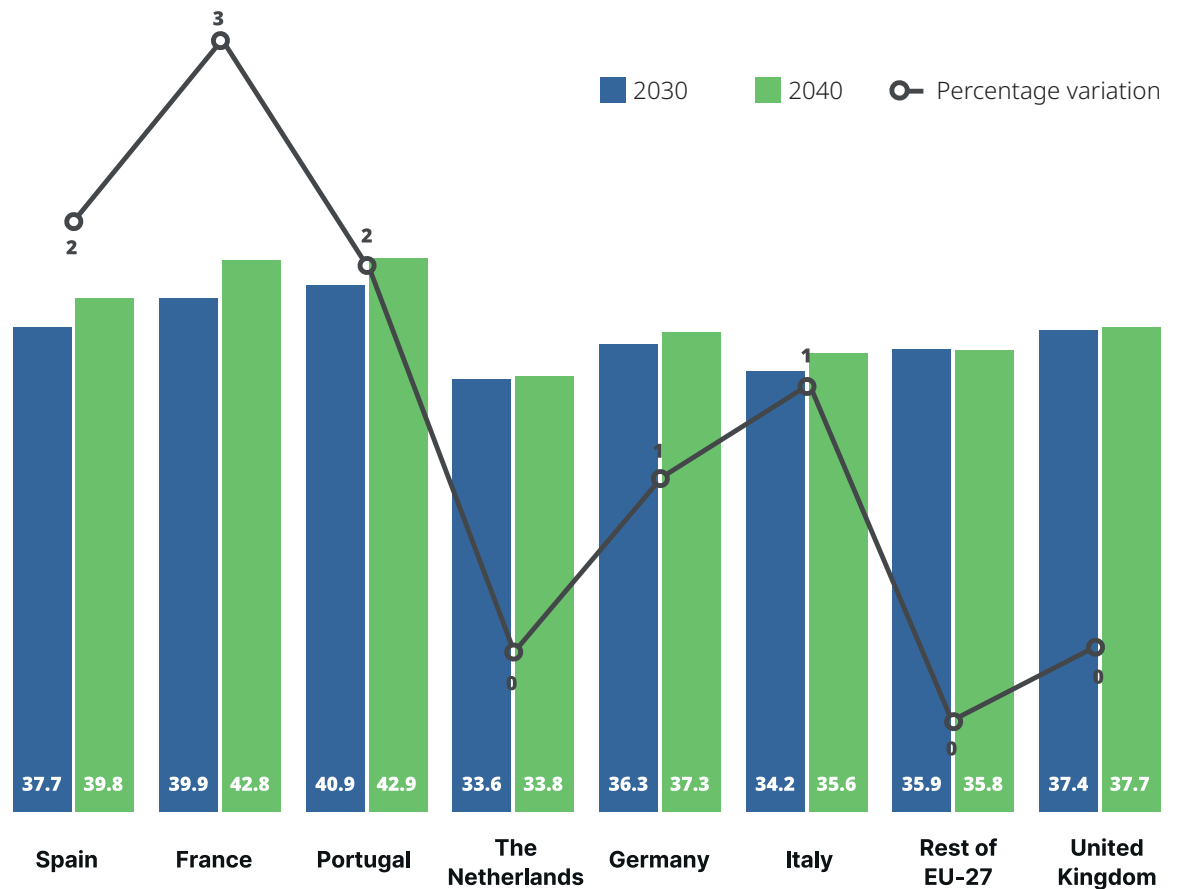


Fig. 9. Representation of women in jobs created by green molecules in Europe and the UK. 2030-2040 comparison and % variation.

UP TO 81% OF THE JOBS CREATED ARE DISTRIBUTED AMONG 20 OCCUPATIONS.

If we look more closely at the types of occupations in which these new jobs will be concentrated, we can see that the vast majority of positions in 2040 correspond to 20 major occupations (more information on page 30). **It follows that professionals who want to take advantage of one of the 1.7 million job opportunities identified must be trained in one or more of the skills needed to perform these occupations.**

In 2040 there could be around **225,000 positions for mid- and senior-level scientists and engineers (12.4%)**, up to **154,000 jobs for mid-level financial and administrative operation professionals (9.1%)**, **103,000 for salespeople** across the area analysed (6.1% of total jobs) and around 97,000 positions for labourers in mining, construction or manufacturing in the EU-27 and the UK (5.7%). **Investment in green molecules would open up at least 90,000 new positions for IT professionals in the region covered by this study.**

Occupations by Type of Employment, 2040 (%)

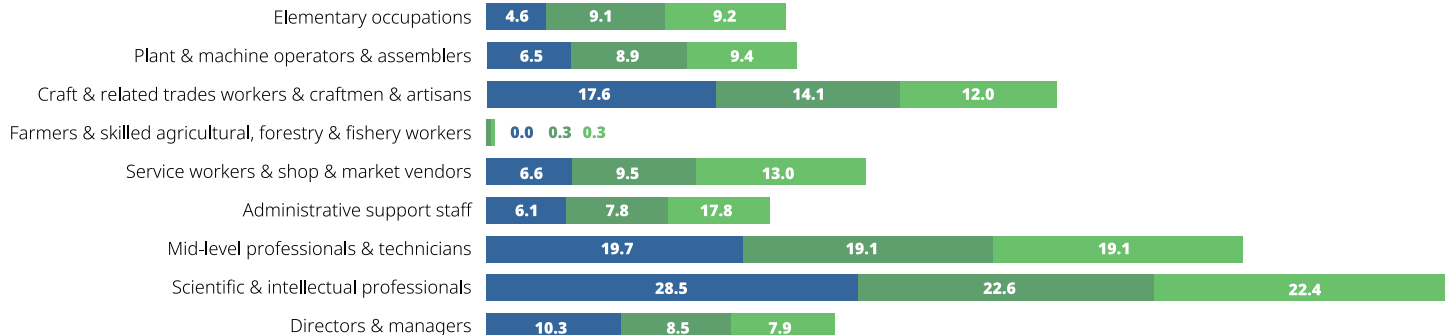


Fig. 10. Analysis of occupations in jobs created by hydrogen and biofuels in 2040, based on Eurostat and ESCO data.





THE SAME AGEING DYNAMICS OF THE EUROPEAN POPULATION

We see it in all sectors. As Europe's population ages, we are witnessing a more or less proportional forecast of the ageing of all sectors, which can only be compensated by clear and decisive employment policies. Companies also play a key role, with initiatives to attract younger talent.

In the specific case of the sector in question and of the energy transition as a whole, this ageing figure is not necessarily negative, since - as we will see below - the profiles required by this paradigm shift are mostly more experienced.

In any case, it is important to note that **the average age of professionals is 43 years old in 2030 and 42 years and 6 months in 2040, slightly lower than the average age of European professionals (44 years old in 2022).**

Representation of Age Groups in Employment (%)

2030

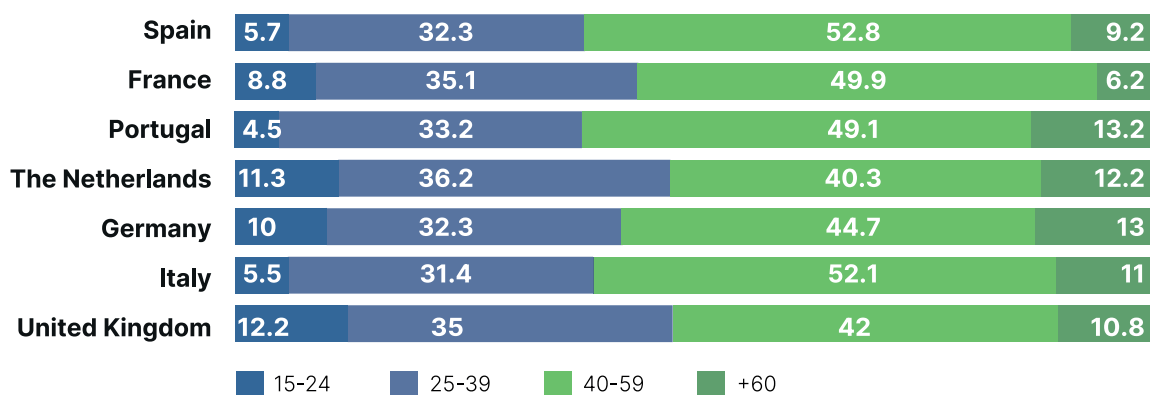


2040



Fig. 11. Percentage weight of the different age groups in total employment in the sector in 2030 and 2040. Average age of 43 years.

Representation of Age Groups in Employment in the Analyzed Region in 2030 (%)



Representation of Age Groups in Employment in the Analyzed Region in 2040 (%)

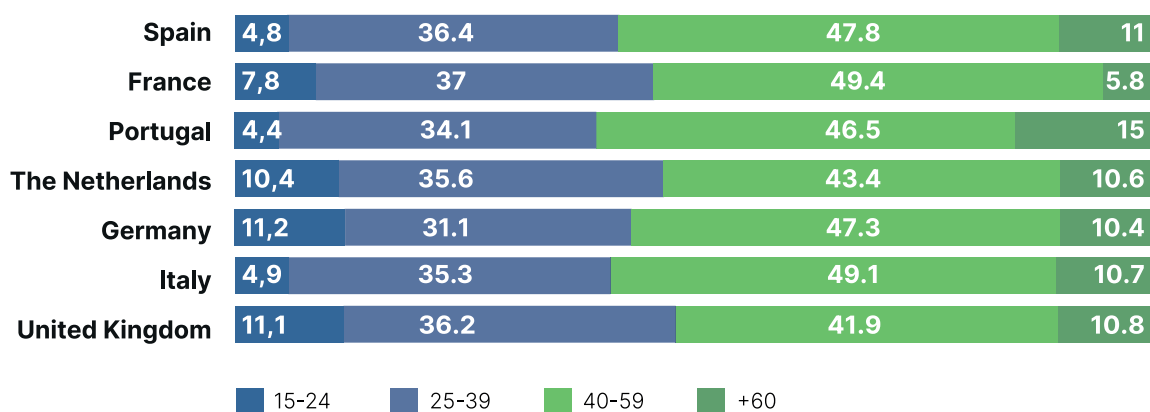


Fig. 12 and 13. Percentage weight of different age groups in the total employment by countries in 2030 and 2040, respectively.



If we look at the countries in further detail, we again see a reflection of their demographic compositions that do vary slightly in the projection to 2040. The over-40 age group is significantly higher than the area average in Italy, Spain and France in 2030. In fact, 59% of professionals in the sector in 2030 are over 40 years old, and 10% of them are over 60 years old.

In 2040, however, the share of the over-40s in this sectoral demographic pyramid falls by 2 bp, as a result of a greater incorporation of young people between 24 and 39 years of age, and a decline in professionals aged between 40 and 59.

A SECTOR FOR MID-LEVEL TECHNICIANS AND SKILLED PROFESSIONALS

Almost 67% of the occupations in the new jobs created by green molecules in 2040 are for mid-level technical professionals and trades, specialists in different fields, scientists, etc. Looking more deeply into the employment typology (direct, indirect and induced), we see that direct jobs are mainly for scientists, mid-level technicians and officials and operators, while service workers and salespeople are more prominent in induced employment.

Weight of key occupations in 2040 (%)

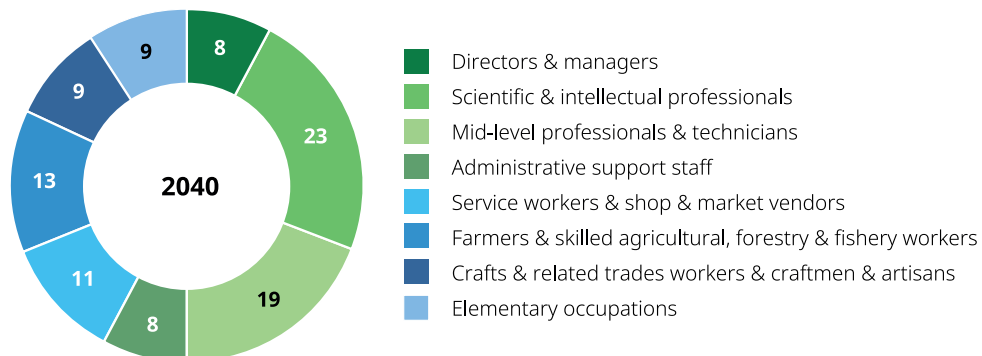


Fig. 14. Analysis of occupations in employment generated by green hydrogen and biofuels in 2040. Predictions based on Eurostat and ESCO data.

Table 3. Most Demanded Occupations in 2040 and Variation in Demand Compared to 2023

ISCO-2-digit classification	Total	Var 2023-2040
OC33 Business and administration associate professionals	9.1%	2,58
OC21 Science and engineering professionals	7.3%	3,67
OC52 Sales workers	6.1%	-0,69
OC31 Science and engineering associate professionals	5.9%	2,97
OC93 Labourers in mining, construction, manufacturing and transport	5.7%	2,89
OC24 Business and administration professionals	5.6%	0,60
OC25 Information and communications technology professionals	5.3%	2,78
OC72 Metal, machinery and related trades workers	4.9%	1,89
OC74 Electrical and electronic trades workers	4.6%	3,16
OC12 Administrative and commercial managers	4.5%	2,90
OC81 Stationary plant and machine operators	4.0%	1,84
OC51 Personal service workers	3.3%	-1,05
OC83 Drivers and mobile plant operators	2.8%	-0,90
OC43 Numerical and material recording clerks	2.5%	-0,44
OC71 Building and related trades workers, excluding electricians	2.3%	-1,31
OC13 Production and specialized services managers	1.9%	-0,29
OC34 Legal, social, cultural and related associate professionals	1.8%	-0,39
OC42 Customer services clerks	1.8%	-0,69
OC41 General and keyboard clerks	1.8%	-2,30
OC82 Assemblers	1.7%	1,13
OC22 Health professionals	1.7%	-1,63
OC44 Other clerical support workers	1.7%	0,56
OC26 Legal, social and cultural professionals	1.6%	-1,62
OC91 Cleaners and helpers	1.6%	-2,01
OC14 Hospitality, retail and other services managers	1.4%	-0,40
OC23 Teaching professionals	1.3%	-4,10
OC75 Food processing, wood working, garment and other craft and related trades workers	1.3%	-0,43
OC53 Personal care workers	1.3%	-2,91
OC35 Information and communications technicians	1.3%	0,18
OC32 Health associate professionals	1.1%	-1,67
OC94 Food preparation assistants	0.8%	-0,05
OC11 Chief executives, senior officials and legislators	0.6%	0,02
OC96 Refuse workers and other elementary workers	0.6%	-0,41
OC54 Protective services workers	0.3%	-1,35
OC73 Handicraft and printing workers	0.2%	-0,26
OC61 Market-oriented skilled agricultural workers	0.2%	-1,56
OC92 Agricultural, forestry and fishery labourers	0.2%	-0,52

Fig. 15. Weight of the different occupations, by level of representativeness in new generation jobs and their variation with respect to 2023 in basis points. Eurostat and ESCO, by ISCO-2-digit classification

A TECHNICAL SECTOR, WHERE SOFT SKILLS ARE PREVALENT

Following the conclusions in the previous section, the reader might be tempted to think that the jobs created in the heat of the green molecule economy will require mainly technical (or hard) skills. The evidence shows that this would be wrong.

The energy transition will require above all soft skills. Based on the European Commission's official classification (ESCO, Cedefop), the skills with the highest weight in 2040 for the almost 2 million new jobs in the sector are **Communication, Collaboration and Creativity (25.9%), Information Skills**, such as analytical thinking and data documentation (21.2%) and **Care and Assistance Provision, understood here as protecting and ensuring compliance with rules, guiding the team and providing information and public support (11.7%).**

Of course, the weight of these skills varies according to whether the job is direct, indirect or induced, but the dynamics are broadly similar across countries.

Weight of Major Skill Groups in 2040 in Europe and the United Kingdom (%)

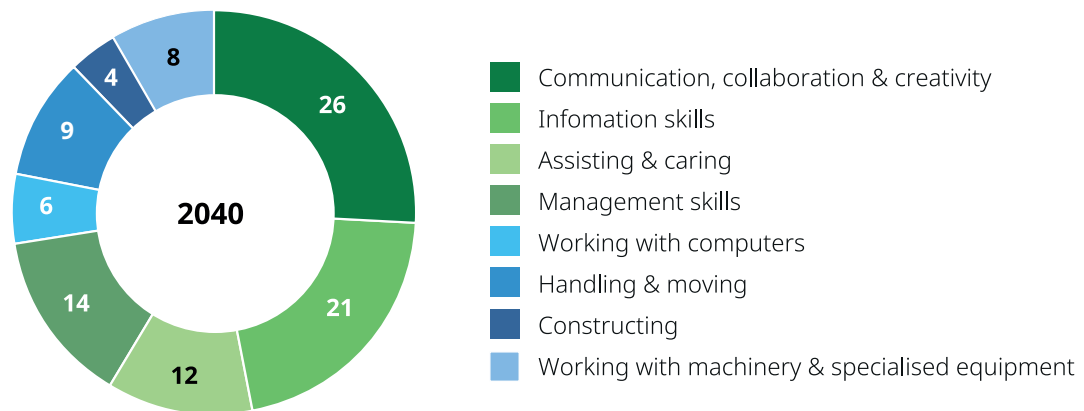


Fig. 16. Percentage weight of major occupation groups (ESCO) in the new jobs in the hydrogen and biofuels economy in Europe and the United Kingdom in 2040.

Most relevant skills & weight by job typology in 2040 (%)

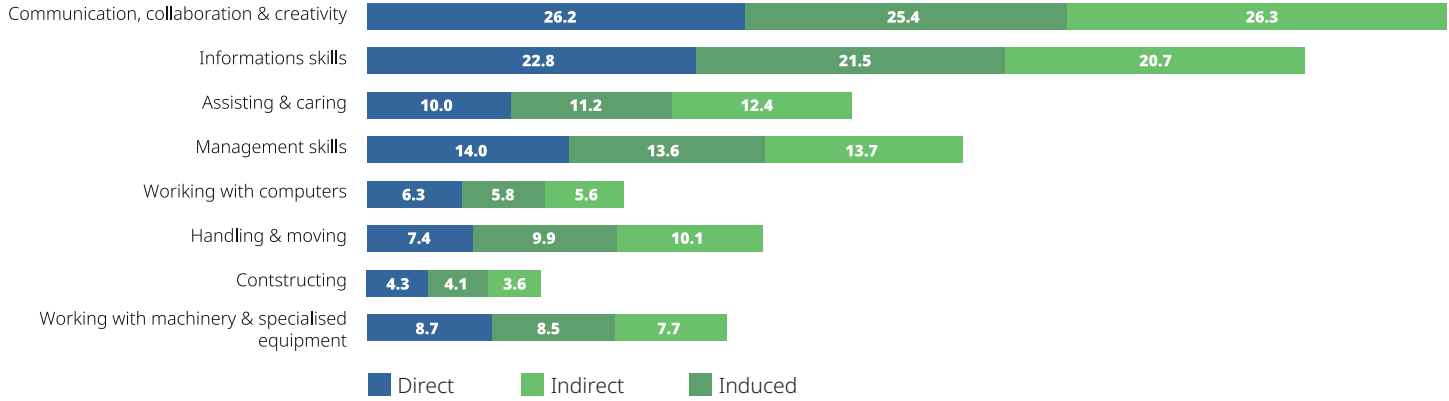


Fig. 17. Relative weight of the major Skills Clusters (ESCO) in new jobs in the hydrogen and biofuels economy in 2040, by type of employment (direct, indirect, induced).



Looking at the table below, once again **20 skills account for 70% of the skills most in demand in 2040 for the jobs that green hydrogen and biofuels will create**. Most of them are considered soft skills.

Table 4. Most Demanded Skills in 2040 in EU-27 and the United Kingdom (%)

S3.3	Protecting and enforcing compliance	8.55%
S1.2	Liaising and networking	5.21%
S2.8	Monitoring, inspecting and testing	4.83%
S2.7	Analysing and evaluating information and data	4.23%
S2.2	Documenting and registering information	4.18%
S2.1	Conducting studies, research and analysis	3.69%
S4.2	Organising, planning and scheduling work and activities	3.67%
S4.1	Developing objectives and strategies	3.20%
S7.1	Building and repairing structures	2.92%
S1.5	Providing advice and consultancy	2.82%
S1.6	Promoting, selling and buying	2.80%
S4.4	Performing administrative tasks	2.15%
S1.8	Working with others	2.14%
S4.3	Allocating and controlling resources	2.03%
S1.9	Troubleshooting problems	1.85%
S5.5	Accessing and analysing digital data	1.84%
S1.3	Teaching and training	1.69%
S8.6	Using precision instruments and equipment	1.68%
S6.11	Cleaning	1.66%
S1.13	Writing and drafting	1.65%
S1.1	Negotiating	1.63%

Finally, if we look at the variation between 2023 and 2040 of the most in-demand skills, we can clearly identify which are where there is the greatest mismatch today and therefore require more attention, and which will be less in demand in the future. In this sense, redirecting professionals towards the most in-demand skills will also help them in their future employability in the energy transition. **The greatest deviation between the current supply of skills and future demand is in the construction and repair of structures, data analysis (0.8 bp), installation of electrical and electronic equipment (0.7 bp) and the design and monitoring of tests, objectives and strategies (0.5 bp)**. The skills for which demand will fall in the coming years are those of teaching and training (-1.1 bp), ensuring compliance with standards (-0.8 bp), supervising people and performing administrative tasks (-0.6 bp) and networking (-0.5 bp).

We see once again how the supply and demand for skills follows the logic of the permeability and evolution of the employment market itself in the period analyzed.

Variation in Skill Demand (2023-2040) in the Region (%)



Fig. 18. Variation in skill demand in employment generated by green hydrogen and biofuels in EU-27 and the United Kingdom between 2023 and 2040.

MUCH MORE THAN EMPLOYMENT: GREEN SKILLS⁵

The European Union, through Cedefop and the European Classification of Skills/ Competences and Occupations, has been updating the definition and classification of skills as the employment market and the demand for professionals are updated. We can already see how it incorporates a categorization in its level 3 for Green Skills and even a level of what we could define as “greenicity” or, in other words, how many green subskills each identified skill contains.

Note 5. Analysis based on European Hydrogen Backbone, European Commission, Eurostat, CEDEFOP, and ESCO data. The net value of greener skills is obtained based on the number of sub-skills (maximum disaggregation) classified as green.

In this section of the text 'Green Molecules: The Upcoming Revolution in the European Employment Market', we will delve into three interesting elements. Firstly, there is the European Union's current classification of Green Competencies. Second is how much weight these Green Skills have in the composition of the new employment created by the hydrogen and biofuels economy in all the countries analysed in this study. And finally, we will present a ranking of countries according to the weight that Green Skills have in new employment in 2040.

Let's start with ESCO's classification of green skills. At the closing of the model of this work (December 2023), the list included 102 sub-skills (ESCO 3-digi.) of greater or lesser importance when deeming a skill green or not.

For the European classification, the greenest skills would be as follows:

- S.3.3.2 Complying with environmental standards and regulations;
- S.2.8.5 Measuring environmental conditions;
- S.1.5.5 Advising on environmental issues;
- S.2.7.4 Analysing business operations;
- S.1.11.2 Designing electrical and electronic equipment and systems;
- S.4.1.3 Developing policies and processes for corporate operations;
- S.6.13.1 Handling hazardous materials;
- S.6.13.2 Treating hazardous materials;
- S.6.4.1 Land cultivation;
- S.2.1.1 Market analysis;
- S. 2.7.1. Real estate or rural land evaluation;
- S.2.7.2. Analysis of scientific data;
- S. 4.1.4. Legislative development;
- S. 4.2.1. Operations manager; etc.

What is evident from this prioritization is that the most critical green competencies in the eyes of the ***European Classification of Skills/Competencies and Occupations*** are directly related to environmental and compliance issues. **Although for the benefit of this study we have used this classification, as we will see below, it may be insufficient for the transformation managers of companies when addressing a change of corporate energy model.**

Green Skills and Their Relative Weight Based on Green Subcomponents

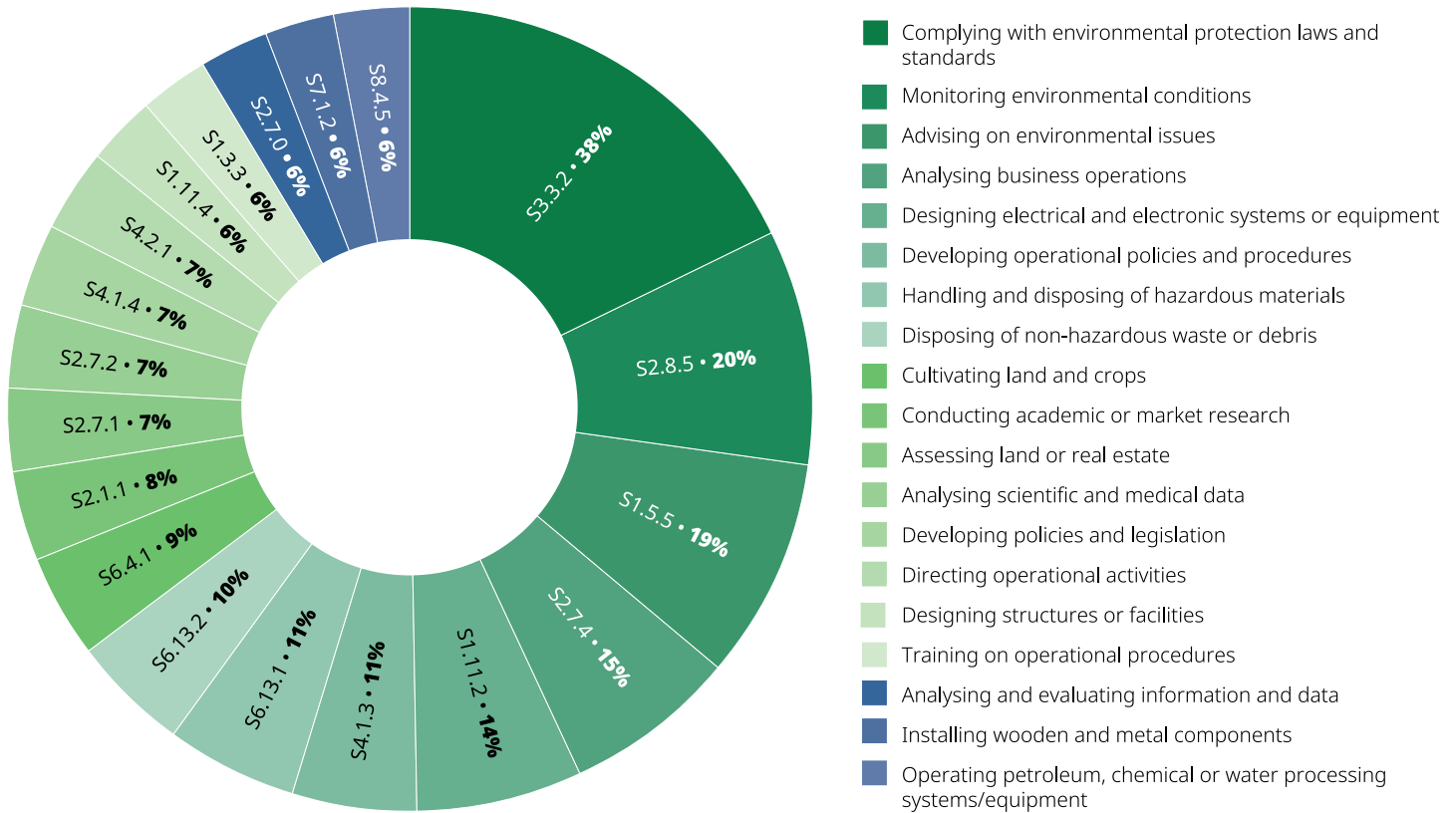


Fig. 19. Major green skills and their relative weight based on green subskills, considering ESCO and CEDEFOP data as of 2023.

On average, **the jobs created in Spain, France, Portugal, Germany, the Netherlands, Italy and the United Kingdom in 2040 will have 54.5% green skills, according to the European Commission's ESCO classification.** They are evidently more present in direct jobs, with 56.8% (remember that these are jobs in the energy sector), and their presence is increasingly less as we move up the value chain, until we reach 53.9% of the relative weight of Green Skills in induced employment.

In general, all new jobs created by green hydrogen and biofuels over the next 17 years in Europe and the UK have a majority Green Skills component. Insofar as they mobilise job creation, we can also say they drive the incorporation of Green Skills among European professionals in the coming decades.

Percentage of Green Competencies in European Employment in 2040 (%)

Direct 56.8	Indirect 54.7	Induced 53.9
Total 54.5		

Fig. 20. Relative weight of Green Skills identified by ESCO in the composition of employment expected to emerge from investments in green molecules in Europe and the United Kingdom in 2040. Presented by employment type (direct, indirect and induced).



Lastly, if we compare the composition of jobs in each country in 2040 by the density of green skills required in each of them, we obtain the following ranking of countries according to their capacity to create green jobs. **Spain tops this list, with a 55.3% presence of Green Skills in new employment related to the green hydrogen and biofuels economy in 2040, followed by Italy (54.8%), the United Kingdom (54.6%), Germany (54.3%), the Netherlands (54.21%), France (54.05%) and Portugal (54.4%).**

This forecast also accentuates the gap between the Green Skills knowledge of current professionals in these countries and their future projection. **Italy (2.8 bp behind) and Spain (2.6 bp), followed by Germany (2.2 bp), the Netherlands (1.8 bp) and Portugal (1.7 bp) are the countries that will have to make the greatest effort to achieve the green job projection.** Only France, at 1.1 bp behind, seems more prepared for the energy transition and the jobs created by the green hydrogen and biofuels revolution⁶.

Countries with the Greatest Weight of Green Skills in 2040

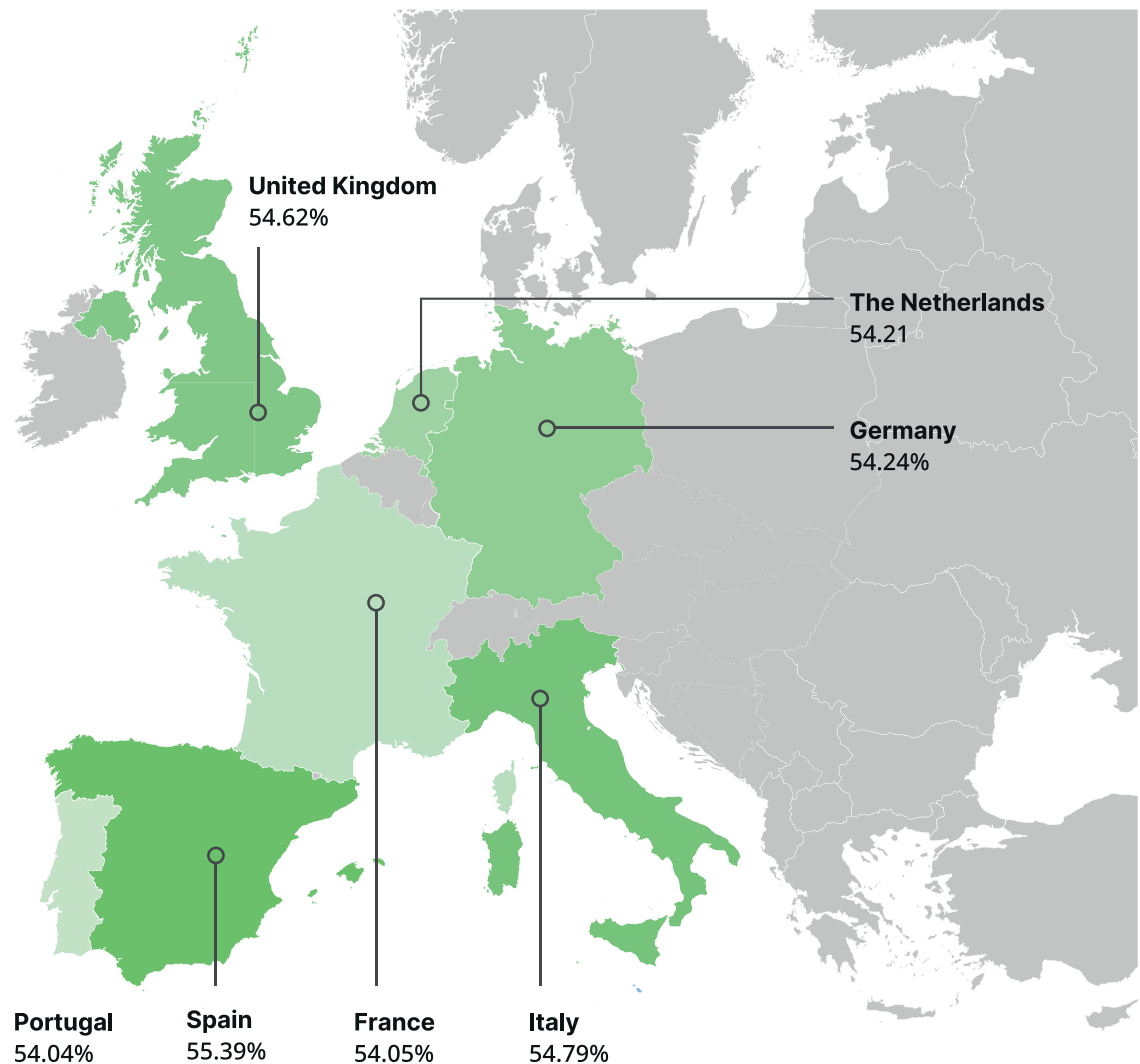


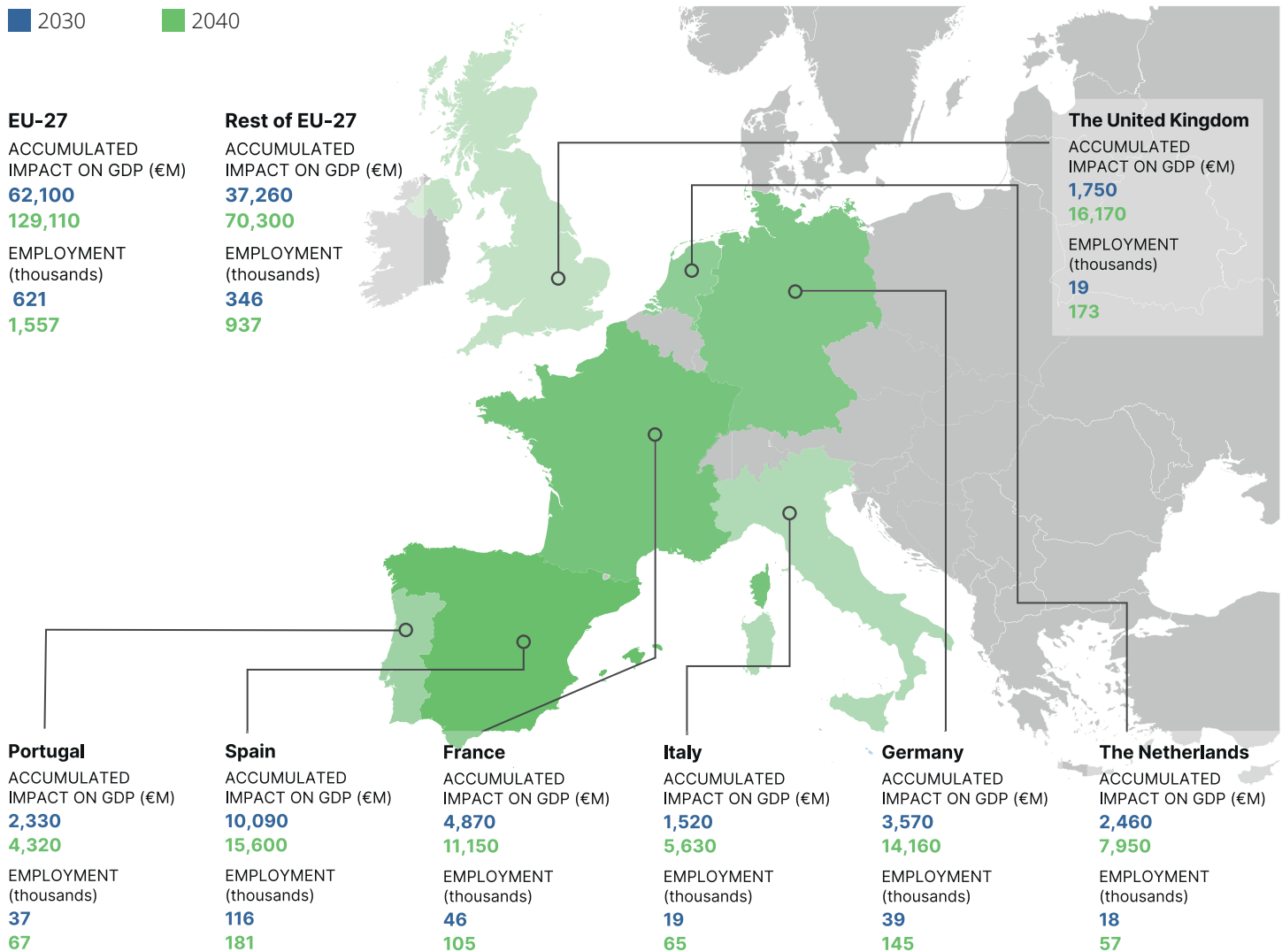
Fig. 21 Comparison of the analyzed countries based on the relative weight of Green Skills in the composition of employment expected to be generated in 2040.

Note 6. For more details, please refer to the appendix included at the end of the text.

THE IMPACT OF THE GREEN MOLECULE ECONOMY ON EMPLOYMENT IN THE COUNTRIES ANALYSED.

The energy transition driven by green hydrogen and biofuels will create its own employment model, as we have seen, which will demand specific professionals and skills along the entire supply and value chain. We will see below how this impact breaks down in the different countries covered.

In addition, we will look at the ISCO classification of occupations developed by the World Labour Organisation to draw as detailed a map of employment by country as possible.





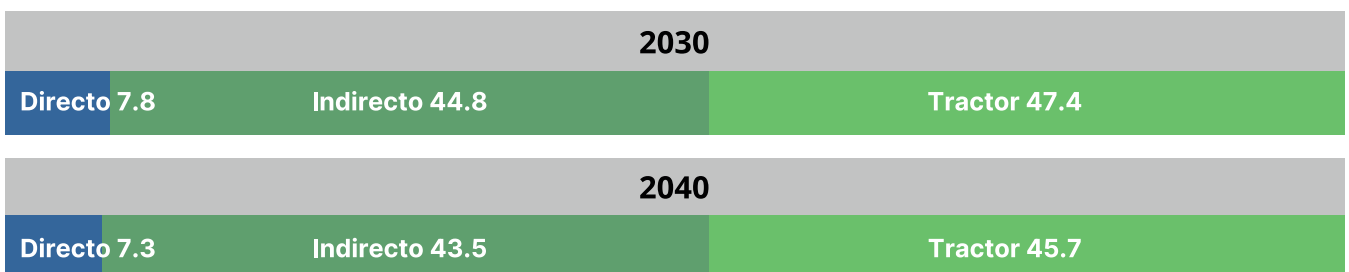
SPAIN



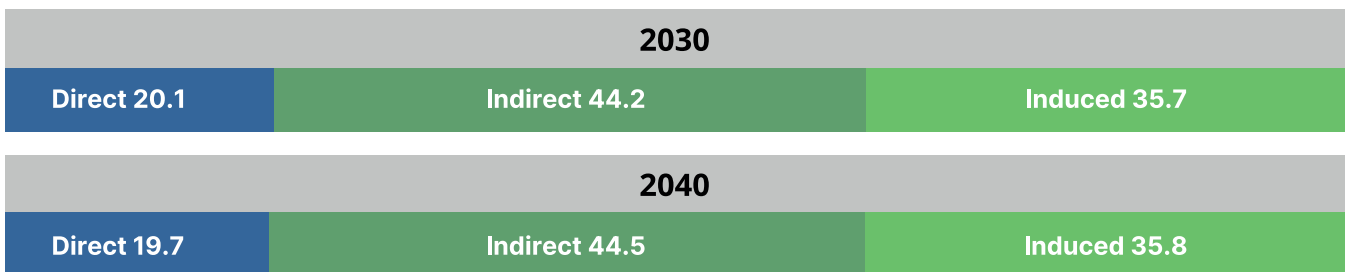
Jobs	GDP	Estimated green hydrogen production
116,000 in 2030 181,000 in 2040	10,090M€ in 2030 15,600M€ in 2040	74TWh in 2030 224TWh in 2040



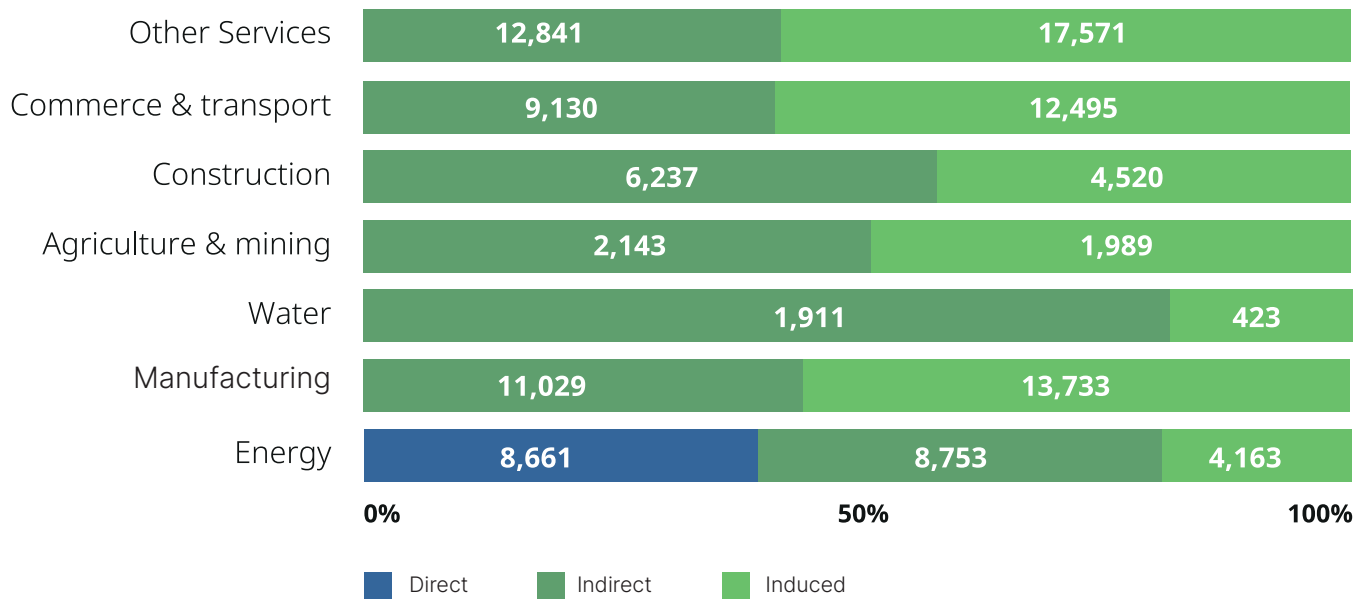
Breakdown of employment in Spain (%)



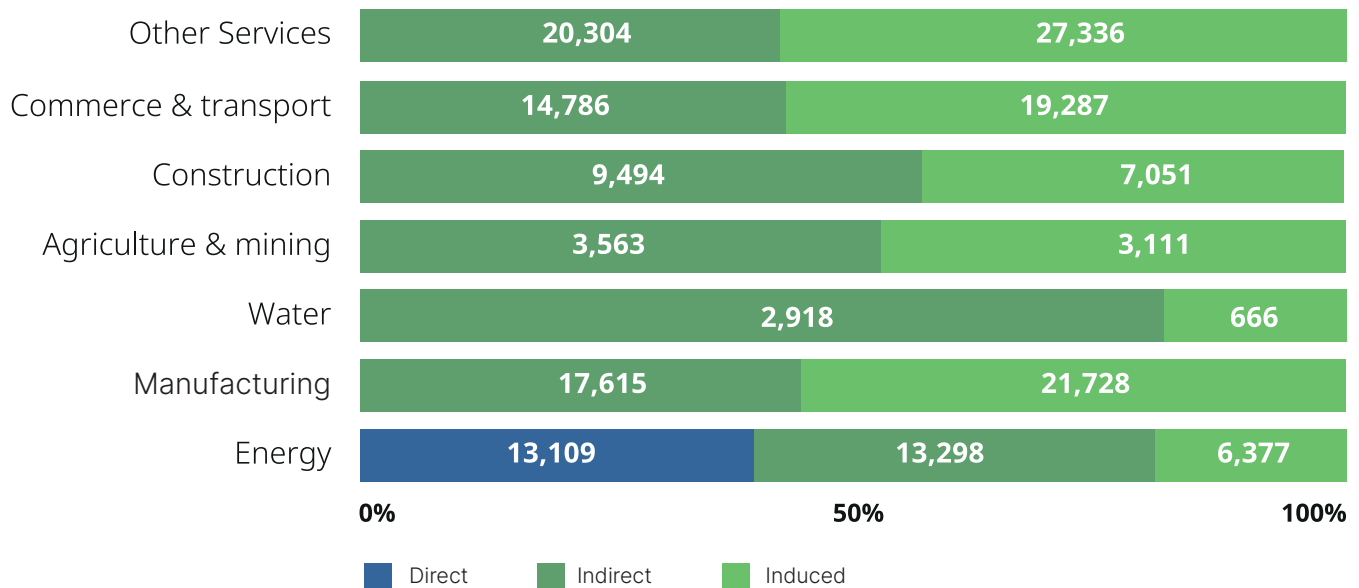
Estimated economic impact in Spain, according to the type of employment (%)



Impact on employment by sector in 2030



Impact on employment by sector in 2040



Socio-demographic profile

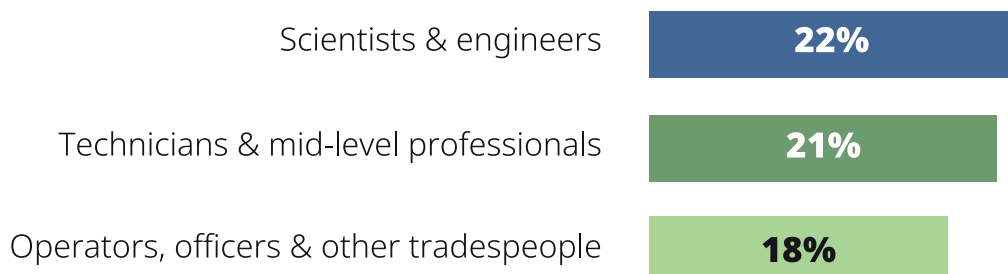
2030



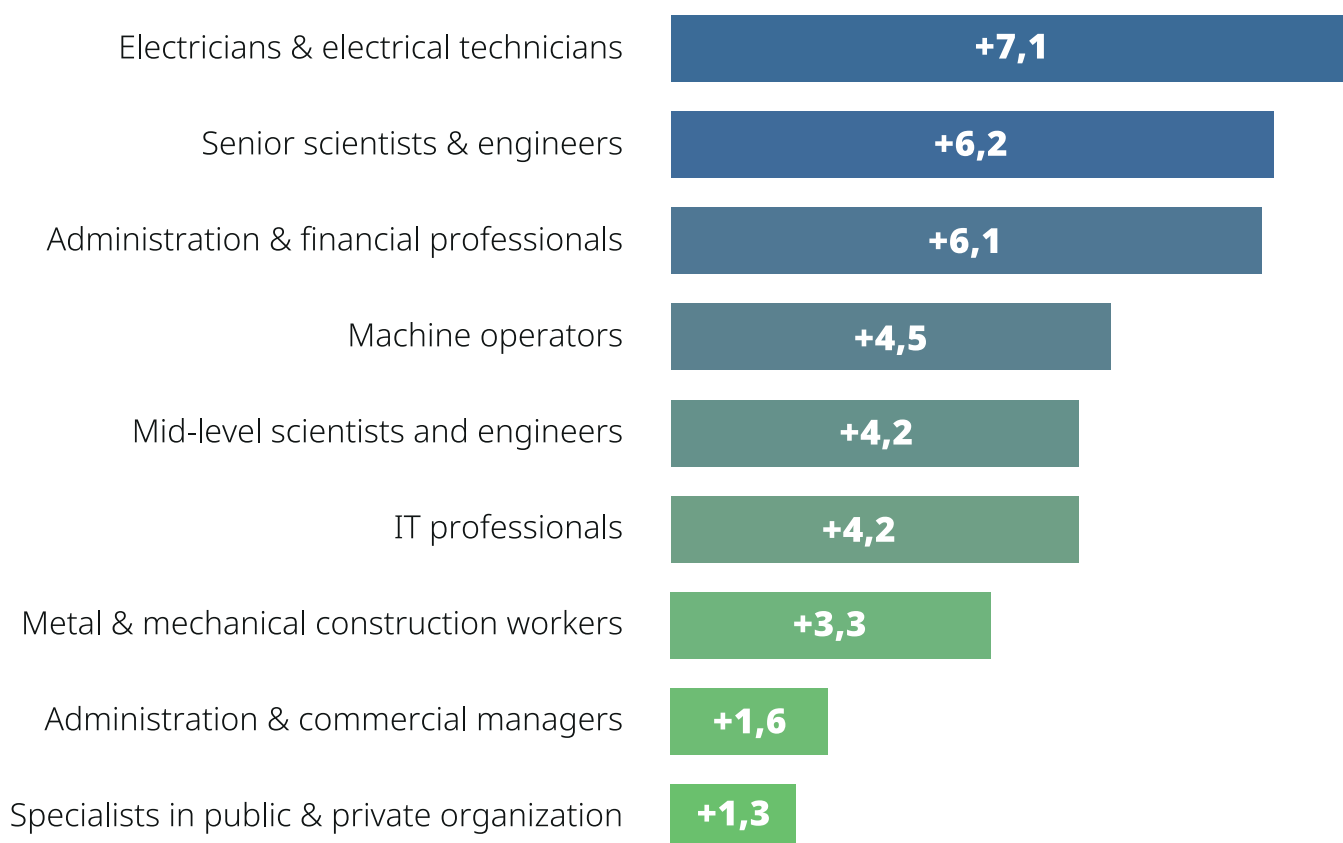
2040



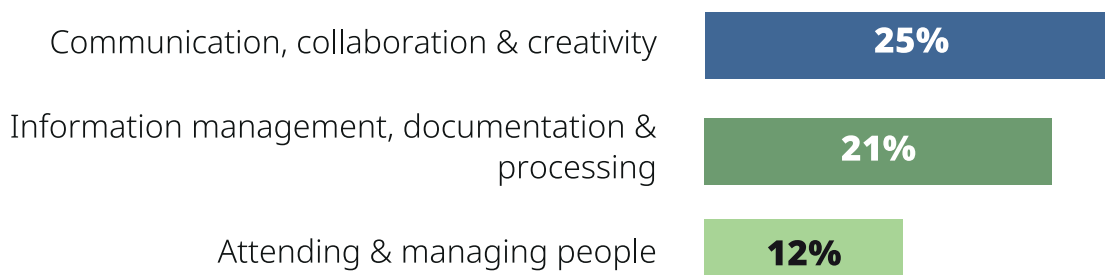
Occupations most in demand



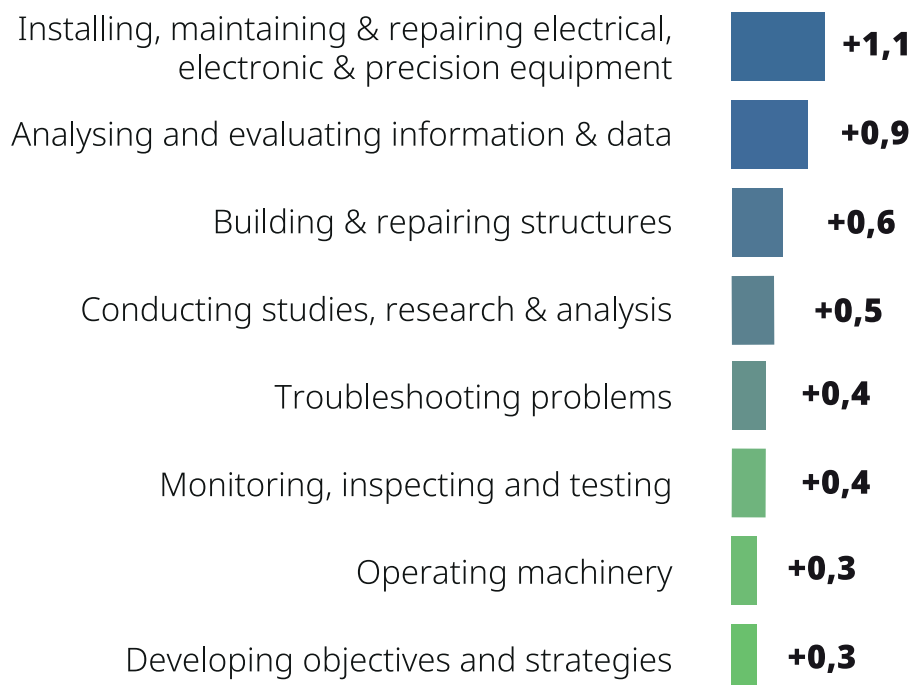
Occupations with the greatest imbalance with respect to 2023



Most demanded skills in 2040



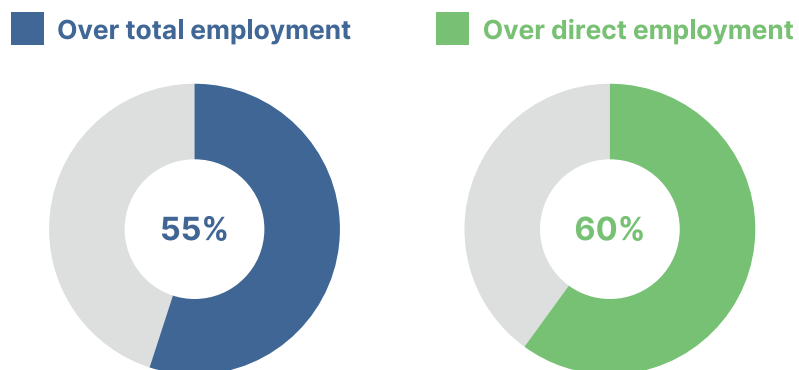
Skills with the greatest imbalance with respect to 2023



Key green skills



Ratio of green skills



FRANCE



Nuevos empleos

46.000
en 2030
105.000
en 2040



Impacto económico estimado

4.870M€
en 2030
11.150M€
en 2040



Producción estimada de Hidrógeno Verde

30TWh
en 2030
104TWh
en 2040



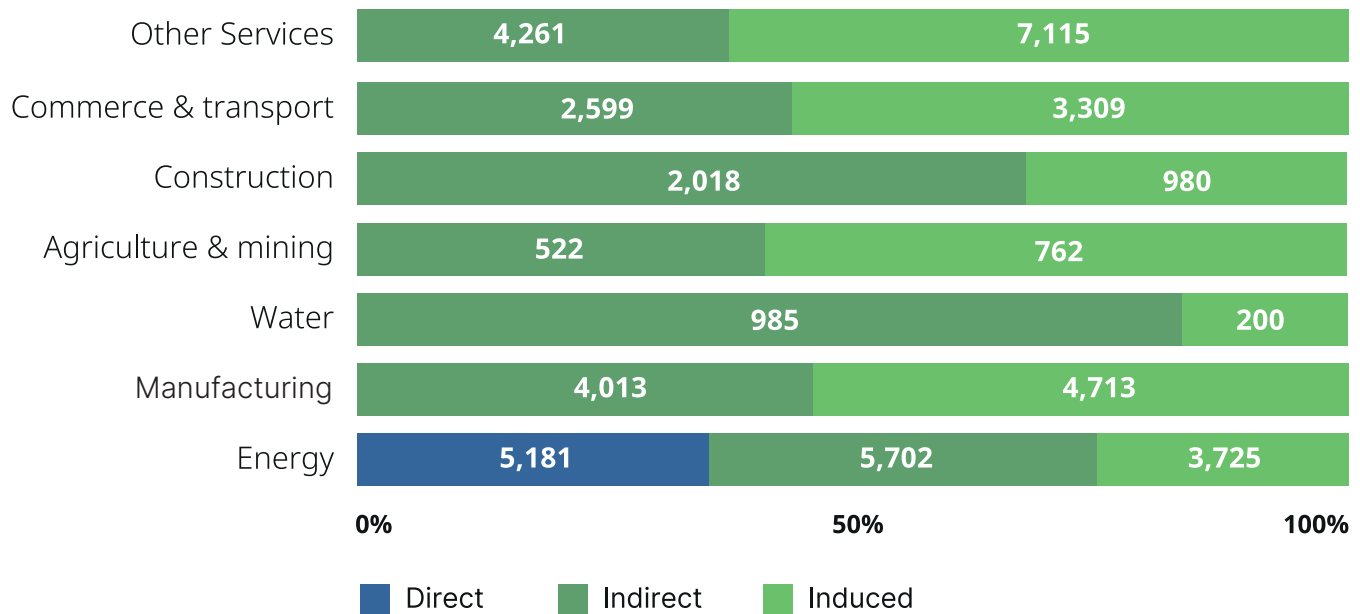
Breakdown of employment in France (%)

2030		
Direct 10.9	Indirect 43.5	Induced 45.7
2040		
Direct 11.4	Indirect 43.4	Induced 44.8

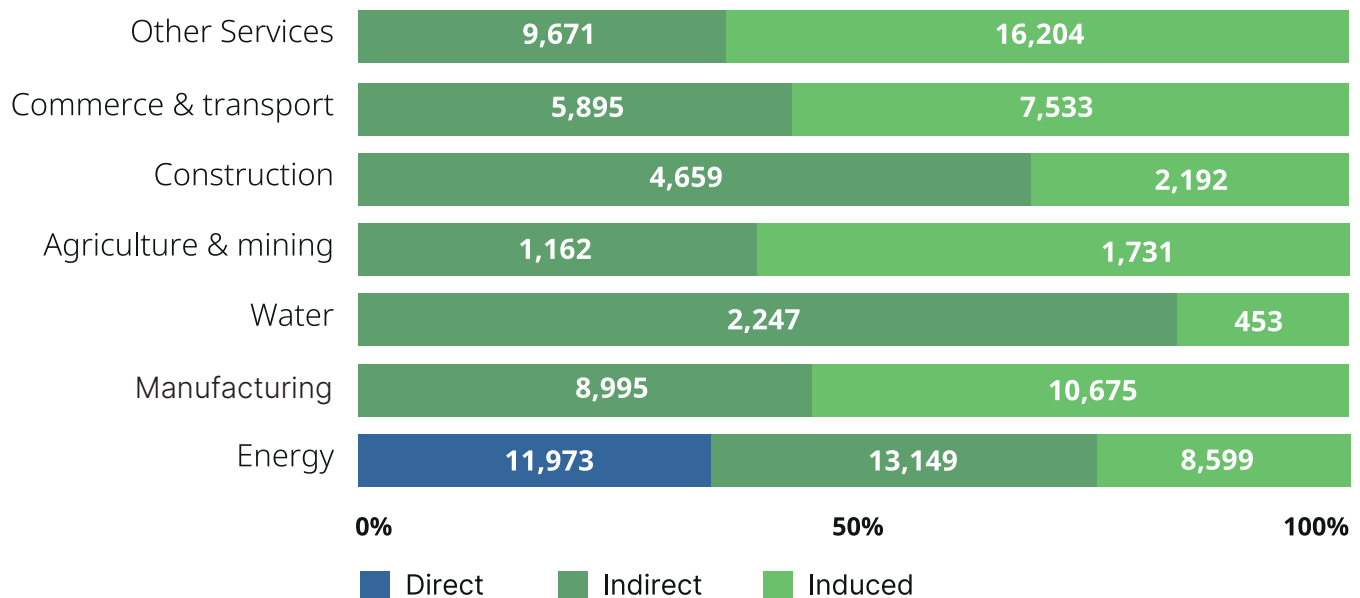
Estimated economic impact in France, according to the type of employment (%)

2030		
Direct 17.7	Indirect 43.3	Induced 39.0
2040		
Direct 17.8	Indirect 43.3	Induced 38.8

Impact on employment by sectors in 2030



Impact on employment by sectors in 2040



Socio-demographic profile

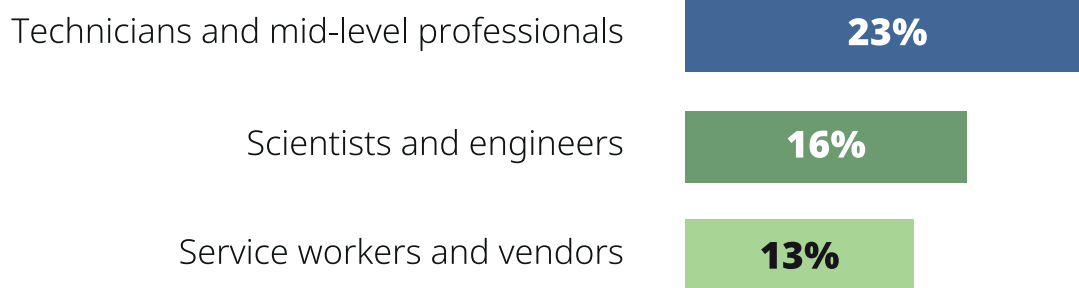
2030



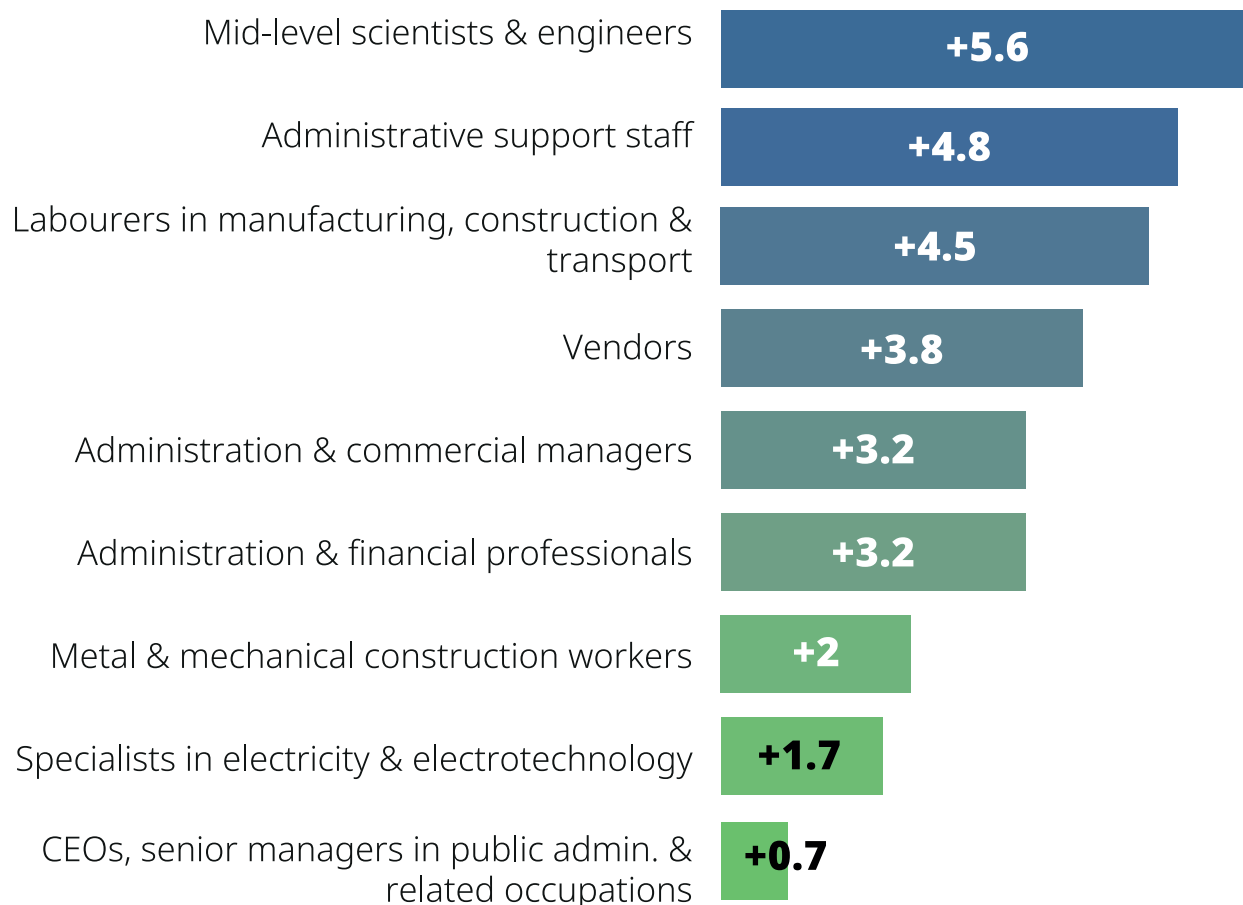
2040



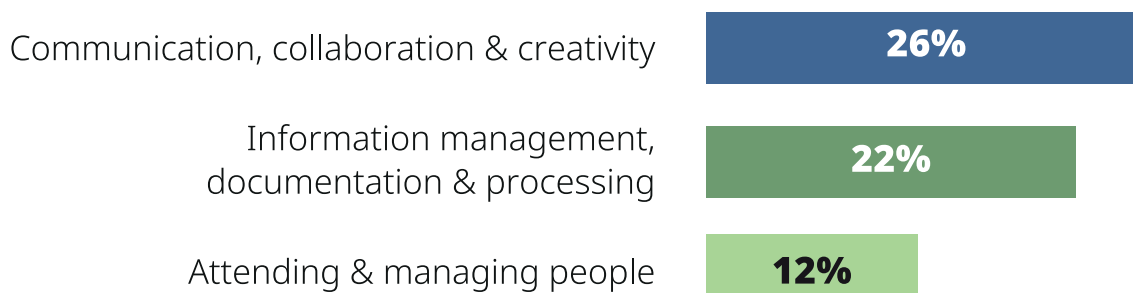
Occupations most in demand in 2040 (%)



Occupations with the greatest imbalance with respect to 2023



Most demanded skills in 2040 (%)



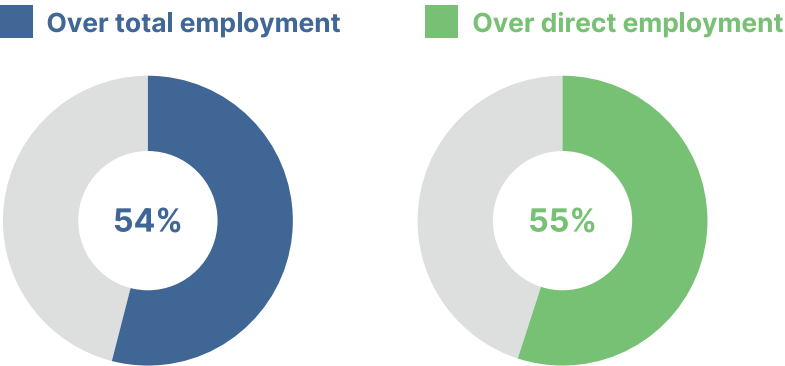
Skills with the greatest imbalance with respect to 2023 (en puntos básicos)



Key green skills



Ratio of green skills in 2040



PORTUGAL



Jobs

37,000
in 2030

67,000
in 2040



GDP

2,330M€
in 2030

4,320M€
in 2040



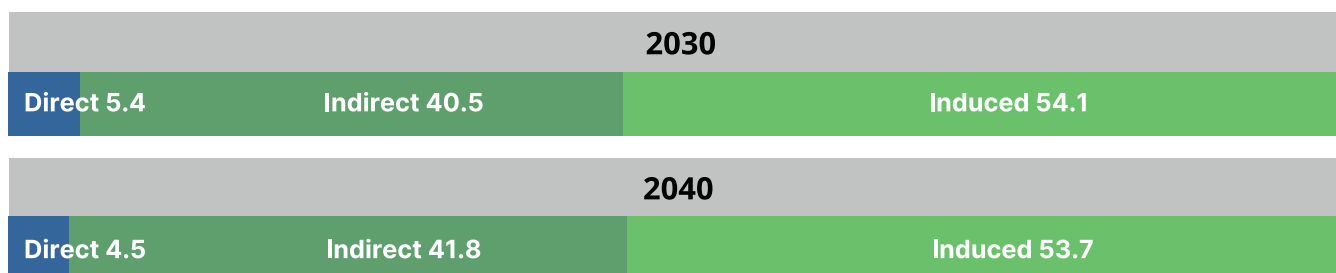
Estimated green hydrogen production

16TWh
in 2030

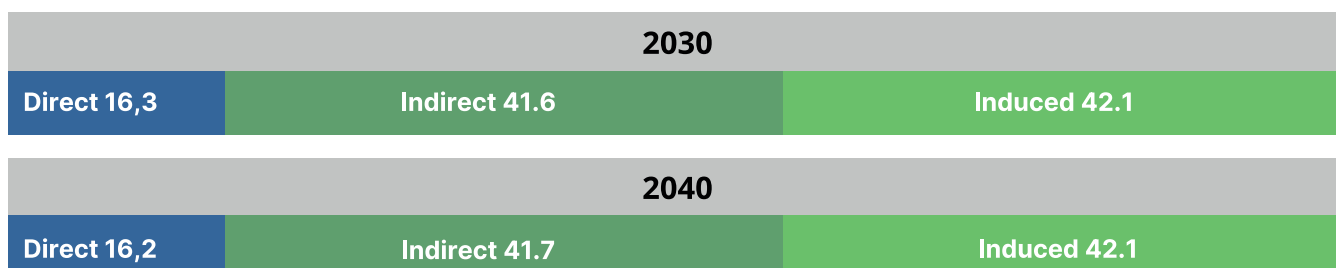
55TWh
in 2040



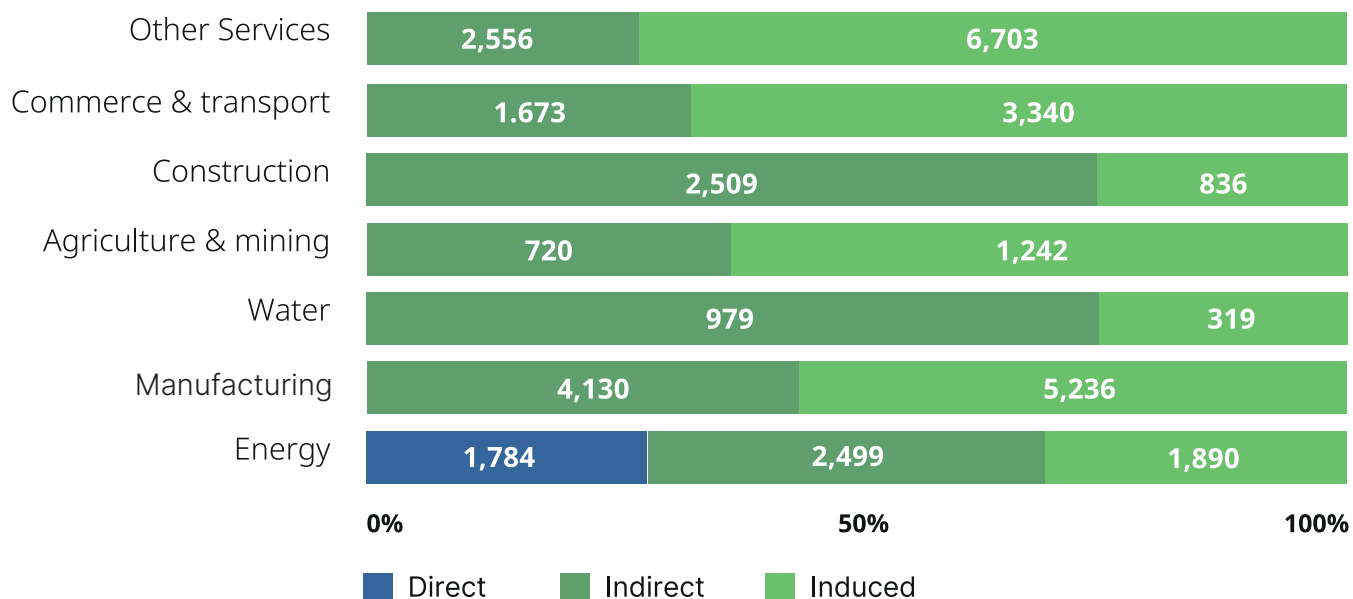
Breakdown of employment in Portugal (%)



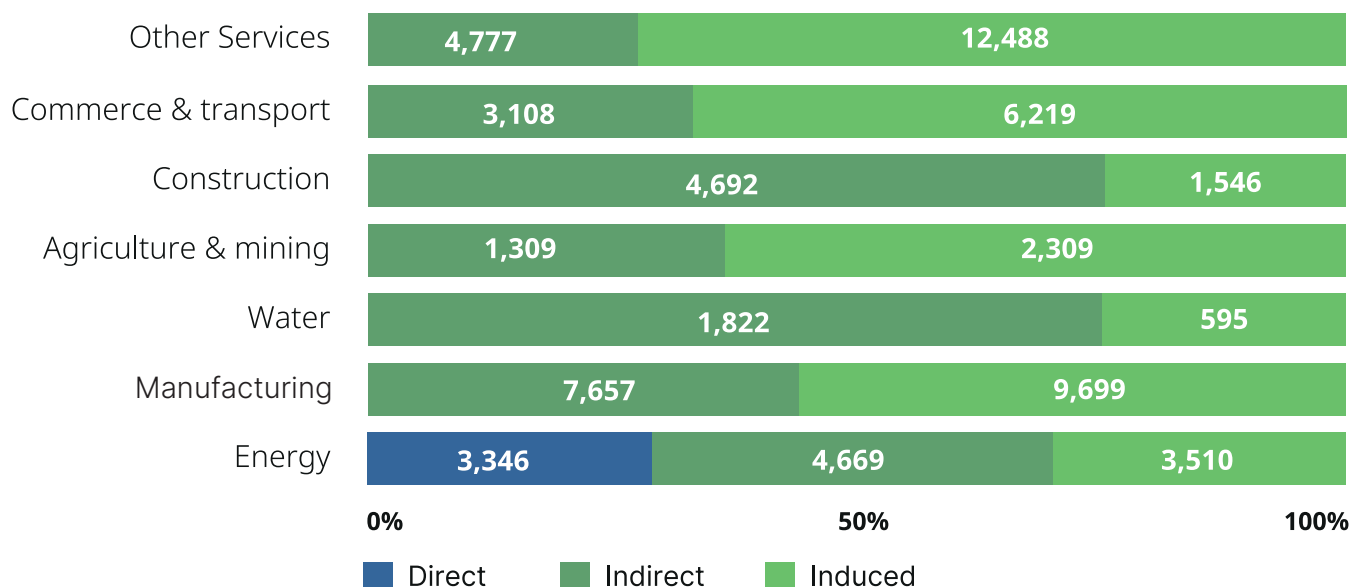
Estimated economic impact in Portugal, according to the type of employment (%)



Impact on employment by sectors in 2030



Impact on employment by sectors in 2040



Socio-demographic profile

2030



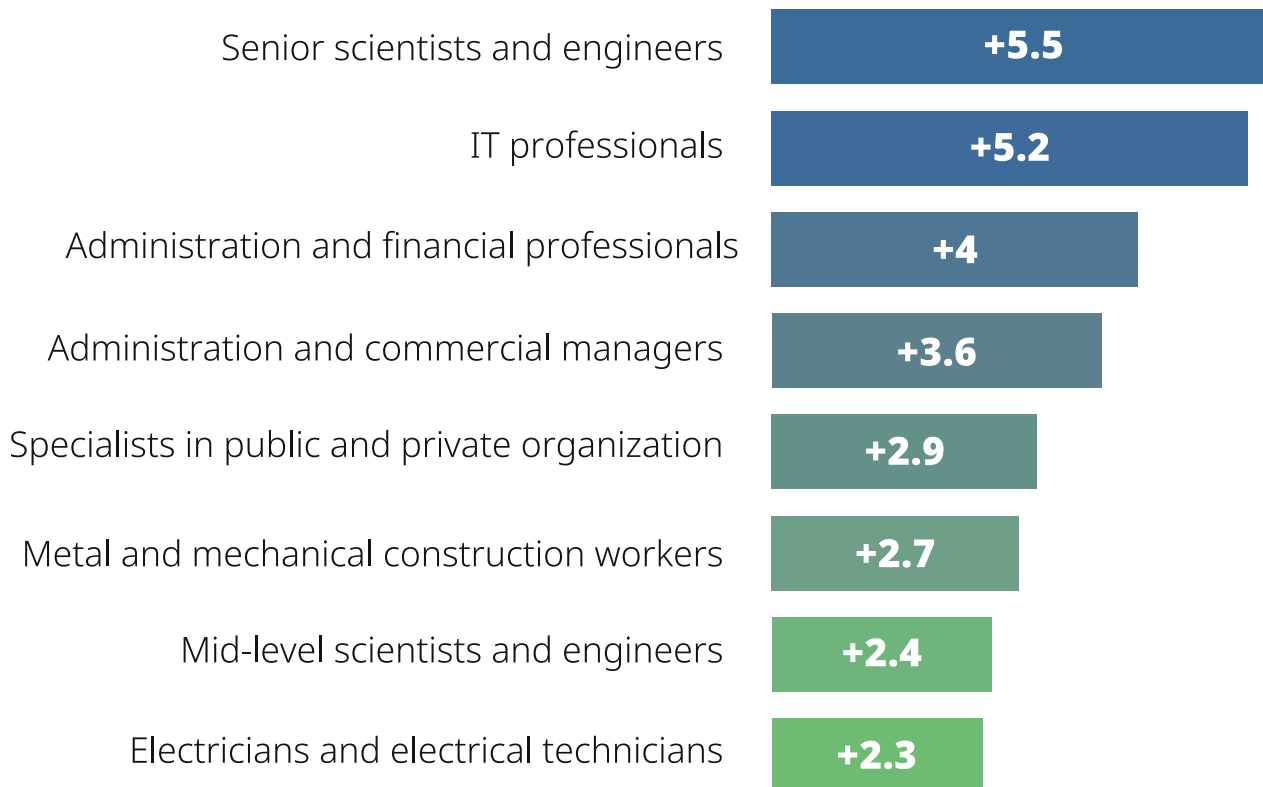
2040



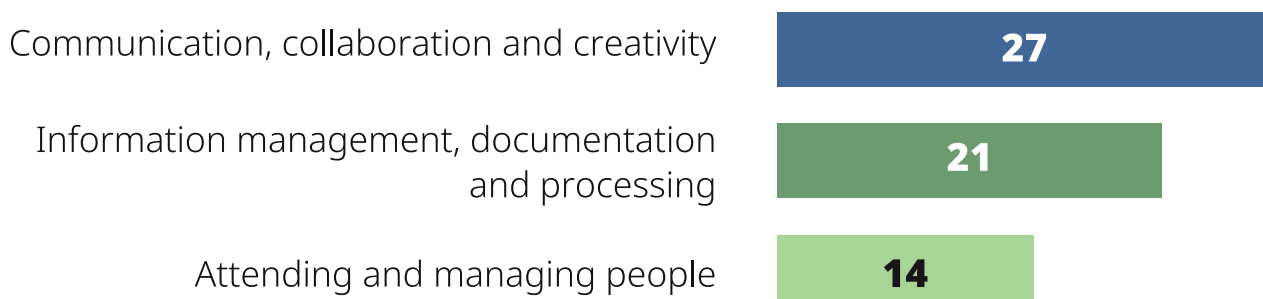
Occupations most in demand in 2040 (%)



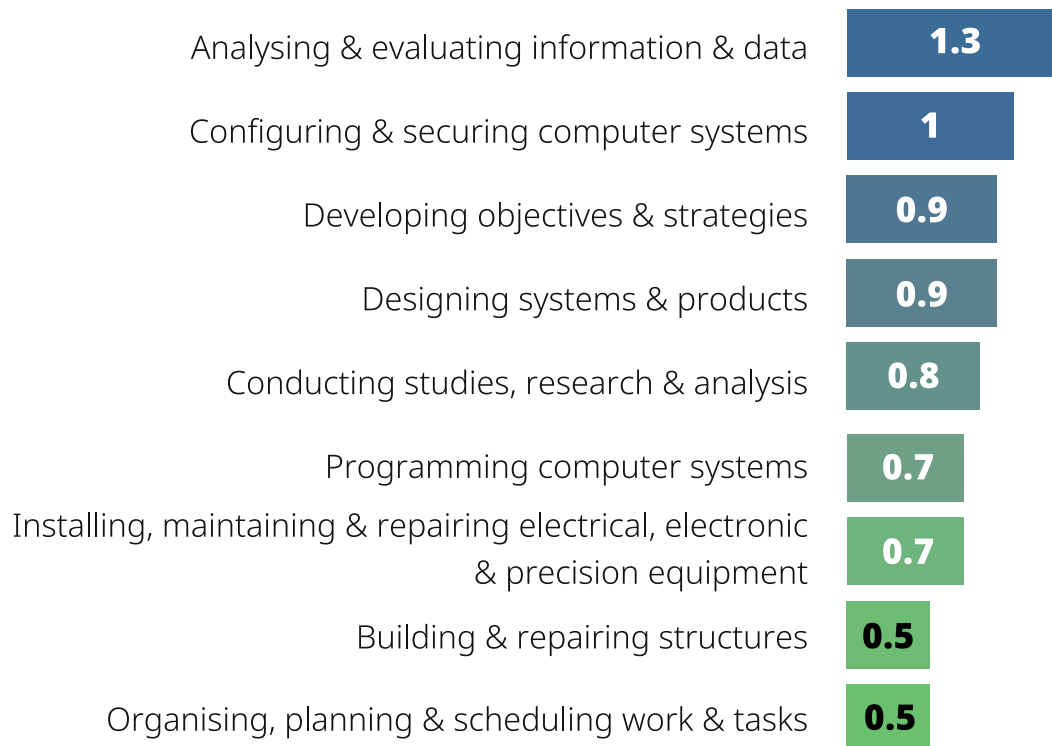
Occupations with the greatest imbalance with respect to 2023



Most demanded skills in 2040 (%)



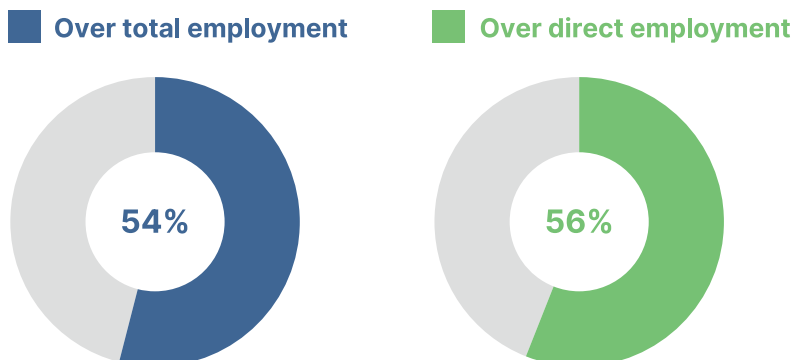
Skills with the greatest imbalance with respect to 2023 (en puntos básicos)



Key green skills



Ratio of green skills in 2040



THE NETHERLANDS



Jobs

18,000
in 2030
57,000
in 2040



GDP

2,460M€
in 2030
7,950M€
in 2040

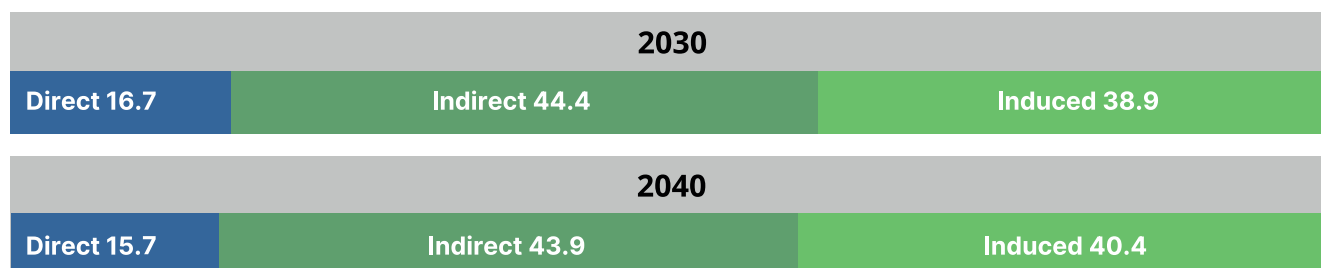


Estimated green hydrogen production

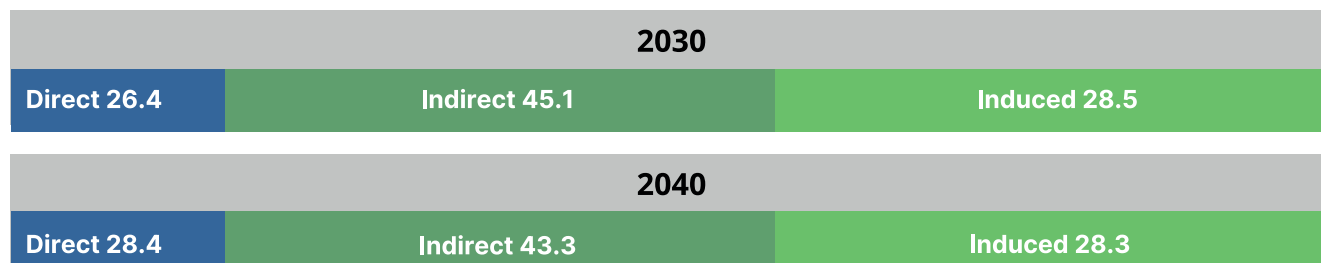
17TWh
in 2030
84TWh
in 2040



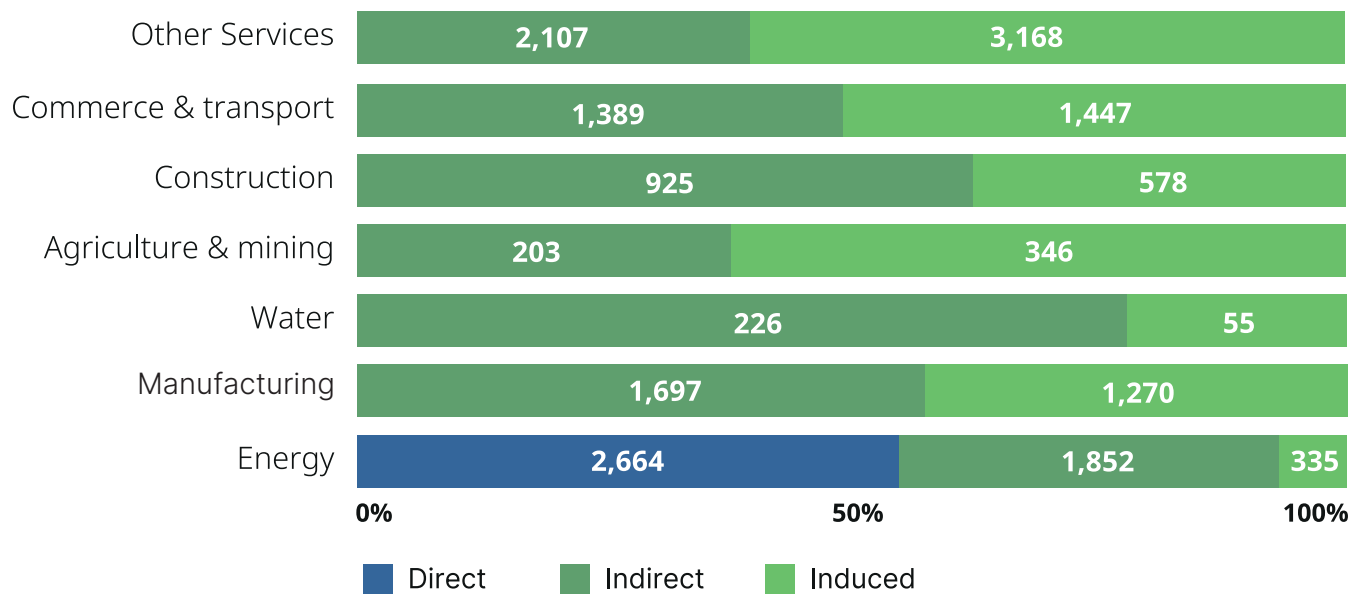
Breakdown of employment in The Netherlands (%)



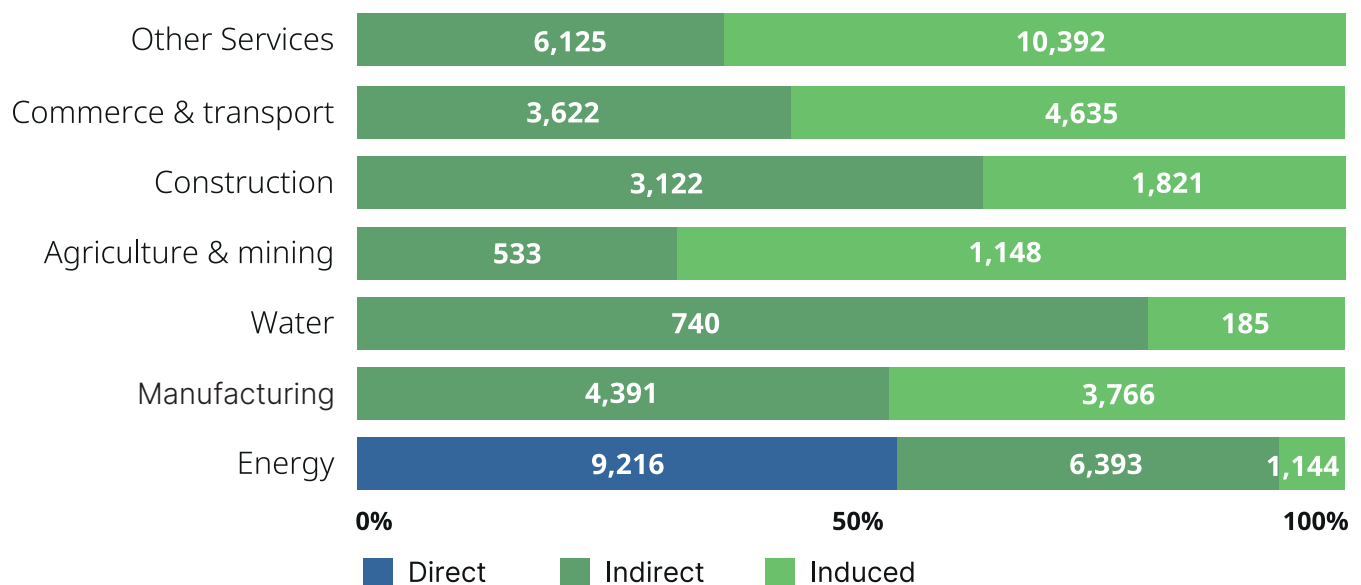
Estimated economic impact in The Netherlands, according to the type of employment (%)



Impact on employment by sectors in 2030



Impact on employment by sectors in 2040



Socio-demographic profile

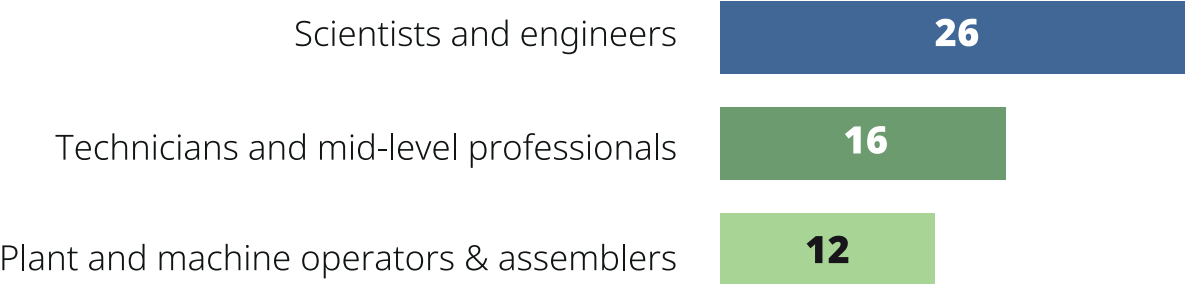
2030



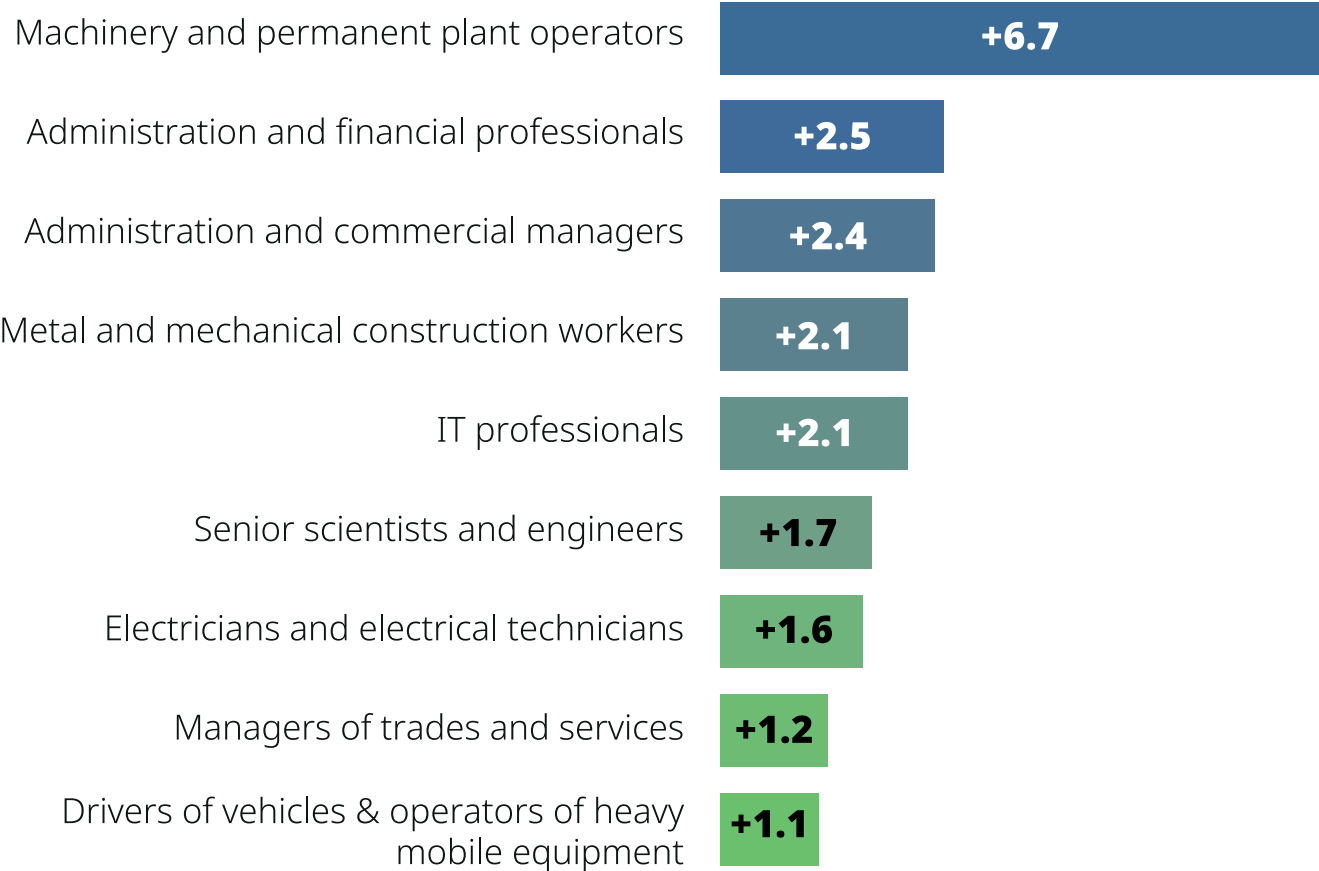
2040



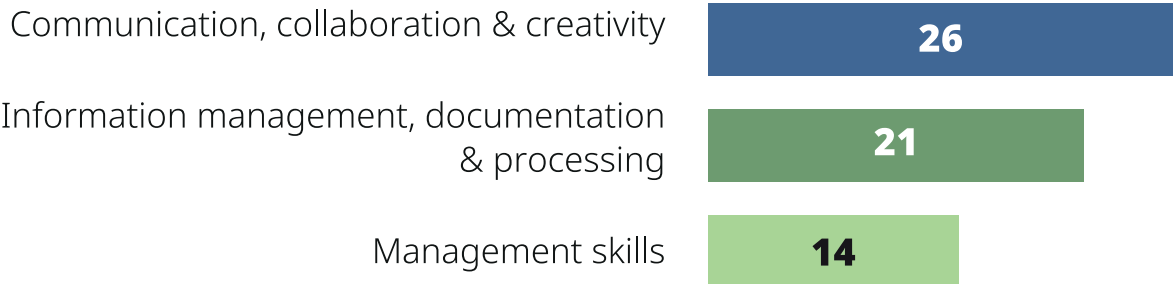
Occupations most in demand in 2040 (%)



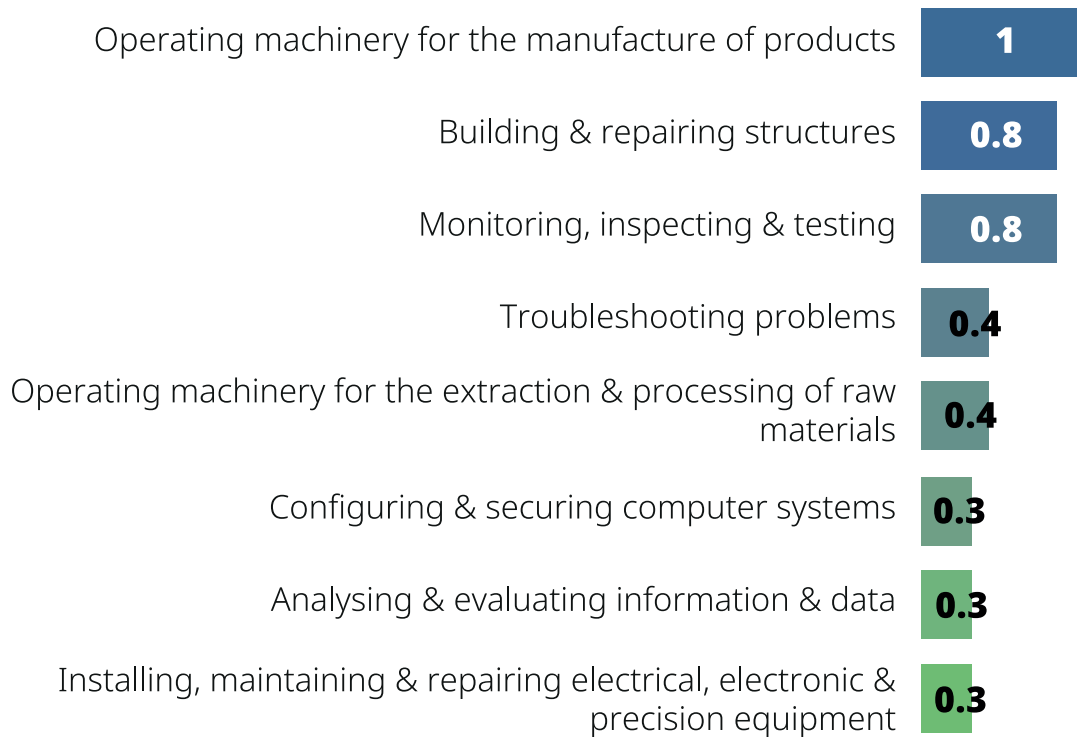
Occupations with the greatest imbalance with respect to 2023



Most demanded skills in 2040 (%)



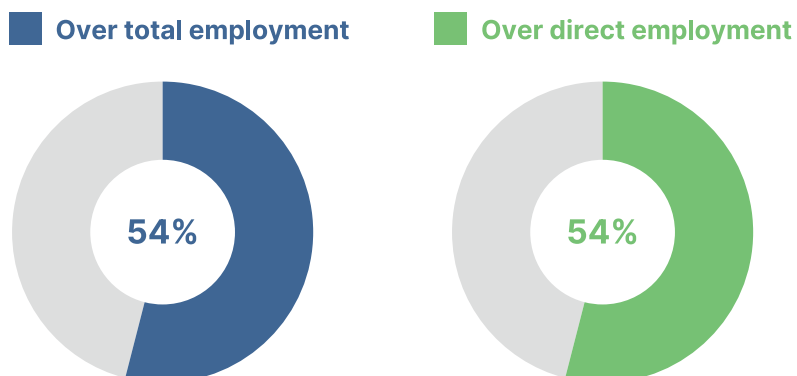
Skills with the greatest imbalance with respect to 2023 (en puntos básicos)



Key green skills



Ratio of green skills in 2040



GERMANY



Jobs

39,000
in 2030
145,000
in 2040



GDP

3,570M€
in 2030
14,160M€
in 2040

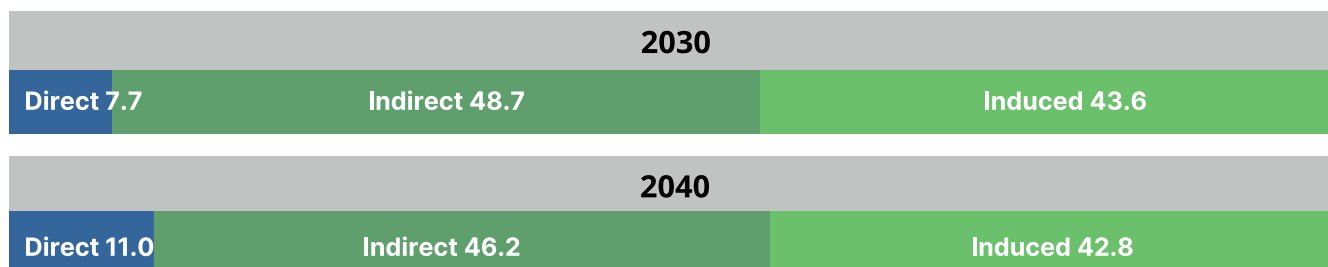


Estimated green hydrogen production

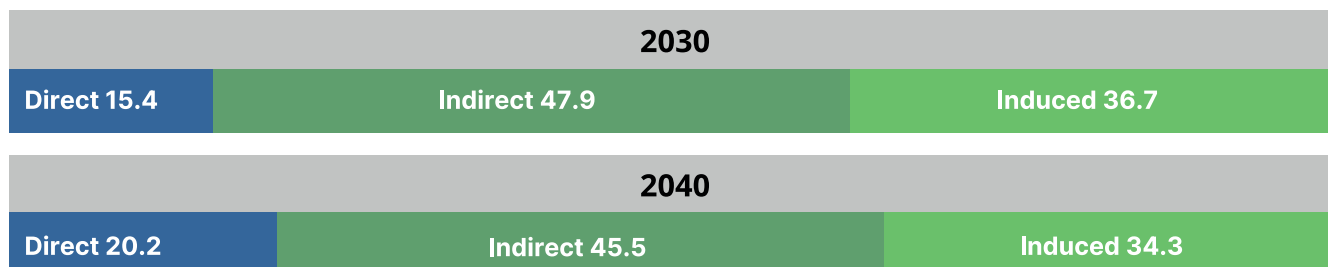
14.6TWh
in 2030
102TWh
in 2040



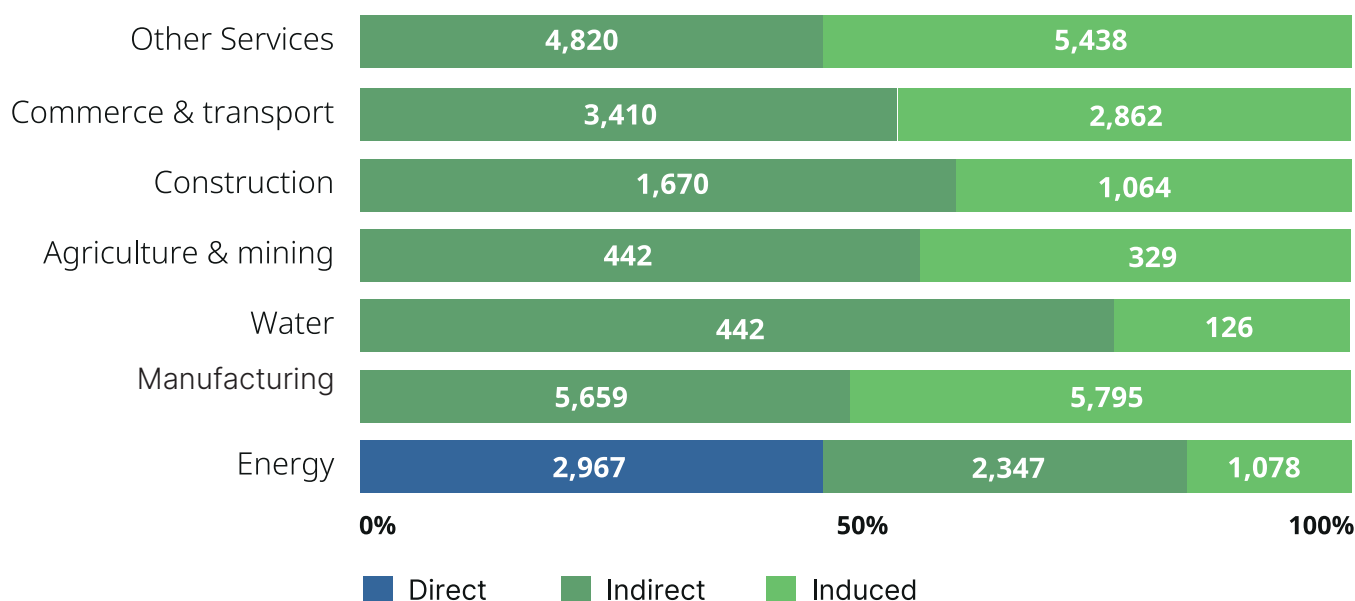
Breakdown of employment in Germany (%)



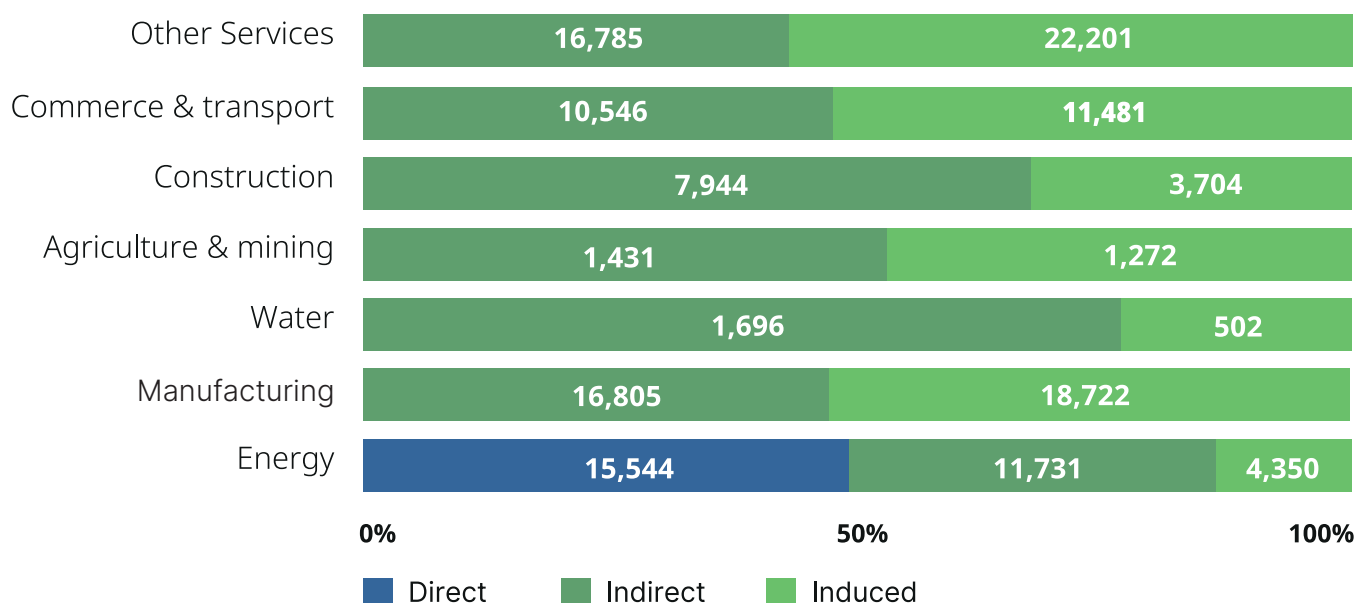
Estimated economic impact in Germany, according to the type of employment (%)



Impact on employment by sectors in 2030



Impact on employment by sectors in 2040



Socio-demographic profile

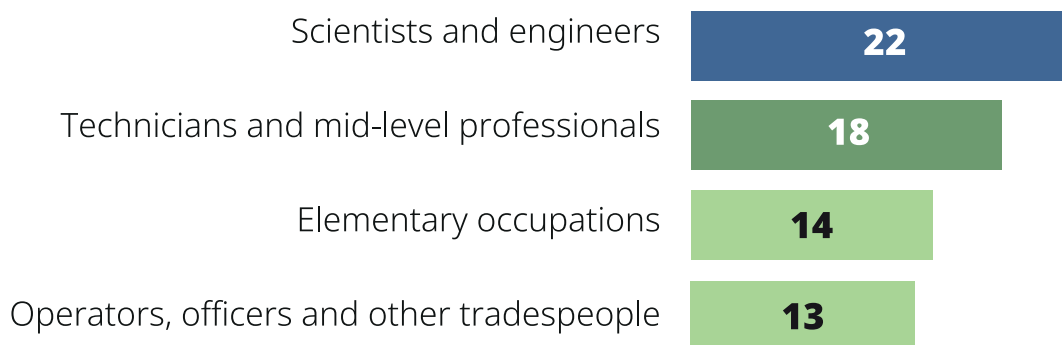
2030



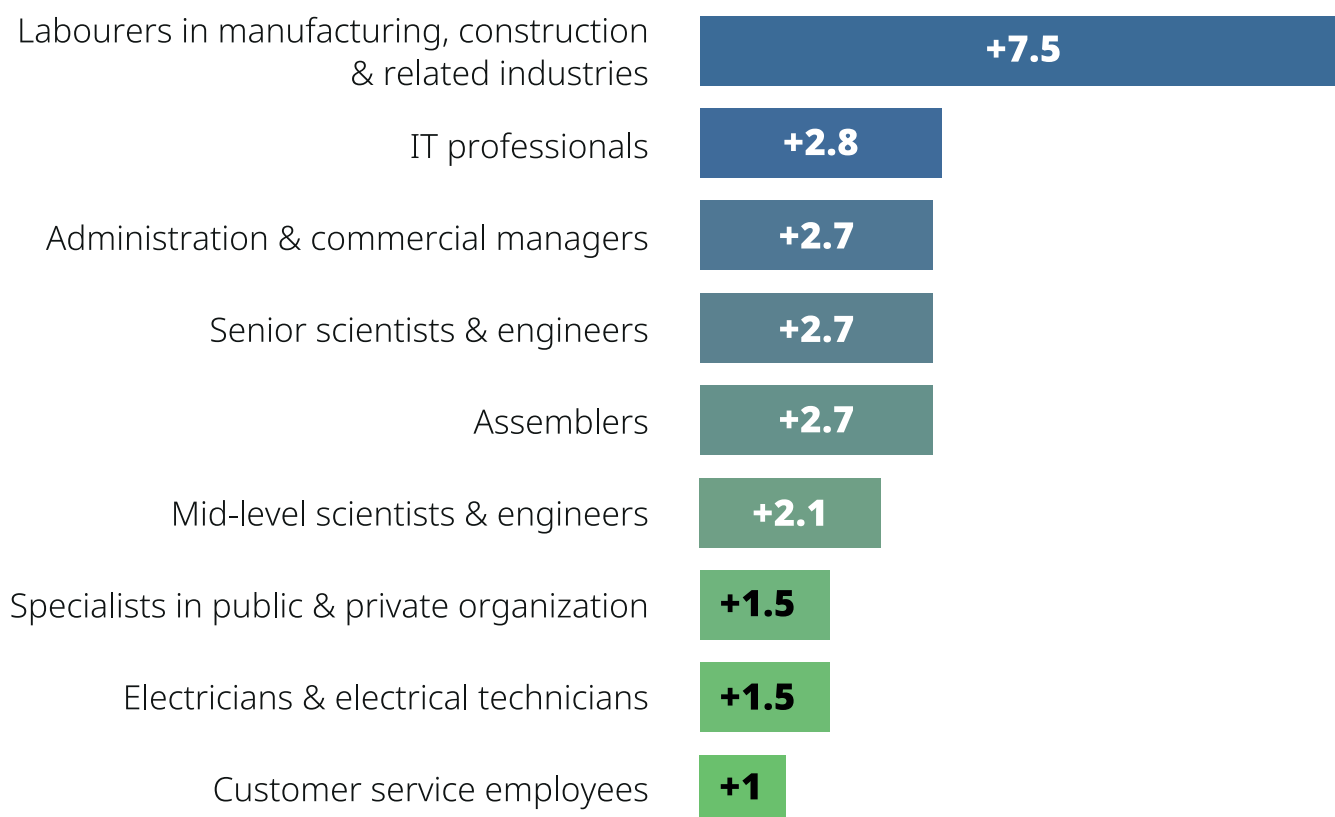
2040



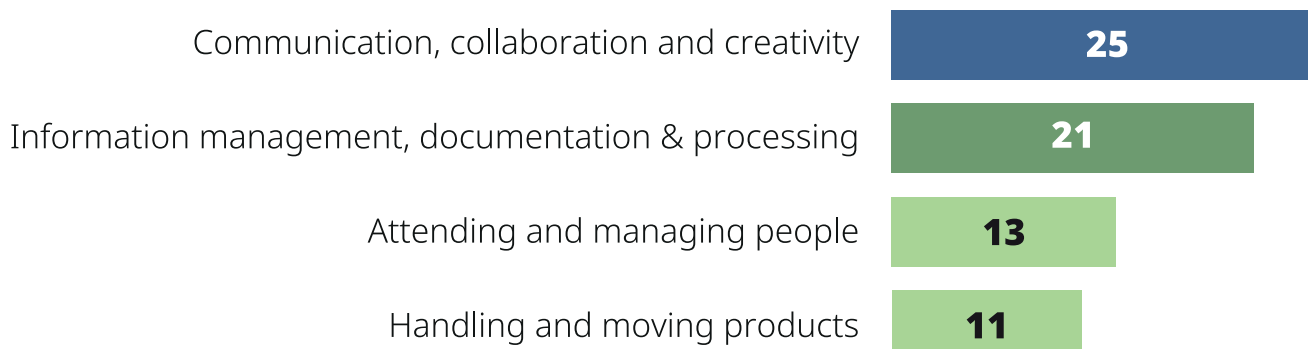
Occupations most in demand in 2040 (%)



Occupations with the greatest imbalance with respect to 2023



Most demanded skills in 2040 (%)



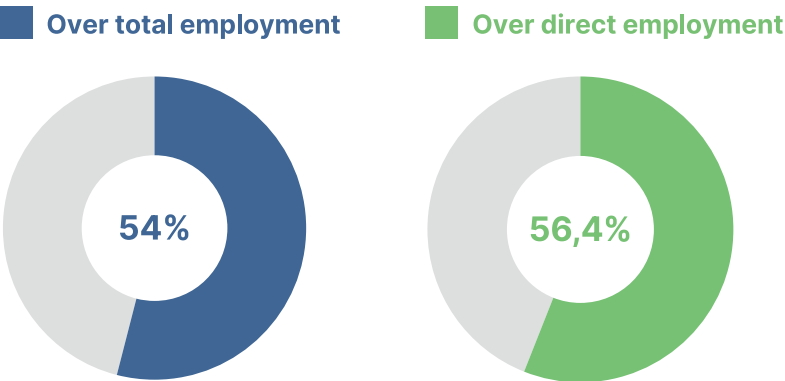
Skills with the greatest imbalance with respect to 2023 (en puntos básicos)

Building & repairing structures	1
Monitoring, inspecting and testing	0.7
Analysing & evaluating information & data	0.6
Moving & lifting materials	0.5
Designing systems & products	0.5
Sorting, packaging, packing & wrapping goods & materials	0.5
Installing, maintaining & repairing electrical, electronic & precision equipment	0.5
Operating mobile machinery	0.4
Developing objectives & strategies	0.4

Key green skills



Ratio of green skills in 2040





ITALY



Jobs

19,000
in 2030
65,000
in 2040



GDP

1,520M€
in 2030
5,630M€
in 2040

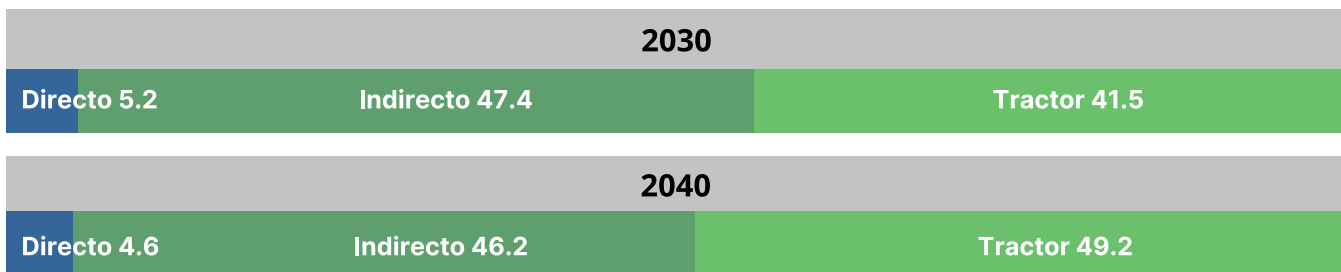


Estimated green hydrogen production

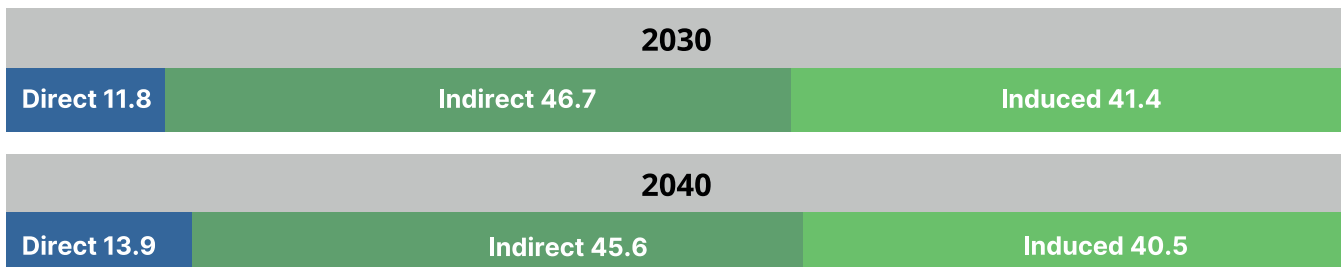
7TWh
in 2030
49TWh
in 2040



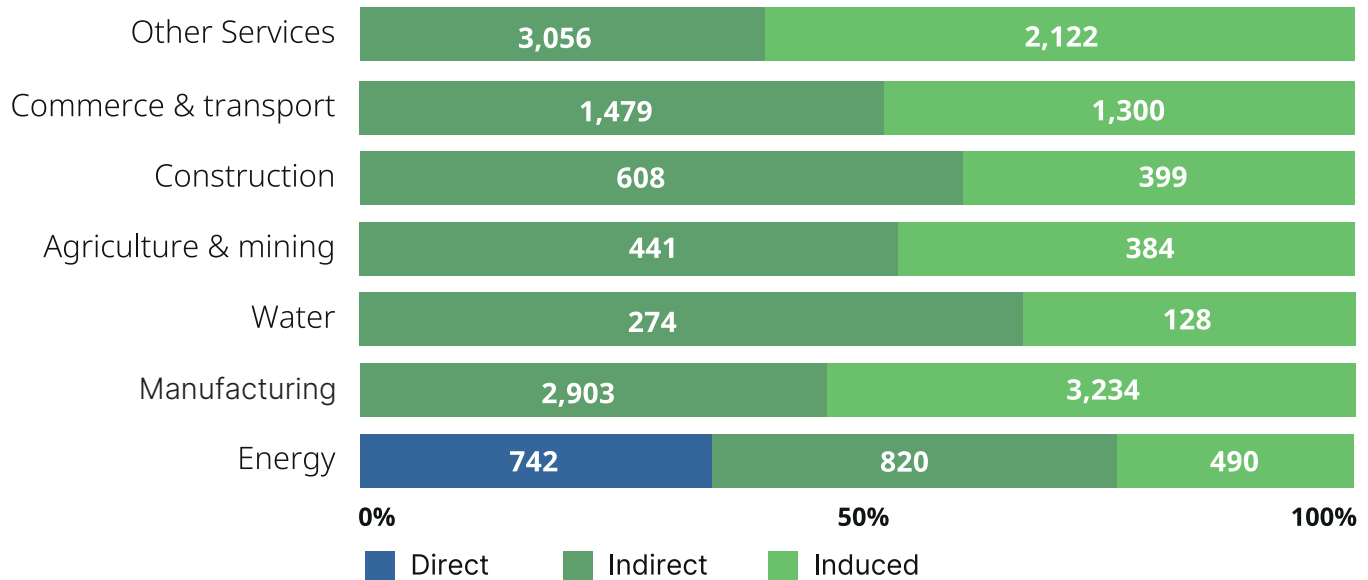
Breakdown of employment in Italy (%)



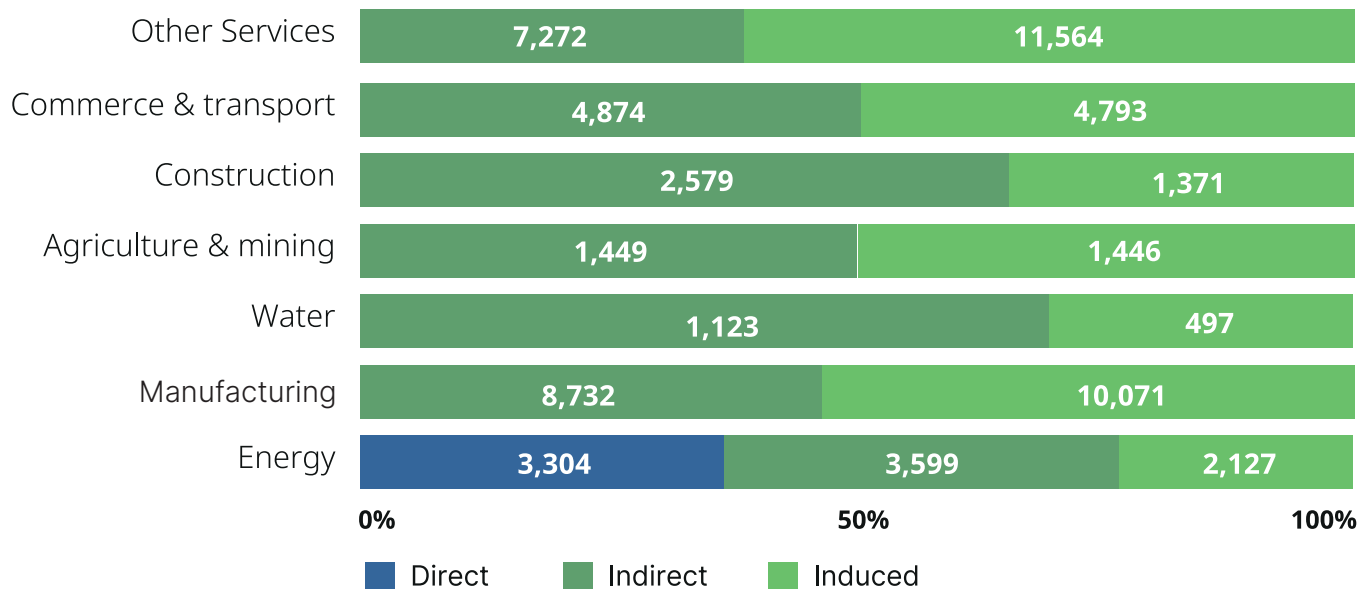
Estimated economic impact in Italy, according to the type of employment (%)



Impact on employment by sectors in 2030



Impact on employment by sectors in 2040



Socio-demographic profile

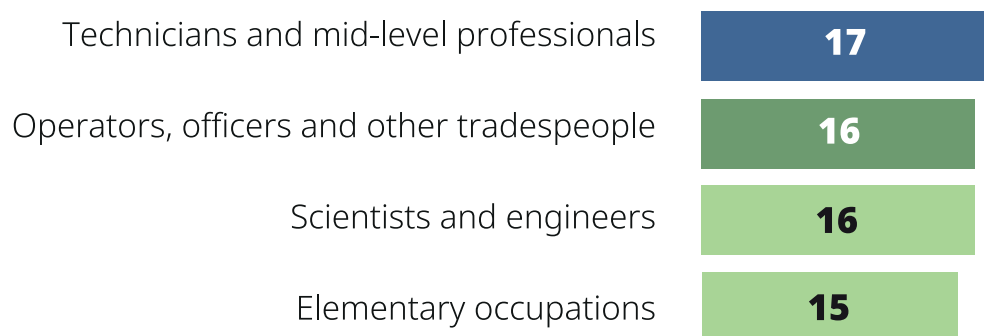
2030



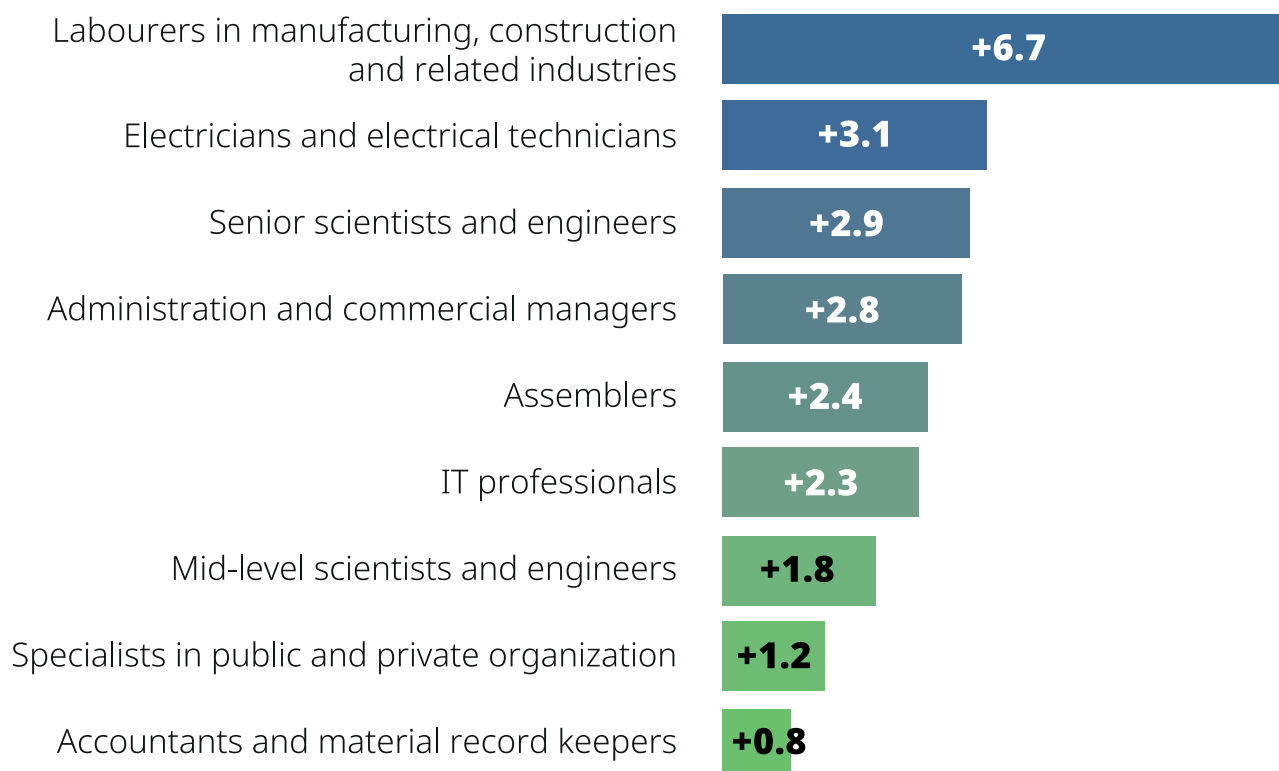
2040



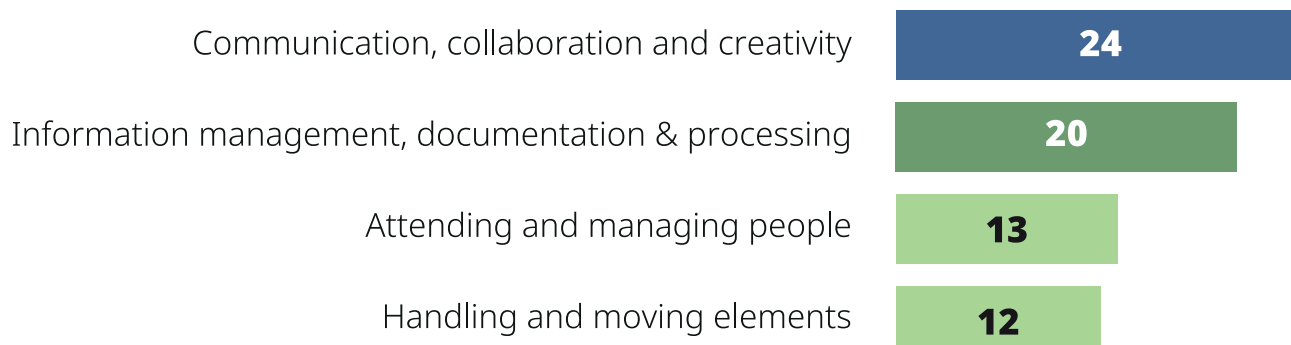
Occupations most in demand in 2040 (%)



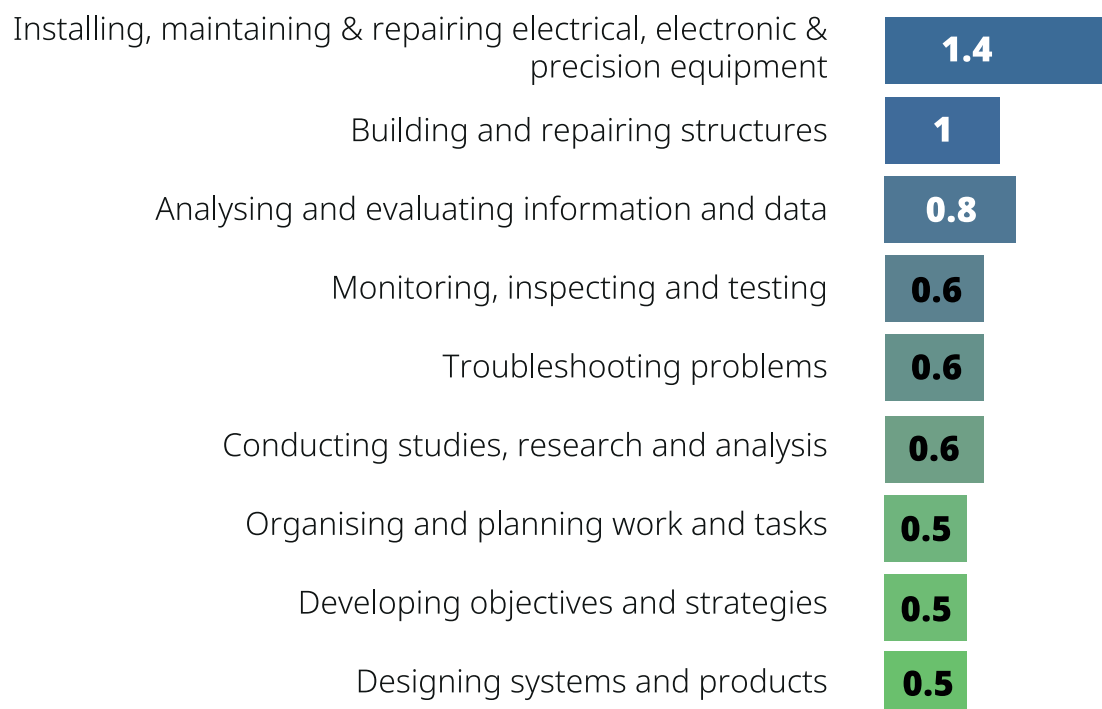
Occupations with the greatest imbalance with respect to 2023



Most demanded skills in 2040 (%)



Skills with the greatest imbalance with respect to 2023 (en puntos básicos)

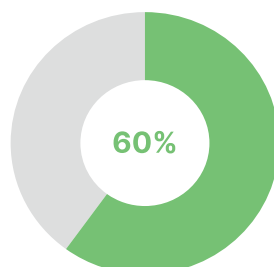
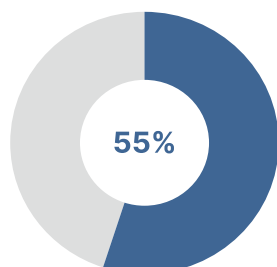


Key green skills



Ratio of green skills in 2040

■ Over total employment
 ■ Over direct employment



UNITED KINGDOM



Jobs

19,000
in 2030
173,000
in 2040



GDP

1,750M€
in 2030
16,170M€
in 2040

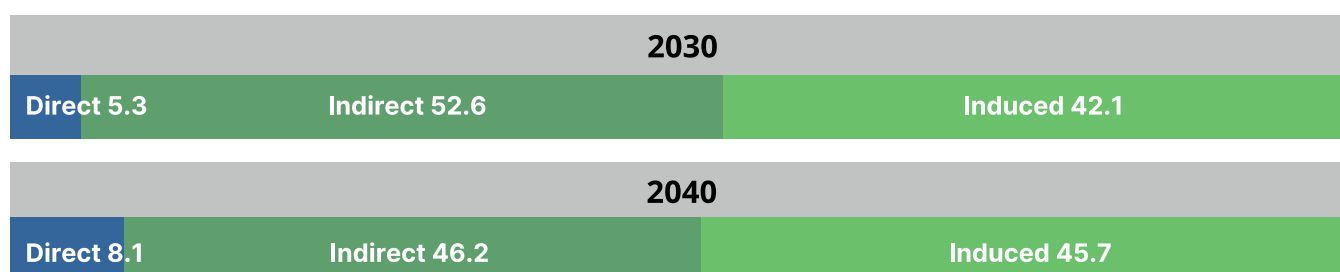


Estimated green hydrogen production

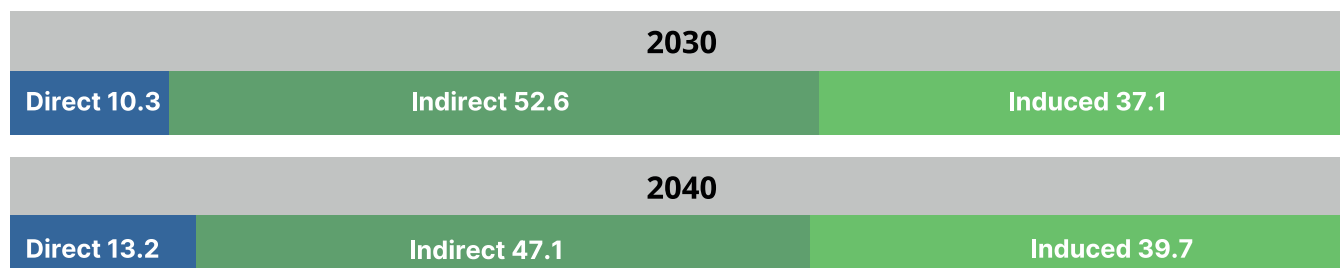
10TWh
in 2030
174TW
in 2040



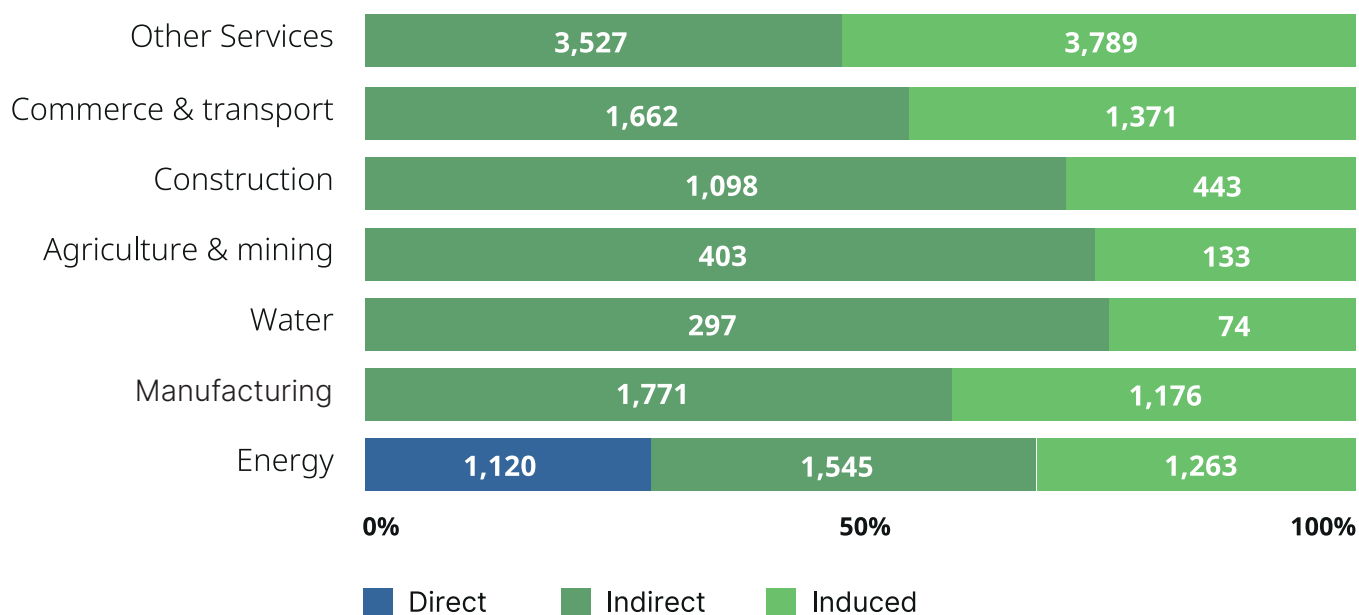
Breakdown of employment in The United Kingdom (%)



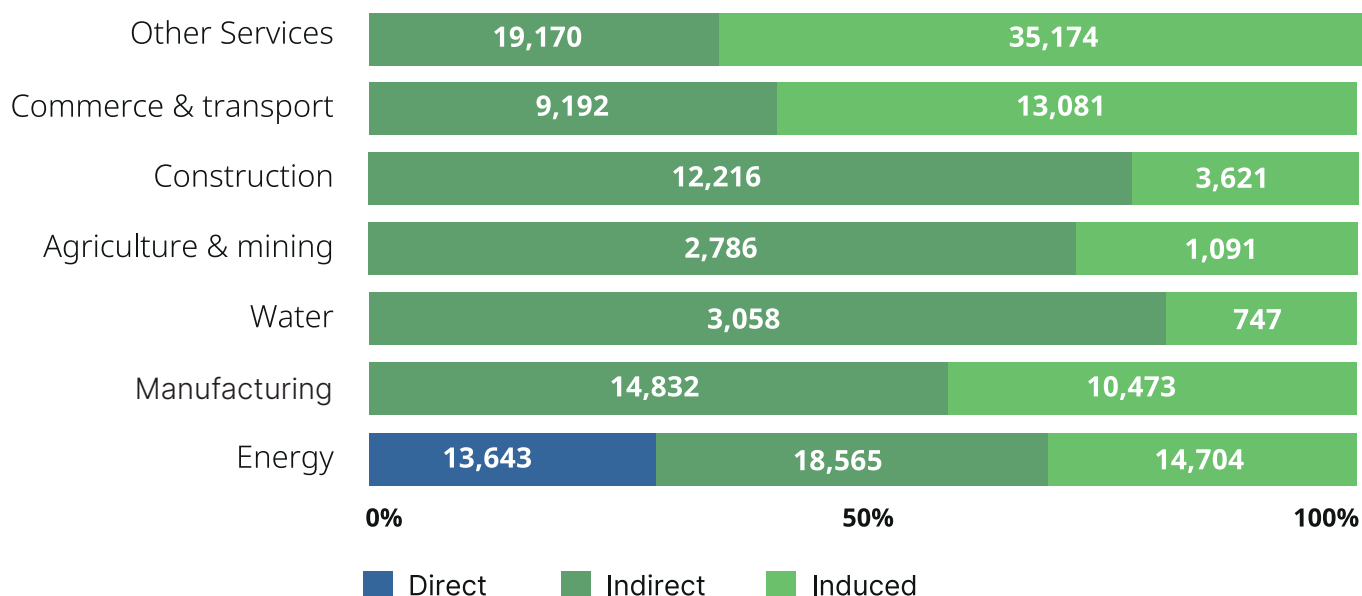
Estimated economic impact in the UK, according to the type of employment (%)



Impact on employment by sectors in 2030



Impact on employment by sectors in 2040



Socio-demographic profile

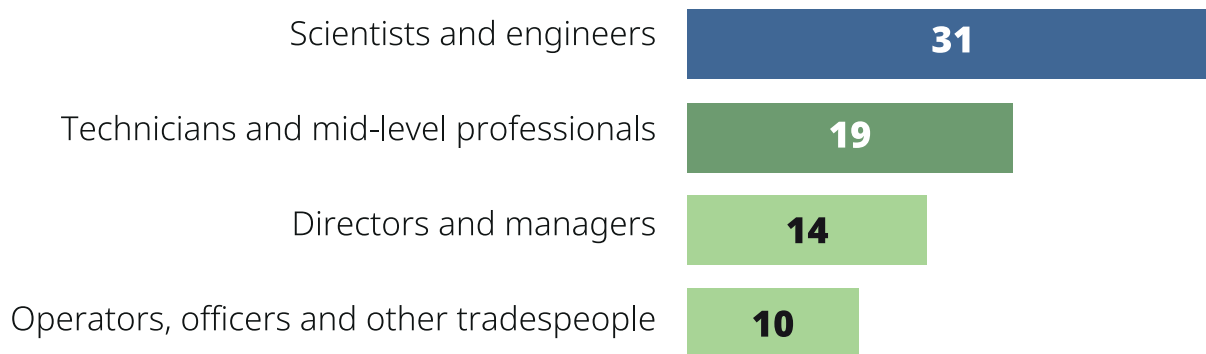
2030



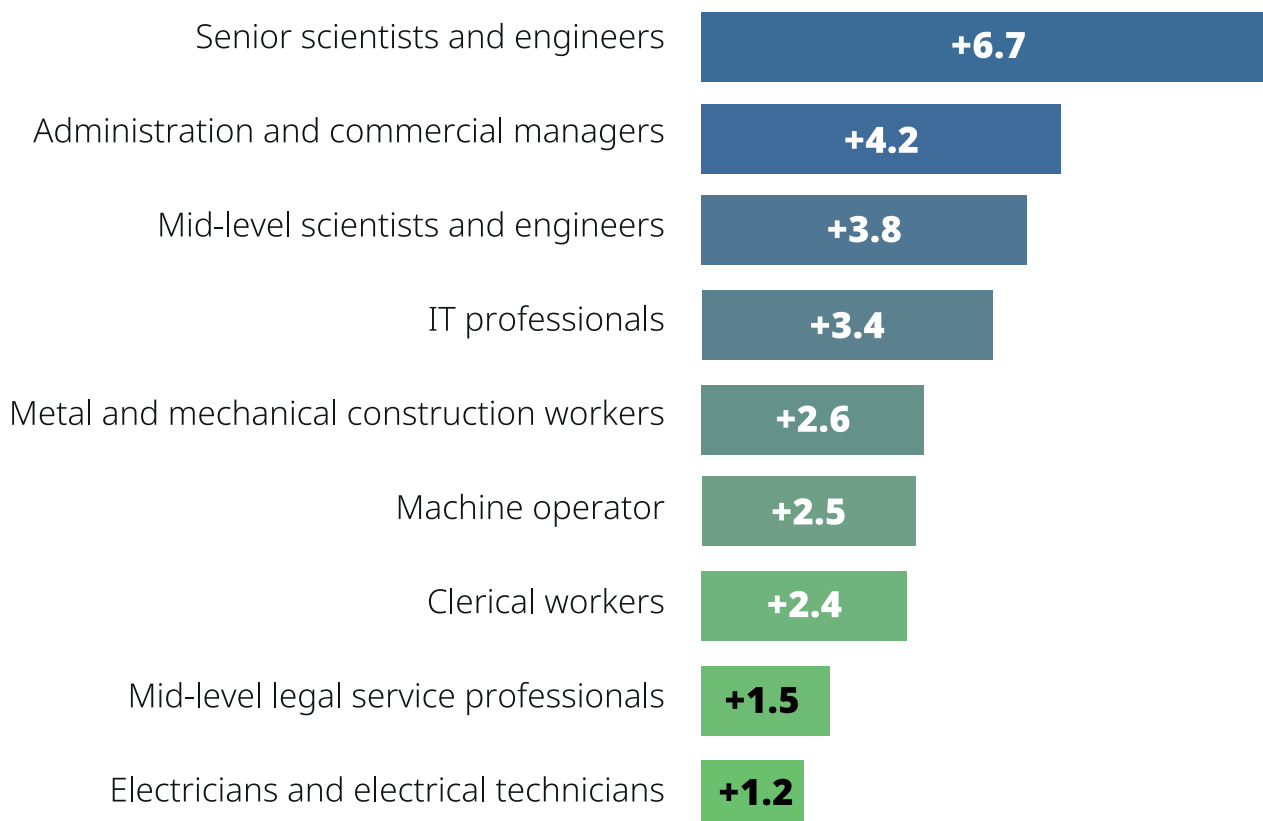
2040



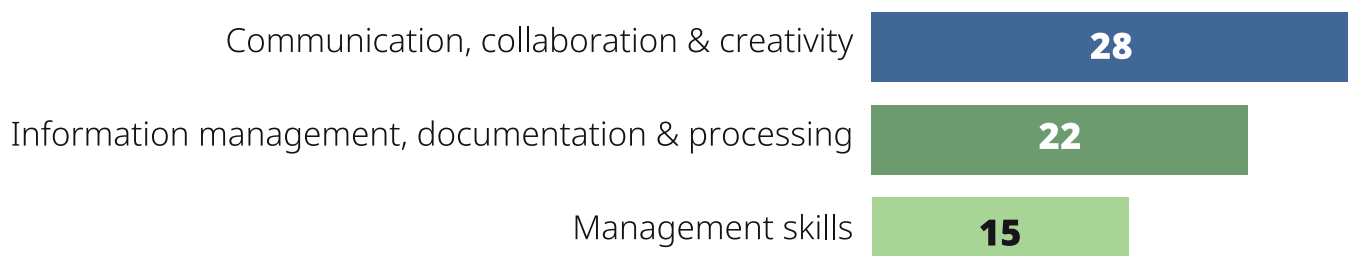
Occupations most in demand in 2040 (%)



Occupations with the greatest imbalance with respect to 2023



Most demanded skills in 2040 (%)



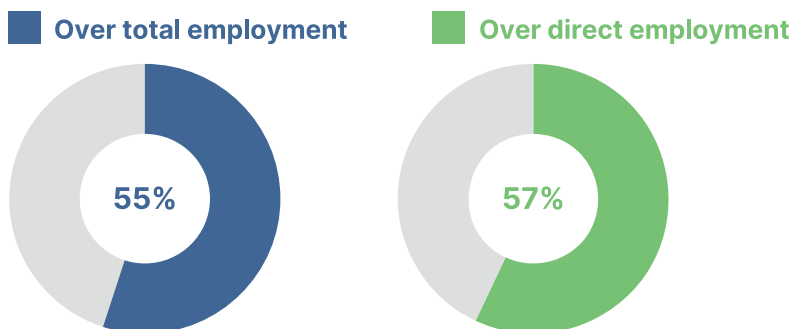
Skills with the greatest imbalance with respect to 2023 (en puntos básicos)

Designing systems and products	0.8
Analysing and evaluating information and data	0.8
Conducting studies, research and analysis	0.7
Developing objectives and strategies	0.6
Building and repairing structures	0.6
Configuring and securing computer systems	0.5
Operating machinery for the manufacture of products	0.5
Programming computer systems	0.5
Installing, maintaining & repairing electrical, electronic & precision equipment	0.4

Key green skills



Ratio of green skills in 2040





**MUCH MORE
THAN NUMBERS:**
QUALITATIVE
ELEMENTS OF
EMPLOYMENT
IN THE ENERGY
TRANSITION



TALENT SHORTAGE OR MISMATCH? LET'S TALK ABOUT THE TALENT GAP.

It is paradoxical that in markets such as Spain, Greece and France, with an unemployment rate of 11.6%, 10.8% and 7.2% in July 2023, respectively, 8 out of 10 employers claim to have problems finding professionals for their vacant positions. With this logic, one can understand why 90% of Taiwanese and 85% of Hong Kong employers say the same, when their unemployment rate is around 3%, or even 1.9% as is the case in Singapore. Is there a lack of professionals? Do companies know how to estimate what they need?

Shortage vs. Mismatch

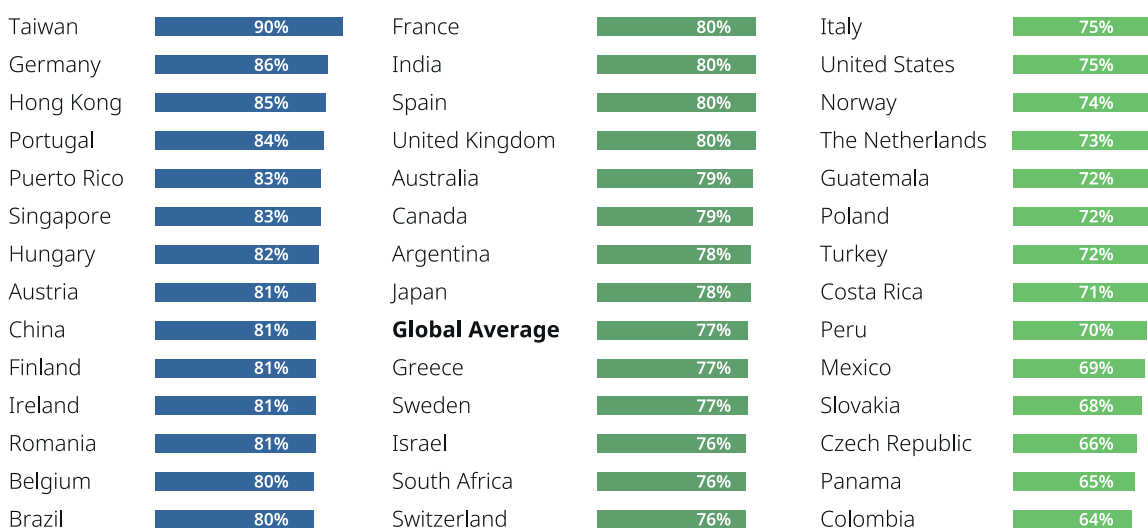


Fig. 22 ManpowerGroup: Comparative talent mismatch and unemployment rates as of July 2023.

Looking forward to an answer, the authors from “Green Molecules” we drew on the knowledge of the director and president of the Centro Nacional del Hidrogeno and the Centro Andaluz del Hidrogeno, in Spain.

We start with a statement from the Worldwide Recruitment Energy 2022, in which more than 1,089 professionals from 53 countries participated. The report confirms that engineers and chemists with experience in hydrogen are the profiles that will be greatest in demand, and that their current shortage is already causing intense competition to attract talent. Similar to what is happening with digital profiles, the consequence of this situation is inflationary salaries and delays in the execution of projects.

On the one hand, Francisco Montalbán, President of the Andalusian Hydrogen Cluster, states: *“Hydrogenerators and their maintenance are going to require engineers,*

welders, electronic technicians, mechanics, installers with gas certificates... All of them are vocational profiles. Current vocational training offers basic hydrogen studies, but specific modules are needed”, adds Javier Brey, President of the Spanish Hydrogen Association: *“In undergraduate education there are no subjects related to hydrogen, especially in technical engineering. And there is a need for this at all levels of training: Vocational training, masters and retraining profiles”*. In this way, *“The first professionals working in green hydrogen have to do everything, multitasking: manage subsidies, grants, know the stock market...”* states Brey. All this in order to move forward with the energy transition programme in the tightest possible timeframe.



TRAINING CHALLENGES: UPSKILLING, RESKILLING, NEWSKILLING AND OTHER CLASSIFICATIONS

In short, we are talking about skilling. One term or another is chosen by comparing the professional's starting point and his/her expected development. How this skill gap is to be closed is what classifies the training into one category or the other.

The Green Molecule transition generates great employment and economic expectations. In the previous section we saw the nearly 2 million new jobs. A few years after the first investments, the lack of qualified professionals could disrupt the immediate future of the energy transition envisaged by the **Green Deal**, according to external sources consulted.

In order to tackle this first phase, it seems inevitable to think about the reconversion of existing profiles and the transfer of knowledge from sectors similar to the hydrogen sector. In this sense, more than 50% of the professionals who participated in the Worldwide Recruitment Energy study identified opportunities for attracting professionals from the traditional fossil fuel sector (Oil & Gas), the chemical sector and the wind or solar renewable sector. This makes sense, as many of the skills needed for green hydrogen generation evolve from those already existing in the hydrocarbon sector.

MASTER'S DEGREES

For the immediate upskilling of professionals in related sectors, there are already official master's degrees in hydrogen: in Spain, the University Master's Degree in Hydrogen Technology of the University of Zaragoza, accredited by the European Accreditation of Engineering Education (EAEE); and the

University Master's Degree in Hydrogen and Renewable Energies of the Technical University of Madrid, accredited by the Accreditation Board for Engineering and Technology (ABET). At the European level, the Aalborg University in Denmark or the Coventry University in England have specialised programmes in hydrogen, and at the global level, Stanford University stands out.

VOCATIONAL TRAINING

With a key milestone in the next five years, it seems logical to also consider the path of training new professionals with specific skills for the development of the Green Molecule Economy through Dual Vocational Training. Considering that 48.7% of European students prefer vocational training over other educational options in 2021, according to Eurostat, there is still a long way to go. Among the countries covered by this study, only Italy (52%) and the Netherlands (68.7%) exceed the European standard; Spain stands at 38.7%, just one hundredth of a percentage point below Portugal (38.8%).

While improving the perception and development of vocational training, specific programmes related to hydrogen and biofuels should be developed, and the number of companies collaborating in dual training should be encouraged to exceed at least 10%. The result is very promising, however: the Andalusian Hydrogen Cluster estimates that in less than eight months students could already be working as hydrogen plant production or maintenance technicians.

NON-REGULATED TRAINING

Understood as a tool for professional reskilling, whether it takes place inside or outside the company, it is the third way to accelerate training in green hydrogen and biofuels technologies.

Non-regulated training can modulate career paths and thus help the reconversion of professionals who are working, or not, and have the potential for development in the new economic context. In particular, non-regulated training could help accelerate the creation of skills and talent associated with growing sectors that could benefit from the agility and capacity of private investment, in collaboration with public advice and oversight.

There is a huge opportunity to showcase the value of public-private collaboration in covering the needs of creating talent at scale. On the one hand, the private sector has already estimated the scope of its investments and the possible talent gaps; on the other hand, the public sector has to design training itineraries and issue approvals that allow active professionals to recognise their skills, just as they could accredit non-regulated training specialised in the new sector. All of this would benefit the professionals and workers who will drive the energy transition.

GREEN ACADEMIES

Nowadays private organizations are responsible for the majority of the training hours. Of the budgets for Human Resources and People & Culture, 25% is allocated to internal training, with personalised training itineraries and plans, in collaboration with research centres and universities.

European legislation envisages the possibility of creating **Net Zero Academies** that could drive job creation in the short term through the development of skills in the most urgent areas, and of course also add value to society in the process, diversifying the supply of informative and dissemination programmes on the energy transition. The European Net Zero Academies are a clear linchpin to accelerate and develop specific training programmes on the energy transition throughout Europe, to solve talent and skill gaps in certain occupations and regions, to develop specific sectoral initiatives, to serve as an observatory of green skills by region or sector and to facilitate synergies to reduce gaps. Of course, these centres for measuring and creating green skills at scale can play a privileged role in coordinating collaborations and partnerships, as well as serving as centres for the accreditation of skills.





LABOUR MARKET MOBILITY

Initially understood as geographical, but also cross-sectoral and intergenerational, labour market mobility can help regions converge in the energy transition.

The production of green hydrogen and biofuels requires proximity, forcing professionals to move between locations. According to experts in the sector who were interviewed for this study, if we think of the more than 100 hydrogen plants that should be installed in Spain and the rest of Europe in the coming years, and combine this with the limited number of available professionals, we can imagine how imperative geographical mobility becomes, as does a certain degree of regulatory support to guarantee both workers' rights and the achievement of objectives.

Back in 2006, the report *"Creating an Innovative Europe"* (developed by a

committee of independent experts for the EU), noted that "mobility failures" or "lack of intra-EU labour traffic" were a serious concern for the future of the European labour market.

The European Commission's latest annual report on intra-EU labour mobility indicates that, after a marked decline in 2020 due to pandemic restrictions, there were some 1.7 million cross-border professionals in the EU in 2021, with Germany, Switzerland and Luxembourg being the destination countries (almost 60%). Clearly, intra-EU labour mobility is not responding to the sectors and locations that are critical for the region's energy transition.

What is holding back geographical mobility? Broadly speaking, uprooting, the impact on the spouse's career, language constraints or the culture of the destination country.

SOCIO-DEMOGRAPHIC CHALLENGES: FROM POPULATION AGEING TO THE CONVERGENCE OF WOMEN IN THE WORK FORCE

Europe is ageing. The energy sector is not an exception, but a reflection of what is happening in society; the population pyramids in Europe and Spain are inverted, reducing the active population and increasing the gap between future positions and available professionals.

In the previous section we saw how the average age of the professionals occupying the almost two million new jobs in 2040 derived from the hydrogen and biofuels economy is over 42 years old. In 2030 there will be more than 8.7 million professionals aged 55 to 66 in Spain, and 50% of the working population will be over 45. And Spain is just one example of the European reality.

Companies are striving to design knowledge transfer or reverse coaching programmes to harness the technical expertise of more senior professionals and the digital skills and agile models of younger ones.

Rethinking the traditional linear career concept

People with more than 30 years of experience in the hydrocarbon sector can make a difference in the renewable energy transition. Making companies friendlier to senior talent and more permeable to generational diversity allows more time for the transfer of knowledge to new professionals, among other advantages.

At the same time, it is necessary to help those professionals who, regardless of where they are in their careers, see how the energy transition and the digital revolution are making their position redundant. They need to be supported in acquiring the necessary skills to remain employable for longer.

Mainly male-dominated sector

It will take years to achieve gender equality in energy sector teams. The growth is sustained and significant in volume, but not sufficient in relative terms: in the study we see that even in 2040 the proportion only rarely falls below 60-40. By age group, and insofar as European women are tending to acquire higher level training, there is a certain development in the older age groups (45-55 years), where the most qualified profiles are in the majority.



The energy sector, and more specifically the renewable energy sector, could be a pole of attraction for female talent in the near future. Research carried out by the Instituto de Empresa and the Cepsa Foundation, "Energy transition and gender equality: opportunities for Spanish youth", reveals that young women are more environmentally aware than men, which makes them more likely to work in areas linked to the environment and new energies -

74% of women support a pro-ecological worldview compared to 71% of men.

We cannot afford not to tap this potential: the first step is to bring awareness to the opportunities that the sector offers women. Careers linked to the energy transition involve technical skills, but also skills in the humanities, finance and economics. The active role of women in these careers is an opportunity and necessary to achieve the goals of a fair energy transition.



THE HARDEST ONE YET: DIGITAL GREEN SKILLS

A CHALLENGE CONVERTED INTO AN OPPORTUNITY

The future will be technological and it will be green. So says the World Economic Forum's *"Future of Jobs Report 2023"* on the "Fourth Industrial Revolution". This document predicts that the factor that will most drive job creation will be investment in technologies that facilitate the ecological transition of companies. The most in-demand profiles alternate between green and digital skills: artificial intelligence specialists, sustainability technicians, cybersecurity experts and renewable energy engineers.

The digitisation of the energy system is a political priority and is linked to the European Green Pact and the 2030 Digital Decade Policy Agenda as a double transition. EU digital and energy policies are already guiding the

digitisation of energy, as issues such as data interoperability, security of supply, cybersecurity and privacy are key to the new energy model.

In particular, Artificial Intelligence is one of the technologies with the greatest potential to drive the energy transition and its objectives. The International Energy Agency states in its paper "Why AI and energy are the new power couple" that the energy sector is taking steps to harness the power of AI to increase efficiency and accelerate innovation.

One last angle is missing in this triangle: soft skills. Thus, professionals with digital knowledge, soft skills and experience in the energy field are set to be "super-professionals" in 2023.





WILL WE BE ABLE TO **SEIZE THE SPRINGBOARD?**

We have everything in our favour: we have sized up the opportunity to improve the EU's competitiveness and industrial leadership, there is specific regulation and investment, and organisations are making great strides in retraining professionals. In the latest clean energy technologies competitiveness progress report, the European Commission states that the EU is better prepared to ensure its energy security than it was three years ago. It is increasing its investment in R&D&I through tools such as the Clean Hydrogen Joint Undertaking, to incentivise research and

innovation in hydrogen technologies in Europe. It has also passed two key pieces of legislation, the Net Zero Industry Act and the Critical Raw Materials Act, which aim to strengthen the value chain and build a strong domestic manufacturing base.

All that remains is for this energy transition to become a reality and for it to contribute to the generation of value, the convergence of regions and the contribution of wealth and knowledge to the people who will be part of the change. Below are some detailed proposals for embracing the challenge.



10 PROPOSALS
FOR BUILDING
A NEW LABOUR
MARKET IN
THE ENERGY
TRANSITION



We have already seen how one of the major concerns of regulators, institutions and companies in the challenge of the energy transition is to ensure that all of society has access to the benefits and opportunities that come with it. The eternal struggle in the world of employment to reduce the inequalities between those who have and do not have the skills that enable them to remain employable and compete in the changing economic and employment context.

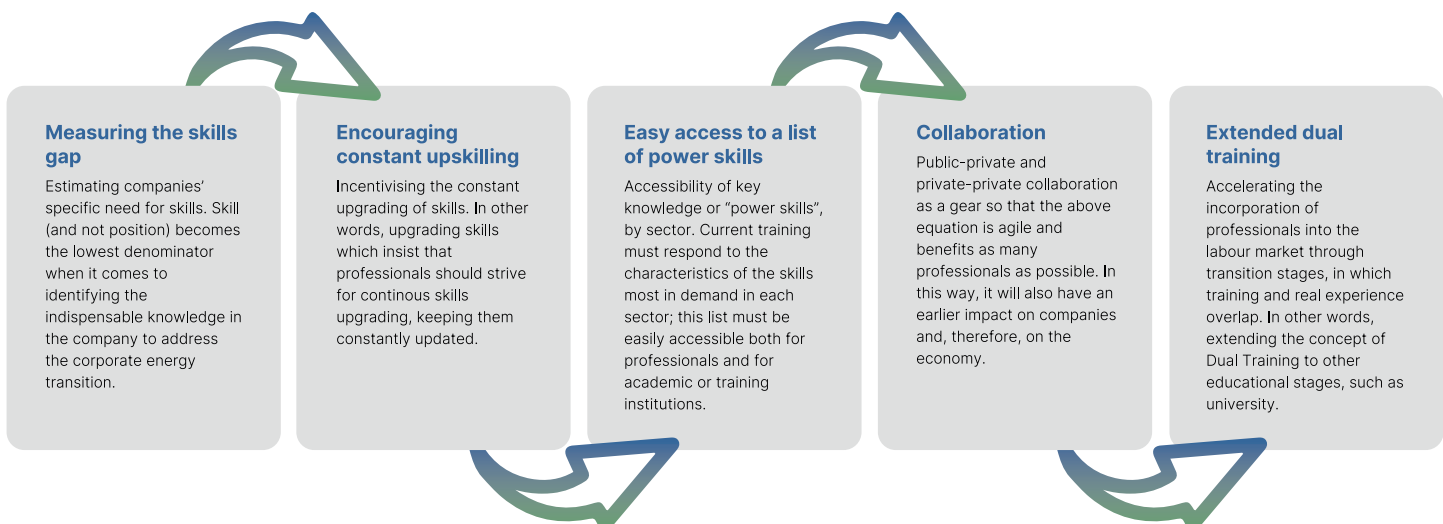
The work of 'Green Molecules: The Upcoming Revolution in the European Employment Market', would not be complete without a summary of concrete, necessary and immediate proposals. Let these last pages serve as a call to action.



MATCHING THE DEMAND FOR PROFESSIONALS WITH THE SUPPLY OF COMPETENCIES

According to data from ManpowerGroup of 2023, **7 out of 10 companies worldwide are looking for or planning to hire professionals with green skills**, or for positions where they will have to perform tasks related to the energy transition. Some 94% of employers report having

some kind of problem finding these same skilled professionals. And at the same time, projections (such as those in this text) announce unstoppable employment opportunities in the future. Is it possible to match these realities? Is it possible to minimize the Talent Gap?



RETHINKING THE UNIVERSITY SYSTEM

As we can see from the econometric analysis, all European countries will need mid- and senior-level scientists and engineers in the next five and seven years. Are there already as many as are needed?

Throughout the study, we have seen how a large number of positions will require middle and superior scientific training, as well as engineers and IT experts. However, most require skills that are currently found in middle, technical or unregulated levels of education. This encourages us to consider not only the speed with which the university - as we understand it today - can respond to the needs of the labour market, but also the actual size of the pool of professionals with this type of higher education.

It is one of the most difficult issues to address in this text, one that even includes the failure or frustration of students who choose higher education courses that will not provide them a job, because the university offers more student slots than the labour market does jobs. Nevertheless, we believe that this is an important area deserving of analysis.

Among other measures, we propose the following:

- **Estimating how many professionals with higher education training will be needed**, in which modalities and in which geographies. This study could serve as a starting point for a possible European employment map.
- **Updating knowledge** in line with the new techniques and technologies that define the **real energy transition**.

- **Accelerating the time it takes for professionals to enter the labour market.**
- Fostering the connection with the company, so that **teachers and students have a closer look at the corporate reality they will be facing.**
- As in the case of vocational **training, creating university specialisations linked to the energy transition**, accessible to students from any geography, which will provide in-depth knowledge of present and future techniques and technologies, in such a way as to also **stimulate the appetite for research.**
- Further exploring the concept of **Dual University** so that qualified professionals arrive faster to the workforce.

The role of private companies, research centres and experts in the field on university advisory boards is key to this proposal. Whether they are public or private, coordination between the different agents in the chain would make it possible to keep the range of training courses on offer up to date, ensure that teachers have extensive knowledge and that students have previous experience in the professional field. If this model of collaboration were to take root in public institutions, it could help to bring the employment opportunities created by the energy transition within the reach of any European citizen.

THE KEY ROLE OF VOCATIONAL TRAINING

The weight of secondary and technical education in the hydrogen economy has been demonstrated in the pages of this study. When it comes to getting a job, 80% of vocational training find one compared to almost 60% of general education graduates. However, vocational training remains unattractive in all geographies, with student participation ratios ranging from 52% in Italy to 38.7% in Spain in 2021. The European average is 48%.

- Commit to the **Dual vocational training model as an accelerator** of access to the labour market and recruitment.

- Encourage **training in soft skills** to be more present throughout the training cycle, taking into account the forecast of this study on its indispensable role in future employment related to the hydrogen economy.
- Align **training provision with public-private investment decisions** by sector and geographical area, so that the Vocational Training model's effectiveness improves and helps alike to retain talent in a determined area.



NON-REGULATED TRAINING AND TALENT HUBS

Companies spend at least €1.000 per year on training for each employee, with multi-million dollar budgets in the case of large employers and corporations that require more technological updating. It is difficult to anticipate the impact on training costs that the energy transition will have on organisations, but we have a reference in our ongoing digitalisation process. According to data from Experis (ManpowerGroup), Spanish companies spend on average more than €2 million on training their employees in digital skills.

In the course of this text, we have already anticipated that the energy transition involves an operational change as profound as the digital one. In fact, they overlap. Therefore, investment figures could exceed any previous numbers.

The authors of this study believe it is important for companies to focus on and consider as soon as possible different elements that will help them adapt their operations to the new energy reality:

- Consider **non-regulated training, provided by centres of reference in the hydrogen field**, as an opportunity to solve the need for skills and trained professionals in the short term.
- Dedicate resources to **supervising and coordinating different training options** to avoid duplicated content and its actual validity, to improve its usefulness and, above all, to not disorientate the professional.
- **Collaborate with public institutions to build a training catalogue** in line with their needs. Companies are ultimately responsible for their own energy transition and can contribute enormously to ensuring that training courses respond efficiently to their talent needs.

Professional experience in the company itself makes them hubs for the creation of talent; especially those that are immersed in their energy transformation. The figure of bodies to certify or accredit professional competences would be useful.



A COMMITMENT TO DIVERSITY

The demographic evolution of the countries analysed (tending towards an ageing population, with women increasingly present in higher education), as well as the regulatory and incentive commitments, define a socio-demographic context of employment in the hydrogen economy that is diverse. But not equitable.

The data in this study define the latent opportunities in the energy transition:

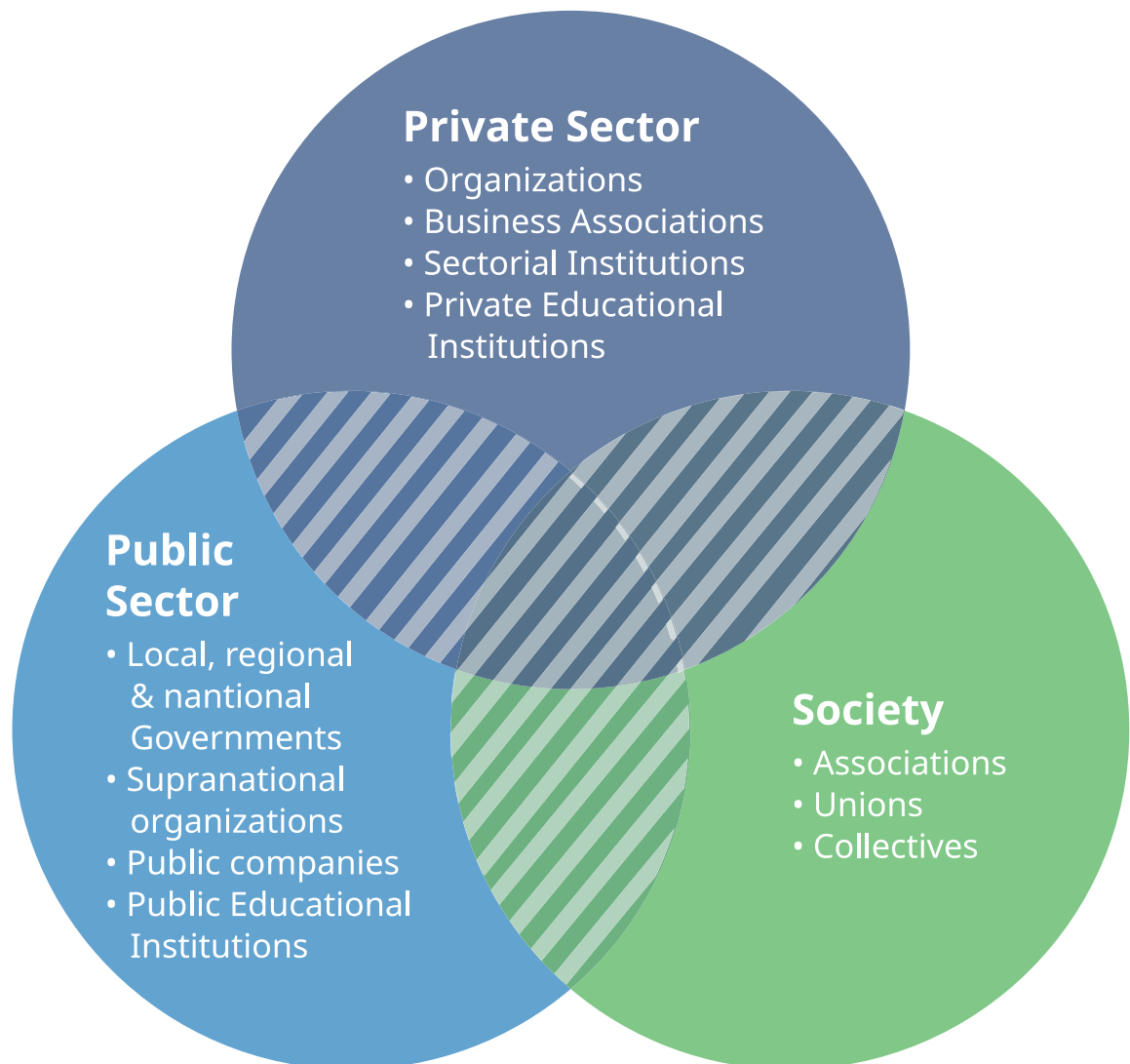
- **Greater participation of women in the employment market**, through the incentive of female vocations in the technical and technological careers most in demand for the energy transition.
- **Increased training in key skills for senior professionals**, who will account for 50% of the workforce in countries such as Spain by 2030.
- **Intense transfer of knowledge among current employees** of companies, through reverse coaching programmes, which foster collaboration, intergenerationality and, most importantly, permanence and corporate growth.
- **Incentives for the reskilling of professionals**, in particular the retraining of skills between converging sectors such as training on the hydrogen and biofuels sector for individuals from the fossil fuel sector, or retraining car maintenance technicians with experience in the combustion engine on the electric motor.
- **Corporate entrepreneurship** linked to the energy transition.



PARTNERSHIPS, PARTNERSHIPS, PARTNERSHIPS...

Everything mentioned in this study is impossible without decisive collaboration between companies, between institutions, between professionals and between organisations at different points in the chain. We are facing the unavoidable reality of the energy

transition. We have already identified clear lines of action. It is now a matter of creating the meeting points, identifying resources and deadlines, and implementing them. **We have just 17 years ahead of us to seize the opportunity of the green molecule economy.**



TALENT WITHOUT BORDERS

One of the consequences of the COVID-19 pandemic and the subsequent economic crisis has been a return to local production and distribution networks in large companies, to avoid supply disruptions. The proof that remote working was acceptable for some positions and specific tasks and the growing Talent Gap in many sectors have resulted in a search for talent across geographical borders. We are committed to turning this reality into an opportunity for the economies of the countries analysed, through the following:

- **International lines of collaboration to improve the skills** of the professionals.
- **Working groups to anticipate new challenges** in labour relations, incorporating all social agents.

- Networks of partners in the different countries, and inside the countries, **to promote vocations in the sector.**
- Policies towards **encouraging the geographical mobility of professionals**, both through public and private measures, in order to carry out projects ranging from one-off projects (construction of hydropower plants, for example) to profound cultural transformations (dissemination of the use of hydrogen as a domestic energy source, as a suggestion).





DISSEMINATION

The energy transition will transform all sectors, companies and professionals, not only those directly linked to energy. We must understand it as a second “digitalisation” of the economy, in the style of the great technological change of recent decades. In the same way that digital skills are a basic element in role descriptions today, green competences are destined to become transversal and indispensable for any type of work. The difference is that we had several decades to adapt to the first change; for this energy change, there are only 15 years left.

It is essential to build an immediate and ambitious dissemination programme that not only generates interest in the new energy solution, but also raises awareness of the opportunities and uses it offers. The list of initiatives is long:

- **Education programmes in schools** at an early age on the uses and opportunities of green molecules.
- **Alliances with Consumer Associations** toward improving the knowledge and understanding on Green Technologies and Energy Transition alike.

- **Media campaigns and social media platforms.**
- **Knowledge and best practice exchange** programmes between countries.
- **Visibility initiatives and awards** for leading companies and professionals.

There are many companies that have been promoting initiatives to bring green hydrogen closer to citizens. The Aragon Hydrogen Foundation is disseminating information from an early age, with visits to its facilities for primary and secondary school students. The CSIC has science teaching programmes in schools from the earliest stages of education, with teacher training, workshops and presence at fairs and museums. Its Cicerón program dedicated to hydrogen production, available on YouTube, is very interesting. Another line of action is on the Renewable Hydrogen Roadmap, and it is to set up a general information point at the *Instituto para la Diversificación y el Ahorro de la Energía* (IDAE) on hydrogen technologies and their possibilities.

ATTRACTING AND ENGAGING TALENT

The energy transformation of companies will be the main source of job creation in the world over the next five years. At the same time, consumers are increasingly sensitive to the energy and environmental commitment of companies, prioritising both their purchasing decisions and their choice of companies to work for. Until 2023, the ESG commitment was a differentiator, but in the midst of the energy transformation, what will make the difference between companies is their ability to lead. Companies need to consider ESG as part of their Employee Value Proposition, as it is also a top-of-mind request for new and younger hirings.

What do professionals take into account when choosing a company? Flexibility, work-life balance, inspirational leaders, etc. and, even more important than financial remuneration, specific policies on energy efficiency.

The costs of attracting talent are enormous at a time of a record global Talent Gap (75% of companies report problems finding the skills they need, either because of a shortage of professionals trained in the skills they need or because of immobility in

the employment market). Similarly, the costs of professional turnover are an important addition to corporate balance sheets (in Spain, the average cost is between €15,000 and €20,000 per person). Considering the above:

- **Accelerate their energy transition strategies** and incorporate the added value of green molecules into their efficiency expectations.
- **Design Employee Value Propositions** that address the reality of the energy transition now.
- **Adding messages in any relevant communications** that break down the company's commitment to the energy transition.
- **Involve employees and other stakeholders** in the design of their energy transition programmes.
- **Create specific attraction campaigns targeting all the underrepresented groups** (mainly women and young people). In short, reinvent the Human Resources function for the energy industry.

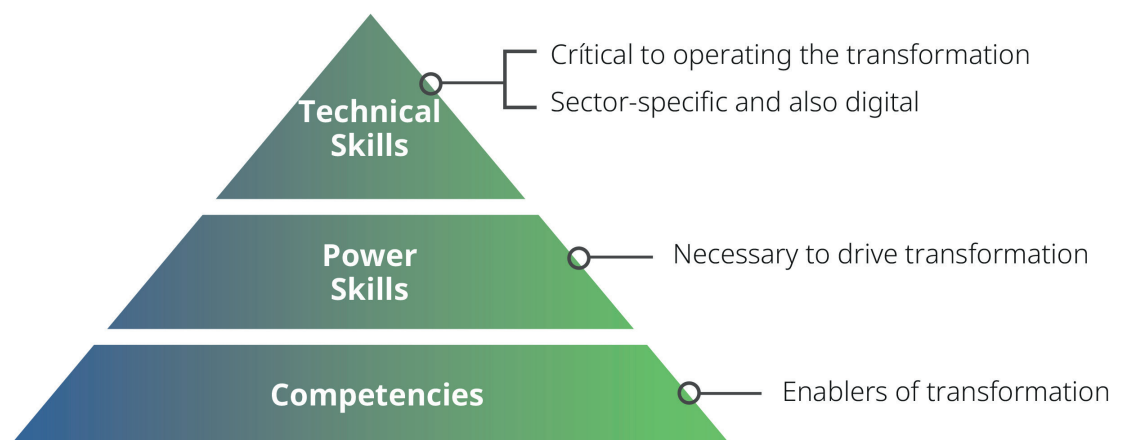


NEW SKILLS MAPPING FOR THE HYDROGEN ECONOMY

It is time to evolve the classification of skills related to the energy transition and expand the list and definition of skills related to green molecules.

Companies embarking on an internal skills analysis process in 2023 in order to address the energy transition and anticipate the reality of 2030 may find that the current literature is limited to their ambition. They are therefore faced with individually developing their own transformation programme.

In these pages, we propose a new classification of green skills that is more appropriate to the reality of the energy transition based on green hydrogen and biofuels. We distinguish among three groups of indispensable competences:



Although the current European classification has made significant progress in the recognition and description of skills related to the digitisation of companies, we believe that it is necessary to further develop those that affect the energy transition and, in particular, green molecules. This is a task that we urgently need to tackle in anticipation of the major transformation of the world of employment that is imminent.



CONCLUSIONS & ACKNOWLEDGEMENTS





We come to the end of this paper with the feeling that we are only at the beginning of a major stage of transformation. Few of our contemporaries will have the opportunity to say that they have been the driving force behind this profound change in the economy and society, but we will all be able to say that we have experienced it. It is now about choosing to participate and actively driving the process, making sure that the opportunities that are opening up reach the hands of many - if not all. We are a Digital generation making way for a Green Generation to which we can bring the lessons learned from the past decades.

This text is a commitment to the best of what the reinvention of the world of employment that comes hand in hand with the energy transition can bring to society.

'Green Molecules: The Upcoming Revolution in the European Employment Market' brings to the table not one, but two unique opportunities: the creation of net jobs and their consequent generation

of value across Europe and the UK; and, at the same time, the valuable definition in number, location, level of education and skills that those jobs will have. A 17-year timescale gives us an ample margin to activate the levers that will enable public education institutions to create the talent needed, in partnership with the private sector. And, simultaneously, to design a public-private collaboration formula that puts the different countries analysed on a powerful and enriching path of global competitiveness.

Although this text focuses on the domestic market of the EU-27 and the United Kingdom, it is important to remember that in the next three decades the weight of countries such as the United States, China and India in the composition of the energy market and their role in the energy transition itself may make the measures described in section 6 even more urgent. It is also important to keep a global perspective when contextualising these conclusions.

1. **The energy transition will create net employment throughout the value chain**, all the way down to the private consumer. And it will improve aggregate and country GDP figures.
2. The energy transition should not be understood as a development but as **an employment market revolution, overlapping with and amplified by the digital one.**
3. **Professionals will have opportunities to obtain quality employment and access the desired and fair transition**, as long as companies and public institutions coordinate in the identification of opportunities, the size of talent gaps and the definition of specific training.
4. The commitment to the energy transition through green molecules in Europe and the United Kingdom represents **an opportunity for the region's competitiveness vis-à-vis the rest of the world.** It is an opportunity that involves both companies and citizens.
5. Companies are committed to attracting talent, creating spaces for coexistence and inclusion and continuous learning environments. The energy transition and professionals' new preferences are driving companies to **undertake profound internal transformation processes that will allow them to remain competitive or even be a benchmark** in the new energy model.
6. Skill becomes the **basic management unit**, as opposed to traditional positions, to manage the transformation of organisations in the new framework. **Those responsible for human resources and people operations are even more relevant elements** in the sustainability and competitiveness of organisations, as they manage not only professionals, but also the company's own skills bank.
7. The comparison by country shows the greatest challenges and opportunities for each of the areas analysed, which **the different social agents must address under the umbrella of a fair and transformative energy transition.** A clear example is the different rate of incorporation of women into the sector in the Netherlands compared to Spain, for example.
8. The European regulatory framework is advancing in measures such as Net Zero Academies, while there are still major differences between countries when it comes to promoting vocational education or synchronising the supply of regulated training and the demand for professionals. **Green academies are an interesting figure** for resolving talent gaps, but also for offering a space for dialogue between the different agents and favouring initiatives that can be implemented quickly.
9. It is time to extend knowledge of the energy transition beyond the academic and professional sphere, **and take it to personal environments, schools and homes.** In a way that is didactic, easy to understand and practical for everyday citizens, this would create a much more widespread awareness of the desirability of the transition, of sustainable consumption and of the opportunity at the individual level.
10. Finally, we need to take the analysis out of the pages of a book and translate it into concrete, far-reaching actions. This text comes with a parallel activation plan that aims to respond to this premise. **It is time for action.**



Acknowledgements

This work would not have been possible without the invaluable collaboration, information and support provided by the *Asociacion Española del Hidrogeno*, *Cluster Andaluz del Hidrogeno*, Loyola University, CEPREDE, PWC Economics Department, Eurostat, European H₂ Backbone, experts and independent professionals consulted to compile a complete vision of the area analysed.



ANNEXES



GLOSSARY

Apprenticeship: This is a training system that combines on-the-job training and work experience with training through regulated and official training. (OIT, 2006)

Circular economy: It is an economic approach that seeks to maximise the reuse, recycling and recovery of resources. Products and materials are designed to have a longer useful life, and repair and recycling is encouraged. An interesting concept that evolves from this approach is “upcycling” - itself derived from the concept of “upgrading” or improving a product by reconditioning it for another, initially unintended use.

Core skills: Competencies that are neither vocational nor technical, but indispensable for performance at work and in society in general. In the study they are defined as “Power Skills” in order to recognize their crucial role in the energy transition.

Decent work: Term described by the International Labour Organisation (ILO, 1999) to summarise the aspirations of people in their working lives. It includes income, opportunities, rights, recognition, family stability, personal development, as well as equity and equality.

Direct, indirect and induced employment: In the content of this report, we distinguish between direct, indirect and induced employment. While the former refers to the people employed in the hydrogen and biofuels production activity, indirect employment refers to employment among suppliers of this activity or as a direct consequence of it. Induced employment is the result of hydrogen consumption by end users.

Energy transition: This refers to the process of fundamental change in the way energy is produced, consumed and managed in a society. At the same time, this transition involves the migration from traditional energy sources (fossil fuels) to cleaner and more sustainable energy sources (solar, wind, hydroelectric, nuclear energy in some cases). The ultimate goal of the energy transition is to reduce greenhouse gas emissions, combat climate change and ensure long-term energy security, access and sustainability.

Green Deal or Green Pact of the European Union⁷: With the aim of making Europe the first carbon-neutral continent by 2050, the European Union set out this comprehensive initiative to tackle the climate crisis and transform Europe's economy and energy model towards a more sustainable one. In addition to covering a wide range of policies to promote renewable energy, sustainable mobility, circular economy, clean technologies and improved energy efficiency, the Green Deal addresses social justice and employment as yardsticks for the energy transition. The European Green Deal (europa.eu) and European Green Deal.

Green Jobs: They are all those jobs that contribute directly or indirectly to the materialization of the energy transition from the traditional fossil fuel model to the future model of renewable or sustainable energies. The ultimate goal - in decades if not centuries - is for all jobs to be green by definition. At the time of writing, the initial concept of “green jobs” (jobs aimed at environmental protection and recycling) is expanding into a broader description, encompassing more strategic positions in companies as they address their energy transition.

Note 7. https://single-market-economy.ec.europa.eu/industry/sustainability/net-zero-industry-act_en

Green skills: knowledge, skills, values and attitudes necessary to participate in a society and economy focused on reducing the impact of human activity on the environment (European Centre for the Development of Vocational Training, Cedefop).

Green Technology, Clean Technology:

Technology that improves resource or energy efficiency in production and ultimately reduces waste or encourages the use of non-polluting and renewable resources (Strietska-Illina et al., 2011).

Green Molecules: Green molecules store energy for a future use, as hydrocarbons are contained in oil, gas and coal. Their life cycle (from generation to combustion) produce negligible, zero or negative amounts of greenhouse gases. For the purpose of this text we have mainly considered green hydrogen and biofuels. The jobs generated by this industry range from the production, distribution and consumption of hydrogen, fuel cell technology, related infrastructure... to international negotiation and trade.

Knowledge: This refers to the result of the assimilation of information through learning and study. Knowledge encompasses facts, principles, theories and practices related to a given subject (European Qualification Framework, EQF).

Occupation: A grouping of jobs composed of similar tasks for which similar skills or competences are required. (European Skills/Competences, Qualifications and Occupations Classification, ESCO).

Skills: Officially defined as an individual's ability to apply knowledge to complete a given task in order to solve a problem (European Qualification Framework, EQF; ILO 2006). In the course of the study we have seen how this definition can be limited in the HR and labour market environments, and we will propose a development. The European Qualifications Framework (EQF) | Europass

Transversal competences: acquired skills that can be tested and are necessary or valuable for performing any type of work, learning or activity. They are considered transversal in that they are not specifically related to any job, occupation, academic discipline, economic sector, etc. (European Skills/Competences, Qualifications and Occupations Classification, ESCO).

METHODOLOGICAL DETAILS

'Green Molecules' is the result of a combination of statistical and qualitative research. It also incorporates insights from previous analyses carried out by different local and international organisations. Specifically, the elements taken into account for the drafting of this study are as follows:

- I. In-depth research into publications and analyses carried out by public and private organisations, which are cited in turn in the bibliography at the end of the text
 - I.a Relationship and explanation of the green hydrogen and biofuels sector. Also its value chain, its production processes and relevant data on the companies that make it up at the time of the study.
 - I.b Details on regulatory matters (energy, labour, digital)
- II. History of research, owned by ManpowerGroup Spain and ManpowerGroup Global, relevant to the object of the study
 - I.a In-depth analysis of the impact of technology
 - I.b Details on trends and factors that mark the future of the sector in terms of talent and at an economic and competitive level
 - I.c Preferences of professionals
 - I.d Expectations of employers in the countries researched in terms of skills and future recruitment
- III. Econometric analysis of key sectors, retroactive and predictive up to 2030 and 2040, considering investment data confirmed by employers, companies and public administration
 - III.a Breakdown by socio-demographic characteristics, educational levels and geographical distribution
 - III.b Details of the countries selected for the analysis
 - III.c Economic impact in all of them
 - III.d Current and future ranking of the areas analysed by the current level of green skills among their professionals
 - III.e Dimension of the mismatch between the jobs driven by green hydrogen and biofuels investments and the skills needed to fill them
- IV. Interviews and focus groups with the different Cepsa teams, and subsequent coordinated work between Cepsa and ManpowerGroup to define a business transformation model. Analysed elements include:
 - IV.a Classification of key skills for future challenges
 - IV.b Definition of skills and prioritisation according to their criticality
 - IV.c Identification of gaps and proposals to solve them.
- V. Contrast with experts in the field and reference bodies for research.
 - V.a In-depth interviews with representatives of the European, national and Andalusian hydrogen authorities; experts in the hydrogen and biofuels market; international employment market analysts in terms of both econometrics and trends.

We would like to highlight the econometric and predictive analysis of the impact of the hydrogen and biofuels economy on the employment market in 2030 and 2040 in the EU-27 and the United Kingdom, which first required us to define the exact scope of action:

- **Time.** 2023 – 2030 - 2040. For all analyses we consider the indicated years individually, although in the GDP and economic calculations we have also identified the cumulative impact.
- **Geography.** The study starts from the general context of the European Union 27 (2020) and then focuses on six countries (Spain, France, Italy, Germany, the Netherlands, Portugal) and adds the United Kingdom to the comparison.

The study provides the following data at the general level:

- Estimated employment for 2030 and 2040.
- Disaggregated by its typology, whether direct, indirect or induced.
- Disaggregated by the sectors that create the most jobs.
- Impact on aggregate GDP.

For the country and Autonomous Community levels, the study reflects, in addition to the aforementioned, the breakdown by gender and age group, and details of the most demanded occupations and skills. In some cases, we also share the comparisons between countries in order to

contextualise the situation of each one in the general framework analysed.

The employment estimates are detailed according to socio-demographic, sectoral, occupational and labour skills characteristics. The following elements have been taken into account for their extraction:

- **Expected green hydrogen production in Europe in 2030 and 2040** (European Hydrogen Backbone).
- **Expected price of green hydrogen in each country listed, for 2030 and 2040**, considering variables such as renewable energy resources, price of electrolyzers, necessary infrastructure, etc. (PriceWaterHouseCoopers).
- **Expenditure and investments required for the development and production of green hydrogen (LCOH)** to estimate the distribution of expenditure and investments by economic sector concerned (European Commission, PWC).

In order to estimate the impact of these investments and expenses on the different sectors and on the employment market, in particular, we have taken into account:

- **European Commission FIGARO tables** (joint input-output (I-O) tables of EU countries and their main trading partners, including the UK. We consider the details for 21 economic sectors. In addition, we use employment data by sector and country published by Eurostat.

In this way, we were able to extract an outline of the impacts generated, which can be represented in the following graph:

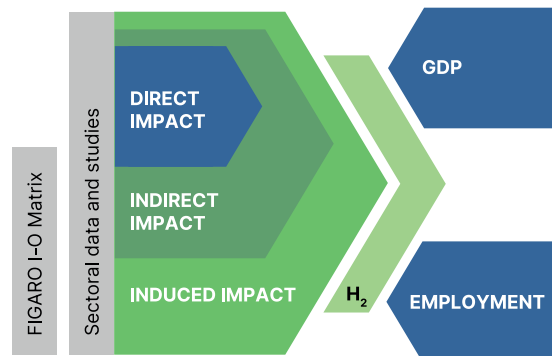


Fig. 1. Model for labour and economic impact analysis



Using the FIGARO I-O matrix to measure the indirect and induced impacts, in addition to the sectoral studies and data for this and for the direct impact forecast, we include the factor of the forecast Green Hydrogen production for each territory analysed, and estimate the disaggregated and aggregate impact on economic value and employment.

Finally, we obtain the socio-demographic, labour and skills characteristics of the jobs created from Eurostat, European Classification of Skills/Competences, Qualifications and Occupations (ESCO) and Cedefop. For more details on the sources used, please see the detailed bibliography at the end of this document.



Fig. 2. Main information sources used for the calculations and the econometric detail

8.2.I. CONTEXT AND HISTORICAL EVOLUTION OF GREEN HYDROGEN PRODUCTION AND DIRECT JOBS

The energy transition will mean a transversal shift in our production models, in the goods and services we use and, ultimately, in the people themselves and their professional development. Green molecules are therefore the driving force behind this economic potential.

Although the use of this resource is not new, it is in recent years that the commitment to green hydrogen has

multiplied until it has become a real alternative to fossil fuels in all or most of its uses in the immediate future.

The production of hydrogen from renewable sources, green hydrogen, represents 0.1% of world production in 2022 (3,160 TWh). In this year, 35,000 people are working in this sector worldwide, of which only 8% are in Europe.

Hydroge production in the world (TWh)

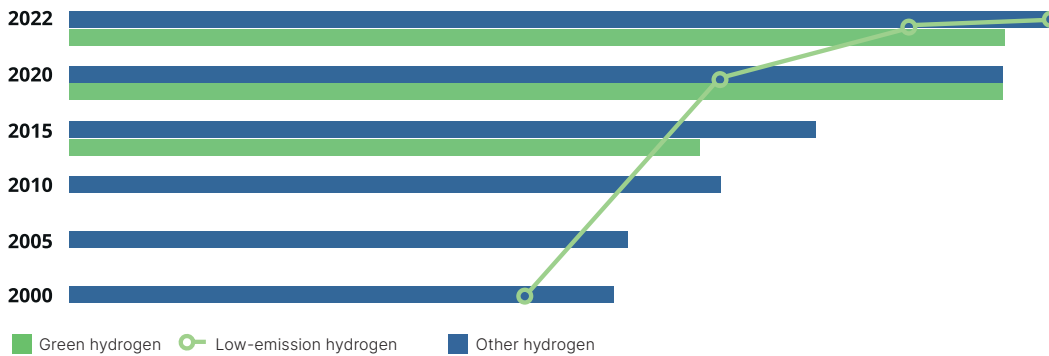


Fig. 3 Recent hydrogen production (Twh) based on data provided by IEA⁵.

Direct employment by location (2022)

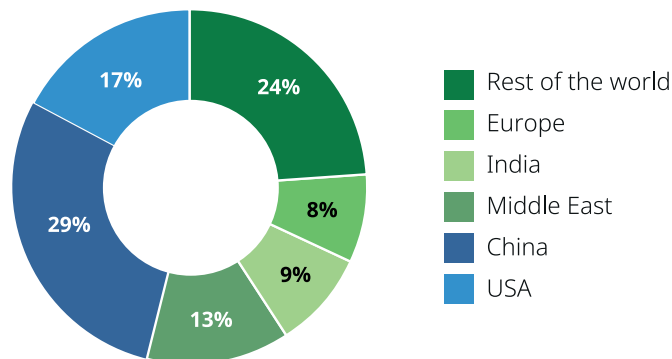


Fig. 4. Direct employment worldwide, by geographical area, in 2022

Europe produced approximately 100 TWh of hydrogen in 2022, less than 1% of which was produced renewably. This production represents less than 2% of the energy consumed in Europe, and only 7% of the total renewable energy produced in Europe. It represents around 2,500 jobs spread across the continent.

Energy production in Europe up to 2021 (Mtoe)

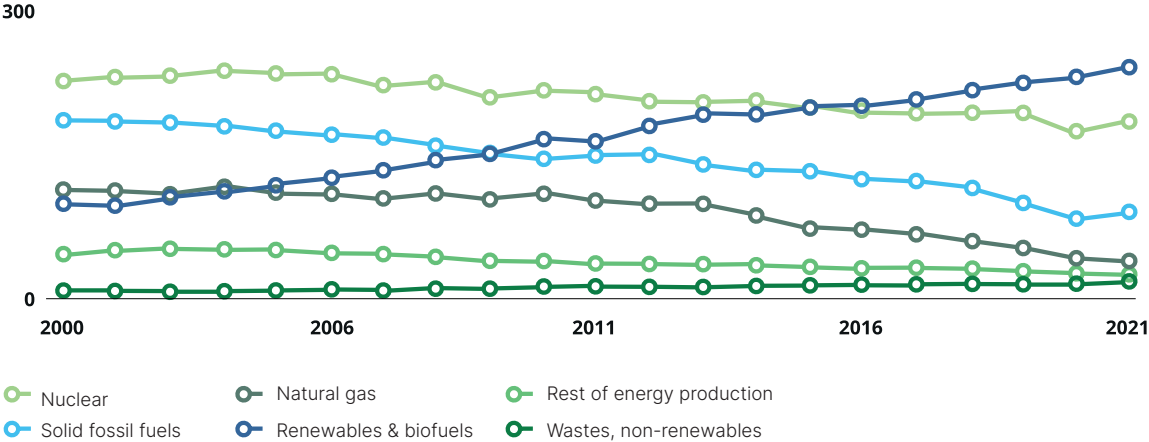


Fig. 5. EU Commission, DG Energy, Unit A4. Energy Statistics. Energy Datasheets: EU Countries (August 2023)



Finally, we are interested in reflecting the relative weight of the energy sector in each of the countries analysed. To measure the volume of companies, turnover and employees, we use the CNAE classification (NACE in Europe, SIC in the United Kingdom), which allows us to draw a comparison between the countries

that are the focus of this study. The heading that brings together companies whose activity is related to the supply of electricity, gas, steam and air conditioning would be D and division 35. Although this coding is not key for the rest of the study, it is relevant at this point in order to gauge the relative weight of the energy sector by country.

Direct employment location (2022)

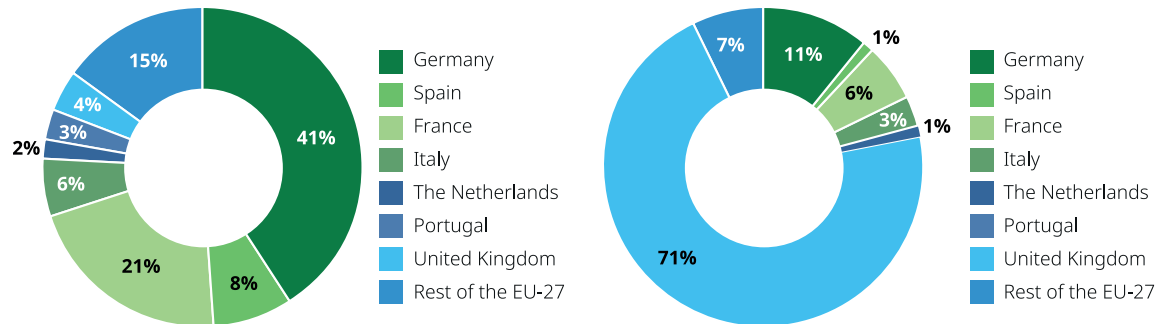


Fig. 6. European Commission Statistics and UK National Statistics. NACE/SIC D companies and workers in 2021



Within the European Union (EU-27), Germany is the country with the greatest weight in 2022, with 36.9% of companies, 29% of employees and 43% of turnover, followed by France (18.6%, 17% and 8% respectively), and Italy (5.6% of companies, 7% of professionals and 14% of turnover). When the UK is added to the comparison, the turnover scale shoots up towards the islands, which account for 99% of the region's revenue (€202 trillion) and more than 2.5 million workers, with only 3.3% of companies.

8.2.II. PROJECTED PRODUCTION, UPTAKE AND INVESTMENTS IN GREEN HYDROGEN AND BIOFUELS IN EU-27 AND UK

Hydrogen production is growing rapidly, although it does not yet represent a significant share of the energy consumed in Europe and the UK. Not yet. Because in the next 17 years hydrogen, along with other renewables such as solar and wind, is expected to break this historical trend. A change of pace motivated by

legislation, public investment and spending commitments by the business fabric of the respective countries, and an ever-increasing awareness among end users and citizens of the preference and use of goods and services of renewable origin. All this opens up a hopeful horizon full of possibilities for this energy vector.

Hydrogen production in the world (TWh)

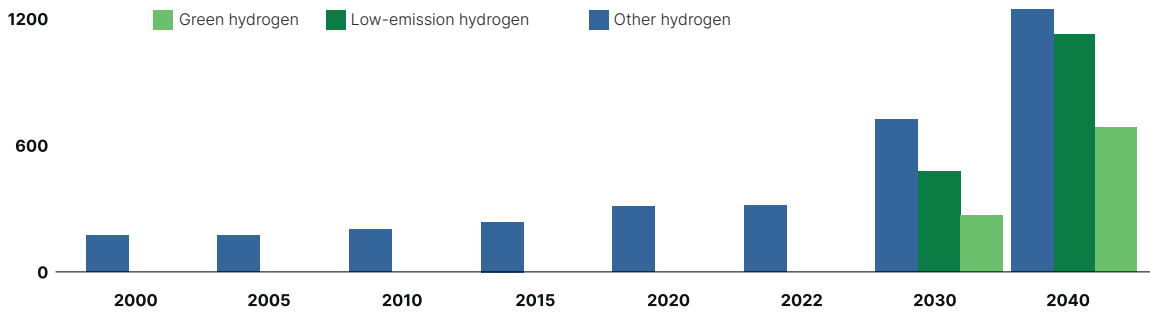


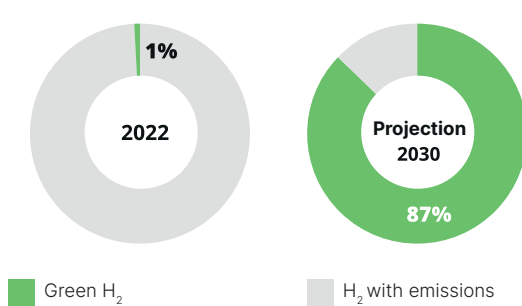
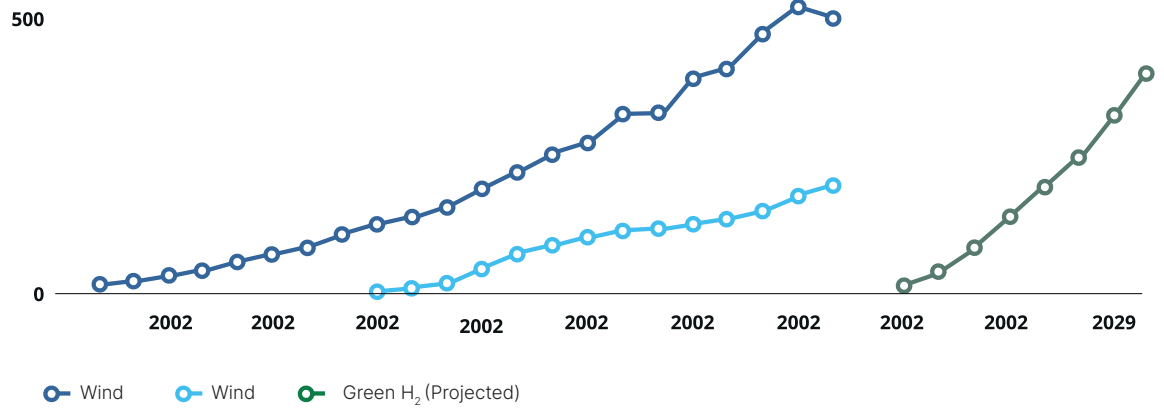
Fig. 7. Projected hydrogen production to 2030-2040 (Twh) based on data provided by IEA6.



Contrasting the European Hydrogen Backbone data with the targets set by the European Union and member states, green hydrogen production in the EU and UK is expected to reach 376 TWh in 2030 and 1,395 TWh in 2040. This represents an average annual growth rate of 60%

until 2030 and 14% between 2030 and 2040. Based on data from IEA, Irena and the European Hydrogen Backbone, we can project an approximate figure of 430 TWh in 2030 in Europe, of which 376 TWh will be green hydrogen.

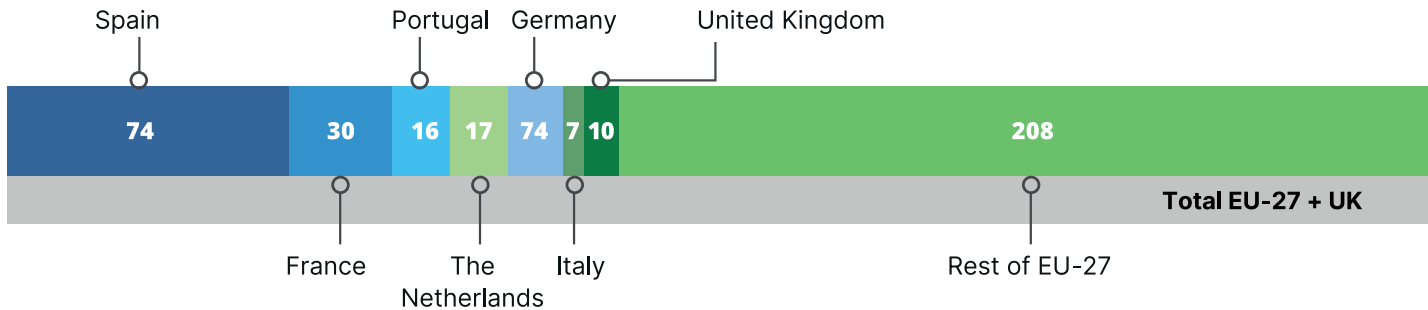
Renewable energy production in Europe (TWh)



Looking more closely at the countries analysed, Spain is set to be the largest producer in Europe: in 2030 it will generate 74 TWh in 2030, almost 20% of the total for the entire EU and the United Kingdom; by that year there will be a considerable increase in the renewable power installed in Spain, which will be accompanied by a drop in the price of renewable electricity. By 2040, Spain will continue to lead in green hydrogen production, reaching 224 TWh.

Fig. 8 and 9. Estimated growth in renewable energy production in Europe-27, according to data from Irena, IEA and European Hydrogen Backbone

Green hydrogen production (TWh). 2030 projection



Green hydrogen production (TWh). 2040 projection

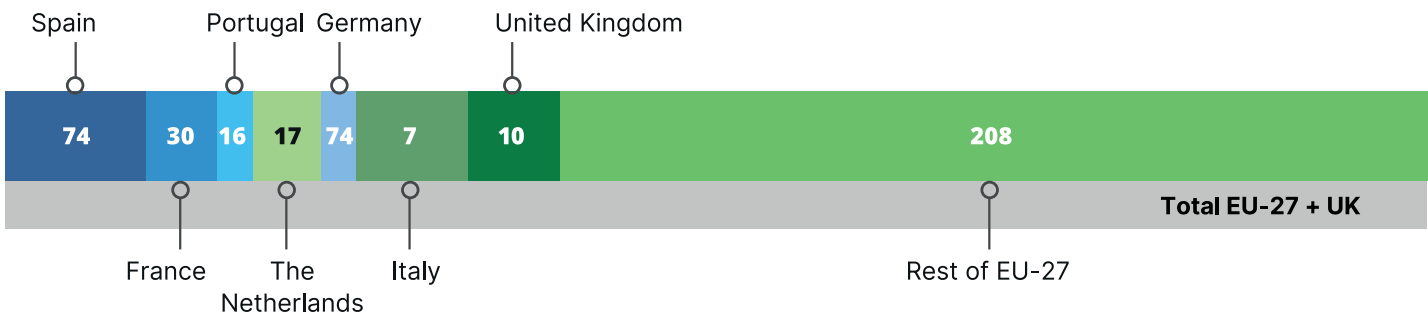
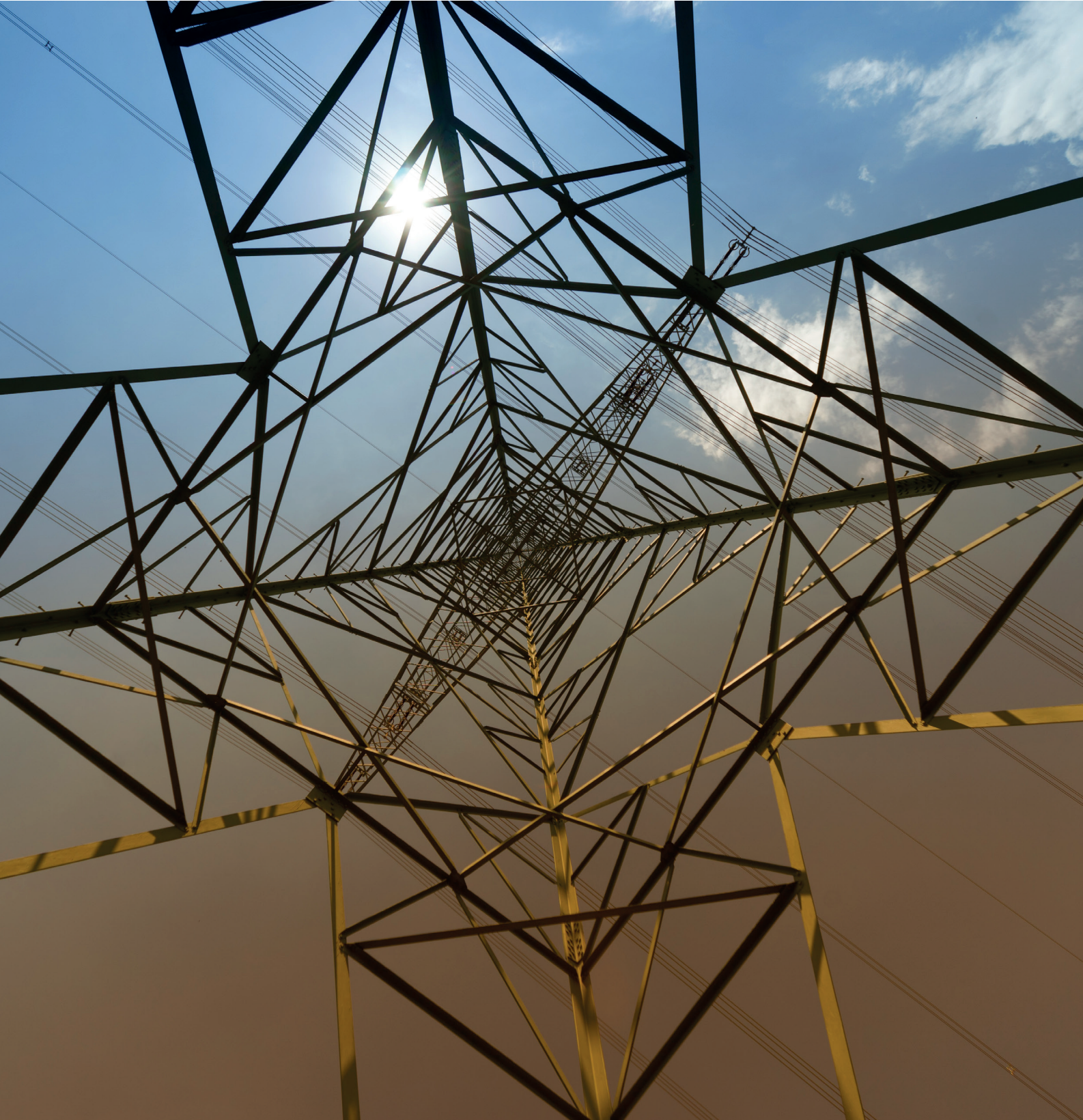


Fig. 10 and 11. Projected level of green hydrogen production by country, in 2030 and 2040⁷.

The rate varies from country to country: from 150 bp growth in Spain or 164 bp growth in the UK, to 68 bp decrease in the rest of the European Union, which appears in this study in aggregate. This graph helps to identify the speed at which each country is adapting to the planned investments and its capacity to translate them into green hydrogen production.

Indeed, in order to achieve this volume of expected production, a major effort will be required in terms of both public investment and private expenditure, in infrastructures and technologies, storage, innovation and, of course, also in training and adaptation of workers to the new energy model. In Europe, projections are for around €32 billion by 2030, and around €73 billion by 2040.

TABLES



Employment forecast in the green molecule sector in EU-27 and UK

	Green hydrogen production (TWh)		Value of production (M€)	
	2030	2040	2030	2040
EU-27	366	1.221	34.070	71.200
EU-27 + UK	376	1.395	34.820	80.340
Spain	74	224	5.560	8.410
France	30	104	2.700	6.250
Portugal	16	55	1.320	2.480
The Netherlands	17	84	1.280	4.410
Germany	15	102	1.320	6.890
Italy	7	49	580	2.580
Rest of EU-27	208	603	21.310	40.180
UK	10	174	750	9.140



Impact on GDP	2030				2040			
	Direct	Indirect	Induced	TOTAL	Direct	Indirect	Induced	TOTAL
Unit: in M€	2030				2040			
EU-27	15.300	27.460	19.340	62.100	30.870	56.740	41.500	129.110
EU-27 + UK	15.480	28.380	19.990	63.850	33.010	64.350	47.920	145.280
Spain	2.030	4.460	3.600	10.090	3.070	6.940	5.590	15.600
France	860	2.110	1.900	4.870	1.990	4.830	4.330	11.150
Portugal	380	970	980	2.330	700	1.800	1.820	4.320
The Netherlands	650	1.110	700	2.460	2.260	3.440	2.250	7.950
Germany	550	1.710	1.310	3.570	2.860	6.440	4.860	14.160
Italy	180	710	630	1.520	780	2.570	2.280	5.630
Rest of EU-27	10.650	16.390	10.220	37.260	19.210	30.720	20.370	70.300
UK	180	920	650	1.750	2.140	7.610	6.420	16.170

Impact on employment	2030				2040			
	Direct	Indirect	Induced	TOTAL	Direct	Indirect	Induced	TOTAL
Unit: 1000 employments	2030				2040			
EU-27	69	280	272	621	186	690	681	1.557
EU-27 + UK	70	290	280	640	200	770	760	1.730
Spain	9	52	55	116	13	82	86	181
France	5	20	21	46	12	46	47	105
Portugal	2	15	20	37	3	28	36	67
The Netherlands	3	8	7	18	9	25	23	57
Germany	3	19	17	39	16	67	62	145
Italy	1	9	9	19	3	30	32	65
Rest of EU-27	46	157	143	346	130	412	395	937
UK	1	10	8	19	14	80	79	173

Source: Analysis based on baseline projections and Eurostat data

Impact on employment by sector concerned (I)

(sector clusters)

	Energy	Manufacturing	Water	Agriculture and mining	Construction	Commerce and transport	Other services
Unit: employments	2030						
EU-27	139.855	126.547	15.037	30.304	54.294	89.050	165.710
Direct	68.547	0	0	0	0	0	0
Indirect	54.661	60.829	11.385	14.935	36.818	40.441	61.154
Induced	16.647	65.718	3.652	15.368	17.476	48.609	104.556
EU-27 + UK	143.783	129.494	15.408	30.839	55.835	92.083	173.026
Direct	69.667	0	0	0	0	0	0
Indirect	56.205	62.599	11.682	15.338	37.915	42.103	64.681
Induced	17.910	66.894	3.726	15.501	17.919	49.980	108.345
Spain	21.577	24.762	2.334	4.132	10.757	21.625	30.412
Direct	8.661	0	0	0	0	0	0
Indirect	8.753	11.029	1.911	2.143	6.237	9.130	12.841
Induced	4.163	13.733	423	1.989	4.520	12.495	17.571
France	14.608	8.726	1.185	1.284	2.998	5.908	11.376
Direct	5.181	0	0	0	0	0	0
Indirect	5.702	4.013	985	522	2.018	2.599	4.261
Induced	3.725	4.713	200	762	980	3.309	7.115
Portugal	6.173	9.366	1.298	1.963	3.345	5.013	9.259
Direct	1.784	0	0	0	0	0	0
Indirect	2.499	4.130	979	720	2.509	1.673	2.556
Induced	1.890	5.236	319	1.242	836	3.340	6.703
The Netherlands	4.851	2.968	281	549	1.503	2.836	5.275
Direct	2.664	0	0	0	0	0	0
Indirect	1.852	1.697	226	203	925	1.389	2.107
Induced	335	1.270	55	346	578	1.447	3.168
Germany	6.391	11.455	568	771	2.734	6.272	10.258
Direct	2.967	0	0	0	0	0	0
Indirect	2.347	5.659	442	442	1.670	3.410	4.820
Induced	1.078	5.795	126	329	1.064	2.862	5.438
Italy	2.052	6.138	401	825	1.007	2.779	5.178
Direct	742	0	0	0	0	0	0
Indirect	820	2.903	274	441	608	1.479	2.122
Induced	490	3.234	128	384	399	1.300	3.056
Rest of EU-27	84.202	63.132	8.969	20.780	31.949	44.618	93.951
UK	3.928	2.947	371	535	1.541	3.033	7.316
Direct	1.120	0	0	0	0	0	0
Indirect	1.545	1.771	297	403	1.098	1.662	3.527
Induced	1.263	1.176	74	133	443	1.371	3.789

Impact on employment by sector concerned (II)

(sector clusters)

	Energy	Manufacturing	Water	Agriculture and mining	Construction	Commerce and transport	Other services
Unit: employments	2040						
EU-27	376.581	319.145	42.152	91.539	136.702	222.386	376.199
Direct	186.010	0	0	0	0	0	0
Indirect	146.233	149.369	30.762	43.037	91.767	98.321	133.988
Induced	44.338	169.776	11.390	48.502	44.935	124.065	242.211
EU-27 + UK	423.493	344.450	45.957	95.416	152.539	244.659	430.543
Direct	199.653	0	0	0	0	0	0
Indirect	164.798	164.201	33.820	45.823	103.983	107.513	153.158
Induced	59.042	180.249	12.137	49.593	48.556	137.146	277.385
Spain	32.784	39.342	3.584	6.674	16.545	34.073	47.640
Direct	13.109	0	0	0	0	0	0
Indirect	13.298	17.615	2.918	3.563	9.494	14.786	20.304
Induced	6.377	21.728	666	3.111	7.051	19.287	27.336
France	33.721	19.670	2.699	2.892	6.851	13.428	25.875
Direct	11.973	0	0	0	0	0	0
Indirect	13.149	8.995	2.247	1.162	4.659	5.895	9.671
Induced	8.599	10.675	453	1.731	2.192	7.533	16.204
Portugal	11.525	17.356	2.416	3.618	6.237	9.327	17.264
Direct	3.346	0	0	0	0	0	0
Indirect	4.669	7.657	1.822	1.309	4.692	3.108	4.777
Induced	3.510	9.699	595	2.309	1.546	6.219	12.488
The Netherlands	16.753	8.156	925	1.681	4.943	8.257	16.517
Direct	9.216	0	0	0	0	0	0
Indirect	6.393	4.391	740	533	3.122	3.622	6.125
Induced	1.144	3.766	185	1.148	1.821	4.635	10.392
Germany	31.625	35.577	2.198	2.704	11.648	22.026	38.986
Direct	15.544	0	0	0	0	0	0
Indirect	11.731	16.805	1.696	1.431	7.944	10.546	16.785
Induced	4.350	18.772	502	1.272	3.704	11.481	22.201
Italy	9.030	18.803	1.620	2.895	3.950	9.667	18.836
Direct	3.304	0	0	0	0	0	0
Indirect	3.599	8.732	1.123	1.449	2.579	4.874	7.272
Induced	2.127	10.071	497	1.446	1.371	4.793	11.564
Rest of EU-27	241.144	180.241	28.710	71.075	86.527	125.609	211.081
UK	46.912	25.304	3.804	3.877	15.837	22.273	54.344
Direct	13.643	0	0	0	0	0	0
Indirect	18.565	14.832	3.058	2.786	12.216	9.192	19.170
Induced	14.704	10.473	747	1.091	3.621	13.081	35.174

Impact on employment by sector concerned (I)

(detailed sectors)

	Agriculture, livestock, forestry and fishing	Mining and quarrying	Manufact. industry	Electricity, gas, steam and air conditioning supply	Water supply, sanitation, waste management and remediation activities	Construc.	Wholesale and retail trade; repair of motor vehicles and motorbikes	Transport and storage	Hotels and restaurants	Information and commun.	Financial and insurance activities
Unit: employments	2030										
EU-27	24.718	5.586	126.547	139.855	15.037	54.294	60.947	28.103	19.176	13.975	8.032
Direct0	0	0	68.547	0	0	0	0	0	0	0	
Indirect	11.096	3.839	60.829	54.661	11.385	36.818	26.494	13.948	3.173	6.799	5.219
Induced	13.622	1.746	65.718	16.647	3.652	17.476	34.453	14.155	16.002	7.176	2.813
EU-27 + UK	24.930	5.909	129.494	143.783	15.408	55.835	63.188	28.895	19.946	14.568	8.742
Direct0	0	0	69.667	0	0	0	0	0	0	0	
Indirect	11.207	4.131	62.599	56.205	11.682	37.915	27.697	14.406	3.313	7.179	5.759
Induced	13.722	1.779	66.894	17.910	3.726	17.919	35.491	14.489	16.633	7.389	2.982
Spain 3.377	755	24.762	21.577	2.334	10.757	14.856	6.769	4.453	2.945	1.272	
Direct0	0	0	8.661	0	0	0	0	0	0	0	
Indirect	1.640	503	11.029	8.753	1.911	6.237	6.115	3.015	720	1.111	855
Induced	1.738	252	13.733	4.163	423	4.520	8.741	3.754	3.733	1.834	416
France	1.200	84	8.726	14.608	1.185	2.998	3.925	1.983	1.095	1.050	744
Direct0	0	0	5.181	0	0	0	0	0	0	0	
Indirect	473	48	4.013	5.702	985	2.018	1.648	951	198	316	456
Induced	726	36	4.713	3.725	200	980	2.277	1.032	898	734	288
Portugal	1.728	234	9.366	6.173	1.298	3.345	3.773	1.240	1.951	599	383
Direct0	0	0	1.784	0	0	0	0	0	0	0	
Indirect	605	115	4.130	2.499	979	2.509	1.117	556	103	291	280
Induced	1.123	119	5.236	1.890	319	836	2.656	684	1.848	308	103
The Netherlands	473	76	2.968	4.851	281	1.503	2.044	791	626	412	205
Direct0	0	0	2.664	0	0	0	0	0	0	0	
Indirect	188	15	1.697	1.852	226	925	933	456	75	233	141
Induced	285	61	1.270	335	55	578	1.112	335	551	179	63
Germany	528	243	11.455	6.391	568	2.734	4.273	1.998	1.105	808	651
Direct0	0	0	2.967	0	0	0	0	0	0	0	
Indirect	259	184	5.659	2.347	442	1.670	2.320	1.090	248	475	432
Induced	269	60	5.795	1.078	126	1.064	1.953	908	857	333	219
Italy	794	31	6.138	2.052	401	1.007	1.695	1.083	773	331	263
Direct0	0	0	742	0	0	0	0	0	0	0	
Indirect	418	23	2.903	820	274	608	858	620	202	186	189
Induced	376	8	3.234	490	128	399	837	463	572	145	74
Rest of EU-27	16.618	4.162	63.132	84.202	8.969	31.949	30.380	14.238	9.172	7.831	4.515
UK 212	324	2.947	3.928	371	1.541	2.241	792	770	593	709	
Direct0	0	0	1.120	0	0	0	0	0	0	0	
Indirect	111	292	1.771	1.545	297	1.098	1.203	459	139	380	540
Induced	100	32	1.176	1.263	74	443	1.038	334	631	213	169

Impact on employment by sector concerned (II)

(detailed sectors)

	Real estate activities	Professional, scientific and technical activities	Administrative and support service activities	Public administration and defence; compulsory Social Security	Education	Health and social work activities	Artistic, recreational and entertainment activities	Other services	Activities of households as employers; undifferentiated goods- and services-producing activities of households for own use	Activities of extraterritorial organizations and bodies
Unit: employments	2030									
EU-27	2.653	29.448	20.627	17.022	14.380	22.350	8.040	9.898	109	0
Direct	0	0	0	0	0	0	0	0	0	0
Indirect	771	20.004	14.296	4.162	2.401	987	1.044	2.254	45	0
Induced	1.882	9.445	6.332	12.860	11.979	21.363	6.996	7.645	64	0
EU-27 + UK	2.705	31.185	21.575	17.477	15.013	23.307	8.327	10.072	109	0
Direct	0	0	0	0	0	0	0	0	0	0
Indirect	786	21.387	15.012	4.252	2.541	1.017	1.094	2.295	45	0
Induced	1.919	9.799	6.563	13.225	12.472	22.289	7.233	7.778	64	0
Spain	157	4.710	5.851	3.349	2.058	3.100	951	1.565	0	0
Direct	0	0	0	0	0	0	0	0	0	0
Indirect	103	2.856	4.457	715	712	326	235	752	0	0
Induced	54	1.855	1.395	2.635	1.346	2.774	716	814	0	0
France	81	1.850	1.430	1.324	1.269	1.491	522	519	0	0
Direct	0	0	0	0	0	0	0	0	0	0
Indirect	40	1.067	1.088	301	461	91	49	194	0	0
Induced	41	784	342	1.024	808	1.400	473	324	0	0
Portugal	63	1.313	906	1.070	628	1.348	348	650	0	0
Direct	0	0	0	0	0	0	0	0	0	0
Indirect	23	909	635	158	28	49	25	55	0	0
Induced	40	404	272	912	599	1.299	324	595	0	0
The Netherlands	60	987	761	450	379	686	446	265	0	0
Direct	0	0	0	0	0	0	0	0	0	0
Indirect	19	666	600	158	83	40	48	44	0	0
Induced	40	321	161	291	296	646	398	221	0	0
Germany	67	1.901	1.667	1.443	540	1.457	194	425	0	0
Direct	0	0	0	0	0	0	0	0	0	0
Indirect	39	1.367	1.202	793	97	13	39	115	0	0
Induced	28	534	465	651	443	1.444	155	310	0	0
Italy	24	1.075	736	371	298	646	139	522	0	0
Direct	0	0	0	0	0	0	0	0	0	0
Indirect	17	734	467	85	63	42	52	84	0	0
Induced	7	340	269	286	235	604	87	438	0	0
Rest of EU-27	2.200	17.613	9.276	9.014	9.208	13.621	5.440	5.953	109	0
UK	52	1.737	948	455	633	957	287	174	0	0
Direct	0	0	0	0	0	0	0	0	0	0
Indirect	16	1.383	716	91	140	31	51	41	0	0
Induced	37	354	231	364	493	926	236	133	0	0

Impact on employment by sector concerned (III)

(detailed sectors)

	Agriculture, livestock, forestry and fishing	Mining and quarrying	Manufact. industry	Electricity, gas, steam and air conditioning supply	Water supply, sanitation, waste management and remediation activities	Construc.	Wholesale and retail trade; repair of motor vehicles and motorbikes	Transport and storage	Hotels and restaurants	Information and commun.	Financial and insurance activities
Unit: employments	2040										
EU-27	70.942	20.597	319.145	376.581	42.152	136.702	150.908	71.478	45.884	30.267	19.457
Direct	0	0	0	186.010	0	0	0	0	0	0	0
Indirect	28.154	14.882	149.369	146.233	30.762	91.767	63.611	34.711	7.195	14.361	12.650
Induced	42.787	5.714	169.776	44.338	11.390	44.935	87.298	36.767	38.689	15.906	6.807
EU-27 + UK	72.632	22.783	344.450	423.493	45.957	152.539	167.780	76.879	53.009	34.310	23.518
Direct	0	0	0	199.653	0	0	0	0	0	0	0
Indirect	29.034	16.789	164.201	164.798	33.820	103.983	70.152	37.361	7.843	16.537	15.267
Induced	43.598	5.994	180.249	59.042	12.137	48.556	97.628	39.518	45.166	17.773	8.251
Spain	5.446	1.228	39.342	32.784	3.584	16.545	23.427	10.646	6.990	4.595	2.001
Direct	0	0	0	13.109	0	0	0	0	0	0	0
Indirect	2.723	840	17.615	13.298	2.918	9.494	9.944	4.842	1.167	1.752	1.353
Induced	2.723	388	21.728	6.377	666	7.051	13.483	5.804	5.824	2.843	648
France	2.704	188	19.670	33.721	2.699	6.851	8.969	4.459	2.497	2.381	1.745
Direct	0	0	0	11.973	0	0	0	0	0	0	0
Indirect	1.054	108	8.995	13.149	2.247	4.659	3.784	2.110	449	713	1.088
Induced	1.650	81	10.675	8.599	453	2.192	5.185	2.348	2.048	1.668	657
Portugal	3.211	407	17.356	11.525	2.416	6.237	7.019	2.308	3.633	1.116	715
Direct	0	0	0	3.346	0	0	0	0	0	0	0
Indirect	1.125	185	7.657	4.669	1.822	4.692	2.070	1.038	194	542	523
Induced	2.087	222	9.699	3.510	595	1.546	4.949	1.270	3.439	574	192
The Netherlands	1.428	253	8.156	16.753	925	4.943	6.132	2.125	2.044	1.210	615
Direct	0	0	0	9.216	0	0	0	0	0	0	0
Indirect	488	44	4.391	6.393	740	3.122	2.507	1.115	223	650	410
Induced	939	208	3.766	1.144	185	1.821	3.625	1.011	1.821	560	205
Germany	1.791	913	35.577	31.625	2.198	11.648	15.271	6.756	4.164	2.749	2.361
Direct	0	0	0	15.544	0	0	0	0	0	0	0
Indirect	759	672	16.805	11.731	1.696	7.944	7.183	3.363	626	1.486	1.448
Induced	1.032	240	18.772	4.350	502	3.704	8.088	3.393	3.538	1.264	912
Italy	2.798	97	18.803	9.030	1.620	3.950	5.744	3.923	2.929	1.121	894
Direct	0	0	0	3.304	0	0	0	0	0	0	0
Indirect	1.384	66	8.732	3.599	1.123	2.579	2.657	2.217	755	638	636
Induced	1.414	31	10.071	2.127	497	1.371	3.087	1.706	2.173	482	258
Rest of EU-27	53.564	17.511	180.241	241.144	28.710	86.527	84.347	41.262	23.626	17.096	11.126
UK	1.691	2.186	25.304	46.912	3.804	15.837	16.872	5.401	7.126	4.043	4.060
Direct	0	0	0	13.643	0	0	0	0	0	0	0
Indirect	880	1.906	14.832	18.565	3.058	12.216	6.541	2.651	648	2.177	2.617
Induced	811	280	10.473	14.704	747	3.621	10.331	2.751	6.478	1.867	1.444

Impact on employment by sector concerned (IV)

(detailed sectors)

	Real estate activities	Professional, scientific and technical activities	Administrative and support service activities	Public administration and defence; compulsory Social Security	Education	Health and social work activities	Artistic, recreational and entertainment activities	Other services	Activities of households as employers; undifferentiated goods- and services-producing activities of households for own use	Activities of extraterritorial organizations and bodies
Unit: employments	2040									
EU-27	6.543	63.291	46.784	41.008	35.582	48.643	17.112	21.507	122	0
Direct	0	0	0	0	0	0	0	0	0	0
Indirect	1.753	41.580	31.146	10.582	5.407	2.063	2.120	5.079	53	0
Induced	4.790	21.711	15.637	30.426	30.175	46.580	14.992	16.429	69	0
EU-27 + UK	7.015	74.046	52.437	44.893	41.271	57.313	19.699	22.910	122	0
Direct	0	0	0	0	0	0	0	0	0	0
Indirect	1.848	49.320	34.939	11.191	6.208	2.259	2.408	5.283	53	0
Induced	5.167	24.726	17.498	33.702	35.063	55.054	17.291	17.627	69	0
Spain	248	7.462	9.196	5.184	3.173	4.886	1.478	2.427	0	0
Direct	0	0	0	0	0	0	0	0	0	0
Indirect	164	4.568	7.006	1.139	1.102	512	373	1.167	0	0
Induced	84	2.893	2.190	4.045	2.071	4.374	1.105	1.260	0	0
France	185	4.189	3.198	3.011	2.902	3.407	1.193	1.166	0	0
Direct	0	0	0	0	0	0	0	0	0	0
Indirect	92	2.419	2.433	671	1.052	208	110	436	0	0
Induced	93	1.770	765	2.340	1.850	3.199	1.083	730	0	0
Portugal	118	2.453	1.690	1.995	1.170	2.515	649	1.211	0	0
Direct	0	0	0	0	0	0	0	0	0	0
Indirect	43	1.702	1.184	295	53	92	46	102	0	0
Induced	74	751	506	1.700	1.117	2.423	603	1.109	0	0
The Netherlands	191	2.879	2.280	1.453	1.243	2.240	1.491	871	0	0
Direct	0	0	0	0	0	0	0	0	0	0
Indirect	57	1.874	1.778	489	255	119	140	129	0	0
Induced	133	1.006	501	964	988	2.121	1.351	742	0	0
Germany	267	6.466	5.840	6.375	2.277	5.947	809	1.733	0	0
Direct	0	0	0	0	0	0	0	0	0	0
Indirect	149	4.354	4.080	3.680	341	48	153	420	0	0
Induced	117	2.111	1.760	2.695	1.936	5.899	656	1.314	0	0
Italy	84	3.701	2.537	1.453	1.180	2.319	500	2.117	0	0
Direct	0	0	0	0	0	0	0	0	0	0
Indirect	58	2.474	1.562	300	224	144	179	301	0	0
Induced	26	1.228	975	1.153	956	2.176	321	1.816	0	0
Rest of EU-27	5.453	36.142	22.043	21.536	23.637	27.329	10.991	11.981	122	0
UK	472	10.755	5.653	3.885	5.688	8.670	2.588	1.403	0	0
Direct	0	0	0	0	0	0	0	0	0	0
Indirect	95	7.740	3.793	610	801	196	289	204	0	0
Induced	376	3.014	1.860	3.276	4.888	8.474	2.299	1.199	0	0

Impact on employment by socio-demographic characteristics

Unit: employments	2030		2040	
	Men	Women	Men	Women
EU-27	392.686	228.109	983.992	580.713
Direct	46.286	22.261	122.658	63.352
Indirect	188.084	92.138	462.072	231.405
Induced	158.316	113.710	399.261	285.956
EU-27 + UK	404.992	235.474	1.091.438	645.618
Direct	47.062	22.605	131.603	68.050
Indirect	194.923	95.600	516.377	256.918
Induced	163.007	117.269	443.458	320.650
Spain	71.994	43.606	108.673	71.968
Direct	4.992	3.669	6.417	6.692
Indirect	33.420	18.624	50.984	30.993
Induced	33.582	21.314	51.273	34.283
France	27.718	18.366	60.149	44.988
Direct	3.119	2.062	6.373	5.601
Indirect	12.580	7.520	27.309	18.469
Induced	12.020	8.784	26.467	20.919
Portugal	21.507	14.911	38.694	29.050
Direct	1.059	726	1.651	1.695
Indirect	9.599	5.468	17.083	10.950
Induced	10.849	8.717	19.960	16.404
The Netherlands	12.119	6.144	37.862	19.370
Direct	1.961	704	6.809	2.407
Indirect	5.890	2.510	17.550	7.376
Induced	4.268	2.930	13.503	9.588
Germany	24.493	13.956	90.800	53.965
Direct	2.110	857	10.546	4.998
Indirect	12.267	6.524	43.528	23.411
Induced	10.117	6.575	36.726	25.556
Italy	12.094	6.286	41.751	23.049
Direct	492	249	1.975	1.329
Indirect	5.900	2.747	20.019	9.609
Induced	5.702	3.290	19.757	12.112
Rest of EU-27	222.760	124.840	606.063	338.322
UK	12.307	7.365	107.446	64.905
Direct	776	344	8.944	4.698
Indirect	6.840	3.462	54.305	25.514
Induced	4.691	3.558	44.197	34.693

Impact on employment

	15-24	25-39	40-59	60+	15-24	25-39	40-59	60+
	2030				2040			
Spain	6.555	37.284	61.072	10.690	8.752	65.673	86.411	19.805
France	4.053	16.181	23.003	2.847	8.244	38.944	51.824	6.125
Portugal	1.623	12.102	17.891	4.801	3.013	23.111	31.443	10.176
The Netherlands	2.058	6.620	7.353	2.231	5.943	20.402	24.801	6.086
Germany	3.834	12.420	17.187	5.008	16.180	45.057	68.540	14.987
Italy	1.010	5.774	9.576	2.019	3.147	22.909	31.842	6.901
UK	2.391	6.910	8.253	2.118	19.094	62.472	72.243	18.542

SPAIN



Weight of the most demanded occupations in 2040

Spain

ISCO-1-digit classification	TOTAL	Direct	Indirect	Induced	Media 2023	Var (points)
OC1 Managers	5,3%	6,1%	5,5%	5,0%	4,4%	0,9
OC2 Professional	22,0%	22,5%	22,3%	21,7%	19,4%	2,6
OC3 Technicians and associate professionals	21,3%	21,0%	21,4%	21,2%	12,1%	9,1
OC4 Clerical support workers	5,2%	3,1%	5,2%	5,5%	10,4%	-5,2
OC5 Service and sales workers	11,4%	4,7%	9,8%	14,0%	20,9%	-9,5
OC6 Skilled agricultural, forestry and fishery workers	0,3%	0,0%	0,3%	0,3%	2,2%	-1,9
OC7 Craft related trades workers	18,3%	33,1%	18,8%	15,5%	10,6%	7,8
OC8 Plant and machine operators, and assemblers	11,5%	8,0%	12,2%	11,4%	7,9%	3,6
OC9 Elementary occupations	4,7%	1,4%	4,5%	5,3%	12,1%	-7,4

Weight of the most demanded occupations in 2040

Spain

ISCO-2-digit classification		TOTAL	Direct	Indirect	Induced	Media 2023	Var (points)
OC11	Chief executives, senior officials and legislators	0,3%	0,2%	0,3%	0,3%	0,3%	0,1
OC12	Administrative and commercial managers	2,9%	3,9%	3,1%	2,6%	1,3%	1,6
OC13	Production and specialized services managers	1,4%	1,7%	1,5%	1,3%	1,3%	0,1
OC14	Hospitality, retail and other services managers	0,7%	0,3%	0,6%	0,8%	1,5%	-0,8
OC21	Science and engineering professionals	9,3%	13,4%	9,7%	8,2%	3,0%	6,2
OC22	Health professionals	1,3%	0,1%	0,7%	2,1%	3,8%	-2,5
OC23	Teaching professionals	1,1%	0,8%	1,0%	1,3%	5,9%	-4,8
OC24	Business and administration professionals	3,8%	3,1%	4,1%	3,6%	2,5%	1,3
OC25	Information and communications technology professionals	5,0%	4,0%	5,4%	4,8%	1,1%	3,9
OC26	Legal, social and cultural professionals	1,5%	1,2%	1,4%	1,7%	3,1%	-1,5
OC31	Science and engineering associate professionals	6,5%	9,1%	6,8%	5,8%	2,3%	4,2
OC32	Health associate professionals	1,1%	1,1%	1,1%	1,2%	1,2%	0,0
OC33	Business and administration associate professionals	11,4%	9,6%	11,5%	11,7%	5,3%	6,1
OC34	Legal, social, cultural and related associate professionals	1,3%	0,5%	1,1%	1,6%	1,5%	-0,2
OC35	Information and communications technicians	0,9%	0,7%	0,9%	0,9%	1,9%	-1,0
OC41	General and keyboard clerks	1,6%	1,0%	1,6%	1,7%	2,6%	-1,0
OC42	Customer services clerks	1,3%	0,6%	1,4%	1,4%	4,8%	-3,4
OC43	Numerical and material recording clerks	1,3%	0,8%	1,3%	1,3%	2,7%	-1,5
OC44	Other clerical support workers	1,0%	0,7%	0,9%	1,1%	0,3%	0,7
OC51	Personal service workers	4,2%	0,7%	2,9%	6,1%	4,8%	-0,5
OC52	Sales workers	5,9%	4,0%	6,1%	6,1%	9,7%	-3,8
OC53	Personal care workers	1,0%	0,1%	0,5%	1,6%	4,0%	-3,0
OC54	Protective services workers	0,3%	0,0%	0,3%	0,3%	2,4%	-2,1
OC61	Market-oriented skilled agricultural workers	0,3%	0,0%	0,3%	0,3%	2,0%	-1,7
OC62	Market-oriented skilled forestry, fishery and hunting workers	0,0%	0,0%	0,0%	0,0%	0,2%	-0,2
OC71	Building and related trades workers, excluding electricians	3,1%	0,9%	3,8%	2,9%	5,2%	-2,1
OC72	Metal, machinery and related trades workers	5,2%	2,2%	5,4%	5,5%	1,9%	3,3
OC73	Handicraft and printing workers	0,2%	0,1%	0,2%	0,2%	0,4%	-0,2
OC74	Electrical and electronic trades workers	8,7%	29,5%	8,2%	5,8%	1,6%	7,1
OC75	Food processing, wood working, garment and other craft and related trades workers	1,2%	0,4%	1,2%	1,2%	1,5%	-0,4
OC81	Stationary plant and machine operators	6,8%	2,3%	7,3%	7,0%	2,3%	4,5
OC82	Assemblers	1,9%	3,6%	2,0%	1,6%	0,7%	1,2
OC83	Drivers and mobile plant operators	2,9%	2,1%	3,0%	2,9%	5,0%	-2,2
OC91	Cleaners and helpers	1,0%	0,3%	1,0%	1,1%	5,4%	-4,4
OC92	Agricultural, forestry and fishery labourers	0,1%	0,0%	0,1%	0,1%	1,7%	-1,6
OC93	Labourers in mining, construction, manufacturing and transport	1,9%	0,3%	2,0%	2,1%	3,4%	-1,5
OC94	Food preparation assistants	1,3%	0,6%	1,1%	1,7%	0,8%	0,5
OC95	Street and related sales and service workers	0,0%	0,0%	0,0%	0,0%	0,0%	0,0
OC96	Refuse workers and other elementary workers	0,3%	0,1%	0,3%	0,3%	0,8%	-0,5

Weight of green skills in 2024

Spain

ESCO-3-digit classification	Number of green subskills Yes=1 No=0		TOTAL	Direct	Indirect	Induced	Media 2023	Var (points)	
S1.0.0	Communication, collaboration and creativity	0	0	0,0%	0,0%	0,0%	0,0%	0,0%	0,0
S1.1.0	Negotiating	0	0	0,0%	0,0%	0,0%	0,0%	0,0%	0,0
S1.1.1	Negotiating and managing contracts and agreements	0	0	0,0%	0,0%	0,0%	0,0%	0,0%	0,0
S1.1.2	Mediating and resolving disputes	0	0	0,0%	0,0%	0,0%	0,0%	0,0%	0,0
S1.1.3	Responding to complaints	1	1	0,2%	0,1%	0,2%	0,2%	0,3%	-0,1
S1.11.0	Designing systems and products	5	1	0,4%	0,5%	0,4%	0,3%	0,2%	0,2
S1.11.1	Designing ict systems or applications	0	0	0,0%	0,0%	0,0%	0,0%	0,0%	0,0
S1.11.2	Designing electrical or electronic systems or equipment	14	1	0,2%	0,2%	0,2%	0,1%	0,1%	0,1
S1.11.3	Developing recipes or menus	0	0	0,0%	0,0%	0,0%	0,0%	0,0%	0,0
S1.11.4	Designing structures or facilities	6	1	0,2%	0,2%	0,2%	0,2%	0,1%	0,0
S1.11.5	Designing industrial materials, systems or products	5	1	0,4%	0,5%	0,4%	0,3%	0,1%	0,2
S1.12.0	Creating artistic, visual or instructive materials	0	0	0,0%	0,0%	0,0%	0,0%	0,0%	0,0
S1.12.1	Creating visual displays and decorations	0	0	0,0%	0,0%	0,0%	0,0%	0,0%	0,0
S1.12.2	Developing instructive or promotional materials	0	0	0,0%	0,0%	0,0%	0,0%	0,0%	0,0
S1.12.3	Creating artistic designs or performances	0	0	0,0%	0,0%	0,0%	0,0%	0,0%	0,0
S1.13.0	Writing and composing	0	0	0,0%	0,0%	0,0%	0,0%	0,0%	0,0
S1.13.1	Composing music	0	0	0,0%	0,0%	0,0%	0,0%	0,0%	0,0
S1.13.2	Artistic and creative writing	0	0	0,0%	0,0%	0,0%	0,0%	0,0%	0,0
S1.13.3	Technical or academic writing	1	1	1,4%	1,5%	1,4%	1,3%	1,0%	0,3
S1.14.0	Performing and entertaining	0	0	0,0%	0,0%	0,0%	0,0%	0,0%	0,0
S1.14.1	Practising sports	0	0	0,0%	0,0%	0,0%	0,0%	0,0%	0,0
S1.14.2	Performing artistic or cultural activities	0	0	0,0%	0,0%	0,0%	0,0%	0,0%	0,0
S1.14.3	Conducting gaming activities	0	0	0,0%	0,0%	0,0%	0,0%	0,0%	0,0
S1.15.0	Using more than one language	0	0	0,0%	0,0%	0,0%	0,0%	0,0%	0,0
S1.15.1	Using foreign languages	0	0	0,0%	0,0%	0,0%	0,0%	0,0%	0,0
S1.15.2	Translating and interpreting	0	0	0,0%	0,0%	0,0%	0,0%	0,0%	0,0
S1.2.0	Liaising and networking	0	0	0,0%	0,0%	0,0%	0,0%	0,0%	0,0
S1.2.1	Communicating with colleagues and clients	1	1	1,1%	0,9%	1,1%	1,2%	1,4%	-0,3
S1.2.3	Developing professional relationships or networks	1	1	1,7%	1,6%	1,7%	1,8%	2,0%	-0,3
S1.2.4	Advocating for individual or community needs	1	1	0,4%	0,3%	0,3%	0,4%	0,5%	-0,1
S1.2.5	Collaborating and liaising	0	0	0,0%	0,0%	0,0%	0,0%	0,0%	0,0
S1.3.0	Teaching and training	2	1	0,2%	0,2%	0,2%	0,2%	0,6%	-0,4
S1.3.1	Teaching academic or vocational subjects	1	1	0,2%	0,1%	0,1%	0,2%	0,4%	-0,3
S1.3.2	Teaching safety procedures	2	1	0,1%	0,1%	0,0%	0,1%	0,1%	0,0
S1.3.3	Training on operational procedures	6	1	0,8%	0,8%	0,7%	0,8%	0,9%	-0,1
S1.3.4	Training on health or medical topics	0	0	0,0%	0,0%	0,0%	0,0%	0,0%	0,0
S1.3.5	Coaching and mentoring	2	1	0,4%	0,3%	0,3%	0,5%	0,8%	-0,4
S1.4.0	Presenting information	0	0	0,0%	0,0%	0,0%	0,0%	0,0%	0,0
S1.4.1	Presenting general information	0	0	0,0%	0,0%	0,0%	0,0%	0,0%	0,0
S1.4.2	Presenting research or technical information	0	0	0,0%	0,0%	0,0%	0,0%	0,0%	0,0
S1.4.3	Presenting information in legal proceedings	0	0	0,0%	0,0%	0,0%	0,0%	0,0%	0,0
S1.5.0	Advising and consulting	0	0	0,0%	0,0%	0,0%	0,0%	0,0%	0,0
S1.5.1	Advising on legal, regulatory or procedural matters	2	1	0,4%	0,4%	0,4%	0,4%	0,3%	0,1
S1.5.2	Providing financial advice	0	0	0,0%	0,0%	0,0%	0,0%	0,0%	0,0
S1.5.3	Advising on products and services	3	1	0,8%	0,6%	0,7%	0,8%	1,0%	-0,2
S1.5.4	Providing medical advice	1	1	0,3%	0,1%	0,2%	0,4%	0,6%	-0,3
S1.5.5	Advising on environmental issues	19	1	0,2%	0,3%	0,2%	0,2%	0,1%	0,1
S1.5.6	Advising on design or use of technologies	1	1	0,2%	0,2%	0,2%	0,2%	0,1%	0,1

S1.5.7	Advising on business or operational matters	1	1	0,1%	0,1%	0,1%	0,1%	0,1%	0,0
S1.5.8	Advising on educational or vocational matters	0	0	0,0%	0,0%	0,0%	0,0%	0,0%	0,0
S1.5.9	Advising on workplace health and safety issues	0	0	0,0%	0,0%	0,0%	0,0%	0,0%	0,0
S1.6.0	Promoting, selling and purchasing	1	1	0,1%	0,1%	0,1%	0,1%	0,1%	0,0
S1.6.1	Selling products or services	1	1	1,0%	0,9%	1,0%	1,1%	1,5%	-0,5
S1.6.2	Promoting products, services, or programs	5	1	1,0%	1,0%	1,0%	1,1%	1,3%	-0,3
S1.6.3	Purchasing goods or services	0	0	0,0%	0,0%	0,0%	0,0%	0,0%	0,0
S1.7.1	Interviewing	0	0	0,0%	0,0%	0,0%	0,0%	0,0%	0,0
S1.7.2	Engaging with others to identify needs	0	0	0,0%	0,0%	0,0%	0,0%	0,0%	0,0
S1.7.3	Listening and asking questions	0	0	0,0%	0,0%	0,0%	0,0%	0,0%	0,0
S1.8.0	Working with others	0	0	0,0%	0,0%	0,0%	0,0%	0,0%	0,0
S1.8.1	Working in teams	0	0	0,0%	0,0%	0,0%	0,0%	0,0%	0,0
S1.8.2	Giving instructions	0	0	0,0%	0,0%	0,0%	0,0%	0,0%	0,0
S1.8.3	Giving feedback	0	0	0,0%	0,0%	0,0%	0,0%	0,0%	0,0
S1.8.4	Accepting feedback	0	0	0,0%	0,0%	0,0%	0,0%	0,0%	0,0
S1.8.5	Following instructions and procedures	1	1	0,5%	0,3%	0,5%	0,5%	0,6%	-0,1
S1.8.6	Assisting and supporting co-workers	0	0	0,0%	0,0%	0,0%	0,0%	0,0%	0,0
S1.9.0	Solving problems	0	0	0,0%	0,0%	0,0%	0,0%	0,0%	0,0
S1.9.1	Developing solutions	3	1	1,5%	2,1%	1,5%	1,4%	0,9%	0,6
S1.9.2	Implementing new procedures or processes	3	1	0,5%	0,4%	0,5%	0,5%	0,3%	0,2
S2.0.0	Information skills	0	0	0,0%	0,0%	0,0%	0,0%	0,0%	0,0
S2.1.0	Conducting studies, investigations and examinations	0	0	0,0%	0,0%	0,0%	0,0%	0,0%	0,0
S2.1.1	Conducting academic or market research	8	1	1,7%	1,9%	1,7%	1,7%	1,3%	0,4
S2.1.2	Diagnosing health conditions	0	0	0,0%	0,0%	0,0%	0,0%	0,0%	0,0
S2.1.3	Interpreting technical documentation and diagrams	0	0	0,0%	0,0%	0,0%	0,0%	0,0%	0,0
S2.1.4	Carrying out forensic and police investigations	1	1	0,1%	0,1%	0,1%	0,1%	0,1%	0,0
S2.2.0	Documenting and recording information	0	0	0,0%	0,0%	0,0%	0,0%	0,0%	0,0
S2.2.1	Preparing financial docs, records, reports, or budgets	0	0	0,0%	0,0%	0,0%	0,0%	0,0%	0,0
S2.2.2	Recording legal information	0	0	0,0%	0,0%	0,0%	0,0%	0,0%	0,0
S2.2.3	Preparing docs. for contracts, applications, or permits	1	1	0,4%	0,3%	0,4%	0,4%	0,2%	0,1
S2.2.4	Maintaining or preparing medical documentation	0	0	0,0%	0,0%	0,0%	0,0%	0,0%	0,0
S2.2.5	Maintaining operational records	1	1	2,1%	2,2%	2,1%	2,0%	2,1%	0,0
S2.2.6	Document. tech. designs/procedures/problems/activities	0	0	0,0%	0,0%	0,0%	0,0%	0,0%	0,0
S2.2.7	Reporting incidents and defects	1	1	0,3%	0,5%	0,3%	0,3%	0,3%	0,0
S2.3.0	Managing information	0	0	0,0%	0,0%	0,0%	0,0%	0,0%	0,0
S2.4.0	Processing information	0	0	0,0%	0,0%	0,0%	0,0%	0,0%	0,0
S2.4.1	Gathering information from physical or electronic sources	1	1	0,8%	0,7%	0,8%	0,8%	0,7%	0,1
S2.4.2	Entering and transforming information	0	0	0,0%	0,0%	0,0%	0,0%	0,0%	0,0
S2.5.0	Measuring physical properties	0	0	0,0%	0,0%	0,0%	0,0%	0,0%	0,0
S2.5.1	Measuring dimensions and related properties	3	1	0,3%	0,3%	0,3%	0,3%	0,2%	0,1
S2.5.2	Weighing	0	0	0,0%	0,0%	0,0%	0,0%	0,0%	0,0
S2.6.0	Calculating and estimating	1	1	0,0%	0,0%	0,0%	0,0%	0,0%	0,0
S2.6.1	Performing calculations	2	1	0,6%	0,7%	0,7%	0,6%	0,7%	0,0
S2.6.2	Determining values of goods or services	0	0	0,0%	0,0%	0,0%	0,0%	0,0%	0,0
S2.6.3	Estimating resource needs	1	1	0,4%	0,6%	0,4%	0,4%	0,3%	0,1
S2.7.0	Analysing and evaluating information and data	6	1	0,7%	0,7%	0,7%	0,7%	0,6%	0,1
S2.7.1	Assessing land or real estate	7	1	0,2%	0,3%	0,2%	0,2%	0,1%	0,1
S2.7.2	Analysing scientific and medical data	7	1	0,3%	0,3%	0,3%	0,2%	0,2%	0,1
S2.7.3	Analysing financial and economic data	0	0	0,0%	0,0%	0,0%	0,0%	0,0%	0,0
S2.7.4	Analysing business operations	15	1	0,9%	0,9%	1,0%	0,9%	0,6%	0,3
S2.7.5	Performing risk analysis and management	1	1	0,8%	0,8%	0,8%	0,8%	0,6%	0,3
S2.7.6	Evaluating syst., programmes, equipment and products	1	1	0,4%	0,4%	0,4%	0,4%	0,3%	0,1

S2.8.0	Monitoring, inspecting and testing	4	1	0,3%	0,2%	0,3%	0,3%	0,3%	0,0
S2.8.1	Testing electrical and mechanical systems or equipment	4	1	0,2%	0,3%	0,3%	0,2%	0,1%	0,1
S2.8.10	Monitoring quality of products	2	1	1,5%	1,5%	1,6%	1,4%	1,0%	0,5
S2.8.11	Testing vehicles	0	0	0,0%	0,0%	0,0%	0,0%	0,0%	0,0
S2.8.2	Monitoring operational activities	3	1	1,2%	1,0%	1,2%	1,2%	1,0%	0,2
S2.8.3	Monitoring financial and economic resources and activity	0	0	0,0%	0,0%	0,0%	0,0%	0,0%	0,0
S2.8.4	Monitoring safety or security	2	1	0,5%	0,4%	0,5%	0,5%	0,6%	-0,1
S2.8.5	Monitoring environmental conditions	20	1	0,2%	0,2%	0,2%	0,2%	0,1%	0,0
S2.8.6	Monitoring health conditions of humans and animals	2	1	0,2%	0,1%	0,1%	0,2%	0,4%	-0,2
S2.8.8	Testing and analysing substances	3	1	0,2%	0,2%	0,2%	0,2%	0,1%	0,1
S2.8.9	Inspecting food safety and quality	0	0	0,0%	0,0%	0,0%	0,0%	0,0%	0,0
S2.9.0	Monitoring developments in area of expertise	0	0	0,0%	0,0%	0,0%	0,0%	0,0%	0,0
S3.0.0	Assisting and caring	0	0	0,0%	0,0%	0,0%	0,0%	0,0%	0,0
S3.1.0	Counselling	0	0	0,0%	0,0%	0,0%	0,0%	0,0%	0,0
S3.1.1	Counselling on personal, family or social issues	0	0	0,0%	0,0%	0,0%	0,0%	0,0%	0,0
S3.1.2	Providing support to resolve problems	1	1	0,1%	0,1%	0,1%	0,1%	0,2%	-0,1
S3.1.3	Assisting people to access services	0	0	0,0%	0,0%	0,0%	0,0%	0,0%	0,0
S3.2.0	Providing health care or medical treatments	0	0	0,0%	0,0%	0,0%	0,0%	0,0%	0,0
S3.2.1	Providing medical, dental and nursing care	0	0	0,0%	0,0%	0,0%	0,0%	0,0%	0,0
S3.2.2	Performing surgical procedures	0	0	0,0%	0,0%	0,0%	0,0%	0,0%	0,0
S3.2.3	Providing physical therapies	0	0	0,0%	0,0%	0,0%	0,0%	0,0%	0,0
S3.2.4	Providing psychological and occupational therapies	0	0	0,0%	0,0%	0,0%	0,0%	0,0%	0,0
S3.2.5	Prescribing & ordering medical tests, treatments/devices	0	0	0,0%	0,0%	0,0%	0,0%	0,0%	0,0
S3.2.6	Fitting assistive devices	0	0	0,0%	0,0%	0,0%	0,0%	0,0%	0,0
S3.3.0	Protecting and enforcing	1	1	0,2%	0,1%	0,2%	0,2%	0,2%	-0,1
S3.3.1	Complying with health and safety procedures	5	1	4,0%	4,6%	3,9%	3,9%	4,2%	-0,2
S3.3.2	Complying with environ. protection laws and standards	38	1	0,5%	0,4%	0,5%	0,4%	0,5%	0,0
S3.3.3	Complying with operational procedures	2	1	1,5%	1,4%	1,5%	1,6%	1,8%	-0,2
S3.3.4	Verifying identities and documentation	0	0	0,0%	0,0%	0,0%	0,0%	0,0%	0,0
S3.3.5	Maintaining and enforcing physical security	2	1	0,8%	0,6%	0,8%	0,8%	1,6%	-0,8
S3.3.6	Protecting privacy and personal data	0	0	0,0%	0,0%	0,0%	0,0%	0,0%	0,0
S3.3.7	Ensuring compliance with legislation	2	1	1,2%	1,0%	1,2%	1,2%	1,1%	0,1
S3.4.0	Providing info. and support to the public and clients	0	0	0,0%	0,0%	0,0%	0,0%	0,0%	0,0
S3.4.1	Providing information to the public and clients	1	1	0,2%	0,1%	0,2%	0,2%	0,2%	-0,1
S3.4.2	Accompanying and welcoming people	0	0	0,0%	0,0%	0,0%	0,0%	0,0%	0,0
S3.4.4	Providing general assistance to people	0	0	0,0%	0,0%	0,0%	0,0%	0,0%	0,0
S3.5.0	Preparing and serving food and drinks	0	0	0,0%	0,0%	0,0%	0,0%	0,0%	0,0
S3.5.1	Preparing food and drinks	0	0	0,0%	0,0%	0,0%	0,0%	0,0%	0,0
S3.5.2	Serving food and drinks	0	0	0,0%	0,0%	0,0%	0,0%	0,0%	0,0
S3.6.0	Providing personal care	0	0	0,0%	0,0%	0,0%	0,0%	0,0%	0,0
S3.6.1	Assisting people with mobility	0	0	0,0%	0,0%	0,0%	0,0%	0,0%	0,0
S3.6.2	Assisting with personal needs	0	0	0,0%	0,0%	0,0%	0,0%	0,0%	0,0
S3.6.3	Caring for children	0	0	0,0%	0,0%	0,0%	0,0%	0,0%	0,0
S3.6.4	Styling hair and providing beauty treatments	0	0	0,0%	0,0%	0,0%	0,0%	0,0%	0,0
S4.0.0	Management skills	0	0	0,0%	0,0%	0,0%	0,0%	0,0%	0,0
S4.1.0	Developing objectives and strategies	4	1	0,2%	0,2%	0,2%	0,2%	0,2%	0,1
S4.1.1	Identifying opportunities	3	1	0,4%	0,4%	0,4%	0,4%	0,2%	0,2
S4.1.2	Developing financial, business or marketing plans	1	1	0,6%	0,6%	0,6%	0,6%	0,4%	0,2
S4.1.3	Developing operational policies and procedures	11	1	0,9%	1,0%	1,0%	0,9%	0,6%	0,4
S4.1.4	Developing policies and legislation	7	1	0,1%	0,1%	0,1%	0,1%	0,1%	0,0
S4.1.5	Developing health programmes	0	0	0,0%	0,0%	0,0%	0,0%	0,0%	0,0
S4.1.6	Developing educational programmes	0	0	0,0%	0,0%	0,0%	0,0%	0,0%	0,0

S4.1.7	Developing contingency and emergency response plans	1	1	0,2%	0,2%	0,2%	0,2%	0,2%	0,0
S4.2.0	Organising, planning and scheduling work and activities	2	1	0,2%	0,1%	0,2%	0,2%	0,2%	0,0
S4.2.1	Directing operational activities	7	1	0,8%	0,7%	0,8%	0,8%	0,9%	-0,1
S4.2.2	Planning events and programmes	1	1	1,2%	1,1%	1,1%	1,2%	1,2%	-0,1
S4.2.3	Directing, supervising and coordinating projects	3	1	0,4%	0,5%	0,4%	0,4%	0,3%	0,2
S4.2.4	Managing transport and logistics activities	0	0	0,0%	0,0%	0,0%	0,0%	0,0%	0,0
S4.2.5	Planning production processes	3	1	0,5%	0,5%	0,5%	0,5%	0,3%	0,2
S4.3.0	Allocating and controlling resources	0	0	0,0%	0,0%	0,0%	0,0%	0,0%	0,0
S4.3.1	Managing budgets or finances	2	1	0,8%	0,7%	0,8%	0,8%	0,6%	0,2
S4.3.2	Managing and administering human resources	0	0	0,0%	0,0%	0,0%	0,0%	0,0%	0,0
S4.3.3	Allocating and controlling physical resources	0	0	0,0%	0,0%	0,0%	0,0%	0,0%	0,0
S4.4.0	Performing administrative activities	0	0	0,0%	0,0%	0,0%	0,0%	0,0%	0,0
S4.4.2	Executing financial transactions	0	0	0,0%	0,0%	0,0%	0,0%	0,0%	0,0
S4.4.3	Performing general clerical and administrative tasks	0	0	0,0%	0,0%	0,0%	0,0%	0,0%	0,0
S4.5.0	Leading and motivating	0	0	0,0%	0,0%	0,0%	0,0%	0,0%	0,0
S4.6.0	Building and developing teams	0	0	0,0%	0,0%	0,0%	0,0%	0,0%	0,0
S4.7.0	Recruiting and hiring	0	0	0,0%	0,0%	0,0%	0,0%	0,0%	0,0
S4.8.1	Supervising a team or group	1	1	0,6%	0,6%	0,6%	0,6%	0,7%	-0,1
S4.8.2	Assigning work to others	0	0	0,0%	0,0%	0,0%	0,0%	0,0%	0,0
S4.8.3	Monitoring and evaluating the performance of individuals	0	0	0,0%	0,0%	0,0%	0,0%	0,0%	0,0
S4.9.0	Making decisions	1	1	0,3%	0,3%	0,2%	0,3%	0,2%	0,0
S5.0.0	Working with computers	0	0	0,0%	0,0%	0,0%	0,0%	0,0%	0,0
S5.1.0	Programming computer systems	0	0	0,0%	0,0%	0,0%	0,0%	0,0%	0,0
S5.2.1	Setting up computer systems	0	0	0,0%	0,0%	0,0%	0,0%	0,0%	0,0
S5.2.2	Protecting ict devices	0	0	0,0%	0,0%	0,0%	0,0%	0,0%	0,0
S5.2.3	Resolving computer problems	0	0	0,0%	0,0%	0,0%	0,0%	0,0%	0,0
S5.5.0	Accessing and analysing digital data	0	0	0,0%	0,0%	0,0%	0,0%	0,0%	0,0
S5.5.1	Browsing, searching and filtering digital data	0	0	0,0%	0,0%	0,0%	0,0%	0,0%	0,0
S5.5.2	Managing, gathering and storing digital data	0	0	0,0%	0,0%	0,0%	0,0%	0,0%	0,0
S5.6.0	Use digital tools for collab., content creation&prob. solv.	0	0	0,0%	0,0%	0,0%	0,0%	0,0%	0,0
S5.6.1	Using digital tools for collaboration and productivity	0	0	0,0%	0,0%	0,0%	0,0%	0,0%	0,0
S5.6.2	Use word processing, publishing & presentation software	0	0	0,0%	0,0%	0,0%	0,0%	0,0%	0,0
S5.6.3	Using computer aided design and drawing tools	0	0	0,0%	0,0%	0,0%	0,0%	0,0%	0,0
S5.6.4	Using digital tools for processing sound and images	0	0	0,0%	0,0%	0,0%	0,0%	0,0%	0,0
S5.7.0	Using digital tools to control machinery	0	0	0,0%	0,0%	0,0%	0,0%	0,0%	0,0
S6.0.0	Handling and moving	0	0	0,0%	0,0%	0,0%	0,0%	0,0%	0,0
S6.1.0	Sorting and packaging goods and materials	0	0	0,0%	0,0%	0,0%	0,0%	0,0%	0,0
S6.1.1	Sorting materials or products	4	1	0,5%	0,3%	0,5%	0,5%	0,5%	0,0
S6.1.2	Marking materials or objects for identification	1	1	0,3%	0,1%	0,3%	0,3%	0,3%	0,0
S6.1.3	Packaging objects	1	1	0,2%	0,1%	0,2%	0,2%	0,3%	-0,1
S6.11.0	Cleaning	0	0	0,0%	0,0%	0,0%	0,0%	0,0%	0,0
S6.11.1	Cleaning tools, equipment, workpieces and vehicles	0	0	0,0%	0,0%	0,0%	0,0%	0,0%	0,0
S6.11.2	Cleaning interior and exterior of buildings	0	0	0,0%	0,0%	0,0%	0,0%	0,0%	0,0
S6.11.3	Cleaning outdoor spaces	0	0	0,0%	0,0%	0,0%	0,0%	0,0%	0,0
S6.12.0	Washing and maintaining textiles and clothing	0	0	0,0%	0,0%	0,0%	0,0%	0,0%	0,0
S6.13.0	Handling and disposing of waste and hazardous materials	3	1	0,0%	0,0%	0,0%	0,0%	0,0%	0,0
S6.13.1	Handling and disposing of hazardous materials	11	1	0,5%	0,4%	0,5%	0,5%	0,7%	-0,2
S6.13.2	Disposing of non-hazardous waste or debris	10	1	0,3%	0,1%	0,2%	0,3%	0,5%	-0,2
S6.2.0	Moving and lifting	0	0	0,0%	0,0%	0,0%	0,0%	0,0%	0,0
S6.2.1	Loading and unloading goods and, materials	0	0	0,0%	0,0%	0,0%	0,0%	0,0%	0,0
S6.2.2	Moving or lifting materials, equipment, or supplies	0	0	0,0%	0,0%	0,0%	0,0%	0,0%	0,0
S6.2.3	Storing goods and materials	1	1	0,6%	0,3%	0,5%	0,6%	0,8%	-0,2

S6.3.0	Transforming and blending materials	0	0	0,0%	0,0%	0,0%	0,0%	0,0%	0,0
S6.3.1	Preparing mixtures or solutions	1	1	0,2%	0,1%	0,2%	0,2%	0,2%	0,0
S6.3.3	Preparing industrial materials for processing or use	0	0	0,0%	0,0%	0,0%	0,0%	0,0%	0,0
S6.3.6	Collecting & preparing specimens or materials for testing	0	0	0,0%	0,0%	0,0%	0,0%	0,0%	0,0
S6.4.0	Tending plants and crops	0	0	0,0%	0,0%	0,0%	0,0%	0,0%	0,0
S6.4.1	Cultivating land and crops	9	1	0,1%	0,0%	0,1%	0,1%	0,5%	-0,4
S6.4.2	Planting, pruning & harvest. trees, crops and other plants	3	1	0,1%	0,0%	0,1%	0,1%	0,3%	-0,2
S6.5.0	Assembling and fabricating products	0	0	0,0%	0,0%	0,0%	0,0%	0,0%	0,0
S6.5.1	Fabricating precision instruments or jewellery	0	0	0,0%	0,0%	0,0%	0,0%	0,0%	0,0
S6.5.2	Fabricating medical and prosthetic devices	0	0	0,0%	0,0%	0,0%	0,0%	0,0%	0,0
S6.5.3	Assembling electrical and electronic products	0	0	0,0%	0,0%	0,0%	0,0%	0,0%	0,0
S6.5.4	Assembling mechanical products	0	0	0,0%	0,0%	0,0%	0,0%	0,0%	0,0
S6.5.5	Assembling furniture	0	0	0,0%	0,0%	0,0%	0,0%	0,0%	0,0
S6.5.6	Fabricating garments and textile products	0	0	0,0%	0,0%	0,0%	0,0%	0,0%	0,0
S6.5.7	Fabricating food and related products	0	0	0,0%	0,0%	0,0%	0,0%	0,0%	0,0
S6.5.8	Fabricating tobacco products	0	0	0,0%	0,0%	0,0%	0,0%	0,0%	0,0
S6.6.1	Making production moulds and casts	0	0	0,0%	0,0%	0,0%	0,0%	0,0%	0,0
S6.6.2	Making patterns and templates	0	0	0,0%	0,0%	0,0%	0,0%	0,0%	0,0
S6.6.3	Making models	0	0	0,0%	0,0%	0,0%	0,0%	0,0%	0,0
S6.7.0	Using hand tools	0	0	0,0%	0,0%	0,0%	0,0%	0,0%	0,0
S6.7.1	Cutting materials and drilling holes	0	0	0,0%	0,0%	0,0%	0,0%	0,0%	0,0
S6.7.2	Shaping materials to create products	0	0	0,0%	0,0%	0,0%	0,0%	0,0%	0,0
S6.7.3	Smoothing surfaces of objects or equipment	0	0	0,0%	0,0%	0,0%	0,0%	0,0%	0,0
S6.7.4	Using precision hand tools	0	0	0,0%	0,0%	0,0%	0,0%	0,0%	0,0
S6.7.5	Hammering, nailing and riveting	0	0	0,0%	0,0%	0,0%	0,0%	0,0%	0,0
S6.8.0	Positioning materials, tools or equipment	1	1	0,7%	0,6%	0,7%	0,6%	0,5%	0,2
S6.9.0	Handling animals	0	0	0,0%	0,0%	0,0%	0,0%	0,0%	0,0
S6.9.1	Tending and breeding animals	1	1	0,2%	0,1%	0,2%	0,3%	0,6%	-0,4
S6.9.2	Tending and breeding aquatic animals	1	1	0,0%	0,0%	0,0%	0,0%	0,2%	-0,2
S6.9.3	Moving and herding animals	0	0	0,0%	0,0%	0,0%	0,0%	0,0%	0,0
S6.9.4	Hunting, trapping and slaughtering animals	0	0	0,0%	0,0%	0,0%	0,0%	0,0%	0,0
S6.9.5	Feeding and grooming animals	0	0	0,0%	0,0%	0,0%	0,0%	0,0%	0,0
S6.9.6	Training animals	0	0	0,0%	0,0%	0,0%	0,0%	0,0%	0,0
S6.9.7	Providing therapy or veterinary treatment for animals	0	0	0,0%	0,0%	0,0%	0,0%	0,0%	0,0
S7.0.0	Constructing	1	1	0,0%	0,0%	0,0%	0,0%	0,1%	0,0
S7.1.0	Building and repairing structures	0	0	0,0%	0,0%	0,0%	0,0%	0,0%	0,0
S7.1.1	Installing structural masonry materials	0	0	0,0%	0,0%	0,0%	0,0%	0,0%	0,0
S7.1.2	Installing wooden and metal components	6	1	2,5%	3,9%	2,6%	2,2%	1,6%	0,9
S7.1.4	Installing concrete components	0	0	0,0%	0,0%	0,0%	0,0%	0,0%	0,0
S7.1.5	Installing roofing	0	0	0,0%	0,0%	0,0%	0,0%	0,0%	0,0
S7.1.6	Joining parts using soldering, welding/brazing techniques	0	0	0,0%	0,0%	0,0%	0,0%	0,0%	0,0
S7.1.7	Installing and assembling building fixtures	0	0	0,0%	0,0%	0,0%	0,0%	0,0%	0,0
S7.1.8	Installing and assembling rigging equipment	0	0	0,0%	0,0%	0,0%	0,0%	0,0%	0,0
S7.2.0	Installing interior or exterior infrastructure	0	0	0,0%	0,0%	0,0%	0,0%	0,0%	0,0
S7.2.1	Installing heating, ventilation & air conditioning equip.	4	1	0,1%	0,2%	0,1%	0,1%	0,1%	0,0
S7.2.2	Installing plumbing or piping equipment or systems	0	0	0,0%	0,0%	0,0%	0,0%	0,0%	0,0
S7.2.3	Installing insulation materials	1	1	0,1%	0,0%	0,1%	0,1%	0,1%	0,0
S7.3.1	Applying material to fill gaps in surfaces	0	0	0,0%	0,0%	0,0%	0,0%	0,0%	0,0
S7.3.2	Applying textured or masonry coatings	0	0	0,0%	0,0%	0,0%	0,0%	0,0%	0,0
S7.3.3	Applying protective or decorative solutions or coatings	0	0	0,0%	0,0%	0,0%	0,0%	0,0%	0,0
S7.3.4	Installing floor and wall coverings	0	0	0,0%	0,0%	0,0%	0,0%	0,0%	0,0
S8.0.0	Working with machinery and specialised equipment	1	1	0,9%	1,1%	0,9%	0,9%	0,4%	0,5

S8.1.1	Operating earthmoving equipment	0	0	0,0%	0,0%	0,0%	0,0%	0,0%	0,0
S8.1.2	Operating agricultural or forestry equipment	2	1	0,1%	0,0%	0,1%	0,1%	0,3%	-0,2
S8.1.3	Operating lifting or moving equipment	0	0	0,0%	0,0%	0,0%	0,0%	0,0%	0,0
S8.2.0	Driving vehicles	0	0	0,0%	0,0%	0,0%	0,0%	0,0%	0,0
S8.2.1	Driving heavy vehicles	0	0	0,0%	0,0%	0,0%	0,0%	0,0%	0,0
S8.2.2	Driving light vehicles	0	0	0,0%	0,0%	0,0%	0,0%	0,0%	0,0
S8.2.3	Operating rail vehicles	0	0	0,0%	0,0%	0,0%	0,0%	0,0%	0,0
S8.3.0	Operating watercraft	0	0	0,0%	0,0%	0,0%	0,0%	0,0%	0,0
S8.4.0	Operating machinery for extraction/proces. raw materials	1	1	0,0%	0,0%	0,0%	0,0%	0,0%	0,0
S8.4.1	Operating mining, drilling & mineral processing machinery	0	0	0,0%	0,0%	0,0%	0,0%	0,0%	0,0
S8.4.2	Operating metal processing and finishing machinery	0	0	0,0%	0,0%	0,0%	0,0%	0,0%	0,0
S8.4.3	Operating pumping systems or equipment	0	0	0,0%	0,0%	0,0%	0,0%	0,0%	0,0
S8.4.4	Operating energy production or distribution equipment	5	1	0,1%	0,2%	0,1%	0,1%	0,1%	0,1
S8.4.5	Op. petroleum/chemical/water proces. systems or equip.	6	1	0,1%	0,1%	0,1%	0,1%	0,1%	0,0
S8.4.6	Operating wood processing and papermaking machinery	1	1	0,1%	0,0%	0,1%	0,1%	0,0%	0,0
S8.4.7	Operating kilns, furnaces and drying equipment	1	1	0,2%	0,1%	0,2%	0,2%	0,1%	0,1
S8.5.0	Operating machinery for the manufacture of products	0	0	0,0%	0,0%	0,0%	0,0%	0,0%	0,0
S8.5.1	Operating painting or coating machinery	0	0	0,0%	0,0%	0,0%	0,0%	0,0%	0,0
S8.5.2	Operating packaging machinery	0	0	0,0%	0,0%	0,0%	0,0%	0,0%	0,0
S8.5.3	Operating machinery for the manufacture and treatment of textiles, fur and leather products	0	0	0,0%	0,0%	0,0%	0,0%	0,0%	0,0
S8.5.4	Operating food processing machinery	0	0	0,0%	0,0%	0,0%	0,0%	0,0%	0,0
S8.5.5	Operating mixing and separating machinery	0	0	0,0%	0,0%	0,0%	0,0%	0,0%	0,0
S8.5.6	Operating print and photographic production equipment	0	0	0,0%	0,0%	0,0%	0,0%	0,0%	0,0
S8.5.7	Operating metal, plastic or rubber forming equipment	0	0	0,0%	0,0%	0,0%	0,0%	0,0%	0,0
S8.5.8	Operating cutting, grinding and smoothing machinery	1	1	0,2%	0,1%	0,2%	0,2%	0,1%	0,1
S8.6.0	Using precision instrumentation and equipment	0	0	0,0%	0,0%	0,0%	0,0%	0,0%	0,0
S8.6.1	Operating medical equipment	0	0	0,0%	0,0%	0,0%	0,0%	0,0%	0,0
S8.6.2	Operating audio-visual equipment	0	0	0,0%	0,0%	0,0%	0,0%	0,0%	0,0
S8.6.3	Operating scientific and laboratory equipment	1	1	0,3%	0,5%	0,3%	0,3%	0,2%	0,2
S8.6.4	Operating communications equipment	0	0	0,0%	0,0%	0,0%	0,0%	0,0%	0,0
S8.6.5	Operating precision industrial equipment	0	0	0,0%	0,0%	0,0%	0,0%	0,0%	0,0
S8.6.6	Using precision measuring equipment	1	1	0,6%	0,9%	0,6%	0,6%	0,4%	0,2
S8.7.0	Installing, maintaining and repairing mechanical equip.	0	0	0,0%	0,0%	0,0%	0,0%	0,0%	0,0
S8.7.1	Repairing and installing mechanical equipment	2	1	0,4%	0,5%	0,4%	0,3%	0,2%	0,2
S8.7.2	Maintaining mechanical equipment and tools	0	0	0,0%	0,0%	0,0%	0,0%	0,0%	0,0
S8.7.3	Maintaining mechanical machinery	0	0	0,0%	0,0%	0,0%	0,0%	0,0%	0,0
S8.8.0	Installing, maintaining and repairing electrical, electronic and precision equipment	0	0	0,0%	0,0%	0,0%	0,0%	0,0%	0,0
S8.8.1	Installing/repairing electrical, electronic/precision equip.	4	1	1,5%	4,7%	1,5%	1,1%	0,4%	1,1
S8.8.2	Maintaining electrical, electronic and precision equip.	5	1	0,7%	1,5%	0,7%	0,5%	0,3%	0,3
S8.9.0	Operating aircraft	0	0	0,0%	0,0%	0,0%	0,0%	0,0%	0,0

FRANCE



Weight of the most demanded occupations in 2040

France

ISCO-1-digit classification	TOTAL	Direct	Indirect	Induced	Media 2023	Var (points)
OC1 Managers	9,1%	12,6%	8,9%	8,5%	7,3%	1,8
OC2 Professional	16,0%	17,1%	14,8%	16,9%	23,1%	-7,1
OC3 Technicians and associate professionals	23,4%	26,7%	23,0%	22,8%	18,1%	5,2
OC4 Clerical support workers	10,4%	11,0%	10,0%	10,6%	8,8%	1,6
OC5 Service and sales workers	13,4%	13,5%	12,7%	14,1%	14,5%	-1,1
OC6 Skilled agricultural, forestry and fishery workers	0,1%	0,0%	0,2%	0,2%	2,9%	-2,7
OC7 Craft related trades workers	12,0%	10,0%	13,3%	11,2%	10,1%	1,9
OC8 Plant and machine operators, and assemblers	6,0%	2,1%	6,7%	6,2%	6,6%	-0,6
OC9 Elementary occupations	9,6%	6,9%	10,5%	9,5%	8,6%	1,0

Weight of the most demanded occupations in 2040

France

ISCO-2-digit classification		TOTAL	Direct	Indirect	Induced	Media 2023	Var (points)
OC11	Chief executives, senior officials and legislators	1,5%	2,9%	1,5%	1,2%	0,8%	0,7
OC12	Administrative and commercial managers	5,4%	7,6%	5,2%	5,0%	2,2%	3,2
OC13	Production and specialized services managers	1,4%	1,4%	1,3%	1,3%	2,5%	-1,1
OC14	Hospitality, retail and other services managers	0,9%	0,6%	0,8%	1,0%	1,9%	-1,0
OC21	Science and engineering professionals	3,8%	4,9%	3,9%	3,5%	4,0%	-0,2
OC22	Health professionals	1,7%	0,5%	0,9%	2,7%	2,9%	-1,2
OC23	Teaching professionals	0,4%	0,2%	0,3%	0,5%	4,6%	-4,2
OC24	Business and administration professionals	5,2%	6,4%	5,2%	5,0%	5,9%	-0,7
OC25	Information and communications technology professionals	2,9%	3,4%	2,7%	2,9%	2,7%	0,2
OC26	Legal, social and cultural professionals	2,0%	1,6%	1,7%	2,4%	3,1%	-1,1
OC31	Science and engineering associate professionals	8,9%	11,6%	9,4%	7,8%	3,4%	5,6
OC32	Health associate professionals	1,5%	0,8%	1,0%	2,3%	3,4%	-1,8
OC33	Business and administration associate professionals	10,2%	12,3%	10,1%	9,8%	7,0%	3,2
OC34	Legal, social, cultural and related associate professionals	1,9%	1,3%	1,8%	2,2%	3,6%	-1,7
OC35	Information and communications technicians	0,7%	0,7%	0,7%	0,8%	0,7%	0,0
OC41	General and keyboard clerks	1,2%	0,9%	1,1%	1,3%	3,9%	-2,7
OC42	Customer services clerks	0,8%	0,7%	0,8%	0,9%	1,2%	-0,4
OC43	Numerical and material recording clerks	2,6%	1,7%	2,5%	2,9%	2,7%	-0,1
OC44	Other clerical support workers	5,8%	7,7%	5,6%	5,6%	1,0%	4,8
OC51	Personal service workers	2,8%	2,9%	2,6%	3,1%	3,5%	-0,6
OC52	Sales workers	8,7%	10,2%	8,3%	8,6%	4,8%	3,8
OC53	Personal care workers	1,5%	0,1%	1,3%	2,2%	4,6%	-3,1
OC54	Protective services workers	0,4%	0,2%	0,5%	0,3%	1,6%	-1,2
OC61	Market-oriented skilled agricultural workers	0,1%	0,0%	0,1%	0,1%	2,7%	-2,6
OC62	Market-oriented skilled forestry, fishery and hunting workers	0,0%	0,0%	0,0%	0,0%	0,2%	-0,1
OC71	Building and related trades workers, excluding electricians	2,6%	2,7%	3,0%	2,3%	3,7%	-1,0
OC72	Metal, machinery and related trades workers	5,0%	2,5%	5,7%	5,0%	3,0%	2,0
OC73	Handicraft and printing workers	0,1%	0,1%	0,1%	0,1%	0,4%	-0,3
OC74	Electrical and electronic trades workers	2,9%	4,5%	3,0%	2,3%	1,2%	1,7
OC75	Food processing, wood working, garment and other craft and related trades workers	1,3%	0,3%	1,4%	1,4%	1,8%	-0,5
OC81	Stationary plant and machine operators	2,5%	0,7%	2,8%	2,7%	2,2%	0,3
OC82	Assemblers	0,6%	0,5%	0,7%	0,6%	0,5%	0,1
OC83	Drivers and mobile plant operators	2,8%	0,9%	3,3%	2,9%	3,9%	-1,0
OC91	Cleaners and helpers	1,5%	1,0%	1,6%	1,5%	4,1%	-2,6
OC92	Agricultural, forestry and fishery labourers	0,2%	0,0%	0,2%	0,3%	0,4%	-0,3
OC93	Labourers in mining, construction, manufacturing and transport	6,9%	5,0%	7,7%	6,7%	2,5%	4,5
OC94	Food preparation assistants	0,8%	0,7%	0,7%	0,9%	0,8%	0,0
OC95	Street and related sales and service workers	0,0%	0,0%	0,0%	0,0%	0,0%	0,0
OC96	Refuse workers and other elementary workers	0,2%	0,1%	0,2%	0,1%	0,8%	-0,6

Weight of green skills in 2024

France

ESCO-3-digit classification	Number of green subskills Yes=1 No=0		TOTAL	Direct	Indirect	Induced	Media 2023	Var (points)	
S1.0.0	Communication, collaboration and creativity	0	0	0,0%	0,0%	0,0%	0,0%	0,0%	0,0
S1.1.0	Negotiating	0	0	0,0%	0,0%	0,0%	0,0%	0,0%	0,0
S1.1.1	Negotiating and managing contracts and agreements	0	0	0,0%	0,0%	0,0%	0,0%	0,0%	0,0
S1.1.2	Mediating and resolving disputes	0	0	0,0%	0,0%	0,0%	0,0%	0,0%	0,0
S1.1.3	Responding to complaints	1	1	0,2%	0,2%	0,2%	0,2%	0,2%	0,0
S1.11.0	Designing systems and products	5	1	0,2%	0,3%	0,2%	0,2%	0,2%	0,0
S1.11.1	Designing ict systems or applications	0	0	0,0%	0,0%	0,0%	0,0%	0,0%	0,0
S1.11.2	Designing electrical or electronic systems or equipment	14	1	0,1%	0,1%	0,1%	0,1%	0,1%	0,0
S1.11.3	Developing recipes or menus	0	0	0,0%	0,0%	0,0%	0,0%	0,0%	0,0
S1.11.4	Designing structures or facilities	6	1	0,2%	0,2%	0,2%	0,2%	0,2%	0,0
S1.11.5	Designing industrial materials, systems or products	5	1	0,2%	0,3%	0,2%	0,2%	0,2%	0,1
S1.12.0	Creating artistic, visual or instructive materials	0	0	0,0%	0,0%	0,0%	0,0%	0,0%	0,0
S1.12.1	Creating visual displays and decorations	0	0	0,0%	0,0%	0,0%	0,0%	0,0%	0,0
S1.12.2	Developing instructive or promotional materials	0	0	0,0%	0,0%	0,0%	0,0%	0,0%	0,0
S1.12.3	Creating artistic designs or performances	0	0	0,0%	0,0%	0,0%	0,0%	0,0%	0,0
S1.13.0	Writing and composing	0	0	0,0%	0,0%	0,0%	0,0%	0,0%	0,0
S1.13.1	Composing music	0	0	0,0%	0,0%	0,0%	0,0%	0,0%	0,0
S1.13.2	Artistic and creative writing	0	0	0,0%	0,0%	0,0%	0,0%	0,0%	0,0
S1.13.3	Technical or academic writing	1	1	1,3%	1,4%	1,2%	1,2%	1,3%	0,0
S1.14.0	Performing and entertaining	0	0	0,0%	0,0%	0,0%	0,0%	0,0%	0,0
S1.14.1	Practising sports	0	0	0,0%	0,0%	0,0%	0,0%	0,0%	0,0
S1.14.2	Performing artistic or cultural activities	0	0	0,0%	0,0%	0,0%	0,0%	0,0%	0,0
S1.14.3	Conducting gaming activities	0	0	0,0%	0,0%	0,0%	0,0%	0,0%	0,0
S1.15.0	Using more than one language	0	0	0,0%	0,0%	0,0%	0,0%	0,0%	0,0
S1.15.1	Using foreign languages	0	0	0,0%	0,0%	0,0%	0,0%	0,0%	0,0
S1.15.2	Translating and interpreting	0	0	0,0%	0,0%	0,0%	0,0%	0,0%	0,0
S1.2.0	Liaising and networking	0	0	0,0%	0,0%	0,0%	0,0%	0,0%	0,0
S1.2.1	Communicating with colleagues and clients	1	1	1,4%	1,4%	1,4%	1,4%	1,4%	0,0
S1.2.3	Developing professional relationships or networks	1	1	1,9%	2,1%	1,8%	1,9%	2,1%	-0,2
S1.2.4	Advocating for individual or community needs	1	1	0,5%	0,5%	0,4%	0,5%	0,6%	-0,1
S1.2.5	Collaborating and liaising	0	0	0,0%	0,0%	0,0%	0,0%	0,0%	0,0
S1.3.0	Teaching and training	2	1	0,2%	0,2%	0,2%	0,2%	0,5%	-0,4
S1.3.1	Teaching academic or vocational subjects	1	1	0,1%	0,1%	0,1%	0,1%	0,4%	-0,3
S1.3.2	Teaching safety procedures	2	1	0,0%	0,0%	0,0%	0,1%	0,1%	0,0
S1.3.3	Training on operational procedures	6	1	0,7%	0,8%	0,7%	0,7%	0,7%	0,0
S1.3.4	Training on health or medical topics	0	0	0,0%	0,0%	0,0%	0,0%	0,0%	0,0
S1.3.5	Coaching and mentoring	2	1	0,4%	0,3%	0,3%	0,4%	0,8%	-0,4
S1.4.0	Presenting information	0	0	0,0%	0,0%	0,0%	0,0%	0,0%	0,0
S1.4.1	Presenting general information	0	0	0,0%	0,0%	0,0%	0,0%	0,0%	0,0
S1.4.2	Presenting research or technical information	0	0	0,0%	0,0%	0,0%	0,0%	0,0%	0,0
S1.4.3	Presenting information in legal proceedings	0	0	0,0%	0,0%	0,0%	0,0%	0,0%	0,0
S1.5.0	Advising and consulting	0	0	0,0%	0,0%	0,0%	0,0%	0,0%	0,0
S1.5.1	Advising on legal, regulatory or procedural matters	2	1	0,4%	0,5%	0,4%	0,4%	0,4%	0,0
S1.5.2	Providing financial advice	0	0	0,0%	0,0%	0,0%	0,0%	0,0%	0,0
S1.5.3	Advising on products and services	3	1	0,9%	1,0%	0,8%	0,9%	0,6%	0,2
S1.5.4	Providing medical advice	1	1	0,3%	0,2%	0,2%	0,5%	0,7%	-0,3
S1.5.5	Advising on environmental issues	19	1	0,2%	0,2%	0,2%	0,2%	0,2%	0,0
S1.5.6	Advising on design or use of technologies	1	1	0,2%	0,1%	0,2%	0,2%	0,1%	0,0

S1.5.7	Advising on business or operational matters	1	1	0,1%	0,2%	0,1%	0,1%	0,1%	0,0
S1.5.8	Advising on educational or vocational matters	0	0	0,0%	0,0%	0,0%	0,0%	0,0%	0,0
S1.5.9	Advising on workplace health and safety issues	0	0	0,0%	0,0%	0,0%	0,0%	0,0%	0,0
S1.6.0	Promoting, selling and purchasing	1	1	0,1%	0,1%	0,1%	0,1%	0,1%	0,0
S1.6.1	Selling products or services	1	1	1,2%	1,4%	1,2%	1,2%	0,9%	0,3
S1.6.2	Promoting products, services, or programs	5	1	1,1%	1,2%	1,1%	1,1%	1,2%	-0,1
S1.6.3	Purchasing goods or services	0	0	0,0%	0,0%	0,0%	0,0%	0,0%	0,0
S1.7.1	Interviewing	0	0	0,0%	0,0%	0,0%	0,0%	0,0%	0,0
S1.7.2	Engaging with others to identify needs	0	0	0,0%	0,0%	0,0%	0,0%	0,0%	0,0
S1.7.3	Listening and asking questions	0	0	0,0%	0,0%	0,0%	0,0%	0,0%	0,0
S1.8.0	Working with others	0	0	0,0%	0,0%	0,0%	0,0%	0,0%	0,0
S1.8.1	Working in teams	0	0	0,0%	0,0%	0,0%	0,0%	0,0%	0,0
S1.8.2	Giving instructions	0	0	0,0%	0,0%	0,0%	0,0%	0,0%	0,0
S1.8.3	Giving feedback	0	0	0,0%	0,0%	0,0%	0,0%	0,0%	0,0
S1.8.4	Accepting feedback	0	0	0,0%	0,0%	0,0%	0,0%	0,0%	0,0
S1.8.5	Following instructions and procedures	1	1	0,5%	0,4%	0,6%	0,5%	0,6%	-0,1
S1.8.6	Assisting and supporting co-workers	0	0	0,0%	0,0%	0,0%	0,0%	0,0%	0,0
S1.9.0	Solving problems	0	0	0,0%	0,0%	0,0%	0,0%	0,0%	0,0
S1.9.1	Developing solutions	3	1	1,2%	1,2%	1,3%	1,2%	1,0%	0,3
S1.9.2	Implementing new procedures or processes	3	1	0,5%	0,6%	0,5%	0,5%	0,4%	0,1
S2.0.0	Information skills	0	0	0,0%	0,0%	0,0%	0,0%	0,0%	0,0
S2.1.0	Conducting studies, investigations and examinations	0	0	0,0%	0,0%	0,0%	0,0%	0,0%	0,0
S2.1.1	Conducting academic or market research	8	1	1,4%	1,6%	1,3%	1,4%	1,5%	-0,1
S2.1.2	Diagnosing health conditions	0	0	0,0%	0,0%	0,0%	0,0%	0,0%	0,0
S2.1.3	Interpreting technical documentation and diagrams	0	0	0,0%	0,0%	0,0%	0,0%	0,0%	0,0
S2.1.4	Carrying out forensic and police investigations	1	1	0,1%	0,1%	0,1%	0,1%	0,1%	0,0
S2.2.0	Documenting and recording information	0	0	0,0%	0,0%	0,0%	0,0%	0,0%	0,0
S2.2.1	Preparing financial docs, records, reports, or budgets	0	0	0,0%	0,0%	0,0%	0,0%	0,0%	0,0
S2.2.2	Recording legal information	0	0	0,0%	0,0%	0,0%	0,0%	0,0%	0,0
S2.2.3	Preparing docs. for contracts, applications, or permits	1	1	0,3%	0,4%	0,3%	0,3%	0,3%	0,1
S2.2.4	Maintaining or preparing medical documentation	0	0	0,0%	0,0%	0,0%	0,0%	0,0%	0,0
S2.2.5	Maintaining operational records	1	1	2,4%	2,4%	2,4%	2,3%	2,0%	0,3
S2.2.6	Document. tech. designs/procedures/problems/activities	0	0	0,0%	0,0%	0,0%	0,0%	0,0%	0,0
S2.2.7	Reporting incidents and defects	1	1	0,2%	0,2%	0,3%	0,2%	0,3%	0,0
S2.3.0	Managing information	0	0	0,0%	0,0%	0,0%	0,0%	0,0%	0,0
S2.4.0	Processing information	0	0	0,0%	0,0%	0,0%	0,0%	0,0%	0,0
S2.4.1	Gathering information from physical or electronic sources	1	1	0,8%	1,0%	0,8%	0,8%	0,8%	0,1
S2.4.2	Entering and transforming information	0	0	0,0%	0,0%	0,0%	0,0%	0,0%	0,0
S2.5.0	Measuring physical properties	0	0	0,0%	0,0%	0,0%	0,0%	0,0%	0,0
S2.5.1	Measuring dimensions and related properties	3	1	0,2%	0,2%	0,2%	0,2%	0,2%	0,0
S2.5.2	Weighing	0	0	0,0%	0,0%	0,0%	0,0%	0,0%	0,0
S2.6.0	Calculating and estimating	1	1	0,0%	0,0%	0,0%	0,0%	0,0%	0,0
S2.6.1	Performing calculations	2	1	0,7%	0,8%	0,7%	0,7%	0,5%	0,2
S2.6.2	Determining values of goods or services	0	0	0,0%	0,0%	0,0%	0,0%	0,0%	0,0
S2.6.3	Estimating resource needs	1	1	0,4%	0,4%	0,4%	0,4%	0,3%	0,1
S2.7.0	Analysing and evaluating information and data	6	1	0,7%	0,8%	0,7%	0,7%	0,7%	0,0
S2.7.1	Assessing land or real estate	7	1	0,2%	0,2%	0,2%	0,2%	0,1%	0,0
S2.7.2	Analysing scientific and medical data	7	1	0,2%	0,2%	0,2%	0,2%	0,2%	0,0
S2.7.3	Analysing financial and economic data	0	0	0,0%	0,0%	0,0%	0,0%	0,0%	0,0
S2.7.4	Analysing business operations	15	1	1,0%	1,1%	1,0%	1,0%	0,8%	0,2
S2.7.5	Performing risk analysis and management	1	1	0,8%	1,0%	0,8%	0,8%	0,8%	0,1
S2.7.6	Evaluating syst., programmes, equipment and products	1	1	0,4%	0,4%	0,4%	0,4%	0,3%	0,1

S2.8.0	Monitoring, inspecting and testing	4	1	0,3%	0,3%	0,3%	0,3%	0,3%	0,0
S2.8.1	Testing electrical and mechanical systems or equipment	4	1	0,2%	0,2%	0,2%	0,2%	0,1%	0,1
S2.8.10	Monitoring quality of products	2	1	1,3%	1,1%	1,4%	1,2%	0,9%	0,3
S2.8.11	Testing vehicles	0	0	0,0%	0,0%	0,0%	0,0%	0,0%	0,0
S2.8.2	Monitoring operational activities	3	1	1,2%	1,3%	1,2%	1,2%	1,0%	0,2
S2.8.3	Monitoring financial and economic resources and activity	0	0	0,0%	0,0%	0,0%	0,0%	0,0%	0,0
S2.8.4	Monitoring safety or security	2	1	0,6%	0,5%	0,6%	0,6%	0,5%	0,0
S2.8.5	Monitoring environmental conditions	20	1	0,2%	0,2%	0,2%	0,2%	0,2%	0,0
S2.8.6	Monitoring health conditions of humans and animals	2	1	0,2%	0,1%	0,2%	0,2%	0,4%	-0,2
S2.8.8	Testing and analysing substances	3	1	0,2%	0,2%	0,2%	0,2%	0,1%	0,0
S2.8.9	Inspecting food safety and quality	0	0	0,0%	0,0%	0,0%	0,0%	0,0%	0,0
S2.9.0	Monitoring developments in area of expertise	0	0	0,0%	0,0%	0,0%	0,0%	0,0%	0,0
S3.0.0	Assisting and caring	0	0	0,0%	0,0%	0,0%	0,0%	0,0%	0,0
S3.1.0	Counselling	0	0	0,0%	0,0%	0,0%	0,0%	0,0%	0,0
S3.1.1	Counselling on personal, family or social issues	0	0	0,0%	0,0%	0,0%	0,0%	0,0%	0,0
S3.1.2	Providing support to resolve problems	1	1	0,1%	0,1%	0,1%	0,2%	0,3%	-0,1
S3.1.3	Assisting people to access services	0	0	0,0%	0,0%	0,0%	0,0%	0,0%	0,0
S3.2.0	Providing health care or medical treatments	0	0	0,0%	0,0%	0,0%	0,0%	0,0%	0,0
S3.2.1	Providing medical, dental and nursing care	0	0	0,0%	0,0%	0,0%	0,0%	0,0%	0,0
S3.2.2	Performing surgical procedures	0	0	0,0%	0,0%	0,0%	0,0%	0,0%	0,0
S3.2.3	Providing physical therapies	0	0	0,0%	0,0%	0,0%	0,0%	0,0%	0,0
S3.2.4	Providing psychological and occupational therapies	0	0	0,0%	0,0%	0,0%	0,0%	0,0%	0,0
S3.2.5	Prescribing & ordering medical tests, treatments/devices	0	0	0,0%	0,0%	0,0%	0,0%	0,0%	0,0
S3.2.6	Fitting assistive devices	0	0	0,0%	0,0%	0,0%	0,0%	0,0%	0,0
S3.3.0	Protecting and enforcing	1	1	0,2%	0,1%	0,2%	0,2%	0,2%	0,0
S3.3.1	Complying with health and safety procedures	5	1	3,5%	2,9%	3,6%	3,6%	3,9%	-0,4
S3.3.2	Complying with environ. protection laws and standards	38	1	0,4%	0,4%	0,4%	0,4%	0,5%	-0,1
S3.3.3	Complying with operational procedures	2	1	1,8%	1,7%	1,8%	1,9%	1,9%	-0,1
S3.3.4	Verifying identities and documentation	0	0	0,0%	0,0%	0,0%	0,0%	0,0%	0,0
S3.3.5	Maintaining and enforcing physical security	2	1	0,9%	0,7%	0,9%	0,9%	1,2%	-0,3
S3.3.6	Protecting privacy and personal data	0	0	0,0%	0,0%	0,0%	0,0%	0,0%	0,0
S3.3.7	Ensuring compliance with legislation	2	1	1,2%	1,2%	1,2%	1,2%	1,1%	0,1
S3.4.0	Providing info. and support to the public and clients	0	0	0,0%	0,0%	0,0%	0,0%	0,0%	0,0
S3.4.1	Providing information to the public and clients	1	1	0,2%	0,2%	0,1%	0,2%	0,2%	0,0
S3.4.2	Accompanying and welcoming people	0	0	0,0%	0,0%	0,0%	0,0%	0,0%	0,0
S3.4.4	Providing general assistance to people	0	0	0,0%	0,0%	0,0%	0,0%	0,0%	0,0
S3.5.0	Preparing and serving food and drinks	0	0	0,0%	0,0%	0,0%	0,0%	0,0%	0,0
S3.5.1	Preparing food and drinks	0	0	0,0%	0,0%	0,0%	0,0%	0,0%	0,0
S3.5.2	Serving food and drinks	0	0	0,0%	0,0%	0,0%	0,0%	0,0%	0,0
S3.6.0	Providing personal care	0	0	0,0%	0,0%	0,0%	0,0%	0,0%	0,0
S3.6.1	Assisting people with mobility	0	0	0,0%	0,0%	0,0%	0,0%	0,0%	0,0
S3.6.2	Assisting with personal needs	0	0	0,0%	0,0%	0,0%	0,0%	0,0%	0,0
S3.6.3	Caring for children	0	0	0,0%	0,0%	0,0%	0,0%	0,0%	0,0
S3.6.4	Styling hair and providing beauty treatments	0	0	0,0%	0,0%	0,0%	0,0%	0,0%	0,0
S4.0.0	Management skills	0	0	0,0%	0,0%	0,0%	0,0%	0,0%	0,0
S4.1.0	Developing objectives and strategies	4	1	0,3%	0,3%	0,2%	0,2%	0,2%	0,0
S4.1.1	Identifying opportunities	3	1	0,4%	0,5%	0,4%	0,4%	0,3%	0,1
S4.1.2	Developing financial, business or marketing plans	1	1	0,9%	1,2%	0,9%	0,8%	0,7%	0,2
S4.1.3	Developing operational policies and procedures	11	1	0,9%	1,1%	0,9%	0,9%	0,8%	0,2
S4.1.4	Developing policies and legislation	7	1	0,1%	0,2%	0,1%	0,1%	0,1%	0,0
S4.1.5	Developing health programmes	0	0	0,0%	0,0%	0,0%	0,0%	0,0%	0,0
S4.1.6	Developing educational programmes	0	0	0,0%	0,0%	0,0%	0,0%	0,0%	0,0

S4.1.7	Developing contingency and emergency response plans	1	1	0,2%	0,2%	0,2%	0,2%	0,2%	0,0
S4.2.0	Organising, planning and scheduling work and activities	2	1	0,3%	0,3%	0,3%	0,3%	0,2%	0,1
S4.2.1	Directing operational activities	7	1	0,9%	1,1%	0,9%	0,9%	0,8%	0,1
S4.2.2	Planning events and programmes	1	1	1,5%	1,5%	1,4%	1,5%	1,4%	0,1
S4.2.3	Directing, supervising and coordinating projects	3	1	0,4%	0,5%	0,4%	0,3%	0,3%	0,0
S4.2.4	Managing transport and logistics activities	0	0	0,0%	0,0%	0,0%	0,0%	0,0%	0,0
S4.2.5	Planning production processes	3	1	0,5%	0,6%	0,5%	0,5%	0,4%	0,1
S4.3.0	Allocating and controlling resources	0	0	0,0%	0,0%	0,0%	0,0%	0,0%	0,0
S4.3.1	Managing budgets or finances	2	1	1,0%	1,2%	0,9%	0,9%	0,8%	0,1
S4.3.2	Managing and administering human resources	0	0	0,0%	0,0%	0,0%	0,0%	0,0%	0,0
S4.3.3	Allocating and controlling physical resources	0	0	0,0%	0,0%	0,0%	0,0%	0,0%	0,0
S4.4.0	Performing administrative activities	0	0	0,0%	0,0%	0,0%	0,0%	0,0%	0,0
S4.4.2	Executing financial transactions	0	0	0,0%	0,0%	0,0%	0,0%	0,0%	0,0
S4.4.3	Performing general clerical and administrative tasks	0	0	0,0%	0,0%	0,0%	0,0%	0,0%	0,0
S4.5.0	Leading and motivating	0	0	0,0%	0,0%	0,0%	0,0%	0,0%	0,0
S4.6.0	Building and developing teams	0	0	0,0%	0,0%	0,0%	0,0%	0,0%	0,0
S4.7.0	Recruiting and hiring	0	0	0,0%	0,0%	0,0%	0,0%	0,0%	0,0
S4.8.1	Supervising a team or group	1	1	0,7%	0,8%	0,7%	0,7%	0,7%	0,0
S4.8.2	Assigning work to others	0	0	0,0%	0,0%	0,0%	0,0%	0,0%	0,0
S4.8.3	Monitoring and evaluating the performance of individuals	0	0	0,0%	0,0%	0,0%	0,0%	0,0%	0,0
S4.9.0	Making decisions	1	1	0,3%	0,3%	0,3%	0,3%	0,3%	0,0
S5.0.0	Working with computers	0	0	0,0%	0,0%	0,0%	0,0%	0,0%	0,0
S5.1.0	Programming computer systems	0	0	0,0%	0,0%	0,0%	0,0%	0,0%	0,0
S5.2.1	Setting up computer systems	0	0	0,0%	0,0%	0,0%	0,0%	0,0%	0,0
S5.2.2	Protecting ict devices	0	0	0,0%	0,0%	0,0%	0,0%	0,0%	0,0
S5.2.3	Resolving computer problems	0	0	0,0%	0,0%	0,0%	0,0%	0,0%	0,0
S5.5.0	Accessing and analysing digital data	0	0	0,0%	0,0%	0,0%	0,0%	0,0%	0,0
S5.5.1	Browsing, searching and filtering digital data	0	0	0,0%	0,0%	0,0%	0,0%	0,0%	0,0
S5.5.2	Managing, gathering and storing digital data	0	0	0,0%	0,0%	0,0%	0,0%	0,0%	0,0
S5.6.0	Use digital tools for collab., content creation&prob. solv.	0	0	0,0%	0,0%	0,0%	0,0%	0,0%	0,0
S5.6.1	Using digital tools for collaboration and productivity	0	0	0,0%	0,0%	0,0%	0,0%	0,0%	0,0
S5.6.2	Use word processing, publishing & presentation software	0	0	0,0%	0,0%	0,0%	0,0%	0,0%	0,0
S5.6.3	Using computer aided design and drawing tools	0	0	0,0%	0,0%	0,0%	0,0%	0,0%	0,0
S5.6.4	Using digital tools for processing sound and images	0	0	0,0%	0,0%	0,0%	0,0%	0,0%	0,0
S5.7.0	Using digital tools to control machinery	0	0	0,0%	0,0%	0,0%	0,0%	0,0%	0,0
S6.0.0	Handling and moving	0	0	0,0%	0,0%	0,0%	0,0%	0,0%	0,0
S6.1.0	Sorting and packaging goods and materials	0	0	0,0%	0,0%	0,0%	0,0%	0,0%	0,0
S6.1.1	Sorting materials or products	4	1	0,5%	0,4%	0,6%	0,5%	0,5%	0,0
S6.1.2	Marking materials or objects for identification	1	1	0,3%	0,2%	0,4%	0,3%	0,3%	0,1
S6.1.3	Packaging objects	1	1	0,3%	0,2%	0,4%	0,3%	0,2%	0,1
S6.11.0	Cleaning	0	0	0,0%	0,0%	0,0%	0,0%	0,0%	0,0
S6.11.1	Cleaning tools, equipment, workpieces and vehicles	0	0	0,0%	0,0%	0,0%	0,0%	0,0%	0,0
S6.11.2	Cleaning interior and exterior of buildings	0	0	0,0%	0,0%	0,0%	0,0%	0,0%	0,0
S6.11.3	Cleaning outdoor spaces	0	0	0,0%	0,0%	0,0%	0,0%	0,0%	0,0
S6.12.0	Washing and maintaining textiles and clothing	0	0	0,0%	0,0%	0,0%	0,0%	0,0%	0,0
S6.13.0	Handling and disposing of waste & hazardous materials	3	1	0,0%	0,0%	0,0%	0,0%	0,0%	0,0
S6.13.1	Handling and disposing of hazardous materials	11	1	0,5%	0,4%	0,5%	0,5%	0,6%	-0,1
S6.13.2	Disposing of non-hazardous waste or debris	10	1	0,2%	0,2%	0,3%	0,3%	0,4%	-0,1
S6.2.0	Moving and lifting	0	0	0,0%	0,0%	0,0%	0,0%	0,0%	0,0
S6.2.1	Loading and unloading goods and, materials	0	0	0,0%	0,0%	0,0%	0,0%	0,0%	0,0
S6.2.2	Moving or lifting materials, equipment, or supplies	0	0	0,0%	0,0%	0,0%	0,0%	0,0%	0,0
S6.2.3	Storing goods and materials	1	1	0,7%	0,6%	0,7%	0,7%	0,6%	0,1

S6.3.0	Transforming and blending materials	0	0	0,0%	0,0%	0,0%	0,0%	0,0%	0,0
S6.3.1	Preparing mixtures or solutions	1	1	0,2%	0,1%	0,2%	0,2%	0,2%	0,0
S6.3.3	Preparing industrial materials for processing or use	0	0	0,0%	0,0%	0,0%	0,0%	0,0%	0,0
S6.3.6	Collecting & preparing specimens or materials for testing	0	0	0,0%	0,0%	0,0%	0,0%	0,0%	0,0
S6.4.0	Tending plants and crops	0	0	0,0%	0,0%	0,0%	0,0%	0,0%	0,0
S6.4.1	Cultivating land and crops	9	1	0,1%	0,0%	0,1%	0,1%	0,4%	-0,3
S6.4.2	Planting, pruning & harvest. trees, crops and other plants	3	1	0,1%	0,0%	0,1%	0,1%	0,2%	-0,2
S6.5.0	Assembling and fabricating products	0	0	0,0%	0,0%	0,0%	0,0%	0,0%	0,0
S6.5.1	Fabricating precision instruments or jewellery	0	0	0,0%	0,0%	0,0%	0,0%	0,0%	0,0
S6.5.2	Fabricating medical and prosthetic devices	0	0	0,0%	0,0%	0,0%	0,0%	0,0%	0,0
S6.5.3	Assembling electrical and electronic products	0	0	0,0%	0,0%	0,0%	0,0%	0,0%	0,0
S6.5.4	Assembling mechanical products	0	0	0,0%	0,0%	0,0%	0,0%	0,0%	0,0
S6.5.5	Assembling furniture	0	0	0,0%	0,0%	0,0%	0,0%	0,0%	0,0
S6.5.6	Fabricating garments and textile products	0	0	0,0%	0,0%	0,0%	0,0%	0,0%	0,0
S6.5.7	Fabricating food and related products	0	0	0,0%	0,0%	0,0%	0,0%	0,0%	0,0
S6.5.8	Fabricating tobacco products	0	0	0,0%	0,0%	0,0%	0,0%	0,0%	0,0
S6.6.1	Making production moulds and casts	0	0	0,0%	0,0%	0,0%	0,0%	0,0%	0,0
S6.6.2	Making patterns and templates	0	0	0,0%	0,0%	0,0%	0,0%	0,0%	0,0
S6.6.3	Making models	0	0	0,0%	0,0%	0,0%	0,0%	0,0%	0,0
S6.7.0	Using hand tools	0	0	0,0%	0,0%	0,0%	0,0%	0,0%	0,0
S6.7.1	Cutting materials and drilling holes	0	0	0,0%	0,0%	0,0%	0,0%	0,0%	0,0
S6.7.2	Shaping materials to create products	0	0	0,0%	0,0%	0,0%	0,0%	0,0%	0,0
S6.7.3	Smoothing surfaces of objects or equipment	0	0	0,0%	0,0%	0,0%	0,0%	0,0%	0,0
S6.7.4	Using precision hand tools	0	0	0,0%	0,0%	0,0%	0,0%	0,0%	0,0
S6.7.5	Hammering, nailing and riveting	0	0	0,0%	0,0%	0,0%	0,0%	0,0%	0,0
S6.8.0	Positioning materials, tools or equipment	1	1	0,6%	0,4%	0,6%	0,6%	0,4%	0,1
S6.9.0	Handling animals	0	0	0,0%	0,0%	0,0%	0,0%	0,0%	0,0
S6.9.1	Tending and breeding animals	1	1	0,2%	0,1%	0,2%	0,2%	0,6%	-0,4
S6.9.2	Tending and breeding aquatic animals	1	1	0,1%	0,0%	0,0%	0,1%	0,1%	0,0
S6.9.3	Moving and herding animals	0	0	0,0%	0,0%	0,0%	0,0%	0,0%	0,0
S6.9.4	Hunting, trapping and slaughtering animals	0	0	0,0%	0,0%	0,0%	0,0%	0,0%	0,0
S6.9.5	Feeding and grooming animals	0	0	0,0%	0,0%	0,0%	0,0%	0,0%	0,0
S6.9.6	Training animals	0	0	0,0%	0,0%	0,0%	0,0%	0,0%	0,0
S6.9.7	Providing therapy or veterinary treatment for animals	0	0	0,0%	0,0%	0,0%	0,0%	0,0%	0,0
S7.0.0	Constructing	1	1	0,1%	0,1%	0,1%	0,1%	0,0%	0,0
S7.1.0	Building and repairing structures	0	0	0,0%	0,0%	0,0%	0,0%	0,0%	0,0
S7.1.1	Installing structural masonry materials	0	0	0,0%	0,0%	0,0%	0,0%	0,0%	0,0
S7.1.2	Installing wooden and metal components	6	1	1,8%	1,6%	1,9%	1,7%	1,5%	0,3
S7.1.4	Installing concrete components	0	0	0,0%	0,0%	0,0%	0,0%	0,0%	0,0
S7.1.5	Installing roofing	0	0	0,0%	0,0%	0,0%	0,0%	0,0%	0,0
S7.1.6	Joining parts using soldering, welding/brazing techniques	0	0	0,0%	0,0%	0,0%	0,0%	0,0%	0,0
S7.1.7	Installing and assembling building fixtures	0	0	0,0%	0,0%	0,0%	0,0%	0,0%	0,0
S7.1.8	Installing and assembling rigging equipment	0	0	0,0%	0,0%	0,0%	0,0%	0,0%	0,0
S7.2.0	Installing interior or exterior infrastructure	0	0	0,0%	0,0%	0,0%	0,0%	0,0%	0,0
S7.2.1	Installing heating, ventilation & air conditioning equip.	4	1	0,1%	0,1%	0,1%	0,1%	0,1%	0,0
S7.2.2	Installing plumbing or piping equipment or systems	0	0	0,0%	0,0%	0,0%	0,0%	0,0%	0,0
S7.2.3	Installing insulation materials	1	1	0,1%	0,1%	0,1%	0,0%	0,1%	0,0
S7.3.1	Applying material to fill gaps in surfaces	0	0	0,0%	0,0%	0,0%	0,0%	0,0%	0,0
S7.3.2	Applying textured or masonry coatings	0	0	0,0%	0,0%	0,0%	0,0%	0,0%	0,0
S7.3.3	Applying protective or decorative solutions or coatings	0	0	0,0%	0,0%	0,0%	0,0%	0,0%	0,0
S7.3.4	Installing floor and wall coverings	0	0	0,0%	0,0%	0,0%	0,0%	0,0%	0,0
S8.0.0	Working with machinery and specialised equipment	1	1	0,6%	0,4%	0,6%	0,6%	0,5%	0,1

S8.1.1	Operating earthmoving equipment	0	0	0,0%	0,0%	0,0%	0,0%	0,0%	0,0
S8.1.2	Operating agricultural or forestry equipment	2	1	0,1%	0,0%	0,1%	0,1%	0,2%	-0,1
S8.1.3	Operating lifting or moving equipment	0	0	0,0%	0,0%	0,0%	0,0%	0,0%	0,0
S8.2.0	Driving vehicles	0	0	0,0%	0,0%	0,0%	0,0%	0,0%	0,0
S8.2.1	Driving heavy vehicles	0	0	0,0%	0,0%	0,0%	0,0%	0,0%	0,0
S8.2.2	Driving light vehicles	0	0	0,0%	0,0%	0,0%	0,0%	0,0%	0,0
S8.2.3	Operating rail vehicles	0	0	0,0%	0,0%	0,0%	0,0%	0,0%	0,0
S8.3.0	Operating watercraft	0	0	0,0%	0,0%	0,0%	0,0%	0,0%	0,0
S8.4.0	Operating machinery for extraction/proces. raw materials	1	1	0,0%	0,0%	0,0%	0,0%	0,0%	0,0
S8.4.1	Operating mining, drilling & mineral processing machinery	0	0	0,0%	0,0%	0,0%	0,0%	0,0%	0,0
S8.4.2	Operating metal processing and finishing machinery	0	0	0,0%	0,0%	0,0%	0,0%	0,0%	0,0
S8.4.3	Operating pumping systems or equipment	0	0	0,0%	0,0%	0,0%	0,0%	0,0%	0,0
S8.4.4	Operating energy production or distribution equipment	5	1	0,1%	0,1%	0,1%	0,1%	0,1%	0,0
S8.4.5	Op. petroleum/chemical/water proces. systems or equip.	6	1	0,1%	0,1%	0,2%	0,1%	0,1%	0,1
S8.4.6	Operating wood processing and papermaking machinery	1	1	0,0%	0,0%	0,0%	0,0%	0,0%	0,0
S8.4.7	Operating kilns, furnaces and drying equipment	1	1	0,1%	0,0%	0,1%	0,1%	0,1%	0,0
S8.5.0	Operating machinery for the manufacture of products	0	0	0,0%	0,0%	0,0%	0,0%	0,0%	0,0
S8.5.1	Operating painting or coating machinery	0	0	0,0%	0,0%	0,0%	0,0%	0,0%	0,0
S8.5.2	Operating packaging machinery	0	0	0,0%	0,0%	0,0%	0,0%	0,0%	0,0
S8.5.3	Operating machinery for the manufacture and treatment of textiles, fur and leather products	0	0	0,0%	0,0%	0,0%	0,0%	0,0%	0,0
S8.5.4	Operating food processing machinery	0	0	0,0%	0,0%	0,0%	0,0%	0,0%	0,0
S8.5.5	Operating mixing and separating machinery	0	0	0,0%	0,0%	0,0%	0,0%	0,0%	0,0
S8.5.6	Operating print and photographic production equipment	0	0	0,0%	0,0%	0,0%	0,0%	0,0%	0,0
S8.5.7	Operating metal, plastic or rubber forming equipment	0	0	0,0%	0,0%	0,0%	0,0%	0,0%	0,0
S8.5.8	Operating cutting, grinding and smoothing machinery	1	1	0,2%	0,1%	0,2%	0,2%	0,1%	0,0
S8.6.0	Using precision instrumentation and equipment	0	0	0,0%	0,0%	0,0%	0,0%	0,0%	0,0
S8.6.1	Operating medical equipment	0	0	0,0%	0,0%	0,0%	0,0%	0,0%	0,0
S8.6.2	Operating audio-visual equipment	0	0	0,0%	0,0%	0,0%	0,0%	0,0%	0,0
S8.6.3	Operating scientific and laboratory equipment	1	1	0,2%	0,3%	0,2%	0,2%	0,2%	0,0
S8.6.4	Operating communications equipment	0	0	0,0%	0,0%	0,0%	0,0%	0,0%	0,0
S8.6.5	Operating precision industrial equipment	0	0	0,0%	0,0%	0,0%	0,0%	0,0%	0,0
S8.6.6	Using precision measuring equipment	1	1	0,5%	0,5%	0,5%	0,5%	0,4%	0,1
S8.7.0	Installing, maintaining and repairing mechanical equip.	0	0	0,0%	0,0%	0,0%	0,0%	0,0%	0,0
S8.7.1	Repairing and installing mechanical equipment	2	1	0,3%	0,2%	0,3%	0,3%	0,2%	0,1
S8.7.2	Maintaining mechanical equipment and tools	0	0	0,0%	0,0%	0,0%	0,0%	0,0%	0,0
S8.7.3	Maintaining mechanical machinery	0	0	0,0%	0,0%	0,0%	0,0%	0,0%	0,0
S8.8.0	Installing, maintaining and repairing electrical, electronic and precision equipment	0	0	0,0%	0,0%	0,0%	0,0%	0,0%	0,0
S8.8.1	Installing/repairing electrical, electronic/precision equip.	4	1	0,6%	0,8%	0,7%	0,6%	0,4%	0,3
S8.8.2	Maintaining electrical, electronic and precision equip.	5	1	0,4%	0,5%	0,4%	0,4%	0,3%	0,1
S8.9.0	Operating aircraft	0	0	0,0%	0,0%	0,0%	0,0%	0,0%	0,0

PORTUGAL



Weight of the most demanded occupations in 2040

Portugal

ISCO-1-digit classification		TOTAL	Direct	Indirect	Induced	Media 2023	Var (points)
OC1	Managers	7,6%	10,7%	7,8%	7,1%	6,3%	1,3
OC2	Professional	27,7%	45,4%	28,0%	25,8%	24,0%	3,7
OC3	Technicians and associate professionals	20,4%	18,9%	20,3%	20,5%	11,9%	8,5
OC4	Clerical support workers	7,0%	4,8%	6,3%	7,7%	10,0%	-3,0
OC5	Service and sales workers	11,8%	5,7%	8,5%	15,0%	17,8%	-6,0
OC6	Skilled agricultural, forestry and fishery workers	0,6%	0,0%	0,6%	0,7%	2,2%	-1,5
OC7	Craft related trades workers	14,0%	9,0%	16,4%	12,7%	12,3%	1,7
OC8	Plant and machine operators, and assemblers	5,2%	4,2%	5,8%	4,8%	7,8%	-2,7
OC9	Elementary occupations	5,8%	1,5%	6,4%	5,8%	7,8%	-2,0

Weight of the most demanded occupations in 2040

Portugal

ISCO-2-digit classification		TOTAL	Direct	Indirect	Induced	Media 2023	Var (points)
OC11	Chief executives, senior officials and legislators	0,3%	0,2%	0,3%	0,3%	0,7%	-0,4
OC12	Administrative and commercial managers	4,8%	8,2%	5,1%	4,3%	1,2%	3,6
OC13	Production and specialized services managers	1,6%	1,7%	1,7%	1,5%	2,3%	-0,8
OC14	Hospitality, retail and other services managers	0,9%	0,5%	0,7%	1,0%	2,0%	-1,2
OC21	Science and engineering professionals	9,4%	17,1%	10,3%	8,0%	3,9%	5,5
OC22	Health professionals	1,5%	0,4%	1,1%	2,0%	4,2%	-2,7
OC23	Teaching professionals	0,9%	0,2%	0,4%	1,4%	6,1%	-5,1
OC24	Business and administration professionals	7,0%	12,0%	7,1%	6,5%	4,1%	2,9
OC25	Information and communications technology professionals	7,6%	14,1%	8,0%	6,7%	2,4%	5,2
OC26	Legal, social and cultural professionals	1,2%	1,6%	1,1%	1,3%	3,3%	-2,1
OC31	Science and engineering associate professionals	4,7%	6,1%	5,2%	4,1%	2,2%	2,4
OC32	Health associate professionals	0,9%	0,5%	0,6%	1,1%	1,3%	-0,5
OC33	Business and administration associate professionals	9,9%	9,9%	9,3%	10,4%	5,9%	4,0
OC34	Legal, social, cultural and related associate professionals	1,1%	0,7%	0,9%	1,4%	1,4%	-0,3
OC35	Information and communications technicians	3,8%	1,6%	4,3%	3,6%	0,9%	2,8
OC41	General and keyboard clerks	1,7%	2,2%	1,6%	1,8%	5,7%	-4,0
OC42	Customer services clerks	2,7%	1,2%	2,0%	3,4%	2,2%	0,5
OC43	Numerical and material recording clerks	1,4%	0,9%	1,4%	1,4%	1,8%	-0,4
OC44	Other clerical support workers	1,2%	0,4%	1,3%	1,1%	0,3%	0,9
OC51	Personal service workers	4,1%	1,4%	2,3%	5,8%	3,7%	0,4
OC52	Sales workers	6,9%	3,9%	5,7%	8,1%	7,4%	-0,5
OC53	Personal care workers	0,6%	0,4%	0,2%	0,8%	4,5%	-3,9
OC54	Protective services workers	0,2%	0,0%	0,3%	0,2%	2,2%	-2,0
OC61	Market-oriented skilled agricultural workers	0,6%	0,0%	0,5%	0,7%	1,8%	-1,2
OC62	Market-oriented skilled forestry, fishery and hunting workers	0,1%	0,0%	0,0%	0,1%	0,4%	-0,3
OC71	Building and related trades workers, excluding electricians	2,4%	0,8%	3,6%	1,7%	3,9%	-1,5
OC72	Metal, machinery and related trades workers	6,1%	1,4%	6,6%	6,1%	3,4%	2,7
OC73	Handicraft and printing workers	0,2%	0,1%	0,2%	0,2%	0,6%	-0,4
OC74	Electrical and electronic trades workers	3,9%	6,2%	4,5%	3,2%	1,6%	2,3
OC75	Food processing, wood working, garment and other craft and related trades workers	1,4%	0,6%	1,5%	1,4%	2,7%	-1,3
OC81	Stationary plant and machine operators	1,8%	1,7%	1,9%	1,7%	3,3%	-1,5
OC82	Assemblers	0,7%	1,2%	0,9%	0,6%	0,5%	0,3
OC83	Drivers and mobile plant operators	2,6%	1,3%	3,0%	2,5%	4,1%	-1,4
OC91	Cleaners and helpers	0,5%	0,2%	0,4%	0,6%	3,7%	-3,2
OC92	Agricultural, forestry and fishery labourers	0,3%	0,0%	0,3%	0,4%	0,3%	0,0
OC93	Labourers in mining, construction, manufacturing and transport	2,9%	0,8%	3,7%	2,5%	1,8%	1,1
OC94	Food preparation assistants	0,7%	0,2%	0,3%	1,1%	0,8%	-0,1
OC95	Street and related sales and service workers	0,0%	0,0%	0,0%	0,0%	0,1%	-0,1
OC96	Refuse workers and other elementary workers	1,3%	0,3%	1,6%	1,2%	1,1%	0,3

Weight of green skills in 2040

Portugal

ESCO-3-digit classification	Number of green subskills Yes=1 No=0		Portugal					Media 2023	Var (points)
	TOTAL	Direct	Indirect	Induced					
S1.0.0	Communication, collaboration and creativity	0	0	0,0%	0,0%	0,0%	0,0%	0,0%	0,0
S1.1.0	Negotiating	0	0	0,0%	0,0%	0,0%	0,0%	0,0%	0,0
S1.1.1	Negotiating and managing contracts and agreements	0	0	0,0%	0,0%	0,0%	0,0%	0,0%	0,0
S1.1.2	Mediating and resolving disputes	0	0	0,0%	0,0%	0,0%	0,0%	0,0%	0,0
S1.1.3	Responding to complaints	1	1	0,2%	0,2%	0,2%	0,3%	0,3%	0,0
S1.11.0	Designing systems and products	5	1	0,4%	0,6%	0,4%	0,3%	0,2%	0,2
S1.11.1	Designing ict systems or applications	0	0	0,0%	0,0%	0,0%	0,0%	0,0%	0,0
S1.11.2	Designing electrical or electronic systems or equipment	14	1	0,2%	0,3%	0,2%	0,1%	0,1%	0,1
S1.11.3	Developing recipes or menus	0	0	0,0%	0,0%	0,0%	0,0%	0,0%	0,0
S1.11.4	Designing structures or facilities	6	1	0,2%	0,2%	0,2%	0,2%	0,1%	0,1
S1.11.5	Designing industrial materials, systems or products	5	1	0,4%	0,6%	0,4%	0,3%	0,2%	0,2
S1.12.0	Creating artistic, visual or instructive materials	0	0	0,0%	0,0%	0,0%	0,0%	0,0%	0,0
S1.12.1	Creating visual displays and decorations	0	0	0,0%	0,0%	0,0%	0,0%	0,0%	0,0
S1.12.2	Developing instructive or promotional materials	0	0	0,0%	0,0%	0,0%	0,0%	0,0%	0,0
S1.12.3	Creating artistic designs or performances	0	0	0,0%	0,0%	0,0%	0,0%	0,0%	0,0
S1.13.0	Writing and composing	0	0	0,0%	0,0%	0,0%	0,0%	0,0%	0,0
S1.13.1	Composing music	0	0	0,0%	0,0%	0,0%	0,0%	0,0%	0,0
S1.13.2	Artistic and creative writing	0	0	0,0%	0,0%	0,0%	0,0%	0,0%	0,0
S1.13.3	Technical or academic writing	1	1	1,4%	1,9%	1,4%	1,3%	1,3%	0,1
S1.14.0	Performing and entertaining	0	0	0,0%	0,0%	0,0%	0,0%	0,0%	0,0
S1.14.1	Practising sports	0	0	0,0%	0,0%	0,0%	0,0%	0,0%	0,0
S1.14.2	Performing artistic or cultural activities	0	0	0,0%	0,0%	0,0%	0,0%	0,0%	0,0
S1.14.3	Conducting gaming activities	0	0	0,0%	0,0%	0,0%	0,0%	0,0%	0,0
S1.15.0	Using more than one language	0	0	0,0%	0,0%	0,0%	0,0%	0,0%	0,0
S1.15.1	Using foreign languages	0	0	0,0%	0,0%	0,0%	0,0%	0,0%	0,0
S1.15.2	Translating and interpreting	0	0	0,0%	0,0%	0,0%	0,0%	0,0%	0,0
S1.2.0	Liaising and networking	0	0	0,0%	0,0%	0,0%	0,0%	0,0%	0,0
S1.2.1	Communicating with colleagues and clients	1	1	1,2%	1,2%	1,2%	1,3%	1,5%	-0,2
S1.2.3	Developing professional relationships or networks	1	1	2,0%	2,2%	1,9%	2,1%	2,1%	0,0
S1.2.4	Advocating for individual or community needs	1	1	0,4%	0,5%	0,4%	0,4%	0,5%	-0,1
S1.2.5	Collaborating and liaising	0	0	0,0%	0,0%	0,0%	0,0%	0,0%	0,0
S1.3.0	Teaching and training	2	1	0,2%	0,2%	0,2%	0,3%	0,6%	-0,4
S1.3.1	Teaching academic or vocational subjects	1	1	0,2%	0,1%	0,1%	0,2%	0,4%	-0,3
S1.3.2	Teaching safety procedures	2	1	0,0%	0,0%	0,0%	0,0%	0,1%	0,0
S1.3.3	Training on operational procedures	6	1	0,8%	0,7%	0,7%	0,9%	0,8%	0,0
S1.3.4	Training on health or medical topics	0	0	0,0%	0,0%	0,0%	0,0%	0,0%	0,0
S1.3.5	Coaching and mentoring	2	1	0,4%	0,4%	0,3%	0,5%	0,8%	-0,4
S1.4.0	Presenting information	0	0	0,0%	0,0%	0,0%	0,0%	0,0%	0,0
S1.4.1	Presenting general information	0	0	0,0%	0,0%	0,0%	0,0%	0,0%	0,0
S1.4.2	Presenting research or technical information	0	0	0,0%	0,0%	0,0%	0,0%	0,0%	0,0
S1.4.3	Presenting information in legal proceedings	0	0	0,0%	0,0%	0,0%	0,0%	0,0%	0,0
S1.5.0	Advising and consulting	0	0	0,0%	0,0%	0,0%	0,0%	0,0%	0,0
S1.5.1	Advising on legal, regulatory or procedural matters	2	1	0,5%	0,7%	0,5%	0,5%	0,4%	0,1
S1.5.2	Providing financial advice	0	0	0,0%	0,0%	0,0%	0,0%	0,0%	0,0
S1.5.3	Advising on products and services	3	1	0,8%	0,5%	0,7%	0,9%	0,8%	0,0
S1.5.4	Providing medical advice	1	1	0,3%	0,2%	0,2%	0,4%	0,7%	-0,4
S1.5.5	Advising on environmental issues	19	1	0,2%	0,4%	0,3%	0,2%	0,2%	0,1
S1.5.6	Advising on design or use of technologies	1	1	0,2%	0,2%	0,2%	0,2%	0,1%	0,1

S1.5.7	Advising on business or operational matters	1	1	0,2%	0,2%	0,2%	0,1%	0,1%	0,0
S1.5.8	Advising on educational or vocational matters	0	0	0,0%	0,0%	0,0%	0,0%	0,0%	0,0
S1.5.9	Advising on workplace health and safety issues	0	0	0,0%	0,0%	0,0%	0,0%	0,0%	0,0
S1.6.0	Promoting, selling and purchasing	1	1	0,1%	0,1%	0,1%	0,1%	0,1%	0,0
S1.6.1	Selling products or services	1	1	1,2%	0,8%	1,0%	1,4%	1,2%	0,0
S1.6.2	Promoting products, services, or programs	5	1	1,3%	1,2%	1,1%	1,3%	1,2%	0,1
S1.6.3	Purchasing goods or services	0	0	0,0%	0,0%	0,0%	0,0%	0,0%	0,0
S1.7.1	Interviewing	0	0	0,0%	0,0%	0,0%	0,0%	0,0%	0,0
S1.7.2	Engaging with others to identify needs	0	0	0,0%	0,0%	0,0%	0,0%	0,0%	0,0
S1.7.3	Listening and asking questions	0	0	0,0%	0,0%	0,0%	0,0%	0,0%	0,0
S1.8.0	Working with others	0	0	0,0%	0,0%	0,0%	0,0%	0,0%	0,0
S1.8.1	Working in teams	0	0	0,0%	0,0%	0,0%	0,0%	0,0%	0,0
S1.8.2	Giving instructions	0	0	0,0%	0,0%	0,0%	0,0%	0,0%	0,0
S1.8.3	Giving feedback	0	0	0,0%	0,0%	0,0%	0,0%	0,0%	0,0
S1.8.4	Accepting feedback	0	0	0,0%	0,0%	0,0%	0,0%	0,0%	0,0
S1.8.5	Following instructions and procedures	1	1	0,5%	0,3%	0,4%	0,5%	0,6%	-0,2
S1.8.6	Assisting and supporting co-workers	0	0	0,0%	0,0%	0,0%	0,0%	0,0%	0,0
S1.9.0	Solving problems	0	0	0,0%	0,0%	0,0%	0,0%	0,0%	0,0
S1.9.1	Developing solutions	3	1	1,3%	1,5%	1,4%	1,3%	1,0%	0,4
S1.9.2	Implementing new procedures or processes	3	1	0,5%	0,6%	0,5%	0,5%	0,4%	0,1
S2.0.0	Information skills	0	0	0,0%	0,0%	0,0%	0,0%	0,0%	0,0
S2.1.0	Conducting studies, investigations and examinations	0	0	0,0%	0,0%	0,0%	0,0%	0,0%	0,0
S2.1.1	Conducting academic or market research	8	1	1,9%	2,9%	2,0%	1,8%	1,5%	0,5
S2.1.2	Diagnosing health conditions	0	0	0,0%	0,0%	0,0%	0,0%	0,0%	0,0
S2.1.3	Interpreting technical documentation and diagrams	0	0	0,0%	0,0%	0,0%	0,0%	0,0%	0,0
S2.1.4	Carrying out forensic and police investigations	1	1	0,1%	0,1%	0,1%	0,1%	0,1%	0,0
S2.2.0	Documenting and recording information	0	0	0,0%	0,0%	0,0%	0,0%	0,0%	0,0
S2.2.1	Preparing financial docs, records, reports, or budgets	0	0	0,0%	0,0%	0,0%	0,0%	0,0%	0,0
S2.2.2	Recording legal information	0	0	0,0%	0,0%	0,0%	0,0%	0,0%	0,0
S2.2.3	Preparing docs. for contracts, applications, or permits	1	1	0,3%	0,4%	0,3%	0,3%	0,3%	0,1
S2.2.4	Maintaining or preparing medical documentation	0	0	0,0%	0,0%	0,0%	0,0%	0,0%	0,0
S2.2.5	Maintaining operational records	1	1	1,9%	1,6%	2,0%	1,9%	2,0%	-0,1
S2.2.6	Document. tech. designs/procedures/problems/activities	0	0	0,0%	0,0%	0,0%	0,0%	0,0%	0,0
S2.2.7	Reporting incidents and defects	1	1	0,2%	0,2%	0,2%	0,2%	0,3%	0,0
S2.3.0	Managing information	0	0	0,0%	0,0%	0,0%	0,0%	0,0%	0,0
S2.4.0	Processing information	0	0	0,0%	0,0%	0,0%	0,0%	0,0%	0,0
S2.4.1	Gathering information from physical or electronic sources	1	1	0,9%	1,2%	0,9%	0,9%	0,7%	0,2
S2.4.2	Entering and transforming information	0	0	0,0%	0,0%	0,0%	0,0%	0,0%	0,0
S2.5.0	Measuring physical properties	0	0	0,0%	0,0%	0,0%	0,0%	0,0%	0,0
S2.5.1	Measuring dimensions and related properties	3	1	0,2%	0,2%	0,2%	0,2%	0,2%	0,0
S2.5.2	Weighing	0	0	0,0%	0,0%	0,0%	0,0%	0,0%	0,0
S2.6.0	Calculating and estimating	1	1	0,0%	0,0%	0,0%	0,0%	0,0%	0,0
S2.6.1	Performing calculations	2	1	0,7%	0,7%	0,7%	0,7%	0,6%	0,1
S2.6.2	Determining values of goods or services	0	0	0,0%	0,0%	0,0%	0,0%	0,0%	0,0
S2.6.3	Estimating resource needs	1	1	0,4%	0,5%	0,4%	0,4%	0,3%	0,1
S2.7.0	Analysing and evaluating information and data	6	1	0,7%	0,9%	0,7%	0,7%	0,7%	0,0
S2.7.1	Assessing land or real estate	7	1	0,2%	0,3%	0,2%	0,2%	0,1%	0,1
S2.7.2	Analysing scientific and medical data	7	1	0,3%	0,4%	0,3%	0,2%	0,2%	0,0
S2.7.3	Analysing financial and economic data	0	0	0,0%	0,0%	0,0%	0,0%	0,0%	0,0
S2.7.4	Analysing business operations	15	1	1,2%	1,7%	1,2%	1,1%	0,7%	0,5
S2.7.5	Performing risk analysis and management	1	1	0,9%	1,2%	0,9%	0,9%	0,7%	0,2
S2.7.6	Evaluating syst., programmes, equipment and products	1	1	0,4%	0,5%	0,4%	0,3%	0,3%	0,0

S2.8.0	Monitoring, inspecting and testing	4	1	0,3%	0,2%	0,3%	0,2%	0,3%	0,0
S2.8.1	Testing electrical and mechanical systems or equipment	4	1	0,2%	0,2%	0,2%	0,2%	0,1%	0,1
S2.8.10	Monitoring quality of products	2	1	1,1%	0,9%	1,2%	1,0%	1,0%	0,1
S2.8.11	Testing vehicles	0	0	0,0%	0,0%	0,0%	0,0%	0,0%	0,0
S2.8.2	Monitoring operational activities	3	1	1,1%	1,1%	1,1%	1,2%	1,0%	0,1
S2.8.3	Monitoring financial and economic resources and activity	0	0	0,0%	0,0%	0,0%	0,0%	0,0%	0,0
S2.8.4	Monitoring safety or security	2	1	0,5%	0,4%	0,5%	0,5%	0,5%	-0,1
S2.8.5	Monitoring environmental conditions	20	1	0,2%	0,2%	0,2%	0,2%	0,1%	0,0
S2.8.6	Monitoring health conditions of humans and animals	2	1	0,2%	0,1%	0,1%	0,2%	0,4%	-0,2
S2.8.8	Testing and analysing substances	3	1	0,2%	0,3%	0,2%	0,2%	0,1%	0,1
S2.8.9	Inspecting food safety and quality	0	0	0,0%	0,0%	0,0%	0,0%	0,0%	0,0
S2.9.0	Monitoring developments in area of expertise	0	0	0,0%	0,0%	0,0%	0,0%	0,0%	0,0
S3.0.0	Assisting and caring	0	0	0,0%	0,0%	0,0%	0,0%	0,0%	0,0
S3.1.0	Counselling	0	0	0,0%	0,0%	0,0%	0,0%	0,0%	0,0
S3.1.1	Counselling on personal, family or social issues	0	0	0,0%	0,0%	0,0%	0,0%	0,0%	0,0
S3.1.2	Providing support to resolve problems	1	1	0,1%	0,1%	0,1%	0,1%	0,2%	-0,1
S3.1.3	Assisting people to access services	0	0	0,0%	0,0%	0,0%	0,0%	0,0%	0,0
S3.2.0	Providing health care or medical treatments	0	0	0,0%	0,0%	0,0%	0,0%	0,0%	0,0
S3.2.1	Providing medical, dental and nursing care	0	0	0,0%	0,0%	0,0%	0,0%	0,0%	0,0
S3.2.2	Performing surgical procedures	0	0	0,0%	0,0%	0,0%	0,0%	0,0%	0,0
S3.2.3	Providing physical therapies	0	0	0,0%	0,0%	0,0%	0,0%	0,0%	0,0
S3.2.4	Providing psychological and occupational therapies	0	0	0,0%	0,0%	0,0%	0,0%	0,0%	0,0
S3.2.5	Prescribing & ordering medical tests, treatments/devices	0	0	0,0%	0,0%	0,0%	0,0%	0,0%	0,0
S3.2.6	Fitting assistive devices	0	0	0,0%	0,0%	0,0%	0,0%	0,0%	0,0
S3.3.0	Protecting and enforcing	1	1	0,1%	0,1%	0,2%	0,1%	0,2%	-0,1
S3.3.1	Complying with health and safety procedures	5	1	3,4%	2,4%	3,5%	3,3%	3,9%	-0,5
S3.3.2	Complying with environ. protection laws and standards	38	1	0,4%	0,5%	0,5%	0,4%	0,5%	0,0
S3.3.3	Complying with operational procedures	2	1	1,5%	1,6%	1,5%	1,5%	1,7%	-0,2
S3.3.4	Verifying identities and documentation	0	0	0,0%	0,0%	0,0%	0,0%	0,0%	0,0
S3.3.5	Maintaining and enforcing physical security	2	1	0,8%	0,5%	0,7%	0,8%	1,5%	-0,7
S3.3.6	Protecting privacy and personal data	0	0	0,0%	0,0%	0,0%	0,0%	0,0%	0,0
S3.3.7	Ensuring compliance with legislation	2	1	1,1%	1,1%	1,1%	1,1%	1,1%	0,0
S3.4.0	Providing info. and support to the public and clients	0	0	0,0%	0,0%	0,0%	0,0%	0,0%	0,0
S3.4.1	Providing information to the public and clients	1	1	0,2%	0,2%	0,2%	0,2%	0,2%	0,0
S3.4.2	Accompanying and welcoming people	0	0	0,0%	0,0%	0,0%	0,0%	0,0%	0,0
S3.4.4	Providing general assistance to people	0	0	0,0%	0,0%	0,0%	0,0%	0,0%	0,0
S3.5.0	Preparing and serving food and drinks	0	0	0,0%	0,0%	0,0%	0,0%	0,0%	0,0
S3.5.1	Preparing food and drinks	0	0	0,0%	0,0%	0,0%	0,0%	0,0%	0,0
S3.5.2	Serving food and drinks	0	0	0,0%	0,0%	0,0%	0,0%	0,0%	0,0
S3.6.0	Providing personal care	0	0	0,0%	0,0%	0,0%	0,0%	0,0%	0,0
S3.6.1	Assisting people with mobility	0	0	0,0%	0,0%	0,0%	0,0%	0,0%	0,0
S3.6.2	Assisting with personal needs	0	0	0,0%	0,0%	0,0%	0,0%	0,0%	0,0
S3.6.3	Caring for children	0	0	0,0%	0,0%	0,0%	0,0%	0,0%	0,0
S3.6.4	Styling hair and providing beauty treatments	0	0	0,0%	0,0%	0,0%	0,0%	0,0%	0,0
S4.0.0	Management skills	0	0	0,0%	0,0%	0,0%	0,0%	0,0%	0,0
S4.1.0	Developing objectives and strategies	4	1	0,3%	0,4%	0,3%	0,3%	0,2%	0,1
S4.1.1	Identifying opportunities	3	1	0,4%	0,5%	0,4%	0,4%	0,3%	0,2
S4.1.2	Developing financial, business or marketing plans	1	1	0,9%	1,3%	0,9%	0,8%	0,5%	0,3
S4.1.3	Developing operational policies and procedures	11	1	1,1%	1,6%	1,2%	1,0%	0,7%	0,4
S4.1.4	Developing policies and legislation	7	1	0,1%	0,2%	0,1%	0,1%	0,1%	0,0
S4.1.5	Developing health programmes	0	0	0,0%	0,0%	0,0%	0,0%	0,0%	0,0
S4.1.6	Developing educational programmes	0	0	0,0%	0,0%	0,0%	0,0%	0,0%	0,0

S4.1.7	Developing contingency and emergency response plans	1	1	0,2%	0,2%	0,2%	0,2%	0,2%	0,0
S4.2.0	Organising, planning and scheduling work and activities	2	1	0,2%	0,1%	0,2%	0,2%	0,2%	0,0
S4.2.1	Directing operational activities	7	1	0,9%	1,0%	0,9%	0,9%	0,8%	0,1
S4.2.2	Planning events and programmes	1	1	1,3%	1,2%	1,2%	1,3%	1,2%	0,0
S4.2.3	Directing, supervising and coordinating projects	3	1	0,5%	0,8%	0,5%	0,4%	0,3%	0,2
S4.2.4	Managing transport and logistics activities	0	0	0,0%	0,0%	0,0%	0,0%	0,0%	0,0
S4.2.5	Planning production processes	3	1	0,5% ^o	0,5%	0,5%	0,5%	0,3%	0,2
S4.3.0	Allocating and controlling resources	0	0	0,0%	0,0%	0,0%	0,0%	0,0%	0,0
S4.3.1	Managing budgets or finances	2	1	1,0%	1,2%	0,9%	0,9%	0,7%	0,2
S4.3.2	Managing and administering human resources	0	0	0,0%	0,0%	0,0%	0,0%	0,0%	0,0
S4.3.3	Allocating and controlling physical resources	0	0	0,0%	0,0%	0,0%	0,0%	0,0%	0,0
S4.4.0	Performing administrative activities	0	0	0,0%	0,0%	0,0%	0,0%	0,0%	0,0
S4.4.2	Executing financial transactions	0	0	0,0%	0,0%	0,0%	0,0%	0,0%	0,0
S4.4.3	Performing general clerical and administrative tasks	0	0	0,0%	0,0%	0,0%	0,0%	0,0%	0,0
S4.5.0	Leading and motivating	0	0	0,0%	0,0%	0,0%	0,0%	0,0%	0,0
S4.6.0	Building and developing teams	0	0	0,0%	0,0%	0,0%	0,0%	0,0%	0,0
S4.7.0	Recruiting and hiring	0	0	0,0%	0,0%	0,0%	0,0%	0,0%	0,0
S4.8.1	Supervising a team or group	1	1	0,7%	0,8%	0,7%	0,7%	0,7%	0,0
S4.8.2	Assigning work to others	0	0	0,0%	0,0%	0,0%	0,0%	0,0%	0,0
S4.8.3	Monitoring and evaluating the performance of individuals	0	0	0,0%	0,0%	0,0%	0,0%	0,0%	0,0
S4.9.0	Making decisions	1	1	0,3%	0,3%	0,2%	0,3%	0,3%	0,0
S5.0.0	Working with computers	0	0	0,0%	0,0%	0,0%	0,0%	0,0%	0,0
S5.1.0	Programming computer systems	0	0	0,0%	0,0%	0,0%	0,0%	0,0%	0,0
S5.2.1	Setting up computer systems	0	0	0,0%	0,0%	0,0%	0,0%	0,0%	0,0
S5.2.2	Protecting ict devices	0	0	0,0%	0,0%	0,0%	0,0%	0,0%	0,0
S5.2.3	Resolving computer problems	0	0	0,0%	0,0%	0,0%	0,0%	0,0%	0,0
S5.5.0	Accessing and analysing digital data	0	0	0,0%	0,0%	0,0%	0,0%	0,0%	0,0
S5.5.1	Browsing, searching and filtering digital data	0	0	0,0%	0,0%	0,0%	0,0%	0,0%	0,0
S5.5.2	Managing, gathering and storing digital data	0	0	0,0%	0,0%	0,0%	0,0%	0,0%	0,0
S5.6.0	Use digital tools for collab., content creation&prob. solv.	0	0	0,0%	0,0%	0,0%	0,0%	0,0%	0,0
S5.6.1	Using digital tools for collaboration and productivity	0	0	0,0%	0,0%	0,0%	0,0%	0,0%	0,0
S5.6.2	Use word processing, publishing & presentation software	0	0	0,0%	0,0%	0,0%	0,0%	0,0%	0,0
S5.6.3	Using computer aided design and drawing tools	0	0	0,0%	0,0%	0,0%	0,0%	0,0%	0,0
S5.6.4	Using digital tools for processing sound and images	0	0	0,0%	0,0%	0,0%	0,0%	0,0%	0,0
S5.7.0	Using digital tools to control machinery	0	0	0,0%	0,0%	0,0%	0,0%	0,0%	0,0
S6.0.0	Handling and moving	0	0	0,0%	0,0%	0,0%	0,0%	0,0%	0,0
S6.1.0	Sorting and packaging goods and materials	0	0	0,0%	0,0%	0,0%	0,0%	0,0%	0,0
S6.1.1	Sorting materials or products	4	1	0,5%	0,2%	0,5%	0,5%	0,5%	-0,1
S6.1.2	Marking materials or objects for identification	1	1	0,3%	0,1%	0,3%	0,3%	0,3%	0,0
S6.1.3	Packaging objects	1	1	0,2%	0,1%	0,2%	0,2%	0,2%	0,0
S6.11.0	Cleaning	0	0	0,0%	0,0%	0,0%	0,0%	0,0%	0,0
S6.11.1	Cleaning tools, equipment, workpieces and vehicles	0	0	0,0%	0,0%	0,0%	0,0%	0,0%	0,0
S6.11.2	Cleaning interior and exterior of buildings	0	0	0,0%	0,0%	0,0%	0,0%	0,0%	0,0
S6.11.3	Cleaning outdoor spaces	0	0	0,0%	0,0%	0,0%	0,0%	0,0%	0,0
S6.12.0	Washing and maintaining textiles and clothing	0	0	0,0%	0,0%	0,0%	0,0%	0,0%	0,0
S6.13.0	Handling and disposing of waste and hazardous materials	3	1	0,0%	0,0%	0,0%	0,0%	0,0%	0,0
S6.13.1	Handling and disposing of hazardous materials	11	1	0,4%	0,2%	0,4%	0,4%	0,6%	-0,2
S6.13.2	Disposing of non-hazardous waste or debris	10	1	0,2%	0,1%	0,2%	0,2%	0,4%	-0,2
S6.2.0	Moving and lifting	0	0	0,0%	0,0%	0,0%	0,0%	0,0%	0,0
S6.2.1	Loading and unloading goods and, materials	0	0	0,0%	0,0%	0,0%	0,0%	0,0%	0,0
S6.2.2	Moving or lifting materials, equipment, or supplies	0	0	0,0%	0,0%	0,0%	0,0%	0,0%	0,0
S6.2.3	Storing goods and materials	1	1	0,6%	0,3%	0,5%	0,7%	0,7%	-0,1

S6.3.0	Transforming and blending materials	0	0	0,0%	0,0%	0,0%	0,0%	0,0%	0,0
S6.3.1	Preparing mixtures or solutions	1	1	0,1%	0,1%	0,2%	0,1%	0,2%	0,0
S6.3.3	Preparing industrial materials for processing or use	0	0	0,0%	0,0%	0,0%	0,0%	0,0%	0,0
S6.3.6	Collecting & preparing specimens or materials for testing	0	0	0,0%	0,0%	0,0%	0,0%	0,0%	0,0
S6.4.0	Tending plants and crops	0	0	0,0%	0,0%	0,0%	0,0%	0,0%	0,0
S6.4.1	Cultivating land and crops	9	1	0,1%	0,0%	0,1%	0,2%	0,3%	-0,2
S6.4.2	Planting, pruning & harvest. trees, crops and other plants	3	1	0,1%	0,0%	0,1%	0,1%	0,2%	-0,1
S6.5.0	Assembling and fabricating products	0	0	0,0%	0,0%	0,0%	0,0%	0,0%	0,0
S6.5.1	Fabricating precision instruments or jewellery	0	0	0,0%	0,0%	0,0%	0,0%	0,0%	0,0
S6.5.2	Fabricating medical and prosthetic devices	0	0	0,0%	0,0%	0,0%	0,0%	0,0%	0,0
S6.5.3	Assembling electrical and electronic products	0	0	0,0%	0,0%	0,0%	0,0%	0,0%	0,0
S6.5.4	Assembling mechanical products	0	0	0,0%	0,0%	0,0%	0,0%	0,0%	0,0
S6.5.5	Assembling furniture	0	0	0,0%	0,0%	0,0%	0,0%	0,0%	0,0
S6.5.6	Fabricating garments and textile products	0	0	0,0%	0,0%	0,0%	0,0%	0,0%	0,0
S6.5.7	Fabricating food and related products	0	0	0,0%	0,0%	0,0%	0,0%	0,0%	0,0
S6.5.8	Fabricating tobacco products	0	0	0,0%	0,0%	0,0%	0,0%	0,0%	0,0
S6.6.1	Making production moulds and casts	0	0	0,0%	0,0%	0,0%	0,0%	0,0%	0,0
S6.6.2	Making patterns and templates	0	0	0,0%	0,0%	0,0%	0,0%	0,0%	0,0
S6.6.3	Making models	0	0	0,0%	0,0%	0,0%	0,0%	0,0%	0,0
S6.7.0	Using hand tools	0	0	0,0%	0,0%	0,0%	0,0%	0,0%	0,0
S6.7.1	Cutting materials and drilling holes	0	0	0,0%	0,0%	0,0%	0,0%	0,0%	0,0
S6.7.2	Shaping materials to create products	0	0	0,0%	0,0%	0,0%	0,0%	0,0%	0,0
S6.7.3	Smoothing surfaces of objects or equipment	0	0	0,0%	0,0%	0,0%	0,0%	0,0%	0,0
S6.7.4	Using precision hand tools	0	0	0,0%	0,0%	0,0%	0,0%	0,0%	0,0
S6.7.5	Hammering, nailing and riveting	0	0	0,0%	0,0%	0,0%	0,0%	0,0%	0,0
S6.8.0	Positioning materials, tools or equipment	1	1	0,5%	0,3%	0,6%	0,5%	0,5%	0,1
S6.9.0	Handling animals	0	0	0,0%	0,0%	0,0%	0,0%	0,0%	0,0
S6.9.1	Tending and breeding animals	1	1	0,3%	0,1%	0,2%	0,4%	0,5%	-0,2
S6.9.2	Tending and breeding aquatic animals	1	1	0,1%	0,0%	0,1%	0,1%	0,1%	0,0
S6.9.3	Moving and herding animals	0	0	0,0%	0,0%	0,0%	0,0%	0,0%	0,0
S6.9.4	Hunting, trapping and slaughtering animals	0	0	0,0%	0,0%	0,0%	0,0%	0,0%	0,0
S6.9.5	Feeding and grooming animals	0	0	0,0%	0,0%	0,0%	0,0%	0,0%	0,0
S6.9.6	Training animals	0	0	0,0%	0,0%	0,0%	0,0%	0,0%	0,0
S6.9.7	Providing therapy or veterinary treatment for animals	0	0	0,0%	0,0%	0,0%	0,0%	0,0%	0,0
S7.0.0	Constructing	1	1	0,0%	0,0%	0,1%	0,0%	0,0%	0,0
S7.1.0	Building and repairing structures	0	0	0,0%	0,0%	0,0%	0,0%	0,0%	0,0
S7.1.1	Installing structural masonry materials	0	0	0,0%	0,0%	0,0%	0,0%	0,0%	0,0
S7.1.2	Installing wooden and metal components	6	1	1,9%	1,8%	2,2%	1,8%	1,6%	0,4
S7.1.4	Installing concrete components	0	0	0,0%	0,0%	0,0%	0,0%	0,0%	0,0
S7.1.5	Installing roofing	0	0	0,0%	0,0%	0,0%	0,0%	0,0%	0,0
S7.1.6	Joining parts using soldering, welding/brazing techniques	0	0	0,0%	0,0%	0,0%	0,0%	0,0%	0,0
S7.1.7	Installing and assembling building fixtures	0	0	0,0%	0,0%	0,0%	0,0%	0,0%	0,0
S7.1.8	Installing and assembling rigging equipment	0	0	0,0%	0,0%	0,0%	0,0%	0,0%	0,0
S7.2.0	Installing interior or exterior infrastructure	0	0	0,0%	0,0%	0,0%	0,0%	0,0%	0,0
S7.2.1	Installing heating, ventilation & air conditioning equip.	4	1	0,1%	0,1%	0,1%	0,1%	0,1%	0,0
S7.2.2	Installing plumbing or piping equipment or systems	0	0	0,0%	0,0%	0,0%	0,0%	0,0%	0,0
S7.2.3	Installing insulation materials	1	1	0,0%	0,0%	0,1%	0,0%	0,1%	0,0
S7.3.1	Applying material to fill gaps in surfaces	0	0	0,0%	0,0%	0,0%	0,0%	0,0%	0,0
S7.3.2	Applying textured or masonry coatings	0	0	0,0%	0,0%	0,0%	0,0%	0,0%	0,0
S7.3.3	Applying protective or decorative solutions or coatings	0	0	0,0%	0,0%	0,0%	0,0%	0,0%	0,0
S7.3.4	Installing floor and wall coverings	0	0	0,0%	0,0%	0,0%	0,0%	0,0%	0,0
S8.0.0	Working with machinery and specialised equipment	1	1	0,6%	0,4%	0,7%	0,6%	0,5%	0,1

S8.1.1	Operating earthmoving equipment	0	0	0,0%	0,0%	0,0%	0,0%	0,0%	0,0
S8.1.2	Operating agricultural or forestry equipment	2	1	0,1%	0,0%	0,1%	0,1%	0,2%	-0,1
S8.1.3	Operating lifting or moving equipment	0	0	0,0%	0,0%	0,0%	0,0%	0,0%	0,0
S8.2.0	Driving vehicles	0	0	0,0%	0,0%	0,0%	0,0%	0,0%	0,0
S8.2.1	Driving heavy vehicles	0	0	0,0%	0,0%	0,0%	0,0%	0,0%	0,0
S8.2.2	Driving light vehicles	0	0	0,0%	0,0%	0,0%	0,0%	0,0%	0,0
S8.2.3	Operating rail vehicles	0	0	0,0%	0,0%	0,0%	0,0%	0,0%	0,0
S8.3.0	Operating watercraft	0	0	0,0%	0,0%	0,0%	0,0%	0,0%	0,0
S8.4.0	Operating machinery for extraction/proces. raw materials	1	1	0,0%	0,0%	0,0%	0,0%	0,0%	0,0
S8.4.1	Operating mining, drilling & mineral processing machinery	0	0	0,0%	0,0%	0,0%	0,0%	0,0%	0,0
S8.4.2	Operating metal processing and finishing machinery	0	0	0,0%	0,0%	0,0%	0,0%	0,0%	0,0
S8.4.3	Operating pumping systems or equipment	0	0	0,0%	0,0%	0,0%	0,0%	0,0%	0,0
S8.4.4	Operating energy production or distribution equipment	5	1	0,1%	0,1%	0,1%	0,1%	0,1%	0,0
S8.4.5	Op. petroleum/chemical/water proces. systems or equip.	6	1	0,1%	0,1%	0,1%	0,1%	0,1%	0,0
S8.4.6	Operating wood processing and papermaking machinery	1	1	0,0%	0,0%	0,0%	0,0%	0,0%	0,0
S8.4.7	Operating kilns, furnaces and drying equipment	1	1	0,1%	0,0%	0,1%	0,1%	0,1%	0,0
S8.5.0	Operating machinery for the manufacture of products	0	0	0,0%	0,0%	0,0%	0,0%	0,0%	0,0
S8.5.1	Operating painting or coating machinery	0	0	0,0%	0,0%	0,0%	0,0%	0,0%	0,0
S8.5.2	Operating packaging machinery	0	0	0,0%	0,0%	0,0%	0,0%	0,0%	0,0
S8.5.3	Operating machinery for the manufacture and treatment of textiles, fur and leather products	0	0	0,0%	0,0%	0,0%	0,0%	0,0%	0,0
S8.5.4	Operating food processing machinery	0	0	0,0%	0,0%	0,0%	0,0%	0,0%	0,0
S8.5.5	Operating mixing and separating machinery	0	0	0,0%	0,0%	0,0%	0,0%	0,0%	0,0
S8.5.6	Operating print and photographic production equipment	0	0	0,0%	0,0%	0,0%	0,0%	0,0%	0,0
S8.5.7	Operating metal, plastic or rubber forming equipment	0	0	0,0%	0,0%	0,0%	0,0%	0,0%	0,0
S8.5.8	Operating cutting, grinding and smoothing machinery	1	1	0,2%	0,1%	0,2%	0,2%	0,2%	0,0
S8.6.0	Using precision instrumentation and equipment	0	0	0,0%	0,0%	0,0%	0,0%	0,0%	0,0
S8.6.1	Operating medical equipment	0	0	0,0%	0,0%	0,0%	0,0%	0,0%	0,0
S8.6.2	Operating audio-visual equipment	0	0	0,0%	0,0%	0,0%	0,0%	0,0%	0,0
S8.6.3	Operating scientific and laboratory equipment	1	1	0,2%	0,4%	0,3%	0,2%	0,2%	0,1
S8.6.4	Operating communications equipment	0	0	0,0%	0,0%	0,0%	0,0%	0,0%	0,0
S8.6.5	Operating precision industrial equipment	0	0	0,0%	0,0%	0,0%	0,0%	0,0%	0,0
S8.6.6	Using precision measuring equipment	1	1	0,5%	0,5%	0,6%	0,5%	0,4%	0,1
S8.7.0	Installing, maintaining and repairing mechanical equip.	0	0	0,0%	0,0%	0,0%	0,0%	0,0%	0,0
S8.7.1	Repairing and installing mechanical equipment	2	1	0,3%	0,2%	0,3%	0,3%	0,2%	0,1
S8.7.2	Maintaining mechanical equipment and tools	0	0	0,0%	0,0%	0,0%	0,0%	0,0%	0,0
S8.7.3	Maintaining mechanical machinery	0	0	0,0%	0,0%	0,0%	0,0%	0,0%	0,0
S8.8.0	Installing, maintaining and repairing electrical, electronic and precision equipment	0	0	0,0%	0,0%	0,0%	0,0%	0,0%	0,0
S8.8.1	Installing/repairing electrical, electronic/precision equip.	4	1	0,9%	1,1%	1,0%	0,8%	0,4%	0,5
S8.8.2	Maintaining electrical, electronic and precision equip.	5	1	0,5%	0,5%	0,6%	0,5%	0,3%	0,2
S8.9.0	Operating aircraft	0	0	0,0%	0,0%	0,0%	0,0%	0,0%	0,0

THE NETHERLANDS



Weight of the most demanded occupations in 2040

The Netherlands

ISCO-1-digit classification		TOTAL	Direct	Indirect	Induced	Media 2023	Var (points)
OC1	Managers	9,5%	11,0%	9,5%	8,9%	5,2%	4,3
OC2	Professional	25,8%	29,5%	25,6%	24,6%	31,6%	-5,8
OC3	Technicians and associate professionals	15,5%	17,7%	15,4%	14,9%	17,4%	-1,9
OC4	Clerical support workers	8,0%	7,3%	8,3%	8,0%	9,2%	-1,1
OC5	Service and sales workers	11,4%	10,3%	10,2%	13,3%	17,2%	-5,8
OC6	Skilled agricultural, forestry and fishery workers	0,1%	0,0%	0,1%	0,1%	1,3%	-1,3
OC7	Craft related trades workers	10,1%	7,0%	11,3%	9,7%	6,4%	3,7
OC8	Plant and machine operators, and assemblers	12,1%	9,8%	12,2%	12,7%	4,0%	8,1
OC9	Elementary occupations	7,5%	7,3%	7,5%	7,7%	7,7%	-0,2

Weight of the most demanded occupations in 2040

The Netherlands

ISCO-2-digit classification		TOTAL	Direct	Indirect	Induced	Media 2023	Var (points)
OC11	Chief executives, senior officials and legislators	0,4%	0,5%	0,4%	0,4%	0,6%	-0,2
OC12	Administrative and commercial managers	4,1%	4,7%	4,1%	3,8%	1,6%	2,4
OC13	Production and specialized services managers	2,9%	3,4%	3,0%	2,6%	2,1%	0,8
OC14	Hospitality, retail and other services managers	2,2%	2,4%	2,0%	2,2%	1,0%	1,2
OC21	Science and engineering professionals	5,6%	5,9%	6,1%	4,9%	3,9%	1,7
OC22	Health professionals	2,7%	3,0%	2,2%	3,3%	4,1%	-1,4
OC23	Teaching professionals	1,3%	1,5%	1,0%	1,4%	5,1%	-3,8
OC24	Business and administration professionals	6,7%	9,4%	6,7%	5,8%	9,2%	-2,5
OC25	Information and communications technology professionals	7,0%	7,1%	7,3%	6,6%	4,9%	2,1
OC26	Legal, social and cultural professionals	2,4%	2,7%	2,3%	2,5%	4,3%	-1,8
OC31	Science and engineering associate professionals	3,5%	3,0%	3,8%	3,3%	2,7%	0,8
OC32	Health associate professionals	0,8%	1,0%	0,6%	1,1%	2,9%	-2,1
OC33	Business and administration associate professionals	9,5%	12,0%	9,4%	8,8%	7,0%	2,5
OC34	Legal, social, cultural and related associate professionals	1,1%	1,0%	1,0%	1,2%	3,8%	-2,8
OC35	Information and communications technicians	0,7%	0,8%	0,7%	0,6%	0,9%	-0,3
OC41	General and keyboard clerks	1,4%	1,7%	1,4%	1,3%	1,7%	-0,3
OC42	Customer services clerks	2,1%	2,2%	1,6%	2,7%	2,1%	0,0
OC43	Numerical and material recording clerks	4,2%	2,9%	4,9%	3,7%	4,1%	0,0
OC44	Other clerical support workers	0,4%	0,5%	0,4%	0,4%	1,2%	-0,8
OC51	Personal service workers	2,6%	2,1%	2,0%	3,5%	4,6%	-2,0
OC52	Sales workers	7,2%	6,5%	6,7%	7,9%	6,9%	0,3
OC53	Personal care workers	1,3%	1,5%	1,1%	1,5%	4,6%	-3,3
OC54	Protective services workers	0,3%	0,2%	0,3%	0,4%	1,1%	-0,8
OC61	Market-oriented skilled agricultural workers	0,1%	0,0%	0,1%	0,1%	1,3%	-1,3
OC62	Market-oriented skilled forestry, fishery and hunting workers	0,0%	0,0%	0,0%	0,0%	0,0%	0,0
OC71	Building and related trades workers, excluding electricians	2,1%	1,3%	2,5%	2,0%	2,5%	-0,4
OC72	Metal, machinery and related trades workers	3,8%	1,8%	4,4%	3,9%	1,7%	2,1
OC73	Handicraft and printing workers	0,4%	0,5%	0,4%	0,4%	0,3%	0,1
OC74	Electrical and electronic trades workers	2,7%	2,6%	2,9%	2,4%	1,0%	1,6
OC75	Food processing, wood working, garment and other craft and related trades workers	1,0%	0,8%	1,1%	1,1%	0,8%	0,2
OC81	Stationary plant and machine operators	7,5%	6,8%	7,4%	7,9%	0,8%	6,7
OC82	Assemblers	0,6%	0,3%	0,7%	0,6%	0,3%	0,3
OC83	Drivers and mobile plant operators	4,0%	2,7%	4,1%	4,2%	2,9%	1,1
OC91	Cleaners and helpers	1,8%	2,3%	1,6%	1,9%	2,4%	-0,5
OC92	Agricultural, forestry and fishery labourers	0,2%	0,2%	0,3%	0,2%	0,3%	-0,1
OC93	Labourers in mining, construction, manufacturing and transport	4,5%	4,0%	4,7%	4,4%	3,8%	0,6
OC94	Food preparation assistants	0,3%	0,3%	0,2%	0,5%	0,8%	-0,5
OC95	Street and related sales and service workers	0,1%	0,1%	0,1%	0,1%	0,0%	0,1
OC96	Refuse workers and other elementary workers	0,6%	0,6%	0,6%	0,7%	0,4%	0,2

Weight of green skills in 2040

The Netherlands

ESCO-3-digit classification	Number of green subskills Yes=1 No=0		TOTAL	Direct	Indirect	Induced	Media 2023	Var (points)	
S1.0.0	Communication, collaboration and creativity	0	0	0,0%	0,0%	0,0%	0,0%	0,0%	0,0
S1.1.0	Negotiating	0	0	0,0%	0,0%	0,0%	0,0%	0,0%	0,0
S1.1.1	Negotiating and managing contracts and agreements	0	0	0,0%	0,0%	0,0%	0,0%	0,0%	0,0
S1.1.2	Mediating and resolving disputes	0	0	0,0%	0,0%	0,0%	0,0%	0,0%	0,0
S1.1.3	Responding to complaints	1	1	0,2%	0,2%	0,2%	0,2%	0,2%	0,0
S1.11.0	Designing systems and products	5	1	0,3%	0,3%	0,3%	0,2%	0,2%	0,1
S1.11.1	Designing ict systems or applications	0	0	0,0%	0,0%	0,0%	0,0%	0,0%	0,0
S1.11.2	Designing electrical or electronic systems or equipment	14	1	0,1%	0,1%	0,1%	0,1%	0,1%	0,0
S1.11.3	Developing recipes or menus	0	0	0,0%	0,0%	0,0%	0,0%	0,0%	0,0
S1.11.4	Designing structures or facilities	6	1	0,1%	0,1%	0,2%	0,1%	0,1%	0,0
S1.11.5	Designing industrial materials, systems or products	5	1	0,2%	0,2%	0,3%	0,2%	0,2%	0,1
S1.12.0	Creating artistic, visual or instructive materials	0	0	0,0%	0,0%	0,0%	0,0%	0,0%	0,0
S1.12.1	Creating visual displays and decorations	0	0	0,0%	0,0%	0,0%	0,0%	0,0%	0,0
S1.12.2	Developing instructive or promotional materials	0	0	0,0%	0,0%	0,0%	0,0%	0,0%	0,0
S1.12.3	Creating artistic designs or performances	0	0	0,0%	0,0%	0,0%	0,0%	0,0%	0,0
S1.13.0	Writing and composing	0	0	0,0%	0,0%	0,0%	0,0%	0,0%	0,0
S1.13.1	Composing music	0	0	0,0%	0,0%	0,0%	0,0%	0,0%	0,0
S1.13.2	Artistic and creative writing	0	0	0,0%	0,0%	0,0%	0,0%	0,0%	0,0
S1.13.3	Technical or academic writing	1	1	1,3%	1,4%	1,3%	1,2%	1,3%	-0,1
S1.14.0	Performing and entertaining	0	0	0,0%	0,0%	0,0%	0,0%	0,0%	0,0
S1.14.1	Practising sports	0	0	0,0%	0,0%	0,0%	0,0%	0,0%	0,0
S1.14.2	Performing artistic or cultural activities	0	0	0,0%	0,0%	0,0%	0,0%	0,0%	0,0
S1.14.3	Conducting gaming activities	0	0	0,0%	0,0%	0,0%	0,0%	0,0%	0,0
S1.15.0	Using more than one language	0	0	0,0%	0,0%	0,0%	0,0%	0,0%	0,0
S1.15.1	Using foreign languages	0	0	0,0%	0,0%	0,0%	0,0%	0,0%	0,0
S1.15.2	Translating and interpreting	0	0	0,0%	0,0%	0,0%	0,0%	0,0%	0,0
S1.2.0	Liaising and networking	0	0	0,0%	0,0%	0,0%	0,0%	0,0%	0,0
S1.2.1	Communicating with colleagues and clients	1	1	1,3%	1,4%	1,3%	1,3%	1,4%	-0,1
S1.2.3	Developing professional relationships or networks	1	1	2,1%	2,4%	2,0%	2,1%	2,4%	-0,3
S1.2.4	Advocating for individual or community needs	1	1	0,5%	0,5%	0,4%	0,5%	0,7%	-0,2
S1.2.5	Collaborating and liaising	0	0	0,0%	0,0%	0,0%	0,0%	0,0%	0,0
S1.3.0	Teaching and training	2	1	0,2%	0,2%	0,2%	0,2%	0,6%	-0,4
S1.3.1	Teaching academic or vocational subjects	1	1	0,2%	0,2%	0,1%	0,2%	0,4%	-0,3
S1.3.2	Teaching safety procedures	2	1	0,0%	0,0%	0,0%	0,0%	0,1%	0,0
S1.3.3	Training on operational procedures	6	1	0,7%	0,7%	0,7%	0,7%	0,8%	-0,1
S1.3.4	Training on health or medical topics	0	0	0,0%	0,0%	0,0%	0,0%	0,0%	0,0
S1.3.5	Coaching and mentoring	2	1	0,4%	0,4%	0,4%	0,4%	0,9%	-0,5
S1.4.0	Presenting information	0	0	0,0%	0,0%	0,0%	0,0%	0,0%	0,0
S1.4.1	Presenting general information	0	0	0,0%	0,0%	0,0%	0,0%	0,0%	0,0
S1.4.2	Presenting research or technical information	0	0	0,0%	0,0%	0,0%	0,0%	0,0%	0,0
S1.4.3	Presenting information in legal proceedings	0	0	0,0%	0,0%	0,0%	0,0%	0,0%	0,0
S1.5.0	Advising and consulting	0	0	0,0%	0,0%	0,0%	0,0%	0,0%	0,0
S1.5.1	Advising on legal, regulatory or procedural matters	2	1	0,5%	0,6%	0,5%	0,4%	0,5%	-0,1
S1.5.2	Providing financial advice	0	0	0,0%	0,0%	0,0%	0,0%	0,0%	0,0
S1.5.3	Advising on products and services	3	1	0,8%	0,7%	0,7%	0,8%	0,8%	0,0
S1.5.4	Providing medical advice	1	1	0,4%	0,4%	0,3%	0,5%	0,8%	-0,4
S1.5.5	Advising on environmental issues	19	1	0,2%	0,2%	0,2%	0,2%	0,2%	0,0
S1.5.6	Advising on design or use of technologies	1	1	0,2%	0,2%	0,2%	0,2%	0,1%	0,0

S1.5.7	Advising on business or operational matters	1	1	0,1%	0,2%	0,1%	0,1%	0,2%	0,0
S1.5.8	Advising on educational or vocational matters	0	0	0,0%	0,0%	0,0%	0,0%	0,0%	0,0
S1.5.9	Advising on workplace health and safety issues	0	0	0,0%	0,0%	0,0%	0,0%	0,0%	0,0
S1.6.0	Promoting, selling and purchasing	1	1	0,1%	0,1%	0,1%	0,1%	0,1%	0,0
S1.6.1	Selling products or services	1	1	1,2%	1,1%	1,1%	1,3%	1,1%	0,0
S1.6.2	Promoting products, services, or programs	5	1	1,2%	1,4%	1,2%	1,3%	1,3%	-0,1
S1.6.3	Purchasing goods or services	0	0	0,0%	0,0%	0,0%	0,0%	0,0%	0,0
S1.7.1	Interviewing	0	0	0,0%	0,0%	0,0%	0,0%	0,0%	0,0
S1.7.2	Engaging with others to identify needs	0	0	0,0%	0,0%	0,0%	0,0%	0,0%	0,0
S1.7.3	Listening and asking questions	0	0	0,0%	0,0%	0,0%	0,0%	0,0%	0,0
S1.8.0	Working with others	0	0	0,0%	0,0%	0,0%	0,0%	0,0%	0,0
S1.8.1	Working in teams	0	0	0,0%	0,0%	0,0%	0,0%	0,0%	0,0
S1.8.2	Giving instructions	0	0	0,0%	0,0%	0,0%	0,0%	0,0%	0,0
S1.8.3	Giving feedback	0	0	0,0%	0,0%	0,0%	0,0%	0,0%	0,0
S1.8.4	Accepting feedback	0	0	0,0%	0,0%	0,0%	0,0%	0,0%	0,0
S1.8.5	Following instructions and procedures	1	1	0,6%	0,5%	0,6%	0,6%	0,5%	0,0
S1.8.6	Assisting and supporting co-workers	0	0	0,0%	0,0%	0,0%	0,0%	0,0%	0,0
S1.9.0	Solving problems	0	0	0,0%	0,0%	0,0%	0,0%	0,0%	0,0
S1.9.1	Developing solutions	3	1	1,3%	1,3%	1,3%	1,3%	1,0%	0,3
S1.9.2	Implementing new procedures or processes	3	1	0,6%	0,6%	0,6%	0,5%	0,5%	0,1
S2.0.0	Information skills	0	0	0,0%	0,0%	0,0%	0,0%	0,0%	0,0
S2.1.0	Conducting studies, investigations and examinations	0	0	0,0%	0,0%	0,0%	0,0%	0,0%	0,0
S2.1.1	Conducting academic or market research	8	1	1,6%	1,9%	1,6%	1,6%	1,8%	-0,2
S2.1.2	Diagnosing health conditions	0	0	0,0%	0,0%	0,0%	0,0%	0,0%	0,0
S2.1.3	Interpreting technical documentation and diagrams	0	0	0,0%	0,0%	0,0%	0,0%	0,0%	0,0
S2.1.4	Carrying out forensic and police investigations	1	1	0,1%	0,1%	0,1%	0,1%	0,1%	0,0
S2.2.0	Documenting and recording information	0	0	0,0%	0,0%	0,0%	0,0%	0,0%	0,0
S2.2.1	Preparing financial docs, records, reports, or budgets	0	0	0,0%	0,0%	0,0%	0,0%	0,0%	0,0
S2.2.2	Recording legal information	0	0	0,0%	0,0%	0,0%	0,0%	0,0%	0,0
S2.2.3	Preparing docs. for contracts, applications, or permits	1	1	0,3%	0,4%	0,3%	0,3%	0,3%	0,0
S2.2.4	Maintaining or preparing medical documentation	0	0	0,0%	0,0%	0,0%	0,0%	0,0%	0,0
S2.2.5	Maintaining operational records	1	1	1,9%	1,8%	1,9%	1,9%	1,8%	0,1
S2.2.6	Document. tech. designs/procedures/problems/activities	0	0	0,0%	0,0%	0,0%	0,0%	0,0%	0,0
S2.2.7	Reporting incidents and defects	1	1	0,3%	0,2%	0,3%	0,3%	0,2%	0,1
S2.3.0	Managing information	0	0	0,0%	0,0%	0,0%	0,0%	0,0%	0,0
S2.4.0	Processing information	0	0	0,0%	0,0%	0,0%	0,0%	0,0%	0,0
S2.4.1	Gathering information from physical or electronic sources	1	1	0,8%	0,9%	0,8%	0,8%	0,9%	0,0
S2.4.2	Entering and transforming information	0	0	0,0%	0,0%	0,0%	0,0%	0,0%	0,0
S2.5.0	Measuring physical properties	0	0	0,0%	0,0%	0,0%	0,0%	0,0%	0,0
S2.5.1	Measuring dimensions and related properties	3	1	0,3%	0,2%	0,3%	0,3%	0,1%	0,1
S2.5.2	Weighing	0	0	0,0%	0,0%	0,0%	0,0%	0,0%	0,0
S2.6.0	Calculating and estimating	1	1	0,0%	0,0%	0,0%	0,0%	0,0%	0,0
S2.6.1	Performing calculations	2	1	0,7%	0,7%	0,7%	0,7%	0,7%	0,0
S2.6.2	Determining values of goods or services	0	0	0,0%	0,0%	0,0%	0,0%	0,0%	0,0
S2.6.3	Estimating resource needs	1	1	0,3%	0,3%	0,4%	0,3%	0,3%	0,0
S2.7.0	Analysing and evaluating information and data	6	1	0,7%	0,7%	0,7%	0,7%	0,8%	-0,1
S2.7.1	Assessing land or real estate	7	1	0,2%	0,2%	0,2%	0,2%	0,2%	0,0
S2.7.2	Analysing scientific and medical data	7	1	0,2%	0,2%	0,2%	0,2%	0,2%	0,0
S2.7.3	Analysing financial and economic data	0	0	0,0%	0,0%	0,0%	0,0%	0,0%	0,0
S2.7.4	Analysing business operations	15	1	1,1%	1,2%	1,2%	1,1%	1,0%	0,2
S2.7.5	Performing risk analysis and management	1	1	0,9%	1,1%	0,9%	0,9%	0,9%	0,1
S2.7.6	Evaluating syst., programmes, equipment and products	1	1	0,4%	0,4%	0,4%	0,4%	0,3%	0,1

S2.8.0	Monitoring, inspecting and testing	4	1	0,3%	0,3%	0,3%	0,3%	0,2%	0,1
S2.8.1	Testing electrical and mechanical systems or equipment	4	1	0,2%	0,2%	0,2%	0,2%	0,1%	0,1
S2.8.10	Monitoring quality of products	2	1	1,3%	1,1%	1,3%	1,3%	0,7%	0,5
S2.8.11	Testing vehicles	0	0	0,0%	0,0%	0,0%	0,0%	0,0%	0,0
S2.8.2	Monitoring operational activities	3	1	1,2%	1,2%	1,2%	1,2%	1,0%	0,2
S2.8.3	Monitoring financial and economic resources and activity	0	0	0,0%	0,0%	0,0%	0,0%	0,0%	0,0
S2.8.4	Monitoring safety or security	2	1	0,5%	0,5%	0,5%	0,5%	0,5%	0,0
S2.8.5	Monitoring environmental conditions	20	1	0,2%	0,2%	0,2%	0,2%	0,1%	0,0
S2.8.6	Monitoring health conditions of humans and animals	2	1	0,2%	0,2%	0,2%	0,2%	0,4%	-0,2
S2.8.8	Testing and analysing substances	3	1	0,2%	0,2%	0,2%	0,2%	0,1%	0,0
S2.8.9	Inspecting food safety and quality	0	0	0,0%	0,0%	0,0%	0,0%	0,0%	0,0
S2.9.0	Monitoring developments in area of expertise	0	0	0,0%	0,0%	0,0%	0,0%	0,0%	0,0
S3.0.0	Assisting and caring	0	0	0,0%	0,0%	0,0%	0,0%	0,0%	0,0
S3.1.0	Counselling	0	0	0,0%	0,0%	0,0%	0,0%	0,0%	0,0
S3.1.1	Counselling on personal, family or social issues	0	0	0,0%	0,0%	0,0%	0,0%	0,0%	0,0
S3.1.2	Providing support to resolve problems	1	1	0,1%	0,1%	0,1%	0,1%	0,3%	-0,2
S3.1.3	Assisting people to access services	0	0	0,0%	0,0%	0,0%	0,0%	0,0%	0,0
S3.2.0	Providing health care or medical treatments	0	0	0,0%	0,0%	0,0%	0,0%	0,0%	0,0
S3.2.1	Providing medical, dental and nursing care	0	0	0,0%	0,0%	0,0%	0,0%	0,0%	0,0
S3.2.2	Performing surgical procedures	0	0	0,0%	0,0%	0,0%	0,0%	0,0%	0,0
S3.2.3	Providing physical therapies	0	0	0,0%	0,0%	0,0%	0,0%	0,0%	0,0
S3.2.4	Providing psychological and occupational therapies	0	0	0,0%	0,0%	0,0%	0,0%	0,0%	0,0
S3.2.5	Prescribing & ordering medical tests, treatments/devices	0	0	0,0%	0,0%	0,0%	0,0%	0,0%	0,0
S3.2.6	Fitting assistive devices	0	0	0,0%	0,0%	0,0%	0,0%	0,0%	0,0
S3.3.0	Protecting and enforcing	1	1	0,2%	0,2%	0,2%	0,2%	0,2%	0,0
S3.3.1	Complying with health and safety procedures	5	1	3,4%	3,0%	3,4%	3,5%	3,5%	-0,2
S3.3.2	Complying with environ. protection laws and standards	38	1	0,4%	0,4%	0,5%	0,4%	0,4%	0,0
S3.3.3	Complying with operational procedures	2	1	1,9%	1,9%	1,9%	1,9%	1,9%	0,0
S3.3.4	Verifying identities and documentation	0	0	0,0%	0,0%	0,0%	0,0%	0,0%	0,0
S3.3.5	Maintaining and enforcing physical security	2	1	0,9%	0,8%	0,8%	0,9%	1,1%	-0,3
S3.3.6	Protecting privacy and personal data	0	0	0,0%	0,0%	0,0%	0,0%	0,0%	0,0
S3.3.7	Ensuring compliance with legislation	2	1	1,3%	1,3%	1,3%	1,3%	1,0%	0,3
S3.4.0	Providing info. and support to the public and clients	0	0	0,0%	0,0%	0,0%	0,0%	0,0%	0,0
S3.4.1	Providing information to the public and clients	1	1	0,2%	0,2%	0,2%	0,2%	0,2%	0,0
S3.4.2	Accompanying and welcoming people	0	0	0,0%	0,0%	0,0%	0,0%	0,0%	0,0
S3.4.4	Providing general assistance to people	0	0	0,0%	0,0%	0,0%	0,0%	0,0%	0,0
S3.5.0	Preparing and serving food and drinks	0	0	0,0%	0,0%	0,0%	0,0%	0,0%	0,0
S3.5.1	Preparing food and drinks	0	0	0,0%	0,0%	0,0%	0,0%	0,0%	0,0
S3.5.2	Serving food and drinks	0	0	0,0%	0,0%	0,0%	0,0%	0,0%	0,0
S3.6.0	Providing personal care	0	0	0,0%	0,0%	0,0%	0,0%	0,0%	0,0
S3.6.1	Assisting people with mobility	0	0	0,0%	0,0%	0,0%	0,0%	0,0%	0,0
S3.6.2	Assisting with personal needs	0	0	0,0%	0,0%	0,0%	0,0%	0,0%	0,0
S3.6.3	Caring for children	0	0	0,0%	0,0%	0,0%	0,0%	0,0%	0,0
S3.6.4	Styling hair and providing beauty treatments	0	0	0,0%	0,0%	0,0%	0,0%	0,0%	0,0
S4.0.0	Management skills	0	0	0,0%	0,0%	0,0%	0,0%	0,0%	0,0
S4.1.0	Developing objectives and strategies	4	1	0,3%	0,3%	0,3%	0,2%	0,2%	0,0
S4.1.1	Identifying opportunities	3	1	0,4%	0,5%	0,4%	0,4%	0,3%	0,1
S4.1.2	Developing financial, business or marketing plans	1	1	0,8%	1,0%	0,8%	0,8%	0,7%	0,1
S4.1.3	Developing operational policies and procedures	11	1	1,1%	1,1%	1,1%	1,0%	0,9%	0,2
S4.1.4	Developing policies and legislation	7	1	0,1%	0,1%	0,1%	0,1%	0,1%	0,0
S4.1.5	Developing health programmes	0	0	0,0%	0,0%	0,0%	0,0%	0,0%	0,0
S4.1.6	Developing educational programmes	0	0	0,0%	0,0%	0,0%	0,0%	0,0%	0,0

S4.1.7	Developing contingency and emergency response plans	1	1	0,2%	0,2%	0,2%	0,2%	0,2%	0,0
S4.2.0	Organising, planning and scheduling work and activities	2	1	0,2%	0,2%	0,2%	0,2%	0,2%	0,0
S4.2.1	Directing operational activities	7	1	0,9%	1,0%	0,9%	0,9%	0,8%	0,1
S4.2.2	Planning events and programmes	1	1	1,3%	1,4%	1,3%	1,3%	1,5%	-0,2
S4.2.3	Directing, supervising and coordinating projects	3	1	0,4%	0,5%	0,4%	0,4%	0,4%	0,0
S4.2.4	Managing transport and logistics activities	0	0	0,0%	0,0%	0,0%	0,0%	0,0%	0,0
S4.2.5	Planning production processes	3	1	0,5%	0,5%	0,5%	0,5%	0,4%	0,1
S4.3.0	Allocating and controlling resources	0	0	0,0%	0,0%	0,0%	0,0%	0,0%	0,0
S4.3.1	Managing budgets or finances	2	1	1,0%	1,2%	1,0%	0,9%	0,9%	0,1
S4.3.2	Managing and administering human resources	0	0	0,0%	0,0%	0,0%	0,0%	0,0%	0,0
S4.3.3	Allocating and controlling physical resources	0	0	0,0%	0,0%	0,0%	0,0%	0,0%	0,0
S4.4.0	Performing administrative activities	0	0	0,0%	0,0%	0,0%	0,0%	0,0%	0,0
S4.4.2	Executing financial transactions	0	0	0,0%	0,0%	0,0%	0,0%	0,0%	0,0
S4.4.3	Performing general clerical and administrative tasks	0	0	0,0%	0,0%	0,0%	0,0%	0,0%	0,0
S4.5.0	Leading and motivating	0	0	0,0%	0,0%	0,0%	0,0%	0,0%	0,0
S4.6.0	Building and developing teams	0	0	0,0%	0,0%	0,0%	0,0%	0,0%	0,0
S4.7.0	Recruiting and hiring	0	0	0,0%	0,0%	0,0%	0,0%	0,0%	0,0
S4.8.1	Supervising a team or group	1	1	0,7%	0,8%	0,7%	0,7%	0,7%	0,0
S4.8.2	Assigning work to others	0	0	0,0%	0,0%	0,0%	0,0%	0,0%	0,0
S4.8.3	Monitoring and evaluating the performance of individuals	0	0	0,0%	0,0%	0,0%	0,0%	0,0%	0,0
S4.9.0	Making decisions	1	1	0,3%	0,3%	0,3%	0,3%	0,3%	-0,1
S5.0.0	Working with computers	0	0	0,0%	0,0%	0,0%	0,0%	0,0%	0,0
S5.1.0	Programming computer systems	0	0	0,0%	0,0%	0,0%	0,0%	0,0%	0,0
S5.2.1	Setting up computer systems	0	0	0,0%	0,0%	0,0%	0,0%	0,0%	0,0
S5.2.2	Protecting ict devices	0	0	0,0%	0,0%	0,0%	0,0%	0,0%	0,0
S5.2.3	Resolving computer problems	0	0	0,0%	0,0%	0,0%	0,0%	0,0%	0,0
S5.5.0	Accessing and analysing digital data	0	0	0,0%	0,0%	0,0%	0,0%	0,0%	0,0
S5.5.1	Browsing, searching and filtering digital data	0	0	0,0%	0,0%	0,0%	0,0%	0,0%	0,0
S5.5.2	Managing, gathering and storing digital data	0	0	0,0%	0,0%	0,0%	0,0%	0,0%	0,0
S5.6.0	Use digital tools for collab., content creation&prob. solv.	0	0	0,0%	0,0%	0,0%	0,0%	0,0%	0,0
S5.6.1	Using digital tools for collaboration and productivity	0	0	0,0%	0,0%	0,0%	0,0%	0,0%	0,0
S5.6.2	Use word processing, publishing & presentation software	0	0	0,0%	0,0%	0,0%	0,0%	0,0%	0,0
S5.6.3	Using computer aided design and drawing tools	0	0	0,0%	0,0%	0,0%	0,0%	0,0%	0,0
S5.6.4	Using digital tools for processing sound and images	0	0	0,0%	0,0%	0,0%	0,0%	0,0%	0,0
S5.7.0	Using digital tools to control machinery	0	0	0,0%	0,0%	0,0%	0,0%	0,0%	0,0
S6.0.0	Handling and moving	0	0	0,0%	0,0%	0,0%	0,0%	0,0%	0,0
S6.1.0	Sorting and packaging goods and materials	0	0	0,0%	0,0%	0,0%	0,0%	0,0%	0,0
S6.1.1	Sorting materials or products	4	1	0,5%	0,4%	0,5%	0,5%	0,4%	0,1
S6.1.2	Marking materials or objects for identification	1	1	0,3%	0,3%	0,3%	0,3%	0,2%	0,1
S6.1.3	Packaging objects	1	1	0,3%	0,3%	0,3%	0,3%	0,2%	0,1
S6.11.0	Cleaning	0	0	0,0%	0,0%	0,0%	0,0%	0,0%	0,0
S6.11.1	Cleaning tools, equipment, workpieces and vehicles	0	0	0,0%	0,0%	0,0%	0,0%	0,0%	0,0
S6.11.2	Cleaning interior and exterior of buildings	0	0	0,0%	0,0%	0,0%	0,0%	0,0%	0,0
S6.11.3	Cleaning outdoor spaces	0	0	0,0%	0,0%	0,0%	0,0%	0,0%	0,0
S6.12.0	Washing and maintaining textiles and clothing	0	0	0,0%	0,0%	0,0%	0,0%	0,0%	0,0
S6.13.0	Handling and disposing of waste and hazardous materials	3	1	0,0%	0,0%	0,0%	0,0%	0,0%	0,0
S6.13.1	Handling and disposing of hazardous materials	11	1	0,5%	0,4%	0,5%	0,5%	0,5%	0,0
S6.13.2	Disposing of non-hazardous waste or debris	10	1	0,3%	0,2%	0,2%	0,3%	0,3%	0,0
S6.2.0	Moving and lifting	0	0	0,0%	0,0%	0,0%	0,0%	0,0%	0,0
S6.2.1	Loading and unloading goods and, materials	0	0	0,0%	0,0%	0,0%	0,0%	0,0%	0,0
S6.2.2	Moving or lifting materials, equipment, or supplies	0	0	0,0%	0,0%	0,0%	0,0%	0,0%	0,0
S6.2.3	Storing goods and materials	1	1	0,6%	0,6%	0,6%	0,7%	0,6%	0,0

S6.3.0	Transforming and blending materials	0	0	0,0%	0,0%	0,0%	0,0%	0,0%	0,0
S6.3.1	Preparing mixtures or solutions	1	1	0,2%	0,2%	0,2%	0,2%	0,1%	0,1
S6.3.3	Preparing industrial materials for processing or use	0	0	0,0%	0,0%	0,0%	0,0%	0,0%	0,0
S6.3.6	Collecting & preparing specimens or materials for testing	0	0	0,0%	0,0%	0,0%	0,0%	0,0%	0,0
S6.4.0	Tending plants and crops	0	0	0,0%	0,0%	0,0%	0,0%	0,0%	0,0
S6.4.1	Cultivating land and crops	9	1	0,1%	0,1%	0,1%	0,1%	0,2%	-0,2
S6.4.2	Planting, pruning & harvest. trees, crops and other plants	3	1	0,1%	0,0%	0,1%	0,1%	0,1%	-0,1
S6.5.0	Assembling and fabricating products	0	0	0,0%	0,0%	0,0%	0,0%	0,0%	0,0
S6.5.1	Fabricating precision instruments or jewellery	0	0	0,0%	0,0%	0,0%	0,0%	0,0%	0,0
S6.5.2	Fabricating medical and prosthetic devices	0	0	0,0%	0,0%	0,0%	0,0%	0,0%	0,0
S6.5.3	Assembling electrical and electronic products	0	0	0,0%	0,0%	0,0%	0,0%	0,0%	0,0
S6.5.4	Assembling mechanical products	0	0	0,0%	0,0%	0,0%	0,0%	0,0%	0,0
S6.5.5	Assembling furniture	0	0	0,0%	0,0%	0,0%	0,0%	0,0%	0,0
S6.5.6	Fabricating garments and textile products	0	0	0,0%	0,0%	0,0%	0,0%	0,0%	0,0
S6.5.7	Fabricating food and related products	0	0	0,0%	0,0%	0,0%	0,0%	0,0%	0,0
S6.5.8	Fabricating tobacco products	0	0	0,0%	0,0%	0,0%	0,0%	0,0%	0,0
S6.6.1	Making production moulds and casts	0	0	0,0%	0,0%	0,0%	0,0%	0,0%	0,0
S6.6.2	Making patterns and templates	0	0	0,0%	0,0%	0,0%	0,0%	0,0%	0,0
S6.6.3	Making models	0	0	0,0%	0,0%	0,0%	0,0%	0,0%	0,0
S6.7.0	Using hand tools	0	0	0,0%	0,0%	0,0%	0,0%	0,0%	0,0
S6.7.1	Cutting materials and drilling holes	0	0	0,0%	0,0%	0,0%	0,0%	0,0%	0,0
S6.7.2	Shaping materials to create products	0	0	0,0%	0,0%	0,0%	0,0%	0,0%	0,0
S6.7.3	Smoothing surfaces of objects or equipment	0	0	0,0%	0,0%	0,0%	0,0%	0,0%	0,0
S6.7.4	Using precision hand tools	0	0	0,0%	0,0%	0,0%	0,0%	0,0%	0,0
S6.7.5	Hammering, nailing and riveting	0	0	0,0%	0,0%	0,0%	0,0%	0,0%	0,0
S6.8.0	Positioning materials, tools or equipment	1	1	0,5%	0,4%	0,6%	0,6%	0,3%	0,2
S6.9.0	Handling animals	0	0	0,0%	0,0%	0,0%	0,0%	0,0%	0,0
S6.9.1	Tending and breeding animals	1	1	0,2%	0,2%	0,2%	0,2%	0,5%	-0,3
S6.9.2	Tending and breeding aquatic animals	1	1	0,1%	0,1%	0,1%	0,1%	0,1%	0,0
S6.9.3	Moving and herding animals	0	0	0,0%	0,0%	0,0%	0,0%	0,0%	0,0
S6.9.4	Hunting, trapping and slaughtering animals	0	0	0,0%	0,0%	0,0%	0,0%	0,0%	0,0
S6.9.5	Feeding and grooming animals	0	0	0,0%	0,0%	0,0%	0,0%	0,0%	0,0
S6.9.6	Training animals	0	0	0,0%	0,0%	0,0%	0,0%	0,0%	0,0
S6.9.7	Providing therapy or veterinary treatment for animals	0	0	0,0%	0,0%	0,0%	0,0%	0,0%	0,0
S7.0.0	Constructing	1	1	0,1%	0,1%	0,1%	0,1%	0,1%	0,0
S7.1.0	Building and repairing structures	0	0	0,0%	0,0%	0,0%	0,0%	0,0%	0,0
S7.1.1	Installing structural masonry materials	0	0	0,0%	0,0%	0,0%	0,0%	0,0%	0,0
S7.1.2	Installing wooden and metal components	6	1	1,8%	1,5%	1,9%	1,8%	1,2%	0,6
S7.1.4	Installing concrete components	0	0	0,0%	0,0%	0,0%	0,0%	0,0%	0,0
S7.1.5	Installing roofing	0	0	0,0%	0,0%	0,0%	0,0%	0,0%	0,0
S7.1.6	Joining parts using soldering, welding/brazing techniques	0	0	0,0%	0,0%	0,0%	0,0%	0,0%	0,0
S7.1.7	Installing and assembling building fixtures	0	0	0,0%	0,0%	0,0%	0,0%	0,0%	0,0
S7.1.8	Installing and assembling rigging equipment	0	0	0,0%	0,0%	0,0%	0,0%	0,0%	0,0
S7.2.0	Installing interior or exterior infrastructure	0	0	0,0%	0,0%	0,0%	0,0%	0,0%	0,0
S7.2.1	Installing heating, ventilation & air conditioning equip.	4	1	0,1%	0,1%	0,1%	0,1%	0,1%	0,0
S7.2.2	Installing plumbing or piping equipment or systems	0	0	0,0%	0,0%	0,0%	0,0%	0,0%	0,0
S7.2.3	Installing insulation materials	1	1	0,0%	0,0%	0,0%	0,0%	0,0%	0,0
S7.3.1	Applying material to fill gaps in surfaces	0	0	0,0%	0,0%	0,0%	0,0%	0,0%	0,0
S7.3.2	Applying textured or masonry coatings	0	0	0,0%	0,0%	0,0%	0,0%	0,0%	0,0
S7.3.3	Applying protective or decorative solutions or coatings	0	0	0,0%	0,0%	0,0%	0,0%	0,0%	0,0
S7.3.4	Installing floor and wall coverings	0	0	0,0%	0,0%	0,0%	0,0%	0,0%	0,0
S8.0.0	Working with machinery and specialised equipment	1	1	0,7%	0,6%	0,7%	0,7%	0,3%	0,4

S8.1.1	Operating earthmoving equipment	0	0	0,0%	0,0%	0,0%	0,0%	0,0%	0,0
S8.1.2	Operating agricultural or forestry equipment	2	1	0,1%	0,1%	0,1%	0,1%	0,1%	-0,1
S8.1.3	Operating lifting or moving equipment	0	0	0,0%	0,0%	0,0%	0,0%	0,0%	0,0
S8.2.0	Driving vehicles	0	0	0,0%	0,0%	0,0%	0,0%	0,0%	0,0
S8.2.1	Driving heavy vehicles	0	0	0,0%	0,0%	0,0%	0,0%	0,0%	0,0
S8.2.2	Driving light vehicles	0	0	0,0%	0,0%	0,0%	0,0%	0,0%	0,0
S8.2.3	Operating rail vehicles	0	0	0,0%	0,0%	0,0%	0,0%	0,0%	0,0
S8.3.0	Operating watercraft	0	0	0,0%	0,0%	0,0%	0,0%	0,0%	0,0
S8.4.0	Operating machinery for extraction/proces. raw materials	1	1	0,0%	0,0%	0,0%	0,0%	0,0%	0,0
S8.4.1	Operating mining, drilling & mineral processing machinery	0	0	0,0%	0,0%	0,0%	0,0%	0,0%	0,0
S8.4.2	Operating metal processing and finishing machinery	0	0	0,0%	0,0%	0,0%	0,0%	0,0%	0,0
S8.4.3	Operating pumping systems or equipment	0	0	0,0%	0,0%	0,0%	0,0%	0,0%	0,0
S8.4.4	Operating energy production or distribution equipment	5	1	0,1%	0,1%	0,1%	0,1%	0,1%	0,0
S8.4.5	Op. petroleum/chemical/water proces. systems or equip.	6	1	0,1%	0,1%	0,1%	0,1%	0,1%	0,0
S8.4.6	Operating wood processing and papermaking machinery	1	1	0,1%	0,1%	0,1%	0,1%	0,0%	0,0
S8.4.7	Operating kilns, furnaces and drying equipment	1	1	0,2%	0,1%	0,2%	0,2%	0,0%	0,1
S8.5.0	Operating machinery for the manufacture of products	0	0	0,0%	0,0%	0,0%	0,0%	0,0%	0,0
S8.5.1	Operating painting or coating machinery	0	0	0,0%	0,0%	0,0%	0,0%	0,0%	0,0
S8.5.2	Operating packaging machinery	0	0	0,0%	0,0%	0,0%	0,0%	0,0%	0,0
S8.5.3	Operating machinery for the manufacture and treatment of textiles, fur and leather products	0	0	0,0%	0,0%	0,0%	0,0%	0,0%	0,0
S8.5.4	Operating food processing machinery	0	0	0,0%	0,0%	0,0%	0,0%	0,0%	0,0
S8.5.5	Operating mixing and separating machinery	0	0	0,0%	0,0%	0,0%	0,0%	0,0%	0,0
S8.5.6	Operating print and photographic production equipment	0	0	0,0%	0,0%	0,0%	0,0%	0,0%	0,0
S8.5.7	Operating metal, plastic or rubber forming equipment	0	0	0,0%	0,0%	0,0%	0,0%	0,0%	0,0
S8.5.8	Operating cutting, grinding and smoothing machinery	1	1	0,2%	0,2%	0,2%	0,2%	0,1%	0,1
S8.6.0	Using precision instrumentation and equipment	0	0	0,0%	0,0%	0,0%	0,0%	0,0%	0,0
S8.6.1	Operating medical equipment	0	0	0,0%	0,0%	0,0%	0,0%	0,0%	0,0
S8.6.2	Operating audio-visual equipment	0	0	0,0%	0,0%	0,0%	0,0%	0,0%	0,0
S8.6.3	Operating scientific and laboratory equipment	1	1	0,2%	0,2%	0,2%	0,2%	0,2%	0,0
S8.6.4	Operating communications equipment	0	0	0,0%	0,0%	0,0%	0,0%	0,0%	0,0
S8.6.5	Operating precision industrial equipment	0	0	0,0%	0,0%	0,0%	0,0%	0,0%	0,0
S8.6.6	Using precision measuring equipment	1	1	0,4%	0,4%	0,5%	0,4%	0,3%	0,1
S8.7.0	Installing, maintaining and repairing mechanical equip.	0	0	0,0%	0,0%	0,0%	0,0%	0,0%	0,0
S8.7.1	Repairing and installing mechanical equipment	2	1	0,3%	0,2%	0,3%	0,3%	0,2%	0,1
S8.7.2	Maintaining mechanical equipment and tools	0	0	0,0%	0,0%	0,0%	0,0%	0,0%	0,0
S8.7.3	Maintaining mechanical machinery	0	0	0,0%	0,0%	0,0%	0,0%	0,0%	0,0
S8.8.0	Installing, maintaining and repairing electrical, electronic and precision equipment	0	0	0,0%	0,0%	0,0%	0,0%	0,0%	0,0
S8.8.1	Installing/repairing electrical, electronic/precision equip.	4	1	0,6%	0,5%	0,6%	0,5%	0,3%	0,3
S8.8.2	Maintaining electrical, electronic and precision equip.	5	1	0,3%	0,3%	0,4%	0,3%	0,3%	0,1
S8.9.0	Operating aircraft	0	0	0,0%	0,0%	0,0%	0,0%	0,0%	0,0

GERMANY



Weight of the most demanded occupations in 2040

Germany

ISCO-1-digit classification	TOTAL	Direct	Indirect	Induced	Media 2023	Var (points)
OC1 Managers	7,4%	8,0%	7,6%	7,1%	4,2%	3,2
OC2 Professional	21,8%	23,6%	21,9%	21,4%	22,5%	-0,7
OC3 Technicians and associate professionals	17,9%	19,6%	18,0%	17,5%	20,0%	-2,1
OC4 Clerical support workers	7,9%	5,6%	8,4%	7,9%	13,2%	-5,3
OC5 Service and sales workers	8,8%	5,3%	8,0%	10,2%	13,7%	-4,9
OC6 Skilled agricultural, forestry and fishery workers	0,3%	0,1%	0,4%	0,4%	1,3%	-1,0
OC7 Craft related trades workers	12,9%	21,4%	12,6%	11,8%	11,1%	1,8
OC8 Plant and machine operators, and assemblers	9,3%	8,9%	9,5%	9,1%	6,3%	3,0
OC9 Elementary occupations	13,7%	7,5%	13,7%	14,7%	7,7%	6,0

Weight of the most demanded occupations in 2040

Germany

ISCO-2-digit classification		TOTAL	Direct	Indirect	Induced	Media 2023	Var (points)
OC11	Chief executives, senior officials and legislators	1,3%	1,6%	1,3%	1,2%	1,4%	-0,1
OC12	Administrative and commercial managers	3,8%	4,4%	3,9%	3,5%	1,1%	2,7
OC13	Production and specialized services managers	1,1%	1,2%	1,1%	1,0%	1,2%	-0,1
OC14	Hospitality, retail and other services managers	1,3%	0,9%	1,3%	1,4%	0,5%	0,8
OC21	Science and engineering professionals	7,0%	10,6%	7,2%	6,2%	4,3%	2,7
OC22	Health professionals	1,5%	0,1%	1,1%	2,2%	2,4%	-1,0
OC23	Teaching professionals	1,3%	0,8%	1,2%	1,6%	5,9%	-4,6
OC24	Business and administration professionals	5,6%	5,9%	5,9%	5,1%	4,0%	1,5
OC25	Information and communications technology professionals	5,2%	5,6%	5,5%	4,8%	2,4%	2,8
OC26	Legal, social and cultural professionals	1,2%	0,6%	1,0%	1,5%	3,4%	-2,2
OC31	Science and engineering associate professionals	6,5%	11,8%	6,5%	5,6%	4,4%	2,1
OC32	Health associate professionals	1,5%	0,2%	1,1%	2,2%	6,3%	-4,7
OC33	Business and administration associate professionals	7,8%	6,0%	8,3%	7,5%	7,1%	0,7
OC34	Legal, social, cultural and related associate professionals	1,5%	1,0%	1,4%	1,6%	1,4%	0,1
OC35	Information and communications technicians	0,7%	0,6%	0,7%	0,6%	0,9%	-0,2
OC41	General and keyboard clerks	1,4%	1,0%	1,4%	1,4%	6,7%	-5,3
OC42	Customer services clerks	2,5%	1,8%	2,7%	2,4%	1,5%	1,0
OC43	Numerical and material recording clerks	2,3%	1,3%	2,4%	2,3%	4,0%	-1,7
OC44	Other clerical support workers	1,8%	1,5%	1,9%	1,8%	1,1%	0,7
OC51	Personal service workers	2,9%	1,5%	2,6%	3,5%	4,6%	-1,7
OC52	Sales workers	4,1%	3,6%	4,3%	4,0%	6,0%	-1,8
OC53	Personal care workers	1,5%	0,1%	0,8%	2,6%	1,8%	-0,3
OC54	Protective services workers	0,2%	0,1%	0,2%	0,2%	1,3%	-1,1
OC61	Market-oriented skilled agricultural workers	0,3%	0,1%	0,3%	0,3%	1,3%	-1,0
OC62	Market-oriented skilled forestry, fishery and hunting workers	0,0%	0,0%	0,0%	0,0%	0,1%	0,0
OC71	Building and related trades workers, excluding electricians	3,4%	8,8%	3,1%	2,6%	2,6%	0,8
OC72	Metal, machinery and related trades workers	5,0%	5,2%	4,9%	4,9%	4,6%	0,3
OC73	Handicraft and printing workers	0,4%	0,3%	0,4%	0,4%	0,5%	-0,2
OC74	Electrical and electronic trades workers	3,3%	6,8%	3,1%	2,8%	1,8%	1,5
OC75	Food processing, wood working, garment and other craft and related trades workers	1,0%	0,3%	1,0%	1,1%	1,6%	-0,6
OC81	Stationary plant and machine operators	3,1%	2,0%	3,2%	3,3%	2,4%	0,7
OC82	Assemblers	3,5%	5,9%	3,4%	3,3%	0,9%	2,7
OC83	Drivers and mobile plant operators	2,6%	1,0%	2,9%	2,5%	3,0%	-0,4
OC91	Cleaners and helpers	1,6%	0,6%	1,4%	2,0%	3,0%	-1,4
OC92	Agricultural, forestry and fishery labourers	0,2%	0,0%	0,2%	0,2%	0,3%	-0,1
OC93	Labourers in mining, construction, manufacturing and transport	10,4%	6,4%	10,8%	10,7%	2,9%	7,5
OC94	Food preparation assistants	0,7%	0,1%	0,6%	0,9%	0,8%	-0,1
OC95	Street and related sales and service workers	0,0%	0,1%	0,0%	0,0%	0,0%	0,0
OC96	Refuse workers and other elementary workers	0,7%	0,2%	0,6%	0,8%	0,6%	0,0

Weight of green skills in 2040

Germany

ESCO-3-digit classification	Number of green subskills Yes=1 No=0		Germany					Media 2023	Var (points)
	TOTAL	Direct	Indirect	Induced					
S1.0.0	Communication, collaboration and creativity	0	0	0,0%	0,0%	0,0%	0,0%	0,0%	0,0
S1.1.0	Negotiating	0	0	0,0%	0,0%	0,0%	0,0%	0,0%	0,0
S1.1.1	Negotiating and managing contracts and agreements	0	0	0,0%	0,0%	0,0%	0,0%	0,0%	0,0
S1.1.2	Mediating and resolving disputes	0	0	0,0%	0,0%	0,0%	0,0%	0,0%	0,0
S1.1.3	Responding to complaints	1	1	0,2%	0,2%	0,2%	0,2%	0,3%	0,0
S1.11.0	Designing systems and products	5	1	0,3%	0,4%	0,3%	0,3%	0,2%	0,1
S1.11.1	Designing ict systems or applications	0	0	0,0%	0,0%	0,0%	0,0%	0,0%	0,0
S1.11.2	Designing electrical or electronic systems or equipment	14	1	0,1%	0,2%	0,1%	0,1%	0,1%	0,0
S1.11.3	Developing recipes or menus	0	0	0,0%	0,0%	0,0%	0,0%	0,0%	0,0
S1.11.4	Designing structures or facilities	6	1	0,2%	0,2%	0,2%	0,2%	0,1%	0,1
S1.11.5	Designing industrial materials, systems or products	5	1	0,3%	0,4%	0,3%	0,3%	0,2%	0,1
S1.12.0	Creating artistic, visual or instructive materials	0	0	0,0%	0,0%	0,0%	0,0%	0,0%	0,0
S1.12.1	Creating visual displays and decorations	0	0	0,0%	0,0%	0,0%	0,0%	0,0%	0,0
S1.12.2	Developing instructive or promotional materials	0	0	0,0%	0,0%	0,0%	0,0%	0,0%	0,0
S1.12.3	Creating artistic designs or performances	0	0	0,0%	0,0%	0,0%	0,0%	0,0%	0,0
S1.13.0	Writing and composing	0	0	0,0%	0,0%	0,0%	0,0%	0,0%	0,0
S1.13.1	Composing music	0	0	0,0%	0,0%	0,0%	0,0%	0,0%	0,0
S1.13.2	Artistic and creative writing	0	0	0,0%	0,0%	0,0%	0,0%	0,0%	0,0
S1.13.3	Technical or academic writing	1	1	1,3%	1,4%	1,3%	1,2%	1,4%	-0,2
S1.14.0	Performing and entertaining	0	0	0,0%	0,0%	0,0%	0,0%	0,0%	0,0
S1.14.1	Practising sports	0	0	0,0%	0,0%	0,0%	0,0%	0,0%	0,0
S1.14.2	Performing artistic or cultural activities	0	0	0,0%	0,0%	0,0%	0,0%	0,0%	0,0
S1.14.3	Conducting gaming activities	0	0	0,0%	0,0%	0,0%	0,0%	0,0%	0,0
S1.15.0	Using more than one language	0	0	0,0%	0,0%	0,0%	0,0%	0,0%	0,0
S1.15.1	Using foreign languages	0	0	0,0%	0,0%	0,0%	0,0%	0,0%	0,0
S1.15.2	Translating and interpreting	0	0	0,0%	0,0%	0,0%	0,0%	0,0%	0,0
S1.2.0	Liaising and networking	0	0	0,0%	0,0%	0,0%	0,0%	0,0%	0,0
S1.2.1	Communicating with colleagues and clients	1	1	1,2%	1,0%	1,2%	1,2%	1,5%	-0,3
S1.2.3	Developing professional relationships or networks	1	1	1,9%	1,6%	1,9%	1,9%	2,1%	-0,2
S1.2.4	Advocating for individual or community needs	1	1	0,4%	0,3%	0,4%	0,4%	0,5%	-0,1
S1.2.5	Collaborating and liaising	0	0	0,0%	0,0%	0,0%	0,0%	0,0%	0,0
S1.3.0	Teaching and training	2	1	0,2%	0,2%	0,2%	0,3%	0,6%	-0,4
S1.3.1	Teaching academic or vocational subjects	1	1	0,2%	0,1%	0,1%	0,2%	0,4%	-0,2
S1.3.2	Teaching safety procedures	2	1	0,0%	0,0%	0,0%	0,0%	0,1%	0,0
S1.3.3	Training on operational procedures	6	1	0,6%	0,7%	0,6%	0,6%	0,7%	-0,1
S1.3.4	Training on health or medical topics	0	0	0,0%	0,0%	0,0%	0,0%	0,0%	0,0
S1.3.5	Coaching and mentoring	2	1	0,4%	0,3%	0,4%	0,5%	0,7%	-0,3
S1.4.0	Presenting information	0	0	0,0%	0,0%	0,0%	0,0%	0,0%	0,0
S1.4.1	Presenting general information	0	0	0,0%	0,0%	0,0%	0,0%	0,0%	0,0
S1.4.2	Presenting research or technical information	0	0	0,0%	0,0%	0,0%	0,0%	0,0%	0,0
S1.4.3	Presenting information in legal proceedings	0	0	0,0%	0,0%	0,0%	0,0%	0,0%	0,0
S1.5.0	Advising and consulting	0	0	0,0%	0,0%	0,0%	0,0%	0,0%	0,0
S1.5.1	Advising on legal, regulatory or procedural matters	2	1	0,4%	0,4%	0,4%	0,4%	0,4%	0,0
S1.5.2	Providing financial advice	0	0	0,0%	0,0%	0,0%	0,0%	0,0%	0,0
S1.5.3	Advising on products and services	3	1	0,6%	0,6%	0,6%	0,6%	0,7%	-0,1
S1.5.4	Providing medical advice	1	1	0,3%	0,1%	0,2%	0,5%	0,7%	-0,4
S1.5.5	Advising on environmental issues	19	1	0,2%	0,3%	0,2%	0,2%	0,2%	0,0
S1.5.6	Advising on design or use of technologies	1	1	0,2%	0,2%	0,2%	0,2%	0,2%	0,0

S1.5.7	Advising on business or operational matters	1	1	0,1%	0,1%	0,1%	0,1%	0,1%	0,0
S1.5.8	Advising on educational or vocational matters	0	0	0,0%	0,0%	0,0%	0,0%	0,0%	0,0
S1.5.9	Advising on workplace health and safety issues	0	0	0,0%	0,0%	0,0%	0,0%	0,0%	0,0
S1.6.0	Promoting, selling and purchasing	1	1	0,1%	0,1%	0,1%	0,1%	0,1%	0,0
S1.6.1	Selling products or services	1	1	0,9%	0,8%	0,9%	0,8%	1,0%	-0,1
S1.6.2	Promoting products, services, or programs	5	1	1,1%	1,0%	1,1%	1,1%	1,0%	0,1
S1.6.3	Purchasing goods or services	0	0	0,0	0,0%	0,0%	0,0%	0,0%	0,0
S1.7.1	Interviewing	0	0	0,0	0,0%	0,0%	0,0%	0,0%	0,0
S1.7.2	Engaging with others to identify needs	0	0	0,0	0,0%	0,0%	0,0%	0,0%	0,0
S1.7.3	Listening and asking questions	0	0	0,0	0,0%	0,0%	0,0%	0,0%	0,0
S1.8.0	Working with others	0	0	0,0	0,0%	0,0%	0,0%	0,0%	0,0
S1.8.1	Working in teams	0	0	0,0	0,0%	0,0%	0,0%	0,0%	0,0
S1.8.2	Giving instructions	0	0	0,0	0,0%	0,0%	0,0%	0,0%	0,0
S1.8.3	Giving feedback	0	0	0,0	0,0%	0,0%	0,0%	0,0%	0,0
S1.8.4	Accepting feedback	0	0	0,0	0,0%	0,0%	0,0%	0,0%	0,0
S1.8.5	Following instructions and procedures	1	1	0,6	0,4%	0,6%	0,6%	0,6%	-0,1
S1.8.6	Assisting and supporting co-workers	0	0	0,0	0,0%	0,0%	0,0%	0,0%	0,0
S1.9.0	Solving problems	0	0	0,0	0,0%	0,0%	0,0%	0,0%	0,0
S1.9.1	Developing solutions	3	1	1,3	1,6%	1,4%	1,3%	1,0%	0,3
S1.9.2	Implementing new procedures or processes	3	1	0,1	0,4%	0,5%	0,5%	0,4%	0,
S2.0.0	Information skills	0	0	0,0	0,0%	0,0%	0,0%	0,0%	0,
S2.1.0	Conducting studies, investigations and examinations	0	0	0,0%	0,0%	0,0%	0,0%	0,0%	0,0
S2.1.1	Conducting academic or market research	8	1	1,6%	1,8%	1,6%	1,5%	1,5%	0,0
S2.1.2	Diagnosing health conditions	0	0	0,0%	0,0%	0,0%	0,0%	0,0%	0,0
S2.1.3	Interpreting technical documentation and diagrams	0	0	0,0%	0,0%	0,0%	0,0%	0,0%	0,0
S2.1.4	Carrying out forensic and police investigations	1	1	0,1%	0,1%	0,1%	0,1%	0,1%	0,0
S2.2.0	Documenting and recording information	0	0	0,0%	0,0%	0,0%	0,0%	0,0%	0,0
S2.2.1	Preparing financial docs, records, reports, or budgets	0	0	0,0%	0,0%	0,0%	0,0%	0,0%	0,0
S2.2.2	Recording legal information	0	0	0,0%	0,0%	0,0%	0,0%	0,0%	0,0
S2.2.3	Preparing docs. for contracts, applications, or permits	1	1	0,3%	0,3%	0,3%	0,3%	0,3%	0,0
S2.2.4	Maintaining or preparing medical documentation	0	0	0,0%	0,0%	0,0%	0,0%	0,0%	0,0
S2.2.5	Maintaining operational records	1	1	2,1%	2,3%	2,1%	2,1%	2,1%	0,0
S2.2.6	Document. tech. designs/procedures/problems/activities	0	0	0,0%	0,0%	0,0%	0,0%	0,0%	0,0
S2.2.7	Reporting incidents and defects	1	1	0,3%	0,4%	0,3%	0,3%	0,3%	0,0
S2.3.0	Managing information	0	0	0,0%	0,0%	0,0%	0,0%	0,0%	0,0
S2.4.0	Processing information	0	0	0,0%	0,0%	0,0%	0,0%	0,0%	0,0
S2.4.1	Gathering information from physical or electronic sources	1	1	0,7%	0,7%	0,8%	0,7%	0,8%	-0,1
S2.4.2	Entering and transforming information	0	0	0,0%	0,0%	0,0%	0,0%	0,0%	0,0
S2.5.0	Measuring physical properties	0	0	0,0%	0,0%	0,0%	0,0%	0,0%	0,0
S2.5.1	Measuring dimensions and related properties	3	1	0,3%	0,3%	0,3%	0,3%	0,2%	0,1
S2.5.2	Weighing	0	0	0,0%	0,0%	0,0%	0,0%	0,0%	0,0
S2.6.0	Calculating and estimating	1	1	0,0%	0,0%	0,0%	0,0%	0,0%	0,0
S2.6.1	Performing calculations	2	1	0,6%	0,6%	0,6%	0,6%	0,6%	0,0
S2.6.2	Determining values of goods or services	0	0	0,0%	0,0%	0,0%	0,0%	0,0%	0,0
S2.6.3	Estimating resource needs	1	1	0,4%	0,5%	0,4%	0,3%	0,3%	0,1
S2.7.0	Analysing and evaluating information and data	6	1	0,6%	0,7%	0,6%	0,6%	0,7%	-0,1
S2.7.1	Assessing land or real estate	7	1	0,2%	0,2%	0,2%	0,2%	0,1%	0,0
S2.7.2	Analysing scientific and medical data	7	1	0,2%	0,3%	0,2%	0,2%	0,2%	0,0
S2.7.3	Analysing financial and economic data	0	0	0,0%	0,0%	0,0%	0,0%	0,0%	0,0
S2.7.4	Analysing business operations	15	1	1,1%	1,1%	1,1%	1,0%	0,7%	0,4
S2.7.5	Performing risk analysis and management	1	1	0,8%	0,7%	0,8%	0,7%	0,7%	0,1
S2.7.6	Evaluating syst., programmes, equipment and products	1	1	0,4%	0,4%	0,4%	0,4%	0,3%	0,1

S2.8.0	Monitoring, inspecting and testing	4	1	0,3%	0,3%	0,4%	0,3%	0,3%	0,1
S2.8.1	Testing electrical and mechanical systems or equipment	4	1	0,2%	0,3%	0,2%	0,2%	0,2%	0,1
S2.8.10	Monitoring quality of products	2	1	1,5%	1,9%	1,5%	1,5%	1,0%	0,5
S2.8.11	Testing vehicles	0	0	0,0%	0,0%	0,0%	0,0%	0,0%	0,0
S2.8.2	Monitoring operational activities	3	1	1,1%	1,1%	1,1%	1,1%	1,0%	0,1
S2.8.3	Monitoring financial and economic resources and activity	0	0	0,0%	0,0%	0,0%	0,0%	0,0%	0,0
S2.8.4	Monitoring safety or security	2	1	0,6%	0,5%	0,6%	0,6%	0,6%	0,1
S2.8.5	Monitoring environmental conditions	20	1	0,2%	0,2%	0,2%	0,2%	0,1%	0,0
S2.8.6	Monitoring health conditions of humans and animals	2	1	0,2%	0,1%	0,2%	0,3%	0,4%	-0,2
S2.8.8	Testing and analysing substances	3	1	0,2%	0,3%	0,2%	0,2%	0,2%	0,0
S2.8.9	Inspecting food safety and quality	0	0	0,0%	0,0%	0,0%	0,0%	0,0%	0,0
S2.9.0	Monitoring developments in area of expertise	0	0	0,0%	0,0%	0,0%	0,0%	0,0%	0,0
S3.0.0	Assisting and caring	0	0	0,0%	0,0%	0,0%	0,0%	0,0%	0,0
S3.1.0	Counselling	0	0	0,0%	0,0%	0,0%	0,0%	0,0%	0,0
S3.1.1	Counselling on personal, family or social issues	0	0	0,0%	0,0%	0,0%	0,0%	0,0%	0,0
S3.1.2	Providing support to resolve problems	1	1	0,1%	0,1%	0,1%	0,2%	0,2%	0,0
S3.1.3	Assisting people to access services	0	0	0,0%	0,0%	0,0%	0,0%	0,0%	0,0
S3.2.0	Providing health care or medical treatments	0	0	0,0%	0,0%	0,0%	0,0%	0,0%	0,0
S3.2.1	Providing medical, dental and nursing care	0	0	0,0%	0,0%	0,0%	0,0%	0,0%	0,0
S3.2.2	Performing surgical procedures	0	0	0,0%	0,0%	0,0%	0,0%	0,0%	0,0
S3.2.3	Providing physical therapies	0	0	0,0%	0,0%	0,0%	0,0%	0,0%	0,0
S3.2.4	Providing psychological and occupational therapies	0	0	0,0%	0,0%	0,0%	0,0%	0,0%	0,0
S3.2.5	Prescribing & ordering medical tests, treatments/devices	0	0	0,0%	0,0%	0,0%	0,0%	0,0%	0,0
S3.2.6	Fitting assistive devices	0	0	0,0%	0,0%	0,0%	0,0%	0,0%	0,0
S3.3.0	Protecting and enforcing	1	1	0,2%	0,2%	0,2%	0,2%	0,2%	0,0
S3.3.1	Complying with health and safety procedures	5	1	3,9%	4,2%	3,8%	4,0%	3,8%	0,0
S3.3.2	Complying with environ. protection laws and standards	38	1	0,4%	0,5%	0,4%	0,4%	0,5%	0,0
S3.3.3	Complying with operational procedures	2	1	1,7%	1,5%	1,7%	1,8%	1,8%	0,0
S3.3.4	Verifying identities and documentation	0	0	0,0%	0,0%	0,0%	0,0%	0,0%	0,0
S3.3.5	Maintaining and enforcing physical security	2	1	0,8%	0,6%	0,8%	0,8%	1,1%	-0,4
S3.3.6	Protecting privacy and personal data	0	0	0,0%	0,0%	0,0%	0,0%	0,0%	0,0
S3.3.7	Ensuring compliance with legislation	2	1	1,1%	1,0%	1,1%	1,1%	1,0%	0,0
S3.4.0	Providing info. and support to the public and clients	0	0	0,0%	0,0%	0,0%	0,0%	0,0%	0,0
S3.4.1	Providing information to the public and clients	1	1	0,2%	0,1%	0,2%	0,2%	0,2%	0,0
S3.4.2	Accompanying and welcoming people	0	0	0,0%	0,0%	0,0%	0,0%	0,0%	0,0
S3.4.4	Providing general assistance to people	0	0	0,0%	0,0%	0,0%	0,0%	0,0%	0,0
S3.5.0	Preparing and serving food and drinks	0	0	0,0%	0,0%	0,0%	0,0%	0,0%	0,0
S3.5.1	Preparing food and drinks	0	0	0,0%	0,0%	0,0%	0,0%	0,0%	0,0
S3.5.2	Serving food and drinks	0	0	0,0%	0,0%	0,0%	0,0%	0,0%	0,0
S3.6.0	Providing personal care	0	0	0,0%	0,0%	0,0%	0,0%	0,0%	0,0
S3.6.1	Assisting people with mobility	0	0	0,0%	0,0%	0,0%	0,0%	0,0%	0,0
S3.6.2	Assisting with personal needs	0	0	0,0%	0,0%	0,0%	0,0%	0,0%	0,0
S3.6.3	Caring for children	0	0	0,0%	0,0%	0,0%	0,0%	0,0%	0,0
S3.6.4	Styling hair and providing beauty treatments	0	0	0,0%	0,0%	0,0%	0,0%	0,0%	0,0
S4.0.0	Management skills	0	0	0,0%	0,0%	0,0%	0,0%	0,0%	0,0
S4.1.0	Developing objectives and strategies	4	1	0,2%	0,3%	0,2%	0,2%	0,2%	0,0
S4.1.1	Identifying opportunities	3	1	0,4%	0,3%	0,4%	0,3%	0,3%	0,1
S4.1.2	Developing financial, business or marketing plans	1	1	0,8%	0,8%	0,8%	0,7%	0,5%	0,2
S4.1.3	Developing operational policies and procedures	11	1	1,0%	1,1%	1,0%	0,9%	0,7%	0,3
S4.1.4	Developing policies and legislation	7	1	0,1%	0,2%	0,1%	0,1%	0,1%	0,0
S4.1.5	Developing health programmes	0	0	0,0%	0,0%	0,0%	0,0%	0,0%	0,0
S4.1.6	Developing educational programmes	0	0	0,0%	0,0%	0,0%	0,0%	0,0%	0,0

S4.1.7	Developing contingency and emergency response plans	1	1	0,2%	0,2%	0,2%	0,2%	0,2%	0,0
S4.2.0	Organising, planning and scheduling work and activities	2	1	0,2%	0,2%	0,2%	0,2%	0,2%	0,1
S4.2.1	Directing operational activities	7	1	0,8%	0,8%	0,8%	0,8%	0,7%	0,0
S4.2.2	Planning events and programmes	1	1	1,2%	1,1%	1,2%	1,2%	1,3%	-0,1
S4.2.3	Directing, supervising and coordinating projects	3	1	0,4%	0,5%	0,4%	0,4%	0,3%	0,1
S4.2.4	Managing transport and logistics activities	0	0	0,0%	0,0%	0,0%	0,0%	0,0%	0,0
S4.2.5	Planning production processes	3	1	0,4%	0,4%	0,5%	0,4%	0,4%	0,1
S4.3.0	Allocating and controlling resources	0	0	0,0%	0,0%	0,0%	0,0%	0,0%	0,0
S4.3.1	Managing budgets or finances	2	1	0,8%	0,8%	0,9%	0,8%	0,7%	0,1
S4.3.2	Managing and administering human resources	0	0	0,0%	0,0%	0,0%	0,0%	0,0%	0,0
S4.3.3	Allocating and controlling physical resources	0	0	0,0%	0,0%	0,0%	0,0%	0,0%	0,0
S4.4.0	Performing administrative activities	0	0	0,0%	0,0%	0,0%	0,0%	0,0%	0,0
S4.4.2	Executing financial transactions	0	0	0,0%	0,0%	0,0%	0,0%	0,0%	0,0
S4.4.3	Performing general clerical and administrative tasks	0	0	0,0%	0,0%	0,0%	0,0%	0,0%	0,0
S4.5.0	Leading and motivating	0	0	0,0%	0,0%	0,0%	0,0%	0,0%	0,0
S4.6.0	Building and developing teams	0	0	0,0%	0,0%	0,0%	0,0%	0,0%	0,0
S4.7.0	Recruiting and hiring	0	0	0,0%	0,0%	0,0%	0,0%	0,0%	0,0
S4.8.1	Supervising a team or group	1	1	0,7%	0,7%	0,7%	0,7%	0,7%	0,0
S4.8.2	Assigning work to others	0	0	0,0%	0,0%	0,0%	0,0%	0,0%	0,0
S4.8.3	Monitoring and evaluating the performance of individuals	0	0	0,0%	0,0%	0,0%	0,0%	0,0%	0,0
S4.9.0	Making decisions	1	1	0,3%	0,2%	0,3%	0,3%	0,3%	0,0
S5.0.0	Working with computers	0	0	0,0%	0,0%	0,0%	0,0%	0,0%	0,0
S5.1.0	Programming computer systems	0	0	0,0%	0,0%	0,0%	0,0%	0,0%	0,0
S5.2.1	Setting up computer systems	0	0	0,0%	0,0%	0,0%	0,0%	0,0%	0,0
S5.2.2	Protecting ict devices	0	0	0,0%	0,0%	0,0%	0,0%	0,0%	0,0
S5.2.3	Resolving computer problems	0	0	0,0%	0,0%	0,0%	0,0%	0,0%	0,0
S5.5.0	Accessing and analysing digital data	0	0	0,0%	0,0%	0,0%	0,0%	0,0%	0,0
S5.5.1	Browsing, searching and filtering digital data	0	0	0,0%	0,0%	0,0%	0,0%	0,0%	0,0
S5.5.2	Managing, gathering and storing digital data	0	0	0,0%	0,0%	0,0%	0,0%	0,0%	0,0
S5.6.0	Use digital tools for collab., content creation&prob. solv.	0	0	0,0%	0,0%	0,0%	0,0%	0,0%	0,0
S5.6.1	Using digital tools for collaboration and productivity	0	0	0,0%	0,0%	0,0%	0,0%	0,0%	0,0
S5.6.2	Use word processing, publishing & presentation software	0	0	0,0%	0,0%	0,0%	0,0%	0,0%	0,0
S5.6.3	Using computer aided design and drawing tools	0	0	0,0%	0,0%	0,0%	0,0%	0,0%	0,0
S5.6.4	Using digital tools for processing sound and images	0	0	0,0%	0,0%	0,0%	0,0%	0,0%	0,0
S5.7.0	Using digital tools to control machinery	0	0	0,0%	0,0%	0,0%	0,0%	0,0%	0,0
S6.0.0	Handling and moving	0	0	0,0%	0,0%	0,0%	0,0%	0,0%	0,0
S6.1.0	Sorting and packaging goods and materials	0	0	0,0%	0,0%	0,0%	0,0%	0,0%	0,0
S6.1.1	Sorting materials or products	4	1	0,6%	0,5%	0,6%	0,6%	0,5%	0,1
S6.1.2	Marking materials or objects for identification	1	1	0,4%	0,4%	0,4%	0,4%	0,3%	0,1
S6.1.3	Packaging objects	1	1	0,5%	0,3%	0,5%	0,5%	0,2%	0,2
S6.11.0	Cleaning	0	0	0,0%	0,0%	0,0%	0,0%	0,0%	0,0
S6.11.1	Cleaning tools, equipment, workpieces and vehicles	0	0	0,0%	0,0%	0,0%	0,0%	0,0%	0,0
S6.11.2	Cleaning interior and exterior of buildings	0	0	0,0%	0,0%	0,0%	0,0%	0,0%	0,0
S6.11.3	Cleaning outdoor spaces	0	0	0,0%	0,0%	0,0%	0,0%	0,0%	0,0
S6.12.0	Washing and maintaining textiles and clothing	0	0	0,0%	0,0%	0,0%	0,0%	0,0%	0,0
S6.13.0	Handling and disposing of waste and hazardous materials	3	1	0,0%	0,0%	0,0%	0,0%	0,0%	0,0
S6.13.1	Handling and disposing of hazardous materials	11	1	0,6%	0,5%	0,5%	0,6%	0,5%	0,0
S6.13.2	Disposing of non-hazardous waste or debris	10	1	0,3%	0,2%	0,3%	0,3%	0,3%	0,0
S6.2.0	Moving and lifting	0	0	0,0%	0,0%	0,0%	0,0%	0,0%	0,0
S6.2.1	Loading and unloading goods and, materials	0	0	0,0%	0,0%	0,0%	0,0%	0,0%	0,0
S6.2.2	Moving or lifting materials, equipment, or supplies	0	0	0,0%	0,0%	0,0%	0,0%	0,0%	0,0
S6.2.3	Storing goods and materials	1	1	0,6%	0,4%	0,6%	0,7%	0,6%	0,0

S6.3.0	Transforming and blending materials	0	0	0,0%	0,0%	0,0%	0,0%	0,0%	0,0
S6.3.1	Preparing mixtures or solutions	1	1	0,2%	0,3%	0,2%	0,2%	0,2%	0,1
S6.3.3	Preparing industrial materials for processing or use	0	0	0,0%	0,0%	0,0%	0,0%	0,0%	0,0
S6.3.6	Collecting & preparing specimens or materials for testing	0	0	0,0%	0,0%	0,0%	0,0%	0,0%	0,0
S6.4.0	Tending plants and crops	0	0	0,0%	0,0%	0,0%	0,0%	0,0%	0,0
S6.4.1	Cultivating land and crops	9	1	0,1%	0,1%	0,1%	0,1%	0,2%	-0,1
S6.4.2	Planting, pruning & harvest. trees, crops and other plants	3	1	0,1%	0,0%	0,1%	0,1%	0,1%	-0,1
S6.5.0	Assembling and fabricating products	0	0	0,0%	0,0%	0,0%	0,0%	0,0%	0,0
S6.5.1	Fabricating precision instruments or jewellery	0	0	0,0%	0,0%	0,0%	0,0%	0,0%	0,0
S6.5.2	Fabricating medical and prosthetic devices	0	0	0,0%	0,0%	0,0%	0,0%	0,0%	0,0
S6.5.3	Assembling electrical and electronic products	0	0	0,0%	0,0%	0,0%	0,0%	0,0%	0,0
S6.5.4	Assembling mechanical products	0	0	0,0%	0,0%	0,0%	0,0%	0,0%	0,0
S6.5.5	Assembling furniture	0	0	0,0%	0,0%	0,0%	0,0%	0,0%	0,0
S6.5.6	Fabricating garments and textile products	0	0	0,0%	0,0%	0,0%	0,0%	0,0%	0,0
S6.5.7	Fabricating food and related products	0	0	0,0%	0,0%	0,0%	0,0%	0,0%	0,0
S6.5.8	Fabricating tobacco products	0	0	0,0%	0,0%	0,0%	0,0%	0,0%	0,0
S6.6.1	Making production moulds and casts	0	0	0,0%	0,0%	0,0%	0,0%	0,0%	0,0
S6.6.2	Making patterns and templates	0	0	0,0%	0,0%	0,0%	0,0%	0,0%	0,0
S6.6.3	Making models	0	0	0,0%	0,0%	0,0%	0,0%	0,0%	0,0
S6.7.0	Using hand tools	0	0	0,0%	0,0%	0,0%	0,0%	0,0%	0,0
S6.7.1	Cutting materials and drilling holes	0	0	0,0%	0,0%	0,0%	0,0%	0,0%	0,0
S6.7.2	Shaping materials to create products	0	0	0,0%	0,0%	0,0%	0,0%	0,0%	0,0
S6.7.3	Smoothing surfaces of objects or equipment	0	0	0,0%	0,0%	0,0%	0,0%	0,0%	0,0
S6.7.4	Using precision hand tools	0	0	0,0%	0,0%	0,0%	0,0%	0,0%	0,0
S6.7.5	Hammering, nailing and riveting	0	0	0,0%	0,0%	0,0%	0,0%	0,0%	0,0
S6.8.0	Positioning materials, tools or equipment	1	1	0,7%	0,9%	0,7%	0,7%	0,5%	0,3
S6.9.0	Handling animals	0	0	0,0%	0,0%	0,0%	0,0%	0,0%	0,0
S6.9.1	Tending and breeding animals	1	1	0,2%	0,1%	0,2%	0,3%	0,5%	-0,2
S6.9.2	Tending and breeding aquatic animals	1	1	0,1%	0,0%	0,1%	0,1%	0,1%	0,0
S6.9.3	Moving and herding animals	0	0	0,0%	0,0%	0,0%	0,0%	0,0%	0,0
S6.9.4	Hunting, trapping and slaughtering animals	0	0	0,0%	0,0%	0,0%	0,0%	0,0%	0,0
S6.9.5	Feeding and grooming animals	0	0	0,0%	0,0%	0,0%	0,0%	0,0%	0,0
S6.9.6	Training animals	0	0	0,0%	0,0%	0,0%	0,0%	0,0%	0,0
S6.9.7	Providing therapy or veterinary treatment for animals	0	0	0,0%	0,0%	0,0%	0,0%	0,0%	0,0
S7.0.0	Constructing	1	1	0,1%	0,1%	0,1%	0,1%	0,0%	0,1
S7.1.0	Building and repairing structures	0	0	0,0%	0,0%	0,0%	0,0%	0,0%	0,0
S7.1.1	Installing structural masonry materials	0	0	0,0%	0,0%	0,0%	0,0%	0,0%	0,0
S7.1.2	Installing wooden and metal components	6	1	2,1%	2,8%	2,1%	1,9%	1,5%	0,5
S7.1.4	Installing concrete components	0	0	0,0%	0,0%	0,0%	0,0%	0,0%	0,0
S7.1.5	Installing roofing	0	0	0,0%	0,0%	0,0%	0,0%	0,0%	0,0
S7.1.6	Joining parts using soldering, welding/brazing techniques	0	0	0,0%	0,0%	0,0%	0,0%	0,0%	0,0
S7.1.7	Installing and assembling building fixtures	0	0	0,0%	0,0%	0,0%	0,0%	0,0%	0,0
S7.1.8	Installing and assembling rigging equipment	0	0	0,0%	0,0%	0,0%	0,0%	0,0%	0,0
S7.2.0	Installing interior or exterior infrastructure	0	0	0,0%	0,0%	0,0%	0,0%	0,0%	0,0
S7.2.1	Installing heating, ventilation & air conditioning equip.	4	1	0,1%	0,2%	0,1%	0,1%	0,1%	0,0
S7.2.2	Installing plumbing or piping equipment or systems	0	0	0,0%	0,0%	0,0%	0,0%	0,0%	0,0
S7.2.3	Installing insulation materials	1	1	0,1%	0,1%	0,1%	0,0%	0,0%	0,0
S7.3.1	Applying material to fill gaps in surfaces	0	0	0,0%	0,0%	0,0%	0,0%	0,0%	0,0
S7.3.2	Applying textured or masonry coatings	0	0	0,0%	0,0%	0,0%	0,0%	0,0%	0,0
S7.3.3	Applying protective or decorative solutions or coatings	0	0	0,0%	0,0%	0,0%	0,0%	0,0%	0,0
S7.3.4	Installing floor and wall coverings	0	0	0,0%	0,0%	0,0%	0,0%	0,0%	0,0
S8.0.0	Working with machinery and specialised equipment	1	1	0,7%	0,8%	0,7%	0,7%	0,5%	0,2

S8.1.1	Operating earthmoving equipment	0	0	0,0%	0,0%	0,0%	0,0%	0,0%	0,0
S8.1.2	Operating agricultural or forestry equipment	2	1	0,1%	0,0%	0,1%	0,1%	0,1%	-0,1
S8.1.3	Operating lifting or moving equipment	0	0	0,0%	0,0%	0,0%	0,0%	0,0%	0,0
S8.2.0	Driving vehicles	0	0	0,0%	0,0%	0,0%	0,0%	0,0%	0,0
S8.2.1	Driving heavy vehicles	0	0	0,0%	0,0%	0,0%	0,0%	0,0%	0,0
S8.2.2	Driving light vehicles	0	0	0,0%	0,0%	0,0%	0,0%	0,0%	0,0
S8.2.3	Operating rail vehicles	0	0	0,0%	0,0%	0,0%	0,0%	0,0%	0,0
S8.3.0	Operating watercraft	0	0	0,0%	0,0%	0,0%	0,0%	0,0%	0,0
S8.4.0	Operating machinery for extraction/proces. raw materials	1	1	0,1%	0,0%	0,1%	0,1%	0,0%	0,0
S8.4.1	Operating mining, drilling & mineral processing machinery	0	0	0,0%	0,0%	0,0%	0,0%	0,0%	0,0
S8.4.2	Operating metal processing and finishing machinery	0	0	0,0%	0,0%	0,0%	0,0%	0,0%	0,0
S8.4.3	Operating pumping systems or equipment	0	0	0,0%	0,0%	0,0%	0,0%	0,0%	0,0
S8.4.4	Operating energy production or distribution equipment	5	1	0,1%	0,2%	0,1%	0,1%	0,1%	0,0
S8.4.5	Op. petroleum/chemical/water proces. systems or equip.	6	1	0,2%	0,2%	0,2%	0,2%	0,1%	0,1
S8.4.6	Operating wood processing and papermaking machinery	1	1	0,0%	0,0%	0,0%	0,0%	0,0%	0,0
S8.4.7	Operating kilns, furnaces and drying equipment	1	1	0,1%	0,1%	0,1%	0,1%	0,1%	0,0
S8.5.0	Operating machinery for the manufacture of products	0	0	0,0%	0,0%	0,0%	0,0%	0,0%	0,0
S8.5.1	Operating painting or coating machinery	0	0	0,0%	0,0%	0,0%	0,0%	0,0%	0,0
S8.5.2	Operating packaging machinery	0	0	0,0%	0,0%	0,0%	0,0%	0,0%	0,0
S8.5.3	Operating machinery for the manufacture and treatment of textiles, fur and leather products	0	0	0,0%	0,0%	0,0%	0,0%	0,0%	0,0
S8.5.4	Operating food processing machinery	0	0	0,0%	0,0%	0,0%	0,0%	0,0%	0,0
S8.5.5	Operating mixing and separating machinery	0	0	0,0%	0,0%	0,0%	0,0%	0,0%	0,0
S8.5.6	Operating print and photographic production equipment	0	0	0,0%	0,0%	0,0%	0,0%	0,0%	0,0
S8.5.7	Operating metal, plastic or rubber forming equipment	0	0	0,0%	0,0%	0,0%	0,0%	0,0%	0,0
S8.5.8	Operating cutting, grinding and smoothing machinery	1	1	0,2%	0,2%	0,2%	0,2%	0,2%	0,1
S8.6.0	Using precision instrumentation and equipment	0	0	0,0%	0,0%	0,0%	0,0%	0,0%	0,0
S8.6.1	Operating medical equipment	0	0	0,0%	0,0%	0,0%	0,0%	0,0%	0,0
S8.6.2	Operating audio-visual equipment	0	0	0,0%	0,0%	0,0%	0,0%	0,0%	0,0
S8.6.3	Operating scientific and laboratory equipment	1	1	0,2%	0,3%	0,2%	0,2%	0,2%	0,0
S8.6.4	Operating communications equipment	0	0	0,0%	0,0%	0,0%	0,0%	0,0%	0,0
S8.6.5	Operating precision industrial equipment	0	0	0,0%	0,0%	0,0%	0,0%	0,0%	0,0
S8.6.6	Using precision measuring equipment	1	1	0,6%	0,8%	0,6%	0,5%	0,4%	0,2
S8.7.0	Installing, maintaining and repairing mechanical equip.	0	0	0,0%	0,0%	0,0%	0,0%	0,0%	0,0
S8.7.1	Repairing and installing mechanical equipment	2	1	0,4%	0,5%	0,4%	0,3%	0,2%	0,1
S8.7.2	Maintaining mechanical equipment and tools	0	0	0,0%	0,0%	0,0%	0,0%	0,0%	0,0
S8.7.3	Maintaining mechanical machinery	0	0	0,0%	0,0%	0,0%	0,0%	0,0%	0,0
S8.8.0	Installing, maintaining and repairing electrical, electronic and precision equipment	0	0	0,0%	0,0%	0,0%	0,0%	0,0%	0,0
S8.8.1	Installing/repairing electrical, electronic/precision equip.	4	1	0,8%	1,5%	0,8%	0,7%	0,5%	0,3
S8.8.2	Maintaining electrical, electronic and precision equip.	5	1	0,5%	0,7%	0,5%	0,5%	0,4%	0,1
S8.9.0	Operating aircraft	0	0	0,0%	0,0%	0,0%	0,0%	0,0%	0,0

ITALY



Weight of the most demanded occupations in 2040

Italy

ISCO-1-digit classification		TOTAL	Direct	Indirect	Induced	Media 2023	Var (points)
OC1	Managers	6,1%	11,0%	6,2%	5,7%	3,8%	2,4
OC2	Professional	16,3%	18,4%	15,9%	16,5%	15,2%	1,1
OC3	Technicians and associate professionals	17,2%	15,4%	17,6%	16,9%	17,0%	0,1
OC4	Clerical support workers	9,1%	5,3%	9,9%	8,6%	12,9%	-3,8
OC5	Service and sales workers	12,4%	4,3%	10,7%	14,7%	17,4%	-5,0
OC6	Skilled agricultural, forestry and fishery workers	0,0%	0,0%	0,0%	0,0%	2,4%	-2,4
OC7	Craft related trades workers	15,9%	31,5%	15,9%	14,6%	13,4%	2,5
OC8	Plant and machine operators, and assemblers	7,9%	8,3%	8,2%	7,6%	7,1%	0,8
OC9	Elementary occupations	15,1%	5,8%	15,7%	15,4%	10,9%	4,2

Weight of the most demanded occupations in 2040

Italy

ISCO-2-digit classification		TOTAL	Direct	Indirect	Induced	Media 2023	Var (points)
OC11	Chief executives, senior officials and legislators	0,5%	0,7%	0,5%	0,5%	0,4%	0,1
OC12	Administrative and commercial managers	3,1%	6,2%	3,2%	2,7%	0,2%	2,9
OC13	Production and specialized services managers	1,1%	1,3%	1,1%	1,0%	1,4%	-0,3
OC14	Hospitality, retail and other services managers	1,5%	2,7%	1,5%	1,5%	1,9%	-0,4
OC21	Science and engineering professionals	5,6%	10,6%	5,9%	4,8%	2,5%	3,1
OC22	Health professionals	1,2%	0,3%	0,7%	1,8%	1,5%	-0,3
OC23	Teaching professionals	1,0%	0,1%	0,5%	1,5%	5,6%	-4,6
OC24	Business and administration professionals	4,1%	3,7%	4,3%	3,9%	2,3%	1,8
OC25	Information and communications technology professionals	3,3%	3,2%	3,5%	3,2%	1,0%	2,4
OC26	Legal, social and cultural professionals	1,1%	0,5%	0,9%	1,3%	2,3%	-1,2
OC31	Science and engineering associate professionals	6,3%	8,5%	6,6%	5,8%	4,0%	2,3
OC32	Health associate professionals	0,7%	0,1%	0,4%	0,9%	3,4%	-2,8
OC33	Business and administration associate professionals	7,8%	6,2%	8,4%	7,4%	7,0%	0,8
OC34	Legal, social, cultural and related associate professionals	1,6%	0,3%	1,4%	2,0%	1,0%	0,7
OC35	Information and communications technicians	0,8%	0,4%	0,8%	0,8%	1,6%	-0,8
OC41	General and keyboard clerks	1,9%	1,1%	2,1%	1,9%	7,0%	-5,1
OC42	Customer services clerks	1,8%	0,7%	1,8%	1,9%	2,1%	-0,3
OC43	Numerical and material recording clerks	4,1%	2,6%	4,7%	3,7%	2,9%	1,2
OC44	Other clerical support workers	1,2%	1,0%	1,3%	1,1%	0,8%	0,4
OC51	Personal service workers	4,2%	1,2%	2,9%	5,8%	5,4%	-1,2
OC52	Sales workers	7,0%	2,3%	7,0%	7,4%	7,3%	-0,3
OC53	Personal care workers	0,7%	0,6%	0,4%	1,1%	3,3%	-2,6
OC54	Protective services workers	0,4%	0,1%	0,4%	0,4%	1,3%	-0,9
OC61	Market-oriented skilled agricultural workers	0,0%	0,0%	0,0%	0,0%	2,3%	-2,3
OC62	Market-oriented skilled forestry, fishery and hunting workers	0,0%	0,0%	0,0%	0,0%	0,1%	-0,1
OC71	Building and related trades workers, excluding electricians	1,6%	0,5%	1,8%	1,6%	4,4%	-2,7
OC72	Metal, machinery and related trades workers	4,0%	0,8%	4,1%	4,2%	4,0%	0,1
OC73	Handicraft and printing workers	0,2%	0,1%	0,2%	0,2%	0,9%	-0,7
OC74	Electrical and electronic trades workers	8,3%	29,5%	8,1%	6,8%	1,6%	6,7
OC75	Food processing, wood working, garment and other craft and related trades workers	1,7%	0,6%	1,6%	1,8%	2,6%	-0,9
OC81	Stationary plant and machine operators	2,6%	1,7%	2,7%	2,7%	3,0%	-0,3
OC82	Assemblers	3,6%	6,2%	3,6%	3,5%	0,9%	2,8
OC83	Drivers and mobile plant operators	1,6%	0,4%	1,9%	1,4%	3,2%	-1,7
OC91	Cleaners and helpers	3,0%	1,1%	3,2%	3,1%	4,4%	-1,3
OC92	Agricultural, forestry and fishery labourers	0,2%	0,0%	0,3%	0,2%	1,6%	-1,4
OC93	Labourers in mining, construction, manufacturing and transport	10,2%	4,3%	10,9%	10,0%	2,2%	8,0
OC94	Food preparation assistants	1,2%	0,2%	0,9%	1,7%	0,4%	0,8
OC95	Street and related sales and service workers	0,0%	0,0%	0,0%	0,0%	0,4%	-0,4
OC96	Refuse workers and other elementary workers	0,4%	0,2%	0,5%	0,4%	2,0%	-1,6

Weight of the most demanded occupations in 2040

Italy

ISCO-1-digit classification		TOTAL	Direct	Indirect	Induced	Media 2023	Var (points)
S1	Communication, collaboration and creativity	24,0%	22,7%	23,7%	24,5%	26,0%	-2,0
S2	Research and analytical thinking	20,4%	21,3%	20,7%	19,9%	18,4%	2,0
S3	Providing assistance and care	12,0%	10,4%	11,4%	12,6%	3,9%	-1,9
S4	Managerial skills	12,8%	12,1%	12,8%	12,8%	13,3%	-0,5
S5	ICT skills	4,9%	5,6%	5,0%	4,7%	4,4%	0,4
S6	Hand working	12,2%	8,6%	12,2%	12,5%	13,4%	-1,2
S7	Building, repairing and installing	4,5%	6,0%	4,7%	4,3%	3,6%	0,9
S8	Working with specialized machinery and equipment	9,3%	13,3%	9,4%	8,8%	7,1%	2,2

Weight of the most demanded occupations in 2040

Italy

ISCO-2-digit classification		TOTAL	Direct	Indirect	Induced	Media 2023	Var (points)
S1.0	Communication, collaboration and creativity	0,2%	0,2%	0,2%	0,2%	0,3%	-0,09
S1.1	Negotiation	1,5%	1,6%	1,5%	1,4%	1,4%	0,12
S1.11	Systems and product design	1,1%	1,5%	1,2%	1,1%	0,6%	0,50
S1.12	Creating artistic, visual or educational materials	1,3%	1,0%	1,2%	1,3%	1,6%	-0,29
S1.13	Writing and composing	1,4%	1,5%	1,5%	1,4%	1,8%	-0,40
S1.14	Performing and entertaining	0,3%	0,1%	0,2%	0,3%	0,4%	-0,14
S1.15	Proficiency in other languages	0,4%	0,4%	0,4%	0,4%	0,5%	-0,04
S1.2	Liaising & Networking	4,8%	4,3%	4,8%	4,8%	5,2%	-0,46
S1.3	Teaching and training	1,5%	1,2%	1,3%	1,7%	2,7%	-1,15
S1.4	Public speaking and reasoning	0,8%	0,9%	0,8%	0,8%	0,7%	0,02
S1.5	Mentoring	2,5%	2,2%	2,5%	2,6%	2,7%	-0,16
S1.6	Promoting and selling	2,9%	2,7%	2,9%	3,0%	3,1%	-0,11
S1.7	Gathering information	1,2%	0,8%	1,2%	1,2%	1,3%	-0,08
S1.8	Working with others	2,2%	1,7%	2,2%	2,2%	2,5%	-0,29
S1.9	Problem solving	1,9%	2,5%	1,9%	1,8%	1,3%	0,59
S2.0	Information skills	0,0%	0,0%	0,0%	0,0%	0,0%	0,00
S2.1	Surveys and assessments	3,4%	4,3%	3,4%	3,4%	2,9%	0,55
S2.2	Storing and recording information	4,2%	4,3%	4,3%	4,1%	3,9%	0,31
S2.3	Managing information	0,6%	0,6%	0,6%	0,6%	0,8%	-0,15
S2.4	Processing information	1,3%	1,0%	1,3%	1,2%	1,6%	-0,34
S2.5	Measuring physical properties	0,4%	0,4%	0,4%	0,4%	0,4%	0,05
S2.6	Calculations and estimations	1,2%	1,3%	1,3%	1,2%	1,0%	0,19
S2.7	Analysing and evaluating information and data	3,7%	4,0%	3,8%	3,5%	2,8%	0,84
S2.8	Monitoring and testing	5,1%	4,9%	5,2%	5,0%	4,4%	0,70
S2.9	Monitoring developments in the sector of competence	0,5%	0,4%	0,5%	0,5%	0,6%	-0,13
S3.0	Providing assistance and care	0,0%	0,0%	0,0%	0,0%	0,1%	-0,02
S3.1	Offering advices and mentoring	0,2%	0,1%	0,2%	0,2%	0,3%	-0,11
S3.2	Providing health care or medical care	0,4%	0,2%	0,3%	0,5%	0,8%	-0,39
S3.3	Protecting healthcare regulations	8,9%	8,8%	8,8%	8,9%	9,3%	-0,39
S3.4	Providing information and support to the public and customers	1,4%	0,9%	1,3%	1,5%	1,8%	-0,40
S3.5	Preparing and serving food and drinks	0,7%	0,2%	0,5%	0,9%	0,7%	-0,06
S3.6	Providing general assistance to people	0,4%	0,2%	0,3%	0,5%	0,9%	-0,55
S4.0	Managerial skills	0,3%	0,4%	0,3%	0,3%	0,3%	0,01
S4.1	Developing objectives and strategies	2,6%	3,0%	2,6%	2,5%	2,0%	0,53
S4.2	Organising, planning and scheduling work and activities	3,6%	3,4%	3,7%	3,5%	3,1%	0,53

S4.3	Allocating and monitoring resources	1,9%	1,7%	1,9%	1,9%	1,7%	0,24
S4.4	Carrying out administrative activities	2,4%	1,5%	2,4%	2,4%	3,4%	-1,00
S4.5	Driving and motivating the others	0,2%	0,2%	0,2%	0,2%	0,2%	-0,04
S4.6	Team management	0,1%	0,1%	0,1%	0,1%	0,3%	-0,13
S4.7	HR	0,2%	0,2%	0,2%	0,2%	0,2%	-0,03
S4.8	Staff supervision	1,2%	1,2%	1,1%	1,3%	1,8%	-0,61
S4.9	Decision making and problem solving	0,3%	0,3%	0,2%	0,2%	0,3%	0,00
S5.0	Working with computers	0,2%	0,2%	0,2%	0,2%	0,2%	0,02
S5.1	Programming computer systems	0,6%	0,7%	0,6%	0,6%	0,2%	0,34
S5.2	Cyber security	0,9%	1,6%	0,9%	0,8%	0,4%	0,49
S5.5	Accessing and understanding digital data	1,6%	1,5%	1,7%	1,6%	1,9%	-0,26
S5.6	Using digital tools for collab., content creation & problem solving	1,0%	1,0%	1,0%	0,9%	1,2%	-0,28
S5.7	Using digital tools to control and manage machinery	0,6%	0,6%	0,6%	0,6%	0,4%	0,14
S6.0	Moving and transferring goods and products	0,0%	0,0%	0,0%	0,0%	0,0%	0,01
S6.1	Sorting and packaging of goods and materials	1,5%	0,8%	1,5%	1,5%	1,2%	0,28
S6.11	Cleaning	2,3%	1,1%	2,3%	2,4%	2,9%	-0,61
S6.12	Washing and maintaining textiles and clothing	0,2%	0,1%	0,2%	0,2%	0,3%	-0,13
S6.13	Managing dangerous waste materials	1,0%	0,6%	1,0%	1,0%	1,1%	-0,17
S6.2	Lifting and transferring goods and products	2,0%	1,1%	2,1%	2,0%	1,5%	0,50
S6.3	Transforming and mixing materials	0,5%	0,5%	0,5%	0,5%	0,5%	0,02
S6.4	Dealing with plants and crops	0,1%	0,0%	0,1%	0,1%	0,8%	-0,65
S6.5	Assembling and manufacturing products	1,4%	1,8%	1,4%	1,4%	1,1%	0,32
S6.6	Creating casts, models and samples	0,2%	0,1%	0,2%	0,2%	0,2%	-0,02
S6.7	Using and mastering hand tools	1,5%	1,5%	1,5%	1,4%	1,2%	0,26
S6.8	Placing materials, tools or equipment	0,7%	0,6%	0,7%	0,7%	0,5%	0,15
S6.9	Farming	0,9%	0,3%	0,7%	1,0%	2,0%	-1,13
S7.0	Hand working	0,1%	0,0%	0,1%	0,1%	0,0%	0,07
S7.1	Building and repairing structure	3,4%	5,3%	3,5%	3,2%	2,5%	0,98
S7.2	Installing indoor or outdoor infrastructure	0,5%	0,4%	0,5%	0,5%	0,5%	-0,05
S7.3	Finishing the interior or exterior of structures	0,5%	0,3%	0,5%	0,5%	0,6%	-0,09
S8.0	Working with specialized machinery and equipment	0,7%	1,0%	0,7%	0,7%	0,6%	0,18
S8.1	Using non-common vehicles	1,1%	0,6%	1,1%	1,0%	0,9%	0,20
S8.2	Driving vehicles	0,6%	0,4%	0,6%	0,6%	0,6%	-0,01
S8.3	Driving boats	0,2%	0,1%	0,2%	0,2%	0,3%	-0,09
S8.4	Using extraction machinery and treating raw materials	0,7%	0,6%	0,8%	0,7%	0,6%	0,12
S8.5	Using machinery for products manufacturing	1,2%	0,9%	1,2%	1,2%	1,2%	0,00
S8.6	Using precision instruments and equipment	1,8%	2,5%	1,8%	1,7%	1,6%	0,21
S8.7	Installing, maintaining and repairing mechanical equipment	0,7%	0,8%	0,7%	0,7%	0,5%	0,15
S8.8	Installing/maintain./repairing electrical, electronic & precision equip.	2,2%	6,3%	2,2%	1,9%	0,8%	1,39
S8.9	Piloting aircraft	0,1%	0,1%	0,1%	0,1%	0,0%	0,03

Weight of the most demanded occupations in 2040

Italy

ESCO-3-digit classification		TOTAL	Direct	Indirect	Induced	Media 2023	Var (points)
S1.0.0	Communication, collaboration and creativity	0,2%	0,2%	0,2%	0,2%	0,3%	-0,09
S1.1.0	Negotiating	0,0%	0,0%	0,0%	0,0%	0,0%	-0,01
S1.1.1	Negotiating and managing contracts and agreements	0,9%	1,2%	1,0%	0,9%	0,8%	0,16
S1.1.2	Mediating and resolving disputes	0,3%	0,3%	0,3%	0,3%	0,3%	0,03
S1.1.3	Responding to complaints	0,3%	0,2%	0,2%	0,3%	0,3%	-0,06
S1.11.0	Designing systems and products	0,3%	0,4%	0,3%	0,2%	0,1%	0,11
S1.11.1	Designing ict systems or applications	0,2%	0,2%	0,3%	0,2%	0,1%	0,16
S1.11.2	Designing electrical or electronic systems or equipment	0,1%	0,2%	0,1%	0,1%	0,1%	0,05
S1.11.3	Developing recipes or menus	0,1%	0,0%	0,1%	0,1%	0,1%	0,00
S1.11.4	Designing structures or facilities	0,2%	0,2%	0,2%	0,2%	0,1%	0,07
S1.11.5	Designing industrial materials, systems or products	0,3%	0,4%	0,3%	0,2%	0,2%	0,11
S1.12.0	Creating artistic, visual or instructive materials	0,1%	0,0%	0,1%	0,1%	0,1%	-0,02
S1.12.1	Creating visual displays and decorations	0,6%	0,5%	0,6%	0,6%	0,6%	0,00
S1.12.2	Developing instructive or promotional materials	0,2%	0,2%	0,2%	0,3%	0,5%	-0,22
S1.12.3	Creating artistic designs or performances	0,4%	0,3%	0,3%	0,4%	0,4%	-0,05
S1.13.0	Writing and composing	0,1%	0,1%	0,1%	0,1%	0,3%	-0,17
S1.13.1	Composing music	0,0%	0,0%	0,0%	0,0%	0,0%	-0,03
S1.13.2	Artistic and creative writing	0,1%	0,1%	0,1%	0,1%	0,3%	-0,13
S1.13.3	Technical or academic writing	1,2%	1,3%	1,2%	1,1%	1,2%	-0,08
S1.14.0	Performing and entertaining	0,0%	0,0%	0,0%	0,0%	0,0%	0,00
S1.14.1	Practising sports	0,1%	0,0%	0,0%	0,1%	0,1%	-0,02
S1.14.2	Performing artistic or cultural activities	0,2%	0,1%	0,1%	0,2%	0,2%	-0,09
S1.14.3	Conducting gaming activities	0,1%	0,1%	0,1%	0,1%	0,1%	-0,03
S1.15.0	Using more than one language	0,0%	0,0%	0,0%	0,0%	0,0%	-0,01
S1.15.1	Using foreign languages	0,4%	0,3%	0,3%	0,4%	0,4%	-0,03
S1.15.2	Translating and interpreting	0,1%	0,1%	0,1%	0,1%	0,0%	0,00
S1.2.0	Liaising and networking	0,3%	0,3%	0,3%	0,2%	0,3%	-0,07
S1.2.1	Communicating with colleagues and clients	1,3%	0,9%	1,3%	1,3%	1,5%	-0,24
S1.2.3	Developing professional relationships or networks	1,7%	1,6%	1,7%	1,8%	1,9%	-0,14
S1.2.4	Advocating for individual or community needs	0,3%	0,3%	0,3%	0,3%	0,4%	-0,07
S1.2.5	Collaborating and liaising	1,2%	1,2%	1,2%	1,2%	1,1%	0,06
S1.3.0	Teaching and training	0,2%	0,1%	0,1%	0,2%	0,6%	-0,38
S1.3.1	Teaching academic or vocational subjects	0,1%	0,1%	0,1%	0,2%	0,4%	-0,26
S1.3.2	Teaching safety procedures	0,1%	0,1%	0,0%	0,1%	0,1%	-0,01
S1.3.3	Training on operational procedures	0,7%	0,7%	0,7%	0,8%	0,8%	-0,07
S1.3.4	Training on health or medical topics	0,1%	0,0%	0,0%	0,1%	0,2%	-0,09
S1.3.5	Coaching and mentoring	0,3%	0,2%	0,3%	0,4%	0,7%	-0,34
S1.4.0	Presenting information	0,0%	0,0%	0,0%	0,0%	0,0%	0,00
S1.4.1	Presenting general information	0,3%	0,3%	0,3%	0,3%	0,4%	-0,03
S1.4.2	Presenting research or technical information	0,4%	0,5%	0,4%	0,4%	0,3%	0,05
S1.4.3	Presenting information in legal proceedings	0,0%	0,0%	0,0%	0,0%	0,0%	0,00
S1.5.0	Advising and consulting	0,2%	0,2%	0,2%	0,2%	0,2%	-0,01
S1.5.1	Advising on legal, regulatory or procedural matters	0,3%	0,4%	0,4%	0,3%	0,3%	0,07
S1.5.2	Providing financial advice	0,4%	0,4%	0,4%	0,4%	0,3%	0,11
S1.5.3	Advising on products and services	0,8%	0,5%	0,8%	0,9%	0,9%	-0,04
S1.5.4	Providing medical advice	0,2%	0,1%	0,2%	0,3%	0,5%	-0,28
S1.5.5	Advising on environmental issues	0,2%	0,3%	0,2%	0,2%	0,1%	0,03
S1.5.6	Advising on design or use of technologies	0,1%	0,1%	0,1%	0,1%	0,1%	0,01

S1.5.7	Advising on business or operational matters	0,1%	0,1%	0,1%	0,1%	0,1%	0,01
S1.5.8	Advising on educational or vocational matters	0,0%	0,0%	0,0%	0,1%	0,1%	-0,07
S1.5.9	Advising on workplace health and safety issues	0,1%	0,1%	0,1%	0,1%	0,1%	0,00
S1.6.0	Promoting, selling and purchasing	0,1%	0,1%	0,1%	0,1%	0,1%	0,03
S1.6.1	Selling products or services	1,2%	0,8%	1,2%	1,2%	1,3%	-0,08
S1.6.2	Promoting products, services, or programs	1,1%	1,2%	1,1%	1,2%	1,2%	-0,01
S1.6.3	Purchasing goods or services	0,5%	0,6%	0,5%	0,5%	0,6%	-0,05
S1.7.1	Interviewing	0,2%	0,1%	0,2%	0,2%	0,3%	-0,05
S1.7.2	Engaging with others to identify needs	0,8%	0,6%	0,8%	0,8%	0,7%	0,05
S1.7.3	Listening and asking questions	0,2%	0,1%	0,2%	0,2%	0,3%	-0,08
S1.8.0	Working with others	0,2%	0,2%	0,2%	0,2%	0,2%	-0,01
S1.8.1	Working in teams	0,8%	0,7%	0,8%	0,8%	0,8%	0,04
S1.8.2	Giving instructions	0,2%	0,2%	0,2%	0,2%	0,2%	-0,03
S1.8.3	Giving feedback	0,2%	0,1%	0,1%	0,2%	0,3%	-0,15
S1.8.4	Accepting feedback	0,1%	0,1%	0,1%	0,2%	0,2%	-0,08
S1.8.5	Following instructions and procedures	0,6%	0,4%	0,6%	0,6%	0,7%	-0,04
S1.8.6	Assisting and supporting co-workers	0,1%	0,1%	0,1%	0,1%	0,1%	-0,02
S1.9.0	Solving problems	0,0%	0,0%	0,0%	0,0%	0,0%	-0,01
S1.9.1	Developing solutions	1,4%	2,1%	1,4%	1,3%	0,9%	0,48
S1.9.2	Implementing new procedures or processes	0,5%	0,4%	0,5%	0,4%	0,4%	0,12
S2.0.0	Information skills	0,0%	0,0%	0,0%	0,0%	0,0%	0,00
S2.1.0	Conducting studies, investigations and examinations	0,4%	0,3%	0,4%	0,4%	0,3%	0,03
S2.1.1	Conducting academic or market research	1,3%	1,6%	1,3%	1,3%	1,1%	0,13
S2.1.2	Diagnosing health conditions	0,1%	0,0%	0,1%	0,2%	0,2%	-0,12
S2.1.3	Interpreting technical documentation and diagrams	1,6%	2,3%	1,6%	1,5%	1,1%	0,51
S2.1.4	Carrying out forensic and police investigations	0,1%	0,1%	0,1%	0,1%	0,1%	0,00
S2.2.0	Documenting and recording information	0,2%	0,2%	0,2%	0,2%	0,2%	0,02
S2.2.1	Preparing financial documents, records, reports, or budgets	0,6%	0,6%	0,7%	0,6%	0,5%	0,15
S2.2.2	Recording legal information	0,1%	0,1%	0,1%	0,1%	0,0%	0,01
S2.2.3	Preparing documentation for contracts, applications, or permits	0,3%	0,3%	0,3%	0,3%	0,2%	0,05
S2.2.4	Maintaining or preparing medical documentation	0,1%	0,0%	0,1%	0,1%	0,2%	-0,10
S2.2.5	Maintaining operational records	2,2%	2,3%	2,3%	2,2%	2,2%	0,00
S2.2.6	Documenting technical designs, procedures, problems or activities	0,4%	0,4%	0,4%	0,3%	0,2%	0,13
S2.2.7	Reporting incidents and defects	0,3%	0,5%	0,3%	0,3%	0,3%	0,06
S2.3.0	Managing information	0,6%	0,6%	0,6%	0,6%	0,8%	-0,15
S2.4.0	Processing information	0,0%	0,0%	0,0%	0,0%	0,0%	0,01
S2.4.1	Gathering information from physical or electronic sources	0,7%	0,6%	0,7%	0,7%	0,7%	-0,02
S2.4.2	Entering and transforming information	0,5%	0,4%	0,6%	0,5%	0,9%	-0,34
S2.5.0	Measuring physical properties	0,1%	0,0%	0,1%	0,1%	0,1%	0,01
S2.5.1	Measuring dimensions and related properties	0,3%	0,3%	0,3%	0,3%	0,2%	0,02
S2.5.2	Weighing	0,1%	0,0%	0,1%	0,1%	0,1%	0,02
S2.6.0	Calculating and estimating	0,0%	0,0%	0,0%	0,0%	0,0%	0,01
S2.6.1	Performing calculations	0,7%	0,6%	0,7%	0,7%	0,6%	0,10
S2.6.2	Determining values of goods or services	0,2%	0,2%	0,2%	0,1%	0,1%	0,01
S2.6.3	Estimating resource needs	0,4%	0,6%	0,4%	0,4%	0,3%	0,07
S2.7.0	Analysing and evaluating information and data	0,6%	0,6%	0,6%	0,6%	0,7%	-0,03
S2.7.1	Assessing land or real estate	0,2%	0,2%	0,2%	0,2%	0,1%	0,04
S2.7.2	Analysing scientific and medical data	0,2%	0,2%	0,2%	0,2%	0,2%	0,01
S2.7.3	Analysing financial and economic data	0,7%	0,7%	0,7%	0,6%	0,5%	0,21
S2.7.4	Analysing business operations	0,9%	1,0%	1,0%	0,9%	0,6%	0,38
S2.7.5	Performing risk analysis and management	0,7%	0,7%	0,7%	0,7%	0,5%	0,14
S2.7.6	Evaluating systems, programmes, equipment and products	0,4%	0,5%	0,4%	0,4%	0,3%	0,09

S2.8.0	Monitoring, inspecting and testing	0,4%	0,3%	0,4%	0,4%	0,3%	0,06
S2.8.1	Testing electrical and mechanical systems or equipment	0,2%	0,3%	0,2%	0,2%	0,2%	0,06
S2.8.10	Monitoring quality of products	1,5%	1,6%	1,5%	1,4%	1,1%	0,36
S2.8.11	Testing vehicles	0,3%	0,3%	0,3%	0,3%	0,2%	0,07
S2.8.2	Monitoring operational activities	1,2%	1,0%	1,2%	1,2%	1,0%	0,13
S2.8.3	Monitoring financial and economic resources and activity	0,4%	0,4%	0,4%	0,4%	0,3%	0,10
S2.8.4	Monitoring safety or security	0,7%	0,5%	0,7%	0,7%	0,5%	0,12
S2.8.5	Monitoring environmental conditions	0,1%	0,2%	0,1%	0,1%	0,1%	0,01
S2.8.6	Monitoring health conditions of humans and animals	0,2%	0,1%	0,1%	0,2%	0,4%	-0,22
S2.8.8	Testing and analysing substances	0,2%	0,2%	0,2%	0,2%	0,1%	0,02
S2.8.9	Inspecting food safety and quality	0,0%	0,0%	0,0%	0,0%	0,0%	-0,02
S2.9.0	Monitoring developments in area of expertise	0,5%	0,4%	0,5%	0,5%	0,6%	-0,13
S3.0.0	Assisting and caring	0,0%	0,0%	0,0%	0,0%	0,1%	-0,02
S3.1.0	Counselling	0,0%	0,0%	0,0%	0,0%	0,0%	-0,01
S3.1.1	Counselling on personal, family or social issues	0,0%	0,0%	0,0%	0,1%	0,1%	-0,03
S3.1.2	Providing support to resolve problems	0,1%	0,1%	0,1%	0,1%	0,2%	-0,05
S3.1.3	Assisting people to access services	0,0%	0,0%	0,0%	0,0%	0,1%	-0,02
S3.2.0	Providing health care or medical treatments	0,1%	0,0%	0,0%	0,1%	0,2%	-0,09
S3.2.1	Providing medical, dental and nursing care	0,2%	0,1%	0,2%	0,2%	0,4%	-0,19
S3.2.2	Performing surgical procedures	0,0%	0,0%	0,0%	0,0%	0,0%	-0,01
S3.2.3	Providing physical therapies	0,0%	0,0%	0,0%	0,0%	0,1%	-0,02
S3.2.4	Providing psychological and occupational therapies	0,0%	0,0%	0,0%	0,0%	0,1%	-0,03
S3.2.5	Prescribing and ordering medical tests, treatments or devices	0,0%	0,0%	0,0%	0,0%	0,1%	-0,02
S3.2.6	Fitting assistive devices	0,0%	0,0%	0,0%	0,0%	0,0%	-0,02
S3.3.0	Protecting and enforcing	0,2%	0,2%	0,2%	0,2%	0,2%	-0,02
S3.3.1	Complying with health and safety procedures	4,0%	4,6%	3,9%	4,1%	4,0%	0,01
S3.3.2	Complying with environmental protection laws and standards	0,4%	0,4%	0,4%	0,4%	0,5%	-0,08
S3.3.3	Complying with operational procedures	1,7%	1,7%	1,7%	1,7%	1,6%	0,07
S3.3.4	Verifying identities and documentation	0,2%	0,1%	0,2%	0,2%	0,2%	-0,02
S3.3.5	Maintaining and enforcing physical security	0,9%	0,6%	0,8%	0,9%	1,2%	-0,38
S3.3.6	Protecting privacy and personal data	0,3%	0,2%	0,3%	0,3%	0,4%	-0,05
S3.3.7	Ensuring compliance with legislation	1,1%	1,0%	1,2%	1,1%	1,1%	0,08
S3.4.0	Providing information and support to the public and clients	0,0%	0,0%	0,0%	0,0%	0,0%	-0,01
S3.4.1	Providing information to the public and clients	0,2%	0,1%	0,2%	0,2%	0,2%	-0,05
S3.4.2	Accompanying and welcoming people	0,3%	0,1%	0,3%	0,4%	0,5%	-0,18
S3.4.4	Providing general assistance to people	0,9%	0,7%	0,9%	1,0%	1,1%	-0,17
S3.5.0	Preparing and serving food and drinks	0,0%	0,0%	0,0%	0,0%	0,0%	-0,02
S3.5.1	Preparing food and drinks	0,6%	0,2%	0,4%	0,7%	0,5%	0,01
S3.5.2	Serving food and drinks	0,1%	0,0%	0,1%	0,1%	0,2%	-0,06
S3.6.0	Providing personal care	0,0%	0,0%	0,0%	0,0%	0,0%	0,00
S3.6.1	Assisting people with mobility	0,1%	0,0%	0,0%	0,1%	0,1%	-0,06
S3.6.2	Assisting with personal needs	0,1%	0,0%	0,1%	0,1%	0,1%	-0,08
S3.6.3	Caring for children	0,1%	0,1%	0,1%	0,2%	0,5%	-0,36
S3.6.4	Styling hair and providing beauty treatments	0,1%	0,0%	0,1%	0,2%	0,2%	-0,05
S4.0.0	Management skills	0,3%	0,4%	0,3%	0,3%	0,3%	0,01
S4.1.0	Developing objectives and strategies	0,2%	0,3%	0,2%	0,2%	0,1%	0,06
S4.1.1	Identifying opportunities	0,3%	0,3%	0,3%	0,3%	0,3%	0,08
S4.1.2	Developing financial, business or marketing plans	0,6%	0,8%	0,6%	0,6%	0,4%	0,24
S4.1.3	Developing operational policies and procedures	0,8%	1,0%	0,9%	0,8%	0,5%	0,29
S4.1.4	Developing policies and legislation	0,1%	0,1%	0,1%	0,1%	0,1%	0,03
S4.1.5	Developing health programmes	0,1%	0,1%	0,1%	0,1%	0,1%	0,01
S4.1.6	Developing educational programmes	0,2%	0,2%	0,2%	0,3%	0,4%	-0,18

S4.1.7	Developing contingency and emergency response plans	0,2%	0,2%	0,2%	0,2%	0,1%	0,01
S4.2.0	Organising, planning and scheduling work and activities	0,2%	0,1%	0,2%	0,2%	0,1%	0,06
S4.2.1	Directing operational activities	0,8%	0,8%	0,9%	0,8%	0,8%	0,04
S4.2.2	Planning events and programmes	1,3%	1,2%	1,3%	1,3%	1,2%	0,02
S4.2.3	Directing, supervising and coordinating projects	0,3%	0,4%	0,3%	0,3%	0,2%	0,09
S4.2.4	Managing transport and logistics activities	0,5%	0,4%	0,6%	0,5%	0,3%	0,21
S4.2.5	Planning production processes	0,4%	0,5%	0,5%	0,4%	0,3%	0,11
S4.3.0	Allocating and controlling resources	0,0%	0,0%	0,0%	0,0%	0,1%	-0,02
S4.3.1	Managing budgets or finances	0,8%	0,9%	0,8%	0,7%	0,6%	0,14
S4.3.2	Managing and administering human resources	0,2%	0,2%	0,2%	0,2%	0,2%	0,03
S4.3.3	Allocating and controlling physical resources	0,9%	0,6%	0,9%	0,9%	0,8%	0,08
S4.4.0	Performing administrative activities	0,0%	0,0%	0,0%	0,0%	0,0%	0,00
S4.4.2	Executing financial transactions	1,3%	0,7%	1,3%	1,4%	1,5%	-0,12
S4.4.3	Performing general clerical and administrative tasks	1,0%	0,8%	1,1%	1,0%	1,9%	-0,88
S4.5.0	Leading and motivating	0,2%	0,2%	0,2%	0,2%	0,2%	-0,04
S4.6.0	Building and developing teams	0,1%	0,1%	0,1%	0,1%	0,3%	-0,13
S4.7.0	Recruiting and hiring	0,2%	0,2%	0,2%	0,2%	0,2%	-0,03
S4.8.1	Supervising a team or group	0,7%	0,7%	0,7%	0,7%	0,7%	-0,01
S4.8.2	Assigning work to others	0,0%	0,0%	0,0%	0,0%	0,1%	-0,04
S4.8.3	Monitoring and evaluating the performance of individuals	0,6%	0,4%	0,5%	0,6%	1,1%	-0,55
S4.9.0	Making decisions	0,3%	0,3%	0,2%	0,2%	0,3%	0,00
S5.0.0	Working with computers	0,2%	0,2%	0,2%	0,2%	0,2%	0,02
S5.1.0	Programming computer systems	0,6%	0,7%	0,6%	0,6%	0,2%	0,34
S5.2.1	Setting up computer systems	0,2%	0,4%	0,3%	0,2%	0,1%	0,13
S5.2.2	Protecting ict devices	0,5%	0,9%	0,5%	0,4%	0,2%	0,27
S5.2.3	Resolving computer problems	0,2%	0,3%	0,2%	0,2%	0,1%	0,09
S5.5.0	Accessing and analysing digital data	0,6%	0,5%	0,6%	0,6%	0,5%	0,08
S5.5.1	Browsing, searching and filtering digital data	0,0%	0,0%	0,0%	0,0%	0,0%	0,00
S5.5.2	Managing, gathering and storing digital data	1,0%	0,9%	1,1%	1,0%	1,4%	-0,35
S5.6.0	Use digital tools for collaboration, content creation and problem solving	0,0%	0,0%	0,0%	0,0%	0,0%	0,00
S5.6.1	Using digital tools for collaboration and productivity	0,4%	0,3%	0,4%	0,4%	0,7%	-0,25
S5.6.2	Using word processing, publishing and presentation software	0,1%	0,1%	0,1%	0,1%	0,3%	-0,13
S5.6.3	Using computer aided design and drawing tools	0,3%	0,5%	0,4%	0,3%	0,2%	0,14
S5.6.4	Using digital tools for processing sound and images	0,1%	0,1%	0,1%	0,1%	0,1%	-0,03
S5.7.0	Using digital tools to control machinery	0,6%	0,6%	0,6%	0,6%	0,4%	0,14
S6.0.0	Handling and moving	0,0%	0,0%	0,0%	0,0%	0,0%	0,01
S6.1.0	Sorting and packaging goods and materials	0,0%	0,0%	0,0%	0,0%	0,0%	0,00
S6.1.1	Sorting materials or products	0,6%	0,4%	0,6%	0,6%	0,6%	-0,04
S6.1.2	Marking materials or objects for identification	0,4%	0,2%	0,4%	0,4%	0,3%	0,09
S6.1.3	Packaging objects	0,5%	0,2%	0,5%	0,4%	0,2%	0,23
S6.11.0	Cleaning	0,2%	0,1%	0,2%	0,2%	0,2%	-0,06
S6.11.1	Cleaning tools, equipment, workpieces and vehicles	0,7%	0,5%	0,7%	0,8%	0,8%	-0,07
S6.11.2	Cleaning interior and exterior of buildings	1,3%	0,5%	1,3%	1,4%	1,7%	-0,42
S6.11.3	Cleaning outdoor spaces	0,1%	0,0%	0,1%	0,1%	0,2%	-0,07
S6.12.0	Washing and maintaining textiles and clothing	0,2%	0,1%	0,2%	0,2%	0,3%	-0,13
S6.13.0	Handling and disposing of waste and hazardous materials	0,0%	0,0%	0,0%	0,0%	0,0%	-0,02
S6.13.1	Handling and disposing of hazardous materials	0,6%	0,4%	0,6%	0,6%	0,7%	-0,06
S6.13.2	Disposing of non-hazardous waste or debris	0,4%	0,1%	0,3%	0,4%	0,4%	-0,08
S6.2.0	Moving and lifting	0,0%	0,0%	0,1%	0,0%	0,0%	0,02
S6.2.1	Loading and unloading goods and, materials	0,6%	0,3%	0,7%	0,6%	0,4%	0,23
S6.2.2	Moving or lifting materials, equipment, or supplies	0,6%	0,4%	0,6%	0,6%	0,3%	0,23

S6.2.3	Storing goods and materials	0,8%	0,3%	0,8%	0,8%	0,8%	0,02
S6.3.0	Transforming and blending materials	0,0%	0,0%	0,0%	0,0%	0,0%	0,01
S6.3.1	Preparing mixtures or solutions	0,2%	0,1%	0,2%	0,2%	0,2%	0,02
S6.3.3	Preparing industrial materials for processing or use	0,2%	0,1%	0,2%	0,2%	0,1%	0,03
S6.3.6	Collecting and preparing specimens or materials for testing	0,1%	0,2%	0,1%	0,1%	0,2%	-0,03
S6.4.0	Tending plants and crops	0,0%	0,0%	0,0%	0,0%	0,0%	-0,01
S6.4.1	Cultivating land and crops	0,1%	0,0%	0,1%	0,1%	0,5%	-0,42
S6.4.2	Planting, pruning and harvesting trees, crops and other plants	0,0%	0,0%	0,0%	0,0%	0,3%	-0,21
S6.5.0	Assembling and fabricating products	0,5%	0,6%	0,5%	0,5%	0,4%	0,17
S6.5.1	Fabricating precision instruments or jewellery	0,1%	0,1%	0,1%	0,1%	0,1%	-0,01
S6.5.2	Fabricating medical and prosthetic devices	0,0%	0,1%	0,0%	0,1%	0,1%	-0,02
S6.5.3	Assembling electrical and electronic products	0,3%	0,7%	0,3%	0,2%	0,1%	0,19
S6.5.4	Assembling mechanical products	0,1%	0,1%	0,1%	0,1%	0,0%	0,03
S6.5.5	Assembling furniture	0,0%	0,0%	0,0%	0,0%	0,1%	-0,01
S6.5.6	Fabricating garments and textile products	0,2%	0,1%	0,2%	0,2%	0,2%	0,00
S6.5.7	Fabricating food and related products	0,1%	0,1%	0,1%	0,1%	0,2%	-0,03
S6.5.8	Fabricating tobacco products	0,0%	0,0%	0,0%	0,0%	0,0%	-0,01
S6.6.1	Making production moulds and casts	0,1%	0,1%	0,1%	0,1%	0,1%	-0,01
S6.6.2	Making patterns and templates	0,0%	0,0%	0,0%	0,0%	0,1%	-0,02
S6.6.3	Making models	0,0%	0,1%	0,0%	0,0%	0,0%	0,01
S6.7.0	Using hand tools	0,4%	0,3%	0,4%	0,4%	0,3%	0,07
S6.7.1	Cutting materials and drilling holes	0,4%	0,4%	0,4%	0,4%	0,3%	0,06
S6.7.2	Shaping materials to create products	0,1%	0,1%	0,1%	0,1%	0,1%	0,00
S6.7.3	Smoothing surfaces of objects or equipment	0,3%	0,3%	0,3%	0,3%	0,3%	-0,01
S6.7.4	Using precision hand tools	0,1%	0,3%	0,1%	0,1%	0,1%	0,07
S6.7.5	Hammering, nailing and riveting	0,1%	0,1%	0,1%	0,1%	0,1%	0,07
S6.8.0	Positioning materials, tools or equipment	0,7%	0,6%	0,7%	0,7%	0,5%	0,15
S6.9.0	Handling animals	0,0%	0,0%	0,0%	0,0%	0,0%	0,00
S6.9.1	Tending and breeding animals	0,2%	0,1%	0,2%	0,3%	0,6%	-0,43
S6.9.2	Tending and breeding aquatic animals	0,1%	0,0%	0,1%	0,1%	0,2%	-0,16
S6.9.3	Moving and herding animals	0,1%	0,0%	0,1%	0,2%	0,2%	-0,07
S6.9.4	Hunting, trapping and slaughtering animals	0,0%	0,0%	0,0%	0,0%	0,1%	-0,03
S6.9.5	Feeding and grooming animals	0,1%	0,0%	0,1%	0,1%	0,2%	-0,13
S6.9.6	Training animals	0,1%	0,0%	0,1%	0,1%	0,2%	-0,06
S6.9.7	Providing therapy or veterinary treatment for animals	0,2%	0,1%	0,1%	0,3%	0,5%	-0,26
S7.0.0	Constructing	0,1%	0,0%	0,1%	0,1%	0,0%	0,07
S7.1.0	Building and repairing structures	0,1%	0,1%	0,1%	0,1%	0,1%	0,04
S7.1.1	Installing structural masonry materials	0,0%	0,0%	0,0%	0,0%	0,0%	-0,01
S7.1.2	Installing wooden and metal components	2,3%	3,8%	2,3%	2,1%	1,7%	0,56
S7.1.4	Installing concrete components	0,1%	0,1%	0,1%	0,1%	0,1%	0,07
S7.1.5	Installing roofing	0,0%	0,0%	0,0%	0,0%	0,1%	-0,02
S7.1.6	Joining parts using soldering, welding or brazing techniques	0,6%	1,1%	0,7%	0,6%	0,3%	0,31
S7.1.7	Installing and assembling building fixtures	0,1%	0,2%	0,1%	0,1%	0,1%	0,02
S7.1.8	Installing and assembling rigging equipment	0,1%	0,1%	0,1%	0,1%	0,1%	0,01
S7.2.0	Installing interior or exterior infrastructure	0,0%	0,0%	0,0%	0,0%	0,0%	-0,02
S7.2.1	Installing heating, ventilation and air conditioning equipment	0,1%	0,2%	0,1%	0,1%	0,1%	-0,01
S7.2.2	Installing plumbing or piping equipment or systems	0,4%	0,2%	0,4%	0,3%	0,3%	0,03
S7.2.3	Installing insulation materials	0,0%	0,0%	0,0%	0,0%	0,1%	-0,04
S7.3.1	Applying material to fill gaps in surfaces	0,1%	0,0%	0,1%	0,1%	0,0%	0,02
S7.3.2	Applying textured or masonry coatings	0,0%	0,0%	0,0%	0,0%	0,0%	0,00
S7.3.3	Applying protective or decorative solutions or coatings	0,3%	0,2%	0,3%	0,3%	0,4%	-0,07
S7.3.4	Installing floor and wall coverings	0,1%	0,0%	0,1%	0,1%	0,1%	-0,04

S8.0.0	Working with machinery and specialised equipment	0,7%	1,0%	0,7%	0,7%	0,6%	0,18
S8.1.1	Operating earthmoving equipment	0,4%	0,3%	0,4%	0,4%	0,3%	0,12
S8.1.2	Operating agricultural or forestry equipment	0,1%	0,0%	0,1%	0,1%	0,3%	-0,20
S8.1.3	Operating lifting or moving equipment	0,6%	0,3%	0,6%	0,6%	0,3%	0,27
S8.2.0	Driving vehicles	0,3%	0,3%	0,3%	0,3%	0,3%	-0,03
S8.2.1	Driving heavy vehicles	0,1%	0,0%	0,1%	0,1%	0,1%	0,00
S8.2.2	Driving light vehicles	0,1%	0,0%	0,1%	0,1%	0,1%	-0,02
S8.2.3	Operating rail vehicles	0,1%	0,1%	0,2%	0,1%	0,1%	0,04
S8.3.0	Operating watercraft	0,2%	0,1%	0,2%	0,2%	0,3%	-0,09
S8.4.0	Operating machinery to extract and process raw materials	0,1%	0,1%	0,1%	0,1%	0,0%	0,01
S8.4.1	Operating mining, drilling and mineral processing machinery	0,1%	0,0%	0,1%	0,1%	0,0%	0,01
S8.4.2	Operating metal processing and finishing machinery	0,1%	0,0%	0,1%	0,1%	0,1%	0,00
S8.4.3	Operating pumping systems or equipment	0,2%	0,1%	0,2%	0,2%	0,1%	0,02
S8.4.4	Operating energy production or distribution equipment	0,1%	0,2%	0,1%	0,1%	0,1%	0,04
S8.4.5	Operating petroleum, chemical or water processing systems/equip.	0,2%	0,1%	0,2%	0,2%	0,1%	0,06
S8.4.6	Operating wood processing and papermaking machinery	0,0%	0,0%	0,0%	0,0%	0,0%	-0,01
S8.4.7	Operating kilns, furnaces and drying equipment	0,1%	0,1%	0,1%	0,1%	0,1%	-0,02
S8.5.0	Operating machinery for the manufacture of products	0,2%	0,2%	0,2%	0,2%	0,1%	0,05
S8.5.1	Operating painting or coating machinery	0,0%	0,0%	0,0%	0,0%	0,0%	0,00
S8.5.2	Operating packaging machinery	0,0%	0,0%	0,0%	0,0%	0,0%	0,02
S8.5.3	Operating machinery for the manufacture and treatment of textiles, fur and leather products	0,2%	0,2%	0,2%	0,2%	0,3%	-0,02
S8.5.4	Operating food processing machinery	0,2%	0,1%	0,2%	0,2%	0,3%	-0,06
S8.5.5	Operating mixing and separating machinery	0,1%	0,0%	0,1%	0,1%	0,1%	0,00
S8.5.6	Operating print and photographic production equipment	0,1%	0,1%	0,1%	0,1%	0,1%	-0,02
S8.5.7	Operating metal, plastic or rubber forming equipment	0,2%	0,1%	0,2%	0,2%	0,1%	0,02
S8.5.8	Operating cutting, grinding and smoothing machinery	0,2%	0,1%	0,2%	0,2%	0,2%	0,01
S8.6.0	Using precision instrumentation and equipment	0,2%	0,2%	0,2%	0,2%	0,1%	0,04
S8.6.1	Operating medical equipment	0,0%	0,0%	0,0%	0,0%	0,1%	-0,05
S8.6.2	Operating audio-visual equipment	0,2%	0,2%	0,2%	0,2%	0,3%	-0,10
S8.6.3	Operating scientific and laboratory equipment	0,2%	0,5%	0,3%	0,2%	0,2%	0,07
S8.6.4	Operating communications equipment	0,4%	0,7%	0,4%	0,4%	0,3%	0,08
S8.6.5	Operating precision industrial equipment	0,1%	0,1%	0,1%	0,1%	0,1%	0,04
S8.6.6	Using precision measuring equipment	0,6%	0,9%	0,6%	0,6%	0,5%	0,13
S8.7.0	Installing, maintaining and repairing mechanical equipment	0,0%	0,0%	0,0%	0,0%	0,0%	0,00
S8.7.1	Repairing and installing mechanical equipment	0,4%	0,5%	0,4%	0,3%	0,2%	0,11
S8.7.2	Maintaining mechanical equipment and tools	0,0%	0,0%	0,0%	0,0%	0,0%	-0,01
S8.7.3	Maintaining mechanical machinery	0,3%	0,3%	0,3%	0,3%	0,3%	0,04
S8.8.0	Installing, maintaining and repairing electrical, electronic and precision equipment	0,0%	0,0%	0,0%	0,0%	0,0%	-0,01
S8.8.1	Installing and repairing electrical, electronic and precision equip.	1,5%	4,7%	1,5%	1,3%	0,5%	1,08
S8.8.2	Maintaining electrical, electronic and precision equipment	0,7%	1,5%	0,7%	0,6%	0,3%	0,32
S8.9.0	Operating aircraft	0,1%	0,1%	0,1%	0,1%	0,0%	0,03

Weight of green skills in 2040

Italy

ESCO-3-digit classification	Number of green subskills Yes=1 No=0		TOTAL					Media 2023	Var (points)
			Direct	Indirect	Induced	Media 2023	Var (points)		
S1.0.0	Communication, collaboration and creativity	0	0	0,0%	0,0%	0,0%	0,0%	0,0%	0,0
S1.1.0	Negotiating	0	0	0,0%	0,0%	0,0%	0,0%	0,0%	0,0
S1.1.1	Negotiating and managing contracts and agreements	0	0	0,0%	0,0%	0,0%	0,0%	0,0%	0,0
S1.1.2	Mediating and resolving disputes	0	0	0,0%	0,0%	0,0%	0,0%	0,0%	0,0
S1.1.3	Responding to complaints	1	1	0,3%	0,2%	0,2%	0,3%	0,3%	-0,1
S1.11.0	Designing systems and products	5	1	0,3%	0,4%	0,3%	0,2%	0,1%	0,1
S1.11.1	Designing ict systems or applications	0	0	0,0%	0,0%	0,0%	0,0%	0,0%	0,0
S1.11.2	Designing electrical or electronic systems or equipment	14	1	0,1%	0,2%	0,1%	0,1%	0,1%	0,0
S1.11.3	Developing recipes or menus	0	0	0,0%	0,0%	0,0%	0,0%	0,0%	0,0
S1.11.4	Designing structures or facilities	6	1	0,2%	0,2%	0,2%	0,2%	0,1%	0,1
S1.11.5	Designing industrial materials, systems or products	5	1	0,3%	0,4%	0,3%	0,2%	0,2%	0,1
S1.12.0	Creating artistic, visual or instructive materials	0	0	0,0%	0,0%	0,0%	0,0%	0,0%	0,0
S1.12.1	Creating visual displays and decorations	0	0	0,0%	0,0%	0,0%	0,0%	0,0%	0,0
S1.12.2	Developing instructive or promotional materials	0	0	0,0%	0,0%	0,0%	0,0%	0,0%	0,0
S1.12.3	Creating artistic designs or performances	0	0	0,0%	0,0%	0,0%	0,0%	0,0%	0,0
S1.13.0	Writing and composing	0	0	0,0%	0,0%	0,0%	0,0%	0,0%	0,0
S1.13.1	Composing music	0	0	0,0%	0,0%	0,0%	0,0%	0,0%	0,0
S1.13.2	Artistic and creative writing	0	0	0,0%	0,0%	0,0%	0,0%	0,0%	0,0
S1.13.3	Technical or academic writing	1	1	1,2%	1,3%	1,2%	1,1%	1,2%	-0,1
S1.14.0	Performing and entertaining	0	0	0,0%	0,0%	0,0%	0,0%	0,0%	0,0
S1.14.1	Practising sports	0	0	0,0%	0,0%	0,0%	0,0%	0,0%	0,0
S1.14.2	Performing artistic or cultural activities	0	0	0,0%	0,0%	0,0%	0,0%	0,0%	0,0
S1.14.3	Conducting gaming activities	0	0	0,0%	0,0%	0,0%	0,0%	0,0%	0,0
S1.15.0	Using more than one language	0	0	0,0%	0,0%	0,0%	0,0%	0,0%	0,0
S1.15.1	Using foreign languages	0	0	0,0%	0,0%	0,0%	0,0%	0,0%	0,0
S1.15.2	Translating and interpreting	0	0	0,0%	0,0%	0,0%	0,0%	0,0%	0,0
S1.2.0	Liaising and networking	0	0	0,0%	0,0%	0,0%	0,0%	0,0%	0,0
S1.2.1	Communicating with colleagues and clients	1	1	1,3%	0,9%	1,3%	1,3%	1,5%	-0,2
S1.2.3	Developing professional relationships or networks	1	1	1,7%	1,6%	1,7%	1,8%	1,9%	-0,1
S1.2.4	Advocating for individual or community needs	1	1	0,3%	0,3%	0,3%	0,3%	0,4%	-0,1
S1.2.5	Collaborating and liaising	0	0	0,0%	0,0%	0,0%	0,0%	0,0%	0,0
S1.3.0	Teaching and training	2	1	0,2%	0,1%	0,1%	0,2%	0,6%	-0,4
S1.3.1	Teaching academic or vocational subjects	1	1	0,1%	0,1%	0,1%	0,2%	0,4%	-0,3
S1.3.2	Teaching safety procedures	2	1	0,1%	0,1%	0,0%	0,1%	0,1%	0,0
S1.3.3	Training on operational procedures	6	1	0,7%	0,7%	0,7%	0,8%	0,8%	-0,1
S1.3.4	Training on health or medical topics	0	0	0,0%	0,0%	0,0%	0,0%	0,0%	0,0
S1.3.5	Coaching and mentoring	2	1	0,3%	0,2%	0,3%	0,4%	0,7%	-0,3
S1.4.0	Presenting information	0	0	0,0%	0,0%	0,0%	0,0%	0,0%	0,0
S1.4.1	Presenting general information	0	0	0,0%	0,0%	0,0%	0,0%	0,0%	0,0
S1.4.2	Presenting research or technical information	0	0	0,0%	0,0%	0,0%	0,0%	0,0%	0,0
S1.4.3	Presenting information in legal proceedings	0	0	0,0%	0,0%	0,0%	0,0%	0,0%	0,0
S1.5.0	Advising and consulting	0	0	0,0%	0,0%	0,0%	0,0%	0,0%	0,0
S1.5.1	Advising on legal, regulatory or procedural matters	2	1	0,3%	0,4%	0,4%	0,3%	0,3%	0,1
S1.5.2	Providing financial advice	0	0	0,0%	0,0%	0,0%	0,0%	0,0%	0,0
S1.5.3	Advising on products and services	3	1	0,8%	0,5%	0,8%	0,9%	0,9%	0,0
S1.5.4	Providing medical advice	1	1	0,2%	0,1%	0,2%	0,3%	0,5%	-0,3
S1.5.5	Advising on environmental issues	19	1	0,2%	0,3%	0,2%	0,2%	0,1%	0,0
S1.5.6	Advising on design or use of technologies	1	1	0,1%	0,1%	0,1%	0,1%	0,1%	0,0

S1.5.7	Advising on business or operational matters	1	1	0,1%	0,1%	0,1%	0,1%	0,1%	0,0
S1.5.8	Advising on educational or vocational matters	0	0	0,0%	0,0%	0,0%	0,0%	0,0%	0,0
S1.5.9	Advising on workplace health and safety issues	0	0	0,0%	0,0%	0,0%	0,0%	0,0%	0,0
S1.6.0	Promoting, selling and purchasing	1	1	0,1%	0,1%	0,1%	0,1%	0,1%	0,0
S1.6.1	Selling products or services	1	1	1,2%	0,8%	1,2%	1,2%	1,3%	-0,1
S1.6.2	Promoting products, services, or programs	5	1	1,1%	1,2%	1,1%	1,2%	1,2%	0,0
S1.6.3	Purchasing goods or services	0	0	0,0%	0,0%	0,0%	0,0%	0,0%	0,0
S1.7.1	Interviewing	0	0	0,0%	0,0%	0,0%	0,0%	0,0%	0,0
S1.7.2	Engaging with others to identify needs	0	0	0,0%	0,0%	0,0%	0,0%	0,0%	0,0
S1.7.3	Listening and asking questions	0	0	0,0%	0,0%	0,0%	0,0%	0,0%	0,0
S1.8.0	Working with others	0	0	0,0%	0,0%	0,0%	0,0%	0,0%	0,0
S1.8.1	Working in teams	0	0	0,0%	0,0%	0,0%	0,0%	0,0%	0,0
S1.8.2	Giving instructions	0	0	0,0%	0,0%	0,0%	0,0%	0,0%	0,0
S1.8.3	Giving feedback	0	0	0,0%	0,0%	0,0%	0,0%	0,0%	0,0
S1.8.4	Accepting feedback	0	0	0,0%	0,0%	0,0%	0,0%	0,0%	0,0
S1.8.5	Following instructions and procedures	1	1	0,6%	0,4%	0,6%	0,6%	0,7%	0,0
S1.8.6	Assisting and supporting co-workers	0	0	0,0%	0,0%	0,0%	0,0%	0,0%	0,0
S1.9.0	Solving problems	0	0	0,0%	0,0%	0,0%	0,0%	0,0%	0,0
S1.9.1	Developing solutions	3	1	1,4%	2,1%	1,4%	1,3%	0,9%	0,5
S1.9.2	Implementing new procedures or processes	3	1	0,5%	0,4%	0,5%	0,4%	0,4%	0,1
S2.0.0	Information skills	0	0	0,0%	0,0%	0,0%	0,0%	0,0%	0,0
S2.1.0	Conducting studies, investigations and examinations	0	0	0,0%	0,0%	0,0%	0,0%	0,0%	0,0
S2.1.1	Conducting academic or market research	8	1	1,3%	1,6%	1,3%	1,3%	1,1%	0,1
S2.1.2	Diagnosing health conditions	0	0	0,0%	0,0%	0,0%	0,0%	0,0%	0,0
S2.1.3	Interpreting technical documentation and diagrams	0	0	0,0%	0,0%	0,0%	0,0%	0,0%	0,0
S2.1.4	Carrying out forensic and police investigations	1	1	0,1%	0,1%	0,1%	0,1%	0,1%	0,0
S2.2.0	Documenting and recording information	0	0	0,0%	0,0%	0,0%	0,0%	0,0%	0,0
S2.2.1	Preparing financial docs, records, reports, or budgets	0	0	0,0%	0,0%	0,0%	0,0%	0,0%	0,0
S2.2.2	Recording legal information	0	0	0,0%	0,0%	0,0%	0,0%	0,0%	0,0
S2.2.3	Preparing docs. for contracts, applications, or permits	1	1	0,3%	0,3%	0,3%	0,3%	0,2%	0,0
S2.2.4	Maintaining or preparing medical documentation	0	0	0,0%	0,0%	0,0%	0,0%	0,0%	0,0
S2.2.5	Maintaining operational records	1	1	2,2%	2,3%	2,3%	2,2%	2,2%	0,0
S2.2.6	Document. tech. designs/procedures/problems/activities	0	0	0,0%	0,0%	0,0%	0,0%	0,0%	0,0
S2.2.7	Reporting incidents and defects	1	1	0,3%	0,5%	0,3%	0,3%	0,3%	0,1
S2.3.0	Managing information	0	0	0,0%	0,0%	0,0%	0,0%	0,0%	0,0
S2.4.0	Processing information	0	0	0,0%	0,0%	0,0%	0,0%	0,0%	0,0
S2.4.1	Gathering information from physical or electronic sources	1	1	0,7%	0,6%	0,7%	0,7%	0,7%	0,0
S2.4.2	Entering and transforming information	0	0	0,0%	0,0%	0,0%	0,0%	0,0%	0,0
S2.5.0	Measuring physical properties	0	0	0,0%	0,0%	0,0%	0,0%	0,0%	0,0
S2.5.1	Measuring dimensions and related properties	3	1	0,3%	0,3%	0,3%	0,3%	0,2%	0,0
S2.5.2	Weighing	0	0	0,0%	0,0%	0,0%	0,0%	0,0%	0,0
S2.6.0	Calculating and estimating	1	1	0,0%	0,0%	0,0%	0,0%	0,0%	0,0
S2.6.1	Performing calculations	2	1	0,7%	0,6%	0,7%	0,7%	0,6%	0,1
S2.6.2	Determining values of goods or services	0	0	0,0%	0,0%	0,0%	0,0%	0,0%	0,0
S2.6.3	Estimating resource needs	1	1	0,4%	0,6%	0,4%	0,4%	0,3%	0,1
S2.7.0	Analysing and evaluating information and data	6	1	0,6%	0,6%	0,6%	0,6%	0,7%	0,0
S2.7.1	Assessing land or real estate	7	1	0,2%	0,2%	0,2%	0,2%	0,1%	0,0
S2.7.2	Analysing scientific and medical data	7	1	0,2%	0,2%	0,2%	0,2%	0,2%	0,0
S2.7.3	Analysing financial and economic data	0	0	0,0%	0,0%	0,0%	0,0%	0,0%	0,0
S2.7.4	Analysing business operations	15	1	0,9%	1,0%	1,0%	0,9%	0,6%	0,4
S2.7.5	Performing risk analysis and management	1	1	0,7%	0,7%	0,7%	0,7%	0,5%	0,1
S2.7.6	Evaluating syst., programmes, equipment and products	1	1	0,4%	0,5%	0,4%	0,4%	0,3%	0,1

S2.8.0	Monitoring, inspecting and testing	4	1	0,4%	0,3%	0,4%	0,4%	0,3%	0,1
S2.8.1	Testing electrical and mechanical systems or equipment	4	1	0,2%	0,3%	0,2%	0,2%	0,2%	0,1
S2.8.10	Monitoring quality of products	2	1	1,5%	1,6%	1,5%	1,4%	1,1%	0,4
S2.8.11	Testing vehicles	0	0	0,0%	0,0%	0,0%	0,0%	0,0%	0,0
S2.8.2	Monitoring operational activities	3	1	1,2%	1,0%	1,2%	1,2%	1,0%	0,1
S2.8.3	Monitoring financial and economic resources and activity	0	0	0,0%	0,0%	0,0%	0,0%	0,0%	0,0
S2.8.4	Monitoring safety or security	2	1	0,7%	0,5%	0,7%	0,7%	0,5%	0,1
S2.8.5	Monitoring environmental conditions	20	1	0,1%	0,2%	0,1%	0,1%	0,1%	0,0
S2.8.6	Monitoring health conditions of humans and animals	2	1	0,2%	0,1%	0,1%	0,2%	0,4%	-0,2
S2.8.8	Testing and analysing substances	3	1	0,2%	0,2%	0,2%	0,2%	0,1%	0,0
S2.8.9	Inspecting food safety and quality	0	0	0,0%	0,0%	0,0%	0,0%	0,0%	0,0
S2.9.0	Monitoring developments in area of expertise	0	0	0,0%	0,0%	0,0%	0,0%	0,0%	0,0
S3.0.0	Assisting and caring	0	0	0,0%	0,0%	0,0%	0,0%	0,0%	0,0
S3.1.0	Counselling	0	0	0,0%	0,0%	0,0%	0,0%	0,0%	0,0
S3.1.1	Counselling on personal, family or social issues	0	0	0,0%	0,0%	0,0%	0,0%	0,0%	0,0
S3.1.2	Providing support to resolve problems	1	1	0,1%	0,1%	0,1%	0,1%	0,2%	-0,1
S3.1.3	Assisting people to access services	0	0	0,0%	0,0%	0,0%	0,0%	0,0%	0,0
S3.2.0	Providing health care or medical treatments	0	0	0,0%	0,0%	0,0%	0,0%	0,0%	0,0
S3.2.1	Providing medical, dental and nursing care	0	0	0,0%	0,0%	0,0%	0,0%	0,0%	0,0
S3.2.2	Performing surgical procedures	0	0	0,0%	0,0%	0,0%	0,0%	0,0%	0,0
S3.2.3	Providing physical therapies	0	0	0,0%	0,0%	0,0%	0,0%	0,0%	0,0
S3.2.4	Providing psychological and occupational therapies	0	0	0,0%	0,0%	0,0%	0,0%	0,0%	0,0
S3.2.5	Prescribing & ordering medical tests, treatments/devices	0	0	0,0%	0,0%	0,0%	0,0%	0,0%	0,0
S3.2.6	Fitting assistive devices	0	0	0,0%	0,0%	0,0%	0,0%	0,0%	0,0
S3.3.0	Protecting and enforcing	1	1	0,2%	0,2%	0,2%	0,2%	0,2%	0,0
S3.3.1	Complying with health and safety procedures	5	1	4,0%	4,6%	3,9%	4,1%	4,0%	0,0
S3.3.2	Complying with environ. protection laws and standards	38	1	0,4%	0,4%	0,4%	0,4%	0,5%	-0,1
S3.3.3	Complying with operational procedures	2	1	1,7%	1,7%	1,7%	1,7%	1,6%	0,1
S3.3.4	Verifying identities and documentation	0	0	0,0%	0,0%	0,0%	0,0%	0,0%	0,0
S3.3.5	Maintaining and enforcing physical security	2	1	0,9%	0,6%	0,8%	0,9%	1,2%	-0,4
S3.3.6	Protecting privacy and personal data	0	0	0,0%	0,0%	0,0%	0,0%	0,0%	0,0
S3.3.7	Ensuring compliance with legislation	2	1	1,1%	1,0%	1,2%	1,1%	1,1%	0,1
S3.4.0	Providing info. and support to the public and clients	0	0	0,0%	0,0%	0,0%	0,0%	0,0%	0,0
S3.4.1	Providing information to the public and clients	1	1	0,2%	0,1%	0,2%	0,2%	0,2%	0,0
S3.4.2	Accompanying and welcoming people	0	0	0,0%	0,0%	0,0%	0,0%	0,0%	0,0
S3.4.4	Providing general assistance to people	0	0	0,0%	0,0%	0,0%	0,0%	0,0%	0,0
S3.5.0	Preparing and serving food and drinks	0	0	0,0%	0,0%	0,0%	0,0%	0,0%	0,0
S3.5.1	Preparing food and drinks	0	0	0,0%	0,0%	0,0%	0,0%	0,0%	0,0
S3.5.2	Serving food and drinks	0	0	0,0%	0,0%	0,0%	0,0%	0,0%	0,0
S3.6.0	Providing personal care	0	0	0,0%	0,0%	0,0%	0,0%	0,0%	0,0
S3.6.1	Assisting people with mobility	0	0	0,0%	0,0%	0,0%	0,0%	0,0%	0,0
S3.6.2	Assisting with personal needs	0	0	0,0%	0,0%	0,0%	0,0%	0,0%	0,0
S3.6.3	Caring for children	0	0	0,0%	0,0%	0,0%	0,0%	0,0%	0,0
S3.6.4	Styling hair and providing beauty treatments	0	0	0,0%	0,0%	0,0%	0,0%	0,0%	0,0
S4.0.0	Management skills	0	0	0,0%	0,0%	0,0%	0,0%	0,0%	0,0
S4.1.0	Developing objectives and strategies	4	1	0,2%	0,3%	0,2%	0,2%	0,1%	0,1
S4.1.1	Identifying opportunities	3	1	0,3%	0,3%	0,3%	0,3%	0,3%	0,1
S4.1.2	Developing financial, business or marketing plans	1	1	0,6%	0,8%	0,6%	0,6%	0,4%	0,2
S4.1.3	Developing operational policies and procedures	11	1	0,8%	1,0%	0,9%	0,8%	0,5%	0,3
S4.1.4	Developing policies and legislation	7	1	0,1%	0,1%	0,1%	0,1%	0,1%	0,0
S4.1.5	Developing health programmes	0	0	0,0%	0,0%	0,0%	0,0%	0,0%	0,0
S4.1.6	Developing educational programmes	0	0	0,0%	0,0%	0,0%	0,0%	0,0%	0,0

S4.1.7	Developing contingency and emergency response plans	1	1	0,2%	0,2%	0,2%	0,2%	0,1%	0,0
S4.2.0	Organising, planning and scheduling work and activities	2	1	0,2%	0,1%	0,2%	0,2%	0,1%	0,1
S4.2.1	Directing operational activities	7	1	0,8%	0,8%	0,9%	0,8%	0,8%	0,0
S4.2.2	Planning events and programmes	1	1	1,3%	1,2%	1,3%	1,3%	1,2%	0,0
S4.2.3	Directing, supervising and coordinating projects	3	1	0,3%	0,4%	0,3%	0,3%	0,2%	0,1
S4.2.4	Managing transport and logistics activities	0	0	0,0%	0,0%	0,0%	0,0%	0,0%	0,0
S4.2.5	Planning production processes	3	1	0,4%	0,5%	0,5%	0,4%	0,3%	0,1
S4.3.0	Allocating and controlling resources	0	0	0,0%	0,0%	0,0%	0,0%	0,0%	0,0
S4.3.1	Managing budgets or finances	2	1	0,8%	0,9%	0,8%	0,7%	0,6%	0,1
S4.3.2	Managing and administering human resources	0	0	0,0%	0,0%	0,0%	0,0%	0,0%	0,0
S4.3.3	Allocating and controlling physical resources	0	0	0,0%	0,0%	0,0%	0,0%	0,0%	0,0
S4.4.0	Performing administrative activities	0	0	0,0%	0,0%	0,0%	0,0%	0,0%	0,0
S4.4.2	Executing financial transactions	0	0	0,0%	0,0%	0,0%	0,0%	0,0%	0,0
S4.4.3	Performing general clerical and administrative tasks	0	0	0,0%	0,0%	0,0%	0,0%	0,0%	0,0
S4.5.0	Leading and motivating	0	0	0,0%	0,0%	0,0%	0,0%	0,0%	0,0
S4.6.0	Building and developing teams	0	0	0,0%	0,0%	0,0%	0,0%	0,0%	0,0
S4.7.0	Recruiting and hiring	0	0	0,0%	0,0%	0,0%	0,0%	0,0%	0,0
S4.8.1	Supervising a team or group	1	1	0,7%	0,7%	0,7%	0,7%	0,7%	0,0
S4.8.2	Assigning work to others	0	0	0,0%	0,0%	0,0%	0,0%	0,0%	0,0
S4.8.3	Monitoring and evaluating the performance of individuals	0	0	0,0%	0,0%	0,0%	0,0%	0,0%	0,0
S4.9.0	Making decisions	1	1	0,3%	0,3%	0,2%	0,2%	0,3%	0,0
S5.0.0	Working with computers	0	0	0,0%	0,0%	0,0%	0,0%	0,0%	0,0
S5.1.0	Programming computer systems	0	0	0,0%	0,0%	0,0%	0,0%	0,0%	0,0
S5.2.1	Setting up computer systems	0	0	0,0%	0,0%	0,0%	0,0%	0,0%	0,0
S5.2.2	Protecting ict devices	0	0	0,0%	0,0%	0,0%	0,0%	0,0%	0,0
S5.2.3	Resolving computer problems	0	0	0,0%	0,0%	0,0%	0,0%	0,0%	0,0
S5.5.0	Accessing and analysing digital data	0	0	0,0%	0,0%	0,0%	0,0%	0,0%	0,0
S5.5.1	Browsing, searching and filtering digital data	0	0	0,0%	0,0%	0,0%	0,0%	0,0%	0,0
S5.5.2	Managing, gathering and storing digital data	0	0	0,0%	0,0%	0,0%	0,0%	0,0%	0,0
S5.6.0	Use digital tools for collab., content creation&prob. solv.	0	0	0,0%	0,0%	0,0%	0,0%	0,0%	0,0
S5.6.1	Using digital tools for collaboration and productivity	0	0	0,0%	0,0%	0,0%	0,0%	0,0%	0,0
S5.6.2	Use word processing, publishing & presentation software	0	0	0,0%	0,0%	0,0%	0,0%	0,0%	0,0
S5.6.3	Using computer aided design and drawing tools	0	0	0,0%	0,0%	0,0%	0,0%	0,0%	0,0
S5.6.4	Using digital tools for processing sound and images	0	0	0,0%	0,0%	0,0%	0,0%	0,0%	0,0
S5.7.0	Using digital tools to control machinery	0	0	0,0%	0,0%	0,0%	0,0%	0,0%	0,0
S6.0.0	Handling and moving	0	0	0,0%	0,0%	0,0%	0,0%	0,0%	0,0
S6.1.0	Sorting and packaging goods and materials	0	0	0,0%	0,0%	0,0%	0,0%	0,0%	0,0
S6.1.1	Sorting materials or products	4	1	0,6%	0,4%	0,6%	0,6%	0,6%	0,0
S6.1.2	Marking materials or objects for identification	1	1	0,4%	0,2%	0,4%	0,4%	0,3%	0,1
S6.1.3	Packaging objects	1	1	0,5%	0,2%	0,5%	0,4%	0,2%	0,2
S6.11.0	Cleaning	0	0	0,0%	0,0%	0,0%	0,0%	0,0%	0,0
S6.11.1	Cleaning tools, equipment, workpieces and vehicles	0	0	0,0%	0,0%	0,0%	0,0%	0,0%	0,0
S6.11.2	Cleaning interior and exterior of buildings	0	0	0,0%	0,0%	0,0%	0,0%	0,0%	0,0
S6.11.3	Cleaning outdoor spaces	0	0	0,0%	0,0%	0,0%	0,0%	0,0%	0,0
S6.12.0	Washing and maintaining textiles and clothing	0	0	0,0%	0,0%	0,0%	0,0%	0,0%	0,0
S6.13.0	Handling and disposing of waste and hazardous materials	3	1	0,0%	0,0%	0,0%	0,0%	0,0%	0,0
S6.13.1	Handling and disposing of hazardous materials	11	1	0,6%	0,4%	0,6%	0,6%	0,7%	-0,1
S6.13.2	Disposing of non-hazardous waste or debris	10	1	0,4%	0,1%	0,3%	0,4%	0,4%	-0,1
S6.2.0	Moving and lifting	0	0	0,0%	0,0%	0,0%	0,0%	0,0%	0,0
S6.2.1	Loading and unloading goods and, materials	0	0	0,0%	0,0%	0,0%	0,0%	0,0%	0,0
S6.2.2	Moving or lifting materials, equipment, or supplies	0	0	0,0%	0,0%	0,0%	0,0%	0,0%	0,0
S6.2.3	Storing goods and materials	1	1	0,8%	0,3%	0,8%	0,8%	0,8%	0,0

S6.3.0	Transforming and blending materials	0	0	0,0%	0,0%	0,0%	0,0%	0,0%	0,0
S6.3.1	Preparing mixtures or solutions	1	1	0,2%	0,1%	0,2%	0,2%	0,2%	0,0
S6.3.3	Preparing industrial materials for processing or use	0	0	0,0%	0,0%	0,0%	0,0%	0,0%	0,0
S6.3.6	Collecting & preparing specimens or materials for testing	0	0	0,0%	0,0%	0,0%	0,0%	0,0%	0,0
S6.4.0	Tending plants and crops	0	0	0,0%	0,0%	0,0%	0,0%	0,0%	0,0
S6.4.1	Cultivating land and crops	9	1	0,1%	0,0%	0,1%	0,1%	0,5%	-0,4
S6.4.2	Planting, pruning & harvest. trees, crops and other plants	3	1	0,0%	0,0%	0,0%	0,0%	0,3%	-0,2
S6.5.0	Assembling and fabricating products	0	0	0,0%	0,0%	0,0%	0,0%	0,0%	0,0
S6.5.1	Fabricating precision instruments or jewellery	0	0	0,0%	0,0%	0,0%	0,0%	0,0%	0,0
S6.5.2	Fabricating medical and prosthetic devices	0	0	0,0%	0,0%	0,0%	0,0%	0,0%	0,0
S6.5.3	Assembling electrical and electronic products	0	0	0,0%	0,0%	0,0%	0,0%	0,0%	0,0
S6.5.4	Assembling mechanical products	0	0	0,0%	0,0%	0,0%	0,0%	0,0%	0,0
S6.5.5	Assembling furniture	0	0	0,0%	0,0%	0,0%	0,0%	0,0%	0,0
S6.5.6	Fabricating garments and textile products	0	0	0,0%	0,0%	0,0%	0,0%	0,0%	0,0
S6.5.7	Fabricating food and related products	0	0	0,0%	0,0%	0,0%	0,0%	0,0%	0,0
S6.5.8	Fabricating tobacco products	0	0	0,0%	0,0%	0,0%	0,0%	0,0%	0,0
S6.6.1	Making production moulds and casts	0	0	0,0%	0,0%	0,0%	0,0%	0,0%	0,0
S6.6.2	Making patterns and templates	0	0	0,0%	0,0%	0,0%	0,0%	0,0%	0,0
S6.6.3	Making models	0	0	0,0%	0,0%	0,0%	0,0%	0,0%	0,0
S6.7.0	Using hand tools	0	0	0,0%	0,0%	0,0%	0,0%	0,0%	0,0
S6.7.1	Cutting materials and drilling holes	0	0	0,0%	0,0%	0,0%	0,0%	0,0%	0,0
S6.7.2	Shaping materials to create products	0	0	0,0%	0,0%	0,0%	0,0%	0,0%	0,0
S6.7.3	Smoothing surfaces of objects or equipment	0	0	0,0%	0,0%	0,0%	0,0%	0,0%	0,0
S6.7.4	Using precision hand tools	0	0	0,0%	0,0%	0,0%	0,0%	0,0%	0,0
S6.7.5	Hammering, nailing and riveting	0	0	0,0%	0,0%	0,0%	0,0%	0,0%	0,0
S6.8.0	Positioning materials, tools or equipment	1	1	0,7%	0,6%	0,7%	0,7%	0,5%	0,2
S6.9.0	Handling animals	0	0	0,0%	0,0%	0,0%	0,0%	0,0%	0,0
S6.9.1	Tending and breeding animals	1	1	0,2%	0,1%	0,2%	0,3%	0,6%	-0,4
S6.9.2	Tending and breeding aquatic animals	1	1	0,1%	0,0%	0,1%	0,1%	0,2%	-0,2
S6.9.3	Moving and herding animals	0	0	0,0%	0,0%	0,0%	0,0%	0,0%	0,0
S6.9.4	Hunting, trapping and slaughtering animals	0	0	0,0%	0,0%	0,0%	0,0%	0,0%	0,0
S6.9.5	Feeding and grooming animals	0	0	0,0%	0,0%	0,0%	0,0%	0,0%	0,0
S6.9.6	Training animals	0	0	0,0%	0,0%	0,0%	0,0%	0,0%	0,0
S6.9.7	Providing therapy or veterinary treatment for animals	0	0	0,0%	0,0%	0,0%	0,0%	0,0%	0,0
S7.0.0	Constructing	1	1	0,1%	0,0%	0,1%	0,1%	0,0%	0,1
S7.1.0	Building and repairing structures	0	0	0,0%	0,0%	0,0%	0,0%	0,0%	0,0
S7.1.1	Installing structural masonry materials	0	0	0,0%	0,0%	0,0%	0,0%	0,0%	0,0
S7.1.2	Installing wooden and metal components	6	1	2,3%	3,8%	2,3%	2,1%	1,7%	0,6
S7.1.4	Installing concrete components	0	0	0,0%	0,0%	0,0%	0,0%	0,0%	0,0
S7.1.5	Installing roofing	0	0	0,0%	0,0%	0,0%	0,0%	0,0%	0,0
S7.1.6	Joining parts using soldering, welding/brazing techniques	0	0	0,0%	0,0%	0,0%	0,0%	0,0%	0,0
S7.1.7	Installing and assembling building fixtures	0	0	0,0%	0,0%	0,0%	0,0%	0,0%	0,0
S7.1.8	Installing and assembling rigging equipment	0	0	0,0%	0,0%	0,0%	0,0%	0,0%	0,0
S7.2.0	Installing interior or exterior infrastructure	0	0	0,0%	0,0%	0,0%	0,0%	0,0%	0,0
S7.2.1	Installing heating, ventilation & air conditioning equip.	4	1	0,1%	0,2%	0,1%	0,1%	0,1%	0,0
S7.2.2	Installing plumbing or piping equipment or systems	0	0	0,0%	0,0%	0,0%	0,0%	0,0%	0,0
S7.2.3	Installing insulation materials	1	1	0,0%	0,0%	0,0%	0,0%	0,1%	0,0
S7.3.1	Applying material to fill gaps in surfaces	0	0	0,0%	0,0%	0,0%	0,0%	0,0%	0,0
S7.3.2	Applying textured or masonry coatings	0	0	0,0%	0,0%	0,0%	0,0%	0,0%	0,0
S7.3.3	Applying protective or decorative solutions or coatings	0	0	0,0%	0,0%	0,0%	0,0%	0,0%	0,0
S7.3.4	Installing floor and wall coverings	0	0	0,0%	0,0%	0,0%	0,0%	0,0%	0,0
S8.0.0	Working with machinery and specialised equipment	1	1	0,7%	1,0%	0,7%	0,7%	0,6%	0,2

S8.1.1	Operating earthmoving equipment	0	0	0,0%	0,0%	0,0%	0,0%	0,0%	0,0
S8.1.2	Operating agricultural or forestry equipment	2	1	0,1%	0,0%	0,1%	0,1%	0,3%	-0,2
S8.1.3	Operating lifting or moving equipment	0	0	0,0%	0,0%	0,0%	0,0%	0,0%	0,0
S8.2.0	Driving vehicles	0	0	0,0%	0,0%	0,0%	0,0%	0,0%	0,0
S8.2.1	Driving heavy vehicles	0	0	0,0%	0,0%	0,0%	0,0%	0,0%	0,0
S8.2.2	Driving light vehicles	0	0	0,0%	0,0%	0,0%	0,0%	0,0%	0,0
S8.2.3	Operating rail vehicles	0	0	0,0%	0,0%	0,0%	0,0%	0,0%	0,0
S8.3.0	Operating watercraft	0	0	0,0%	0,0%	0,0%	0,0%	0,0%	0,0
S8.4.0	Operating machinery for extraction/proces. raw materials	1	1	0,1%	0,1%	0,1%	0,1%	0,0%	0,0
S8.4.1	Operating mining, drilling & mineral processing machinery	0	0	0,0%	0,0%	0,0%	0,0%	0,0%	0,0
S8.4.2	Operating metal processing and finishing machinery	0	0	0,0%	0,0%	0,0%	0,0%	0,0%	0,0
S8.4.3	Operating pumping systems or equipment	0	0	0,0%	0,0%	0,0%	0,0%	0,0%	0,0
S8.4.4	Operating energy production or distribution equipment	5	1	0,1%	0,2%	0,1%	0,1%	0,1%	0,0
S8.4.5	Op. petroleum/chemical/water proces. systems or equip.	6	1	0,2%	0,1%	0,2%	0,2%	0,1%	0,1
S8.4.6	Operating wood processing and papermaking machinery	1	1	0,0%	0,0%	0,0%	0,0%	0,0%	0,0
S8.4.7	Operating kilns, furnaces and drying equipment	1	1	0,1%	0,1%	0,1%	0,1%	0,1%	0,0
S8.5.0	Operating machinery for the manufacture of products	0	0	0,0%	0,0%	0,0%	0,0%	0,0%	0,0
S8.5.1	Operating painting or coating machinery	0	0	0,0%	0,0%	0,0%	0,0%	0,0%	0,0
S8.5.2	Operating packaging machinery	0	0	0,0%	0,0%	0,0%	0,0%	0,0%	0,0
S8.5.3	Operating machinery for the manufacture and treatment of textiles, fur and leather products	0	0	0,0%	0,0%	0,0%	0,0%	0,0%	0,0
S8.5.4	Operating food processing machinery	0	0	0,0%	0,0%	0,0%	0,0%	0,0%	0,0
S8.5.5	Operating mixing and separating machinery	0	0	0,0%	0,0%	0,0%	0,0%	0,0%	0,0
S8.5.6	Operating print and photographic production equipment	0	0	0,0%	0,0%	0,0%	0,0%	0,0%	0,0
S8.5.7	Operating metal, plastic or rubber forming equipment	0	0	0,0%	0,0%	0,0%	0,0%	0,0%	0,0
S8.5.8	Operating cutting, grinding and smoothing machinery	1	1	0,2%	0,1%	0,2%	0,2%	0,2%	0,0
S8.6.0	Using precision instrumentation and equipment	0	0	0,0%	0,0%	0,0%	0,0%	0,0%	0,0
S8.6.1	Operating medical equipment	0	0	0,0%	0,0%	0,0%	0,0%	0,0%	0,0
S8.6.2	Operating audio-visual equipment	0	0	0,0%	0,0%	0,0%	0,0%	0,0%	0,0
S8.6.3	Operating scientific and laboratory equipment	1	1	0,2%	0,5%	0,3%	0,2%	0,2%	0,1
S8.6.4	Operating communications equipment	0	0	0,0%	0,0%	0,0%	0,0%	0,0%	0,0
S8.6.5	Operating precision industrial equipment	0	0	0,0%	0,0%	0,0%	0,0%	0,0%	0,0
S8.6.6	Using precision measuring equipment	1	1	0,6%	0,9%	0,6%	0,6%	0,5%	0,1
S8.7.0	Installing, maintaining and repairing mechanical equip.	0	0	0,0%	0,0%	0,0%	0,0%	0,0%	0,0
S8.7.1	Repairing and installing mechanical equipment	2	1	0,4%	0,5%	0,4%	0,3%	0,2%	0,1
S8.7.2	Maintaining mechanical equipment and tools	0	0	0,0%	0,0%	0,0%	0,0%	0,0%	0,0
S8.7.3	Maintaining mechanical machinery	0	0	0,0%	0,0%	0,0%	0,0%	0,0%	0,0
S8.8.0	Installing, maintaining and repairing electrical, electronic and precision equipment	0	0	0,0%	0,0%	0,0%	0,0%	0,0%	0,0
S8.8.1	Installing/repairing electrical, electronic/precision equip.	4	1	1,5%	4,7%	1,5%	1,3%	0,5%	1,1
S8.8.2	Maintaining electrical, electronic and precision equip.	5	1	0,7%	1,5%	0,7%	0,6%	0,3%	0,3
S8.9.0	Operating aircraft	0	0	0,0%	0,0%	0,0%	0,0%	0,0%	0,0

THE UNITED KINGDOM

Weight of the most demanded occupations in 2040

UK

ISCO-1-digit classification		TOTAL	Direct	Indirect	Induced	Media 2023	Var (points)
OC1	Managers	13,5%	12,8%	14,3%	12,6%	11,9%	1,6
OC2	Professional	30,6%	42,8%	29,8%	30,0%	26,5%	4,1
OC3	Technicians and associate professionals	19,1%	18,6%	18,3%	20,1%	12,4%	6,7
OC4	Clerical support workers	6,3%	5,3%	6,5%	6,1%	9,5%	-3,2
OC5	Service and sales workers	7,6%	2,7%	6,4%	9,7%	17,5%	-9,9
OC6	Skilled agricultural, forestry and fishery workers	0,2%	0,1%	0,2%	0,2%	1,2%	-1,0
OC7	Craft related trades workers	9,9%	11,3%	10,8%	8,6%	8,0%	1,9
OC8	Plant and machine operators, and assemblers	7,2%	4,2%	7,9%	6,7%	4,9%	2,3
OC9	Elementary occupations	5,6%	2,1%	5,8%	5,8%	8,2%	-2,6

Weight of the most demanded occupations in 2040

UK

ISCO-2-digit classification		TOTAL	Direct	Indirect	Induced	Media 2023	Var (points)
OC11	Chief executives, senior officials and legislators	0,2%	0,3%	0,2%	0,2%	0,3%	-0,1
OC12	Administrative and commercial managers	7,2%	7,0%	7,7%	6,5%	3,3%	3,8
OC13	Production and specialized services managers	3,8%	4,9%	4,0%	3,5%	4,5%	-0,6
OC14	Hospitality, retail and other services managers	2,3%	0,6%	2,4%	2,4%	3,7%	-1,4
OC21	Science and engineering professionals	10,7%	21,1%	11,1%	8,8%	4,0%	6,7
OC22	Health professionals	1,9%	0,2%	1,1%	3,0%	4,2%	-2,4
OC23	Teaching professionals	3,2%	1,0%	2,5%	4,4%	4,7%	-1,5
OC24	Business and administration professionals	6,9%	8,4%	7,3%	6,3%	7,1%	-0,2
OC25	Information and communications technology professionals	6,1%	10,1%	6,2%	5,5%	3,2%	2,9
OC26	Legal, social and cultural professionals	1,8%	2,0%	1,6%	2,0%	3,2%	-1,4
OC31	Science and engineering associate professionals	5,1%	8,8%	5,4%	4,4%	1,7%	3,4
OC32	Health associate professionals	1,4%	0,5%	1,0%	2,0%	1,2%	0,2
OC33	Business and administration associate professionals	6,9%	6,6%	7,2%	6,5%	6,0%	0,9
OC34	Legal, social, cultural and related associate professionals	4,2%	1,2%	3,3%	5,8%	2,7%	1,5
OC35	Information and communications technicians	1,4%	1,5%	1,4%	1,4%	0,8%	0,7
OC41	General and keyboard clerks	3,0%	2,9%	3,1%	3,0%	0,7%	2,4
OC42	Customer services clerks	1,4%	0,7%	1,4%	1,6%	3,6%	-2,2
OC43	Numerical and material recording clerks	1,6%	1,5%	1,8%	1,4%	2,1%	-0,5
OC44	Other clerical support workers	0,2%	0,2%	0,2%	0,2%	3,0%	-2,8
OC51	Personal service workers	2,1%	0,7%	1,7%	2,8%	3,8%	-1,7
OC52	Sales workers	2,9%	1,4%	2,9%	3,2%	5,5%	-2,6
OC53	Personal care workers	2,3%	0,5%	1,6%	3,5%	6,5%	-4,2
OC54	Protective services workers	0,3%	0,1%	0,3%	0,3%	1,7%	-1,4
OC61	Market-oriented skilled agricultural workers						
OC62	Market-oriented skilled forestry, fishery and hunting workers	0,2%	0,1%	0,2%	0,2%	1,1%	-0,9
OC71	Building and related trades workers, excluding electricians	0,0%	0,0%	0,0%	0,0%	0,1%	-0,1
OC72	Metal, machinery and related trades workers	1,1%	1,1%	1,3%	0,9%	3,4%	-2,3
OC73	Handicraft and printing workers	4,9%	5,0%	5,4%	4,3%	2,2%	2,6
OC74	Electrical and electronic trades workers	0,2%	0,3%	0,2%	0,2%	0,4%	-0,2
OC75	Food processing, wood working, garment and other craft and related trades workers	2,3%	3,7%	2,4%	1,9%	1,1%	1,2
OC81	Stationary plant and machine operators	1,4%	1,2%	1,5%	1,4%	0,9%	0,5
OC82	Assemblers	3,5%	2,6%	3,8%	3,2%	1,0%	2,5
OC83	Drivers and mobile plant operators	0,9%	0,9%	1,0%	0,7%	0,4%	0,5
OC91	Cleaners and helpers	2,9%	0,7%	3,2%	2,8%	3,5%	-0,7
OC92	Agricultural, forestry and fishery labourers	1,4%	0,4%	1,4%	1,5%	2,1%	-0,7
OC93	Labourers in mining, construction, manufacturing and transport	0,1%	0,1%	0,1%	0,1%	0,2%	-0,2
OC94	Food preparation assistants	3,0%	1,3%	3,3%	2,8%	3,0%	-0,1
OC95	Street and related sales and service workers	0,6%	0,1%	0,4%	0,9%	1,5%	-1,0
OC96	Refuse workers and other elementary workers	0,1%	0,0%	0,1%	0,1%	0,1%	0,0
		0,5%	0,1%	0,6%	0,5%	1,2%	-0,7

Weight of the most demanded occupations in 2040

UK

ISCO-1-digit classification		TOTAL	Direct	Indirect	Induced	Media 2023	Var (points)
S1	Communication, collaboration and creativity	27,7%	27,7%	27,1%	28,4%	29,2%	-1,5
S2	Research and analytical thinking	21,5%	24,5%	21,9%	20,6%	19,3%	2,2
S3	Providing assistance and care	11,6%	8,8%	11,0%	12,8%	15,3%	-3,7
S4	Managerial skills	15,4%	15,0%	15,4%	15,4%	15,2%	0,2
S5	ICT skills	6,3%	8,4%	6,3%	5,9%	4,2%	2,1
S6	Hand working	7,7%	5,7%	7,9%	7,8%	9,1%	-1,4
S7	Building, repairing and installing	3,0%	3,2%	3,2%	2,6%	2,6%	0,3
S8	Working with specialized machinery and equipment	6,9%	6,8%	7,2%	6,4%	5,1%	1,8

Weight of the most demanded occupations in 2040

UK

ISCO-2-digit classification		TOTAL	Direct	Indirect	Induced	Media 2023	Var (points)
S1.0	Communication, collaboration and creativity	0,2%	0,2%	0,2%	0,2%	0,3%	-0,09
S1.1	Negotiation	1,5%	1,6%	1,5%	1,4%	1,4%	0,12
S1.11	Systems and product design	1,1%	1,5%	1,2%	1,1%	0,6%	0,50
S1.12	Creating artistic, visual or educational materials	1,3%	1,0%	1,2%	1,3%	1,6%	-0,29
S1.13	Writing and composing	1,4%	1,5%	1,5%	1,4%	1,8%	-0,40
S1.14	Performing and entertaining	0,3%	0,1%	0,2%	0,3%	0,4%	-0,14
S1.15	Proficiency in other languages	0,4%	0,4%	0,4%	0,4%	0,5%	-0,04
S1.2	Liaising & Networking	4,8%	4,3%	4,8%	4,8%	5,2%	-0,46
S1.3	Teaching and training	1,5%	1,2%	1,3%	1,7%	2,7%	-1,15
S1.4	PPublic speaking and reasoning	0,8%	0,9%	0,8%	0,8%	0,7%	0,02
S1.5	Mentoring	2,5%	2,2%	2,5%	2,6%	2,7%	-0,16
S1.6	Promoting and selling	2,9%	2,7%	2,9%	3,0%	3,1%	-0,11
S1.7	Gathering information	1,2%	0,8%	1,2%	1,2%	1,3%	-0,08
S1.8	Working with others	2,2%	1,7%	2,2%	2,2%	2,5%	-0,29
S1.9	Problem solving	1,9%	2,5%	1,9%	1,8%	1,3%	0,59
S2.0	Information skills	0,0%	0,0%	0,0%	0,0%	0,0%	0,00
S2.1	Surveys and assessments	3,4%	4,3%	3,4%	3,4%	2,9%	0,55
S2.2	Storing and recording information	4,2%	4,3%	4,3%	4,1%	3,9%	0,31
S2.3	Managing information	0,6%	0,6%	0,6%	0,6%	0,8%	-0,15
S2.4	Processing information	1,3%	1,0%	1,3%	1,2%	1,6%	-0,34
S2.5	Measuring physical properties	0,4%	0,4%	0,4%	0,4%	0,4%	0,05
S2.6	Calculations and estimations	1,2%	1,3%	1,3%	1,2%	1,0%	0,19
S2.7	Analysing and evaluating information and data	3,7%	4,0%	3,8%	3,5%	2,8%	0,84
S2.8	Monitoring and testing	5,1%	4,9%	5,2%	5,0%	4,4%	0,70
S2.9	Monitoring developments in the sector of competence	0,5%	0,4%	0,5%	0,5%	0,6%	-0,13
S3.0	Providing assistance and care	0,0%	0,0%	0,0%	0,0%	0,1%	-0,02
S3.1	Offering advices and mentoring	0,2%	0,1%	0,2%	0,2%	0,3%	-0,11
S3.2	Providing health care or medical care	0,4%	0,2%	0,3%	0,5%	0,8%	-0,39
S3.3	Protecting healthcare regulations	8,9%	8,8%	8,8%	8,9%	9,3%	-0,39
S3.4	Providing information and support to the public and customers	1,4%	0,9%	1,3%	1,5%	1,8%	-0,40
S3.5	Preparing and serving food and drinks	0,7%	0,2%	0,5%	0,9%	0,7%	-0,06
S3.6	Providing general assistance to people	0,4%	0,2%	0,3%	0,5%	0,9%	-0,55
S4.0	Managerial skills	0,3%	0,4%	0,3%	0,3%	0,3%	0,01

S4.1	Developing objectives and strategies	2,6%	3,0%	2,6%	2,5%	2,0%	0,53
S4.2	Organising, planning and scheduling work and activities	3,6%	3,4%	3,7%	3,5%	3,1%	0,53
S4.3	Allocating and monitoring resources	1,9%	1,7%	1,9%	1,9%	1,7%	0,24
S4.4	Carrying out administrative activities	2,4%	1,5%	2,4%	2,4%	3,4%	-1,00
S4.5	Driving and motivating the others	0,2%	0,2%	0,2%	0,2%	0,2%	-0,04
S4.6	Team management	0,1%	0,1%	0,1%	0,1%	0,3%	-0,13
S4.7	HR	0,2%	0,2%	0,2%	0,2%	0,2%	-0,03
S4.8	Staff supervision	1,2%	1,2%	1,1%	1,3%	1,8%	-0,61
S4.9	Decision making and problem solving	0,3%	0,3%	0,2%	0,2%	0,3%	0,00
S5.0	Working with computers	0,2%	0,2%	0,2%	0,2%	0,2%	0,02
S5.1	Programming computer systems	0,6%	0,7%	0,6%	0,6%	0,2%	0,34
S5.2	Cyber security	0,9%	1,6%	0,9%	0,8%	0,4%	0,49
S5.5	Accessing and understanding digital data	1,6%	1,5%	1,7%	1,6%	1,9%	-0,26
S5.6	Using digital tools for collab., content creation & problem solving	1,0%	1,0%	1,0%	0,9%	1,2%	-0,28
S5.7	Using digital tools to control and manage machinery	0,6%	0,6%	0,6%	0,6%	0,4%	0,14
S6.0	Moving and transferring goods and products	0,0%	0,0%	0,0%	0,0%	0,0%	0,01
S6.1	Sorting and packaging of goods and materials	1,5%	0,8%	1,5%	1,5%	1,2%	0,28
S6.11	Cleaning	2,3%	1,1%	2,3%	2,4%	2,9%	-0,61
S6.12	Washing and maintaining textiles and clothing	0,2%	0,1%	0,2%	0,2%	0,3%	-0,13
S6.13	Managing dangerous waste materials	1,0%	0,6%	1,0%	1,0%	1,1%	-0,17
S6.2	Lifting and transferring goods and products	2,0%	1,1%	2,1%	2,0%	1,5%	0,50
S6.3	Transforming and mixing materials	0,5%	0,5%	0,5%	0,5%	0,5%	0,02
S6.4	Dealing with plants and crops	0,1%	0,0%	0,1%	0,1%	0,8%	-0,65
S6.5	Assembling and manufacturing products	1,4%	1,8%	1,4%	1,4%	1,1%	0,32
S6.6	Creating casts, models and samples	0,2%	0,1%	0,2%	0,2%	0,2%	-0,02
S6.7	Using and mastering hand tools	1,5%	1,5%	1,5%	1,4%	1,2%	0,26
S6.8	Placing materials, tools or equipment	0,7%	0,6%	0,7%	0,7%	0,5%	0,15
S6.9	Farming	0,9%	0,3%	0,7%	1,0%	2,0%	-1,13
S7.0	Hand working	0,1%	0,0%	0,1%	0,1%	0,0%	0,07
S7.1	Building and repairing structure	3,4%	5,3%	3,5%	3,2%	2,5%	0,98
S7.2	Installing indoor or outdoor infrastructure	0,5%	0,4%	0,5%	0,5%	0,5%	-0,05
S7.3	Finishing the interior or exterior of structures	0,5%	0,3%	0,5%	0,5%	0,6%	-0,09
S8.0	Working with specialized machinery and equipment	0,7%	1,0%	0,7%	0,7%	0,6%	0,18
S8.1	Using non-common vehicles	1,1%	0,6%	1,1%	1,0%	0,9%	0,20
S8.2	Driving vehicles	0,6%	0,4%	0,6%	0,6%	0,6%	-0,01
S8.3	Driving boats	0,2%	0,1%	0,2%	0,2%	0,3%	-0,09
S8.4	Using extraction machinery and treating raw materials	0,7%	0,6%	0,8%	0,7%	0,6%	0,12
S8.5	Using machinery for products manufacturing	1,2%	0,9%	1,2%	1,2%	1,2%	0,00
S8.6	Using precision instruments and equipment	1,8%	2,5%	1,8%	1,7%	1,6%	0,21
S8.7	Installing, maintaining and repairing mechanical equipment	0,7%	0,8%	0,7%	0,7%	0,5%	0,15
S8.8	Installing/maintain./repairing electrical, electronic & precision equip.	2,2%	6,3%	2,2%	1,9%	0,8%	1,39
S8.9	Piloting aircraft	0,1%	0,1%	0,1%	0,1%	0,0%	0,03

Weight of the most demanded occupations in 2040

UK

ESCO-3-digit classification	TOTAL	Direct	Indirect	Induced	Media 2023	Var (points)
S1.0.0	0,4%	0,4%	0,4%	0,4%	0,4%	-0,04
S1.1.0	0,0%	0,0%	0,0%	0,0%	0,0%	-0,01
S1.1.1	1,1%	1,1%	1,1%	1,0%	1,0%	0,10
S1.1.2	0,3%	0,3%	0,3%	0,3%	0,4%	-0,03
S1.1.3	0,2%	0,1%	0,2%	0,2%	0,3%	-0,06
S1.11.0	0,4%	0,7%	0,4%	0,4%	0,2%	0,22
S1.11.1	0,4%	0,7%	0,4%	0,4%	0,2%	0,20
S1.11.2	0,2%	0,3%	0,2%	0,2%	0,1%	0,11
S1.11.3	0,1%	0,1%	0,1%	0,1%	0,1%	-0,01
S1.11.4	0,2%	0,3%	0,2%	0,2%	0,1%	0,06
S1.11.5	0,4%	0,7%	0,4%	0,4%	0,2%	0,23
S1.12.0	0,1%	0,1%	0,1%	0,1%	0,1%	0,01
S1.12.1	0,5%	0,6%	0,5%	0,6%	0,5%	0,04
S1.12.2	0,5%	0,4%	0,4%	0,5%	0,6%	-0,08
S1.12.3	0,6%	0,6%	0,5%	0,6%	0,5%	0,11
S1.13.0	0,2%	0,2%	0,2%	0,2%	0,2%	0,02
S1.13.1	0,0%	0,0%	0,0%	0,0%	0,0%	-0,01
S1.13.2	0,2%	0,2%	0,2%	0,2%	0,1%	0,06
S1.13.3	1,5%	2,0%	1,5%	1,5%	1,2%	0,35
S1.14.0	0,0%	0,0%	0,0%	0,0%	0,0%	0,00
S1.14.1	0,1%	0,0%	0,1%	0,1%	0,1%	0,00
S1.14.2	0,2%	0,2%	0,2%	0,3%	0,3%	-0,05
S1.14.3	0,1%	0,0%	0,1%	0,1%	0,1%	-0,04
S1.15.0	0,0%	0,0%	0,0%	0,0%	0,0%	0,00
S1.15.1	0,4%	0,4%	0,4%	0,4%	0,6%	-0,14
S1.15.2	0,1%	0,1%	0,1%	0,1%	0,1%	-0,06
S1.2.0	0,2%	0,2%	0,2%	0,2%	0,2%	-0,02
S1.2.1	1,2%	1,1%	1,2%	1,3%	1,4%	-0,15
S1.2.3	2,1%	2,0%	2,1%	2,2%	2,4%	-0,26
S1.2.4	0,5%	0,4%	0,5%	0,6%	0,6%	-0,13
S1.2.5	1,5%	1,6%	1,5%	1,5%	1,5%	0,04
S1.3.0	0,4%	0,3%	0,3%	0,5%	0,6%	-0,17
S1.3.1	0,3%	0,2%	0,3%	0,4%	0,4%	-0,10
S1.3.2	0,1%	0,1%	0,0%	0,1%	0,1%	-0,01
S1.3.3	0,7%	0,6%	0,7%	0,7%	0,8%	-0,08
S1.3.4	0,1%	0,0%	0,1%	0,2%	0,2%	-0,09
S1.3.5	0,7%	0,4%	0,6%	0,8%	0,9%	-0,22
S1.4.0	0,0%	0,0%	0,0%	0,0%	0,0%	-0,01
S1.4.1	0,5%	0,5%	0,5%	0,5%	0,5%	-0,02
S1.4.2	0,4%	0,6%	0,4%	0,4%	0,4%	0,09
S1.4.3	0,0%	0,0%	0,0%	0,0%	0,0%	0,00
S1.5.0	0,2%	0,3%	0,2%	0,2%	0,2%	-0,01
S1.5.1	0,5%	0,6%	0,5%	0,5%	0,4%	0,06
S1.5.2	0,5%	0,5%	0,5%	0,4%	0,4%	0,03
S1.5.3	0,5%	0,4%	0,5%	0,5%	0,7%	-0,22
S1.5.4	0,4%	0,1%	0,3%	0,6%	0,7%	-0,31
S1.5.5	0,3%	0,4%	0,3%	0,2%	0,2%	0,09
S1.5.6	0,2%	0,3%	0,2%	0,2%	0,1%	0,09
S1.5.7	0,2%	0,2%	0,2%	0,2%	0,1%	0,03

S1.5.8	Advising on educational or vocational matters	0,1%	0,1%	0,1%	0,1%	0,1%	-0,04
S1.5.9	Advising on workplace health and safety issues	0,1%	0,1%	0,1%	0,1%	0,1%	-0,01
S1.6.0	Promoting, selling and purchasing	0,1%	0,1%	0,1%	0,1%	0,1%	0,02
S1.6.1	Selling products or services	0,7%	0,5%	0,7%	0,8%	1,1%	-0,43
S1.6.2	Promoting products, services, or programs	1,2%	1,0%	1,2%	1,2%	1,5%	-0,32
S1.6.3	Purchasing goods or services	0,5%	0,4%	0,5%	0,5%	0,6%	-0,09
S1.7.1	Interviewing	0,3%	0,2%	0,3%	0,3%	0,3%	-0,02
S1.7.2	Engaging with others to identify needs	0,6%	0,6%	0,6%	0,6%	0,8%	-0,15
S1.7.3	Listening and asking questions	0,2%	0,1%	0,2%	0,3%	0,4%	-0,15
S1.8.0	Working with others	0,3%	0,3%	0,3%	0,3%	0,2%	0,04
S1.8.1	Working in teams	0,7%	0,6%	0,7%	0,8%	0,9%	-0,14
S1.8.2	Giving instructions	0,2%	0,1%	0,2%	0,2%	0,2%	0,00
S1.8.3	Giving feedback	0,3%	0,3%	0,3%	0,4%	0,4%	-0,05
S1.8.4	Accepting feedback	0,2%	0,1%	0,2%	0,2%	0,3%	-0,09
S1.8.5	Following instructions and procedures	0,5%	0,3%	0,5%	0,5%	0,5%	-0,02
S1.8.6	Assisting and supporting co-workers	0,1%	0,1%	0,1%	0,1%	0,1%	-0,05
S1.9.0	Solving problems	0,0%	0,0%	0,0%	0,0%	0,0%	-0,02
S1.9.1	Developing solutions	1,3%	1,5%	1,3%	1,2%	1,0%	0,30
S1.9.2	Implementing new procedures or processes	0,5%	0,5%	0,5%	0,5%	0,4%	0,07
S2.0.0	Information skills	0,0%	0,0%	0,0%	0,0%	0,0%	0,00
S2.1.0	Conducting studies, investigations and examinations	0,4%	0,4%	0,4%	0,3%	0,4%	0,00
S2.1.1	Conducting academic or market research	2,1%	3,0%	2,1%	2,1%	1,7%	0,48
S2.1.2	Diagnosing health conditions	0,2%	0,1%	0,1%	0,2%	0,3%	-0,14
S2.1.3	Interpreting technical documentation and diagrams	1,2%	1,4%	1,3%	1,1%	0,8%	0,40
S2.1.4	Carrying out forensic and police investigations	0,1%	0,1%	0,1%	0,1%	0,1%	-0,01
S2.2.0	Documenting and recording information	0,1%	0,1%	0,1%	0,1%	0,2%	-0,07
S2.2.1	Preparing financial documents, records, reports, or budgets	0,8%	0,8%	0,8%	0,7%	0,8%	0,01
S2.2.2	Recording legal information	0,1%	0,1%	0,1%	0,1%	0,1%	0,01
S2.2.3	Preparing documentation for contracts, applications, or permits	0,3%	0,4%	0,3%	0,3%	0,3%	0,04
S2.2.4	Maintaining or preparing medical documentation	0,1%	0,1%	0,1%	0,2%	0,2%	-0,06
S2.2.5	Maintaining operational records	1,8%	1,8%	1,8%	1,7%	1,9%	-0,14
S2.2.6	Documenting technical designs, procedures, problems or activities	0,5%	0,8%	0,5%	0,5%	0,3%	0,22
S2.2.7	Reporting incidents and defects	0,2%	0,2%	0,2%	0,2%	0,2%	0,00
S2.3.0	Managing information	0,8%	1,0%	0,8%	0,8%	0,8%	0,02
S2.4.0	Processing information	0,0%	0,0%	0,0%	0,0%	0,0%	-0,01
S2.4.1	Gathering information from physical or electronic sources	0,9%	1,1%	0,9%	0,8%	0,8%	0,06
S2.4.2	Entering and transforming information	0,5%	0,5%	0,5%	0,5%	0,4%	0,04
S2.5.0	Measuring physical properties	0,1%	0,1%	0,1%	0,1%	0,0%	0,02
S2.5.1	Measuring dimensions and related properties	0,2%	0,2%	0,2%	0,2%	0,1%	0,08
S2.5.2	Weighing	0,0%	0,0%	0,0%	0,0%	0,0%	0,00
S2.6.0	Calculating and estimating	0,0%	0,0%	0,0%	0,0%	0,0%	0,01
S2.6.1	Performing calculations	0,5%	0,6%	0,6%	0,5%	0,6%	-0,03
S2.6.2	Determining values of goods or services	0,2%	0,1%	0,2%	0,2%	0,2%	-0,05
S2.6.3	Estimating resource needs	0,4%	0,5%	0,4%	0,3%	0,3%	0,06
S2.7.0	Analysing and evaluating information and data	0,8%	0,9%	0,8%	0,8%	0,7%	0,09
S2.7.1	Assessing land or real estate	0,2%	0,3%	0,2%	0,2%	0,1%	0,05
S2.7.2	Analysing scientific and medical data	0,3%	0,4%	0,3%	0,3%	0,2%	0,06
S2.7.3	Analysing financial and economic data	0,9%	1,0%	1,0%	0,8%	0,8%	0,14
S2.7.4	Analysing business operations	1,3%	1,6%	1,3%	1,2%	1,0%	0,27
S2.7.5	Performing risk analysis and management	1,0%	1,1%	1,0%	0,9%	0,9%	0,10
S2.7.6	Evaluating systems, programmes, equipment and products	0,4%	0,5%	0,4%	0,4%	0,3%	0,09
S2.8.0	Monitoring, inspecting and testing	0,3%	0,2%	0,3%	0,3%	0,3%	-0,02

S2.8.1	Testing electrical and mechanical systems or equipment	0,2%	0,3%	0,2%	0,2%	0,1%	0,08
S2.8.10	Monitoring quality of products	1,1%	1,2%	1,2%	1,0%	0,8%	0,33
S2.8.11	Testing vehicles	0,2%	0,2%	0,2%	0,2%	0,2%	0,00
S2.8.2	Monitoring operational activities	1,1%	1,1%	1,1%	1,0%	1,0%	0,08
S2.8.3	Monitoring financial and economic resources and activity	0,5%	0,5%	0,5%	0,5%	0,5%	0,03
S2.8.4	Monitoring safety or security	0,5%	0,4%	0,5%	0,5%	0,5%	-0,07
S2.8.5	Monitoring environmental conditions	0,2%	0,3%	0,2%	0,2%	0,1%	0,05
S2.8.6	Monitoring health conditions of humans and animals	0,2%	0,1%	0,2%	0,3%	0,4%	-0,18
S2.8.8	Testing and analysing substances	0,2%	0,3%	0,2%	0,2%	0,1%	0,10
S2.8.9	Inspecting food safety and quality	0,0%	0,0%	0,0%	0,0%	0,0%	0,00
S2.9.0	Monitoring developments in area of expertise	0,8%	0,8%	0,7%	0,8%	0,7%	0,03
S3.0.0	Assisting and caring	0,1%	0,0%	0,1%	0,1%	0,1%	-0,01
S3.1.0	Counselling	0,0%	0,0%	0,0%	0,0%	0,0%	0,00
S3.1.1	Counselling on personal, family or social issues	0,1%	0,1%	0,1%	0,1%	0,1%	-0,03
S3.1.2	Providing support to resolve problems	0,2%	0,1%	0,2%	0,3%	0,3%	-0,08
S3.1.3	Assisting people to access services	0,1%	0,0%	0,0%	0,1%	0,1%	-0,03
S3.2.0	Providing health care or medical treatments	0,1%	0,0%	0,1%	0,1%	0,2%	-0,10
S3.2.1	Providing medical, dental and nursing care	0,3%	0,1%	0,2%	0,4%	0,5%	-0,25
S3.2.2	Performing surgical procedures	0,0%	0,0%	0,0%	0,0%	0,0%	-0,01
S3.2.3	Providing physical therapies	0,0%	0,0%	0,0%	0,1%	0,1%	-0,02
S3.2.4	Providing psychological and occupational therapies	0,1%	0,0%	0,0%	0,1%	0,1%	-0,06
S3.2.5	Prescribing and ordering medical tests, treatments or devices	0,1%	0,0%	0,0%	0,1%	0,1%	-0,04
S3.2.6	Fitting assistive devices	0,0%	0,0%	0,0%	0,1%	0,0%	-0,01
S3.3.0	Protecting and enforcing	0,1%	0,1%	0,2%	0,1%	0,2%	-0,05
S3.3.1	Complying with health and safety procedures	3,4%	2,8%	3,3%	3,6%	3,7%	-0,33
S3.3.2	Complying with environmental protection laws and standards	0,5%	0,7%	0,5%	0,5%	0,4%	0,07
S3.3.3	Complying with operational procedures	1,9%	1,6%	1,8%	1,9%	2,1%	-0,23
S3.3.4	Verifying identities and documentation	0,2%	0,2%	0,2%	0,2%	0,2%	-0,06
S3.3.5	Maintaining and enforcing physical security	0,7%	0,4%	0,7%	0,8%	1,3%	-0,58
S3.3.6	Protecting privacy and personal data	0,4%	0,4%	0,4%	0,4%	0,5%	-0,13
S3.3.7	Ensuring compliance with legislation	1,1%	1,1%	1,1%	1,1%	1,1%	0,02
S3.4.0	Providing information and support to the public and clients	0,0%	0,0%	0,0%	0,0%	0,0%	-0,01
S3.4.1	Providing information to the public and clients	0,1%	0,1%	0,1%	0,2%	0,2%	-0,08
S3.4.2	Accompanying and welcoming people	0,3%	0,1%	0,2%	0,3%	0,5%	-0,24
S3.4.4	Providing general assistance to people	0,7%	0,4%	0,6%	0,7%	1,0%	-0,33
S3.5.0	Preparing and serving food and drinks	0,0%	0,0%	0,0%	0,0%	0,0%	0,00
S3.5.1	Preparing food and drinks	0,4%	0,2%	0,3%	0,6%	0,8%	-0,33
S3.5.2	Serving food and drinks	0,1%	0,0%	0,1%	0,1%	0,1%	-0,03
S3.6.0	Providing personal care	0,0%	0,0%	0,0%	0,0%	0,0%	0,00
S3.6.1	Assisting people with mobility	0,1%	0,0%	0,1%	0,1%	0,2%	-0,07
S3.6.2	Assisting with personal needs	0,2%	0,1%	0,1%	0,2%	0,3%	-0,10
S3.6.3	Caring for children	0,4%	0,1%	0,3%	0,5%	0,9%	-0,51
S3.6.4	Styling hair and providing beauty treatments	0,1%	0,0%	0,1%	0,1%	0,1%	-0,05
S4.0.0	Management skills	0,5%	0,5%	0,5%	0,5%	0,5%	-0,01
S4.1.0	Developing objectives and strategies	0,3%	0,4%	0,3%	0,3%	0,2%	0,06
S4.1.1	Identifying opportunities	0,4%	0,4%	0,4%	0,4%	0,3%	0,08
S4.1.2	Developing financial, business or marketing plans	1,0%	1,1%	1,1%	1,0%	0,9%	0,18
S4.1.3	Developing operational policies and procedures	1,2%	1,6%	1,2%	1,1%	0,9%	0,33
S4.1.4	Developing policies and legislation	0,1%	0,2%	0,1%	0,1%	0,1%	0,03
S4.1.5	Developing health programmes	0,2%	0,2%	0,2%	0,2%	0,2%	-0,01
S4.1.6	Developing educational programmes	0,4%	0,4%	0,4%	0,5%	0,5%	-0,05
S4.1.7	Developing contingency and emergency response plans	0,2%	0,2%	0,2%	0,2%	0,2%	0,01

S4.2.0	Organising, planning and scheduling work and activities	0,2%	0,2%	0,2%	0,2%	0,2%	-0,04
S4.2.1	Directing operational activities	0,9%	0,9%	1,0%	0,9%	0,9%	0,04
S4.2.2	Planning events and programmes	1,3%	1,2%	1,3%	1,4%	1,5%	-0,14
S4.2.3	Directing, supervising and coordinating projects	0,5%	0,8%	0,5%	0,5%	0,4%	0,16
S4.2.4	Managing transport and logistics activities	0,3%	0,3%	0,4%	0,3%	0,3%	0,00
S4.2.5	Planning production processes	0,5%	0,5%	0,5%	0,4%	0,4%	0,09
S4.3.0	Allocating and controlling resources	0,1%	0,1%	0,1%	0,1%	0,1%	0,00
S4.3.1	Managing budgets or finances	1,1%	1,1%	1,2%	1,1%	1,0%	0,12
S4.3.2	Managing and administering human resources	0,2%	0,2%	0,2%	0,2%	0,2%	0,00
S4.3.3	Allocating and controlling physical resources	0,8%	0,7%	0,8%	0,9%	0,8%	0,05
S4.4.0	Performing administrative activities	0,0%	0,0%	0,0%	0,0%	0,0%	0,00
S4.4.2	Executing financial transactions	0,8%	0,6%	0,8%	0,9%	1,2%	-0,34
S4.4.3	Performing general clerical and administrative tasks	1,0%	0,9%	1,0%	1,0%	0,8%	0,18
S4.5.0	Leading and motivating	0,3%	0,3%	0,3%	0,4%	0,4%	-0,05
S4.6.0	Building and developing teams	0,2%	0,2%	0,2%	0,3%	0,3%	-0,08
S4.7.0	Recruiting and hiring	0,3%	0,3%	0,3%	0,3%	0,3%	0,01
S4.8.1	Supervising a team or group	0,9%	0,9%	0,9%	0,9%	0,8%	0,04
S4.8.2	Assigning work to others	0,0%	0,0%	0,0%	0,0%	0,0%	-0,01
S4.8.3	Monitoring and evaluating the performance of individuals	1,0%	0,7%	0,9%	1,2%	1,5%	-0,42
S4.9.0	Making decisions	0,3%	0,3%	0,3%	0,3%	0,3%	0,01
S5.0.0	Working with computers	0,3%	0,4%	0,3%	0,3%	0,2%	0,07
S5.1.0	Programming computer systems	1,0%	1,6%	1,0%	0,9%	0,5%	0,46
S5.2.1	Setting up computer systems	0,3%	0,5%	0,4%	0,3%	0,2%	0,16
S5.2.2	Protecting ict devices	0,6%	0,9%	0,6%	0,5%	0,3%	0,27
S5.2.3	Resolving computer problems	0,2%	0,3%	0,2%	0,2%	0,1%	0,08
S5.5.0	Accessing and analysing digital data	0,5%	0,5%	0,5%	0,5%	0,6%	-0,05
S5.5.1	Browsing, searching and filtering digital data	0,0%	0,0%	0,0%	0,0%	0,0%	0,00
S5.5.2	Managing, gathering and storing digital data	1,4%	1,8%	1,4%	1,3%	0,9%	0,48
S5.6.0	Using digital tools for collabora., content creation & problem solving	0,0%	0,0%	0,0%	0,0%	0,0%	0,00
S5.6.1	Using digital tools for collaboration and productivity	0,6%	0,6%	0,6%	0,6%	0,6%	0,04
S5.6.2	Using word processing, publishing and presentation software	0,2%	0,2%	0,2%	0,2%	0,1%	0,06
S5.6.3	Using computer aided design and drawing tools	0,5%	0,8%	0,5%	0,4%	0,2%	0,25
S5.6.4	Using digital tools for processing sound and images	0,1%	0,1%	0,1%	0,1%	0,1%	0,03
S5.7.0	Using digital tools to control machinery	0,5%	0,5%	0,5%	0,4%	0,3%	0,23
S6.0.0	Handling and moving	0,0%	0,0%	0,0%	0,0%	0,0%	0,00
S6.1.0	Sorting and packaging goods and materials	0,0%	0,0%	0,0%	0,0%	0,0%	0,00
S6.1.1	Sorting materials or products	0,4%	0,3%	0,4%	0,4%	0,4%	-0,03
S6.1.2	Marking materials or objects for identification	0,3%	0,2%	0,3%	0,3%	0,2%	0,02
S6.1.3	Packaging objects	0,2%	0,1%	0,2%	0,2%	0,2%	0,01
S6.11.0	Cleaning	0,1%	0,1%	0,1%	0,1%	0,1%	-0,02
S6.11.1	Cleaning tools, equipment, workpieces and vehicles	0,5%	0,3%	0,5%	0,5%	0,6%	-0,15
S6.11.2	Cleaning interior and exterior of buildings	0,7%	0,3%	0,7%	0,8%	1,2%	-0,48
S6.11.3	Cleaning outdoor spaces	0,1%	0,0%	0,1%	0,1%	0,1%	-0,04
S6.12.0	Washing and maintaining textiles and clothing	0,1%	0,0%	0,1%	0,1%	0,2%	-0,08
S6.13.0	Handling and disposing of waste and hazardous materials	0,0%	0,0%	0,0%	0,0%	0,0%	0,00
S6.13.1	Handling and disposing of hazardous materials	0,4%	0,3%	0,4%	0,4%	0,5%	-0,10
S6.13.2	Disposing of non-hazardous waste or debris	0,2%	0,1%	0,2%	0,2%	0,3%	-0,13
S6.2.0	Moving and lifting	0,0%	0,0%	0,0%	0,0%	0,0%	0,00
S6.2.1	Loading and unloading goods and, materials	0,3%	0,2%	0,3%	0,3%	0,3%	-0,03
S6.2.2	Moving or lifting materials, equipment, or supplies	0,3%	0,2%	0,3%	0,3%	0,3%	-0,04
S6.2.3	Storing goods and materials	0,4%	0,2%	0,4%	0,5%	0,6%	-0,15
S6.3.0	Transforming and blending materials	0,0%	0,0%	0,0%	0,0%	0,0%	0,01

S6.3.1	Preparing mixtures or solutions	0,2%	0,2%	0,2%	0,1%	0,1%	0,02
S6.3.3	Preparing industrial materials for processing or use	0,1%	0,1%	0,1%	0,1%	0,1%	0,04
S6.3.6	Collecting and preparing specimens or materials for testing	0,2%	0,2%	0,2%	0,2%	0,1%	0,05
S6.4.0	Tending plants and crops	0,0%	0,0%	0,0%	0,0%	0,0%	0,00
S6.4.1	Cultivating land and crops	0,1%	0,1%	0,1%	0,1%	0,2%	-0,12
S6.4.2	Planting, pruning and harvesting trees, crops and other plants	0,0%	0,0%	0,1%	0,0%	0,1%	-0,06
S6.5.0	Assembling and fabricating products	0,3%	0,2%	0,3%	0,3%	0,2%	0,03
S6.5.1	Fabricating precision instruments or jewellery	0,1%	0,1%	0,1%	0,1%	0,1%	0,01
S6.5.2	Fabricating medical and prosthetic devices	0,0%	0,0%	0,0%	0,0%	0,0%	0,01
S6.5.3	Assembling electrical and electronic products	0,1%	0,2%	0,1%	0,1%	0,0%	0,06
S6.5.4	Assembling mechanical products	0,0%	0,0%	0,0%	0,0%	0,0%	0,02
S6.5.5	Assembling furniture	0,0%	0,0%	0,0%	0,0%	0,0%	0,00
S6.5.6	Fabricating garments and textile products	0,1%	0,1%	0,1%	0,1%	0,1%	0,03
S6.5.7	Fabricating food and related products	0,1%	0,1%	0,1%	0,1%	0,1%	0,01
S6.5.8	Fabricating tobacco products	0,0%	0,0%	0,0%	0,0%	0,0%	0,01
S6.6.1	Making production moulds and casts	0,1%	0,1%	0,1%	0,1%	0,1%	0,07
S6.6.2	Making patterns and templates	0,0%	0,0%	0,0%	0,0%	0,0%	0,01
S6.6.3	Making models	0,0%	0,1%	0,0%	0,0%	0,0%	0,02
S6.7.0	Using hand tools	0,2%	0,2%	0,2%	0,2%	0,2%	0,00
S6.7.1	Cutting materials and drilling holes	0,2%	0,2%	0,3%	0,2%	0,3%	-0,01
S6.7.2	Shaping materials to create products	0,1%	0,1%	0,1%	0,1%	0,1%	0,03
S6.7.3	Smoothing surfaces of objects or equipment	0,2%	0,2%	0,2%	0,2%	0,2%	0,00
S6.7.4	Using precision hand tools	0,1%	0,1%	0,1%	0,1%	0,0%	0,03
S6.7.5	Hammering, nailing and riveting	0,1%	0,0%	0,1%	0,1%	0,0%	0,01
S6.8.0	Positioning materials, tools or equipment	0,5%	0,4%	0,5%	0,4%	0,3%	0,12
S6.9.0	Handling animals	0,0%	0,0%	0,0%	0,0%	0,0%	0,00
S6.9.1	Tending and breeding animals	0,2%	0,1%	0,2%	0,2%	0,4%	-0,20
S6.9.2	Tending and breeding aquatic animals	0,0%	0,1%	0,0%	0,0%	0,1%	-0,03
S6.9.3	Moving and herding animals	0,1%	0,0%	0,1%	0,1%	0,1%	-0,05
S6.9.4	Hunting, trapping and slaughtering animals	0,0%	0,0%	0,0%	0,0%	0,0%	0,00
S6.9.5	Feeding and grooming animals	0,1%	0,0%	0,1%	0,1%	0,1%	-0,08
S6.9.6	Training animals	0,1%	0,0%	0,1%	0,1%	0,1%	-0,05
S6.9.7	Providing therapy or veterinary treatment for animals	0,2%	0,1%	0,2%	0,3%	0,4%	-0,14
S7.0.0	Constructing	0,0%	0,0%	0,0%	0,0%	0,0%	0,00
S7.1.0	Building and repairing structures	0,1%	0,0%	0,1%	0,1%	0,1%	-0,01
S7.1.1	Installing structural masonry materials	0,0%	0,0%	0,0%	0,0%	0,0%	-0,01
S7.1.2	Installing wooden and metal components	1,7%	2,0%	1,8%	1,5%	1,2%	0,47
S7.1.4	Installing concrete components	0,1%	0,0%	0,1%	0,1%	0,1%	0,00
S7.1.5	Installing roofing	0,0%	0,0%	0,0%	0,0%	0,0%	-0,02
S7.1.6	Joining parts using soldering, welding or brazing techniques	0,4%	0,5%	0,4%	0,3%	0,2%	0,17
S7.1.7	Installing and assembling building fixtures	0,1%	0,1%	0,1%	0,0%	0,1%	-0,03
S7.1.8	Installing and assembling rigging equipment	0,1%	0,1%	0,1%	0,1%	0,1%	0,01
S7.2.0	Installing interior or exterior infrastructure	0,0%	0,0%	0,0%	0,0%	0,0%	-0,01
S7.2.1	Installing heating, ventilation and air conditioning equipment	0,1%	0,1%	0,1%	0,1%	0,1%	-0,01
S7.2.2	Installing plumbing or piping equipment or systems	0,2%	0,2%	0,2%	0,2%	0,3%	-0,07
S7.2.3	Installing insulation materials	0,0%	0,0%	0,0%	0,0%	0,1%	-0,03
S7.3.1	Applying material to fill gaps in surfaces	0,0%	0,0%	0,0%	0,0%	0,0%	-0,01
S7.3.2	Applying textured or masonry coatings	0,0%	0,0%	0,0%	0,0%	0,0%	0,00
S7.3.3	Applying protective or decorative solutions or coatings	0,2%	0,2%	0,2%	0,2%	0,3%	-0,07
S7.3.4	Installing floor and wall coverings	0,0%	0,0%	0,0%	0,0%	0,1%	-0,04
S8.0.0	Working with machinery and specialised equipment	0,6%	0,6%	0,6%	0,6%	0,3%	0,26
S8.1.1	Operating earthmoving equipment	0,3%	0,1%	0,3%	0,2%	0,3%	-0,04

S8.1.2	Operating agricultural or forestry equipment	0,1%	0,1%	0,1%	0,1%	0,1%	-0,05
S8.1.3	Operating lifting or moving equipment	0,3%	0,2%	0,3%	0,3%	0,3%	0,02
S8.2.0	Driving vehicles	0,2%	0,1%	0,2%	0,2%	0,3%	-0,07
S8.2.1	Driving heavy vehicles	0,1%	0,0%	0,1%	0,1%	0,1%	-0,01
S8.2.2	Driving light vehicles	0,1%	0,0%	0,1%	0,1%	0,1%	-0,04
S8.2.3	Operating rail vehicles	0,1%	0,0%	0,1%	0,1%	0,1%	-0,01
S8.3.0	Operating watercraft	0,2%	0,1%	0,2%	0,2%	0,2%	-0,02
S8.4.0	Operating machinery for extraction and processing of raw materials	0,0%	0,0%	0,0%	0,0%	0,0%	0,00
S8.4.1	Operating mining, drilling and mineral processing machinery	0,0%	0,0%	0,1%	0,0%	0,0%	0,02
S8.4.2	Operating metal processing and finishing machinery	0,1%	0,1%	0,1%	0,1%	0,0%	0,05
S8.4.3	Operating pumping systems or equipment	0,1%	0,1%	0,1%	0,1%	0,1%	0,01
S8.4.4	Operating energy production or distribution equipment	0,1%	0,2%	0,1%	0,1%	0,1%	0,05
S8.4.5	Operat. petroleum, chemical/water processing syst. or equipment	0,1%	0,1%	0,1%	0,1%	0,1%	0,03
S8.4.6	Operating wood processing and papermaking machinery	0,0%	0,0%	0,0%	0,0%	0,0%	0,02
S8.4.7	Operating kilns, furnaces and drying equipment	0,1%	0,1%	0,1%	0,1%	0,0%	0,05
S8.5.0	Operating machinery for the manufacture of products	0,1%	0,1%	0,1%	0,1%	0,0%	0,06
S8.5.1	Operating painting or coating machinery	0,0%	0,0%	0,0%	0,0%	0,0%	0,00
S8.5.2	Operating packaging machinery	0,0%	0,0%	0,0%	0,0%	0,0%	0,01
S8.5.3	Operating machinery for the manufacture and treatment of textiles, fur and leather products	0,3%	0,3%	0,3%	0,2%	0,1%	0,13
S8.5.4	Operating food processing machinery	0,2%	0,2%	0,2%	0,2%	0,1%	0,08
S8.5.5	Operating mixing and separating machinery	0,1%	0,1%	0,1%	0,1%	0,0%	0,05
S8.5.6	Operating print and photographic production equipment	0,1%	0,1%	0,1%	0,0%	0,0%	0,01
S8.5.7	Operating metal, plastic or rubber forming equipment	0,1%	0,1%	0,2%	0,1%	0,1%	0,08
S8.5.8	Operating cutting, grinding and smoothing machinery	0,2%	0,2%	0,2%	0,1%	0,1%	0,07
S8.6.0	Using precision instrumentation and equipment	0,1%	0,2%	0,1%	0,1%	0,1%	0,06
S8.6.1	Operating medical equipment	0,1%	0,0%	0,1%	0,1%	0,1%	-0,04
S8.6.2	Operating audio-visual equipment	0,3%	0,3%	0,3%	0,3%	0,2%	0,12
S8.6.3	Operating scientific and laboratory equipment	0,3%	0,4%	0,3%	0,2%	0,2%	0,10
S8.6.4	Operating communications equipment	0,3%	0,3%	0,3%	0,3%	0,3%	-0,01
S8.6.5	Operating precision industrial equipment	0,1%	0,1%	0,1%	0,1%	0,1%	0,05
S8.6.6	Using precision measuring equipment	0,4%	0,6%	0,5%	0,4%	0,3%	0,12
S8.7.0	Installing, maintaining and repairing mechanical equipment	0,0%	0,0%	0,0%	0,0%	0,0%	0,00
S8.7.1	Repairing and installing mechanical equipment	0,3%	0,3%	0,3%	0,2%	0,2%	0,09
S8.7.2	Maintaining mechanical equipment and tools	0,0%	0,0%	0,0%	0,0%	0,0%	0,00
S8.7.3	Maintaining mechanical machinery	0,3%	0,3%	0,3%	0,2%	0,2%	0,09
S8.8.0	Install/maintain & repairing electrical, electronic/precision equip.	0,1%	0,0%	0,1%	0,1%	0,0%	0,02
S8.8.1	Installing and repairing electrical, electronic/precision equip.	0,6%	0,8%	0,6%	0,5%	0,3%	0,27
S8.8.2	Maintaining electrical, electronic and precision equipment	0,4%	0,5%	0,4%	0,4%	0,3%	0,15
S8.9.0	Operating aircraft	0,0%	0,1%	0,0%	0,0%	0,0%	0,02

Weight of green skills in 2040

UK

ESCO-3-digit classification	Number of green subskills Yes=1 No=0		UK					Media 2023	Var (points)
			TOTAL	Direct	Indirect	Induced			
S1.0.0	Communication, collaboration and creativity	0	0	0,0%	0,0%	0,0%	0,0%	0,0%	0,0
S1.1.0	Negotiating	0	0	0,0%	0,0%	0,0%	0,0%	0,0%	0,0
S1.1.1	Negotiating and managing contracts and agreements	0	0	0,0%	0,0%	0,0%	0,0%	0,0%	0,0
S1.1.2	Mediating and resolving disputes	0	0	0,0%	0,0%	0,0%	0,0%	0,0%	0,0
S1.1.3	Responding to complaints	1	1	0,2%	0,1%	0,2%	0,2%	0,3%	-0,1
S1.11.0	Designing systems and products	5	1	0,4%	0,7%	0,4%	0,4%	0,2%	0,2
S1.11.1	Designing ict systems or applications	0	0	0,0%	0,0%	0,0%	0,0%	0,0%	0,0
S1.11.2	Designing electrical or electronic systems or equipment	14	1	0,2%	0,3%	0,2%	0,2%	0,1%	0,1
S1.11.3	Developing recipes or menus	0	0	0,0%	0,0%	0,0%	0,0%	0,0%	0,0
S1.11.4	Designing structures or facilities	6	1	0,2%	0,3%	0,2%	0,2%	0,1%	0,1
S1.11.5	Designing industrial materials, systems or products	5	1	0,4%	0,7%	0,4%	0,4%	0,2%	0,2
S1.12.0	Creating artistic, visual or instructive materials	0	0	0,0%	0,0%	0,0%	0,0%	0,0%	0,0
S1.12.1	Creating visual displays and decorations	0	0	0,0%	0,0%	0,0%	0,0%	0,0%	0,0
S1.12.2	Developing instructive or promotional materials	0	0	0,0%	0,0%	0,0%	0,0%	0,0%	0,0
S1.12.3	Creating artistic designs or performances	0	0	0,0%	0,0%	0,0%	0,0%	0,0%	0,0
S1.13.0	Writing and composing	0	0	0,0%	0,0%	0,0%	0,0%	0,0%	0,0
S1.13.1	Composing music	0	0	0,0%	0,0%	0,0%	0,0%	0,0%	0,0
S1.13.2	Artistic and creative writing	0	0	0,0%	0,0%	0,0%	0,0%	0,0%	0,0
S1.13.3	Technical or academic writing	1	1	1,5%	2,0%	1,5%	1,5%	1,2%	0,4
S1.14.0	Performing and entertaining	0	0	0,0%	0,0%	0,0%	0,0%	0,0%	0,0
S1.14.1	Practising sports	0	0	0,0%	0,0%	0,0%	0,0%	0,0%	0,0
S1.14.2	Performing artistic or cultural activities	0	0	0,0%	0,0%	0,0%	0,0%	0,0%	0,0
S1.14.3	Conducting gaming activities	0	0	0,0%	0,0%	0,0%	0,0%	0,0%	0,0
S1.15.0	Using more than one language	0	0	0,0%	0,0%	0,0%	0,0%	0,0%	0,0
S1.15.1	Using foreign languages	0	0	0,0%	0,0%	0,0%	0,0%	0,0%	0,0
S1.15.2	Translating and interpreting	0	0	0,0%	0,0%	0,0%	0,0%	0,0%	0,0
S1.2.0	Liaising and networking	0	0	0,0%	0,0%	0,0%	0,0%	0,0%	0,0
S1.2.1	Communicating with colleagues and clients	1	1	1,2%	1,1%	1,2%	1,3%	1,4%	-0,1
S1.2.3	Developing professional relationships or networks	1	1	2,1%	2,0%	2,1%	2,2%	2,4%	-0,3
S1.2.4	Advocating for individual or community needs	1	1	0,5%	0,4%	0,5%	0,6%	0,6%	-0,1
S1.2.5	Collaborating and liaising	0	0	0,0%	0,0%	0,0%	0,0%	0,0%	0,0
S1.3.0	Teaching and training	2	1	0,4%	0,3%	0,3%	0,5%	0,6%	-0,2
S1.3.1	Teaching academic or vocational subjects	1	1	0,3%	0,2%	0,3%	0,4%	0,4%	-0,1
S1.3.2	Teaching safety procedures	2	1	0,1%	0,1%	0,0%	0,1%	0,1%	0,0
S1.3.3	Training on operational procedures	6	1	0,7%	0,6%	0,7%	0,7%	0,8%	-0,1
S1.3.4	Training on health or medical topics	0	0	0,0%	0,0%	0,0%	0,0%	0,0%	0,0
S1.3.5	Coaching and mentoring	2	1	0,7%	0,4%	0,6%	0,8%	0,9%	-0,2
S1.4.0	Presenting information	0	0	0,0%	0,0%	0,0%	0,0%	0,0%	0,0
S1.4.1	Presenting general information	0	0	0,0%	0,0%	0,0%	0,0%	0,0%	0,0
S1.4.2	Presenting research or technical information	0	0	0,0%	0,0%	0,0%	0,0%	0,0%	0,0
S1.4.3	Presenting information in legal proceedings	0	0	0,0%	0,0%	0,0%	0,0%	0,0%	0,0
S1.5.0	Advising and consulting	0	0	0,0%	0,0%	0,0%	0,0%	0,0%	0,0
S1.5.1	Advising on legal, regulatory or procedural matters	2	1	0,5%	0,6%	0,5%	0,5%	0,4%	0,1
S1.5.2	Providing financial advice	0	0	0,0%	0,0%	0,0%	0,0%	0,0%	0,0
S1.5.3	Advising on products and services	3	1	0,5%	0,4%	0,5%	0,5%	0,7%	-0,2
S1.5.4	Providing medical advice	1	1	0,4%	0,1%	0,3%	0,6%	0,7%	-0,3
S1.5.5	Advising on environmental issues	19	1	0,3%	0,4%	0,3%	0,2%	0,2%	0,1
S1.5.6	Advising on design or use of technologies	1	1	0,2%	0,3%	0,2%	0,2%	0,1%	0,1

S1.5.7	Advising on business or operational matters	1	1	0,2%	0,2%	0,2%	0,2%	0,1%	0,0
S1.5.8	Advising on educational or vocational matters	0	0	0,0%	0,0%	0,0%	0,0%	0,0%	0,0
S1.5.9	Advising on workplace health and safety issues	0	0	0,0%	0,0%	0,0%	0,0%	0,0%	0,0
S1.6.0	Promoting, selling and purchasing	1	1	0,1%	0,1%	0,1%	0,1%	0,1%	0,0
S1.6.1	Selling products or services	1	1	0,7%	0,5%	0,7%	0,8%	1,1%	-0,4
S1.6.2	Promoting products, services, or programs	5	1	1,2%	1,0%	1,2%	1,2%	1,5%	-0,3
S1.6.3	Purchasing goods or services	0	0	0,0%	0,0%	0,0%	0,0%	0,0%	0,0
S1.7.1	Interviewing	0	0	0,0%	0,0%	0,0%	0,0%	0,0%	0,0
S1.7.2	Engaging with others to identify needs	0	0	0,0%	0,0%	0,0%	0,0%	0,0%	0,0
S1.7.3	Listening and asking questions	0	0	0,0%	0,0%	0,0%	0,0%	0,0%	0,0
S1.8.0	Working with others	0	0	0,0%	0,0%	0,0%	0,0%	0,0%	0,0
S1.8.1	Working in teams	0	0	0,0%	0,0%	0,0%	0,0%	0,0%	0,0
S1.8.2	Giving instructions	0	0	0,0%	0,0%	0,0%	0,0%	0,0%	0,0
S1.8.3	Giving feedback	0	0	0,0%	0,0%	0,0%	0,0%	0,0%	0,0
S1.8.4	Accepting feedback	0	0	0,0%	0,0%	0,0%	0,0%	0,0%	0,0
S1.8.5	Following instructions and procedures	1	1	0,5%	0,3%	0,5%	0,5%	0,5%	0,0
S1.8.6	Assisting and supporting co-workers	0	0	0,0%	0,0%	0,0%	0,0%	0,0%	0,0
S1.9.0	Solving problems	0	0	0,0%	0,0%	0,0%	0,0%	0,0%	0,0
S1.9.1	Developing solutions	3	1	1,3%	1,5%	1,3%	1,2%	1,0%	0,3
S1.9.2	Implementing new procedures or processes	3	1	0,5%	0,5%	0,5%	0,5%	0,4%	0,1
S2.0.0	Information skills	0	0	0,0%	0,0%	0,0%	0,0%	0,0%	0,0
S2.1.0	Conducting studies, investigations and examinations	0	0	0,0%	0,0%	0,0%	0,0%	0,0%	0,0
S2.1.1	Conducting academic or market research	8	1	2,1%	3,0%	2,1%	2,1%	1,7%	0,5
S2.1.2	Diagnosing health conditions	0	0	0,0%	0,0%	0,0%	0,0%	0,0%	0,0
S2.1.3	Interpreting technical documentation and diagrams	0	0	0,0%	0,0%	0,0%	0,0%	0,0%	0,0
S2.1.4	Carrying out forensic and police investigations	1	1	0,1%	0,1%	0,1%	0,1%	0,1%	0,0
S2.2.0	Documenting and recording information	0	0	0,0%	0,0%	0,0%	0,0%	0,0%	0,0
S2.2.1	Preparing financial docs, records, reports, or budgets	0	0	0,0%	0,0%	0,0%	0,0%	0,0%	0,0
S2.2.2	Recording legal information	0	0	0,0%	0,0%	0,0%	0,0%	0,0%	0,0
S2.2.3	Preparing docs. for contracts, applications, or permits	1	1	0,3%	0,4%	0,3%	0,3%	0,3%	0,0
S2.2.4	Maintaining or preparing medical documentation	0	0	0,0%	0,0%	0,0%	0,0%	0,0%	0,0
S2.2.5	Maintaining operational records	1	1	1,8%	1,8%	1,8%	1,7%	1,9%	-0,1
S2.2.6	Document. tech. designs/procedures/problems/activities	0	0	0,0%	0,0%	0,0%	0,0%	0,0%	0,0
S2.2.7	Reporting incidents and defects	1	1	0,2%	0,2%	0,2%	0,2%	0,2%	0,0
S2.3.0	Managing information	0	0	0,0%	0,0%	0,0%	0,0%	0,0%	0,0
S2.4.0	Processing information	0	0	0,0%	0,0%	0,0%	0,0%	0,0%	0,0
S2.4.1	Gathering information from physical or electronic sources	1	1	0,9%	1,1%	0,9%	0,8%	0,8%	0,1
S2.4.2	Entering and transforming information	0	0	0,0%	0,0%	0,0%	0,0%	0,0%	0,0
S2.5.0	Measuring physical properties	0	0	0,0%	0,0%	0,0%	0,0%	0,0%	0,0
S2.5.1	Measuring dimensions and related properties	3	1	0,2%	0,2%	0,2%	0,2%	0,1%	0,1
S2.5.2	Weighing	0	0	0,0%	0,0%	0,0%	0,0%	0,0%	0,0
S2.6.0	Calculating and estimating	1	1	0,0%	0,0%	0,0%	0,0%	0,0%	0,0
S2.6.1	Performing calculations	2	1	0,5%	0,6%	0,6%	0,5%	0,6%	0,0
S2.6.2	Determining values of goods or services	0	0	0,0%	0,0%	0,0%	0,0%	0,0%	0,0
S2.6.3	Estimating resource needs	1	1	0,4%	0,5%	0,4%	0,3%	0,3%	0,1
S2.7.0	Analysing and evaluating information and data	6	1	0,8%	0,9%	0,8%	0,8%	0,7%	0,1
S2.7.1	Assessing land or real estate	7	1	0,2%	0,3%	0,2%	0,2%	0,1%	0,0
S2.7.2	Analysing scientific and medical data	7	1	0,3%	0,4%	0,3%	0,3%	0,2%	0,1
S2.7.3	Analysing financial and economic data	0	0	0,0%	0,0%	0,0%	0,0%	0,0%	0,0
S2.7.4	Analysing business operations	15	1	1,3%	1,6%	1,3%	1,2%	1,0%	0,3
S2.7.5	Performing risk analysis and management	1	1	1,0%	1,1%	1,0%	0,9%	0,9%	0,1
S2.7.6	Evaluating syst., programmes, equipment and products	1	1	0,4%	0,5%	0,4%	0,4%	0,3%	0,1

S2.8.0	Monitoring, inspecting and testing	4	1	0,3%	0,2%	0,3%	0,3%	0,3%	0,0
S2.8.1	Testing electrical and mechanical systems or equipment	4	1	0,2%	0,3%	0,2%	0,2%	0,1%	0,1
S2.8.10	Monitoring quality of products	2	1	1,1%	1,2%	1,2%	1,0%	0,8%	0,3
S2.8.11	Testing vehicles	0	0	0,0%	0,0%	0,0%	0,0%	0,0%	0,0
S2.8.2	Monitoring operational activities	3	1	1,1%	1,1%	1,1%	1,0%	1,0%	0,1
S2.8.3	Monitoring financial and economic resources and activity	0	0	0,0%	0,0%	0,0%	0,0%	0,0%	0,0
S2.8.4	Monitoring safety or security	2	1	0,5%	0,4%	0,5%	0,5%	0,5%	-0,1
S2.8.5	Monitoring environmental conditions	20	1	0,2%	0,3%	0,2%	0,2%	0,1%	0,1
S2.8.6	Monitoring health conditions of humans and animals	2	1	0,2%	0,1%	0,2%	0,3%	0,4%	-0,2
S2.8.8	Testing and analysing substances	3	1	0,2%	0,3%	0,2%	0,2%	0,1%	0,1
S2.8.9	Inspecting food safety and quality	0	0	0,0%	0,0%	0,0%	0,0%	0,0%	0,0
S2.9.0	Monitoring developments in area of expertise	0	0	0,0%	0,0%	0,0%	0,0%	0,0%	0,0
S3.0.0	Assisting and caring	0	0	0,0%	0,0%	0,0%	0,0%	0,0%	0,0
S3.1.0	Counselling	0	0	0,0%	0,0%	0,0%	0,0%	0,0%	0,0
S3.1.1	Counselling on personal, family or social issues	0	0	0,0%	0,0%	0,0%	0,0%	0,0%	0,0
S3.1.2	Providing support to resolve problems	1	1	0,2%	0,1%	0,2%	0,3%	0,3%	-0,1
S3.1.3	Assisting people to access services	0	0	0,0%	0,0%	0,0%	0,0%	0,0%	0,0
S3.2.0	Providing health care or medical treatments	0	0	0,0%	0,0%	0,0%	0,0%	0,0%	0,0
S3.2.1	Providing medical, dental and nursing care	0	0	0,0%	0,0%	0,0%	0,0%	0,0%	0,0
S3.2.2	Performing surgical procedures	0	0	0,0%	0,0%	0,0%	0,0%	0,0%	0,0
S3.2.3	Providing physical therapies	0	0	0,0%	0,0%	0,0%	0,0%	0,0%	0,0
S3.2.4	Providing psychological and occupational therapies	0	0	0,0%	0,0%	0,0%	0,0%	0,0%	0,0
S3.2.5	Prescribing & ordering medical tests, treatments/devices	0	0	0,0%	0,0%	0,0%	0,0%	0,0%	0,0
S3.2.6	Fitting assistive devices	0	0	0,0%	0,0%	0,0%	0,0%	0,0%	0,0
S3.3.0	Protecting and enforcing	1	1	0,1%	0,1%	0,2%	0,1%	0,2%	-0,1
S3.3.1	Complying with health and safety procedures	5	1	3,4%	2,8%	3,3%	3,6%	3,7%	-0,3
S3.3.2	Complying with environ. protection laws and standards	38	1	0,5%	0,7%	0,5%	0,5%	0,4%	0,1
S3.3.3	Complying with operational procedures	2	1	1,9%	1,6%	1,8%	1,9%	2,1%	-0,2
S3.3.4	Verifying identities and documentation	0	0	0,0%	0,0%	0,0%	0,0%	0,0%	0,0
S3.3.5	Maintaining and enforcing physical security	2	1	0,7%	0,4%	0,7%	0,8%	1,3%	-0,6
S3.3.6	Protecting privacy and personal data	0	0	0,0%	0,0%	0,0%	0,0%	0,0%	0,0
S3.3.7	Ensuring compliance with legislation	2	1	1,1%	1,1%	1,1%	1,1%	1,1%	0,0
S3.4.0	Providing info. and support to the public and clients	0	0	0,0%	0,0%	0,0%	0,0%	0,0%	0,0
S3.4.1	Providing information to the public and clients	1	1	0,1%	0,1%	0,1%	0,2%	0,2%	-0,1
S3.4.2	Accompanying and welcoming people	0	0	0,0%	0,0%	0,0%	0,0%	0,0%	0,0
S3.4.4	Providing general assistance to people	0	0	0,0%	0,0%	0,0%	0,0%	0,0%	0,0
S3.5.0	Preparing and serving food and drinks	0	0	0,0%	0,0%	0,0%	0,0%	0,0%	0,0
S3.5.1	Preparing food and drinks	0	0	0,0%	0,0%	0,0%	0,0%	0,0%	0,0
S3.5.2	Serving food and drinks	0	0	0,0%	0,0%	0,0%	0,0%	0,0%	0,0
S3.6.0	Providing personal care	0	0	0,0%	0,0%	0,0%	0,0%	0,0%	0,0
S3.6.1	Assisting people with mobility	0	0	0,0%	0,0%	0,0%	0,0%	0,0%	0,0
S3.6.2	Assisting with personal needs	0	0	0,0%	0,0%	0,0%	0,0%	0,0%	0,0
S3.6.3	Caring for children	0	0	0,0%	0,0%	0,0%	0,0%	0,0%	0,0
S3.6.4	Styling hair and providing beauty treatments	0	0	0,0%	0,0%	0,0%	0,0%	0,0%	0,0
S4.0.0	Management skills	0	0	0,0%	0,0%	0,0%	0,0%	0,0%	0,0
S4.1.0	Developing objectives and strategies	4	1	0,3%	0,4%	0,3%	0,3%	0,2%	0,1
S4.1.1	Identifying opportunities	3	1	0,4%	0,4%	0,4%	0,4%	0,3%	0,1
S4.1.2	Developing financial, business or marketing plans	1	1	1,0%	1,1%	1,1%	1,0%	0,9%	0,2
S4.1.3	Developing operational policies and procedures	11	1	1,2%	1,6%	1,2%	1,1%	0,9%	0,3
S4.1.4	Developing policies and legislation	7	1	0,1%	0,2%	0,1%	0,1%	0,1%	0,0
S4.1.5	Developing health programmes	0	0	0,0%	0,0%	0,0%	0,0%	0,0%	0,0
S4.1.6	Developing educational programmes	0	0	0,0%	0,0%	0,0%	0,0%	0,0%	0,0

S4.1.7	Developing contingency and emergency response plans	1	1	0,2%	0,2%	0,2%	0,2%	0,2%	0,0
S4.2.0	Organising, planning and scheduling work and activities	2	1	0,2%	0,2%	0,2%	0,2%	0,2%	0,0
S4.2.1	Directing operational activities	7	1	0,9%	0,9%	1,0%	0,9%	0,9%	0,0
S4.2.2	Planning events and programmes	1	1	1,3%	1,2%	1,3%	1,4%	1,5%	-0,1
S4.2.3	Directing, supervising and coordinating projects	3	1	0,5%	0,8%	0,5%	0,5%	0,4%	0,2
S4.2.4	Managing transport and logistics activities	0	0	0,0%	0,0%	0,0%	0,0%	0,0%	0,0
S4.2.5	Planning production processes	3	1	0,5%	0,5%	0,5%	0,4%	0,4%	0,1
S4.3.0	Allocating and controlling resources	0	0	0,0%	0,0%	0,0%	0,0%	0,0%	0,0
S4.3.1	Managing budgets or finances	2	1	1,1%	1,1%	1,2%	1,1%	1,0%	0,1
S4.3.2	Managing and administering human resources	0	0	0,0%	0,0%	0,0%	0,0%	0,0%	0,0
S4.3.3	Allocating and controlling physical resources	0	0	0,0%	0,0%	0,0%	0,0%	0,0%	0,0
S4.4.0	Performing administrative activities	0	0	0,0%	0,0%	0,0%	0,0%	0,0%	0,0
S4.4.2	Executing financial transactions	0	0	0,0%	0,0%	0,0%	0,0%	0,0%	0,0
S4.4.3	Performing general clerical and administrative tasks	0	0	0,0%	0,0%	0,0%	0,0%	0,0%	0,0
S4.5.0	Leading and motivating	0	0	0,0%	0,0%	0,0%	0,0%	0,0%	0,0
S4.6.0	Building and developing teams	0	0	0,0%	0,0%	0,0%	0,0%	0,0%	0,0
S4.7.0	Recruiting and hiring	0	0	0,0%	0,0%	0,0%	0,0%	0,0%	0,0
S4.8.1	Supervising a team or group	1	1	0,9%	0,9%	0,9%	0,9%	0,8%	0,0
S4.8.2	Assigning work to others	0	0	0,0%	0,0%	0,0%	0,0%	0,0%	0,0
S4.8.3	Monitoring and evaluating the performance of individuals	0	0	0,0%	0,0%	0,0%	0,0%	0,0%	0,0
S4.9.0	Making decisions	1	1	0,3%	0,3%	0,3%	0,3%	0,3%	0,0
S5.0.0	Working with computers	0	0	0,0%	0,0%	0,0%	0,0%	0,0%	0,0
S5.1.0	Programming computer systems	0	0	0,0%	0,0%	0,0%	0,0%	0,0%	0,0
S5.2.1	Setting up computer systems	0	0	0,0%	0,0%	0,0%	0,0%	0,0%	0,0
S5.2.2	Protecting ict devices	0	0	0,0%	0,0%	0,0%	0,0%	0,0%	0,0
S5.2.3	Resolving computer problems	0	0	0,0%	0,0%	0,0%	0,0%	0,0%	0,0
S5.5.0	Accessing and analysing digital data	0	0	0,0%	0,0%	0,0%	0,0%	0,0%	0,0
S5.5.1	Browsing, searching and filtering digital data	0	0	0,0%	0,0%	0,0%	0,0%	0,0%	0,0
S5.5.2	Managing, gathering and storing digital data	0	0	0,0%	0,0%	0,0%	0,0%	0,0%	0,0
S5.6.0	Use digital tools for collab., content creation&prob. solv.	0	0	0,0%	0,0%	0,0%	0,0%	0,0%	0,0
S5.6.1	Using digital tools for collaboration and productivity	0	0	0,0%	0,0%	0,0%	0,0%	0,0%	0,0
S5.6.2	Use word processing, publishing & presentation software	0	0	0,0%	0,0%	0,0%	0,0%	0,0%	0,0
S5.6.3	Using computer aided design and drawing tools	0	0	0,0%	0,0%	0,0%	0,0%	0,0%	0,0
S5.6.4	Using digital tools for processing sound and images	0	0	0,0%	0,0%	0,0%	0,0%	0,0%	0,0
S5.7.0	Using digital tools to control machinery	0	0	0,0%	0,0%	0,0%	0,0%	0,0%	0,0
S6.0.0	Handling and moving	0	0	0,0%	0,0%	0,0%	0,0%	0,0%	0,0
S6.1.0	Sorting and packaging goods and materials	0	0	0,0%	0,0%	0,0%	0,0%	0,0%	0,0
S6.1.1	Sorting materials or products	4	1	0,4%	0,3%	0,4%	0,4%	0,4%	0,0
S6.1.2	Marking materials or objects for identification	1	1	0,3%	0,2%	0,3%	0,3%	0,2%	0,0
S6.1.3	Packaging objects	1	1	0,2%	0,1%	0,2%	0,2%	0,2%	0,0
S6.11.0	Cleaning	0	0	0,0%	0,0%	0,0%	0,0%	0,0%	0,0
S6.11.1	Cleaning tools, equipment, workpieces and vehicles	0	0	0,0%	0,0%	0,0%	0,0%	0,0%	0,0
S6.11.2	Cleaning interior and exterior of buildings	0	0	0,0%	0,0%	0,0%	0,0%	0,0%	0,0
S6.11.3	Cleaning outdoor spaces	0	0	0,0%	0,0%	0,0%	0,0%	0,0%	0,0
S6.12.0	Washing and maintaining textiles and clothing	0	0	0,0%	0,0%	0,0%	0,0%	0,0%	0,0
S6.13.0	Handling and disposing of waste and hazardous materials	3	1	0,0%	0,0%	0,0%	0,0%	0,0%	0,0
S6.13.1	Handling and disposing of hazardous materials	11	1	0,4%	0,3%	0,4%	0,4%	0,5%	-0,1
S6.13.2	Disposing of non-hazardous waste or debris	10	1	0,2%	0,1%	0,2%	0,2%	0,3%	-0,1
S6.2.0	Moving and lifting	0	0	0,0%	0,0%	0,0%	0,0%	0,0%	0,0
S6.2.1	Loading and unloading goods and, materials	0	0	0,0%	0,0%	0,0%	0,0%	0,0%	0,0
S6.2.2	Moving or lifting materials, equipment, or supplies	0	0	0,0%	0,0%	0,0%	0,0%	0,0%	0,0
S6.2.3	Storing goods and materials	1	1	0,4%	0,2%	0,4%	0,5%	0,6%	-0,2

S6.3.0	Transforming and blending materials	0	0	0,0%	0,0%	0,0%	0,0%	0,0%	0,0
S6.3.1	Preparing mixtures or solutions	1	1	0,2%	0,2%	0,2%	0,1%	0,1%	0,0
S6.3.3	Preparing industrial materials for processing or use	0	0	0,0%	0,0%	0,0%	0,0%	0,0%	0,0
S6.3.6	Collecting & preparing specimens or materials for testing	0	0	0,0%	0,0%	0,0%	0,0%	0,0%	0,0
S6.4.0	Tending plants and crops	0	0	0,0%	0,0%	0,0%	0,0%	0,0%	0,0
S6.4.1	Cultivating land and crops	9	1	0,1%	0,1%	0,1%	0,1%	0,2%	-0,1
S6.4.2	Planting, pruning & harvest. trees, crops and other plants	3	1	0,0%	0,0%	0,1%	0,0%	0,1%	-0,1
S6.5.0	Assembling and fabricating products	0	0	0,0%	0,0%	0,0%	0,0%	0,0%	0,0
S6.5.1	Fabricating precision instruments or jewellery	0	0	0,0%	0,0%	0,0%	0,0%	0,0%	0,0
S6.5.2	Fabricating medical and prosthetic devices	0	0	0,0%	0,0%	0,0%	0,0%	0,0%	0,0
S6.5.3	Assembling electrical and electronic products	0	0	0,0%	0,0%	0,0%	0,0%	0,0%	0,0
S6.5.4	Assembling mechanical products	0	0	0,0%	0,0%	0,0%	0,0%	0,0%	0,0
S6.5.5	Assembling furniture	0	0	0,0%	0,0%	0,0%	0,0%	0,0%	0,0
S6.5.6	Fabricating garments and textile products	0	0	0,0%	0,0%	0,0%	0,0%	0,0%	0,0
S6.5.7	Fabricating food and related products	0	0	0,0%	0,0%	0,0%	0,0%	0,0%	0,0
S6.5.8	Fabricating tobacco products	0	0	0,0%	0,0%	0,0%	0,0%	0,0%	0,0
S6.6.1	Making production moulds and casts	0	0	0,0%	0,0%	0,0%	0,0%	0,0%	0,0
S6.6.2	Making patterns and templates	0	0	0,0%	0,0%	0,0%	0,0%	0,0%	0,0
S6.6.3	Making models	0	0	0,0%	0,0%	0,0%	0,0%	0,0%	0,0
S6.7.0	Using hand tools	0	0	0,0%	0,0%	0,0%	0,0%	0,0%	0,0
S6.7.1	Cutting materials and drilling holes	0	0	0,0%	0,0%	0,0%	0,0%	0,0%	0,0
S6.7.2	Shaping materials to create products	0	0	0,0%	0,0%	0,0%	0,0%	0,0%	0,0
S6.7.3	Smoothing surfaces of objects or equipment	0	0	0,0%	0,0%	0,0%	0,0%	0,0%	0,0
S6.7.4	Using precision hand tools	0	0	0,0%	0,0%	0,0%	0,0%	0,0%	0,0
S6.7.5	Hammering, nailing and riveting	0	0	0,0%	0,0%	0,0%	0,0%	0,0%	0,0
S6.8.0	Positioning materials, tools or equipment	1	1	0,5%	0,4%	0,5%	0,4%	0,3%	0,1
S6.9.0	Handling animals	0	0	0,0%	0,0%	0,0%	0,0%	0,0%	0,0
S6.9.1	Tending and breeding animals	1	1	0,2%	0,1%	0,2%	0,2%	0,4%	-0,2
S6.9.2	Tending and breeding aquatic animals	1	1	0,0%	0,1%	0,0%	0,0%	0,1%	0,0
S6.9.3	Moving and herding animals	0	0	0,0%	0,0%	0,0%	0,0%	0,0%	0,0
S6.9.4	Hunting, trapping and slaughtering animals	0	0	0,0%	0,0%	0,0%	0,0%	0,0%	0,0
S6.9.5	Feeding and grooming animals	0	0	0,0%	0,0%	0,0%	0,0%	0,0%	0,0
S6.9.6	Training animals	0	0	0,0%	0,0%	0,0%	0,0%	0,0%	0,0
S6.9.7	Providing therapy or veterinary treatment for animals	0	0	0,0%	0,0%	0,0%	0,0%	0,0%	0,0
S7.0.0	Constructing	1	1	0,0%	0,0%	0,0%	0,0%	0,0%	0,0
S7.1.0	Building and repairing structures	0	0	0,0%	0,0%	0,0%	0,0%	0,0%	0,0
S7.1.1	Installing structural masonry materials	0	0	0,0%	0,0%	0,0%	0,0%	0,0%	0,0
S7.1.2	Installing wooden and metal components	6	1	1,7%	2,0%	1,8%	1,5%	1,2%	0,5
S7.1.4	Installing concrete components	0	0	0,0%	0,0%	0,0%	0,0%	0,0%	0,0
S7.1.5	Installing roofing	0	0	0,0%	0,0%	0,0%	0,0%	0,0%	0,0
S7.1.6	Joining parts using soldering, welding/brazing techniques	0	0	0,0%	0,0%	0,0%	0,0%	0,0%	0,0
S7.1.7	Installing and assembling building fixtures	0	0	0,0%	0,0%	0,0%	0,0%	0,0%	0,0
S7.1.8	Installing and assembling rigging equipment	0	0	0,0%	0,0%	0,0%	0,0%	0,0%	0,0
S7.2.0	Installing interior or exterior infrastructure	0	0	0,0%	0,0%	0,0%	0,0%	0,0%	0,0
S7.2.1	Installing heating, ventilation & air conditioning equip.	4	1	0,1%	0,1%	0,1%	0,1%	0,1%	0,0
S7.2.2	Installing plumbing or piping equipment or systems	0	0	0,0%	0,0%	0,0%	0,0%	0,0%	0,0
S7.2.3	Installing insulation materials	1	1	0,0%	0,0%	0,0%	0,0%	0,1%	0,0
S7.3.1	Applying material to fill gaps in surfaces	0	0	0,0%	0,0%	0,0%	0,0%	0,0%	0,0
S7.3.2	Applying textured or masonry coatings	0	0	0,0%	0,0%	0,0%	0,0%	0,0%	0,0
S7.3.3	Applying protective or decorative solutions or coatings	0	0	0,0%	0,0%	0,0%	0,0%	0,0%	0,0
S7.3.4	Installing floor and wall coverings	0	0	0,0%	0,0%	0,0%	0,0%	0,0%	0,0
S8.0.0	Working with machinery and specialised equipment	1	1	0,6%	0,6%	0,6%	0,6%	0,3%	0,3

S8.1.1	Operating earthmoving equipment	0	0	0,0%	0,0%	0,0%	0,0%	0,0%	0,0
S8.1.2	Operating agricultural or forestry equipment	2	1	0,1%	0,1%	0,1%	0,1%	0,1%	0,0
S8.1.3	Operating lifting or moving equipment	0	0	0,0%	0,0%	0,0%	0,0%	0,0%	0,0
S8.2.0	Driving vehicles	0	0	0,0%	0,0%	0,0%	0,0%	0,0%	0,0
S8.2.1	Driving heavy vehicles	0	0	0,0%	0,0%	0,0%	0,0%	0,0%	0,0
S8.2.2	Driving light vehicles	0	0	0,0%	0,0%	0,0%	0,0%	0,0%	0,0
S8.2.3	Operating rail vehicles	0	0	0,0%	0,0%	0,0%	0,0%	0,0%	0,0
S8.3.0	Operating watercraft	0	0	0,0%	0,0%	0,0%	0,0%	0,0%	0,0
S8.4.0	Operating machinery for extraction/proces. raw materials	1	1	0,0%	0,0%	0,0%	0,0%	0,0%	0,0
S8.4.1	Operating mining, drilling & mineral processing machinery	0	0	0,0%	0,0%	0,0%	0,0%	0,0%	0,0
S8.4.2	Operating metal processing and finishing machinery	0	0	0,0%	0,0%	0,0%	0,0%	0,0%	0,0
S8.4.3	Operating pumping systems or equipment	0	0	0,0%	0,0%	0,0%	0,0%	0,0%	0,0
S8.4.4	Operating energy production or distribution equipment	5	1	0,1%	0,2%	0,1%	0,1%	0,1%	0,1
S8.4.5	Op. petroleum/chemical/water proces. systems or equip.	6	1	0,1%	0,1%	0,1%	0,1%	0,1%	0,0
S8.4.6	Operating wood processing and papermaking machinery	1	1	0,0%	0,0%	0,0%	0,0%	0,0%	0,0
S8.4.7	Operating kilns, furnaces and drying equipment	1	1	0,1%	0,1%	0,1%	0,1%	0,0%	0,0
S8.5.0	Operating machinery for the manufacture of products	0	0	0,0%	0,0%	0,0%	0,0%	0,0%	0,0
S8.5.1	Operating painting or coating machinery	0	0	0,0%	0,0%	0,0%	0,0%	0,0%	0,0
S8.5.2	Operating packaging machinery	0	0	0,0%	0,0%	0,0%	0,0%	0,0%	0,0
S8.5.3	Operating machinery for the manufacture and treatment of textiles, fur and leather products	0	0	0,0%	0,0%	0,0%	0,0%	0,0%	0,0
S8.5.4	Operating food processing machinery	0	0	0,0%	0,0%	0,0%	0,0%	0,0%	0,0
S8.5.5	Operating mixing and separating machinery	0	0	0,0%	0,0%	0,0%	0,0%	0,0%	0,0
S8.5.6	Operating print and photographic production equipment	0	0	0,0%	0,0%	0,0%	0,0%	0,0%	0,0
S8.5.7	Operating metal, plastic or rubber forming equipment	0	0	0,0%	0,0%	0,0%	0,0%	0,0%	0,0
S8.5.8	Operating cutting, grinding and smoothing machinery	1	1	0,2%	0,2%	0,2%	0,1%	0,1%	0,1
S8.6.0	Using precision instrumentation and equipment	0	0	0,0%	0,0%	0,0%	0,0%	0,0%	0,0
S8.6.1	Operating medical equipment	0	0	0,0%	0,0%	0,0%	0,0%	0,0%	0,0
S8.6.2	Operating audio-visual equipment	0	0	0,0%	0,0%	0,0%	0,0%	0,0%	0,0
S8.6.3	Operating scientific and laboratory equipment	1	1	0,3%	0,4%	0,3%	0,2%	0,2%	0,1
S8.6.4	Operating communications equipment	0	0	0,0%	0,0%	0,0%	0,0%	0,0%	0,0
S8.6.5	Operating precision industrial equipment	0	0	0,0%	0,0%	0,0%	0,0%	0,0%	0,0
S8.6.6	Using precision measuring equipment	1	1	0,4%	0,6%	0,5%	0,4%	0,3%	0,1
S8.7.0	Installing, maintaining and repairing mechanical equip.	0	0	0,0%	0,0%	0,0%	0,0%	0,0%	0,0
S8.7.1	Repairing and installing mechanical equipment	2	1	0,3%	0,3%	0,3%	0,2%	0,2%	0,1
S8.7.2	Maintaining mechanical equipment and tools	0	0	0,0%	0,0%	0,0%	0,0%	0,0%	0,0
S8.7.3	Maintaining mechanical machinery	0	0	0,0%	0,0%	0,0%	0,0%	0,0%	0,0
S8.8.0	Installing, maintaining and repairing electrical, electronic and precision equipment	0	0	0,0%	0,0%	0,0%	0,0%	0,0%	0,0
S8.8.1	Installing/repairing electrical, electronic/precision equip.	4	1	0,6%	0,8%	0,6%	0,5%	0,3%	0,3
S8.8.2	Maintaining electrical, electronic and precision equip.	5	1	0,4%	0,5%	0,4%	0,4%	0,3%	0,2
S8.9.0	Operating aircraft	0	0	0,0%	0,0%	0,0%	0,0%	0,0%	0,0



BIBLIOGRAPHY



BIBLIOGRAPHY

SOURCES:

- a. E. Aja, J. Arango y Josep Oliver Alonso (directores), *La inmigración en Spain en 2010*, Barcelona: CIDOB edicions. Rihova, Hana (2016), *Using Labour Market Information. Guide to anticipating and Matching Skills and Jobs. Volume 2*. Luxembourg: Publications Ofce of the European Union.
- b. Banco de Spain (2021). *Un análisis sectorial de los retos futuros de la economía española 2021*. Documentos ocasionales nº 2133. Madrid, 2021
- c. H. Bakhshia, J. Downing, M. Osborne, P. Schneider (2017): *The Future of Skills: Employment in 2030*. Pearson, University of Oxford, Oxford Martin School i Nesta.
- d. Bakule, M.; V. Czesana; Véra Havilickova; B. Kriechel; T. Rasovez and Rob Wilson. *Developing skills Foresights, Scenarios and Forecasts. Guide to anticipating and Matching Skills and Jobs. Volume 2*. European Training Foundation, European Centre for the Development of Vocational Training and International Lablur Ofce. Luxembourg: Publications Ofce of the European Union.
- e. CaixaBank Dualiza. (2022, 4 April). *Observatorio de la Formación Profesional*. <https://www.observatoriofp.com>
- f. CaixaBank Dualiza. Díez, A.; Moso, M.; Torrent, J. (2019). *La formación profesional en la empresa industrial*. Fundación Bankia por la Formación Dual, Madrid, 2019
- g. Cedefop. *The green employment and skills transformation. Insights from a European Green Deal skills forecast scenario*. Luxembourg, 2021 *The 2021 PREDICT Key Facts Report*, European Commission.
- h. Cedefop (2012). *Green skills and environmental awareness in vocational education and training*. Luxembourg: Publications Office. https://www.cedefop.europa.eu/files/5524_en.pdf
- i. Cedefop (2019). *Skills for green jobs: 2018 update*. European synthesis report. Luxembourg: Publications Office. Cedefop reference series; No 109. <http://data.europa.eu/doi/10.2801/750438>
- j. CEPREDE. *Economía Digital en Spain, 2021 · Adigital Barómetro TIC Monitor*, prepared by VASS and Centro de Predicción Económica.
- k. Consorci de Formació Professional de l'Automoció. *Competències i necessitats formatives del Sector de l'Automoció de Catalunya*. Generalitat de Catalunya. Departament d'empresa i coneixement. Barcelona, 2019
- l. Cortazar, L. (2018). *Transformación digital y consecuencias para el empleo en Spain*. Una revisión de la investigación reciente. Documento de Trabajo 2018/04. FEDEA, Madrid.
- m. Cuadrado, J.R.; Iglesias, C. (2003). *Cambio sectorial y desempleo en Spain*. Un análisis de la relación entre terciarización, cambio cualificativo y movilidad laboral en Spain. Fundación BBVA, Madrid.
- n. Devlin J, Chang M-W, Lee K, Toutanova K. (2019). *BERT: Pre-training of Deep Bidirectional Transformers for*

- Language Understanding. NAACL. 4171-4186. <http://dx.doi.org/10.18653/v1/N19-1423>
- o. Druker, P. (1969). *The Age of Discontinuity, Guidelines to our Changing Society*. Harper and Rpw, Noa York.
- p. Dupuy, Arnaud (2009), 'An evaluation of the forecast of the indicador of the labour market gap', ROA Technical Report, ROA-TR-2009/3, Research Centre for Education and the Labor Market (ROA). Maastricht University.
- q. European Commission Studies (1996). *Enseñar y aprender: hacia la sociedad del conocimiento*. Luxembourg: Publications Office of the European Union. Serrano, A.; Crespo, E. (1997). *El discurso de la Unión Europea sobre la sociedad del conocimiento*. REIS, num. 02, 1997, Madrid. Page 89-207.
- r. European Commission (2016a), *a New Skills Agenda for Europe*, Communication from the Commission to the European Parliament, The Council, the European Economic and Social Committee and the Committee of the Regions, Brussels, 10 June, COM (2016), 281 fial.
- s. (2016b), *European Qualications Framework for lifelong learning*, Council Recommendation, Strasbourg, 2016/0180 (NLE).
- t. European Training Foundation, European Centre for the Development of Vocational Training and International Labour Ofce (2016a), *Using Labour Market Information. Guide to anticipating and Matching Skills and Jobs*. Volume 2. Luxembourg: Publications Ofce of the European Union.
- u. European Commission (2013). *PES and green jobs*. Brussels, Author: Annette Cox and Beth Foley
- v. European Commission (2021). *Reskilling for the green transition*. https://ec.europa.eu/environment/ecoap/about-eco-innovation/policies-matters/reskilling-green-transition_en
- w. Fina, L.; Toharia, L.; García Serrano, C.; Mañé, F. (2000). *Cambio ocupacional y necesidades educativas de la economía española*, en F. Sáez (coord.), *Formación y empleo*. Fundación Argentaria, Madrid, pág., 47-154.
- x. Finlayson, A., Moso-Diez, M., and Orlovic Lovren, V. (2021) *Impact of COVID-19 on Education for Sustainable Development (ESD) in the context of twin transition*, EENEE report, Luxembourg: Publications Office of the European Union. doi: 10.2766/05850.
- y. *Fundación Biodiversidad y Observatorio de la Sostenibilidad en Spain*. Madrid, 2010 *The green employment and skills transformation. Insights from a European Green Deal skills forecast scenario*. Luxembourg Publication Ofce of the European Union, 2021.
- z. Gamboa, J., Moso-Díez, M., Albizu, M., Blanco, L., Lafuente, A., Mondaca, A., Murciego, A., Navarro, M. and Ugalde, E. (2021). *Observatorio de la Formación Profesional en Spain: Informe 2021-La FP como clave de Competitividad y Sostenibilidad*.
- aa. García Montalvo, J. (2009). *La inserción laboral de los universitarios y el fenómeno de la sobrecualificación en Spain*, en *La educación en Spain*. Papeles de Economía Española, núm. 119, Madrid, 2009. Page 172-187
- bb. García Serrano, C.; Jimeno, J. F.; Toharia, L. (1995). *La naturaleza del cambio técnico y la evolución del empleo en Spain, 1977-1993*. *Información Comercial Española*, núm 743, julio 1995, Madrid. Page 23-44.

- cc. Garrido, L.; Toharia, L. (1991). Cambio ocupacional y necesidades de formación en Spain, 1985- 1995. En *Economía industrial*, núm. 277, enero-febrero 1991, Pág. 159-179
- dd. Homs, O., Kruse, W., Ordovás, R., Pries, L. (1987). Cambios de cualificación en las empresas españolas. Fundación IESA, Madrid.
- ee. Homs, O. (1990). La cualificación como rigidez o innovación en la organización del trabajo. El caso del sector hotelero. *Sociología del Trabajo*. Nueva época, primavera 1990, número 9, Madrid. Page 19-33
- ff. INJUVE, Jóvenes y vida activa. Mercado e instituciones. *Revista de Estudios de Juventud*. No. 87, 2009, Madrid
- gg. Instituto Valenciano de Estudios Económicos (Ivie) y Cajamar, 2020 y 2021. Informe resumen de energías renovables. REE. Observatorio sobre el Sector Agroalimentario.
- hh. *La Vanguardia* 11-10-2018 Cuadrado, J.R.; Iglesias, C. (2003).
- ii. Lockart, C. Brett and Michael Wolf (2012), 'Employment Outlook: 2010-2020. Occupational employment projections to 2020', *Monthly Labor review*, January.
- jj. Mañé Vernet, F. i Oliver-Alonso, Josep (2001), *Mercat de Treball, Demografia i Sistema Educatiu a Catalunya a les Portes del S.XXI: Reptes i Oportunitats per a la Propera Dècada*, PIMEC-SEFES, Barcelona.
- kk. Mañé Vernet, F. and J. Oliver Alonso (2003a), 'Forecasting educational necessities in Spain through 2010', en M. Neugart and K. Schömann (eds.): *Forecasting labour markets in OECD countries: measuring and tackling mismatches*. Cheltenham, UK: Edward Elgar, ISBN: 1 84376 0134, pp. 283-323.
- ll. Mañé-Vernet, F. and Josep Oliver-Alonso (2003b), 'A note of the evolution of labour supply in Spain and its implications at regional level, en Bullinger, Schmidt, Schömann and Tessaring (editors): *Early identification of skill needs in Europe*. Luxembourg: Cedefop Reference series; 40, pp. 261-275.
- mm. McKinsey & Company (2017a): *A future that works: automation, employment, and productivity*. McKinsey Global Institute. Ken Goldberg. Catedrático de Ingeniería Robótica en la Universidad de California, Berkeley.
- nn. OECD (2018): *Job Creation and Local Economic Development 2018: Preparing for the Future of Work*. OECD Publishing.
- oo. Oliver Alonso, Josep (2006), *Spain 2020: un mestizaje ineludible. Cambio demográfico, mercado de trabajo e inmigración en las comunidades autónomas*, Institut d'Estudis Autonòmics, Generalitat de Catalunya.
- pp. Oliver Alonso, Josep (2011), 'El mercado de trabajo de la inmigración 2007-10: los cambios 2009/2010 en el marco de la crisis',
- qq. Prieto, C. (2000). Trabajo y orden social: entre la nada y la sociedad de empleo. *Política y Sociedad*, 34.
- rr. Report on the State of the art of Advanced Manufacturing and HVET/VET in Europe. EXAM 4.0 Partnership. <https://examhub.eu/pdf>. Informe empleo verde en una economía sostenible.

- ss. WORLD ECONOMIC FORUM (2018): The Future of Jobs Report. Centre for the New Economy and Society Insight Report. INTERNATIONAL LABOUR ORGANIZATION (2018): The future of work in a changing natural environment: Climate change, degradation and sustainability. ILO future of work research paper series, research paper 4.

Ministros%20ha%20aprobado%20un%20 Acuerdo,por%20un%20 importe%20de%2050%20millones%20 de%20euros

- <https://www.mincotur.gob.es/es-es/IndicadoresyEstadisticas/Presentaciones%20 sectoriales/14.%20 Fabrica%20maquinaria%20y%20 equipo%20mecanico.pdf>
- <https://www.extrasoft.es/robotica-industrial-en-espana/>
- [https://www.infopack.es/es/noticia/e5.368\).spana-10-en-el-ranking-mundial-en-parque-derobots-industriales-a-pesar-del-descenso-de-nuevas-inst](https://www.infopack.es/es/noticia/e5.368).spana-10-en-el-ranking-mundial-en-parque-derobots-industriales-a-pesar-del-descenso-de-nuevas-inst)
- https://ifr.org/img/worldrobotics/Executive_Summary_WR_Industrial_Robots_2021.pdf
- https://www.ine.es/dyngs/INEbase/operacion.htm?c=Estadistica_C&cid=1254736143952&menu=re-sultados&secc=1254736143612&i-dp=1254735576715
- https://ec.europa.eu/eurostat/statistics-explained/index.php?title=Renewable_energy_statistics
- 26413_77772021101535.pdf (cdti.es)
- <https://www.e-unwto.org/doi/epdf/10.18111/9789284422746>
- <https://www.exceltur.org/impactur-2/>
- https://www.idae.es/sites/default/les/documentos/publicaciones_idae/documentos_11261_escalacalifenerg_edifexistentes_2011_accesible_c762988d.pdf

OTHER PUBLICATIONS CONSIDERED

- https://www.boe.es/diario_boe/txt.php?id=BOE-A-2022-1058 Organic Law 3/2022, of 31 March, on the organization and integration of Vocational Training. Official State Gazette (BOE) no. 78 of 1 April 2022
- www.manpowergroup.com and internal repository of studies (60 years of global database)
- https://www.ontsi.es/sites/ontsi/les/2022-06/robotizacion_y_automatizacion.pdf
- https://www.mckinsey.com/~media/mckinsey/industries/public_and_social_sector/our_insights/what_the_future_of_work_will_mean_for_jobs_skills_and_wages/mgi_jobs_lost-jobs_gained_report_december_2017.pdf
- https://www3.weforum.org/docs/WEF_Future_of_Jobs_2018.pdf
- <https://www.lamoncloa.gob.es/consejodeministros/Paginas/enlaces/140921-enlace-maquinaherramienta.aspx#:~:text=El%20Consejo%20de%20>

MAIN BODIES, ASSOCIATIONS AND GROUPS CONSULTED FOR THIS STUDY

- Ministry of Agriculture, Fisheries and Food (<https://www.mapa.gob.es>)
- Ministry of Economic Affairs and Digital Transformation (<https://www.mineco.gob.es>)
- Ministry of Science and Innovation (<https://www.ciencia.gob.es>)
- Ministry of Culture and Sport (www.culturaydeporte.gob.es)
- Ministry of Education and Vocational Training (<https://www.educacionyfp.gob.es/portada.html>)
- Ministry of Industry, Trade and Tourism (<https://www.mincotur.gob.es>)
- Ministry of Labour and Social Economy (<https://www.mites.gob.es>)
- Ministry of Ecological Transition and the Demographic Challenge (<https://www.miteco.gob.es/es>)
- Ministry of Transport, Mobility and Urban Agenda (<https://www.mitma.gob.es/>)
- CDETI (<https://sede.cdti.gob.es>)
- DESI (<https://digital-strategy.ec.europa.eu/en/policies/desi>)
- Eurostat (<https://ec.europa.eu/eurostat>)
- ICEX (<https://www.icex.es>)
- Idae (<https://www.idae.es>)
- INE (<https://ine.es>)
- Ontsi (<https://www.ontsi.es>)
- RED.es (www.red.es)
- Adigital (<https://www.adigital.org>)
- AED (<https://asociaciondedirectivos.org>)
- AEDIPE (www.aedipe.es)
- AMETIC (<https://ametic.es>)
- Andimac (www.andimac.org)
- ANFAB (<https://anfab.com>)
- ANFAC (<https://anfacs.com>)
- APD (<https://www.apd.es>)
- ASEMPLERO (<https://asempleo.com>)
- CÁMARA DE COMERCIO DE Spain (<https://www.camara.es>)
- CEOE (<https://www.ceoe.es>)
- ConsorcioPassivHaus (<https://www.consorcio-passivhaus.com>)
- DigitalES (<https://www.digitales.es>)
- Euroconstruct (<https://www.euroconstruct.org>)
- FIAB (www.fiab.es)
- Forética (<https://foretica.org>)
- Fundación Laboral de la Construcción (<https://www.fundacionlaboral.org>)
- Ganvam (<https://ganvam.es>)
- Spain Green Building Council (<https://gbce.es>)
- Observatorio de la Construcción (<https://www.observatoriodelaconstruccion.com>)
- World Tourism Organisation (www.e-unwto.org)
- WORLD ECONOMIC FORUM (www.weforum.org)

- CSIC: <https://www.csic.es/es/ciencia-y-sociedad/didactica-de-la-ciencia>
- Irena <https://www.irena.org/Digital-Report/Geopolitics-of-the-Energy-Transformation>

SPECIFIC REFERENCES FOR THE ECONOMIC ANALYSIS:

- Cedefop (2023). Skills-OVATE. <https://www.cedefop.europa.eu/en/tools/skills-online-vacancies/sectors/sectors-occupations>
- European Commission, Directorate-General for Economic and Financial Affairs, Vandeplas, A., Vanyolos, I., Vigani, M. (2022). The possible implications of the green transition for the EU labour market, Publications Office of the European Union. <https://data.europa.eu/doi/10.2765/583043>
- European Commission, Directorate-General for Employment, Social Affairs and Inclusion, (2017). ESCO handbook: European skills, competences, qualifications and occupations, Publications Office. <https://data.europa.eu/doi/10.2767/934956>
- European Commission, Directorate-General for Energy, Cihlar, J., Villar Lejarreta, A., Wang, A. (2021). Hydrogen generation in Europe: overview of costs and key benefits, Publications Office. <https://data.europa.eu/doi/10.2833/821682>
- European Commission, Directorate-General for Employment, Social Affairs and Inclusion (2022). Green Skills and Knowledge Concepts: Labelling the ESCO classification. <https://esco.ec.europa.eu/system/files/2023-07/Green%20Skills%20and%20Knowledge%20-%20Labelling%20ESCO.pdf>
- European hydrogen backbone (2022). Five hydrogen supply corridors for Europe in 2030. Guidehouse, May 2022.
- Eurostat (2023). FIGARO and ESA supply, use and input-output tables. <https://ec.europa.eu/eurostat/web/esa-supply-use-input-tables>
- Fuel Cells and Hydrogen 2 Joint Undertaking, (2016). Hydrogen roadmap Europe: a sustainable pathway for the European energy transition, Publications Office. <https://data.europa.eu/doi/10.2843/341510>
- Fuel cells and hydrogen joint undertaking (2020). Opportunities for Hydrogen Energy Technologies considering the National Energy & Climate Plans. Trinomics, august 2020.
- Gas for Climate (2019). Job creation by scaling up renewables. Navigant, November 2019.
- IEA (2021, 2022, 2023). Global Hydrogen Review. <https://www.iea.org/reports/global-hydrogen-review-2023>
- IEA (2023). Hydrogen Projects Database. <https://www.iea.org/data-and-statistics/data-product/hydrogen-projects-database#overview>
- IRENA (2022). Renewable Energy and Jobs Annual Review 2022. In collaboration with the international labor organization.
- https://www.irena.org/-/media/Files/IRENA/Agency/Publication/2022/Sep/IRENA_Renewable_energy_and_jobs_2022.pdf

- IRENA (2022). World Energy Transition outlook 2022. <https://www.irena.org/Digital-Report/World-Energy-Transitions-Outlook-2022>
- PwC (2023). The green hydrogen economy. <https://www.pwc.com/gx/en/industries/energy-utilities-resources/future-energy/green-hydrogen-cost.htm>

