



2018

ANNUAL REPORT



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The **European Centre for the Development of Vocational Training** (Cedefop) is the European Union's reference centre for vocational education and training, skills and qualifications. We provide information, research, analyses and evidence on vocational education and training, skills and qualifications for policy-making in the EU Member States. Cedefop was originally established in 1975 by Council Regulation (EEC) No 337/75. This decision was repealed in 2019 by Regulation (EU) 2019/128 establishing Cedefop as a Union Agency with a renewed mandate.

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FOREWORD

Helping to make vocational education and training (VET) fit for future challenges while meeting those of today: this principle best encapsulates Cedefop's work and achievements in 2018.

Policy discourse throughout the year reflected the growing recognition that devising employment, social and education and training policies in different silos is no longer an option. Neither is striving for excellence, innovation and competitiveness at the expense of inclusion. It takes concerted and forward-looking approaches to tackle the multiple challenges and their complexity to the benefit of Europe's economy and social fabric. In a similar vein, the joint Cedefop-European Economic and Social Committee (EESC) policy learning forum called for coordinated approaches and collaboration among governments, social partners and civil society organisations to devise effective pathways for low-skilled adults to upgrade their qualifications.

To fulfil its role as a major pillar in this endeavour, VET needs to adapt to changing requirements, and, at the same time, anticipate developments and help shape the future. The 2018 edition of our skills forecast, the new strand of work on digitalisation and the outlook on how VET could evolve came at the right time to inform reflections on the future of work and VET during the Bulgarian and Austrian Presidencies.

The close cooperation with Austria and the Commission's invitation to put the conference on VET's changing role and its future into the limelight of the European vocational skills week, exemplify the great interest that Cedefop's work attracted in 2018. This event was certainly a highlight, not only for its large attendance; it showed the success we can generate when we join forces. It included contributions from all strands of our work and staff from all departments.

The Commission's event to celebrate the 10th anniversary of the European qualifications framework was another occasion to demonstrate the value of effective teamwork. The opportunity to help shape this event and the European validation festival reflected appreciation for Cedefop's longstanding expertise in these fields and its proactive approach.

It was with great pleasure that we received the overall positive feedback following the external evaluation of Cedefop and the other agencies within the remit of the Commission's Directorate for Employment: Eurofound, EU-OSHA and the

ETF. It confirmed that our work is complementary, not overlapping, and may also inform the work of the envisaged European Labour Authority. This complementarity manifested itself in our joint venture with Eurofound on the skills forecast and the joint Cedefop-ETF review of progress in countries' joint priorities for VET. Throughout the year we also cooperated with the Commission's Joint Research Centre, Eurostat, the OECD, the ILO and UNESCO to the benefit of both parties.

We were particularly pleased to see an increase in the take-up of our work in documents, papers and reports by EU-level and international organisations, not only in various policy areas but also in analyses that relate to countries around the globe. The response to our improved offer of online information and interactive web tools indicates the success of our strategic decision to shift from traditional publications towards outputs in different innovative and user-friendly formats targeted to various users.

Like the take-up of our work, we see the increasing demand for support and expertise and growing tasks, in number or scope, as appreciation of our work and encouragement. However, also in 2018, tight budget and human resources required setting priorities in close cooperation with our Governing Board.

Cedefop's achievements are the success of the entire team, their competences, hard work and dedication to the cause of VET and the Agency. I would like to thank all for their motivation, foresightedness and commitment, and their resilience and readiness to go the extra mile that our tasks and tight schedules often entail. I would also like to commend the Heads of department for their sound management, collaborative spirit and concerted action. It is due to the joint efforts in all departments that we reached the exceptionally high budget execution rate of 100% this year.

The end of the year was marked by two important developments that will guide our work in 2019 and the years to come: the vision for VET 2030 agreed by the Commission's Advisory Committee on Vocational Training, to which we contributed, which will inform the Commission's work on future cooperation in VET; and the adoption of Cedefop's new regulation to replace the one dating from 1975 when the Agency was established. Having come into force on 20 February 2019, it will bring about some change to Cedefop's governance and a modernised mandate reflecting today's

understanding of VET and the Agency's role at the interface of education and training and the labour market.

As in previous years, we are grateful for the cooperation and support we received from our stakeholders and particularly the European Commission's Directorate-General for Employment in all spheres of our work. I would like to express our gratitude to the Chair and members of Cedefop's Bureau and Governing Board for their commitment and unfailing support to the Agency. Personally, I would like to thank them sincerely for the trust they have shown by appointing me as Acting Director after the departure of former Director James Calleja. It has been a privilege for me to steer Cedefop, jointly with them and our team, through a busy and challenging period.

We are firmly committed to remaining a forward-looking organisation that adheres to high standards of quality, ethics and integrity. Under the leadership of the new Executive Director, who will be joining us in 2019, and in close collaboration with our Board and stakeholders, we will trim our sails to navigate through another successful year.

Mara Brugia

Acting Executive Director

CEDEFOP

Cedefop is the oldest of the EU's decentralised agencies. Founded in 1975 ⁽¹⁾ and based in Greece since 1995, Cedefop supports the promotion, development and implementation of the Union policy in the field of vocational education and training (VET), as well as skills and qualifications policies, by working together with the Commission, Member States and social partners.

Cedefop's new tasks as described in its revised Founding Regulation – which entered into force on 20 February 2019 ⁽²⁾ – reflect today's broader

⁽¹⁾ Council of the European Union (1975). Council Regulation of 10 February 1975 establishing the European Centre for the Development of Vocational Training (Cedefop) EEC No 337/75. *Official Journal of the European Communities*, L 39, 13.2.1975 as last amended by Council Regulation EC No 2051/2004. http://www.cedefop.europa.eu/EN/Files/Consolidated_version_Founding_Regulation_EN_01975R0337-20041221-en.pdf

⁽²⁾ Regulation (EU) 2019/128 of the European Parliament and of the Council of 16 January 2019 establishing a European Centre for the Development of Vocational Training (Cedefop) and repealing Council Regulation (EEC) No 337/75. *Official Journal of the European Union*, L 30, 31.1.2019, pp. 90-105. <https://eur-lex.europa.eu/legal-content/EN/TXT/?uri=OJ:L:2019:030:TOC>

understanding of VET and the actual scope of the activities carried out by the Agency; these go beyond VET and include skills and qualifications, confirming the Agency's role at the intersection between education and training and the labour market.

In line with the vision and values set for the Agency, for 2017-20, three strategic areas of operation have been defined:

- (a) shaping VET: foster the renewal and modernisation of VET systems and institutions in response to rapidly changing policy needs and priorities; support the development and use of European tools and principles promoting lifelong and life-wide learning;
- (b) valuing VET: support the development and implementation of VET policies and programmes helping all citizens to achieve competences and skills required for work, employability, entrepreneurship, and lifelong learning in a constantly changing labour market;
- (c) informing VET: inform the design of VET and employment policies that ensure the availability of a qualified workforce and its continuous, as





© Cedefop, 2018/Sakis Gioumpasis

Cedefop Governing Board. Thessaloniki, October 2018

well as effective, skilling; promote jobs that value, develop and make the best possible use of people’s skills throughout their working lives.

Cedefop’s multiannual objectives – providing evidence and new knowledge; monitoring and analysing policies; acting as a knowledge broker for countries and stakeholders – reflect the core functions of the Agency. Combined with the thematic strategic areas of operation, they define the type and scope of the work the Agency delivers. The multiannual objectives steer the activities of Cedefop’s annual work programmes and ensure continuity of its work, allowing the necessary flexibility to respond to changing needs.

CEDEFOP GOVERNANCE

GOVERNING BOARD

Cedefop is governed by a Board made up of three members from each Member State, representing the Government, employer and employee organisations; and three members representing the European Commission.

Member State and social partner representatives are appointed by the Council for three years (renewable). Commission representatives are appointed by the Commission.

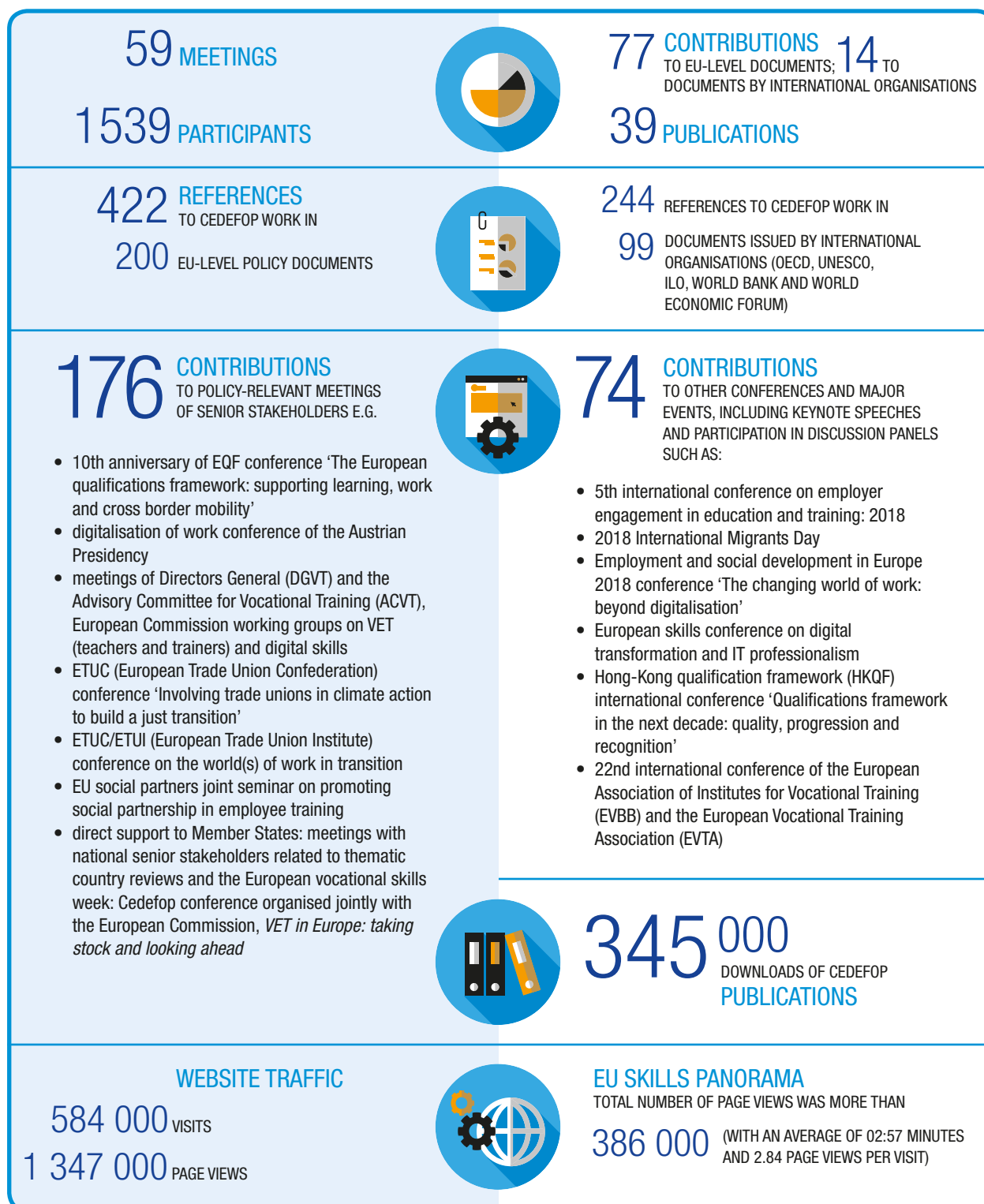
The Governing Board convenes once a year.

BUREAU

To operate and be more closely involved in monitoring the Agency’s activities, aiming to reinforce supervision of administrative and budgetary management, the Governing Board establishes a small-sized Bureau. The Bureau usually meets three to four times per year. The Governing Board may decide to enlarge the Bureau to discuss strategic issues informing future Governing Board decisions.

HIGHLIGHTS OF 2018

PERFORMANCE⁽⁹⁾



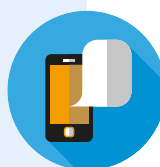
⁽⁹⁾ Figures in the performance tables of the operational areas do not necessarily add up to the totals presented in this table and in Annex II, as some of these values refer to a combination of activities from different operational areas.

611 CITATIONS
IN ACADEMIC LITERATURE
2018-19



Most frequently quoted themes: skills supply and demand, qualification frameworks, validation of non-formal and informal learning, lifelong guidance and learning outcomes.

96% OCCUPATION RATE OF THE
ESTABLISHMENT PLAN



BUDGET IMPLEMENTATION RATE:
100%

Cedefop's work in 2018 can be subsumed under three broad themes: future of work and skills, future of VET, and empowering people to cope with current and future change. Several EU-level documents, events and policy initiatives that took account of Cedefop work or that the Agency was invited to contribute to also centred around these themes.

Reflections on the future of work and VET marked the Bulgarian and Austrian Council Presidencies: Cedefop's biannual Brussels-based seminars organised jointly with them focused on labour market and skills information systems for VET policies and possible directions VET may take in the future. Developing a shared vision for future European VET policy, was central to discussions at meetings of Directors General for VET (DGVT), the Commission's Advisory Committee for Vocational Training (ACVT) and the Austrian Presidency VET conference. Their reflections culminated in the formulation of a vision by the ACVT to guide EU policy, to which Cedefop contributed through several strands of its work throughout the year.

Highly dynamic and competitive labour markets continuously shape skill requirements for future jobs. For VET to enable learners to acquire the skills that will (also) be relevant for tomorrow's jobs, it needs to adjust to, and anticipate, changes that affect our economies and societies and, therefore, the labour market. This requires foresight. A forward-looking perspective is also crucial for people's education and career choices. This is where Cedefop's skills forecasts come into play.

Entrusted with regular EU-wide skill supply and demand projections by the Council, the Agency presented its most recent outlook up to 2030 in June 2018 – 10 years after it had pioneered its first forecast. Cedefop's projections serve as an alert system for policy-makers, helping them to be proactive and avoid taking decisions on education and training investment in the dark. For the 2030 outlook, Cedefop joined forces with Eurofound. The presentation of Cedefop's forecast at the launch event in Brussels was followed by a [joint publication](#) ⁽⁴⁾. The [briefing note](#) ⁽⁵⁾, which summarised the data, trends and challenges, was among the top 10 2018 publications downloaded in the same year.

In times of rapid change and controversial debate on how digitalisation, robotisation, machine learning and artificial intelligence will influence employment, a combination of anticipation methods is more important than ever. As rapid changes require combining a long-term perspective with evidence on current skill demand, Cedefop has worked to develop an EU-wide real-time information system using big data to analyse online job vacancies. The first data sets were released in March 2019.

Information on skills supply and demand is not enough to understand how well countries' skills systems perform in their endeavour to meet

⁽⁴⁾ http://www.cedefop.europa.eu/files/3077_en.pdf

⁽⁵⁾ <http://www.cedefop.europa.eu/en/publications-and-resources/publications/9130>

LESS BRAWN, MORE BRAIN FOR TOMORROW'S WORKERS

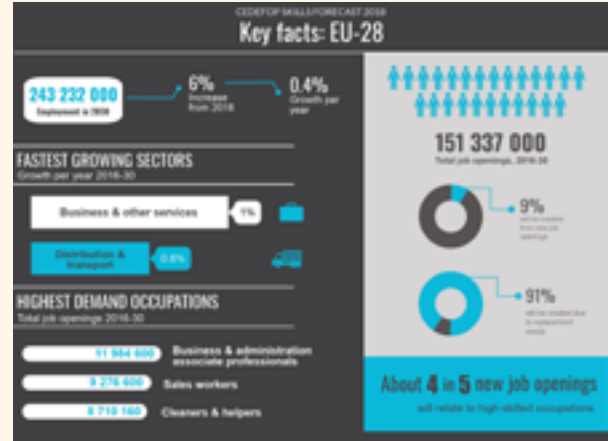
Slow economic growth, population ageing, immigration, and skills mismatch are challenges Europe is facing at the dawn of the fourth industrial revolution. Cedefop's skills forecast shows how these challenges are likely to affect future jobs and skills.

Service sectors are expected to be the main drivers of employment growth until 2030, although the pace is likely to slow after 2025. Legal and accounting, research and development and advertising and market research are among those expected to grow fastest. Most employment growth is expected for hotel and catering as well as health and social work. Employment in public administration and defence is expected to see a reduction in almost all EU countries. Manufacturing is the main sector affected by both global trade and automation.

Job polarisation is expected to increase, with more jobs in the higher and lower skills spectrum and fewer mid-level jobs. Overall, driven mostly by sectoral but also technological change, four out of five new jobs will be in high-skilled occupations. Employment levels in medium-skill occupations are projected to stagnate or even decline. In contrast, demand for difficult-to automate occupations, such as legal, social and cultural roles, will be strengthened. Growth, albeit moderate, is expected in certain occupations such as sales, security, cleaning and caring. Apart from new job openings, the need to replace workers leaving the labour market will account for nine out of 10 job openings. Within jobs, there will be a shift towards more autonomy, less routine, more ICT, fewer physical tasks, and more social and intellectual tasks. Work at lower levels may intensify and mid-level occupations may become more demanding.

The Cedefop-Eurofound report also highlights challenges in several areas requiring policy-makers' attention. These include the interrelationship of sectoral and demographic challenges, and how employment and education policies will respond and safeguard employment in sectors where technology has the highest penetration.

Cedefop's skills demand and supply forecast helps compare future trends up to 2030 across countries, sectors, occupations, and qualification levels. Projections are available for each EU Member State, plus Iceland, Norway and Switzerland. To suit different user needs, the cross-country



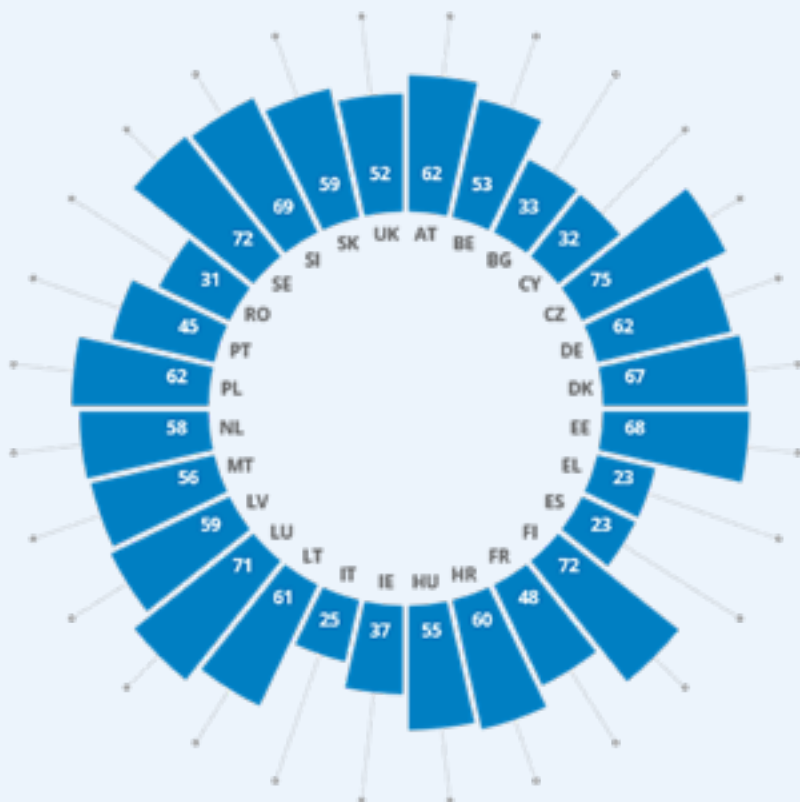
Source: Cedefop 2018.

report was complemented by individual country reports. An interactive database on Cedefop's web portal offers the opportunity to [visualise and compare data from different perspectives](#) ⁽⁶⁾. The skills forecast also feeds the information available through the EU Skills Panorama that Cedefop manages on behalf of the European Commission.

⁽⁶⁾ <http://www.cedefop.europa.eu/en/publications-and-resources/data-visualisations/skills-forecast>

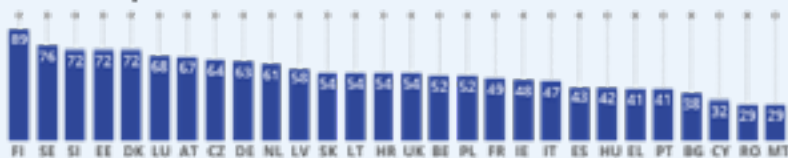
CEDEFOP'S EUROPEAN SKILLS INDEX: NEW TOOL FOR INFORMED POLICY-MAKING

ESI overall score

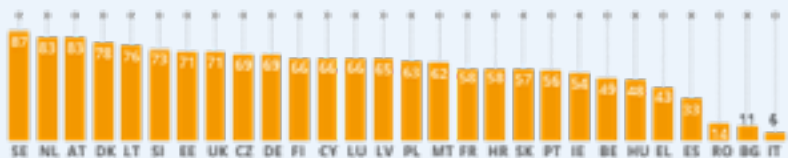


ESI component scores

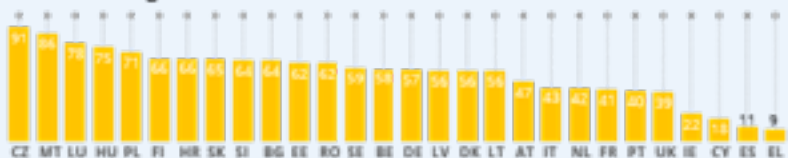
Skills Development



Skills Activation



Skills Matching



The ESI in a nutshell

- Serves as a monitoring tool and helps countries understand what drives their results and what needs improving.
- Promotes dialogue among actors from education and training, employment, economic and social policy.
- Aids benchmarking and supports policy learning across countries.
- Over time, will help assess progress within countries and compare with that of others.

European skills index

- + Comparative performance of country skills systems
- + 3 dimensions
- + 15 individual indicators
- + 28 EU countries

[Go to the tool >](#)

SKILLS PANORAMA

Inspiring your choices on skills and jobs in Europe

The index was audited by the Joint Research Centre who confirmed its quality, underpinned by strong research into the multiple facets of Member States' skills systems.

Europe's economic and social policy objectives. What also matters is their interaction and the dynamics of context factors that influence it. Various indicators are used to monitor countries' progress but, until recently, there was no single measure to assess and compare how well national skills systems perform. Cedefop's European skills

index fills this gap. It was presented in autumn 2018 at an event hosted by the European Economic and Social Committee (EESC). As it also helps countries understand what drives their results and what they may need to improve, it will aid their work to achieve the objectives of the European Pillar of Social Rights. Downloads of [the briefing](#)

DESIGNING VOCATIONAL EDUCATION AND TRAINING'S FUTURE



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Drawing on past developments was at the core of Cedefop's conference 'VET in Europe: taking stock and looking ahead'. Organised jointly with the European Commission, this event was the centrepiece of the [European vocational skills week 2018](#) ⁽⁹⁾ hosted by the Austrian Presidency. It brought together more than 400 participants from Europe and beyond in Vienna on 7 and 8 November 2018.

Policy-makers, social partners and researchers were joined by practitioners and learners in a discussion on the challenges and opportunities facing VET in Europe and around the globe, in a rapidly changing world where uncertainties and challenges have multiplied. To

understand where VET in Europe may, could or should be heading to, Cedefop had decided to see what we can learn from the way in which [VET's nature and role in Europe](#) ⁽¹⁰⁾ has changed since the mid-1990s.

The findings of Cedefop's comprehensive three-year study informed debates on the challenge and possible future directions for VET. These could focus on:

- (a) vocationally and labour market oriented learning at all levels and as individualised pathways operating side by side, as part of an integrated lifelong learning approach;
- (b) entry into occupations and professions remaining a separate education and training subsys-

⁽⁹⁾ <http://www.cedefop.europa.eu/en/news-and-press/news/scenarios-vets-future-discussed-celedop-conference-vienna> and <http://www.cedefop.europa.eu/en/events-and-projects/events/vocational-education-and-training-europe-taking-stock-and-looking-ahead>

⁽¹⁰⁾ <http://www.cedefop.europa.eu/en/events-and-projects/projects/changing-nature-and-role-vocational-education-and-training-vet-europe>

note presenting the index ⁽⁷⁾ suggest considerable interest in this new tool. The data can also be accessed on [Cedefop's web portal](http://www.cedefop.europa.eu/en/publications-and-resources/publications/9132) ⁽⁸⁾ and through the EU Skills Panorama.

⁽⁷⁾ <http://www.cedefop.europa.eu/en/publications-and-resources/publications/9132>

⁽⁸⁾ <http://www.cedefop.europa.eu/en/publications-and-resources/data-visualisations/european-skills-index>

tem, with apprenticeships up to EQF level 8 as the gold standard and clearly defined providers and institutions;

- (c) re-skilling and upskilling for short- and medium-term labour market needs, increasingly linked to continuing and further training in the labour market.

These paths were meant to stimulate debate on how different strategies and policy choices can influence VET's structure, content and outcomes. The aim was to alert policy-makers and support reflections on the role they want VET to play in the years to come. As their main features already exist and do not exclude each other, what is likely to materialise is a combination of these paths.

Collaboration with the Austrian Presidency focused on making VET fit for the future. To support forward-looking decision-making, Cedefop investigated how VET's features should develop to meet tomorrow's requirements. An extensive study of how VET systems developed from 1995 to 2015 helped to outline possible future directions they



© EU, 2018

The conference concluded with the general agreement that this scenario points to critical dimensions that need to be taken into account when discussing VET's future purpose and role in relation to other policy areas and society at large.



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DEFINING, WRITING AND APPLYING LEARNING OUTCOMES IN VET, A GLOBAL CHALLENGE

Cedefop's 2018 policy learning forum on learning outcomes was different from the previous ones in 2015 and 2016 ⁽¹⁾. As learning outcomes increasingly form the basis of qualifications frameworks across the world, Cedefop joined forces with UNESCO. When comparing qualifications, it is not only the levels that count but also the content. Hence, cooperation around the globe becomes increasingly important.

Learning outcomes are not only used for qualification frameworks, but also for qualifications standards, curricula and assessment criteria and occupational standards. The way they are defined and written, needs to suit the purpose. By putting the learner at the centre of the process, the approach also influences teaching and learning.

Against this backdrop, forum participants reflected on:

- (a) the conceptual roots of the learning outcomes approach;
- (b) the role of learning outcomes in governing education and training;
- (c) learning outcomes as a common, international language;
- (d) issues to be considered when revising Cedefop's learning outcomes handbook ⁽²⁾.

⁽¹⁾ <http://www.cedefop.europa.eu/en/events-and-projects/projects/learning-outcomes/events>

⁽²⁾ http://www.cedefop.europa.eu/files/4156_en.pdf

Country cases demonstrated how the underlying concepts of learning outcomes affect their use in policy and practice. Ensuing discussions focused on related challenges and requirements for the actual use and potential benefit of learning outcomes in practice.

More than 50 experts from 30 countries, including South Africa, Laos, Fiji, Trinidad and Tobago and United Arab Emirates, participated in the event held at Cedefop, on 21 and 22 June 2018. The experts from outside Europe considered Cedefop's handbook and the discussions helpful for designing their own guidelines and appreciated the opportunity to discuss potential solutions to challenges that are similar around the globe.

The forum ended with the commitment to continue work in the area, engaging also international stakeholders. Its outcomes will feed into the next edition of Cedefop's handbook, which will reflect the international dimension and become available in 2020.



may take, depending on current policy choices. Its findings informed events throughout the Austrian Presidency and were discussed at Cedefop's conference during the European vocational skills week in November.

This work will continue feeding the policy discourse on VET post-2020, alongside Cedefop's work on skills and its policy monitoring of countries' work on their joint priorities for VET.

Information collected from its network of reference of expertise, ReferNet, on developments in these joint priorities formed the basis for Cedefop's contributions to support the European Commission's work on the *Education and training monitor* and the European Semester. To ensure that the so-called deliverables that countries agreed to focus on in the period 2015-20 can be achieved, they are underpinned by transversal principles. One of these principles is the consistent use of the learning outcomes approach.

Learning outcomes are a reference point for validation of non-formally and informally acquired knowledge, skills and competences. Identifying and validating people's skills and tailored learning offers are cornerstones of several EU-level policy initiatives, including those to help low-skilled adults to upgrade their qualifications.

Making sure Europe's 60 million low-skilled adults are not left behind is a major concern that the [Council recommendation on upskilling pathways](#) aims to address. To aid countries' work on following up the recommendation, and support and complement the work of the Commission, Cedefop organised a policy learning forum in February 2018. This forum was held jointly with the European Economic and Social Committee (EESC) as part of a series planned for the coming years.

The *Upskilling pathways* recommendation reinforces one of the areas countries had agreed to focus on in their joint work on VET until 2020: access to VET and qualifications for all. These priority areas also include promoting work-based learning, and specifically apprenticeship.

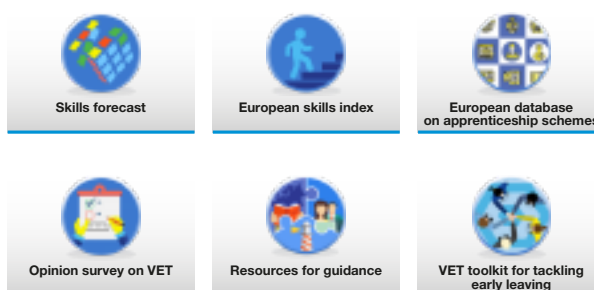
While continuing its reviews to aid individual countries in their endeavours to set up, revise or expand apprenticeship schemes, Cedefop set a new focus in its work on apprenticeship: supporting cross-country learning and multi-level and multi-stakeholder cooperation through dedicated policy learning forums. A cross-country analysis enriched the knowledge base to underpin this work.

Our studies, country reviews and policy learning forum on apprenticeships aimed to support the work of the European alliance for apprenticeships (EAfA) also in the year of its fifth anniversary. A Cedefop community of experts was set up to provide insights into national developments in apprenticeships and the national relevance of EU initiatives, also covering gaps in information retrieval from the countries in specific areas.

The EU's multifaceted challenges require immediate responses and comprehensive forward-looking policy approaches, with education and training strategies as part of the package. With its 2018 activities aimed at informing, shaping and valuing VET, Cedefop supported immediate VET-related policy action and future-oriented approaches, as is evident from the achievements and the longer-term projects presented in this report.

Cedefop's web portal plays a fundamental role in communicating these achievements to a wider public. In 2018 new web resources and data visualisation opportunities were developed to increase usability and outreach. Besides exploring apprenticeships, skills forecast results, and the performance of countries' skills systems, they allow users to compare how citizens in different Member States perceive and have experienced (upper secondary level) VET. Piloted in 2017, an online dynamic platform supports guidance in the digital age with training modules, methods and examples to help managers and practitioners use skills intelligence and ICT tools in their services.

Cedefop data visualisations & tools



Throughout the year, Cedefop collaborated with its sister agencies, Eurofound and the ETF, to share and pool expertise to the benefit of our stakeholders, notably in the work on skills, qualification frameworks and policy monitoring. Joint events and publications highlighted throughout this report bear witness to this

POLICY LEARNING FORUM ON UPSKILLING PATHWAYS

Improving literacy, numeracy and digital skills of adults with low levels of knowledge, skills and competences, and/or helping them to progress to EQF level 3 or 4 qualifications, is the goal of the 2016 Council recommendation. This joint Cedefop-EESC event⁽¹³⁾ offered a platform for government representatives, social partners and civil society to help one another in designing and putting upskilling pathways into place. It targeted primarily members of the Advisory Committee for Vocational Training (ACVT), which has been entrusted with following up the recommendation and EESC members.

The purpose of this policy learning forum, which brought together more than 100 participants, was to shed more light on the challenges national stakeholders encounter in their work to create upskilling opportunities in line with the recommendation. Three main questions were guiding the discussions:

- (a) how are strategies for upskilling implemented in each country and adapted to their specific contexts? Do different stakeholders share the same vision and priorities?
- (b) what are the main challenges different stakeholders and countries face? Are there common challenges that would benefit from peer learning?
- (c) how can these challenges be addressed and overcome?

To underpin the discussions, Cedefop presented new evidence and perspectives on each aspect of the recommendation, drawing on its related strands of work: its study on the economic and social cost of low-skilled adults; VET as a way to prevent and remedy early leaving; work-based learning; outreach and guidance and validation of skills acquired outside formal education and training.

Discussions revealed that countries are facing similar challenges. Stakeholders agreed on the complexity of establishing upskilling pathways and the necessity for governments, social partners and civil societies to form partnerships. Getting small and medium-sized enterprises involved was seen as particularly challenging. While a training guarantee to ensure access for all proved controversial, adopting an inclusive approach, in



Main common challenges ahead

The Policy Learning Forum showed that there are some fundamental questions that need to be addressed in the implementation of the Upskilling Pathways that are common in most countries:

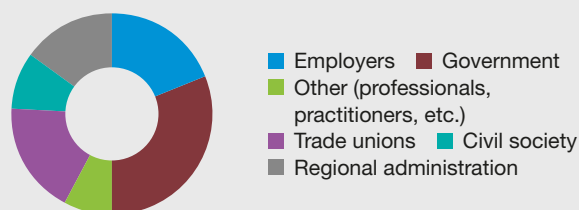
- ⇒ How can a common vision for the Upskilling Pathways be created and shared by all relevant stakeholders?
- ⇒ How can a consistent and synergic approach across different policies be achieved?
- ⇒ What mechanisms exist to engage employers and SMEs in the design and implementation of the Upskilling Pathways?
- ⇒ How can social partners, other civil society organisations and local communities be involved in the process and contribute to outreach low-skilled adults?
- ⇒ Who will be responsible for tailoring training for the individuals and in what way will it be delivered and connected to prior learning?
- ⇒ How trust is built and quality assured in the process of upskilling pathways?
- ⇒ What financial and non-financial measures are in place, or can be implemented, to assure the sustainability of the Upskilling Pathways?

line with the European Pillar of Social Rights, and not one that would prioritise certain target groups over others, was widely supported.

The forum confirmed that countries have introduced a variety of initiatives and measures to identify, validate and recognise the skills low-skilled people actually have; and offered training tailored to individuals' needs. However, there is a need to:

- (a) design strategies bringing services and opportunities together in a coherent and coordinated manner;
- (a) ensure social partners and civil society organisations are involved in designing and implementing these strategies.

Policy learning forum participants by main group



⁽¹³⁾ <http://www.cedefop.europa.eu/en/events-and-projects/events/policy-learning-forum-upskilling-pathways-vision-future-0>

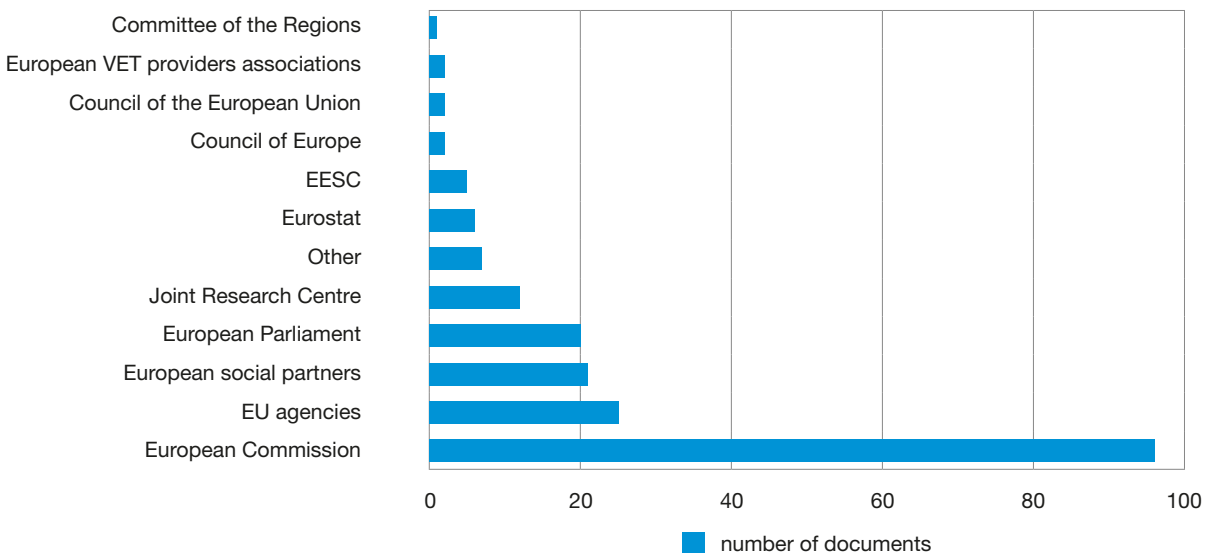
collaboration. Sharing expertise and services with other agencies to achieve synergies also extended to administrative issues. Cedefop continued its efforts to streamline and automate procedures, helping alleviate human resource constraints and achieve increased efficiency gains. The exceptionally high budget execution rate of 100% in 2018 demonstrates the Agency's successful effort towards optimal use of resources entrusted.

KEY PERFORMANCE FINDINGS

Cedefop's performance indicators, if compared to previous years, demonstrate that output and outcomes of the Agency's work have improved even further:

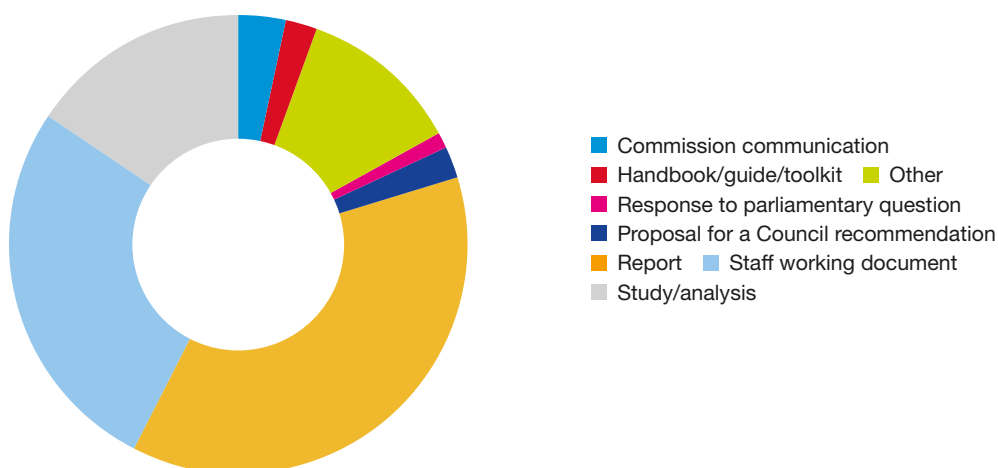
- (a) higher number of EU level policy documents and reports citing or referring to the Agency's findings, indicating trust in the soundness of Cedefop's work;

Figure 1. EU institutions and EU-level stakeholders using of Cedefop work



Source: Cedefop, performance measurement, indicator 1: EU-level documents citing Cedefop.

Figure 2. Type of Commission documents citing Cedefop



Source: Cedefop, performance measurement, indicator 1: EU-level documents citing Cedefop.

APPRENTICESHIP IN FOCUS

While apprenticeships have a long history in Europe, embedded in their specific national contexts, their status, role and purpose, and the underlying concepts, have evolved differently over time. Their renaissance in recent years, aiming to ease young people’s entry into jobs, EU-level initiatives and the joint work to promote and expand apprenticeships, have made this evident. For this endeavour to be effective, requires a clear vision of apprenticeship.

Diversity underneath the surface: Cedefop’s cross-nation overview and its European database on apprenticeships

How countries understand, approach and offer apprenticeships, varies, even though they often share common features. To help build a shared understanding and support the work on quality apprenticeships based on common principles, Cedefop analysed the purposes and functions countries associate with apprenticeships, and investigated how they are organised. Based on their design characteristics, Cedefop also explored the changes that these schemes are undergoing in practice.

Cedefop’s analysis ⁽¹⁴⁾ identified various interpretations of apprenticeship, and two main purposes and functions that hamper a shared understanding across and even within countries:

- (a) apprenticeships as a system distinct from school-based VET with a clear place in the country’s overall education and training system;

their aim is to help learners acquire the full set of skills and competences in an apprenticeable occupation or trade and the related formal apprenticeship qualification linked to the national qualifications framework (education and training function);

- (b) apprenticeships as a diverse way to achieve formal VET qualifications by bringing people into the labour market; the value of the qualification is not linked to the type of VET delivery; they may share goals with active labour market training (mixed education and training and employment functions).

The study and Cedefop’s database ⁽¹⁵⁾ include apprenticeship schemes with a stable/valid legal basis and which are system-level or mainstream schemes, in the EU Member States, Iceland and Norway. The database allows comparison at country level and at scheme level based on specific features.

A forum for cross-country policy learning

These different purposes and roles highlighted by the study were the starting point for the second event ⁽¹⁶⁾ Cedefop organised to stimulate policy learning; countries involved were those that participated in the review exercises and others selected to share their experience. Reflections focused

⁽¹⁴⁾ http://www.cedefop.europa.eu/files/4166_en.pdf

⁽¹⁵⁾ <http://www.cedefop.europa.eu/en/publications-and-resources/data-visualisations/apprenticeship-schemes>

⁽¹⁶⁾ <http://www.cedefop.europa.eu/en/events-and-projects/events/second-cedefop-policy-learning-forum-plf-apprenticeships>



on two main areas: governance and the place of apprenticeships in countries' education and training systems.

The event, held on Cedefop premises in October 2018, also aimed at understanding better how countries with similar and different approaches organise their apprenticeships and learn about recent changes and developments.

Forum participants agreed on the following challenges and conclusions:

- (a) apprenticeships are expected to deliver quick results while safeguarding the quality of learning outcomes; quality assurance often relies on education providers and effective quality assurance mechanisms seem to be a challenge;
- (b) increasing employer engagement and ownership is a challenge in most of the countries reviewed. This is often linked to the dominance of the education sector in governing apprenticeship and to expectations regarding companies' role and trust in their training capacity;
- (c) legislation/statutory requirements do not always define clearly which competences should be developed in the enterprise as opposed to the school. More clarity and company involvement would be conducive to cooperation between schools and companies to develop, im-

plement, and assess apprenticeship learning plans together;

- (d) in many countries, companies seem to consider that their key or only duty should be to offer 'work' or work experience to apprentices, while training is the responsibility of schools. This may lead to a tendency to focus on short-term benefits of apprenticeships, rather than on returns on education investment.



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- (b) increased interest in its web portal content as well as the visits to the Skills Panorama and Europass websites, an indication that the strategic shift to offer more and different online tools and formats presenting the findings of the Agency's research and analyses met growing demand;
- (c) increasing efficiency in core administrative support and effective allocation of resources.

With 96 of a total of 200 EU documents and reports citing or referring to Cedefop work, the European Commission is again the most prominent user, followed by other agencies, the European social partners and the European Parliament.

As in previous years, the scope of policy areas that take up Cedefop findings extended beyond the Directorate-General for Employment, the Agency's partner DG. Reports and papers by DG Economic and Financial Affairs, DG Internal Market, Industry, Entrepreneurship and SMEs as well as the Joint Research Centre also cited or referred to Cedefop work.

A 38% increase in EU-level documents, papers and reports in comparison to 2017 confirms the acknowledgment of Cedefop's value as a European source for evidence and information on VET and skills. As in previous years, skills anticipation and matching accounted for most citations (30%): results of the European Skills and Jobs survey, skills supply and demand forecasts, and the skills governance framework assisting EU countries in skills matching are widely used. Adding those from the Skills Panorama, 39% of the citations related to informing VET. Monitoring VET policy developments followed with 20% of all citations referring mostly to VET in Europe country reports or short descriptions and the country-specific reports on key competences. Others related to promoting access to and attractiveness of VET (9%), the common European tools (7%), labour market integration and social inclusion (7%) and increasing effectiveness of VET policies and programmes (6%).

Cedefop was also asked to contribute to EU level policy documents and reports, such as the European Commission's study on the impact of the 2011 Council recommendation on tackling early school leaving, its reports on employment and social developments in Europe 2018, skills audits and the 2018 *Education and training monitor*. Cedefop contributions also informed the outputs of the ET 2020 working groups on VET

and adult learning. Invitations to contribute to EESC papers included its opinions on concepts for transition management in a digitalised world of work for the Austrian Presidency and on the future of work for the Bulgarian Presidency. The European Investment Bank's report *Investing in Europe's future: the role of education and skills* ⁽¹⁷⁾ published in spring also featured two articles (co) authored by Cedefop experts.

Continuous recognition of Cedefop's expertise is also demonstrated by the request to prepare background papers and contribute to 175 meetings of EU senior stakeholders that support policy development and implementation. Outstanding examples in 2018, besides regular input to ACVT and DGVT meetings, the EQF advisory group and the ET 2020 working groups, include the EQF 10th anniversary conference and the Commission's validation festival. Also in this context, the scope of policy areas was widening and included input into a document for the roundtable on the future of work by the European Group on Ethics in Sciences and Technologies. Cedefop was also invited to contribute to European social partner events ranging from a seminar on promoting social partnership in employee training, which they had jointly organised, to ETUC meetings and conferences related to education, skills for the world of work in transition and a conference related to climate action.

Beside EU-level meetings, Cedefop directly supported stakeholders in the Member States, providing 25 contributions, mainly in the context of apprenticeship reviews in Belgium, Croatia and Cyprus, as well as skills governance reviews in Estonia and Greece.

Take-up of Cedefop's work by international organisations also remained high (97 documents, papers or reports in 2018). Skills anticipation and matching stayed clearly in the lead followed by references to work on validation of non-formal and informal learning, VET financing, national qualifications frameworks and lifelong guidance. The OECD was most frequent user of Cedefop findings (67 documents) followed by the ILO and UNESCO (more than 10 documents each), the World Bank and the World Economic Forum. Drawing mainly on its expertise in skills anticipation, Cedefop contributed to papers and publications

⁽¹⁷⁾ https://www.eib.org/attachments/efs/investing_in_europes_future_the_role_of_education_and_skills_en.pdf

by international organisations, notably the ILO's *World employment social outlook 2018: greening with jobs* ⁽¹⁸⁾.

Noteworthy is the growing interest in Cedefop's online tools. The growing availability of country-specific information and improved visualisation of online data – for instance within the VET toolkit for tackling early leaving, the guidance resources on labour market information and digital technologies or the skills forecast – increased the number of visits to Cedefop's web portal by 15% since 2017.

Skills Panorama traffic increased substantially: more than 80% growth in users, also in new visitors and 52% in returning visitors compared to 2017. To raise awareness of the content of the website, in 2018 Cedefop undertook targeted marketing campaigns with specific dissemination

activities in various large and high-level events. A survey among users revealed that a third of the respondents were researchers, nearly 24% policy-makers, and 11.4% guidance practitioners. Satisfaction reached a rate of 91% confirming the quality and relevance of the information the portal provides.

Administrative services were delivered effectively and efficiently in support of the core business. Budget execution in 2018 reached the highest possible level (100%). At 98.9%, the rate of Cedefop invoices paid within the legal and contractual deadlines remained high. Cedefop's efforts in recent years to move towards a paperless workplace, with streamlined procedures and redesigned workflows to ease collaboration paid off.

<p>Council of the EU, conclusions on the future of work: a lifecycle approach '[...] ...invites the Member States to further develop labour market forecasting tools, taking into account the processes of digitalisation and automation, in order to anticipate trends and guide education, training and employment policies [...], where necessary with the involvement of Cedefop and Eurofound.</p>	<p>BusinessEurope; CEEP; UEAPME; ETUC. Promoting social partnership in employee training – Final report 2018; and Joint recommendations of the European social partners on promoting social partnership in employee training. '[...] Member States, social partners, and education and training providers and local and regional authorities, [...] should work together to improve mechanisms for identifying data on skills needs and the link between them and its use in education and training systems content. In many cases the sectoral and regional level is the most relevant for gathering reliable data on skills needs. Work is being undertaken by Cedefop in this regard and should be used as inspiration for further actions.</p>
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⁽¹⁸⁾ https://www.ilo.org/weso-greening/documents/WESO_Greening_EN_web2.pdf

RESULTS ACHIEVED

2.1. OPERATIONAL ACTIVITY: SHAPING VET BY MODERNISING VET SYSTEMS AND INSTITUTIONS AND BY SUPPORTING THE USE OF EU TOOLS AND PRINCIPLES

PERFORMANCE

130

REFERENCES
IN EU POLICY DOCUMENTS



For example:

- European Commission proposal for a Council recommendation on key competences for lifelong learning
- European Commission staff working document accompanying the communication to the European Parliament, the Council and the European Economic and Social Committee on monitoring the implementation of the European Pillar of Social Rights
- European Commission 2018 reports on the European Semester
- ETUC's report on boosting unions' participation to guarantee quality transitions and employment to young people in Europe
- the EESC analysis *Skills mismatches: an impediment to the competitiveness of EU businesses*

75

ACTIVE CONTRIBUTIONS
TO POLICY-RELEVANT MEETINGS
OF SENIOR STAKEHOLDERS

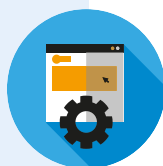


For example:

- meetings of the Advisory Committee (ACVT) and Director Generals for VET (DGVET)
- EQF advisory group and ESCO meetings
- the European Commission task force on the future of VET
- the European Commission steering group on the instruments supporting the European Union VET policy
- the European Commission platform of European associations of VET providers
- the Austrian Presidency conference on the future of VET in Europe

52

WRITTEN CONTRIBUTIONS
TO POLICY DOCUMENTS OF
EU (50) AND INTERNATIONAL
ORGANISATIONS (2)



For example:

- ACVT opinion on the future of vocational education and training post 2020
- input to the country reports of the 2018 *Education and training monitor*
- contribution to the Joint Research Centre's Selfie tool ⁽¹⁹⁾
- papers for the 10th anniversary EQF conference
- joint papers with the Commission for the EQF advisory group
- review of the (updated) reports by Romania, UK (Scotland) relating their NQFs to the EQF
- background papers for the meetings of the DGVET and ACVT on the changing nature and role of VET
- background paper on learning outcomes for the UNESCO reference group

29⁰⁰⁰

DOWNLOADS OF CEDEFOP
PUBLICATIONS
PRODUCED IN 2017-18



TOP THREE PUBLICATIONS:

- *The changing nature and role of vocational education and training in Europe* – 5 volumes (6 320)
- *Defining, writing and applying learning outcomes* (3 939)
- *briefing note Qualifications frameworks in Europe: 2017 developments* (2 369)

⁽¹⁹⁾ Selfie stands for self-reflection on effective learning by fostering the use of innovative educational technologies. It is a tool for schools/ education institutions.

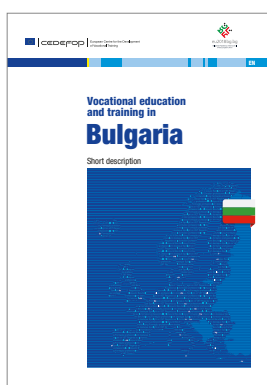
In line with its multiannual objective to **monitor policy trends and analyse developments**, Cedefop published in cooperation with the ETF, the interim report 2015-17 ⁽²⁰⁾ on countries' progress towards the priorities agreed in the Riga conclusions within European cooperation in VET. The interim report confirms that a range of issues which were little addressed until 2015 have since then, in response to the Riga impulse, become of more importance in most countries. These include: school-business cooperation, VET graduate tracking, anticipating skill needs, providing a wider range of disadvantaged groups with training opportunities, and upskilling teachers to make apprenticeship reforms sustainable. The report also shows that, among the Riga transversal principles, 'involving relevant stakeholders' and ensuring 'efficient funding' were those which countries most often cited when describing their actions. In contrast, targeting excellence or innovation, and supporting the learning outcomes approach were cited in 12% of actions only. The report also shows that, by 2018, only one third of all actions undertaken since the start of the Riga process had reached the full-scale implementation stage, the rest still being either in the preparatory phase (33%) or in the legislative process (33%).

The findings informed discussions on the post-2020 VET priorities and the opinion of the Advisory Committee on Vocational Training on the future of VET ⁽²¹⁾. The interim report was accompanied by individual country reports ⁽²²⁾ drafted by Cedefop and validated by ReferNet national representatives. Cedefop drew on ReferNet input and several other sources to describe the 2015 baseline and the state of play in 2018 of the five medium-term deliverables (MTDs), in order to understand better the progress countries have made when comparing VET developments in the period 2015-20. The country reports informed the Commission's work on the European Semester. In addition, at the request of DG EMPL, Cedefop drafted individual country fiches presenting information on VET and adult learning. This work informed the Commission's 2018 *Education and training monitor*.

Cedefop focused on setting and discussing with ReferNet partners criteria to improve the quality of

outputs. In addition to reviewing the method for the policy reporting exercise, Cedefop developed quality criteria and guidelines for national news on VET and the VET in Europe country reports. As a result, 180 national news items on VET (from all EU Member States, Norway and Iceland) were published on the Cedefop website. Themes covered included: skills anticipation and matching; apprenticeship-related measures; vocational guidance and counselling; improving digital skills among VET learners; VET reforms in France and Finland; and VET competence centres in Croatia and Denmark.

Work continued on the **VET in Europe online presentation tool** customised to the needs of key stakeholders in the EU+ Member States. The tool allows for easier selection, compilation and comparison of data on VET systems. An *ex-ante* evaluation was carried out in spring to identify the needs of potential users in which 228 representatives of governments, social partners, VET providers, academia and ReferNet members from 30 countries (EU Member States, Norway and Iceland) participated. They provided overall positive feedback on the concept of the tool and its themes. The results were discussed with ReferNet representatives during the two partnership forums in May and informed the development of a pilot tool that will be available in March 2019.



For the Presidency countries, **short descriptions** ⁽²³⁾ and **Spotlights on VET in Bulgaria** ⁽²⁴⁾ and **Austria** ⁽²⁵⁾ were released on

⁽²⁰⁾ http://www.cedefop.europa.eu/files/3079_en.pdf

⁽²¹⁾ <https://ec.europa.eu/social/main>

[jsp?langId=en&catId=1146&newsId=9263&furtherNews=yes](http://www.cedefop.europa.eu/en/publications-and-resources/country-reports/vet-policy-developments)

⁽²²⁾ <http://www.cedefop.europa.eu/en/publications-and-resources/country-reports/vet-policy-developments>

⁽²³⁾ <http://www.cedefop.europa.eu/en/publications-and-resources/publications/4161>

⁽²⁴⁾ <http://www.cedefop.europa.eu/en/publications-and-resources/publications/8120>

⁽²⁵⁾ <http://www.cedefop.europa.eu/en/publications-and-resources/publications/8127>



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time for the meetings of Directors General for VET, and other high-level meetings (e.g. Presidency conferences in April and July). Updated spotlights on VET for eight countries were made available ⁽²⁶⁾. A special edition ***Spotlight on VET in Europe: 2018 compilation*** was prepared and was published in March 2019. It offers a brief overview of VET systems in the EU-28, Iceland and Norway, including graphical presentations of systems with key features ⁽²⁷⁾ that allow comparison between them. It provides an excellent starting point for VET providers, teachers, learners, researchers and policy-makers to increase understanding of the VET landscape in Europe.

ReferNet is the main source of information for building an evidence base for Cedefop's review of progress towards the 2015-20 Riga deliverables. Cedefop organised the 16th annual plenary ReferNet meeting ⁽²⁸⁾ in Thessaloniki from 21 to 23 November. It brought together the 30 partners under the 2016-19 framework partnership agreement, the national representatives for ReferNet in charge of the validation of reports, as well as representatives from the Commission and the ETF. The attendance was the highest in recent years. National representatives played an active role in reflecting and sharing experiences on the scope and process of validating ReferNet deliverables. The agenda included information sessions on

the latest EU VET policy developments and the future of VET; the network's 2019 work plan; a focus on digitalisation and the future of work; and a knowledge-sharing platform on VET funding. A focus group comprising nine ReferNet volunteers met on 21 and 22 March in Cedefop to discuss the implementation of the action plan following the ReferNet *ex-post* evaluation and how its results could feed into the new framework partnership agreement (2020-23), to be launched in 2019. Two partnership forums were organised: the first in Budapest (15 and 16 May) in cooperation with the National Office of Vocational Education, Training and Adult Education (NSZFH-NOVETAL, ReferNet Hungary), and the second in Madrid (24 and 25 May) in cooperation with the State Foundation for Training in Employment (FUNDAE, ReferNet Spain).

Work on the IVET **mobility scoreboard** ⁽²⁹⁾ was carried out to locate possible sources for complementary information. Where necessary, arrangements were made with Erasmus+ national agencies and Euroguidance national centres to ensure that complete country information about IVET mobility will be provided to Cedefop in the future. In parallel, country-specific policy briefs were issued and sent to DGVTs and IVET mobility stakeholders in Croatia, Cyprus and the United Kingdom. Collection of data to prepare the 2019 scoreboard update was also completed.

In 2018, work on the study on **key competences in IVET** was taken forward. The analytical framework developed was used for the analysis of the three competences examined: digital,

⁽²⁶⁾ Bulgaria, Greece, Italy, Hungary, Lithuania, Poland, Portugal and Slovenia.

⁽²⁷⁾ Key features include accession channels and progression routes for different VET programmes types, types of qualifications and levels they lead to, duration, delivery modes, work-based learning ratio, etc.

⁽²⁸⁾ <http://www.cedefop.europa.eu/en/events-and-projects/events/refernet-annual-plenary-meeting-2018-0>

⁽²⁹⁾ <http://www.cedefop.europa.eu/en/events-and-projects/projects/mobility-scoreboard>

literacy and languages. Data collection started in 30 countries. Preliminary results will be presented in the ET 2020 working group ‘Digital education: learning, teaching and assessment’ (WG DELTA) and DGVT meeting in February-March 2019.

Cedefop continued working closely with the Commission in **supporting the implementation of the EQF**. The 10th year anniversary conference ⁽³⁰⁾ in March 2018 (300 participants) – which Cedefop helped shape – provided a focal point for the cooperation with DG EMPL. The publication of the new EQF guidance brochure ⁽³¹⁾ was based on joint efforts of the Commission and Cedefop and summarises what has been achieved so far. Cedefop also actively supported the work of the EQF advisory group on referencing NQFs to the EQF and on validation of non-formal and informal learning. This included regular support to EQF advisory group meetings in April, June, October and December as well as to the peer learning activities in Bratislava on learning outcomes in April, and in Vienna on inclusion of qualifications from outside formal education and training into NQFs in October.



Cedefop released two publications to celebrate the EQF 10th anniversary. The first, **National qualifications developments in Europe 2017** ⁽³²⁾, reviews how 43 NQFs in 39 countries participating in the EQF implementation ⁽³³⁾ are structured, and how national qualifications have been allocated to

⁽³⁰⁾ <https://ec.europa.eu/social/main.jsp?eventsId=1296&langId=en&catId=88&furtherEvents=yes&>

⁽³¹⁾ <http://www.cedefop.europa.eu/en/publications-and-resources/publications/8608>

⁽³²⁾ <http://www.cedefop.europa.eu/en/publications-and-resources/publications/4163>

⁽³³⁾ 28 EU Member States as well as Albania, Bosnia and Herzegovina, Iceland, Kosovo, Liechtenstein, Montenegro, North Macedonia, Norway, Serbia, Switzerland and Turkey.

NQF levels and linked to the EQF. The publication shows that the NQFs are more than a technical matter to be summarised in a few infographics: they are primarily cooperation platforms and meeting points bringing together stakeholders from education and training and labour market to discuss qualifications and skills policies, creating conditions for more responsive, flexible and permeable qualification systems.

The second publication, **Analysis and overview of NQF level descriptors in European countries** ⁽³⁴⁾, shows that all 39 countries taking part in the EQF implementation have now defined – and for a large part adopted – their levels of learning outcomes. The analysis illustrates the influence of the EQF on national level descriptors, and demonstrates how countries have adjusted and further developed the learning outcomes approach according to national needs and priorities. National level descriptors have mostly been developed through extensive dialogue. While technical in their character, these descriptors do more than help to define and map the level of complexity of a particular qualification; and they also help to clarify its orientation, be this on theoretical knowledge, practical skills and/or transversal competences. Level descriptors are thus important reference points, aiming to reinforce the learning outcomes orientation of education, training and qualification systems.

Related to the work on the EQF is the support to UNESCO and its working group on **world reference levels for qualifications**. Two meetings (in March and November) brought together regional qualifications frameworks from across the world. The conceptual basis for a world reference level tool has been prepared and discussed. Cedefop also continued participating in the development of the ESCO ⁽³⁵⁾ qualification pillar. Particular focus was on: on how to ensure that qualifications and certificates contained in ESCO meet minimum quality requirements and can be trusted; and how to link the qualifications and skills pillar of ESCO, and supporting the dialogue between education and training and labour market.

In relation to **Europass** ⁽³⁶⁾ new features and developments include: CV editor in Serbian; new, dynamic data visualisation tool for better statistical

⁽³⁴⁾ <http://www.cedefop.europa.eu/en/publications-and-resources/publications/5566>

⁽³⁵⁾ European skills, competences, qualifications and occupations (ESCO).

⁽³⁶⁾ <https://europass.cedefop.europa.eu/>

reports; access to personal cloud storage directly from the CV editor; CV editor optimised for smart phones; CV editor accessible to the visually impaired; share CV for review; import photo or attachment to your CV from the cloud; tips to prepare a job interview; integration of the ESCO occupation pillar to the editor for testing purposes. In parallel, throughout the year Cedefop continued providing technical and conceptual support to the European Commission in shaping the new Europass. At the time of writing, Cedefop's contribution to the new Europass platform, which will also integrate the European Skills Panorama and be developed and maintained by the Commission, was still being discussed.

Cedefop continued its cooperation with the European Commission and Member States by providing support to the European credit system for vocational education and training (**ECVET**) user group and contributing to two peer learning activities, on ECVET, NQFs and *Upskilling pathways* and on the role of ECVET in validation of non-formal and informal learning. Cedefop also supported and hosted the ECVET network meeting 2018 which discussed the future of ECVET. Cedefop supported the implementation of the **EQAVET** recommendation by providing advice and expertise to the EQAVET steering committee, the EQAVET working group on the strategic view of quality assurance in a European context and the EQAVET annual meeting and forum.



The important role of the **European community of learning providers**, as VET stakeholders, was stressed at its first annual meeting organised in Thessaloniki on 13 and 14 March ⁽³⁷⁾. The

⁽³⁷⁾ <http://www.cedefop.europa.eu/en/events-and-projects/events/first-annual-meeting-european-community-learning-providers>

community consists of 45 members from 17 EU Member States and Turkey, and complements the platform for the European Association of VET Providers coordinated by the European Commission. Cedefop coordinates the Community and supports the work of the three working groups on the challenge of technology-enhanced learning, EU mobility, and migration. This activity further strengthens the complementarity of work with DG EMPL.

Following the publication of the Cedefop *European handbook on defining and writing learning outcomes* in 2017, preparatory work on the next edition has started. The third policy learning forum (PLF) 'Defining, writing and using learning outcomes' (Thessaloniki, June 2018) ⁽³⁸⁾ fed directly into this work. The PLF built on messages from the European handbook while focusing on the conceptual roots of the learning outcomes approach, the issue of governance and the use of learning outcomes as a common language. The forum provided a platform for European cooperation on the application of learning outcomes, allowing for the identification of common challenges and solutions,

The ***Changing nature and role of VET in Europe*** research attracted a lot of interest from several VET stakeholders across Europe. All six work assignments (conceptions; external factors; initial VET enrolment; VET for lifelong learning; higher VET; synthesis/scenarios) were completed in 2018. The fifth research paper, *Education and labour market outcomes of VET*, was published in October ⁽³⁹⁾ and the remaining three will be published in 2019. 10 case studies have been published in parallel ⁽⁴⁰⁾. A workshop, 'VET in the 21st century: new pressures and changing expectations', was held on 20 and 21 February 2018 ⁽⁴¹⁾ allowing policy-makers and researchers from across Europe to discuss findings so far. The research fed directly into the political debate on the future of VET by helping shape the priorities of the Austrian Presidency and inform opinion on

⁽³⁸⁾ <http://www.cedefop.europa.eu/en/events-and-projects/events/3rd-policy-learning-forum-defining-and-writing-learning-outcomes-vet>

⁽³⁹⁾ <http://www.cedefop.europa.eu/en/publications-and-resources/publications/5569-0>

⁽⁴⁰⁾ <http://www.cedefop.europa.eu/en/publications-and-resources/publications/5567>

⁽⁴¹⁾ <http://www.cedefop.europa.eu/en/events-and-projects/events/vet-21st-century-future-trends-and-priorities>

VET 2030, the ACVT⁽⁴²⁾ adopted in December. The study's outcomes were discussed at the Austrian Presidency conference on the future of VET (Vienna, 9 July) and Cedefop conference 'VET in Europe: taking stock and looking ahead' (Vienna, 7 and 8 November) which was the centrepiece of the vocational skills week under the Austrian Presidency. In the latter conference, which attracted more than 400 participants, a set of directions European VET might take were discussed, supporting the ongoing policy discussion on VET post-2020. Study outcomes were also discussed at the sixth Cedefop Brussels-based seminar 'VET in Europe: future scenarios and their implications', organised jointly with the Austrian Presidency (Brussels, 13 December). The event attracted over 70 participants from a wide range of Brussels-based organisations.

The findings of Cedefop's research on the changing nature and role of VET were complemented by Cedefop research paper *Globalisation opportunities for VET*, published in December⁽⁴³⁾. This publication analyses the changing VET landscape, where different forms of VET provision and qualifications are emerging and new players (international sectoral bodies, multinational companies) provide training and award their own qualifications. It explores national responses to globalisation in 15 countries and five economic sectors, bringing understanding of how European and international initiatives help VET renewal across Europe. Findings show that cooperation and policy learning between European countries is a key success factor in responding to changing skill needs and global pressures. Although VET renewal is heavily embedded in the national structures and steering mechanisms, and much in line with local economic needs, in fast-growing sectors strongly influenced by globalisation there is great pressure to use international sectoral standards as a response to global requirements. The study informed discussions at the Cedefop VET conference in Vienna.

Initial work on a methodology for **comparing VET qualifications** was carried out in 2018. In order to establish an analytical reference point for comparisons, in-depth analysis of different

initiatives and approaches was carried out. Looking into the strengths and weaknesses of ESCO, O*NET and World Skills standards, the study outlined possible solutions in this area. While the multilingual character of the ESCO terminology is of key importance to future applications, other approaches need to be taken into consideration, for example in the balance between transversal and occupationally specific skills and competences. Building on this work, the study will continue in 2019-20 looking at ways to develop an operational and reliable methodology. Cedefop sees these methodological developments as adding value to European VET cooperation, allowing countries to learn from each other through systematic comparisons.

⁽⁴²⁾ <https://ec.europa.eu/social/main.jsp?langId=en&catId=1146&newsId=9263&%20furtherNews=yes>

⁽⁴³⁾ <http://www.cedefop.europa.eu/en/publications-and-resources/publications/5571>

2.2. OPERATIONAL ACTIVITY: VALUING VET TO EMPOWER PEOPLE TO ACHIEVE COMPETENCES AND SKILLS FOR WORK AND LIFE

PERFORMANCE

100

REFERENCES
IN EU POLICY DOCUMENTS



For example:

- Commission staff working document *Situation of young people in the European Union, accompanying the communication from the Commission to the European Parliament, the European Council, the Council, the European Economic and Social Committee and the Committee of the Regions on engaging, connecting and empowering young people: a new EU youth strategy*
- Commission staff working document *Impact assessment accompanying the proposal for a regulation of the European Parliament and of the Council establishing Erasmus*
- EESC opinion on the second education package
- the social partners (Business Europe, CEEP, UEAPME, ETUC) analysis on *Promoting social partnership in employee training*
- the report of ET 2020 working group on adult learning on *Promoting adult learning in the workplace*

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ACTIVE CONTRIBUTIONS
TO POLICY-RELEVANT MEETINGS OF SENIOR STAKEHOLDERS



For example:

- European validation festival
- ET 2020 working groups on adult learning, VET (focused on teachers and trainers) and promoting citizenship
- policy learning forum on upskilling pathways, organised jointly with the European Economic and Social Committee for ACVT and EESC members
- the Youth Guarantee seminar 'Tracking and mapping young people not in education, employment or training (NEETs)'
- European alliance for apprenticeship (EAfA)
- Meetings in Belgium, Croatia, Cyprus and Italy with senior stakeholders to review their apprenticeships
- inter-agency working group on work-based learning

18

WRITTEN CONTRIBUTIONS
TO POLICY DOCUMENTS OF EU (16) AND INTERNATIONAL ORGANISATIONS (2)

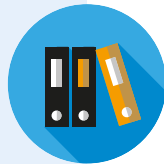


For example:

- the Commission study *Skills audits: tools to identify talent*
- papers for the European validation festival
- Commission study assessing the impact of the 2011 Council recommendation on tackling national early school leaving policies and practices
- peer learning activity on non-formal qualifications in national qualification frameworks

14 000

DOWNLOADS OF CEDEFOP PUBLICATIONS PRODUCED IN 2017-18



TOP THREE PUBLICATIONS:

- briefing note *Reaching out to 'invisible' young people and adults* (2 210)
- *Handbook of ICT practices for guidance and career development* (2 102)
- *Apprenticeship review in Italy* (1 757)



© EU, 2018/Nicolas Lobet - PRYZM Photography

In 2018, Cedefop further developed its activity as a reference organisation in the area of **lifelong guidance**. New country reports on guidance and outreach published in July provide valuable insights into how to support the development of flexible learning pathways for young people and adults ⁽⁴⁴⁾. As part of Cedefop's resources aimed at providing support to national guidance services in using labour market information (LMI) and integration of digital technologies, Cedefop's database *Resources for guidance* has been online since February ⁽⁴⁵⁾. It includes a handbook for the transfer of ICT-based activities, a practitioner toolkit, and a set of training modules for practitioners and careers service managers. The second CareersNet meeting, held in Thessaloniki in June, discussed methodological issues and analysed the results of the first update of the database of guidance systems and practices. The network also debated support to adult learning, coordination with validation activities and the development of career management skills in youth groups. The database allows for comparative analysis of Member States' progress towards the agreed European guidelines for policies and systems development for lifelong guidance ⁽⁴⁶⁾.

Preliminary results of the study on **validation in guidance** highlight different ways to coordinate both activities at national level, ranging from loose cooperation between practitioners to highly structured referrals and full administrative

integration of services. Coordination mechanisms tend to be path-dependent, especially where either the guidance or the validation services already existed. In countries with highly decentralised administration, coordination tends to be local and with a wider range of stakeholder engagement. More generally, Cedefop has maintained its active collaboration with the European Commission on **validation of non-formal and informal learning**. As member of the steering committee of the 2018 *Update of the European inventory of validation*, Cedefop contributed to the data analysis and will be involved in the evaluation of the 2012 Council recommendation on validation. Support to the Commission's study *Mapping of skills audits in and across EU Member States* was also provided. In addition, Cedefop contributed significantly to the validation festival organised by the Commission in Brussels, 14 and 15 June ⁽⁴⁷⁾. Cedefop also provided input to the one-off reports on validation that Member States agreed to produce as a response to the 2012 Council recommendation.

In 2018, work on **financial and non-financial incentives** focused on financing apprenticeships in the EU Member States. The research has generated rich and systematic information on the financing of over 30 apprenticeship schemes identified in the EU-28 in line with the outcomes of Cedefop cross-national overview on apprenticeships schemes. As a by-product, a mapping and taxonomic analysis of the major costs related to apprenticeship schemes and the source of their funding is under preparation. An online database

⁽⁴⁴⁾ <http://www.cedefop.europa.eu/en/publications-and-resources/country-reports/guidance-outreach>

⁽⁴⁵⁾ <http://www.cedefop.europa.eu/en/toolkits/resources-guidance>

⁽⁴⁶⁾ <http://www.elgpn.eu/publications/elgpn-tools-no-6-guidelines-for-policies-and-systems-development-for-lifelong-guidance>

⁽⁴⁷⁾ <http://ec.europa.eu/social/main.jsp?langId=en&catId=88&eventId=1314&furtherEvents=yes>

will complement the study, providing detailed information on financing arrangements for each analysed apprenticeship scheme.

Cedefop continued analysing the results of its **opinion survey on VET in Europe**. Following the synthesis report published in 2017, a series of country reports were published in 2018 with a view to providing contextualised interpretations at national level and insights into citizens' opinions on awareness, attractiveness and effectiveness of VET in their own country ⁽⁴⁸⁾. A new online tool allows users to explore the survey results via different interactive visualisations ⁽⁴⁹⁾. The second edition of Cedefop's opinion survey was initiated and first results are expected at the end of 2019. While the first edition of the survey was focused on IVET, the new survey will focus on image and attractiveness of adult learning and continuing vocational education and training in Europe.

Cedefop continued its work on **apprenticeships** at both country and cross-national levels.

The second policy learning forum on apprenticeships brought together representatives from all countries involved in Cedefop thematic country reviews (TCRs), as well as experts from selected countries (Ireland, the Netherlands, Austria

and UK-England), EU-level social partners and international organisations. Participants had the opportunity to discuss results of the new four TCRs completed in 2018 (Belgium-Fr, Croatia, Cyprus and Sweden), learn how countries with similar or different approaches organise apprenticeships, and to reflect on the different apprenticeship purposes and functions. Preliminary results of the TCR on Croatia were presented at two conferences organised by the Croatian Chamber of Economy and the Chamber of Crafts and Trades in September in Zagreb ⁽⁵⁰⁾, while the findings of the TCR on Sweden were discussed in Stockholm in December at the annual meeting of the Swedish National Agency for Education.

At cross-country level, the outcomes of the cross-national overview of apprenticeship schemes in Europe were published in August ⁽⁵¹⁾. The analysis focused on selected apprenticeship schemes sharing similar approaches and features, identified through screening all EU-28 countries plus Iceland and Norway. Despite similar features, some fundamental differences have emerged among apprenticeship schemes in European countries. A purposive analysis of the

⁽⁴⁸⁾ <http://www.cedefop.europa.eu/en/events-and-projects/networks/refernet/thematic-perspectives/opinion-survey-on-vet>

⁽⁴⁹⁾ <http://www.cedefop.europa.eu/en/publications-and-resources/data-visualisations/opinion-survey-on-vet>

⁽⁵⁰⁾ <https://supportapprenticeships.eu/en/the-international-expert-conference-concludes-the-project-get-involved-in-ep4a-european-partnerships-for-apprenticeships/> and <https://www.dualnoobrazovanje.hr/closing-conference-of-the-cap4app-project>

⁽⁵¹⁾ <http://www.cedefop.europa.eu/en/publications-and-resources/publications/4166>



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© EESC, 2018

selected apprenticeship schemes confirms the existence of at least two main strategic functions of apprenticeships across Europe: apprenticeship as an education and training system aimed at providing people with full competence and capability in an apprenticeable occupation or trade (clear and established education and training function); and apprenticeship as a type of VET delivery within the formal VET system, aimed at providing diverse ways to deliver VET to achieve formal VET qualifications by bringing people into the labour market (mixed education and employment function), particularly the function and purpose of apprenticeship (education and training or employment function). As a by-product of the study, the entire data collection was published online in the form of a comprehensive database of the mainstream and legally based apprenticeship schemes existing in the EU-28+. The database also marked the creation of the new Cedefop community of experts on apprenticeships, aimed at supporting Cedefop in updating the database and, more generally, enriching the knowledge base on apprenticeships at cross-country level. The research on apprenticeships for adults was concluded, with results including a theoretical framework and a taxonomy that can help better understand an area of VET policy that is likely to grow in importance.

Looking beyond apprenticeships and in the context of EU policy initiatives on upskilling pathways for low-skilled adults was Cedefop's project on the **potential of work-based learning in developing upskilling pathways for adults**. Besides the collection of good practices of upskilling adults through work-based learning in the EU-28, Iceland and Norway, Cedefop developed a comprehensive analytical framework for designing and implementing upskilling pathways for adults. The framework is structured around three main levels of policy process (decision-making, support and implementation) and 10 key areas; integrated approach design, identification of target groups, governance, monitoring and evaluation, financial and non-financial support, outreach, lifelong guidance, skills assessment, tailored learning offer leading to a formal qualification, tailored-learning offer with work-based learning, validation and recognition of skills and competences. An in-depth quantitative mapping of the low-skilled adults at the national level shows how diverse the situation is across the EU and therefore how policy approaches and priorities should be different.

To support the Council recommendation on **Upskilling pathways: new opportunities for adults**, Cedefop organises dedicated policy learning forums. The first, 'Upskilling pathways: a vision for the future' was organised in cooperation with the European Economic and Social

Committee (EESC) in Brussels on 7 and 8 February 2018 ⁽⁵²⁾. It brought together representatives of all Member States, social partner organisations and EU institutions. The PLF demonstrated that many countries are already equipped to offer skills identification, training provision tailored to individuals' needs or validation and recognition of prior learning. However, it also highlighted that much needs to be done to bring together these services in a coordinated manner and within a coherent strategy. Different stakeholders generally hold similar views on aims and challenges, confirming that existing differences can be overcome through debate and consensus building. It is, crucial to establish adequate social dialogue and involve social partners and civil society organisations in the design and implementation of the upskilling vision and strategy.

In 2018, Cedefop started its new research, **Complementary pathways for adult refugees: the role of VET, skills and qualifications** ⁽⁵³⁾. The ambition of this research is to provide a pragmatic contribution to the design of socially sustainable and effective mechanisms to improve the management of refugees and, more generally, of people in need of international protection within and between EU Member States. The theoretical and legal framework designed for the implementation of the project was discussed with representatives of key international organisations providing different complementary expertise – international migration, humanitarian protection, labour market integration – in a dedicated workshop held in October. Outcomes of the discussion reinforced the original idea to design a skills-based complementary mechanism to offer protection for adult refugees based on a labour demand-driven approach. A mechanism – complementary, and therefore additional, to humanitarian policy and initiatives – in which the existence of specific labour demand, strong partnerships among stakeholders, and political will are necessary conditions to ensure effectiveness and social sustainability of such initiatives.

Cedefop provided continued support to the ET 2020 working group on VET, focusing on the professional development of **VET teachers**

and (in-company) trainers. The working group accomplished its mandate in June 2018 with the publication of *Teachers and trainers matter* ⁽⁵⁴⁾, where Cedefop analyses and evidence are extensively acknowledged. Cedefop provided continued support from a VET perspective to the ET 2020 working group on schools (2018-20), which focuses on teachers' and school leaders' careers and quality assurance. The main findings from Cedefop work on professional development of teachers and trainers in apprenticeships and work-based learning were disseminated at the EAfA conference in Dublin in April 2018 ⁽⁵⁵⁾.

To support the sustainability and promotion of the **VET toolkit for tackling early leaving** ⁽⁵⁶⁾, several initiatives were undertaken in 2018, including the new community of practice ('ambassadors'), continuous content update and enrichment, and several communication and dissemination activities. In parallel, work progressed towards the expansion of the toolkit into an **online resource on VET policies and practices for labour market integration and social inclusion**. In 2018, Cedefop also developed a specific line of activity targeted to Roma and Traveller people and provided support to several initiatives: the 15th meeting of the ad hoc Committee of Experts for Roma and Traveller Issues ⁽⁵⁷⁾; the International expert seminar organised by the Council of Europe; and the public hearing on addressing early school leaving among Roma of the European Economic and Social Committee ⁽⁵⁸⁾. Cedefop also supports the work of the thematic working group on promoting citizenship and the common values of freedom, tolerance and non-discrimination through education.

⁽⁵²⁾ <http://www.cedefop.europa.eu/en/events-and-projects/events/policy-learning-forum-upskilling-pathways-vision-future-0>

⁽⁵³⁾ <http://www.cedefop.europa.eu/en/about-cedefop/public-procurement/complementary-pathways-adult-refugees-role-vet-skills-and>

⁽⁵⁴⁾ <https://ec.europa.eu/social/main.jsp?catId=738&langId=en&pubId=8131&furtherPubs=yes>

⁽⁵⁵⁾ <http://ec.europa.eu/social/main.jsp?langId=en&catId=1147&eventId=1315&furtherEvents=yes>

⁽⁵⁶⁾ <http://www.cedefop.europa.eu/TEL-toolkit>

⁽⁵⁷⁾ <https://www.coe.int/en/web/roma-and-travellers/cahrom> and <https://www.coe.int/en/web/roma-and-travellers/plenary-and-bureau-meeting-reports>

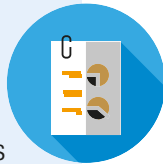
⁽⁵⁸⁾ <https://www.eesc.europa.eu/en/agenda/our-events/events/addressing-early-school-leaving-amongst-roma-current-situation-and-way-forward>

2.3. OPERATIONAL ACTIVITY: INFORMING VET BY OFFERING LABOUR MARKET INTELLIGENCE AND SKILL NEEDS ANALYSIS

PERFORMANCE

166

REFERENCES
IN EU POLICY DOCUMENTS



For example:

- Council conclusions on the future of work: a lifecycle approach
- Commission staff working document accompanying the communication from the Commission to the European Parliament, the Council, the European Economic and Social Committee and the Committee of the Regions on the digital education action plan
- Commission staff working document on digital economy and society index 2018
- Communication from the Commission to the European Parliament and the Council on enhancing legal pathways to Europe: an indispensable part of a balanced and comprehensive migration policy
- European Parliament resolution on modernisation of education in the EU
- European Parliament report on the impact of new technologies on the labour market and the social economy
- The World Economic Forum's *The future of jobs: report 2018*

33

ACTIVE
CONTRIBUTIONS
TO POLICY-RELEVANT
MEETINGS OF SENIOR
STAKEHOLDERS



For example:

- European Commission workshop on the Fourth Industrial Revolution
- European group on ethics in sciences and technologies roundtable on the future of work
- Eurostat big data task force
- Bulgarian Presidency high-level conference on the Future of Work
- OECD workshop on skills governance
- meetings in Bulgaria, Estonia and Greece with senior stakeholders on the governance of skills anticipation and matching systems

19

WRITTEN
CONTRIBUTIONS
TO POLICY DOCUMENTS OF
EU (10) AND INTERNATIONAL
ORGANISATIONS (9)

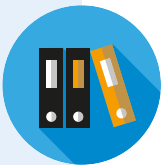


For example:

- AT Presidency conference report *Digitalisation of work*
- support and data provided for the *Employment and social development in Europe* report
- EESC opinion on EU concepts for transition management in a digitalised world of work
- co-authoring article for the European Investment Bank's thematic studies *Investing in Europe's future: the role of education and skills*
- joint conference paper with Eurostat for a common infrastructure for online job vacancy data
- six EU country reports on skills for green jobs that fed the ILO's *World employment social outlook report 2018*

16⁰⁰⁰

DOWNLOADS OF CEDEFOP
PUBLICATIONS
PRODUCED IN 2017-18



TOP THREE PUBLICATIONS:

- *Insights into skill shortages and skill mismatch* (3 193)
- *On the way to 2020: data for vocational education and training policies* (2 253)
- briefing note *Less brawn, more brain for tomorrow's workers* (2 224)

136⁰⁰⁰

VISITS
TO THE EU SKILLS
PANORAMA WEBSITE



THE TOTAL NUMBER OF PAGE VIEWS WAS MORE THAN 386 000

The sections with quantitative data and indicators (dashboards) and analytical highlights are the most visited.

SKILLS PANORAMA

Inspiring your choices on skills and jobs in Europe



In 2018, a revamped version of the **Skills Panorama** was released ⁽⁵⁹⁾. Faster to navigate and easier to use, the new Skills Panorama aspires to broaden its user groups and welcome guidance practitioners. New features of the website include:

- (a) improved search engine, based on the ESCO classification, so that users identify what they are looking for more quickly and easily;
- (b) deeper integration of data and analysis, allowing users to understand better drivers of change in demand for jobs and skills;
- (c) significant improvement of data presentation and visualisations;
- (d) section on 'Institutions' providing LMI in each Member State;
- (e) LMI guides and toolkits form a new section under 'Resources' with the aim to provide access to all relevant tools to users;
- (f) new indicators, such as tasks within occupations, monthly gross income, employment in high-tech economy and high-tech occupations;
- (g) new edition of the European skills index (ESI).

Data and analysis offered in the Skills Panorama were kept up to date: new Cedefop forecast data; a new analytical highlight providing a summary of key EU trends to 2030; and eight new blog articles. These articles cover understanding the online labour market in the EU; big data and job opportunities; use of technology and information in guidance services; understanding the tasks within jobs; the role of online vacancies in the job market; future employment trends and the role of technology; four challenges for the future of work; and VET supporting the qualification of migrants ⁽⁶⁰⁾.

After its launch in autumn 2018, Cedefop's **European skills index** immediately became the most visited section of the Panorama, demonstrating the value of this new composite indicator in measuring and comparing the performance of the skills formation and matching systems in EU Member States ⁽⁶¹⁾. The index was presented on 27 September in Brussels in a

dedicated event ⁽⁶²⁾ and also detailed in a briefing note ⁽⁶³⁾.

To produce **more and better data on skills supply and demand**, Cedefop pursues several activities.

The **Cedefop 2018 skills forecast** was released on 8 June in Brussels, providing timely information on Europe's skill needs. The new set of results was disseminated through various activities, including a redesigned Cedefop web portal and a briefing note summarising the main results ⁽⁶⁴⁾. A reference publication was released in December as a joint



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output with Eurofound. The 2018 skills forecast covers the period up to 2030, providing information on jobs and skills for all Member States by sector of economic activity and occupational group. Key findings suggest that technological change may accelerate known employment trends, such as the shift to services, and may also increase polarisation in job growth, with fast growth projected for high-skill occupations and moderate growth for certain lower-skill jobs. Employment levels in medium-skill occupations are expected to experience a hollowing out, with occupations such as skilled manual workers and clerks likely to decline or

⁽⁵⁹⁾ <https://skillspanorama.cedefop.europa.eu/en>

⁽⁶⁰⁾ <http://skillspanorama.cedefop.europa.eu/en/blog>

⁽⁶¹⁾ <http://skillspanorama.cedefop.europa.eu/en/indicators/making-skills-work-index3>

⁽⁶²⁾ <http://www.cedefop.europa.eu/en/events-and-projects/events/introducing-european-skills-index>

⁽⁶³⁾ <http://www.cedefop.europa.eu/en/publications-and-resources/publications/9132>

⁽⁶⁴⁾ <http://www.cedefop.europa.eu/en/publications-and-resources/publications/9130>



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remain stable, as automation and offshoring take their toll. Europe's labour force is projected to remain at a similar level in the period up to 2030, while moderate job growth will likely curb unemployment. This information is also essential for the implementation of the EU *New skills agenda* and the European Pillar of Social Rights.

Throughout 2018 Cedefop cooperated with Eurofound to prepare alternative scenarios and skills forecasts on the **future of manufacturing**, a project sponsored by DG GROW and the European Parliament. The results were presented on the occasion of the forecast release on 8 June in Brussels and form part of the joint publication released in December 2018. This demonstrates the quality and added value of Cedefop projections which were used by Eurofound. This also led to important synergies between the two agencies.

Cedefop continued to work towards developing a **pan-European tool for analysing skill needs using online vacancies and big data analysis techniques**. This cutting-edge project attracted the attention of the European Commission, DG EMPL and specifically Commissioner Thyssen's Cabinet. Cedefop was requested to accelerate the delivery of a first data set at the beginning of 2019 covering seven countries (Czechia, Germany, Ireland, Spain, France, Italy and the United Kingdom). In 2018, work focused on finalising the analysis of the characteristics of online job

vacancies across occupations and countries. This work provides better understanding of the main differences between private and public online portals, motivation of employers to use online job vacancies as a hiring channel, and the richness of skills descriptions. It is the first time that such comparative analysis was undertaken in all EU Member States.

The infrastructure for gathering and processing online job vacancies was successfully implemented and tested. The proposed methodology was presented in March to a group of experts from Eurostat, the Joint Research Centre, the European Commission and other research institutes. The data gathering process started in April 2018 and by the end of the year about 65 million vacancies had been downloaded to be processed and subsequently analysed.

Cedefop continued its cooperation with the Eurostat's big data task force to work towards the development of an EU tool that can be progressively scaled up to meet the requirements of the European statistical system for the production of vacancy statistics. Closer cooperation was also established with the ESSnet (European statistical system network) as well as with national statistical institutes across various Member States, mainly on data validation. This cooperation was also strengthened by the joint paper presented at the

DG INS ⁽⁶⁵⁾ conference. The results of this work are also expected to help further development of ESCO, its key performance indicators and possibly skills hierarchies.

Cedefop and Eurostat have cooperated on **education, training and labour market statistics** for several years. The aim is to improve data and statistics and their use for policy. In 2018 work focused mainly on analysing the latest continuing vocational training survey with the aim of improving analysis and dissemination of its results and presenting selected findings on continuing vocational training in EU enterprises. Due to delayed data availability, the results will be released in 2019. Cooperation with Eurostat also concerned the preparation of the 2022 and 2024 modules of the EU labour force survey on skills and jobs and entry of young people in the labour market; this will involve participation in Eurostat working groups and task forces.

Based on past collaboration on **skills for green jobs**, Cedefop and the ILO joined forces again to map relevant developments in this area. Cedefop updated the reports for six EU countries: Denmark, Germany, Spain, Estonia, France, and the UK. Outcomes indicate that countries vary in their approach to defining green jobs and skills. Subsequently, different approaches are taking place on green data classification and collection. However, increased efforts are observed regarding the collection of data on developments in the green economy. Since 2010, trends in green employment have tended to parallel general economic trends. Carbon reduction targets and associated incentives and subsidies have been especially influential on green jobs and skills, although other green policies, such as legislation to protect the environment, have also been important. A synthesis report and a video produced by Cedefop was published in 2019.

Cedefop pursues research and offers capacity building support to national stakeholders in relation to **skills anticipation and matching in the EU and in designing better targeted and more effective policy solutions**. Key outcomes in 2018 are outlined below.

Cedefop is carrying out country reviews focused on strengthening the governance of skills



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anticipation and matching systems of Bulgaria, Estonia, Greece and Slovakia. The Bulgarian, Greek and Slovakian reviews were launched and progressed in 2017; the Estonian review was initiated in early 2018. In each country a dedicated scoping exercise was carried out as a first step, to gather inputs from national steering committees on proposals for priority areas for Cedefop's reviews. On this basis, and together with the compilation of background reports synthesising the existing state of knowledge and literature per country, Cedefop has offered a tailor-made proposal for review to each country, proposing key priority areas and associated actions. These have been based on a comprehensive analytical framework developed by Cedefop to assess the key elements of a country's skills anticipation and matching infrastructure. As part of the governance of skills anticipation and matching country reviews, six meetings with national steering committees took place. These meetings aimed at informing participating countries about progress and critical steps of the project.

In addition to the main phases of the project, Cedefop prepared separate notes (e.g. on EU practices of dissemination of labour market and skills intelligence or on innovative methods of financing VET) to assist some of the reviewed Member States; the notes were delivered to the respective ministries. **Customised training courses on specific methods of skills anticipation and matching** have also been designed to facilitate capacity building among national stakeholders: in Bulgaria the course took place in 2017, in Slovakia and Greece the training courses are planned for

⁽⁶⁵⁾ The conference, organised at the level of the heads of national statistical institutions, discusses topics related to the statistical programme and methods and processes for the production of Community statistics.

2019. Participation of Cedefop staff in the Greek country-specific scientific and coordination committees for the national skills diagnosis system has promoted effective cooperation and support between Cedefop and its host country.

In the context of, and as a key output of, the country reviews, Cedefop organised in Thessaloniki on 14 and 15 June a dedicated **policy learning forum on skills anticipation and practices**. The event brought together over 60 national stakeholders from the four countries participating in the support programme and other experts. The forum provided a platform for learning and discussing putting appropriate skills anticipation methods into practice. To meet participants' needs, the event focused on three methods of skills intelligence and anticipation: technological skills foresights; sector-based skills anticipation; and graduate tracer studies. The event combined key expert presentations with specific interactive group sessions aimed at mutual policy learning.

Building on and validating its previous inventory of EU skills mismatch policies (2013-14), Cedefop finalised in 2018 a systematic collection of 131 **contemporary and innovative EU skills anticipation and matching policy instruments** enabling users to filter policy examples according to a range of criteria, including policy area, orientation on skills anticipation, use of labour market and skills intelligence, and type of skill mismatch to be addressed. The [database, available online](#) since December 2018, ⁽⁶⁶⁾ aims to strengthen Cedefop's capacity to provide informed support to EU Member States.

In 2018, Cedefop initiated a new strand of work on **digitalisation and the future of work**. This analyses the impact and drivers of automation, robotics, artificial intelligence and other digital technologies on employment and changing skill needs of jobs, and their implications for VET policy. A new study **Skills formation and skills matching in online platform work: practices and policies for promoting crowd workers' continuous learning** (CrowdLearn) was initiated. Cedefop has also continued to engage in analysis of the European skills and jobs survey (ESJS) data to explore **implications of technological changes and automation for skills mismatch and obsolescence**. EU estimates of the risk of automation in different countries, sectors

and occupations have also been produced. For example, according to the latest ESJS data, about 14% (approximately 31 million) of adult workers are in jobs that face a high risk of automation. The risk of job displacement by machine-led algorithms is expected to affect mostly male and lower-skilled workers, with gaps in their digital and transversal skills. It is less prevalent for workers employed in social and personal services, education and health and cultural industries.

In addition to numerous international/EU events, Cedefop's analysis on the future of work was used to inform the European Group on Ethics in Sciences and New Technologies and a new international working group set up by Microsoft, with the participation of the European Commission and other key national Ministries from EU countries. It was also presented at the Bulgarian Presidency's conference 'The future of work: a lifecycle approach'.

In 2018, Cedefop laid the ground for initiating the data collection of the next wave of the **European skills and jobs survey (ESJS)** in 2020-21, by preparing relevant background documents and putting together a dedicated technical expert working group. In this context, and at the European Commission's request, Cedefop worked on assessing benefits and costs of carrying out the second ESJS as matched employer-employee survey. The assessment was finalised in autumn, providing recommendations for the way forward. Cedefop recommended keeping the second ESJS as an employee survey, while refining its

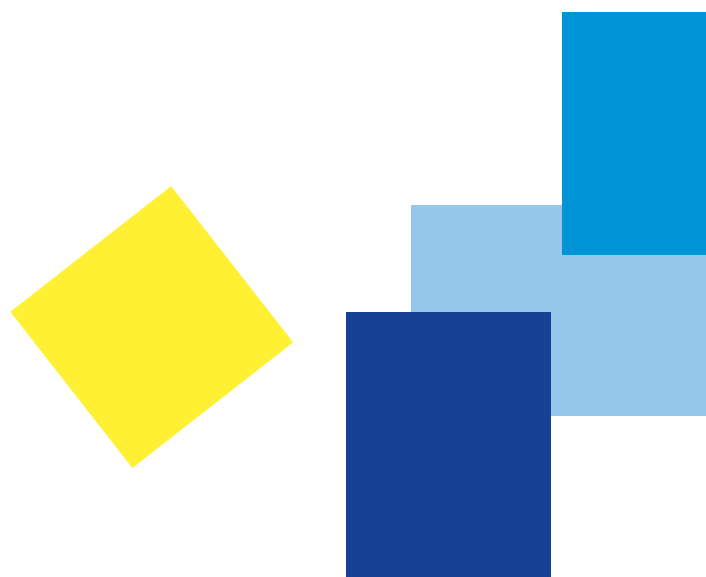


⁽⁶⁶⁾ <http://www.cedefop.europa.eu/en/tools/matching-skills/>

focus to align it with current policy debates on the impact of digitalisation and technological change on the future of work and skills. The Agency also considers that there is potential added value in examining the possibility of piloting an enriched employee-employer survey in a small number of EU countries. However, this cannot be done by Cedefop within its current resource capacity.

Cedefop, together with the Bulgarian Presidency of the EU, organised a **Brussels-based seminar on labour market and skills information systems for VET policies** (Brussels, 26 June). Over 50 participants attended, including representatives from EU institutions (European Commission, European Parliament, European Economic and Social Committee), the Permanent Representations in Brussels and major private (IBM) and international organisations (OECD). The seminar focused on the extent to which labour market and skills information systems can inform VET and employment policies in EU Member States. It provided an overview of new developments in skills anticipation and skills matching tools made possible by big data, such as machine learning, real-time labour market intelligence, text mining and artificial intelligence-based data analytics.

The preparation of the **fourth wave of the European company survey** in collaboration with Eurofound was initiated. The survey focuses on skills strategies in EU companies: how businesses recruit, use and develop a skilled workforce; how this forms part of their competitive strategy in a context of increasingly digitalised work and jobs; and the outcomes it generates. In 2018, cognitive tests and advanced translations were carried out and results were included in the master/source questionnaire. The translation of the master questionnaire in the target languages, including the harmonisation process, was finalised. The pilot took place in the autumn to test the survey infrastructure and assess the quality of the questionnaire translations. The pilot revealed challenges regarding the initially planned sample size in some countries and modifications were introduced. The mainstage field work for the survey is planned for early 2019.



2.4. TRANSVERSAL ACTIVITY: COMMUNICATION, INFORMATION AND DISSEMINATION

PERFORMANCE

55 000
 DOWNLOADS OF CEDEFOP
 BRIEFING NOTES



Continued, systematic and targeted promotion and dissemination of Cedefop publications resulted in high demand for briefing notes targeting policy-makers and published on Cedefop's web portal in eight languages.

573 ARTICLES
 REFERRING TO CEDEFOP IN
 EUROPEAN MEDIA



- Close to 60% of the press clippings refer to the work done by Cedefop on skills anticipation and matching.
- Events like the #CedefopPhotoAward and Cedefop's participation in the European VET skills week were well addressed in the media.
- Selfie tool (28 quotations)

12 084
 FOLLOWERS ON
 FACEBOOK
 (INCREASED BY 9.16%
 OVER 2017)



TOTAL NUMBER OF VIEWS
 ON FACEBOOK AND YOUTUBE OF THE VIDEOS
 PRODUCED AND PUBLISHED BY CEDEFOP IN 2018
 WAS MORE THAN

219 600

7 530
 FOLLOWERS ON
 TWITTER
 (INCREASED BY 19.52%
 SINCE 2017)

59 EVENTS
 ORGANISED BY
 CEDEFOP



- 94% of respondents rated Cedefop's events as GOOD or VERY GOOD
- 50% were POLICY-MAKERS at EU/national level
- 11% RESEARCHERS
- 3% PRACTITIONERS
- 7% SOCIAL PARTNERS
- 8% REPRESENTATIVES OF ENTERPRISES

This activity is dedicated to communicating Cedefop's key messages on VET to stakeholders, and promoting a positive image of Cedefop at European, national and local levels. Throughout 2018, Cedefop organised events and visits for key accounts and other stakeholders to keep them up to date with VET issues and Cedefop's corresponding role.

In 2018 Cedefop welcomed 18 delegations, in total 164 visitors, at its premises in Thessaloniki. The year started with the visit of the European Parliament's Committee on Employment and Social Affairs: Ms Anne Sander, MEP (EPP), Mr Emilian Pavel, MEP(S&D) and Mr Siôn Simon, MEP (S&D) showed special interest in cross-border mobility, the future of work and the impact of automation on skills and jobs.



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A number of visits focused on knowledge sharing and exchange of information between Cedefop experts and representatives of national ministries, national VET institutes, social partner associations and international organisations. National qualification frameworks, validation of non-formal and informal learning, skills governance, forecasting of skills needs and supply, digital economy and artificial intelligence were among the topics covered. While most visitors came from EU Member States, Cedefop also hosted a researcher from Taiwan and a delegation from Singapore.

The collaboration between Cedefop and DG EMPL was further intensified, focusing on joint social media activities. These included Cedefop's skills forecast launch event in June, communication support to the European vocational skills week

2018, ⁽⁶⁷⁾ as well as the #CedefopPhotoAward 2018, designed as an integrated part of the DG EMPL's revised European vocational skills week award concept. The #CedefopPhotoAward campaign 'Vocational education and training: tell your story' ⁽⁶⁸⁾ continued to be an excellent tool for raising VET's visibility, engaging Cedefop stakeholders, and reaching out to young Europeans in initial VET and to learners in continuing vocational training and adult learning. Cross-promotion in all Cedefop communication channels, including a joint social media communication campaign with DG EMPL and promotional videos, created a notable outreach.

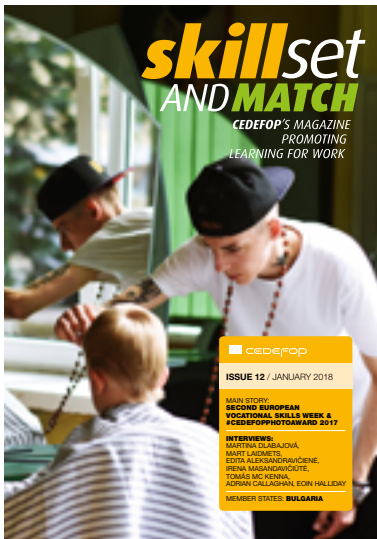


© EU, 2018

In total 100 teams consisting of 304 VET learners and 81 teachers/trainers took part in #CedefopPhotoAward, representing 78 learning providers from 18 EU Member States. Two winning teams were nominated for the top award at the third European vocational skills week in Vienna, where their photo stories were exhibited: one from the CSZC Bem József Technical Secondary and Vocational School, Hungary and one from the Institute of Higher Education Einstein Nebbia, Italy, with the Hungarian team winning first prize. The third prize, a trip to Thessaloniki for the opening of the #CedefopPhotoAward exhibition at the 59th Thessaloniki International Film Festival in November, went to a group of learners at the Vilnius Vocational Training Centre for Business Service Specialists in Lithuania.

⁽⁶⁷⁾ <http://www.cedefop.europa.eu/en/tags/european-vocational-skills-week>

⁽⁶⁸⁾ <http://www.cedefop.europa.eu/en/tags/cedefopphotoaward>



Cedefop published six briefing notes ⁽⁶⁹⁾: *Improving vocational education and training through data, analyses and exchanges; Qualifications frameworks in Europe: 2017 developments; Reaching out to 'invisible' young people and adults; Less brawn, more brain for tomorrow's workers – Cedefop's new skills forecast identifies parallel and contradictory trends and challenges; Cedefop's European skills index: new tool for informed policy-making; and What future for vocational education and training in Europe?*



⁽⁶⁹⁾ <http://www.cedefop.europa.eu/EN/news/briefing-notes.aspx>

Communication activities also included a total of 10 press releases ⁽⁷⁰⁾, three issues of Cedefop's print magazine *Skillset and match* ⁽⁷¹⁾, 14 video clips and interviews ⁽⁷²⁾, 10 issues of Cedefop's electronic newsletter ⁽⁷³⁾, 72 website headlines, 127 Facebook posts and 1 650 tweets/retweets. The number of social media followers reached 12 084 on Facebook and 7 530 on Twitter, an increase of 9.16% for Facebook and of 19.52% for Twitter compared to 2017.

Linguistic support, layout/design and dissemination services were provided for a variety of communication and public relation activities. Most publications were published online only, but there is still a need for print-on-demand and dissemination of hardy copy products. Briefing notes and research papers were also made available in e-book format. A video animation on vocational education and training in Bulgaria ⁽⁷⁴⁾ was published in September.

Cedefop's web portal developments in 2018 focused on data visualisation functionalities for increased usability and outreach. 'Resources for guidance' ⁽⁷⁵⁾ providing a decision-making tool and country-specific fiches, was released in February;

⁽⁷⁰⁾ <http://www.cedefop.europa.eu/en/news-and-press/press-and-media/press-releases>

⁽⁷¹⁾ <http://www.cedefop.europa.eu/en/news-and-press/magazines>

⁽⁷²⁾ <http://www.cedefop.europa.eu/publications-and-resources/videos>

⁽⁷³⁾ <http://www.cedefop.europa.eu/en/news-and-press/newsletters>

⁽⁷⁴⁾ <http://www.cedefop.europa.eu/en/publications-and-resources/videos/watch-bulgarias-vet-system-220>

⁽⁷⁵⁾ <http://www.cedefop.europa.eu/en/toolkits/resources-guidance>

the content of the ‘Financing adult database’ ⁽⁷⁶⁾ was revised, functionalities improved and new interfaces introduced; the ‘European opinion survey on VET’ ⁽⁷⁷⁾, covering results from 28 countries, and the ‘European database on apprenticeship schemes’ ⁽⁷⁸⁾, allowing for cross-country and cross-scheme comparison, were both launched in Q2. Cedefop’s ‘Skills forecasts data visualisations’ ⁽⁷⁹⁾, released in June, offers dynamic cross-country comparisons about the labour force, job openings and employment trends in sectors, occupations and qualifications; the ‘skills anticipation and matching policy instruments’ ⁽⁸⁰⁾, released in Q4, presents a collection of instruments that use labour market and skills intelligence.

Cedefop’s Research Support Centre continued to provide valuable scientific information to the operational departments and access to all subscribed electronic resources and open access databases. Archive and records management successfully continued to preserve the memory of the Agency and ensured that organisational records are authentic, reliable, and accessible to meet business, financial, and legal obligations.

⁽⁷⁶⁾ <http://www.cedefop.europa.eu/en/publications-and-resources/tools/financing-adult-learning-db>

⁽⁷⁷⁾ <http://www.cedefop.europa.eu/en/publications-and-resources/data-visualisations/opinion-survey-on-vet>

⁽⁷⁸⁾ <http://www.cedefop.europa.eu/en/publications-and-resources/data-visualisations/apprenticeship-schemes>

⁽⁷⁹⁾ <http://www.cedefop.europa.eu/publications-and-resources/data-visualisations/skills-forecast>

⁽⁸⁰⁾ <http://www.cedefop.europa.eu/en/tools/matching-skills>



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RELATIONS WITH EU AGENCIES



3.1. COOPERATION WITH THE ETF

The collaboration of the two agencies has a long-standing tradition. Since its outset in 1997, the ETF and Cedefop have created synergies in areas that are relevant to both agencies, taking into account their different mandates, geographic scope and stakeholders. This has led to increased efficiency, economies of scale and increased service levels. The current framework (2018-20) aims at more structured cooperation in thematic areas and activities of common concern to stakeholders and regulatory functions.

In 2018, Cedefop and ETF experts were involved in events and activities of mutual interest. The two agencies continued working together on VET policies and systems, following the interim report presented in 2017 and preparing the final report that will be available in 2019. Coordinated work included joint papers and presentations informing ACVT and DGVT discussions.

Increased effort was also made to take forward international dialogue on qualifications frameworks, in close collaboration with the ETF and UNESCO-HQ and UNESCO (UIL). Work has started on the fourth edition of a national and global qualifications frameworks inventory that will be published in 2019.

The two agencies continued their collaboration on work-based learning and adult learning, also in the framework of the inter-agency working group on work-based learning together with the OECD, the ILO, UNESCO and other major international organisations.

In 2018, the ETF and Cedefop conducted two joint knowledge-sharing seminars. The Thessaloniki event (May) focused on skills and migration and on organising qualifications systems in the ETF partner countries. The Turin

event discussed Cedefop's work on big data analysis from online vacancies and the findings of Cedefop's analysis on European cooperation on VET since 2015. In 2018 the two agencies attended each other's Governing Board meetings, while the two agencies' Brussels liaison offices cooperated efficiently.



3.2. COOPERATION WITH EUROFOUND

Cooperation between Eurofound and Cedefop takes place in the framework of a collaboration agreement renewed in 2016. Activities of common interest are identified each year, based on early analysis of their respective work programmes. This helps structure knowledge exchange and expertise-sharing, avoid overlaps, and identify promising areas for close collaboration, such as in the European company survey.

In 2018, Cedefop and Eurofound continued to work together on the next round of the European company survey. The survey focuses on the link between company skills and business strategies – including the response to digitalisation – and how they affect business outcomes. The project leading to the survey started in 2017, the pilot took place in 2018, the fieldwork is planned for early 2019 and first results will be available in 2020. A steering group composed of members from both agencies' Governing Boards was appointed to monitor and steer the survey's progress. It met twice in 2018, in May and November.

In 2018, cooperation also took place on the future of manufacturing. Eurofound is in charge of the project and has sought collaboration with Cedefop to develop projections of employment under different scenarios for the future of the

sector. The Eurofound job/tasks analysis (from the European job monitor) was ‘plugged’ into the forecast to give insights into skills needed in the future under different economic and energy scenarios. Cedefop provided input and feedback on the scenarios developed by Eurofound, and monitored alignment with the standard set of projections. Eurofound participated in Cedefop’s event to release the new 2018 forecast and presented the results of these projections. A joint publication was released in 2018.

Additional activities in 2018 included participation in a cross-agency working group aiming at assessing the costs and benefits of creating a joint open science/open data repository. Exchange of information and expertise was initiated on the Agencies’ respective work on the platform economy and new forms of digital work.



3.3. COOPERATION WITH ENISA

In 2018, Cedefop continued cooperating with the European Union Agency for Network and Information Security (ENISA) in the framework of the service-level agreement (SLA) signed in 2017. The SLA enables both agencies to share and rationalise resources for mutual benefit. In 2018, the areas of cooperation included: ENISA provided legal advice to Cedefop, due to the discontinuation of an internal legal service in Cedefop in November 2017; both agencies cooperated in relation to negotiations with the Greek authorities to ensure a common approach regarding revisions of their respective headquarter agreements; and they launched a joint procurement for ICT helpdesk services.

3.4. COOPERATION WITH THE EU AGENCIES’ PERFORMANCE DEVELOPMENT NETWORK

In 2018, Cedefop continued to benefit from, and contribute to, the work of the EU agencies’ performance development network (PDN). The PDN

work directly supports the common approach of EU decentralised agencies to increase their cost-effectiveness, with emphasis on performance improvement and accountability. This is pursued through the development of a common set of principles for efficient and effective result-oriented management and the exchange of information and best practices.

In 2018 Cedefop contributed to several PDN activities. It participated in the meeting of the network in spring 2018 contributing to discussions on the EU agencies’ performance framework and shared its practices on quality management and key performance indicators through online surveys.

The exchange of ideas and practices with other EU agencies on topics of common interest has been beneficial to Cedefop. This was especially the case in relation to developing new qualitative indicators and a Cedefop user satisfaction survey expected to run in 2019. The PDN also provided a good forum for Cedefop to exchange views with its sister agencies Eurofound, the ETF and EU-OSHA on several topics of common interest.

3.5. COOPERATION WITH THE EU AGENCIES’ NETWORK

Cooperating with other EU agencies enables significant knowledge-sharing and efficiency gains. Cedefop systematically responds to inter-agency consultations, the results of which are, in turn, disseminated. Cedefop contributes actively to the sub-networks (meetings, work programme and outputs, knowledge sharing) and, in 2018, chaired the Information and Communication Technologies Advisory Committee (ICTAC) network. The Agency also participates in joint procurement actions when appropriate, particularly interinstitutional call for tenders. It is also common practice to share staff members for evaluation and selection committees (for procurement and recruitment procedures respectively).

MANAGEMENT, RESOURCES AND INTERNAL CONTROLS

Throughout the year, services have been delivered efficiently and effectively in support of Cedefop's core business. This is exemplified by the exceptionally high budget execution attained by the Agency in 2018: 100% execution rate of commitment appropriations and 99.9% execution rate of payment appropriations. The high rate of execution of commitment appropriations is achieved thanks to careful planning and prioritisation of expenditures and transfers, which are targeted to redirect available funds to the core business of the Agency.

In addition, to increase efficiency in administrative processes further, Cedefop is:

- (a) leveraging as much as possible on cross-agency collaboration, in the form of knowledge-sharing, service-sharing and participation in joint procurements;
- (b) making constant effort to re-engineer business processes, to reduce inefficiencies, simplify procedure and digitise processes;
- (c) striving constantly to reduce consumption of energy and other consumables to generate savings and reduce the Agency's environmental footprint.

To keep abreast of current requirements and legislation, Cedefop also continuously updates its knowledge and measures to offer its users secure IT systems and to raise staff awareness of the need to protect and handle personal data properly.

Since November 2017, Cedefop's legal advice function has been fully externalised. External sources for legal advice have increased in number, adding to the existing external private contractors (both *intra-* and *extra-muros*), three SLAs with DG HR and ENISA. In the absence of an in-house legal advisor since November 2017, internal activities are confined to the coordination and distribution of requests to the different external sources of legal advice.

Finally, Cedefop is an equal opportunity employer promoting an inclusive and results-

based working environment which is conducive to performance and excellence and where people are treated fairly, with respect and dignity.

4.1. MANAGEMENT AND RESOURCES

4.1.1. HUMAN RESOURCES

The establishment plan occupation on 31 December 2018 was 96%, i.e. above the 95% target.

Staff regulations implementation has progressed well. Following consultation with the Staff Committee and the agreement of the Governing Board, Cedefop opted out of the Commission implementing provisions on contract staff. A relevant model decision is under development. Cedefop received from the Commission four model decisions (function of advisor, middle management staff, learning and development, whistleblowing) which were consulted on with the Staff Committee and were adopted by the Management Board in the beginning of 2019.

A new learning and development strategy (2018-20) was approved in April 2018. A cross-department working group presented to the management an in-depth proposal for a cohesive training plan for expert seminars. A comprehensive and staged management development programme is progressing well.

The comprehensive action plan to the 2017 staff survey was finalised and its implementation is progressing well.

A call for new confidential counsellors was launched in June 2018 and the nominees have already participated in the first three of the six days of mandatory preparatory training for the role.

4.1.2. FINANCE AND PROCUREMENT

The finance and procurement service (FPS) focuses its efforts on simplifying and digitising workflows and tools in use. The main developments can be summarised as follows:

- (a) the automated report on procurement procedures progress was refined;
- (b) a paperless workflow for the reimbursement of expenses of staff going on mission (approximately 450 instances per year) was deployed in July 2018. The workflow builds on existing tools (Fibus and Livelink) and is aligned to the provisions of the revised *Guide on missions and authorised travel* which came in effect on 2 July;
- (c) the cost-benefit analysis on migration to Accrual Based Accounting (ABAC) was delivered to management in June 2018 by the designated project team. Based on the final results, and in consultation with the working group, Cedefop's management decided to migrate to ABAC in 2019 so as to have the system operational as of 2020;
- (d) Cedefop moved to e-tendering in autumn 2018 allowing tenderers to submit their proposals electronically;
- (e) collaboration with other institutions and agencies in the fields of joint procurement procedures (such as the ICT helpdesk services, joint with ENISA and led by Cedefop).

4.1.3. ICT

ICT infrastructures and services have been well maintained, ensuring maximum availability. A major activity of ICT is continuously to upgrade ICT security. In 2018, emphasis was placed on supporting security actions for the cloud-based services of operational departments (according to the IAS recommendation on web-based services), and participating in ENISA's Cyber Europe exercise.

4.1.4. FACILITIES

Facilities services have been delivered efficiently and effectively, ensuring that Cedefop staff works in good conditions meeting all health and safety requirements. A 2018 evaluation of Cedefop building maintenance concluded that these activities are carried out coherently, effectively and efficiently and that, considering the size of Cedefop's building, maintenance is ensured efficiently in comparison with other agencies.

4.2. AUDITS AND INTERNAL CONTROL

4.2.1. EXTERNAL EVALUATION

In April 2017 the Commission launched Cedefop's periodical external evaluation. The evaluation assessed Cedefop individually as well as in a cross-cutting perspective vis-à-vis the other Agencies falling under the remit of DG EMPL (Eurofound, ETF and EU-OSHA). The final report, the synthesis report and the executive summary of the cross-cutting evaluation of the four EU Agencies was transmitted to Cedefop on 11 April (note Ares (2018)1929597). The Cedefop-specific evaluation report was received on 13 June. The Commission's staff working document is expected in early 2019 and Cedefop will follow-up on resulting recommendations.

4.2.2. AUDIT RESULTS AND FOLLOW-UP OF AUDIT RECOMMENDATIONS

Cedefop's internal auditor is the Internal Audit Service of the European Commission (IAS) and the Agency is annually controlled by the European Court of Auditors (ECA). The Agency informs the European Parliament on the results of the audits at the request of the Discharge Authority.

Following each audit, Cedefop draws up an action plan for the implementation of all recommendations. Regular monitoring of actions is carried out by the Internal Control Coordinator. A consolidated action plan, updated at least biannually, is posted on Cedefop's intranet, accessible to all staff.

Cedefop is also following up closely on the recommendations received from the Discharge Authority.

In addition to the audits conducted by the IAS and ECA, Cedefop has developed several procedures and tools to allow systematic *ex-post* and *ex-ante* controls and evaluations; this helps ensure that the necessary control layers and actions are in place and implemented.

4.2.2.1. Court of Auditors (ECA)

On 9 October 2018 the European Court of Auditors published its report and Cedefop's reply on Cedefop's final annual accounts 2017 ⁽⁸¹⁾.

In the Court's opinion, the Centre's annual accounts 2017 present fairly, in all material respects, the financial position of the Centre at 31 December 2017. The results of its operations, its cash flows, and the changes in net assets for 2016 are in accordance with its Financial Rules and the accounting rules adopted by the Commission's accounting officer. The transactions underlying the annual accounts 2017 are legal and regular in all material respects.

The European Court of Auditors included in its report some comments on reliability of accounts, legality and regularity of transactions, particularly related to two recruitment procedures, and on sound financial management and performance.

On the annual accounts for the financial year 2018, the European Court of Auditors conducted an audit in Cedefop in the week from 19 to 23 November 2018. The desk review is being conducted in Q1 2019.

According to the new arrangements for the annual audits under Article 208 (4) and Article 107 of the new Financial Regulation, Cedefop contracted an external audit company (MAZARS) to audit Cedefop's accounts 2018, based on a DG BUDG framework contract. The external company audit took place in the week from 4 to 8 March 2019.

4.2.2.2. Internal Audit Service (IAS)

According to the IAS Strategic audit plan for 2017-19, the IAS conducted an audit on HR management and ethics. The IAS submitted the final audit report on 8 November 2018; it contained six recommendations (one ranked as 'critical', three as 'very important' and two 'important'). Cedefop prepared an action plan to address all recommendations which was agreed by the IAS in December 2018. All recommendations are being implemented according to plan.

Following the three recommendations (ranked as 'important') resulting from the previous IAS audit on web-based services in Cedefop, the action plan prepared by Cedefop was approved by the IAS on 12 January. Recommendations are being implemented.

4.2.3. OTHER SOURCES OF ASSURANCE

4.2.3.1. Ethics, integrity and internal control

As part of awareness-raising activities on ethics, integrity and internal control issues, Cedefop continues to provide regular mandatory sessions on good governance for newcomers and open to all staff. The sessions specifically address ethics, integrity and internal control issues. In 2018, the session was organised in the week 26 to 30 November 2018. Presentations on the dignity at work policy took place in the week 19 to 23 November 2018.

4.2.3.2. Evaluation activities 2018

Ex-ante evaluations were carried out in 2018 for procurement procedures above EUR 200 000. A report reviewing progress and lessons learned confirmed that the six calls for tenders launched in 2018 were compliant with regard to the requirement of *ex-ante* evaluation.

Cedefop carried out *ex-post* evaluations for projects/activities that ended in previous years and entailed a total budget expenditure of above EUR 500 000.

Ex-post evaluations for the year 2017 included the following activities:

- (a) development and maintenance services for Europass framework contract (201 2-FWC 2) (EUR 1 002 246.50);
- (b) building maintenance framework contract (2012-FWC 8) (EUR 646 470.16);
- (c) mid-term skills supply and demand forecast framework contract (2012-FWC 11) (EUR 1 527 379.00).

The final report was completed in September 2018 and the related action plan was finalised in October.

To increase efficiency and relevance, the number and scope of *ex-post* evaluations was reduced, focusing on a more limited number of activities to be evaluated in more depth to provide usable recommendations that can generate further improvement in key activities of the Agency. This approach takes into account the limited internal resources Cedefop can allocate to the exercise, and is in line with Article 9 (4) of Cedefop's financial rules, which stipulates that evaluations should be proportionate to the resources mobilised.

⁽⁸¹⁾ https://www.eca.europa.eu/Lists/ECADocuments/AGENCIES_2017/AGENCIES_2017_EN.pdf

Ex-post evaluations 2018 concentrated on two activities:

- (a) opinion Survey on VET (EUR 1 300 000);
- (b) PCO Services (EUR 900 000).

Cedefop will continue to closely monitor the implementation of the actions linked to Cedefop's environmental policy and more specifically with the green initiatives. Cedefop will also finalise its health and safety policy and will proceed with the implementation of the related action plan.

4.2.3.3. Audit activities 2018

As part of the *ex-post* controls plan, the report concerning the 2015 sample of ReferNet payments was completed in May 2018.

The five Cedefop payments selected at random by the Internal Control Coordinator will be reviewed by Cedefop's accountant who will check that all prescribed procedures have been followed and that the supporting documentation is in place and in line with Cedefop's financial rules. The report is expected by end of January 2019.

In line with its policy on 'Internal controls *ex-post*' of 18 December 2012 and the procedure for *ex-post* controls on procurements decided in 2016, in 2018 Cedefop carried out *ex-post* controls on a sample of its procurement procedures. A working group on *ex-post* controls was appointed on 6 October 2017. The *ex-post* control was performed with the help of an external contractor under the inter-agency framework contract managed by EFSA. The final report was delivered on 15 October 2018. The action plan to address the recommendations was finalised end of October 2018.

Following the decision in 2013 not to move to ABAC, Cedefop conducted annual internal technical reviews of the Agency's financial and budgetary operating platform (Fibus) in 2015, 2016 and 2017. All reviews confirmed that there is no immediate technological threat in Fibus. In January 2018 a project team was set up to perform a feasibility study for the migration to ABAC. The feasibility study assessed advantages and disadvantages of migrating to ABAC, including efficiency gains, time, cost, and implications for work organisation and workload during the transition phase. Based on the final results, and in consultation with the working group, Cedefop's management decided to migrate to ABAC in 2019 so as to have the system operational as of 2020.

Cedefop's anti-fraud strategy, adopted by the Governing Board in October 2014, came to an end

in October 2017. A revised strategy was prepared, based on the DG EMPL anti-fraud strategy. The revised anti-fraud strategy was approved by the Governing Board in January 2019 ⁽⁸²⁾.

In accordance with the revision of the Commission's Internal Control Framework (ICF), Cedefop revised its own Internal Control Framework and developed internal control indicators. The revised Internal Control Framework was adopted by the Governing Board in January 2019 ⁽⁸³⁾.

Cedefop has addressed all recommendations of the Discharge Authority for the financial year 2016 and reported to the Discharge Authority on the measures taken. Cedefop followed up closely the discharge procedure in 2018 and will inform the Discharge Authorities on the results of the audits in early 2019.

Cedefop closely followed up the evaluations and audit activities and kept Governing Board and Bureau members regularly informed.

⁽⁸²⁾ RB(2019)00110 of 28 January 2019.

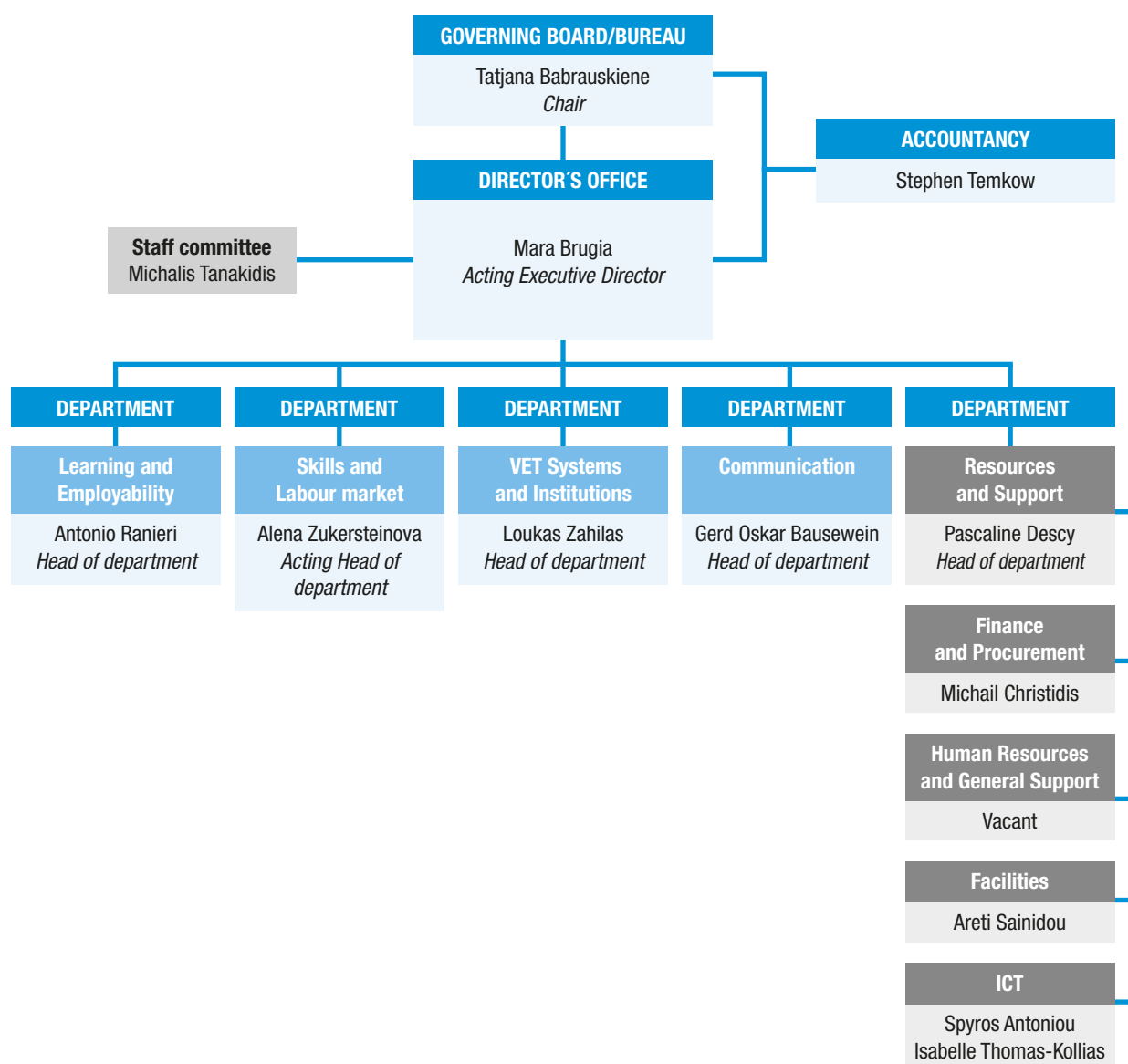
⁽⁸³⁾ RB(2019)00008 of 9 January 2019.

ABBREVIATIONS/ACRONYMS

ACVT	Advisory Committee on Vocational Training
DG BUDG	Directorate General for Budget
DG EMPL	Directorate General for Employment, Social Affairs and Inclusion
DGVT	Directors General for Vocational Education and Training
EAfA	European alliance for apprenticeships
EESC	European Economic and Social Committee
ECA	European Court of Auditors
ECVET	European credit system for vocational education and training
EQAVET	European quality assurance in vocational education and training
EQF	European qualifications framework
ESJS	European skills and jobs survey
ETF	European Training Foundation
ETUC	European Trade Union Confederation
ETUI	European Trade Union Institute
EU-OSHA	European Agency for Safety and Health at Work
HR	human resources
ICT	information and communication technology
ICTAC	Information and Communication Technologies Advisory Committee
IAS	Internal Audit Service of the European Commission
IVET	initial vocational education and training
ILO	International Labour Organization
LMI	labour market information
MEP	Member of the European Parliament
MPOs	mismatch priority occupations
NEET	not in education, employment or training
NQF	national qualifications framework
PDN	performance development network
PLF	policy learning forum
VET	vocational education and training

ANNEXES

I. ORGANISATION CHART SITUATION ON 31 DECEMBER 2018



II. SELECTED PERFORMANCE INDICATORS:

1 JANUARY TO 31 DECEMBER 2018

Selected performance indicators: MTPs 2017-20

Type	Indicator	2018
Cedefop is a key player in attaining EU policy objectives for VET, skills and qualifications		
	Mandates and assignments given to Cedefop in policy documents	7 new
	Policy documents on which Cedefop has participated in preparation of EU institutions	77
	of international organisations	14
	Contributions of Cedefop to policy-relevant meetings of senior stakeholders (active participation)	176
Cedefop is acknowledged and valued as a European source for evidence and information on VET and skills		
Cedefop value 2017-20	EU policy documents citing Cedefop's work	200
	Policy documents of international organisations citing Cedefop's work	99
	Downloads of Cedefop publications	345 000
	of which briefing notes	55 000
	Citations of Cedefop publications/studies in the literature	611
	Active participation in conferences and events	74
	Quality and expected impact of events organised by Cedefop	94%
	Website traffic	
	<i>Visits</i>	584 000
	<i>Unique visitors</i>	412 000
	<i>Page views</i>	1 347 000
	Media coverage, take-up of articles and press releases	573
	Facebook followers	12 084
	Twitter followers	7 530
	Europass outcomes among citizens	
	<i>Visits to the Europass website</i>	26.59 m
	<i>Creation of Europass CVs online</i>	22.17 m
	Skills Panorama portal traffic	
	<i>Users</i>	101 000
	<i>Sessions</i>	136 000
Cedefop is an efficient, well-run and compliant Agency providing a nurturing environment to a qualified and motivated staff		
KPIs for the Director	Rate of implementation of commitment appropriations (budget execution)	100,00%
	Rate of outturn (payment appropriations)	99,10%
	Rate of payments completed within the legal/contractual deadlines	98,89%
	Rate of accepted audit recommendations implemented within agreed deadlines	100,00%
	Percentage of establishment plan filled (including outgoing procedures)	96%
	from deadline for applications [date] to finalisation of selection board report to AIPN [date]	65
	from publication of vacancy notice [date] to decision of AIPN [date]	113

III. REFERNET



ReferNet, Cedefop's reference network on vocational education and training, was created in 2002 to meet the growing demand for comparative information on national VET systems and policies in the EU Member States, Iceland and Norway.

Each ReferNet member is a key national institution involved in VET-related issues, well placed to collect first-hand information from different stakeholders on VET's role, governance and structure.

ReferNet's annual work plans include:

- (a) reporting on national policy measures and actions countries have agreed to carry out. This input informs detailed country fiches and cross-country overviews of developments and helps build the evidence base for Cedefop's review of progress towards the 2015-20 deliverables agreed in the Riga conclusions within European cooperation on VET;
- (b) national news stories informing on the latest developments in VET and labour market issues in all partner countries. They complement the news in Cedefop newsletters;
- (c) *VET in Europe* country reports describing the key features of countries' VET systems in their socioeconomic contexts. They are validated at national level and peer-reviewed before being published on Cedefop's website and in hard copy for Presidency countries;
- (d) *Spotlight on VET* flyers summarising key features, challenges and developments of national VET systems; targeted at readers who need a concise introduction to a country's VET system. They are published online for all countries and in hard copy in several languages for Presidency countries;

- (e) country data on the state of play of mobility policies in initial VET. This input informs detailed country fiches and monitoring instruments within the framework of the mobility scoreboard, a tool for policy-making in learning mobility in initial VET;
- (f) thematic information on issues featuring high on the VET agenda of the EU Presidencies;
- (g) maintaining and updating national ReferNet websites, which helps raise Cedefop's visibility, its products and VET issues more generally in the Member States, Norway and Iceland. In this way, ReferNet partners act as multipliers and dissemination channels in their countries.

ReferNet activities are jointly financed by Cedefop and Member States annually under a four-year framework partnership agreement (2016-19).



 **AUSTRIA**

ReferNet Austria (ibw – Institut für Bildungsforschung der Wirtschaft; öibf – Österreichisches Institut für Berufsbildungsforschung)

www.refernet.at

 **BELGIUM**

IBFFP – Institut Bruxellois Francophone pour la Formation Professionnelle (Bruxelles Formation)

www.refernet.be

 **BULGARIA**

НАПОО – Национална агенция за професионално образование и Обучение

www.refernet.bg

 **CROATIA**

ASOO – Agencija za strukovno obrazovanje i obrazovanje odraslih

www.refernet.hr

 **CYPRUS**

ΑνΑΔ – Αρχή Ανάπτυξης Ανθρώπινου Δυναμικού Κύπρου

www.refernet.org.cy

 **CZECH REPUBLIC**

NÚV – Národní ústav pro vzdělávání
and

NVF – Národní vzdělávací fond

www.refernet.cz

 **DENMARK**

Professionshøjskolen Metropol

www.phmetropol.dk/refernet

 **ESTONIA**

HTM – Haridus- ja Teadusministeerium

www.hm.ee/et/refernet

 **FINLAND**

OPH – Opetushallitus/Utbildningsstyrelsen

www.oph.fi/tietopalvelut/

kansainvalinen_koulutustieto/cedefop/refernet

 **FRANCE**

Centre Inffo – Centre pour le développement de l'information sur la formation permanente

www.centre-inffo.fr/refernet

 **GERMANY**

BIBB – Bundesinstitut für Berufsbildung
www.refernet.de

 **GREECE**

EOPPEP – Εθνικός Οργανισμός Πιστοποίησης Προσόντων & Επαγγελματικού Προσανατολισμού
<http://www.refernet.gr>

 **HUNGARY**

NSZFH – Nemzeti Szakképzési és Felnőttképzési Hivatal
<http://refernet.nive.hu>

 **ICELAND**

Menntamálastofnun – The Directorate of Education
www.refernet.is

 **IRELAND**

SOLAS – An tSeirbhís Oideachais Leanúnaigh agus Scileanna
<http://www.solas.ie/refernet>

 **ITALY**

INAPP – Istituto Nazionale per l'Analisi delle Politiche Pubbliche
www.isfol.it/refernet-italia

 **LATVIA**

AIC – Akadēmiskās informācijas centrs
www.aic.lv/refernet

 **LITHUANIA**

KPMPC – Kvalifikacijų ir profesinio mokymo plėtros centras
www.kpmpc.lt/refernet

 **LUXEMBOURG**

INFPC – Institut national pour le développement de la formation professionnelle continue
www.refernet.lu

 **MALTA**

Ministry for Education and Employment
<http://education.gov.mt/en/refernet/Pages/main-page.aspx>

 **NETHERLANDS**

ECBO – Expertisecentrum Beroepsonderwijs
www.refernet.nl

 **NORWAY**

Diku – Direktoratet for internasjonalisering og kvalitetsutvikling i høyere utdanning
www.siu.no/ReferNet

 **POLAND**

IBE – Instytut Badań Edukacyjnych
<http://www.refernet.ibe.edu.pl>

 **PORTUGAL**

DGERT – Direcção-Geral do Emprego e das Relações de Trabalho
www.refernet.pt

 **ROMANIA**

CNDIPT – Centrul Național de Dezvoltare a Învățământului Profesional și Tehnic
www.refernet.ro

 **SLOVAKIA**

ŠIOV – Štátneho inštitútu odborného vzdelávania
www.refernet.sk

 **SLOVENIA**

CPI – Center RS za poklicno izobraževanje
www.refernet.si

 **SPAIN**

Fundación Estatal para la Formación en el Empleo
www.refernet.es

 **SWEDEN**

SKOLVERKET – Statens skolverk
www.skolverket.se/refernet

 **UNITED KINGDOM**

ECCTIS Ltd
www.refernet.org.uk

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