The European Centre for the Development of Vocational Training (Cedefop) is the European Union’s reference centre for vocational education and training.

We provide information on and analyses of vocational education and training systems, policies, research and practice.

Cedefop was established in 1975 by Council Regulation (EEC) No 337/75.
‘Investing in skills must be a top priority,’ was the challenge for EU Member States from European Commissioner Marianne Thyssen earlier this year. This issue of *Skillset and match* looks at how the challenge is being met.

Knowing which new skills employers are looking for today is as important as anticipating future needs; upskilling and reskilling are constantly in demand. Cedefop has explored untrodden paths to gather real-time skills requirements across the EU, developing a new system to complement our efforts to detect skill needs in the short and long term and understand mismatch. Having a wealth of data is not enough on its own; such data also need to be used effectively. The examples presented in our new web tool aim to inspire upskilling and skills matching policies.

While the need for interlocking skills, economic, employment and social policies is increasingly recognised, the link to environmental policies still seems weak in times when Europe’s youth are urging politicians to act on climate change. In its reflections on a European sustainability agenda, the outgoing Commission advocates training in skills for a green economy. Climate change, automation and digitalisation also affect those caring for our natural environment, such as farmworkers and gardeners.

In the 1870s, energy and transport infrastructure projects were driving the demand for new skills in Cedefop’s host city, Thessaloniki, and for innovative vocational education and training (VET). This example, and Belgium’s integration programme for refugees and migrants, testify to VET’s excellence and inclusion potential, whether in schools or in the form of apprenticeships.

Supporting today’s EU-wide revival of apprenticeships, Cedefop has worked bilaterally with several countries aiming to introduce or expand these schemes. Providing knowledge, evidence and services for policy-making and aiding knowledge-sharing are all objectives that have guided our work for many years. They are now firmly embedded in the mandate set out in Cedefop’s new Regulation. This mandate also reflects today’s broad understanding of VET and our long-standing work on skills and qualifications. We take this as an acknowledgement of our forward-looking strategy.
Skills surveys:
getting them right

No single survey will settle an issue forever and all time but it can provide data so that people can talk about things with concrete evidence

MICHAEL HANDEL
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Following the success of Cedefop’s first European skills and jobs survey (ESJS) in 2014, a second is planned for 2021. Findings from the first survey have proved useful to policymakers and to those interested in how skills evolve and impact on the jobs people across Europe are doing or aspire to do. They include the belief that one in three European employees possess qualifications that are not well-matched to those required by their jobs, while almost half believe that their skills can be better developed or utilised at work.

The working group tasked with preparing the second ESJS, which will focus on the impact of technology on skills, met in Brussels for the first time. Among the leading experts from international organisations and academic institutions who comprise the group is Associate Professor of Sociology at the Northeastern University in the United States, Michael Handel. He designed a survey of workplace skills, technology and management practices (STAMP) in the continental US, the content of which has contributed to the OECD’s PIAAC survey and to a World Bank programme administered in 15 middle- and low-income countries.

Mr Handel spoke to Skillset and match about the challenges surveys, and particularly cross-country ones such as Cedefop’s, have to deal with: The first problem is sampling, contacting people and making the survey representative; the second is measuring issues, getting the questions right and figuring out how to measure something. The third, since this is a cross-national survey, is making the survey and the questions retain their meaning across countries. There is a problem, even within countries, when you ask a question, such as ‘how skilled would you say your job is?’; the potential range of answers – ‘not very skilled’, ‘somewhat skilled’, and so on – doesn’t guarantee a common stable meaning across individuals. It’s not behavioural or factual; it’s actually a judgement question. A major challenge for all survey research is cross-national comparability. That’s why with the OECD and other places you get league tables: how low is unemployment, how low is youth unemployment, how many people graduate university. But what happens if university education doesn’t mean the same thing across different
countries? Even within a country it may not mean the same thing; there are differences in school quality. It’s very hard with skills questions to have cross-national comparability. Translation is a big issue, as are national styles of responding. Some people are more enthusiastic and will always give higher responses to particular kinds of questions; others are more pessimistic.

The working group discussed the impact of technology on skills and how this type of survey can look ahead. How can this be done? You can ask people whether events occurring at their workplace now have resulted in some kind of changes or are likely to in the next year. You can ask them ‘has new technology been introduced and, if yes, has it resulted in staff reductions or is it likely to in the next 12 months?’ That forces people to think very specifically about the immediate future and that’s where you can get more valid responses. You can’t ask them what is going to happen in five years.

Do you think that current surveys and predictions exaggerate the impact automation is going to have on jobs? Some reports argue that in the coming years many jobs will fall victim to automation and robots.

I do. What you see publicised in the media is something that will get clicks. I believe in the popular press and I hope it remains vibrant and strong but we should also recognise that it’s a business. I think this has been blown way out of proportion, though that’s not to say that certain occupations will not decline as a result of automation. If you want to see the effects of economic change, look at decaying manufacturing centres all across the developed world in which there’s been a great deal of suffering, a great deal of demoralisation, a great deal of stagnation/discontent, populous backlash and unhappiness. You don’t have to look into the future, look into the past. People have been left behind by structural shifts in the economy, whether it’s information technology, improved mechanical technology, trade or the exhaustion of natural resources in particular regions. We’ve lived through lots of economic shifts that have been taken lightly, in which people’s needs have been ignored. People are going to be affected by technology. We really need to think about improving retraining, which has not been a huge success story. That’s unfortunate, particularly for people who’ve reached a certain age where it’s hard to find new employment. But I think there has been exaggeration about potential effects on the total number of unemployed and changes in the character of work in the recent discourse on technological advance.

Given the challenges that organising a survey entails, how useful are their results and why should we keep doing them? Any process of policy-making will rely on at least two kinds of knowledge: one is general background knowledge where you have your eyes and ears open to take in information from the environment. You don’t necessarily know whether it will be useful in future deliberations, but it’s good to know what’s going on, to have intelligence about the world. And then there is more specific, direct, targeted information like ‘will provision of a basic income lead to higher employment rates?’ I think a survey like this can provide a mix of both. Certain questions will be answered. No single survey will settle an issue forever and all time but it can provide data so that people can talk about things with concrete evidence. And on a more general level, it gives people a sense of what’s happening.
On 20 February 2019, following approval by the European Parliament, Cedefop’s new Regulation came into force, replacing the Founding Regulation which dated from the agency’s creation in 1975. Adapted to the European Centre for the Development of Vocational Training’s modern role, the document marks a new beginning, though, as Acting Executive Director Mara Brugia says, it is a beginning based on needs that the organisation had already foreseen and is working on.

Why was there a need for a new Regulation for Cedefop?
The purpose was to ensure a ‘common approach’ in the way EU agencies are governed and, even more important for us, the need to adjust Cedefop’s role and mandate to changed realities.

What are the main changes in the new Regulation?
The new Regulation reflects today’s broader understanding of VET. Cedefop’s mandate to ‘support the promotion, development and implementation of Union policies in the field of VET as well as skills and qualifications policies’ signals that VET is interlinked with other policy areas: employment, economic and social policies. The agency’s role has also evolved.
changed from primarily assisting the European Commission to collaborating with the Commission, the Member States and social partners. This is a principle we have long considered crucial, given that VET requires close partnership between governments and social partners. It is reflected in the tripartite character of our Management Board and is now explicitly stated in Cedefop’s objectives.

Providing knowledge, evidence and services for policy-making are not new activities for us: they reflect what Cedefop has been doing for many years. More recently, we have focused on policy learning forums to aid knowledge-sharing among European and national actors. The Commission promotes evidence-informed policy-making, policy and mutual learning in various areas, so the new Regulation now also includes this common practice. Most of the outlined tasks reflect our current activities, like the work on qualifications and validation, our support to countries in implementing VET policies or the tools and data we provide. Of particular importance is that the Regulation entrusts us not only with analyses but also research. We are also now asked to develop a strategy for relations with other international organisations and third countries. Our long-standing cooperation with other EU agencies, notably with ETF, Eurofound and EU-OSHA, will continue with the aim of ensuring our activities are complementary. On the governance side, the agency’s tripartite nature, which has served it well through the years, is maintained. Our Management Board will continue to consist of representatives of the European Commission and Member State governments, employer organisations and trade unions. What is new is that the European Parliament will appoint an independent expert as Board member.

How will the new Regulation help Cedefop fulfil its role as the European Union’s reference centre for VET in the current context of education and the labour market?
The mandate outlined in the new Regulation proves that we have been on the right track with our proactive and forward-looking approach, exploring new thematic areas and pioneering new activities. It enables us to continue our comprehensive perspective and does not see VET in isolation. It acknowledges the need to detect and analyse labour market trends to inform VET policy and decisions related to skills development, education and career paths. It also sees the need to consider the links between VET and other education sectors: this is important in an environment where traditional boundaries between them are blurring. The Regulation confirms Cedefop’s key role at the interface between education and training and the labour market, at a time when skills development becomes a theme beyond traditional VET system boundaries. Having an expert appointed by the European Parliament as a Board member will help us to establish even closer collaboration with them.

The Regulation also asks EU institutions to consider our expertise and studies, or those Cedefop is able to conduct, before deciding on policy or new studies. We see this as an acknowledgement of our achievements which will strengthen our standing as a European reference centre of expertise for VET, skills and qualifications.
From wind turbine engineers to farmers, occupations across sectors are affected by the ‘greening’ of the economy, with new skillsets emerging or with the ‘greening’ of existing ones. New and adapted vocational education and training (VET) curricula and programmes are springing up to accommodate these needs. Cedefop’s new report on Skills for green jobs underlines the growth of ‘green’ skills and jobs in six countries (Denmark, Germany, Estonia, Spain, France and the UK) since 2010. The country studies were developed in collaboration with the International Labour Organization (ILO), repeating collaboration in 2010.

A key outcome is that countries vary in their approach to defining, classifying and collecting data on green jobs and skills. However, increased efforts are observed on data collection on developments in the ‘green economy’.

Since 2010, green employment trends have tended to parallel general economic trends. Carbon reduction targets and associated incentives and subsidies have been especially influential on green jobs and skills; other green policies, such as legislation to protect the environment, have also been important.

Regulations, policies and strategies explicitly focusing on green skills and employment are rare. Consideration of green jobs and skills is framed by broader green strategies, plans and legislation, such as policies to protect the environment, encourage biodiversity, and improve energy efficiency. Plans and strategies focused on green jobs and skills tend to be formed ad hoc, particularly by sectoral organisations strongly affected by the greening of employment. Organisations involved in national policy-making on environmental topics are often weakly connected with those involved in employment and skills policy. There is a generally poor connection between environmental and skills policies.

This is mirrored in skills anticipation mechanisms, where green skills are typically covered as part of general forecasting mechanisms. A notable exception is Onemov, France’s National Observatory for Jobs and Occupations of the Green Economy. Sector-based and regional/local approaches are also common, while green skills may also be seen as a ‘horizontal issue’, like digitalisation or innovation.

INCREASED DEMAND
Nonetheless, the updating of qualifications and VET programmes has soared, reflecting increased demand for green jobs and skills since 2010. Updates mainly concern adding ‘green’ components to existing qualifications/programmes, since changes in skill demands are perceived more pertinent to including new green skills within existing occupations rather than the creation of new green ones.
Respective updates of occupational qualifications standards have also taken place, as in Estonia. ‘Greening’ of programmes has been observed in higher education, concerning bachelor degrees (as in environmental technology in Denmark), and master programmes and new professional licences relevant to the green economy (France).

Reflecting countries’ governmental structures, local and regional dimensions are often crucial to training provision for green skills: for example, the Energy Academy in Samsø, Denmark’s Renewable Energy Island; and the Liverpool City Region Local Enterprise Partnership in the UK.

STAKEHOLDER ROLE
The role of social partners and of the private sector tends to reflect countries’ general institutional set-ups, ranging from the social partners’ prominent contribution to Estonia’s skills anticipation system (OSKA) to the leading role of the business community in the UK. The 50 trade committees in Denmark and the 14 professional advisory committees in France allow social partners to design new programmes and adapt existing ones to labour market needs. Trade unions are also active: in Denmark, trade union 3f, mainly organising unskilled workers, has a green jobs-focused website; unionlearn in the UK has developed a range of activities on the green economy, supporting the development of trade union policy, and setting up green skills partnerships.

Boosting the development of green skills through subsidies and incentives to private companies is rare. Nonetheless, there are interesting examples of (usually large) companies partnering with sectoral bodies and universities. In 2015, the Acciona University programme of the Spanish company Acciona provided, in cooperation with the University of Alcalá, almost 35,000 training hours to employees in green and environmental subjects.

Despite the different patterns in the development of green skills and jobs across countries, Cedefop’s analysis highlights some key points, potentially inspiring for future policy steps. Given the importance of green skills and jobs, robust data at EU level would aid the uptake of relevant anticipation activities; they would also support Member States and stakeholders in their current policy approaches to nurturing green jobs and addressing respective skill needs. With that aim, better coordination between skills and environmental and employment policies could benefit the development of more comprehensive policy approaches to green skills and jobs.
INSPIRING
innovative
skills policies

Using the full potential of skills intelligence to shape and steer education and training systems, and to ease the decisions of citizens, companies and other stakeholders, is one of the drivers of effective skills governance. But there is no standard recipe for how to improve skills intelligence or its use, as the experience from Cedefop’s governance reviews currently under way in Bulgaria, Estonia, Greece and Slovakia clearly shows.

Apart from the capacity for developing, using and disseminating skills intelligence, countries differ in many other respects. National skills systems vary in terms of regulation, process management and stakeholder engagement arrangements. Along with economic, demographic, historic and cultural features, these shape the possibilities for change and their potential effectiveness. This means that a measure or reform aimed at making more or better use of skills intelligence which would be beneficial for a particular country does not work elsewhere.

What is common to all countries is that even the most advanced skills intelligence is of little value when it is not used effectively. Whether it is for employee training, measures to help people find employment or for policies that aim at strengthening the skills or vocational education and training (VET) system (or its governance) as a whole, knowledge of how labour market and skills intelligence can be used to strengthen skills systems can make the difference between failure and success.

INSPIRING THROUGH NEW INSIGHTS
Learning from experience elsewhere can be a good source of inspiration when developing new policies or reforming existing ones. Transferring entire skills policies or measures across borders is often not a realistic option, but a lot can be learned from particular elements, features or principles.

Cedefop provides overviews of skills anticipation and matching in all EU Member States; these explain in broad terms what types of skills intelligence are available and how they are used. It can be challenging to find more detailed and practical
Knowledge of how labour market and skills intelligence can be used to strengthen skills systems can make the difference between failure and success.

Information on skills measures and policies, particularly on how skills and labour market intelligence is used within them. Such information is especially useful for policy-makers working on education and training, skills, (active) labour market policy and related policy areas, as it helps them develop awareness of what works in particular contexts and what potential pitfalls to avoid.

To provide these policy-makers with practical and easily accessible information that can be readily interpreted, Cedefop has recently launched a web tool, Matching skills – Inspiring policies, for anticipating and matching skill needs.

**MATCHING SKILLS: WHAT'S INSIDE?**
The web tool showcases a collection of policy instruments from EU Member States. These use information on labour market trends and anticipated skill needs to inform and shape upskilling or other

**FEATURED IN MATCHING SKILLS: ONLINE COURSES (BELGIUM/FLANDERS)**

Fully operational since 2007, this instrument helps adults – employed and jobseekers – to remain employable and active in the labour market by giving them easy access to learning in a broad range of subjects. In October 2017, 635 different courses were on offer free of charge. The public employment service (VDAB) offers them on its online platform and shapes the training offer using analysis of skill needs in sectors and occupations. The measure could be transferable, provided there is good collaboration between training developers and sectoral organisations to develop well-balanced courses and, if the possibility exists, to provide them online and free of charge.
skills matching policies for the current and future world of work. They typically aim at tackling unemployment, helping people transition to jobs that match their skills better, or making VET more responsive to future labour market developments. The focus is on specific and innovative policy instruments that have recently been implemented and evaluated.

Matching skills contains:
- skills matching policies for today’s labour market to aid jobseekers’ return to work and job mobility, and provide better guidance for school-to-work transitions;
- skills matching policies to prepare the workforce better for the future of work;
- comprehensive overviews for all EU Member States to understand what EU countries are doing to promote better skills matching;
- a map interface to locate policy instruments quickly in particular countries.

Going beyond what is available in official documents and other sources, the tool provides comprehensive information. It helps users understand the approaches used and the rationales behind them; it also offers information on practical organisation of skills policy measures, funding arrangements and stakeholder involvement. The tool offers expert insight into how innovative and successful a policy instrument is and what would enable it to be applied successfully elsewhere.

WORK IN PROGRESS
The tool is not intended to be a one-way street. Cedefop encourages users to send feedback and share ideas for further development. Suggestions for additional skills matching policies to be included are welcome and the matching skills platform offers a template for collecting, synthesising and reporting the necessary information.

In 2019, Cedefop will use information already available in-house to add skills policy instruments to the selection currently featured. Once coverage across countries is sufficient, the information in the web tool will also be analysed to see whether it is possible to discover patterns and relationships between particular features of skills policy measures, to learn more about the effectiveness of skills policies and uncover further potential for policy learning.

- This tool provides valuable information for our Digital Frontrunners project, an international initiative that helps senior stakeholders design skills policies for more adaptable and inclusive labour markets.
  
  Jack Orlik, Senior researcher at NESTA (UK)

- I frequently search information to find out more about skills shortages, future labour market trends and the skills and qualifications needed in particular jobs. The tool is very useful; it gives detailed insight about how this information can be used in policy and practice.

  Kyriakos Filinis, Policy analyst at the Hellenic Federation of Enterprises (Greece)

- Matching skills will allow policy-makers to maximise skills intelligence for the future of work. By showing how intelligence can be used to match skills better to jobs, I think the tool could also help promote employment in good quality and green jobs in tomorrow’s economy in Europe and beyond.

  Cristina Martinez, Senior specialist environment and decent work at the International Labour Organization (ILO)
SKILLS POLICY MEASURES INCLUDED IN THE MATCHING SKILLS WEB TOOL

Types of skills policy measures (based on 129 policy measures in Matching skills on 1 March 2019)

129 policy measures

98 today’s job market

27 both (today’s job market/future of work)

4 future of work

POLICY AREAS

- Active labour market measures and employment: 58
- Adult education and training: 23
- Education (including VET): 32
- Other (e.g. social, innovation, migration): 16

KEY FEATURES

- Explicitly designed to address mismatch: yes
- Easily transferable to other countries: no
- Very innovative: yes

Source: Cedefop.
For more than a decade Cedefop has been investing in skills analysis to provide evidence and support, primarily to the education and training sector, when dealing with the changing situation in the labour market. The European skills forecast, European skills index and European skills and jobs survey are already well-established tools, regularly feeding into European Union and Member State policies. After successful proof of concept and two years of intensive work, Cedefop is extending its skills analysis toolkit with a system for gathering and analysing information contained in online job vacancies.

Analysing online vacancies through an automatised system powered by big data techniques and machine learning enables us to understand employer skills needs faster and in more detail compared to more traditional statistical sources (such as surveys). Although this type of analysis is not new, Cedefop’s approach is unprecedented: covering all EU Member States, building on European skills, competences, qualifications and occupations (ESCO) as an overarching classification. In April, Cedefop released the first results of this system to showcase the potential of the data for seven countries: Czechia, France, Germany, Ireland, Italy, Spain and the United Kingdom.

The system’s ability to provide detailed information on skills across occupations is considerable. Understanding key job characteristics, such as skills requirements, working conditions or locations, at the most granular occupational level can provide important information for designing education and training policies. Almost real-time information can support continuing training as part of the ability to adapt to change seems the skill most often requested by employers.
of active labour market measures. In the future, the ability to understand time trends in skills demands will offer support also to initial education and training and career guidance.

WHAT EMPLOYERS WANT
Based on the initial results, the ability to adapt to change seems the skill most often requested by employers. Further, it is obvious that possession of soft skills is no longer restricted to high level or non-manual workers. For example, motor vehicle mechanics and repairers need customer orientation and teamwork. The ability to navigate through various skills will eventually allow users to get the most crucial information to inform offers by education and training sectors and provide adequate career guidance.

From the first results it is also clear that online job vacancies are no longer restricted to recruitment of high-level professionals as vacancies are being posted for a wide range of occupations. However, they do not reflect all available job vacancies yet as traditional channels such as printed newspapers, posters in windows or even word of mouth are still widely used.

Almost every second online vacancy is for highly skilled occupations: managers, professionals or associate professionals. Clerical or service workers (skilled non-manual) and craft, trades and factory jobs (skilled manual) have about a 20% share each. The remaining, slightly less than 10%, are for elementary occupations, leaving online vacancies for agriculture workers almost insignificant as we believe these are usually recruited using different methods.

COUNTRIES DIFFER
Cross-country variations in online job vacancy occupational structure are natural as they reflect different overall situations in national labour markets, internet penetration across companies and households, or even country habits and usual recruitment practices. While in the UK and Ireland about 70% of vacancies are for high-level occupations, in Czechia it is only 44%, leaving more than one third of jobs for skilled manual and elementary occupations. This reflects both the economy structure and the online channels employers are using. Almost every fifth Czech vacancy is sourced by public employment services’ portals, while in the UK such portals play only a marginal role.

The system described is based on vacancies gathered from a predefined list of online job portals covering a wide range of providers, from multinational portals and recruitment agencies to regional and local players or employers’ websites. While data presented are already of high quality, more has to be done in terms of cleaning, classification and testing of results to provide ‘bulletproof’ evidence for decision-making on skills and career development. Cedefop will continue the effort to do this and develop the system further to cover more European countries. By the end of this year all EU Member States will be included in the system and partial analysis will be made available, while the fully fledged system will be released at the end of 2020.
Cedefop continues its series sharing trends and challenges for selected occupations in the European labour market.

Farmworkers and gardeners, who also include forestry and fishery workers, are responsible for growing, managing and harvesting crops, rearing livestock, managing forests and gathering fish.

With more than 7 million jobs, farmworkers and gardeners belong to the larger occupations in the European labour market, with great importance in Romania, Greece and Poland.

Their employment levels have been declining over the years: 10% of jobs have disappeared since 2011 and more are expected to be lost. Surprisingly, though, their unemployment rate is very low and their future job prospects are very good. This is because it is a quickly ageing occupation, with almost half of workers at least 50 years old. They are retiring in huge numbers and only few younger people are available for replacement vacancies.

The worker shortage is aggravated by the continuous migration of young people from rural areas to cities and by relatively low earnings compared to other skilled occupations.

Automation and digitalisation will continue to shape the occupation in the future. Some 2.8 million farmworkers and gardeners – almost 4 in 10 – have low education level; this number will be reduced to 1.7 million as job requirements rise. The tasks undertaken by farmers and gardeners are moving away from manual labour and basic machinery maintenance towards use of IT, robotics and advanced machinery.

Other skills are becoming more important. Climate change impact will require specific skills to mitigate it; better water management, coping with extreme weather and prevention of plant and animal diseases will be essential. New skills are also likely to be needed by improved approaches and new methods being developed to replace overuse of antibiotics that pose a significant threat to human health.
At the 2018 Euroskills Budapest competition, a single Brussels resident represented the successful Belgian delegation: Omar Lo, a young political refugee, had benefitted from training offered through one of the existing integration programmes set up in Brussels. Originally from Senegal, Omar arrived in Belgium in 2014. Immediately given legal status, he started learning French and took training in plastering/drywall work at a socio-professional integration organisation. Flag bearer for the country during the Euroskills opening ceremony, he was coached in plastering by a trainer from Bruxelles Formation for the competition. He demonstrated great determination throughout his programme and received a high score in his occupation. He now hopes to find a good job to support his family.

Like Omar, many new arrivals can benefit from various programmes for integration and entry into the workforce. The reception agency for newcomers BAPA BXL asbl aims at increasing their social, economic and cultural participation. The agency offers a free reception programme including social support, assessment of French language skills, and courses in French language and citizenship. This programme will become mandatory in 2020 for any adult below the age of 65, coming from a country outside the European Union and who has been living in Belgium for less than three years.

Since 2017, several local employment offices in Brussels have participated in a pilot project called skills validation support, aiming to develop French learning modules. The project targets people who have professional skills in a list of identified occupations but whose level of French is insufficient for understanding the instructions given during skill validation examinations.

The Prim’Test project, developed by the language centre of Bruxelles Formation and jointly financed by the Asylum, migration and integration fund, aims to ease the integration of newly arrived migrants by offering training in French as a foreign language, based on a language placement test.

All these programmes have a single objective: to allow efficient and rapid integration of migrants into society while promoting their independence.
Thematic country reviews on apprenticeship have been part of Cedefop’s support to EU Member States, with their focus on apprenticeship and work-based learning as a pathway to better employability and employment of young people. Since 2014, Cedefop has conducted reviews in nine countries (Belgium/French-speaking community, Croatia, Cyprus, Greece, Italy, Lithuania, Malta, Slovenia and Sweden).

The reviews started with the aim to:
• analyse the existing situation in the country, identify enablers and challenges characteristic to the national context, and develop a set of policy pointers for ensuring quality apprenticeships;
• increase the evidence base at European level that can support policy- and decision-makers across Europe and, possibly, beyond in designing and implementing policies and measures for quality apprenticeships; to support, if possible, comparison across countries.

The review outcomes are mutually enriching. Each country selected priority areas and issues to examine. In cooperation with national stakeholders, we identified enabling factors and challenges of the existing arrangements.

COMMON ISSUES
The reviews have showed that countries face some common challenges regardless of their national contexts and traditions:
• establishing clear and balanced governance: how roles and responsibilities are distributed between education and training and the labour market actors, and to what extent the social partners are involved. In most countries, the social partners have a role at the national level in advisory bodies. The reviews showed that social partners having more say on the implementation of apprenticeships can potentially increase their engagement, ensuring greater relevance of apprenticeship to the world of work;
• defining in a clear way what is to be learned at school and at the workplace and how vocational education and training schools and companies cooperate. The reviews found many examples of successful long-term cooperation between
individual schools and companies. This success often depends on the active and dedicated teachers or apprenticeship coordinators. Creating conditions for structured communication and cooperation is important;

• involving companies, especially small and medium-sized enterprises (SMEs), in taking apprentices and establishing a balanced combination of financial and non-financial support. SMEs are a majority of enterprises across Europe and there is a common view that they are not willing to take apprentices due to lack of resources and lack of capacity. This might be partly true. Reviews also showed that, contrary to such a view, SMEs do not engage due to lack of information about apprenticeship itself and the available programmes in their sectors, about their rights and responsibilities and available funding schemes;

• providing for necessary competences of mentors in companies who accompany apprentices at the workplace;

• guaranteeing appropriate and safe working and learning conditions for apprentices.

WHAT WORKS
Implementation of apprenticeship in many countries is difficult but there are things that work; national stakeholders should think and build on what works and why. Focusing just on challenges often prevents from moving forward. That is why the thematic country reviews put forward both enablers and challenges and suggest actions that build on the former to overcome the latter.

Members of the national steering groups, representing national authorities, social partners and experts, continue their cooperation in policy learning forums. Cedefop believes that this learning will help the countries that were not reviewed to reflect on their policies and practice and to act to improve their apprenticeships.

The reviews are part of the multi-faceted work on apprenticeship and work-based learning: the projects of the cross-nation overview on apprenticeship, the financing element and the community of apprenticeship experts. Together they create a wealth of knowledge that we share through our publications and databases.
While discussions on the future of vocational education and training (VET) are high on the European agenda, the Islahane, the oldest vocational school in Thessaloniki, has emerged from the oblivion in which it had been buried following decades of collective amnesia. From its foundation in 1874, when Thessaloniki was still under Ottoman rule, until its closure around 1924, it lived through half a century of history. Recently restored and converted into an ecomuseum and cultural centre by the Greek city’s historic monuments service, the Islahane opened its doors to the public in 2017.

As Areti Kondylidou, the social anthropologist who coordinated the project, explains to Skillset and match, the term Islahane was a 19th century Turkish neologism and can be loosely translated as ‘house of vocational integration’. The purpose of these schools was to take in orphans and children from deprived families, shelter them from need and from danger, give them an education and teach them a trade.

**ORGANISED VET**

In 1885, there were over 100 Islahanes spread across the Ottoman Empire. The earlier reform of the Empire’s education system introduced the concept of the technical/vocational school for the first time. Although technical education as an institutionalised education system, governed and supported by the State, had first made an appearance in the Western world at the beginning of the 19th century, the traditional method of placing a young person in apprenticeship with a master continued. The
technical and vocational training provided by the *islahanes* was all the more innovative.

The Thessaloniki *Islahane* was founded at the initiative of Midhat Pasha, the city’s modernist governor. A single building housing the orphanage and the school came first, and the place gradually expanded into a complex of four main buildings. One of them was then dedicated exclusively to the workshops; this is the only one that remains and is now the museum.

The institution hosted young people, particularly, but not exclusively, young Muslims, aged 5 to 13, from all parts of the Southern Balkan region. Vocational training started at the end of primary education, at the age of 10. It included a theoretical part supplemented by practice in a workshop where pupils could learn various crafts, including metalwork, woodwork, cast-iron work, printing, lithography and shoe repair. The school was governed by clearly defined administrative and pedagogical criteria and had three sources of financing: private donations and profit generated by its own workshops, but largely the revenue of other public companies set aside for this purpose. By committing itself in this way, the State ensured the creation of a specialised workforce that met the industrialisation needs of the Empire.

In 1912, the end of the Ottoman rule in Thessaloniki, which became part of Greece, also meant the beginning of the end of the *Islahane* as such. From this date to the final departure of the Muslims in 1924, following the exchange of population decided by the Treaty of Lausanne, the institution became the property of the Muslim Community and was considered a private school. But, as funding was no longer provided by the Greek State, the school was closed and resources had to be found to ensure the functioning of the orphanage.

In 1920, the Muslim Community rented out part of the buildings to a rich businessman, Theofilos Zachariadis, on the condition that he would make the necessary investments to keep the workshops in working order and to continue providing vocational training every year for at least 30 young Muslims from the orphanage. As Ms Kondylidou points out, this was ‘a last and touching attempt by the Muslim Community to ensure the professional integration of its young people.’

After the departure of the Muslims, the buildings became the property of the Greek State. Economic and demographic developments in the region generated new needs; the buildings were gradually used for other purposes or demolished. The old workshops were rented to craftspeople.

**NEW LEASE OF LIFE**

In 2011, the historic monuments service set about restoring the building and creating a museum and cultural centre, a project included in the National strategic reference framework 2007-13. Classified as a historic monument, the building has been restored to its original state and bears witness to the architectural and industrial heritage of the day. Many letters, documents, maps, photographs and audiovisual material retrace its history and offer precious information on how vocational training was provided in those days in the broader region. On display are old machines, a wide range of tools, moulds and other industrial parts that were produced there, and which reveal the know-how of the time.

But, above all, this place is a tribute to the children, women and men who lived between these walls, who learned, taught and carried out a trade there; those hundreds of human lives marked in one way or another by this place.
The European labour market is challenged by changes in the demographic composition of the labour force and by increasing work complexities and processes. Skills forecasting makes a useful contribution to decisions by policy-makers, experts and individuals. In this publication, Cedefop presents the latest results of skill supply and demand forecasts. Alongside the updated projections, collaboration between Cedefop and Eurofound has allowed examination of the tasks and skills content of Europe’s current and projected employment structure. This analysis confirms an increasingly polarised occupational structure, a trend also highlighted by the main projections.
Cedefop, in cooperation with the Lifelong Learning Platform, is organising this policy forum to explore the potential of community lifelong learning centres (CLLCs) as one-stop shops for preventing young people at risk and early school leavers from disconnecting. The event will be hosted by the Romanian EU Presidency. It will be an opportunity to discuss Member State experiences in using integrated service delivery in different settings. Participants will consider the potential for establishing CLLCs in disadvantaged areas across Europe. These would offer access to a wider range of learning opportunities for people of all ages, maximising the support offered by multidisciplinary teams. Participants will also be invited to reflect on the post-2020 agenda in the field to ensure continued progress towards improving EU citizens’ qualifications and skills.