**CDO-VR**

**DESK RESEARCH**

**OF DEFICIT OCCUPATIONS   
IN AUSTRIA / STYRIA**



*„Gefördert aus Mitteln des Bundesministeriums für Arbeit und Wirtschaft“*

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# Introduction

*Briefly explain the purpose of the research*

*"More than 80,000 vacancies in deficit occupations" was written online in the Kleine Zeitung (a regional Austrian daily newspaper) in November 2022 and continued: "Electricians, cooks, waiters and nurses have one thing in common: they are professions in which it is particularly difficult to fill vacancies - in other words, Austrian deficit occupations. And the situation is getting worse.“ "The labor shortage in Austria has reached historic dimensions," says Dénes Kucsera, research associate at Agenda Austria*.[[1]](#footnote-1)

This situation has hardly changed in 2023:

*"72% of the companies surveyed expect/fear a further worsening/exacerbation of the shortage of labor and skilled workers in their industry in the next 3 years (51% even expect a sharp increase)."[[2]](#footnote-2)*

Innovative approaches to career guidance offer opportunities for companies, regions and society to recruit workers for so-called deficit occupations and to utilize the potential of young people and jobseekers.

The CDO-VR project deals with these approaches. It examines the question of how young and unemployed people in the border region of the two neighboring countries Slovenia and Austria can be motivated to take an interest in deficit occupations.

A first goal of the project is the preparation of a joint research report in order to gain an up-to-date insight into the situation of deficit occupations in the two partner countries Slovenia and Austria and to find out initial approaches to solutions, with which images, arguments and aspects young and unemployed people can be introduced to deficit occupations. To this end, a secondary analysis and a supplementary qualitative focus group survey with students, young jobseekers and employers, managers and apprenticeship trainers in both regions will be conducted. Subsequently, based on this research, guidelines and technical requirements for the implementation of a VR/AR tool will be developed that can be used in both regions to increase the interest and skills of young and unemployed people for deficit occupations or entry into the labor market.

*Describe the focus groups involved in the project.*

In the focus groups the participants are brought into contact with each other along topic-related in such a way that an unstructured, open discussion arises, from which conclusions about the (gender-specific) attributions to the respective deficit occupations and attitudes towards the "pros and cons" of a possible choice of profession can be drawn.

Furthermore, the aim is to find out how the presentation of deficit occupations (with the

VR) can be done as interesting, target group-specific, motivating and realistic as possible. It applies to figure out what has an effect on girls and boys, young women and men in order to arouse their interest in a vocational training in a deficit occupation.

Focus groups were conducted with the following target groups in the CDO-VR project in both Austria and Slovenia as part of the research:

* Students
* Young jobseekers
* Entrepreneurs/employers/executives
* Apprentice trainers / apprentices / (technical) experts from the sectors involved in the training of involved in the training of skilled workers, apprentices, etc.

The focus groups worked on the following questions, adapted to the respective participants:

* What are your plans for the future after school
* Imagine that you would design a VR tool for a specific profession that is intended to inspire young people like you to do an apprenticeship in this profession

What must this VR tool be able to do

* When you look at the list of (so-called) shortage occupations:

What do you think about it?

* Which three professions would you choose, which would you not, and why?

Discuss with the others!

* What do you think is important to increase the visibility and attractiveness of shortage occupations among young people and young job seekers?
* What do you think are the key competencies and crucial skills to be successful in your industry?
* What needs to be done to encourage young people and young jobseekers to choose a career in your sector?
* How do we need to design a VR tool so that it supports you in your search for applicants?
* What experience do you have with virtual reality in a training or education context?
* What advice would you like to give to young people who are considering entering a profession in your industry?

The results of the focus groups are incorporated into this research report and are also one of the foundations for the next steps in the development of the VR tool.

# Deficit occupations in Austria - Definition

*Define deficit occupations and their significance in the labour market in your country.*

Filling vacancies in deficit occupations and the timely training of future skilled workers in these areas are key to the economy and competitiveness in Austria. Employers, managers, experts and trainers also emphasized in the focus groups how important it is to counteract the shortage of skilled workers by providing career information at an early stage. In addition, it was emphasized how important it is to use innovative methods to interest young people in shortage occupations in particular, to show what an important contribution these occupations make to society and the economy.

## 2.1. What is a deficit occupation

Deficit occupations in Austria are defined as follows: *"Shortage occupations are those in which there were fewer than 1.5 jobseekers per vacancy registered with the Public Employment Service (AMS) in the current year ("job vacancy rate").“*[[3]](#footnote-3)

## 2.2. Deficit occupations in Austria – focus on CDO-VR sectors

Even though there is a shortage of skilled workers in a wide range of sectors across Austria, there are certain professions in which the shortage of skilled workers is particularly high: In 2023, for example, there was a demand for 16,378 vacancies in metal and electrical occupations in Austria and 18,025 vacancies in accommodation/catering and gastronomy (see vacancies by occupation: https://iambweb.ams.or.at/ambweb/ )

The comparison of apprenticeship vacancies and apprenticeship seekers also shows the demand for future skilled workers in Austria particularly well.

In 2023, for example, there will be a total of 6266 vacant apprenticeship positions in Austria in tourism/catering/hotel and hospitality, etc. with 593 registered apprenticeship seekers and 5286 vacant apprenticeship positions in metal and electrical professions with 1564 registered apprenticeship seekers. (see apprenticeship seekers by occupation AMS, or apprenticeship vacancies by occupation: <https://iambweb.ams.or.at/ambweb/> )

*"The shortage of skilled workers now affects all industries and professions. An annual Austria-wide ibw-survey of more than 5,100 companies ("Fachkräfteradar") commissioned by the Austrian Federal Economic Chamber shows, that the shortage of skilled workers in Austria remains at a very high level despite a slight decline since the previous year. Around 210,000 skilled workers were missing in March/April 2023, 82% of companies are affected, 62% suffer from a (very or rather) severe shortage of skilled workers. The following sectors are experiencing particularly severe shortages: tourism, food production, manufacture of electrical and electronic equipment, craft and technical trades and transportation...”* [[4]](#footnote-4)

*According to Corina Drucker, there is an absolute shortage of occupations in Austria:*

*in the construction industry or professions in the skilled trades: Roofers, concrete workers, pavers, carpenters, tilers, pipe fitters, electricians, bricklayers, locksmiths, civil engineers, glaziers, painters and others*

* *in the medical field: doctors, opticians, nurses*
* *in catering trade and tourism: cooks, waiters and catering specialists*
* *Technicians with higher education for data processing or mechanical engineering or the construction industry*
* *and there is still an absolute shortage of skilled workers in the IT sector.*

# Overview of Labor Market in your country

*Current employment trends and statistics in both countries.   
Unemployment rates and sectors experiencing labour shortages.*

The figures in 3.1. refer to the national calculation of the unemployment rate:

*"In the national calculation of the unemployment rate (ALQ), the number of unemployed persons (AL) is set in relation to the labor force potential (LFP). The labor force potential, in turn, is the sum of the number of unemployed and the number of employed persons according to the umbrella organization of social insurance institutions (until 31.12.2019: Main Association of Austrian Social Insurance Institutions)*."[[5]](#footnote-5)

## **3.1 Unemployment rates**[[6]](#footnote-6)

Unemployment rate Austria (AMS) 2022: 6.3% (men: 6.5%, women: 6%)

Unemployment rate Austria (AMS) 2023: 6.4% (men: 6.8%, women: 6%)

Unemployment rate Styria (AMS) 2022: 5.2% (men: 5.4%, women: 5%)

Unemployment rate Styria (AMS) 2023: 5.5% (men: 5.8%, women: 5.1%)  
Young people (<25) Unemployment rate Austria (AMS) 2022: 5.4% (men: 5.5%, women: 5.3%)

Young people (<25) Unemployment rate Austria (AMS) 2023: 5.9% (men: 6.1%, women: 5.7%)

Young people (<25) unemployment rate Styria (AMS) 2022: 4.6% (men: 4.6%, women: 4.7%)

Young people (<25) unemployment rate Styria (AMS) 2023: 5.2% (men: 5.2%, women: 5.2%)

## 3.2. Statistics and data

The CDO-VR project is about getting young people interested in and motivated to train in a shortage occupation. The importance of this topic is illustrated by the AMS statistics on demand and supply on the apprenticeship market in 2023:

Open apprenticeship positions in metal and electrical professions in Austria: 5286  
registered apprenticeship seekers in metal and electrical professions in Austria: 1564  
Open apprenticeship positions in metal and electrical professions in Styria: 912  
registered apprenticeship seekers in the metal and electrical professions in Styria: 211

Apprenticeship vacancies in the building trades in Austria: 1630  
registered apprenticeship seekers for construction occupations in Austria: 398  
Apprenticeship vacancies in the building trades in Styria: 277  
registered apprenticeship seekers for construction occupations in Styria: 46

IT apprenticeship vacancies in Austria: 502  
registered IT apprenticeship applicants in Austria: 472  
IT apprenticeship vacancies in Styria: 95  
registered IT apprenticeship seekers in Styria: 52

Apprenticeship vacancies for healthcare professions in Austria: 377  
registered apprenticeship seekers in the healthcare professions in Austria: 214  
Apprenticeship vacancies in the healthcare professions in Styria: 59  
registered apprenticeship seekers in the healthcare professions in Styria: 20

(Source for the above statistics: see apprenticeship seekers by occupation AMS, or vacant apprenticeships by occupation: <https://iambweb.ams.or.at/ambweb/> )

The apprenticeship statistics of the Austrian Federal Economic Chamber on the 10 most common apprenticeship occupations by gender show the extent to which the career choices of girls and boys, young women and men are still shaped by gender stereotypes:

The top ten for girls are Retail saleswoman, office clerk and hairdresser, while the top ten for boys are hairdresser, and electrical engineering, metal technology and motor vehicle technology for boys.[[7]](#footnote-7)

# Deficit Occupations Definition and Criteria

*Define what constitutes a deficit occupation in your country.  
Criteria used to identify deficit occupations (e.g., skill shortages, demand-supply gaps, specific industries).*

Deficit occupations in Austria are defined as follows: (see also 2.1.)

*"Shortage occupations are those in which there were fewer than 1.5 jobseekers per vacancy registered with the Public Employment Service (AMS) in the current year ("job vacancy rate").“*[[8]](#footnote-8)

## 4.3. Definition of skilled worker (specialist)

The term "skilled worker" is a term that is currently in the media almost every day. But what defines a specialist?

*"Skilled workers are employees who have the necessary training and skills required for a position. Specialist training can be understood to mean both a corresponding apprenticeship and a subject-specific degree.*“[[9]](#footnote-9)

4.4. Shortage of skilled workers

Almost more frequently than the term "skilled worker", we are currently confronted with the term "shortage of skilled workers: *„A shortage of skilled workers means that certain positions cannot be filled because there are not enough skilled workers on the labor market with the appropriate qualifications to do the job. In Austria, eight out of ten companies are already suffering from a severe shortage of skilled workers. The global labor market is experiencing a turning point. The labor market has changed and has gone from being an employer's market to an applicant's market.*“[[10]](#footnote-10)

# Sources of Information

*List and describe the primary sources consulted (government reports, statistical databases, industry reports, etc.).*

All sources used are listed in the respective footnotes or in brackets in the respective text passages.

# Identification of Deficit Occupations

*Analyse official reports and studies identifying deficit occupations in your country.  
Highlight key sectors or industries facing shortages in skilled labour.  
Provide data on specific professions or skill sets that are in high demand and short supply.*

## 6.1. Shortage of skilled workers in hospitality and tourism

Tourism is particularly important in Austria, and the revenue generated in this sector in 2022 is high in relation to gross domestic product with a nominal share of 6.2%.[[11]](#footnote-11) The hospitality industry generates a turnover of around 11.2 billion euros. With more than 160,000 employees, the Austrian food service industry represents one of the largest employment opportunities in Austria. [[12]](#footnote-12)

During the pandemic, the catering industry was particularly affected by closures during lockdowns and temporary travel restrictions. In the 2020/21 tourism year, employment in the sector fell by 21% compared to the previous year and unemployment rose by 15%. After the pandemic-related closures in the industry, there was an upturn again. At the same time, voices were raised complaining that restaurateurs and hoteliers could no longer find staff because many employees had left the industry during the crisis. They had reoriented themselves. [[13]](#footnote-13)

“*In April/May 2023, a total of 82% of the companies (member companies) surveyed on behalf of the Austrian Federal Economic Chamber (WKO) stated that they are currently affected by a shortage of labor and skilled workers (at least in some form). 29% of companies are suffering from a very severe shortage of labor and skilled workers, while a further 33% are experiencing a rather severe shortage. The shortage of labor and skilled workers is particularly acute in tourism (72% very or rather severe)*.”*[[14]](#footnote-14)*

The shortage of skilled workers in the Austrian hospitality industry is acute. At the end of April 2022, around 12,000 vacancies were expected with a total workforce of around 114,000 people. [[15]](#footnote-15) The individual occupations with the greatest recruitment difficulties among the companies surveyed from 2021 to 2024 are "restaurant specialists incl. service staff (waiters)" and "cooks“.[[16]](#footnote-16)

*“Both qualitative and quantitative studies cite the often stressful working conditions (e.g. unfavorable working hours, high health risks, low pay and a lack of opportunities for advancement) and discontinuous employment histories as the main reasons for this, which make it difficult to recruit workers and retain them in the industry over the longer term and increasingly make tourism appear to be a transitional or refugee industry.”* [[17]](#footnote-17)

For example, according to apprenticeship statistics, the number of young people learning the profession of „cook“ fell by 40% between 2011 and 2021.[[18]](#footnote-18)

The hospitality and tourism industry is an important economic factor that also has an impact on the economy as a whole. This makes it all the more important for the industry to find suitable solutions in order to quickly close the gaps that have arisen on the one hand and to attract employees again in the long term on the other.

### **6.1.1. Deficit occupations in the hospitality and hotel industry according to the »migration.gv.at« list**[[19]](#footnote-19)

* Nr. 58: Restaurant cook (Gaststättenköch:innen)  
  Abteilungskoch/ -köchin, Alleinkoch/-köchin, Anstaltskoch/-köchin, Beikoch/-köchin, Chef de brigade, Chef de partie, Chefkoch/-köchin, Chefpatissier(e), Diätkoch/-köchin, Gardemanger, Grilleur/in, Jungkoch/-köchin, Küchenchef/in, Küchenmeister/in, Kellner/in und Koch/Köchin, Koch/Köchin (Hotel- und Gastgewerbe), Koch/Köchin und Kellner/in, Mehlspeiskoch/-köchin, Patissier(e) (Hotel- und Gastgewerbe), Pizzakoch/-köchin, Restaurantkoch/-köchin, Schiffskoch/-köchin, Souschef, Gaststättenkoch/-köchin, Rotiss(eur)euse, Entremetier(e), Tournant/e, Saucier/e, Commis de Cuisine, Systemgastronomiefachmann/-frau, Gastronomiefachmann/-frau, Frühstückskoch/-köchin, Commis de Partie, Demichef de Cuisine, Chef de Cuisine, Sushikoch/-köchin, Kebabkoch/-köchin
* Nr. 75: Economists, other hotel and restaurant professionals, home managers  
  (Wirtschafter:innen, andere Hotel-, Gaststättenfachleute, Heimverwalter:innen)  
  Beschließer/in, Einkäufer/in (Hotel- und Gastgewerbe/Heimverwaltung), Etagenleiter/Etagengouvernante, Ferienheimverwalter/in, Gastgewerbeassistent/in, Heimleiter/in, Hotelassistent/in, Hotelsekretär/in, Küchenleiter/in, Küchenwirtschafter/in, Obersteward/Oberstewardess, Rezeptionist/in, Sekretär/in (Hotel- und Gastgewerbe/Heimverwaltung), Wäschebeschließer/in, Wirtschafter/in (Hotel- und Gastgewerbe/Heimverwaltung), Hotelkaufmann/ frau, Supervisor/in für den Gaststättenbereich, Hausdame, Wirtschafter/in (Krankenhaus), Betriebsdienstleistungskaufmann/ frau, Partybetreuer/in, Reservierungsassistent/in, Reservierungsleiter/in, Reservierungsmitarbeiter/in, Gästebetreuer/in, Hotelkaufmann/ frau (Rezeptionist/in), Betriebsdienstleister/in, Hotel- und Restaurantfach-mann/ frau

### 6.1.2. Regional deficit occupations in the hospitality and hotel industry according to the »migration.gv.at« list[[20]](#footnote-20) and the »Styria Economic Chamber (WKÖ)« list[[21]](#footnote-21)

* Waiters (Kellner:innen)  
  Alleinkellner/in, Chef de hall, Chef de rang, Chef d'etage, Commis, Commis de rang, Demichef de Rang, Getränkekellner/in, Kellner/in, Kellner/in und Stubenmädchen/-bursch, Revierkellner/in, Zahlkellner/in, Oberkellner/in, Sommelier/e, Restaurantfachleute, Wettcafekellner/in
* (Domestic) cooks (Haushalts-)Köch:innen  
  Haushaltskoch/köchin, Koch/Köchin (Privathaushalt), Koch/Köchin und Haushaltskraft

Both job profiles are apprenticeships in Austria and are listed in the occupational profiles of the ams occupational information system under tourism, hospitality, leisure.[[22]](#footnote-22)

The occupational term waiter is outdated and currently corresponds to the apprenticeship occupation of *restaurant specialist* according to the ams occupational lexicon. Restaurant specialists work in hospitality and accommodation businesses (inns, restaurants, coffee houses, bars, hotels, etc.) or in service businesses such as catering and party services. Their area of responsibility includes looking after guests.

### **6.1.3. Cook**

For further work in CDO-VR, we will focus on the occupational profile of chef, as we consider both the demand and the professional and career opportunities for young people in this occupational profile to be relevant.

In 2023, there will be 1106 vacant apprenticeship positions for the occupation of chef in Austria with 134 registered apprenticeship seekers and 138 vacant apprenticeship positions in Styria with 17 registered apprenticeship seekers. (see in each case apprenticeship seekers by occupation AMS, or apprenticeship vacancies by occupation: https://iambweb.ams.or.at/ambweb/ )

Cooks have a wide range of opportunities: They can work in a wide variety of restaurants, hotels, snack bars, but also in care facilities, hospitals, canteen kitchens and much more. They can undergo extensive further training over the course of their career and have good career and promotion prospects. In our focus groups, it was emphasized how important it is to show how much good chefs do for people. For example, how nice it is to have a nice relaxed evening over a good meal or how important healthy and proper nutrition is, especially for children, the elderly or sick people. However, the profession is often rejected due to (supposedly) unattractive working conditions (working weekends or evenings).

In Austria, training to become a chef can take the form of an apprenticeship. The apprenticeship lasts three years.

Detailed descriptions of the job description can be found on the following websites:

<https://bic.at/berufsinformation.php?beruf=koch-koechin_lehrberuf&brfid=274>

<https://www.lehrstellenportal.at/berufe/koch/>

## 6.2. Deficit of skilled workers in electrical engineering

In April/May 2023, a total of 82% of the companies (member companies) surveyed on behalf of the Austrian Federal Economic Chamber (WKO) stated that they are currently affected by a shortage of labor and skilled workers (at least in some form). 29% of companies are suffering from a very severe shortage of labor and skilled workers, while a further 33% are experiencing a rather severe shortage. The shortage of labor and skilled workers is particularly acute in the manufacture of electrical and electronic equipment (69%) and in the craft and technical sector as a whole.[[23]](#footnote-23)

*“63% of the companies surveyed had vacancies for skilled workers at the time of the survey in April/May 2023. In terms of occupational groups, companies are having particular difficulties finding suitable skilled workers for skilled trades (42%)... The search for unskilled workers (across all occupations) is also currently proving particularly difficult for 23% of the companies surveyed... Among the occupations with the greatest, most frequent and at the same time growing difficulties in filling and recruiting positions are those in the field of "electronics, electrical engineering“, which is particularly relevant and dramatic insofar as, among all the "green skills" required, companies give priority to skills in the field of sustainable energy generation (e.g. energy generation using photovoltaics). (e.g. energy generation using photovoltaics) are considered to be the most important. The shortage of labor and skilled workers is already hindering the ecological transformation and conversion to renewable energy sources in around a quarter of companies.”[[24]](#footnote-24)*

### **6.2.1. Deficit occupations in electrical engineering accourding to the »migration.gv.at« list[[25]](#footnote-25)**

* Nr. 1: Graduate engineers for heavy current technology  
  Elektrotechniker/in für Starkstrom (DI), Elektrotechniker/in (DI), Installationstechniker/in - Starkstromtechnik (DI), Konstrukteur/in - Starkstromtechnik (DI), Starkstromtechniker/in (DI), Apparatebautechniker/in (DI), Elektrotechniker/in - Energie-/Antriebstechnik (DI), Elektrotechnikplaner/in - Erneuerbare Energien (DI)
* Nr. 2: Technicians with higher education (Ing.) for heavy current technology  
  Elektrotechniker/in (Ing), Installationstechniker/in - Starkstromtechnik (Ing), Konstrukteur/in - Starkstromtechnik (Ing), Starkstromtechniker/in (Ing), Apparatebautechniker/in (Ing), Elektrotechniker/in - Energie- und Antriebstechnik (Ing), HTL-Absolvent/in für Elektrotechnik, Elektrotechnikplaner/in - Erneuerbare Energien (Ing.)
* Nr. 3: Technician for heavy current technology  
  Elektrotechniker/in, Installationstechniker/in - Starkstromtechnik, Konstrukteur/in - Starkstromtechnik, Starkstromtechniker/in, Elektrotechniker/in - Energie /Antriebstechnik, Elektrotechnikplaner/in - Erneuerbare Energien
* Nr. 8: Graduate engineers for low-current and communications engineering  
  Elektroniker/in - Industrielle Elektronik (DI), Nachrichten- und Schwachstromtechniker/in (DI), Elektroniker/in (DI), Fernsehtechniker/in (DI), Funktechniker/in (DI), Konstrukteur/in - Schwachstrom- und Nachrichtentechnik (DI), Nachrichtentechniker/in (DI), Röntgentechniker/in (DI), Radiotechniker/in (DI), Regeltechniker/in (DI), Schwachstromtechniker/in (DI), Telefonanlagentechniker/in (DI), Elektromedizintechniker/in (DI), Elektrotechniker/in - IT/Elektronik/Photonik (DI), Elektrotechniker/in - Prozesstechnik (DI), Elektrotechniker/in - Automatisierung/Regelung (DI), Elektrotechniker/in - Tontechnik (DI), GSM-Netzplaner/in (Festnetz/Funknetz) (DI), Kommunikationstechniker/in (DI), Kybernetiker/in (DI), Mikrotechniker/in - Molekular /Nano /Quantentechnik (DI), Mobilfunktechniker/in (GSM) (DI), Sensortechniker/in (DI), Signaltechniker/in (DI), SPS /ASIC /IC-Designer/in (DI), SPS /ASIC /IC-Techniker/in (DI), Telekommunikationstechniker/in (DI), SPS-Programmierer/in (DI), SMD-Techniker/in (DI), Messtechniker/in (DI), Telematiker/in (DI)
* Nr. 17: Electricians, electrical fitters  
  Aufzugmonteur/in, Betriebselektriker/in, Blitzschutzbauer/in, Elektriker/in, Elektroinstallateur/in, Elektroinstallateur-Werkmeister/in, Elektroinstallateurmeister/in, Elektromeister/in, Elektromonteur/in, Elektrotechniker-Werkmeister/in, Elektrotechnikermeister/in, Hauselektriker/in, Kabelmonteur/in, Kraftfahrzeugelektriker/in, Neonanlagenmonteur/in, Starkstromelektriker/in, Starkstrommonteur/in, Anlagenmonteur/in, Elektroanlagentechniker/in, Elektrobetriebstechniker/in, Elektrobetriebstechniker/in - Prozessleittechnik, Elektroenergietechniker/in, Elektroinstallationstechniker/in, Anlagenelektriker/in, Elektroinstallationstechn. - Prozessleit-/Bustechnik (m./w.), Montagetechniker/in - Elektroinstallation/Elektronik, Schaltschrankbauer/in, Konstrukteur/in – Elektroinstallationstechnik, Elektrotechniker/in - Anlagen- und Betriebstechnik, Elektrotechniker/in - Elektro- und Gebäudetechnik, Elektrotechniker/in – Energietechnik, Photoviltaiktechniker/in
* Nr. 30: Technicians for low-current and communikcations engineering  
  Elektroniker/in, Fernsehtechniker/in, Funktechniker/in, Konstrukteur/in - Schwachstrom- und Nachrichtentechnik, Nachrichtentechniker/in, Röntgentechniker/in, Radiotechniker/in, Regeltechniker/in, Schwachstromtechniker/in, Tonmeister/in, Videotechniker/in, Telefonanlagentechniker/in, Elektromedizintechniker/in, Elektrotechniker/in - Prozesstechnik, Elektrotechniker/in - Automatisierung/Regelung, Kommunikationstechniker/in, Mobilfunktechniker/in (GSM), Planungstechniker/in - Elektronik, Prüffeldtechniker/in, Sensortechniker/in, Signaltechniker/in, SPS-/ASIC-/IC-Techniker/in, SPS-Programmierer/in, SMD-Techniker/in, Messtechniker/in
* Nr. 48. Electromechanics  
  Elektromechaniker/in, Elektromechaniker-Werkmeister/in, Elektromechanikermeister/in, Prüffeldmechaniker/in, Schaltmechaniker/in, Nachrichtenelektroniker/in, Mess- und Regelmechaniker/in, Mikromechaniker/in, Mikroelektroniker/in, Kommunikationstechniker/in für EDV und Telekommunikation, Kommunikationstechniker/in für Nachrichtenelektronik, EDV-Techniker/in, IT-Elektroniker/in, Mechatroniker/in (mit Lehrabschluss), Elektromaschinentechniker/in, Elektroniker/in (mit Lehrabschluss), Servicetechniker/in Telekom, Elektromechaniker/in für Schwachstrom, Elektromechaniker/in für Starkstrom, Elektromechaniker/in und -maschinenbauer/in, Prozessleittechniker/in, Elektronik-Fertigungstechniker/in, Flugsicherungsmechaniker/in, Montagetechniker/in - Elektromechanik/Elektronik, Servicetechniker/in für Büromaschinen, Servicetechniker/in für EDV, Servicetechniker/in für Haushaltsgeräte, Servicetechniker/in für Haustechnik/Gebäudetechnik, Servicetechniker/in für Kühlanlagen, Servicetechniker/in für Maschinen und Anlagen, Servicetechniker/in für Telekommunikationsnetze, Steuerungs- und Regelungstechniker/in, Elektrotechniker/in - Automatisierungs- u. Prozessleittechn., Mechatroniker/in - Alternative Antriebstechnik, Mechatroniker/in - Automatisierungstechnik, Mechatroniker/in - Büro- und EDV-Systemtechnik, Mechatroniker/in - Elektromaschinentechnik, Mechatroniker/in - Fertigungstechnik, Mechatroniker/in – Medizingerätetechnik, Mechatroniker/in - IT- Digitalsystem- und Netzwerktechnik, Windenergietechniker/in
* Nr. 53: Technicians with higher education (Ing.) for low-current and communications engineering  
  Elektroniker/in (Ing), Fernsehtechniker/in (Ing), Funktechniker/in (Ing), Konstrukteur/in - Schwachstrom- und Nachrichtentechnik (Ing), Nachrichtentechniker/in (Ing), Röntgentechniker/in (Ing), Radiotechniker/in (Ing), Regeltechniker/in (Ing), Schwachstromtechniker/in (Ing), Tontechniker/in, Videotechniker/in (Ing), Telefonanlagentechniker/in (Ing), Elektromedizintechniker/in (Ing), Elektrotechniker/in - Prozesstechnik (Ing), Elektrotechniker/in - Automatisierung/Regelung (Ing), Elektrotechniker/in - Tontechnik (Ing), GSM-Netzplaner/in (Festnetz/Funknetz) (Ing), Kommunikationstechniker/in (Ing), Kybernetiker/in (Ing), Mikrotechniker/in - Molekular-/Nano-/Quantentechnik (Ing), Mobilfunktechniker/in (GSM) (Ing), Planungstechniker/in - Elektronik (Ing), Projekttechniker/in - Elektronik (Ing), Prüffeldtechniker/in (Ing), Sensortechniker/in (Ing), Signaltechniker/in (Ing), SPS-/ASIC-/IC-Designer/in (Ing), SPS-/ASIC-/IC-Techniker/in (Ing), Telekommunikationstechniker/in (Ing), SPS-Programmierer/in (Ing), SMD-Techniker/in (Ing), HTL-Absolvent/in für Elektronik, Messtechniker/in (Ing)

### **6.2.2. Regional deficit occupations in electrical engineering in Styria** according to the »Styria Economic Chamber (WKÖ)« list [[26]](#footnote-26)

According to the »migration.gv.at« list, no occupation in the field of electrical engineering will be identified as a deficit occupation in Styria in 2024. The regional deficit occupation list of the Styrian Economic Chamber in 2022 is quite different, listing the top 20 deficit occupations for which there are at least 25 vacancies. It can be assumed that there is still a major regional shortage of skilled workers in the electrical engineering sector, even if they are not included in the current list of deficit occupations published by the Federal Ministry of Labor, which is to be read in terms of criteria-based immigration (Red-White-Red Card), among other things.

* Nr. 1: Graduate engineer and technician for electrical engineering
* Nr. 6: Electrician / Electrical fitter  
  Aufzugmonteur/in, Betriebselektriker/in, Blitzschutzbauer/in, Elektriker/in, Elektroinstallateur/in, Elektroinstallateur-Werkmeister/in, Elektroinstallateurmeister/in, Elektromeister/in, Elektromonteur/in, Elektrotechniker-Werkmeister/in, Elektrotechnikermeister/in, Hauselektriker/in, Kabelmonteur/in, Kraftfahrzeugelektriker/in, Neonanlagenmonteur/in, Starkstromelektriker/in, Starkstrommonteur/in, Anlagenmonteur/in, Elektroanlagentechniker/in, Elektrobetriebstechniker/in, Elektrobetriebstechniker/in - Prozessleittechnik, Elektroenergietechniker/in, Elektroinstallationstechniker/in, Anlagenelektriker/in, Elektroinstallationstechn. - Prozessleit-/Bustechnik (m./w.), Montagetechniker/in - Elektroinstallation/Elektronik, Schaltschrankbauer/in, Konstrukteur/in – Elektroinstallationstechnik, Elektrotechniker/in - Anlagen- und Betriebstechnik, Elektrotechniker/in - Elektro- und Gebäudetechnik, Elektrotechniker/in – Energietechnik, Photoviltaiktechniker/in
* Nr. 20: Electromechanic  
  Elektromechaniker/in, Elektromechaniker-Werkmeister/in, Elektromechanikermeister/in, Prüffeldmechaniker/in, Schaltmechaniker/in, Nachrichtenelektroniker/in, Mess- und Regelmechaniker/in, Mikromechaniker/in, Mikroelektroniker/in, Kommunikationstechniker/in für EDV und Telekommunikation, Kommunikationstechniker/in für Nachrichtenelektronik, EDV-Techniker/in, IT-Elektroniker/in, Mechatroniker/in (mit Lehrabschluss), Elektromaschinentechniker/in, Elektroniker/in (mit Lehrabschluss), Servicetechniker/in Telekom, Elektromechaniker/in für Schwachstrom, Elektromechaniker/in für Starkstrom, Elektromechaniker/in und -maschinenbauer/in, Prozessleittechniker/in, Elektronik-Fertigungstechniker/in, Flugsicherungsmechaniker/in, Montagetechniker/in - Elektromechanik/Elektronik, Servicetechniker/in für Büromaschinen, Servicetechniker/in für EDV, Servicetechniker/in für Haushaltsgeräte, Servicetechniker/in für Haustechnik/Gebäudetechnik, Servicetechniker/in für Kühlanlagen, Servicetechniker/in für Maschinen und Anlagen, Servicetechniker/in für Telekommunikationsnetze, Steuerungs- und Regelungstechniker/in, Elektrotechniker/in - Automatisierungs- u. Prozessleittechn., Mechatroniker/in - Alternative Antriebstechnik, Mechatroniker/in - Automatisierungstechnik, Mechatroniker/in - Büro- und EDV-Systemtechnik, Mechatroniker/in - Elektromaschinentechnik, Mechatroniker/in - Fertigungstechnik, Mechatroniker/in – Medizingerätetechnik, Mechatroniker/in - IT- Digitalsystem- und Netzwerktechnik, Windenergietechniker/in

In the occupational classification of the Austrian Employment Service (AMS), job profiles in electrical engineering are summarized under electrical engineering, electronics, telecommunications, IT.[[27]](#footnote-27) The job titles »electrician« and »electronics technician« often cause confusion at first glance. However, both terms refer to one and the same profession, as the profession of »electrician« was replaced by that of »electronics technician« in 2003. However, the job description differs in everyday working life: the main difference is that electricians deal with large systems, whereas electronics technicians deal with much smaller systems.[[28]](#footnote-28) The term electrician is a colloquial term for the profession of »electrical engineer«. When entering the job description "Electrician", BIC.at refers to the modular apprenticeship "Electrical engineering - electrical and building services engineering".[[29]](#footnote-29)

### **6.2.3. Electrical engineer in electrical and builing services engineering (formerly: electrician)[[30]](#footnote-30)**

For the further work in CDO-VR, we will focus on the occupational profile of electrical technician in electrical and building services engineering (old: electrician), as we consider both the demand and the professional and career opportunities for young people in this occupational profile to be relevant.

In 2023, for example, there will be 531 vacant apprenticeship positions in Austria for the occupation of electrical and building services engineering technician with 207 registered apprenticeship seekers and 90 vacant apprenticeship positions in Styria with 20 registered apprenticeship seekers. (see in each case apprenticeship seekers by occupation AMS, or apprenticeship vacancies by occupation: <https://iambweb.ams.or.at/ambweb/> )

The job description is very diverse, ranging from electrical installations in residential and public buildings to the installation, adjustment, maintenance and repair of alarm systems, heating and air conditioning systems, locking systems and much more. As with many technical professions in the so-called non-traditional area, it is particularly important to interest girls in the apprenticeship profession and to attract them to training in this area. In the focus groups, it was emphasized how important it is to be able to really try out individual areas of the job description and then gain a comprehensive insight into the day-to-day work of a female electrical engineer through internships in companies. The career opportunities and further training options in this profession are diverse. In the focus groups, interest, the ability to work in a team, good grades in math, manual dexterity, enjoyment of varied work and personal responsibility were named as key skills for starting an apprenticeship in electrical engineering.

In Austria, training as an electrical engineer in electrical and building services engineering takes the form of an apprenticeship. The apprenticeship lasts 3.5 - 4 years.

Detailed descriptions of the job description can be found on the following websites

https://bic.at/berufsinformation.php?beruf=elektrotechnik-elektro-und-gebaeudetechnik\_modullehrberuf&brfid=2476

https://www.lehrstellenportal.at/berufe/elektrotechniker/

## 6.3. Deficit of skilled workers in constuction

The construction industry is also looking for skilled workers. If you search for vacancies in the construction industry in Styria on the AMS homepage (https://jobs.ams.at/public/emps/), 826 vacancies from various sectors are displayed. (as of 19.03.2024)

### **6.3.1. Deficit occupations in construction according to the »migration.gv.at« list** [[31]](#footnote-31)

* Nr. 7 Roofer  
  Dachdecker:in, Steiger:in (Dachdecker), Dachdeckermeister:in
* Nr. 14 Schwarzdecker:in (Blacktop)  
  Schwarzdecker:in
* Nr. 34 Carpenter  
  Bauzimmer(er)in, Bundzimmer(er)in, Schalungszimmer(er)in, Zimmerermeister:in, Zimmer(er)in, Zimmerervorarbeiter:in, Zimmerer-Polier:in, Fertigteilhausbauer:in, Zimmereitechniker:in
* Nr. 35 Technicians with higher education (Ing.) for civil engineering  
  Bauführer:in (Ing), Bauleiter:in (Ing), Baumeister:in (Ing), Bautechniker:in (Ing), Hochbautechniker:in (Ing), Stahlbaukonstrukteur:in (Ing), Stahlbautechniker:in (Ing), Statiker:in (Ing), Straßenbautechniker:in (Ing), Tiefbautechniker:in (Ing), Baustellenleiter:in (Ing), Umwelt-/Sicherheitstechniker:in Bau (Ing), Baukalkulant:in (Ing), Bautechniker:in-Baukonstruktion (Ing), Bautechniker:in-Bauökologie (Ing), Bautechniker:in-Sanierungstechnik (Ing), HTL-Absolvent:in für Bautechnik, Projektleiter:in für Bauprojekte (Ing), BIM-Technike:/in (Ing)
* Nr. 39 Building tinsmith  
  Bauspengler/in, Bauspengler-Werkmeister/in, Dachdecker/in und Spengler/in
* Nr. 51 Concrete workers  
  Betonbauer/in, Polier/in (Betonbau), Schaler/in, Schalungsbauer/in, Stahlbetonbauer/in, Betonsanierungsarbeiter/in, Betonbauspezialist/in - Konstruktiver Betonbau, Betonbauspezialist/in - Stahlbetonhochbau
* Nr. 66 Civil engineers  
  Straßenbaupolier/in, Tiefbaupolier/in, Tiefbauvorarbeiter/in, Tiefbaufacharbeiter/in, Straßenerhaltungsfachmann/ frau, Straßenmeister/in, Tiefbauspezialist/in – Baumaschinenbetrieb, Tiefbauspezialist/in – Siedlungswasserbau, Tiefbauspezialist/in – Verkehrswegebau, Tiefbauer/in
* Nr. 68 Construction technician  
  Bauführer/in, Bauleiter/in, Baumeister/in, Bautechniker/in, Hochbautechniker/in, Stahlbautechniker/in, Straßenbautechniker/in, Tiefbautechniker/in, Stahlbaukonstrukteur/in, Baustellenleiter/in, Umwelt-/Sicherheitstechniker/in Bau, Bautechniker/in-Sanierungstechnik, Projektleiter/in für Bauprojekte, BIM-Techniker/in
* Nr. 84 Graduate engineers for civil engineering  
  Bauführer/in (DI), Bauleiter/in (DI), Bautechniker/in (DI), Bauingenieur/in (DI), Bauwesentechniker/in (DI), Wirtschaftsingenieur/in - Bauwesen (DI), Hochbautechniker/in (DI), Stahlbaukonstrukteur/in (DI), Stahlbautechniker/in (DI), Statiker/in (DI), Straßenbautechniker/in (DI), Tiefbautechniker/in (DI), Baustellenleiter/in (DI), Umwelt/Sicherheitstechniker/in Bau (DI), Bautechniker/in-Baukonstruktion (DI), Bautechniker/in-Bauökologie (DI), Bautechniker/in-Gebäudetechnik (DI), Bautechniker/in-Sanierungstechnik (DI), Projektleiter/in für Bauprojekte (DI), BIM-Techniker/in (DI)
* Nr. 85 Bricklayer  
  Fassader/in, Hausmaurer/in, Kaminmaurer/in, Kaminschleifer/in, Kanalmaurer/in, Maurer/in, Maurerpolier/in, Polier/in, Steinmaurer/in, Betriebsmaurer/in, Ofenmaurer/in, Maurervorarbeiter/in, Verputzer/in, Isoliermonteur/in, Teamwerker/in, Bauhandwerker/in, Hochbauer/in, Hochbauspezialist/in – Neubau, Hochbauspezialist/in - Sanierung
* Nr. 95 Technical draughtsperson  
  Bautechnisch(er)e Zeichner/in, Technisch(er)e Zeichner/in, Bautechnisch(er)e Assistent/in, Kartograf/in

### **6.3.2. Regional shortage occupations in the construction industry in Styria according to the list migration.gv.at and** the »Styria Economic Chamber (WKÖ)« **list** [[32]](#footnote-32)

* Nr. 4 Roofer

## 6.3.3 Structural engineer (?) – Hochbauer:in

For the further work in CDO-VR, we will focus on the job profile of building constructor (formerly bricklayer), as we consider both the demand and the job and career opportunities for young people in this job profile to be relevant.

If you search for vacancies in building construction in Styria on the AMS homepage (https://jobs.ams.at/public/emps/), 260 vacancies are displayed (as of 19.03.2024).

In 2023, there are 255 vacancies for 71 registered apprenticeship seekers in the building construction occupation in Austria and 50 vacancies for 6 registered apprenticeship seekers in Styria. (see in each case apprenticeship seekers by occupation AMS, or apprenticeship vacancies by occupation: <https://iambweb.ams.or.at/ambweb/> )

This occupational profile is as diverse as the buildings, roads, bridges, etc. that surround us. In the focus groups, it was emphasized how important it is to highlight earning and promotion opportunities in this occupational area in particular.

As this is a traditionally male-dominated profession, it is important to show that an apprenticeship as a structural engineer can also be interesting and promising for girls. It is also important to place the profession in a broader, meaningful context, for example to show how effective construction or renovation can contribute to climate protection.

In Austria, training as a structural engineer takes the form of an apprenticeship. The apprenticeship lasts 3 years.

Detailed descriptions of the job description can be found on the following websites

https://bic.at/berufsinformation.php?beruf=hochbau\_lehrberuf&brfid=2715

https://www.lehrstellenportal.at/berufe/hochbauer/

## 6.4. Deficit of skilled workers in the care sector

If you search for vacancies in the care sector in Styria on the AMS homepage (https://jobs.ams.at/public/emps/), 1464 vacancies from different areas are displayed. (as of 20.03.2024)

### **6.4.1. Deficit occupations in the care sector according to the »migration.gv.at« list** [[33]](#footnote-33)

* Nr. 12 Qualified health and nursing professionals  
  Dipl. psychiatr. Krankenpfleger/in, Dipl. psychiatr. Gesundheits- und Krankenpfleger/-schwester, Dipl. Kinderkranken-Säuglingspfleger/-schwester, Dipl. Kinderkrankenpfleger/-schwester, Dipl. Krankenpfleger/in, Dipl. Gesundheits- und Krankenpfleger/-schwester, Lehrkrankenpfleger/ schwester, Dipl. Privatkrankenpfleger/in, Dipl. Säuglings- und Kinderpfleger/in, Dipl. Säuglings-Kinderkrankenpfleger/-schwester, Dipl. Werkskrankenpfleger/-schwester, Operationskrankenpfleger/-schwester, Pflegedienstleiter/in, Wohnbereichsleiter/in in der Altenpflege, Dipl. Gesundheits- und Krankenpfleger/in
* Nr. 89 Non-qualified nurses and related occupations  
  Krankenpfleger/in, Krankenpfleger/ schwester, Laborgehilf(e)in (medizinisches Labor), Operationsdiener/in, Operationsgehilf(e)in, Ordinationsgehilf(e)in, Ordinationshilfe (m./w.), Pfleger/in, Privatkrankenpfleger/in, Zahnärztlich(er)e Assistent/in, Zahnärztlich(er)e Ordinationsgehilf(e)in, Zahnarztassistent/in (Zahnarzthelfer/in), Pflegehelfer/in, Altenpfleger/in, Zahnärztlich(er)e Prophylaxeassistent/in, Ordinationshilfe (tierärztliche Ordination) (m./w.), Zahnärztlich(er)e Fachassistent/in, Medizinisch-technisch(er)e Sekretär/in, Laborassistent/in (medizinisches Labor), Operationsassistent/in, Ordinationsassistent/in, Pflegeassistent/in, Pflegefachassistent/in, Tierärztlich(er)e Ordinationsassistent/in, Diplomiert(er)e Operationstechnisch(er)e Assistent/in

### **6.4.2. Regional deficit occupations in the care sector in Styria according to the »Styrian Economic Chamber (WKÖ)« list [[34]](#footnote-34)**

* Nr. 5 Qualified health care and nursing professionals
* Nr. 15 Medical technical specialists

## 6.4.3. Care professions

The training system for health and social professions in Austria is very complex and not always uniform throughout the country. This overview summarizes those occupational groups and fields of activity for further work in our project. All of the occupational groups and fields of activity presented here work in inpatient facilities such as hospitals and care facilities, as well as in the field of mobile care, where people with support needs are cared for at home.

The focus groups emphasized how important it is to show the diversity of the nursing profession. To show the good sides, but also to convey a realistic portrayal of everyday working life. The focus groups identified the following key skills for entering the care sector Mental and physical resilience, empathy, team-leading, collaboration, willingness to work weekends and holidays as well as after-hours, working and thinking independently, taking and showing responsibility, interest in further education and training.

*"The professions are diverse and deal with the care and support of people of all ages, families and population groups in all forms and levels of care. The aim is to support people so that physical, mental and cognitive resources can be restored or maintained."*[[35]](#footnote-35)

In the focus groups, young people perceive the nursing profession as an area in which you can do good. At the same time, you can also earn money and make a career.

**Healthcare and nursing professions** [[36]](#footnote-36)

* Qualified health care and nursing professional (advanced service for health care and nursing)

Fields of activity

* Carrying out activities and measures assigned by physicians
* Care for people of all ages
* in various forms of care (mobile, outpatient, semi-inpatient, inpatient)
* work in a health-promoting, preventive, curative, rehabilitative and palliative way.

Education

* University of Applied Sciences - Bachelor's degree program (three years)
* or school for healthcare and nursing professions (until 31.12.2023)

**Nursing assistant professions**[[37]](#footnote-37)

* Nursing assistance

Fields of activity

* Carrying out activities and measures assigned by qualified nurses or doctors
* Care for people of all ages
* in various forms of care (mobile, outpatient, semi-inpatient, inpatient)

Education

* Apprenticeship (from 1.9.2023 / temporary training trial; entry provisionally possible until 31.12.2029. ), apprenticeship period 3 years
* School for health and nursing professions
* Nursing assistant course (1 year)
* Nursing assistant

Fields of activity

* Independent implementation of activities and measures assigned by qualified nurses or doctors
* Guidance and instruction of trainees
* Care for people of all ages
* in various forms of care (mobile, outpatient, semi-inpatient, inpatient)

Education

* Apprenticeship (from 1.9.2023 / temporary training trial; entry provisionally possible until 31.12.2029. ), apprenticeship period 4 years
* School for health and nursing professions (2 years)

**Social care professions and support activities**[[38]](#footnote-38)

* usually have a focus on a specific area of activity, such as

Work with the elderly, family work, work with the disabled/disability support, everyday support, senior care, home help, etc.

Fields of activity

Depending on the respective training and activity focus, they support people in need of care

* for activities of daily living
* in structuring and organizing everyday life
* in budget management
* for visits to the authorities and shopping
* for personal hygiene
* when dressing and undressing
* for exercise and leisure activities
* to promote and maintain flexibility and mobility
* etc.

Education

* Relevant courses and training programs

## 6.5. Deficit of skilled workers in the metal techology

6.5.1. Deficit Occupations in Metal Technology according to the “migration.gv.at” list*[[39]](#footnote-39)*

* No. 18 Mechanical engineering technician
* Installation technician - mechanical engineering, automotive construction technician, air conditioning technician, mechanical engineering technician, machine designer, machine technician, sanitary technician, part designer, tool designer, mechanical engineering foreman, Building technician (heating/ventilation/sanitation), quality assurance technician, CAD designer, mechatronics technician, drive technician, construction machinery technician, production technician, ventilation technician, plant technician, CAD/CAM programmer, automation technician
* No. 20 Welders, cutting torch operators
* Aluminium welder, argon arc welder, oxyacetylene torch, oxyacetylene cutter, oxyacetylene welder, electric welder, master electric welder, brazier, boiler welder, spot welder, pipe welder, inert gas welder, welder, chain welder, universal welder, metal technician - welding technician
* No. 21. tinsmiths
* Company tinsmith, letter tinsmith, sheet metal worker, gallantry tinsmith, ventilation tinsmith, tinsmith, master tinsmith, insulation tinsmith, aircraft tinsmith
* No. 24 Locksmiths
* Company locksmith, gallantry locksmith, house locksmith, control locksmith, model locksmith, repair locksmith, master locksmith (locksmith's shop), locksmith (locksmith's shop), general locksmith, metallurgical plant locksmith, hydraulic locksmith, foundry mechanic, metal technician - metalworking technology, skilled metal worker, metalworker, metallurgist and forming technician
* No. 41 Machine fitters
* Motor vehicle fitter (machine fitter), machine fitter, machine fitter foreman, machine fitter foreman, pump fitter, machine fitter foreman, machine fitter, fitter (machines), machine tool operator, forklift fitter, conveyor belt fitter, mechanical engineering technician (with apprenticeship qualification), design engineer - mechanical engineering technology
* No. 42. car body and radiator fitter
* Car body fitter, master car body fitter, radiator fitter, car body fitter, master car body fitter, master car body fitter, car body fitter, car body construction technician, car body builder
* No. 50 Building, sheet metal and construction locksmiths
* Fitting fitter, building fitter, building fitter foreman, fitting fitter, sheet metal fitter, weight fitter, hearth fitter, body builder (metal), body fitter, construction fitter, art fitter, furniture locksmith, oven locksmith, portal locksmith, pipe fitter (building locksmith), roller beam locksmith, key maker, master locksmith, master locksmith (building locksmith), locksmith, steel construction locksmith, master steel construction locksmith, Stone chiseler, Scale fitter, Foreman - steel construction, Assembly fitter, Fitter (building locksmith), Pipeline fitter, Assembly manager - locksmith, Sun protection technician, Shipbuilder, Metal technician - sheet metal technology, Metal technician - metal construction technology, Metal technician - steel construction technology, Design engineer - metal construction technology, Design engineer - steel construction technology, Metal technician - metal construction and sheet metal technology, Metal technician - safety technology
* No. 60 Mould makers, cutters and punchers
* Mould maker, cut maker, tool maker, master tool maker, master tool maker, tool fitter, toolmaking technician, precision tool grinding technician, industrial engraver, tool and fixture maker, design engineer - toolmaking technology, metal technician - toolmaking technology

6.5.2. Regional Deficit Occupations in Metal Technology in Styria according to WKO Styria **list[[40]](#footnote-40)**

* No. 5 Welder, cutting torch
* Aluminium welder, argon arc welder, oxyacetylene torch, oxyacetylene cutter, oxyacetylene welder, electric welder, master electric welder, brazier, boiler welder, spot welder, pipe welder, inert gas welder, welder, chain welder, universal welder, metal technician - welding technician
* No. 7 (Machine) fitter
* Company fitter, gallantry fitter, house fitter, control fitter, pattern fitter, repair fitter, master fitter (locksmith), fitter (locksmith), general fitter, metallurgical fitter, hydraulic fitter, foundry mechanic, metal technician - metalworking technology, skilled metal worker, metalworker, metallurgist and forming technician
* Vehicle fitter (machine fitter), machine fitter, machine fitter foreman, machine fitter foreman, pump fitter, machine fitter foreman, machine fitter, fitter (machines), machine tool fitter, forklift fitter, conveyor belt fitter, mechanical engineering technician (with apprenticeship qualification), design engineer - mechanical engineering technology
* Fitting fitter, building fitter, building fitter foreman, fitting fitter, sheet metal fitter, weight fitter, hearth fitter, body builder (metal), body fitter, construction fitter, art fitter, furniture locksmith, oven locksmith, portal locksmith, pipe fitter (building locksmith), roller beam locksmith, key maker, master locksmith, master locksmith (building locksmith), locksmith, steel construction locksmith, master steel construction locksmith, Stone chiseler, Scale fitter, Foreman - steel construction, Assembly fitter, Fitter (building locksmith), Pipeline fitter, Assembly manager - locksmith, Sun protection technician, Shipbuilder, Metal technician - sheet metal technology, Metal technician - metal construction technology, Metal technician - steel construction technology, Designer - metal construction technology, Designer - steel construction technology, Metal technician - metal construction and sheet metal technology, Metal technician - safety technology[[41]](#footnote-41)
* (Other) Locksmiths are among the top 5 bottleneck occupations in Styria according to the Federal Ministry of Labour and Economy's Skilled Labour Barometer.[[42]](#footnote-42)
* Metalworkers design and produce devices, machines, structures and moulded parts made of steel and other metals. They also assemble finished workpieces and components in machines and systems. In the metal trade, their main area of activity is the maintenance and repair of machines[[43]](#footnote-43).

### 6.5.3. Metal technician - main module welding technology

For further work in CDO-VR, we will focus on the occupational profile of metal technician - main module welding technology, as we consider both the demand and the professional and career opportunities for young people in this occupational profile to be relevant.

In 2023, there will be 605 vacant apprenticeship positions for the occupational profile of metal technician, mechanical engineering technology in Austria with 74 registered apprenticeship seekers and 113 vacant apprenticeship positions in Styria with 16 registered apprenticeship seekers. (see in each case apprenticeship seekers by occupation AMS, or vacancies by occupation: <https://iambweb.ams.or.at/ambweb/> )

As in electrical engineering, the focus groups also emphasized for metal technology that the opportunity to try out individual or several activities from the occupational field in practice is of immense importance in order to arouse young people's interest in training in the metal sector. In the metal sector in particular, it must also be consciously demonstrated how individual work steps are connected and how "small parts" are of great relevance for the interaction of "a large whole". Here too, it is important to provide adequate role models for girls and boys, young women and young men.

In the focus groups, young men in particular expressed an interest in the metal sector.

Metal technology is a very complex field of activity, ranging from the production of sketches to the manufacture of individual parts or entire machines and the inspection of these, to name just a few areas of work.

As in many technical professions, the industry offers many development, promotion and career opportunities.

Training takes the form of an apprenticeship and lasts 3.5 - 4 years.

Detailed descriptions of the job description can be found on the following websites

https://bis.ams.or.at/bis/beruf/732-MetalltechnikerIn%20f%C3%BCr%20Schwei%C3%9Ftechnik

https://www.berufslexikon.at/berufe/3454-MetalltechnikerIn-Hauptmodul\_Schweisstechnik/#beschaeftigung

## 6.6. Shortage of skilled labour in information technology

### 6.6.1 Deficit occupations in information technology according to the migration.gv.at list (for all of Austria)

* No. 16 Graduate engineers for data processing
* Analyst (DI), Computer Scientist (DI), Programmer (DI), System Analyst (DI), System Organiser (DI), System Consultant, Computer Systems Engineer (DI), Computer Technician (DI), Network Technician (DI), Database Technician (DI), Computer Technician (Hardware and Software) (DI), System Developer (DI), Software Technician (Software Developer) (DI), IT trainer (hardware and software) (DI), system and user administrator (DI), application developer and programmer (DI), database developer and programmer (DI), data scientist (DI), data security specialist (DI), hardware technician (DI), computer scientist (application development) (DI), computer scientist (customer service/service) (DI), Computer scientist (system analysis) (DI), Information manager (data warehouse manager) (DI), Internet/intranet administrator (DI), Internet/intranet consultant (DI), IT manager (IT consultant) (DI), Media computer scientist (DI), IT project manager (DI), IT quality assurance technician (DI), System programmer (IT) (DI), Enterprise resource planning system technician (DI), Web master (DI), SAP developer (SAP programmer) (DI), System engineer (DI), Software engineer (DI), System integrator (DI), Network/system engineer (DI), Senior application engineer (DI), Database administrator (DI), Application engineer (DI), Firmware developer (DI), NET software developer (DI), IT architect (DI), Software tester (DI)
* No. 59 Data processing technicians
* Analyst, data entry specialist, programmer, system analyst, system organiser, computer technician, network technician, customer service representative (IT), database technician, IT maintenance technician, Internet technician, IT technician (hardware and software), Software technician (software developer), IT trainer (hardware and software), System and user administrator, Media specialist - media technology, Computer scientist, Hotline consultant (IT HelpDesk), Network administrator, System administrator (networks), Support engineer (m. /w. ), application developer and programmer, web programmer, multimedia programmer, database developer and programmer, application consultant, application supervisor (support), data processing controller, IT administrator, IT organiser, hardware technician, computer scientist (application development), information manager (data warehouse manager), internet/intranet administrator, Internet/intranet consultant, Media IT specialist, Medical documentalist, IT quality assurance technician, Scanning technology/image capture specialist, Support manager, System programmer (IT), Telecommunications technician, Usability engineer, Enterprise resource planning system technician, Web master, IT manager (IT consultant), SAP developer (SAP programmer), IT support employee, System integrator (m. /(m/f), Network/System Engineer (m/f), Senior Application Engineer (m/f), Database Administrator, Information Technologist - Computer Science, Information Technologist - Engineering, Application Engineer (m/f), Firmware Developer, . NET software developer, IT architect, software tester, software developer, hardware developer, software commissioning engineer, information technologist - systems engineering, information technologist - operations engineering, application developer - coding, requirements engineers[[44]](#footnote-44)

### 6.6.2. Information Technologist - Systems Engineering (IT System Administrator)

For the further work in CDO-VR, we will focus on the occupational profile of information technologist - system technology (IT system administrator), as we consider both the demand and the professional and career opportunities for young people in this occupational profile to be relevant.

In 2023, there are 118 open apprenticeship positions in Austria for the occupational profile of information technologist - system technology (IT system administrator) with 178 registered apprenticeship seekers, but only 15 registered apprenticeship seekers in Styria with 19 open apprenticeship positions. (see in each case apprenticeship seekers by occupation AMS, or vacant apprenticeships by occupation: <https://iambweb.ams.or.at/ambweb> )

Here it is even more important than in the occupations already mentioned to provide concrete information about what an information technologist actually does. The opportunity to try out certain areas in practice can open the door to further consideration of training opportunities in this occupational field.

The focus groups showed that young people have little idea about careers in information technology. There are no images or ideas of what work content and areas of activity could be in this sector.

The profession itself has great potential for the future in view of increasing digitalization. It is a very diverse profession that ensures that computer systems and networks work and are always up to date. In addition, customized user-friendly solutions must always be found and tested and much more.

The profession can be learned in different ways. The apprenticeship variant lasts 4 years

Detailed descriptions of the job description can be found on the following websites

https://www.berufslexikon.at/berufe/3501-InformationstechnologIn-Systemtechnik/#anforderungen

<https://bis.ams.or.at/bis/beruf/625-SystemadministratorIn?query=SystemadministratorIn&phrase_search=1>

# Factors Contributing to Labor Shortages

*Explore the reasons behind labour deficits (e.g., technological advancements, demographic changes, insufficient training programs, immigration policies).  
Discuss any regional disparities within each country regarding labour shortages.*

According to the results of the focus groups, research and our many years of experience working in the education sector and on the labor market, there are many reasons for the shortage of skilled workers. The following in particular were also mentioned or became apparent in our focus groups:

* Little knowledge about the content/actual activities of the professions
* Little knowledge about career, further training and promotion opportunities in the professions
* Little knowledge about the contribution of individual professions to solving current societal, social and economic problems (climate protection, sustainability, loneliness, "doing good", etc.) and the associated sense of purpose and individual added value
* Gender stereotypes and traditional role models restrict the range of career choices available to girls in particular
* Lack of role models, especially in professional fields with strong male or female connotations
* Ongoing need for attractive, innovative and, above all, effective tools and approaches for career guidance, job profile work and approaches to relevant fields of activity
* Few opportunities to try out the professions in practice, or these are sometimes simply not used enough (taster placements, internships, etc.)
* The often rather poor image of apprenticeships
* The often rather poor image of entire industries and fields of activity
* Supposed or actual unattractive pay, working hours, working conditions
* Prejudices or relevant previous experiences in families have a lasting influence on young people's career choices

Other reasons for staff shortages are also listed here as examples:

* The so-called baby boomer generation is slowly leaving the labor market and retiring. Due to demographic trends, however, fewer "new" and young workers are coming into the workforce. This makes it all the more important to make good use of the labor force potential of young people and to prepare them well for training and career decisions.
* There are regional differences in the labor market, both in terms of job vacancies and job seekers, and these two factors often do not go together. A lack of mobility and limited opportunities to pursue gainful employment (keyword: caring responsibilities) for certain target groups further restrict the potential workforce in some regions.
* When people work part-time, they are in principle available to companies as skilled workers, but only for a limited number of hours. "With *a part-time employment rate of around 30 percent among employees, Austria had the second-highest part-time employment rate in the EU in 2021."[[45]](#footnote-45)*
* Demographic change in Austria is also having a massive impact on the development of the labor market and the supply of skilled workers:   
  "It *remains to be seen what the future development will look like: The number of vacancies to be filled is expected to continue to rise, the number of people of working age is declining, while at the same time the rising statutory retirement age for women is likely to lead to a renewed increase in older workers. However, according to a current forecast by Statistics Austria, the working population in this country is also expected to shrink - by around 4.8 percent over the next thirty years - a sword of Damocles hanging over the entire labor market*." [[46]](#footnote-46)

# Impact of Deficit Occupations

*Describe the impact of these shortages on the economy, businesses, and workforce productivity.  
Discuss the challenges faced by employers due to these deficits.*

As we found out in our focus groups, in research and based on our many years of experience in working on projects relevant to the labor market, staff shortages in companies have an impact at various levels.

At an economic level, when orders cannot be processed on time and/or the quality of products suffers.  
At employee level, staff shortages lead to overwork, more frequent sick leave or even increased resignations, which results in further staff shortages.  
At the level of managers and HR managers, who increasingly need resources that are already scarce to recruit and retain employees

Companies are required to

* invest time and energy in personnel marketing in order to attract young people as the skilled workers of the future
* Especially in so-called non-traditional sectors, to think about how they can appeal to as many (young) people, girls and boys, women and men as possible and attract them to work in their company
* Thinking about new forms of work and agile working as ways of attracting young people to your company and keeping them there

# Government Initiatives and Policies

*Outline any governmental or institutional measures taken to address labour shortages.  
Highlight policies aimed at training, education, or attracting skilled workers.  
Review any incentives or programs encouraging workforce development in deficit occupations.*

In Styria, there are many initiatives supported by various programs and funding bodies that are intended to counteract the shortage of skilled workers. Here are just a few examples:

* NEBA Ausbildungsfit, https://www.neba.at/ausbildungsfit Measures for young people
* Styrian Youth College, https://www.isop.at/projekt/steirisches-jugendcollege/
* Mafalda, https://www.mafalda.at/ Association for the promotion and support of girls and young women
* ZAM Steiermark GmbH, https://www.zam-steiermark.at/ for the promotion of professional opportunities for women in the labor market
* Regional Coordination for Educational and Vocational Orientation Styria, https://www.verwaltung.steiermark.at/cms/ziel/157910846/DE/
* BIZ - BerufsInfoZentren des AMS, https://www.ams.at/arbeitsuchende/aus-und-weiterbildung/berufsinformationen/biz---berufsinfozentren#steiermark

This list does not claim to be exhaustive

nowa has been working for many years in various projects and activities together with companies and organizations on how personnel can be recruited and retained for different sectors and fields of activity. The following strategies and measures have been and are being discussed and implemented as effective means:

* Equality-oriented employee retention
* New Work approaches as an opportunity for employers and employees (flexibility in working hours and location, participation and co-determination, self-organization in teams, etc.)
* Integrating the gender and diversity perspective into HR marketing, HR planning and HR development Promoting the development and utilization of potential
* Qualification of employees
* Measures and activities for career guidance and career information from a gender and diversity perspective from kindergarten onwards
* Integration of participative and equality-oriented approaches in apprenticeship training

# Overview of the educational system in your country

*Describe the educational system.*

The Austrian education system consists of the following levels:

* The primary level comprises grades 1-4 and is attended by children aged around 6-10. The primary level in Austria consists of the so-called elementary school and is the same for all children.
* Secondary level 1 comprises grades 5-8 and is no longer the same for all children. In Austria, children between the ages of 10 and 14 attend either the so-called Mittelschule (which ends with the 8th grade) or a Allgemeinbildende Höhere Schule (AHS), which can usually be attended up to the 12th grade and ends with a Matura, which entitles the child to study.
* Secondary level 2 comprises grades 9-13. Compulsory education in Austria ends at the end of grade 9. Secondary level 2 offers a wide range of options for young people between the ages of 14 and 19:
* Polytechnic school (1 year)
* Dual training (apprenticeship)
* Various vocational schools
* General secondary school (upper secondary level)
* Training courses for healthcare professions
* Various other training courses
* The post-secondary or tertiary level includes many further education programs, university studies, studies at universities of applied sciences or teacher training colleges, but also, for example, various master schools.

A graphic on the Austrian education system can be found under the following links:

* In German: https://www.bildungssystem.at/
* In English language: https://www.bildungssystem.at/en/

# Conclusion

*Summarize the key findings and insights obtained from the research.  
Emphasize the importance of addressing deficit occupations for the overall economic growth and stability of both countries.*

Through desk research and the focus groups, we have gathered important impressions, data and facts on the topic of shortage occupations in Austria.

It is clear that measures are still needed, and indeed increasingly needed, to get young people interested in training in a shortage occupation. If this succeeds, there will be enough skilled workers in the future to ensure the competitiveness of companies and entire regions.

The following points seem particularly important to us at the end of this research report:

In Austria, the image of apprenticeships, especially in the area of shortage occupations, needs to be massively upgraded

* Adequate presentation is needed, especially of professions that may seem less attractive at first glance
* Role models and peers are needed for young people of all genders
* Realistic, understandable and yet motivating information about job profiles is needed
* Young people need to know what to expect in different occupations in their everyday working life and they need to have the opportunity to try out activities
* Shortage occupations must be established as future-oriented opportunities for careers and livelihoods, both as initial training and as a second educational pathway
* A concerted approach is needed between stakeholders from education, business and politics so that measures can be developed and implemented to tap potential, especially for shortage occupations

In cooperation with our project partners in Slovenia, we will continue to work on the following occupational profiles from the CDO-VR sectors, as already described in the report, with a clear focus on apprenticeships on the Austrian side:

* Electrician (electrical technician in electrical and building services engineering)
* Cook
* Structural engineer (?) Hochbau
* System administrator / system technician (information technologist)
* Metal technician with a focus on welding technology
* Care

# References

*Provide a list of all the sources cited throughout the research.  
Stellen Sie eine Liste aller im Rahmen der Recherche zitierten Quellen bereit.*

All sources used are listed in footnotes or in brackets

1. https://www.kleinezeitung.at/wirtschaft/6221944/Agenda-Austria\_Mehr-als-80000-offene-Stellen-in-Mangelberufen [↑](#footnote-ref-1)
2. https://www.wko.at › fachkraefteradar-summary PDF [↑](#footnote-ref-2)
3. <https://orf.at/stories/3340913/> [↑](#footnote-ref-3)
4. ://www.stepstone.at/e-recruiting/blog/fachkraeftemangel-oesterreich/#in-welchen-branchen-fehlen-in-osterreich-die-meisten-fachkrafte-0b1c7cbf-76c1-4605-9917-60bebeeb67b7 [↑](#footnote-ref-4)
5. https://www.ams.at/arbeitsmarktdaten-und-medien/arbeitsmarkt-daten-und-arbeitsmarkt-forschung/fachbegriffe#arbeitslosenquoten [↑](#footnote-ref-5)
6. <https://iambweb.ams.or.at/ambweb/> [↑](#footnote-ref-6)
7. https://www.wko.at/zahlen-daten-fakten/daten-lehrlingsstatistik [↑](#footnote-ref-7)
8. <https://orf.at/stories/3340913/> [↑](#footnote-ref-8)
9. <https://www.stepstone.at/e-recruiting/blog/fachkraeftemangel-oesterreich/#in-welchen-branchen-fehlen-in-osterreich-die-meisten-fachkrafte-0b1c7cbf-76c1-4605-9917-60bebeeb67b7> [↑](#footnote-ref-9)
10. <https://www.stepstone.at/e-recruiting/blog/fachkraeftemangel-oesterreich/#in-welchen-branchen-fehlen-in-osterreich-die-meisten-fachkrafte-0b1c7cbf-76c1-4605-9917-60bebeeb67b7> [↑](#footnote-ref-10)
11. Cf. <https://www.statistik.at/fileadmin/user_upload/Projektbericht-Tourismusbericht_2022_barrierefrei.pdf> [↑](#footnote-ref-11)
12. Cf. <https://www.wko.at/oe/tourismus-freizeitwirtschaft/gastronomie/start> [↑](#footnote-ref-12)
13. Source: <https://www.awblog.at/Arbeit/fachkraeftemangel-im-gastgewerbe> [↑](#footnote-ref-13)
14. Source: https://www.wko.at/oe/fachkraeftesicherung/fachkraefteradar-summary.pdf [↑](#footnote-ref-14)
15. Cf. https://www.tourismuspresse.at/presseaussendung/TPT\_20230531\_TPT0004/arbeitskraeftemangel-in-gastronomie-und-hotellerie-digitalisierung-als-weg-aus-der-krise-bild [↑](#footnote-ref-15)
16. Cf. https://www.wko.at/oe/fachkraeftesicherung/fachkraefteradar-summary.pdf [↑](#footnote-ref-16)
17. https://www.awblog.at/Arbeit/fachkraeftemangel-im-gastgewerbe [↑](#footnote-ref-17)
18. Cf. https://www.awblog.at/Arbeit/fachkraeftemangel-im-gastgewerbe [↑](#footnote-ref-18)
19. https://www.migration.gv.at/de/formen-der-zuwanderung/dauerhafte-zuwanderung/bundesweite-mangelberufe/ [↑](#footnote-ref-19)
20. https://www.migration.gv.at/de/formen-der-zuwanderung/dauerhafte-zuwanderung/regionale-mangelberufe/ [↑](#footnote-ref-20)
21. [Die Rot-Weiß-Rot-Karte: Fachkräfte in Mangelberufen - WKO](https://www.wko.at/arbeitsrecht/rot-weiss-rot-karte-mangelberufe#heading_Die_Liste_der_regionalen_Mangelberufe_umfasst_im_Jahr_2022_folgende_Berufe_) [↑](#footnote-ref-21)
22. <https://bis.ams.or.at/bis/berufe-nach-berufsbereichen?expand=96,88,96_350> [↑](#footnote-ref-22)
23. Cf. https://www.wko.at/oe/fachkraeftesicherung/fachkraefteradar-summary.pdf [↑](#footnote-ref-23)
24. Source <https://www.wko.at/oe/fachkraeftesicherung/fachkraefteradar-summary.pdf> [↑](#footnote-ref-24)
25. https://www.migration.gv.at/de/formen-der-zuwanderung/dauerhafte-zuwanderung/bundesweite-mangelberufe/ [↑](#footnote-ref-25)
26. <https://www.wko.at/stmk/stmk-news/arbeitskraeftemangel-durchschnittlicher-stellenandrang-hat-> [↑](#footnote-ref-26)
27. <https://bis.ams.or.at/bis/berufe-nach-berufsbereichen?expand=96,88,96_350,88_298,88_298_1126> [↑](#footnote-ref-27)
28. https://www.maturawasnun.at/ausbildung-lehre-elektriker-elektroniker/#google\_vignette [↑](#footnote-ref-28)
29. [Source https://bic.at/berufsinformation.php?beruf=elektrotechnik-elektro-und-gebaeudetechnik\_modullehrberuf&brfid=2476](file:///\\NOWA-DC01\Projekte\Projekte\CDO-VR\WP%201\Desk%20Research\Source%20https:\bic.at\berufsinformation.php%3fberuf=elektrotechnik-elektro-und-gebaeudetechnik_modullehrberuf&brfid=2476) [↑](#footnote-ref-29)
30. Source <https://bic.at/berufsinformation.php?beruf=elektrotechnik-elektro-und-gebaeudetechnik_modullehrberuf&brfid=2476> [↑](#footnote-ref-30)
31. https://www.migration.gv.at/de/formen-der-zuwanderung/dauerhafte-zuwanderung/bundesweite-mangelberufe/ [↑](#footnote-ref-31)
32. https://www.wko.at/stmk/stmk-news/arbeitskraeftemangel-durchschnittlicher-stellenandrang-hat- [↑](#footnote-ref-32)
33. <https://www.migration.gv.at/de/formen-der-zuwanderung/dauerhafte-zuwanderung/bundesweite-mangelberufe/> [↑](#footnote-ref-33)
34. https://www.wko.at/stmk/stmk-news/arbeitskraeftemangel-durchschnittlicher-stellenandrang-hat- [↑](#footnote-ref-34)
35. <https://www.sozialministerium.at/Themen/Pflege/Pflege-mit-Zukunft.html> (03.01.2023) [↑](#footnote-ref-35)
36. Quelle: Gesundheitsberufe in Österreich, 2020; Bundesministerium für Soziales, Gesundheit,

    Pflege und Konsumentenschutz (BMSGPK);   
    https://www.sozialministerium.at/Themen/Pflege/Pflege-mit-Zukunft.html [↑](#footnote-ref-36)
37. Source: ibid [↑](#footnote-ref-37)
38. Source: Healthcare professions in Austria, 2020; Federal Ministry of Social Affairs, Health,

    Care and Consumer Protection (BMSGPK);   
    https://www.sozialministerium.at/Themen/Pflege/Pflege-mit-Zukunft.html [↑](#footnote-ref-38)
39. <https://www.migration.gv.at/de/formen-der-zuwanderung/dauerhafte-zuwanderung/bundesweite-mangelberufe/> [↑](#footnote-ref-39)
40. <https://www.wko.at/stmk/stmk-news/arbeitskraeftemangel-durchschnittlicher-stellenandrang-hat-> [↑](#footnote-ref-40)
41. <https://www.migration.gv.at/de/formen-der-zuwanderung/dauerhafte-zuwanderung/bundesweite-mangelberufe/> [↑](#footnote-ref-41)
42. <https://www.bmaw.gv.at/Themen/Arbeitsmarkt/Arbeitsmarktdaten/Fachkraeftebarometer.html> [↑](#footnote-ref-42)
43. <https://bis.ams.or.at/bis/beruf/1138-SchlosserIn%20im%20Metallbereich> [↑](#footnote-ref-43)
44. https://www.migration.gv.at/de/formen-der-zuwanderung/dauerhafte-zuwanderung/bundesweite-mangelberufe/ [↑](#footnote-ref-44)
45. https://www.momentum-institut.at ' files ' 2023-03 PDF [↑](#footnote-ref-45)
46. https://www.stepstone.at/e-recruiting/blog/fachkraeftemangel-oesterreich/#in-welchen-branchen-fehlen-in-osterreich-die-meisten-fachkrafte-0b1c7cbf-76c1-4605-9917-60bebeeb67b7 [↑](#footnote-ref-46)