



2021

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 This decision was repealed in 2019 by Regulation (EU) 2019/128 establishing Cedefop as a Union Agency with a renewed mandate.

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Nadine Nerguisian, *Chair of the Management Board*



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FOREWORD

For Cedefop, 2021 was marked by a special occasion: the joint visit by Vice-President Margaritis Schinas and European Commissioner for Jobs and Social Rights Nicolas Schmit. An official Commissioner visit is always a highlight for any EU agency; two of them coming on the same day is a particular honour. Discussions with our high-level visitors reaffirmed that the research, analyses and evidence we provide and our forward-looking approach are highly relevant to EU-level policy-making and much valued. We are on the right path by pursuing our vision for vocational education and training (VET) and the strategy we had shaped jointly with our Management Board: proactive, enabling and learner-centred VET that caters for all, at any age, and acts as an engine for innovation.

Our ambition is to support EU policy objectives as the EU's trusted and reliable source for VET, skills and qualifications; inspiring policy, enabling policy learning and engaging stakeholders actively. Invitations to share our expertise and uptake of our findings in documents across economic and social policy areas, showing a particular need for sound, fast and targeted skills intelligence as a prerequisite for informed policy-making, demonstrate our success. We managed to remain ambitious and perform again very strongly, in the second year of the pandemic as well. This relates to our core activities as much as to administrative tasks, as proven by the 100% use of our budget and the clear bill of health we received from the auditors.

We are happy to see the high interest in, and uptake of, our evidence and findings throughout the year, and the readiness to help us develop it further. It was rewarding to experience the wide outreach of our virtual events and participants' engagement in reflections and discussions, despite the limitations posed by online formats. As an open-minded agency, listening to the voice of our users was important to us.

Engaging tripartite advisory groups with members of our Management Board to support studies on financial and non-financial incentives and microcredentials has proved particularly helpful. Taking account of our key stakeholders' views is crucial to ensuring that our work meets their needs. I would like to thank the members for their valuable contributions. Not to forget our networks in their dual roles as information providers and users, who help us contextualise our findings. The tools and features of our new

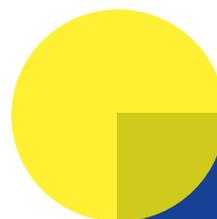
web portal, which I invite you all to visit, will act as additional antennae in the wider VET community.

2021 also brought good tidings in our relationship with Greece, Cedefop's home for more than 25 years. A new seat agreement will renew our mutually beneficial relationship in the interest of the EU.

It was the commitment and resilience of all staff that made Cedefop's success possible, whether they work on content, in support services or in management. I take this opportunity to thank them all whole-heartedly. Particular thanks go to the previous and current Management Board chairpersons, the members from the European Commission, governments and social partners, as well as the expert nominated by the European Parliament, for their continuous guidance and support.

'You help us make better evidence-based policies.' For us, this statement by Commissioner Schmit on the occasion of his visit together with Vice President Schinas, was more than simple kudos. It was a motivational boost for us all, to continue our ambitious work to the benefit of our stakeholders and, ultimately, to European citizens.

Jürgen Siebel
Executive Director





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CEDEFOP

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

In line with its vision and values, Cedefop's strategic areas of operation are:

- (a) shaping VET and qualifications:** improving transparency, relevance, quality of VET and qualifications by facilitating close interaction between IVET, CVET and general and higher education institutional structures;
- (b) valuing VET and skills:** responding to changing needs by promoting quality and inclusive lifelong learning policy, and relevant governance and institutional structures;
- (c) informing VET and skills policies:** producing evidence on skill trends and wide-ranging changes in the world of work to inform VET and skills development policies.

The multiannual objectives reflect the Agency's core functions:

- (a) produce innovative and forward-looking research and policy analyses to inspire policy-making and support well-designed policy implementation;
- (b) develop and maintain the knowledge base and the unique blend of expertise at the interface of VET and the labour market to sustain its role as the authoritative source for VET in Europe;
- (c) share skills, VET and policy intelligence, data, information, tools and perspectives and promote policy learning to foster partnerships in European VET and interactivity with our stakeholders;
- (d) focus corporate communication on increasing stakeholder engagement and outreach via social media, a more interactive web portal and online tools, data visualisations, e-publications, audiovisual material, webinars and other virtual/hybrid events.

The multiannual objectives steer the activities of Cedefop's annual work programmes and ensure continuity of its work, allowing for the necessary flexibility to respond to changing needs.

⁽¹⁾ [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.

CEDEFOP GOVERNANCE

The Management Board and the Executive Director share responsibility



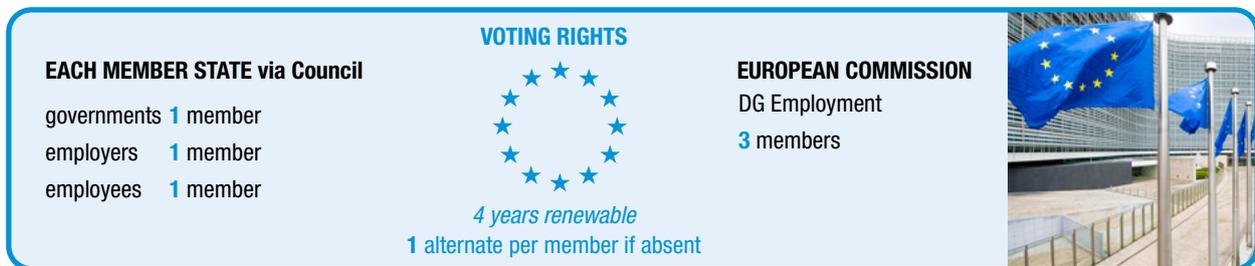
BUDGET SOURCES:

general Union budget,
Norway, Iceland

reports to  gives discharge 

EUROPEAN PARLIAMENT

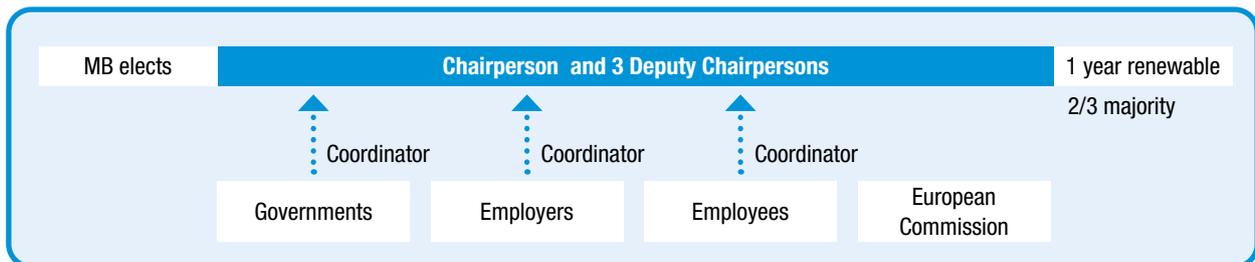
The Management Board mirrors the tripartite character of VET



© shutterstock/artjazz



How the Management Board works



Meet 1x/year

plus upon request of Chairperson, Commission, or 1/3 of members



Decision-making

simple majority if absent
→ voting rights to alternates



Adopts its own and the Executive Board's

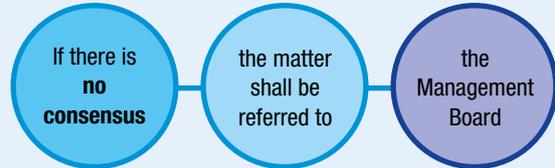
rules of procedure

The Management Board sets the strategic direction



The Executive Board works by consensus

- **discusses** planning documents and financial matters
- **prepares** Management Board decisions, may take provisional decisions if urgent
- **advises** the Executive Director in implementing Management Board decisions to reinforce supervision of administrative and budgetary management
- **monitors** follow-up of evaluation, audit, investigation findings, jointly with the Management Board



The Executive Board assists the Management Board



Each group may designate up to 2 alternates



Meet 3x/year plus upon request of Chairperson or members



Coordinators keep their group members informed

Extension by up to 3 members/group possible

if the Management Board so decides for meetings on strategic issues, particularly to prepare Management Board decisions

HIGHLIGHTS OF 2021

PERFORMANCE AT A GLANCE

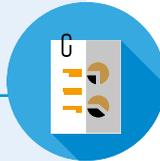
40 PUBLICATIONS

498 000 DOWNLOADS
INCLUDING COUNTRY-SPECIFIC
REPORTS



58 CONTRIBUTIONS TO EU-LEVEL
DOCUMENTS,
NOTABLY COMMISSION SWD ON
MICROCREDENTIALS,
TO INFORM THE SI PRESIDENCY'S
WORK ON THE ADULT LEARNING
AGENDA;

6 CONTRIBUTIONS TO DOCUMENTS BY
INTERNATIONAL ORGANISATIONS



34 MEETINGS
OF WHICH 1 POLICY LEARNING
ACTIVITY (PLA)

1 961 EXTERNAL PARTICIPANTS



542 REFERENCES TO CEDEFOP WORK IN
189 EU-LEVEL POLICY DOCUMENTS

317 REFERENCES TO CEDEFOP WORK IN
128 DOCUMENTS ISSUED BY
INTERNATIONAL ORGANISATIONS
(OECD, UNESCO, COUNCIL OF
EUROPE, ILO, IMF, WORLD BANK,
WHO/COMMISSION, UNICEF
ASSOCIATION OF SOUTHEAST ASIAN
NATIONS (ASEAN) WORLD ECONOMIC
FORUM, MIGRATION POLICY
INSTITUTE, IIEP)

164 CONTRIBUTIONS
TO MEETINGS THAT INFORM POLICIES
AND THEIR IMPLEMENTATION.

- ACVT and DGVT meetings, notably to the integrated monitoring of the implementation of the Council Recommendation on VET and the Osnabrück Declaration.
- Several meetings covering the thematic country reviews on skills governance in Slovenia and on upskilling pathways in France and Italy.
- EU Presidency on themes related to upskilling, reskilling and continuing training of adults.
- Meeting of the EEA Strategic framework working group on vocational education and training and the green transition, organised by the European Commission.
- Social partner event on financial incentives for research and development and skills investments (ETUC, BusinessEurope, SMEunited and SGI Europe).



WEBSITE TRAFFIC

306 000 WEBSITE VISITS (+23%),
968 000 PAGE VIEWS (+18%)



988 CITATIONS
IN ACADEMIC LITERATURE
2020-21



97% OCCUPATION RATE OF THE
ESTABLISHMENT PLAN



BUDGET IMPLEMENTATION RATE
100%

‘Cedefop is at the heart of European Union efforts to forge new skills and bridge the important skill gap that the pandemic has revealed’ said Vice-President Schinas addressing Cedefop staff. The joint visit by European Commission Vice-President Margaritis Schinas and European Commissioner for Jobs and Social Rights Nicolas Schmit was the highlight of the year for Cedefop. This high-profile visit emphasised the crucial role of skills and vocational education and training (VET) in the EU’s post-pandemic recovery and reaffirmed the significance of Cedefop’s research and policy support.

With the EU policy course, and specifically the objectives and targets for VET and skills policy already marked out, 2021 focused on following them up and taking the policy framework further. As in the past, Cedefop’s work contributed substantially to this process, particularly as regards the [VET Recommendation](#) and the [Osnabrück Declaration](#), the 2020 [European Skills Agenda](#) and the [European Pillar of Social Rights](#), and the [related action plan](#) endorsed at the Porto summit in May 2021.

Skills development has come into the focus of economic, industry, environmental and social policy-making within the EU and around the globe. Against this backdrop, our performance measurement again demonstrates the relevance and added value of Cedefop evidence and expertise to an array of policy areas and a large audience, beyond the wider VET community and the EU borders.

SCALING UP SKILLS INTELLIGENCE FOR BETTER POLICY AND PRACTICE

Sound information and intelligence is a prerequisite for optimising countries’ investment in skills; knowing which skills are required at which levels, in which areas, for whom, and how, is crucial. As advocated by Cedefop, strengthening skills intelligence has become one of the main pillars of the 2020 EU Skills Agenda and underpins policy approaches supporting the green and digital transitions. For this purpose, Cedefop has been scaling up its skills intelligence.

SKILLS INTELLIGENCE: MUCH MORE THAN JUST INFORMATION

As a compass devised by Cedefop, skills intelligence is much more than just data or statistics. It is the outcome of an expert-driven process of identifying, analysing, synthesising and presenting quantitative and/or qualitative information to anticipate labour market and skill trends.

No single data set, source or method provides all the answers. It is the analysis, synthesis, and interpretation of the combined data which provides added value and makes them meaningful for users.

Skills intelligence helps to:

- pinpoint demands in the labour market;
- assess current and future skill needs;
- address skill gaps and mismatches;
- adapt education and training policy and provision;
- provide customised education and career guidance and counselling.

Source: Cedefop.

2021 saw the kick-start of our next-generation skills intelligence activities. Building on over 10 years of experience in designing and applying cutting-edge labour market and skills analysis tools and methods for EU-wide anticipation and analysis of skill needs and supply, the next step is to make better use of their complementarities. ‘[Getting the future right](#)’, our flagship conference in the spring, showed how to maximise the potential of skills intelligence for policy-making in the context of the green and digital transitions and demographic trends.

TOWARDS SMARTER AND PEOPLE-CENTRED SKILLS INTELLIGENCE

‘Cedefop’s work is extremely important, since we will need to know what skills will be necessary in various growing sectors and various regions’, stated Commissioner Schmit in his opening speech of Cedefop’s conference ‘[Getting the future right](#)’.



This high-level event examined Cedefop’s skills intelligence work and looked for ways to strengthen it further. Discussions focused on priority areas for making next-generation skills intelligence more contextualised, timelier, transition-focused and more relevant to sectors, businesses and people. Engaging stakeholders prior to and throughout the event and the subsequent thematic workshops helped identify obstacles, gaps and opportunities.

A policy panel with representatives of the European Commission, Eurostat, Eurofound and the

EU social partners reflected on skills intelligence as a strategic policy tool; on the social partners’ role in sectoral skills intelligence arrangements; and on strong partnerships as a key success factor for effective skills intelligence.

Attended by over 230 participants from within and outside the EU, this interactive event was considered ‘inspiring’. High participation rates in the subsequent virtual workshops confirmed the topicality and relevance of Cedefop’s skills intelligence initiatives. The workshops discussed:

- how skills forecasts can be used for scenario analysis;
- which opportunities online job ads offer for (real-time) labour market and skills intelligence and the challenges they entail;
- how information on digital skills can be turned into digital skills intelligence;
- how skills intelligence can be made more fit for purpose, better customised and communicated.

Skills for the green transition and the need to link skill needs to suitable training and learning solutions were highlighted as major blind spots; these two themes have already translated into Cedefop initiatives.

The occasion of the conference was marked by the release of relevant materials: new data in Cedefop’s real-time labour market information platform, [Skills-OVATE](#), powered by big data and offered in cooperation with Eurostat; [research findings](#), a [concise overview of changes](#) induced by the pandemic; a series of [practical guides](#) to using Cedefop’s skills intelligence output effectively; and [hands-on information](#) on how big data can be used for skills policy.

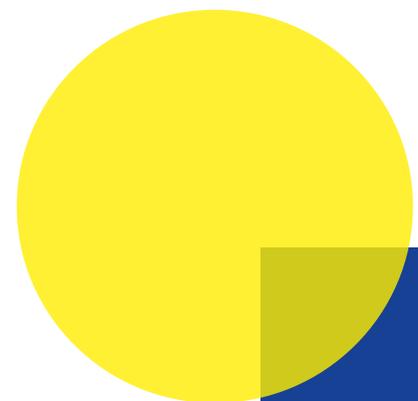
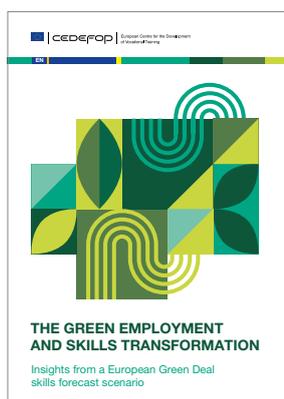


GOING GREENER RELIES ON SKILLS

Europe needs more and better ‘green’ skills intelligence. This is where conference participants identified a blind spot compared to the information available on the implications of digitalisation. To fill this gap, we have reinforced our long-standing work exploring trends towards a greener and more sustainable economy and its implications for VET, with a view to creating a Green Observatory in 2022.

A [skills forecast scenario](#) published at the end of the year illustrates the implications of the [Green Deal](#). It drives skills and training needs in all sectors. The scenario expects job growth in greening sectors, such as electricity and water supply, waste management and construction, while decline is expected to accelerate in mining and quarrying. In most of the other sectors, employment is likely to be redirected towards greener production without leading to significant net employment change. The services sector is among the many where indirect employment effects will be felt. According to the scenario results, achieving the objectives of the Green Deal does not rely only on high-skilled workers but could also alleviate progressive job polarisation. While this scenario provides a model-driven – albeit imprecise – image, it can help shape future-oriented VET, employment and skills policies.

Beyond green skills intelligence, it is essential to understand how VET can help citizens and enterprises to shape and manage the ‘new green paradigm’ and become greener itself. This issue was among the questions discussed at a Cedefop-OECD symposium in the autumn which focused on [apprenticeships for greener economies and societies](#). Apprenticeships allow young people to acquire occupation-specific ‘green’ skills and more general sustainability competences; but they also cater for adults who need to move from declining sectors to new jobs. The discussions were timely in view of the then forthcoming [European sustainability competence framework](#), to which Cedefop contributed, and the [planned proposal for a Council Recommendation](#).



APPRENTICESHIPS GOING GREEN

‘Apprenticeships, if designed well, bring about green innovation, green mindsets and green ambassadors’, according to Professor Gonon of the University of Zurich. This is one of the key take-aways from the 2021 joint [Cedefop-OECD symposium on apprenticeships](#). It explored the links between apprenticeships and the transition towards greener economies and societies and implications for policy-making.

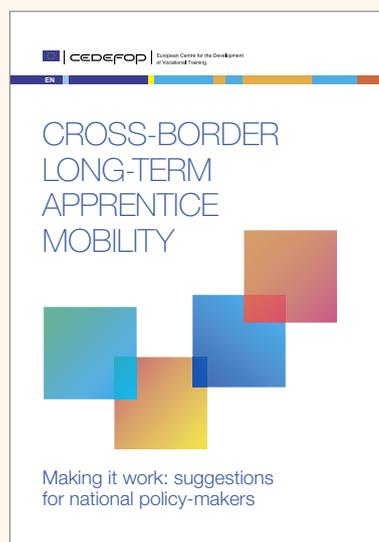
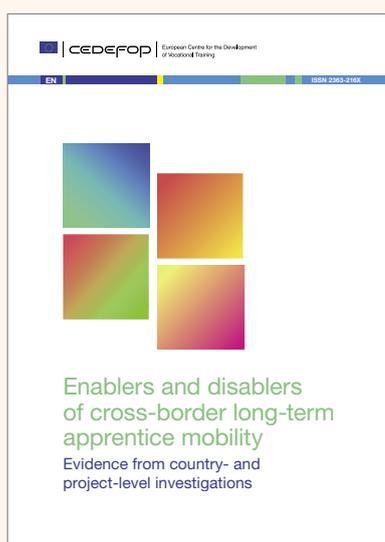
The event demonstrated how apprenticeships can be best designed for emerging green occupations and changing jobs, involving all stakeholders, particularly social partners and professional bodies. Given their proximity to the labour market and their dual learning venues, apprenticeships enable faster reflection of changes in production processes and technologies in learning outcomes.

Discussions focused on:

- (re)designing programmes to provide skills for ‘green jobs’;
- green apprenticeships for reskilling adults;
- learning venues conducive to developing sustainability-oriented occupational skills;
- green apprenticeships as systemic change agents.

Discussions at this second Cedefop-OECD joint venture on apprenticeships were informed by new research and analyses, as well as examples from practices in specific sectors. Representatives of companies, workers, apprentices and training providers shared their perspective with 160 participants, including policy-makers, practitioners and researchers, from around the world.

They stressed a need for sound skills intelligence, specifically to help small and medium-sized enterprises understand training needs. Experience suggests that green apprenticeships reskilling adults could be a way to address the gender balance issue in sectors which tend to be less attractive to young women. Speakers emphasised the crucial role of social partners, and social dialogue more generally, as well as a need to listen to the voices of apprentices when (re)designing apprenticeships. Considering the youth-led climate and environment movements, and young people’s increasing interest in working in related jobs and sectors, ‘green apprenticeships’ could help to make this type of training more attractive.



The keynote speaker’s view of apprentices as ‘greeners’ fits Cedefop’s vision of proactive VET that is not simply responsive but empowers learners to shape the future.

A FRESH LOOK AT LONG-TERM MOBILITY FOR APPRENTICES

While greening apprenticeships is a comparatively new theme, raising the share of apprentices in the Erasmus+ generations has been on the agenda for a long time. However, stays abroad in apprenticeships are still limited. Long-term mobility is a challenge for apprenticeships due to the specificities of blending education and employment.

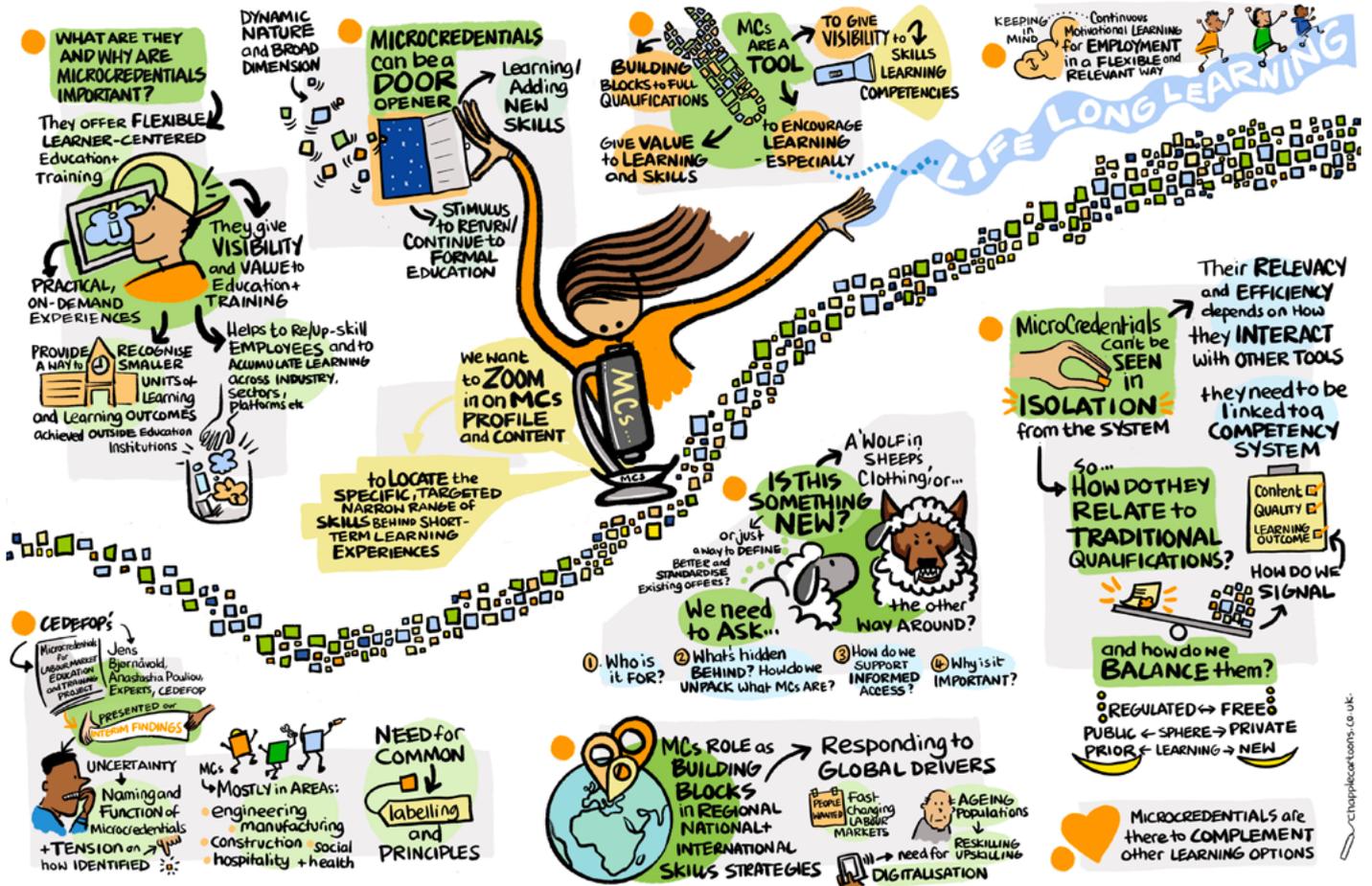
The 2020 policy framework has re-emphasised mobility in VET as one of the priorities and raised the previously set target. With the current Erasmus+ cycle, mobility opportunities for VET learners have doubled. Against this backdrop, Cedefop conducted a [study](#) to identify obstacles to long-term apprentice mobility. It shows that there is a long way to go to create demand, among employers and apprentices and their parents. To support policy-making, a [concise paper](#) points the way forward. It suggests starting at sectoral level and using short-term mobility as stepping stones for the long-term option. As a result, the French Presidency invited Cedefop to contribute to its event to mark the 35th anniversary of the Erasmus+ programme.

FOCUSING ON MICROCREDENTIALS

Many see considerable potential in microcredentials as a tool for supporting up- and reskilling within the EU's recovery measures, along with their focus on a green, digital and just transition. They are considered by many as a new way for people to 'stack' learning flexibly according to their needs. Given the variety of providers and formats in which microcredentials are offered, and the lack of common definition and standards, the Commission has proposed a common EU approach.

As related research and initiatives mainly focus on higher, academic education, Cedefop has taken a closer look at the use of microcredentials in and for labour market-related learning. This has been the first step in a [comprehensive study](#). Interim findings were discussed at a virtual [conference](#) at the end of the year, which demonstrated the global appeal of this theme.

MICROCREDENTIALS FOR VET AND LABOUR MARKET LEARNING



Uncertainty among VET stakeholders about the name and function of microcredentials, as well as questions of trust: these study findings kicked off the debates at Cedefop's conference in November 2021.

The event looked at microcredentials from a global perspective, as independent building blocks in national and international skills strategies. With 240 participants from 40 countries, it was a world-spanning audience. Speakers included representatives of the European Commission, the European Students' Union, the OECD, UNESCO and the ETF. Participants agreed that microcredentials can be tools to:

- give visibility to the outcomes of short and on-demand learning experiences;
- give value to such learning, knowledge, skills and competences;
- encourage learning and motivate individuals to develop from a lifelong and life-wide perspective.

Several participants from European organisations and countries considered that a 'quality seal' is important to strengthen trust in such credentials.

A major aim will be to understand whether we are observing a revolution in the way learning is being valued or whether microcredentials is just a new name for something that has existed all along in different shapes and guises.

This research also contributed to the Commission's work on a proposal for a Council recommendation, which was presented at the end of the year. To support our further work on the role of microcredentials in helping people accumulate learning across VET, sectors, industries, borders and lifespans, we have set up a tripartite sounding board with members from Cedefop's Management Board.

STIMULATING ADULT LEARNING SUPPORT

An advisory group of Board members also accompanied our work in the context of the Commission's initiative on [individual learning accounts](#), one of the financial instruments for adults and enterprises to engage in training activities presented in the forthcoming update of our comprehensive online database.

The updates and related Cedefop studies helped inform the Commission's work and a high-level forum of over 800 participants opened by Commissioner Schmit. Cedefop's expertise enriched the debate on the learning account concept and on similar instruments. Invitations to share findings and contribute to discussions on ways of financing adult learning throughout the year included several events organised by the European social partners.

It takes coordinated approaches to make support policies for CVET/adult learning more effective. Practising what we preach, we reinforced the links between our strands of work on financing VET/adult learning, lifelong guidance, and validation of non-formal and informal learning. Cooperation with the Commission in this context included helping to prepare the update of the European validation guidelines to be released in 2022.

Validation and guidance need to go hand in hand. Many EU Member States have linked public employment services, enterprises and education providers in order to benefit users. Working towards comprehensive lifelong guidance systems, they have also integrated advanced skills intelligence resources. Closely collaborating with its [CareersNet](#), Cedefop has been monitoring the development of these systems, particularly the broad introduction of [ICT-based services](#). In 2021, work focused on [guidance practitioners'](#)

[changing roles](#), (digital) competences, skill needs and continuous professional development.

These learning support measures matter particularly in coherent upskilling pathway policies. Cooperation with [France and Italy](#) to review their approaches to empowering adults through upskilling pathways has been a further step in Cedefop's support to implementing the related [Council Recommendation](#). How to encourage employers to invest in inclusive skills development was one of the main questions discussed at a [joint seminar with the Slovene Presidency](#). Earlier in the year, evidence from our research and analyses had contributed to their [conference](#) and their work towards the [renewed agenda for adult learning](#).

PARTNERSHIPS FOR ADDED VALUE

Joint commitment and cooperation have underpinned the systematic approach to working on [common priorities for VET initiated 20 years ago](#). From the outset, Cedefop has contributed to this joint effort by Member States, associated and candidate countries, European social partners and the Commission. Work in 2021, the first year of the new VET policy cycle, was dedicated to shaping a revamped approach suited to the new policy context and our extended mandate to monitor the VET Council Recommendation and the Osnabrück Declaration, together with [ReferNet](#) and the [ETF](#). The new approach will be put to the test in 2022.

Pooling resources and expertise translates into more effective services, as our collaboration with Eurostat and Eurofound on skills intelligence and mismatch demonstrated once again. Along with co-authoring publications with Eurofound, we jointly coordinated a survey within the EU Agencies Network on Scientific Advice, to map activities that address the socioeconomic effects of sustainable development and demonstrate how this expertise could support the implementation of the European Green Deal.

Providing effective services and relevant products also means listening to users' needs and tapping their expertise. The activities presented in this report demonstrate our close cooperation with ReferNet, our thematic networks, with researchers, experts and practitioners to reinforce the relevance of our work. The 2021 highlights showcase the involvement of our key stakeholders – the

European Commission, governments and social partners – at critical junctures of our research and policy analyses.

INTERACTING WITH THE VET COMMUNITY

Conducting forward-looking research and generating up-to-date and sound evidence on VET, skills and qualifications is not enough. Results and findings also need to be communicated to the VET and skills community.

Our new-generation web portal, launched in autumn 2021, empowers users to interact with our online content in new ways that suit their needs. Thematic entry points, reflecting our strategic vision of VET, bring together related data and content from across Cedefop's portfolio. This approach is supported by access points to national VET systems and statistics, which help contextualise the information. User-friendly dashboards, online tools and target-group-specific data visualisation complement the easy access to publications and events, country-specific findings, statistical overviews and indicators, and news, videos and podcasts.

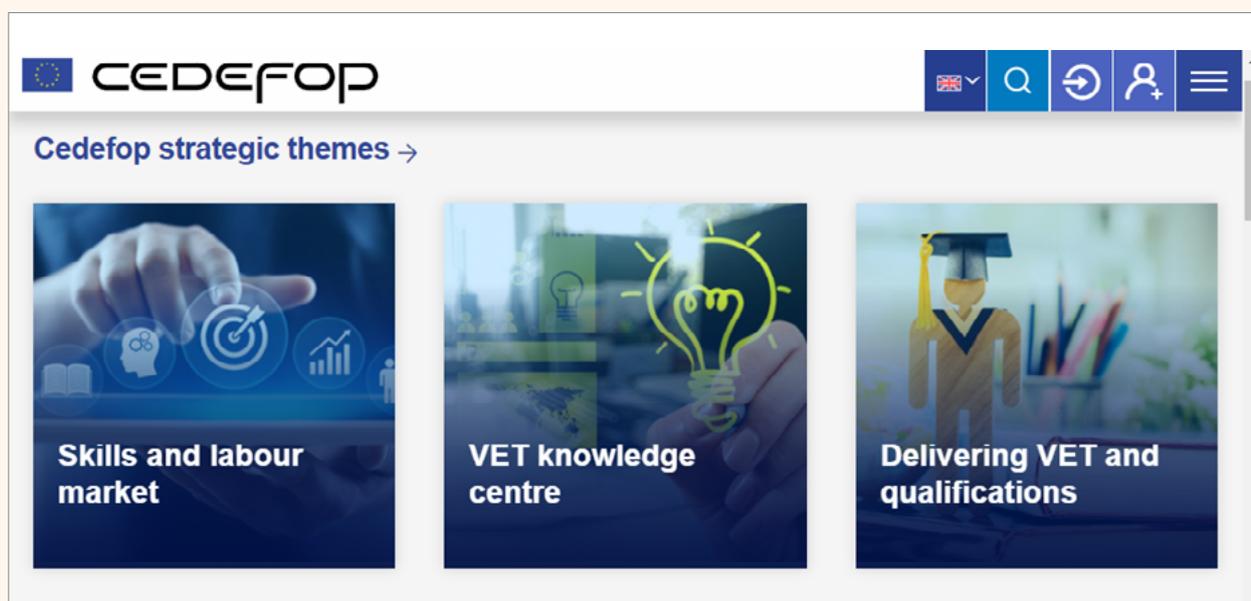
TAKING USERS ON AN INTERACTIVE JOURNEY

2021 was the year of [Cedefop's new web portal](#), a cloud-based solution with a strong focus on data visualisation, online tools and cross-thematic interconnectivity.

The new portal is built on an innovative multi-layer information structure. The three access points guide users to interactive, target-group-specific and theme-related research outcomes. They include qualitative and quantitative data, online tools and data visualisation.

The new portal also features new tools complementing those already available in the past:

- the [NQF online database](#), which enables cross-country and cross-qualifications comparisons;
- the section [Skills intelligence](#) with selected data and dashboards of the former Skills Panorama website;
- the [VET toolkit for NEETs](#), which complements the toolkit for tackling early leaving;
- [Key indicators on VET](#), which enable dynamic graphs based on 36 indicators.



AGILE AND RESILIENT

Remaining flexible and resilient was our motto through the second year of the pandemic. Our crisis management plan again proved successful. Minimising the health risk for staff and ensuring their wellbeing remained our priority. This included access to psychological support and, in cooperation with the national authorities, to vaccination for non-Greek staff members and their families. Based on its (de)escalation strategy, mode of working and protection measures were adapted to suit the fluctuating epidemiological situation and rules issued by the Greek authorities. Accordingly, working remotely remained common practice throughout the year. At the same time, Cedefop remained an active member of the EU Agency advisory group that accompanies their pandemic-induced crisis management. Notwithstanding the challenging situation, we both implemented and exceeded our work programme objectives and, again, fully used our budget, i.e. 100% implementation rate.

Fully committed to the EU agencies' joint priorities to act as role models for administrative excellence and forerunners for sustainable management, we continued supporting and making use of initiatives to share capabilities and resources; this was particularly so with ENISA, also located in Greece, for data protection and confidential counsellors. In steps towards a comprehensive greening strategy, we reduced print publishing further and continued digitalising our work processes, as well as harmonising our IT landscape with that of other EU agencies and institutions.

All Cedefop events were conducted online. While fulfilling its work programme – and more – Cedefop also adapted flexibly to meet the unanticipated high interest in some of its events. With more than 230 participants each, the microcredentials and skills intelligence conferences attracted far more participants than we could have hosted on-site. In total, the number of participants in our events was 30% higher than in 2019. Despite the drawbacks of virtual events, which mostly relate to lack of networking opportunities, this success points the way forward and demonstrates how Cedefop can extend its outreach even further.

PERFORMING STRONGLY AGAIN

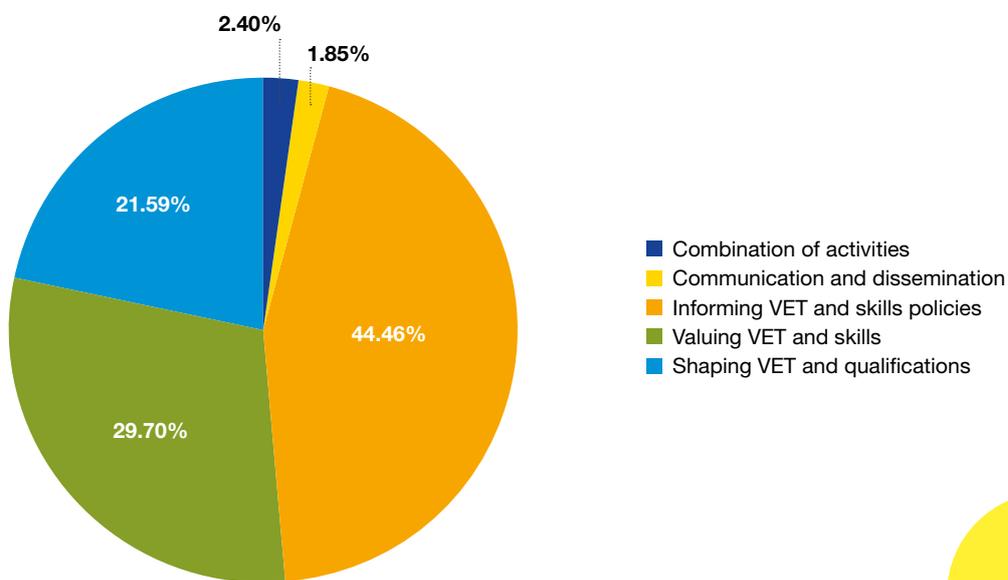
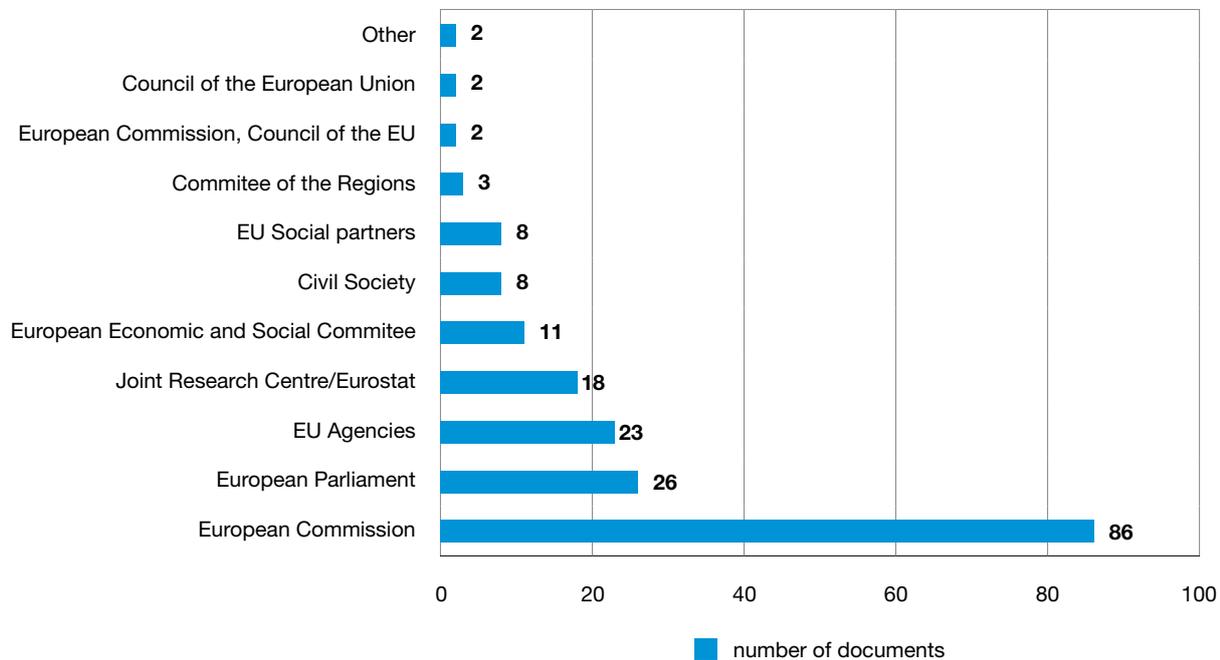
A 23% increase in visits to our web portal, 8% more Facebook likes and 11.25% more Twitter followers, and the new systematic use of LinkedIn, also signal a broader outreach. Cedefop's social media accounts had been among the top 10 influencers in the #EU Vocational Skills social media campaigns organised in previous years, according to a [Commission study](#) released in 2021.

Uptake of Cedefop work in academic literature – fee-based and open access journals – increased by 3.5%. Citations relate to several strands of Cedefop work: from the impact of the pandemic, skills mismatch, skills intelligence including early leaving from education and training, validation and learning outcomes to qualifications frameworks and country-specific information. As well as journals specialising in VET and education sciences, our work is also used in articles on economics, industry and IT-related themes, and tourism.

This mirrors the trend that has been evident in EU- and international-level documents for several years. Climate and energy, industry, taxation, gender equality and care were among the themes addressed by the 189 EU-level policy documents, studies and reports that drew on Cedefop work; also included were adult learning, education in general, skills imbalances and employment. These documents included fewer references than those that were more closely linked to our core business, such as the Commission's [impact assessment report](#) on individual learning accounts or the staff working document on [putting the framework for quality and effective apprenticeships into practice](#). Several documents by the Council, the Commission and the European Parliament acknowledged and suggested using Cedefop's expertise and potential further.

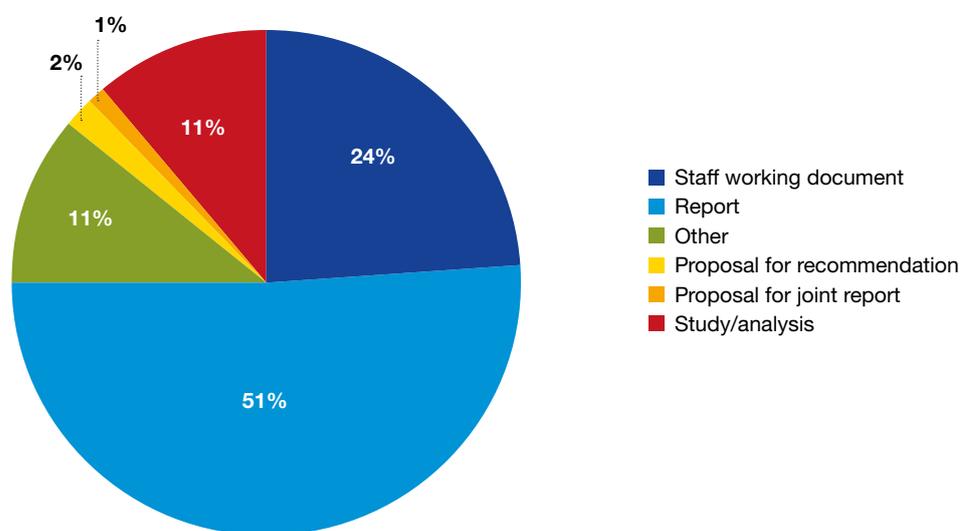
Out of the 542 references in total, over 44% related to our work on informing VET and skills policy, confirming the trend of previous years. Around half of this share was based on our skills intelligence work, 6% related to our work on green skills. Commission documents on skills imbalances accounted for 20%, those by our sister agencies for over 16% of Cedefop work on skills and the labour market. Reflecting the focus of policy-making in 2021, valuing VET followed suit with nearly 30% of all references; 9% of these were used in documents by social partners, specifically in the [Skills, innovation and training](#) report.

Figure 1. EU institutions and EU-level stakeholders using Cedefop work, 2021



NB: 'Other' includes the European Investment Bank and the European Security and Defence College.
 Source: Cedefop's performance measurement system.

Figure 2. Type of European Commission documents citing Cedefop work



NB: 'Other' include, for instance, communication, policy briefs, discussion papers.

Source: Cedefop's performance measurement system.

CEDEFOP EXPERTISE AND POTENTIAL REFLECTED IN EU-LEVEL DOCUMENTS

- The [Council Resolution on a new adult learning agenda](#) proposes to take advantage of Cedefop's information and research for analysing adult learning and building evidence for adult learning policy.
- The Commission [proposal for a Council Recommendation on individual learning accounts](#) refers to their intention to use Cedefop expertise.
- The [Commission staff working document accompanying the communication on the European Pillar of Social Rights action plan](#) acknowledges that the pillar is reflected in Cedefop's strategy and refers to its analytical frameworks, toolkits and instruments in all strands of its work.
- In its study on [guidelines for foresight-based policy analysis](#), the European Parliament refers to Cedefop as one of the relevant agencies in this field.
- In her [Report on strengthening EU social dialogue](#), Andrea Nahles, former Labour Minister of Germany and Special Advisor to Commissioner Schmit, highlighted the potential role of the tripartite EU agencies:

'[...] social partners should hold debates on the future of work more often [...] and] decide how such forward-looking dialogues could be promoted. [...] the relevant existing tripartite EU agencies (Eurofound, CEDEFOP, and EU-OSHA) could play a useful role here. Social partners could propose including forward-thinking dialogues of this nature on social dialogue in future work programmes [...].'

Source: Cedefop's performance measurement system.

Once again, the European Commission was the top user of Cedefop work. The uptake of Cedefop evidence and findings in EU-level documents also reflect our contributions to policy-making in its preparation phase, be it through written contributions to papers or through presentations in dedicated events. Besides the Council Resolution on a new adult learning agenda and the Commission proposals for microcredentials and individual learning accounts with accompanying documents, examples include the [Eurydice report on adult education and training in Europe](#) and country-specific information for the 2021 [Education and Training Monitor](#).

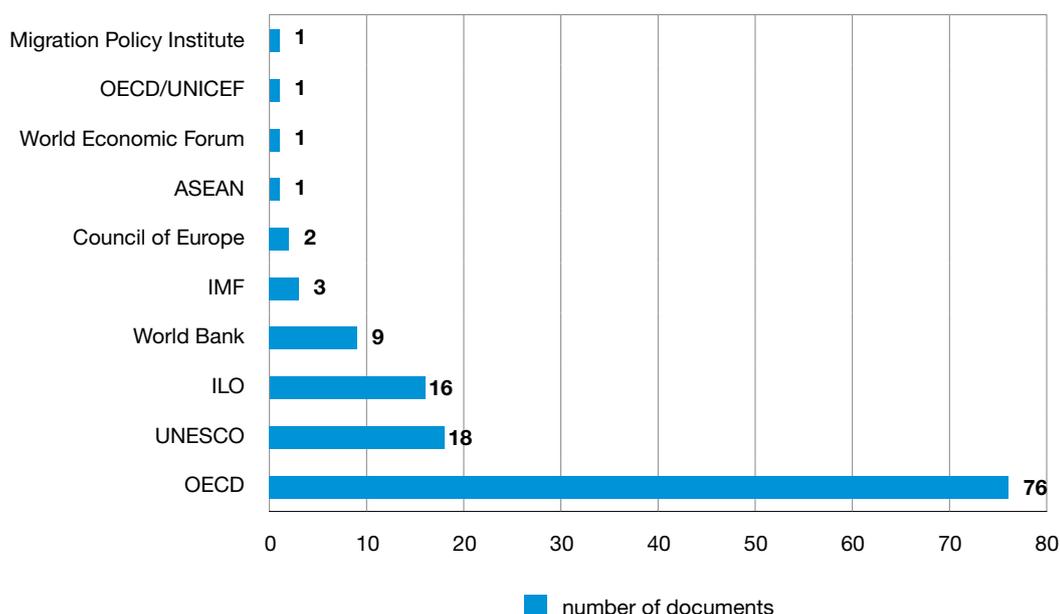
Among international organisations and bodies, the OECD was again the top user of Cedefop work, with UNESCO and the ILO following suit. With 317 references, take-up was substantially higher than in 2020. Allocating Cedefop evidence and findings to our thematic strategic areas of operation, we see a similar distribution as in the EU policy documents, with our work on skills and the labour market, i.e. informing VET and skills policies, again in the lead with over 45%.

As in the past, Cedefop contributed substantially to Commission working groups, and events that support policy-making and implementation. The high-level forum on individual learning accounts is

particularly noteworthy, as it attracted 800 participants. Cedefop speeches also informed the adult learning conference, a joint event by the ILO, the European Alliance for Apprenticeships, and the Slovene Presidency, which attracted large audiences. As in the past, we supported the EQF advisory group as well as the meetings of the Advisory Committee and Directors General for VET. We also contributed substantially to background notes for these events.

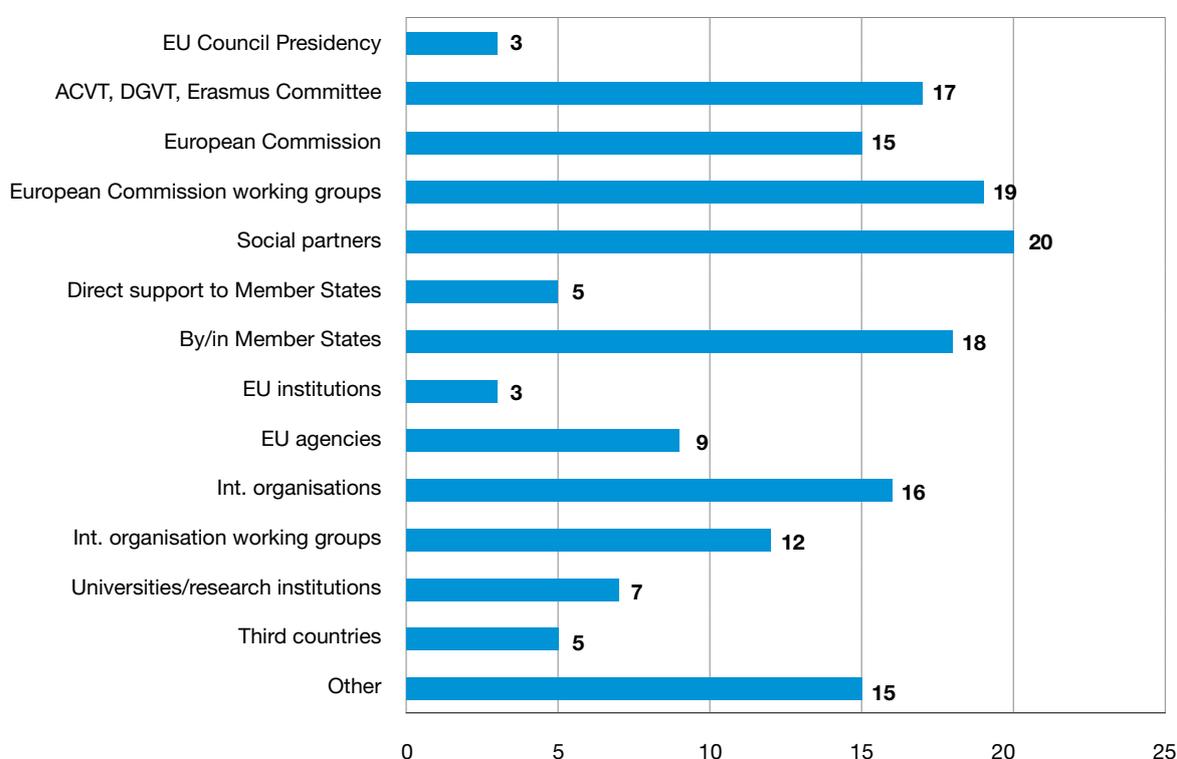
Cedefop was also invited to share its experience at a range of events on lifelong learning, skills and labour market intelligence, mismatch as well as jobs and skills for innovation and the green transition. This included events by the European Committee of the Regions and EU-level and national social partner organisations. Cedefop contributed to a range of national events in different Member States, in several cases organised by universities. This included a contribution via video on the occasion of the [50th anniversary of the Loi Delors](#) dedicated to continuing training organised by our French partners. International events were mostly organised by UNESCO, the ILO and the OECD. The highest shares of contribution were based on our work on labour market and skills intelligence and the European tools, followed by the support to lifelong learning through guidance, validation

Figure 3. International organisations using Cedefop work, 2021



and incentives. Our direct support to Member States through thematic reviews focused on skills governance and upskilling pathways. Overall, over 30% each related to our work on valuing VET and skills and shaping VET and qualifications, 25% to informing VET and skills policies; the remaining contributions drew on a combination of activities from our portfolio.

Figure 4. Contributions to meetings that inform policy and implementation by organisers, 2021



NB: 'Other' includes, for instance, meetings with Commission colleagues.

Source: Cedefop's performance measurement system.

RESULTS ACHIEVED

2.1. OPERATIONAL ACTIVITY: SHAPING VET AND QUALIFICATIONS

PERFORMANCE

117

REFERENCES
IN EU POLICY DOCUMENTS



For example:

- Proposal for a Council Recommendation on a European approach to microcredentials for lifelong learning and employability
- Commission staff working document: Education and Training Monitor 2021
- Education and youth in post-COVID-19 Europe – crisis effects and policy recommendations from the European Parliament

53

CONTRIBUTIONS
TO MEETINGS THAT INFORM
POLICIES AND THEIR
IMPLEMENTATION



For example:

- DGVT webinar on the preparation of the national implementation plans
- Meeting organised by the Danish Industry on the future of the Danish VET system
- Meetings of the inter-agency advisory group on technical and vocational education and training (IAG TVET) working group
- Meeting organised by the Greek Employers confederation – Research Institute (IME GSEVEE) on continuing VET: *The key factor for SMEs' sustainable growth – new challenges and strategies*
- Several meetings on microcredentials organised by the OECD and UNESCO

40

CONTRIBUTIONS
TO EU-LEVEL DOCUMENTS AND 1
CONTRIBUTION TO DOCUMENTS BY
INTERNATIONAL ORGANISATIONS



For example:

- Integrated approach to monitoring the implementation of the VET Recommendation and the Osnabrück Declaration
- Country fiches for the Commission's 2021 Education and Training Monitor
- Joint documents with the Commission in the context of the EQF advisory group, including (updated) NQF-EQF reports by France, Albania and transversal skills and competences

TOP PUBLICATION
DOWNLOADS:



- Briefing note – *The hidden potential of level 5 qualifications* (7 463)
- *Vocational education and training in Romania* (4 166)
- *Vocational education and training in Italy* (3 308)
- *Defining, writing and applying learning outcomes* (3 066)

Work under this strategic area of operation in 2021 focused on: monitoring and analysing VET policy developments; implementing European tools and principles for transparency and recognition of qualifications and credentials; and deepening the understanding of the future of VET.

MONITORING AND ANALYSING VET POLICY DEVELOPMENTS

An integrated monitoring approach for VET priorities

2021 was an important year for the new cycle of monitoring implementation and analysing national VET systems and policies. In 2020 the [Council Recommendation on VET](#) invited the European Commission to 'ensure qualitative and quantitative

OSNABRÜCK DECLARATION
on Vocational Education and Training as an
ENABLER of RECOVERY and just transitions to
DIGITAL and GREEN ECONOMIES



ILLUSTRATION CREATED AS PART OF THE 18TH REFERNET ANNUAL MEETING - 2-4 DECEMBER, 2020

Chapple.cartoons.co.uk

monitoring in line with the common objectives' and 'report to the Council on the implementation of the recommendation every 5 years, building on data available at national and European level and annual monitoring by Cedefop'. The **Osnaabrück Declaration** also reaffirmed the role of Cedefop and the ETF in the process of European cooperation on VET and asked them to monitor implementation of the agreed actions and report annually to the ACVT and DGVT.

In line with the broader mandate received, and responding quickly to the ACVT conclusion in December 2020, which entrusted Cedefop with the combined VET monitoring exercise, Cedefop successfully designed, in cooperation with the ETF and the European Commission, a comprehensive

integrated approach to report on and monitor the two policy documents. The approach includes precise guidelines for the participating countries up to 2025. In cooperation with the ETF, Cedefop drafted a proposed structure for the national implementation plans (2). This proposal was agreed at the ACVT meeting in June and the DGVT meeting in October. In November, Cedefop organised, in cooperation with the European Commission and the ETF, a webinar to support Directors General for VET on the preparation of their national implementation plans.

ReferNet is a key Cedefop partner in the integrated monitoring approach and continues to be the main source of information on the latest national policy developments on the agreed EU priorities. Cedefop organised dedicated workshops with ReferNet national representatives (3) and ReferNet national partners to discuss



(2) National implementation plans are a formal requirement in the Council Recommendation on VET to be developed by countries until May 2022. They will include brief information on the national context and baseline, challenges and general objectives of the plan, detailed description of measures, governance of the implementation of the plan, and expected effects of the plan.

(3) ReferNet national representatives are nominated by the government to support ReferNet work in their countries,

the new themes, align tools and processes with the forthcoming national implementation plans, and identify challenges in implementing the integrated monitoring. The last of these requires a comprehensive overview of national policy developments on VET, skills and qualifications, considering also the countries' reporting for the European Semester, their recovery and resilience plans and the social pillar action plan. The new working method will be piloted in 2022.

Country-based information

In 2021, Cedefop continued supporting policy implementation with country-based evidence and analysis. It drafted 27 country fiches on the latest developments in VET, with a special focus on education, resilience and wellbeing. These fed directly the Commission's annual publication on policy measures in education and training, the [2021 Education and Training Monitor](#).

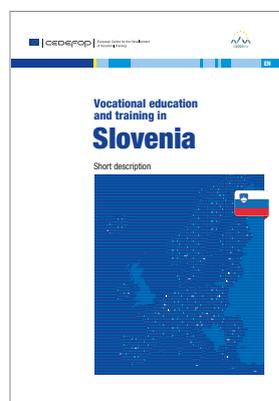
As part of the new integrated monitoring approach, Cedefop piloted country policy briefs on the main policy developments related to the national priorities. It also carried out an *ex-ante* evaluation ⁽⁴⁾ of the data visualisation tool 'Timeline of policy developments' to ensure that the tool is fully aligned with the information needs of national stakeholders involved in designing and/or implementing VET policies. The country policy briefs, and the 'Timeline of policy developments' will be made available in 2022 and updated annually to inform relevant EU monitoring and reporting processes.

Some 95 [national news items on VET](#), provided by ReferNet and edited by Cedefop, confirm that national and EU-level priorities are closely related, and illustrate the variety of policy approaches used across the EU. Countries examined the impact of the COVID-19 pandemic on learner wellbeing and the learning process ⁽⁵⁾ and are looking for effective policy responses. Others are finding ways to integrate digital and green skills in VET for a smooth transition to a low-carbon economy and a

sustainable society ⁽⁶⁾. National news items informed several Cedefop activities and were published in the Cedefop [Skillset and match magazine](#).



For the Portuguese and Slovenian Presidencies [short descriptions](#), [spotlights](#) and [videos](#) on VET systems were released in time to inform DGVT and other stakeholder meetings across the EU. In addition, and in cooperation with ReferNet, Cedefop prepared updated descriptions of VET systems in the EU, Iceland and Norway. A special edition, [Spotlights on VET in Europe: 2020 compilation](#),



including validating, on behalf of the national government, information prepared by the national ReferNet partner.

⁽⁴⁾ 250 people contributed to the *ex-ante* evaluation including representatives of ministries (education and labour) and other public bodies dealing with VET policy-making and implementation, academia, social partners and other data users.

⁽⁵⁾ See for example [Croatia: survey confirms impact of COVID-19 pandemic on education](#), [Netherlands: coronavirus impact on Dutch VET: the worst still to come?](#) and [The Vienna training alliance model – Aid for companies in the COVID-19 crisis](#).

⁽⁶⁾ See for example [Spain: supporting sustainability and green skills in the construction sector](#) and [Luxembourg: 'The future is SMART' campaign](#) and [Latvia: new momentum for green approaches in VET](#)

was published in May, offering a concise overview of VET systems in the EU-27, Iceland and Norway, including latest challenges and policy responses, and graphic system presentations with key features allowing cross-country comparison. This edition includes a set of statistics on key aspects of VET in the EU-27+ countries, including: share of upper secondary learners in vocational and general education programmes; participation of adults in lifelong learning; early leavers from education and training; and employment rates of young graduates.

Embedding entrepreneurship competence in VET

The 2020 European Skills Agenda, the Council Recommendation on VET and the Osnabrück Declaration, all emphasise the importance of entrepreneurship competence along with digital and green skills. In May, Cedefop launched a study to provide policy-makers, social partners, training providers and other stakeholders with new evidence on how entrepreneurship competence is embedded into VET. The study focuses on entrepreneurial learning ecosystems, including policy, practice and gaps, through extensive research in Spain, France, Croatia, Italy, Latvia, Austria, Finland and Sweden.

Initial findings from Italy suggest that, despite many initiatives supporting entrepreneurship competence at provider level, most remain pilot initiatives that do not develop into mainstream policies. At national/regional level, since 2018, the syllabus ⁽⁷⁾ for entrepreneurship in upper secondary education and guidelines ⁽⁸⁾ are compulsory for VET and offer a strong policy base for promoting entrepreneurship competence. However, policies on entrepreneurship are often detached from the field. For example, the 2018 syllabus that supports promoting entrepreneurship competence in Italy is not well known among VET providers, even though it was attached to the well-known guidelines.

In Italy, several factors help VET advance entrepreneurship competence, compared with other same-level education settings: number of teaching hours dedicated to entrepreneurship competence, and strong links with the industry and the professional networks, including presence of vocational teachers who come from the industry.

While entrepreneurship competence is not only about start-ups but rather refers to transforming opportunities and ideas into financial, cultural and social value for others (EntreComp), at national level it is mostly perceived as business creation and primarily connected to employability rather than lifelong learning.

The pilot research results and methodology will be further discussed with VET stakeholders in a dedicated virtual workshop in February 2022.

EUROPEAN TOOLS AND PRINCIPLES FOR TRANSPARENCY AND RECOGNITION OF QUALIFICATIONS AND CREDENTIALS

Supporting EQF implementation

Cedefop worked closely with the Commission in supporting the implementation of the European qualifications framework (EQF) in line with the priorities of the [EQF Recommendation](#). The Agency provided conceptual input to the EQF advisory group meetings in February, June and October. Attention was given to the strengthening and deepening qualifications transparency, notably by supporting the development of national qualifications databases, and by increasing cooperation on learning outcomes to support transparency and comparability of qualifications. Significant effort was put into supporting the work of the EQF advisory group on validation of non-formal and informal learning, aiming to update the 2015 European Commission and Cedefop *Guidelines on validation* (Section 2.2).

Cedefop provided written comments to the (updated) referencing reports ⁽⁹⁾ of France and Albania. It also contributed its evidence and expertise to the work of several project groups, particularly the horizontal comparison of qualifications, the short learning outcomes

⁽⁷⁾ Overview or summary of the curriculum.

⁽⁸⁾ Pathways for transversal competences and guidance.

⁽⁹⁾ Referencing reports provide information and evidence on the referencing of national qualifications levels to the EQF levels, following the 10 EQF referencing criteria. These include: a clear and demonstrable link established between NQF levels and the EQF; qualifications based on learning outcomes; transparent procedures and criteria for inclusion of qualifications in the NQF; all qualifications with an EQF level being quality assured. See the [Referencing reports](#).

descriptions, and the third country dimension of the EQF.

The work on horizontal comparison of qualifications provided important insights into the use of learning outcomes at national level. It illustrated the potential of the approach and a need for more cooperation and more systematic sharing of experiences to support qualifications transparency. While the project group initially focused on how to strengthen the quality of the levelling of national qualifications to the EQF, the material collected provides important insights into the way countries apply learning outcomes. Demonstrating strengths and weaknesses, this work supports mutual learning and the gradual development of transparent and comparable descriptions of qualifications within Europe. Building on these outcomes, a working group including EQF and Europass advisory group representatives is exploring the development and testing of short, learning- outcomes-based descriptions of qualifications aiming at deepening the impact of the EQF, offering insights into qualifications levels, content and profile.

The work on short learning outcomes descriptions for publication on databases/ registers connected to Europass started to explore national material and approaches, also considering the principles outlined in Cedefop's [European handbook on learning outcomes](#). The elaboration of guidelines for drafting short descriptions, and a proposal for the revision and possible digitalisation of the Europass certificate supplements, is also part of this work. This feeds into digital developments, particularly linked to the development of national qualifications databases, connected through Europass. It also paves the way for improving access to content and profile of single qualifications, directly benefitting end-users.

The work on the EQF third country dimension focused on how the EQF, through links to third countries' qualifications frameworks, can support the comparison and recognition of qualifications awarded outside Europe. The group agreed on suitable national and regional qualifications frameworks for comparison using Cedefop's conceptual work, their development stages and progress indicators as a starting reference point. The work resulted in an agreement of the EQF advisory group to pilot cooperation with Ukraine, Morocco and South Africa. The joint Cedefop/

ETF note on stages of NQF developments (2021) provides the basis for this work.

Analysing NQF developments in Europe

In 2021, Cedefop continued reviewing and analysing the implementation of national qualifications frameworks. The eighth edition of the European inventory of national qualifications frameworks (NQF), covering 39 countries and consisting of 43 national chapters, was drafted in house, in close cooperation with national stakeholders. As country chapters are updated every 2 years, the results published on Cedefop's new web portal in 2021 display [developments of NQFs in 2020](#).

Data on NQF progress were gathered through a survey on implementation, use and impact of NQF/EQF, carried out in cooperation with the European Commission. A first Cedefop analysis was presented to the EQF advisory group in June. A detailed analysis will be conducted in the context of the global inventory in cooperation with the ETF, UNESCO and the UNESCO Institute for Lifelong Learning. Information on NQF developments across Europe was made available on the new Cedefop web portal through a new [NQF online tool](#). The tool allows end-users to access and use information in a flexible and targeted way. It also allows for comparisons between countries and for exploring NQF stages of development and their referencing to the EQF.



Supporting ESCO and EQAVET developments

Cedefop continued supporting the revision and further development of the terminology of skills and competences in ESCO. This work supported the publishing of a new version of ESCO (version 1.1) at the end of 2021. Cedefop coordinated the development of the updated terminology on transversal skills and competences. This work was closely related to the development of a new structure to underpin the skills terminology, improving user-friendliness, and allowing for increased consistency. The ESCO work on transversal skills and competences was coordinated with the EQF advisory group, strengthening ongoing cooperation on learning outcomes.

In line with the prioritisation exercise and the portfolio review of its activities in 2021-23, Cedefop refocused its work on quality assurance and EQAVET more specifically, following the integration of the EQAVET framework into the overarching Council Recommendation on VET. It coordinated efforts with the European Commission and the EQAVET Secretariat to align the follow-up to the EQAVET implementation with the forthcoming national implementation plans. It also provided advice and expertise to the EQAVET steering committee, the EQAVET peer learning activities and the EQAVET annual meeting.

Microcredentials in facilitating learning for employment

Cedefop's work on [microcredentials in facilitating learning for employment](#) aims at providing better understanding of the role played by microcredentials in supporting labour-market-related and employment-relevant education, training and learning. The findings are expected to offer new knowledge on the characteristics of microcredentials, their added value to individual learners and employees, as well as their impact on existing qualifications and recognition systems.

In 2021, Cedefop launched four surveys targeting national authorities, employer and employee organisations, and VET providers in 30 countries. The surveys collected data on the use and role of microcredentials linked to labour-market-related education, training and learning. The interim findings from desk research and the surveys were presented in the conference

'Microcredentials for labour market education and training'.

Findings were also shared with the tripartite committee, composed of Cedefop Management Board members, which accompanies and advises Cedefop throughout the study. Interviews and in-depth case studies in eight countries (Germany, Ireland, Spain, France, the Netherlands, Slovenia, Poland and Finland) were conducted in 2021. Findings from the desk research and case studies, supplemented with data from the interviews, will be published in 2022.

The outcomes of the study complemented the Open public consultation on microcredentials run by DG EMPL, and fed into the Commission's staff working document on microcredentials and the proposal for a Council Recommendation on an EU approach to microcredentials.

The use of learning outcomes

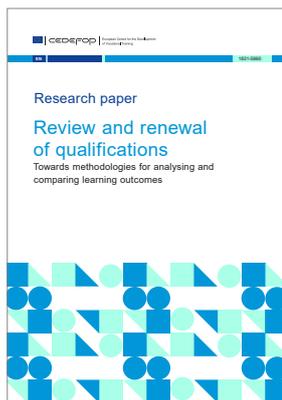
A balanced and reflected use of learning outcomes is critical for strengthening the relevance of curricula, the understanding and comparability of qualifications, for improving learning and teaching practices and for facilitating dialogue between education and training and the labour market.

Cedefop revised and extended its [European handbook on defining, writing and applying learning outcomes](#) addressing four main aims: (a) reflecting on the conditions for implementing the learning outcomes approach for different purposes and drawing attention to the issues involved for each use case (how learning outcomes are used in national VET curricula), with practical examples in European countries; (b) reflecting on conceptual and terminological issues influencing the use of learning outcomes, in a dedicated chapter on transversal skills and competences; (c) revising the set of 'rules of thumb' offering practical advice to practitioners responsible for defining, writing and applying learning outcomes; and (d) providing an overview of, and a direct link to, existing online guidance and research material. The handbook is a useful 'hands-on' tool helping those directly involved in writing learning outcomes by providing links to existing guidance material at national or institutional level, and in the form of research. This resource is meant to develop and grow over time, and turn into a practical tool for policy-makers, practitioners and researchers alike.

Cedefop actively contributed to the development of the European sectoral qualifications framework for asylum and reception officials and the accompanying toolkit. The Agency was involved in the activities of the Certification and accreditation working group, supporting the validation of the occupational and educational standards based on learning outcomes. Visibility and dissemination of Cedefop's European handbook was part of the events organised by the European Asylum Support Office and representatives of Member States working in the area of asylum and reception.

Comparing VET qualifications

A [research paper](#) released in 2021 forms part of Cedefop's [Comparing VET qualifications](#) project, which seeks to develop robust and scalable methods for analysing and comparing the content and profile of qualifications. Focusing on the dialogue (feedback loop) between VET and labour market stakeholders, the paper analysed existing methodologies and outlined how to develop these further. The methodology will support mutual learning between countries, notably by focusing on how a more systematic analysis and comparison of learning outcomes can support the review and renewal of qualifications.



This work is closely coordinated with the EQF working group on horizontal comparison of qualifications and the work of UNESCO on world reference levels. The findings were shared in a dedicated [workshop](#) presenting a series of use cases where a systematic analysis and comparison of learning outcomes could support researchers, policy-makers and practitioners involved in the development, review and renewal of skills and

qualifications. It allowed for a discussion on how to strengthen the feedback loop between education and training and the labour market, thus providing a better link between the supply and demand of skills and qualifications.

UNDERSTANDING THE FUTURE OF VET

Cedefop's work on the [future of VET](#) aims to map and explore systematically the changing content and profile of VET programmes and qualifications, deepening the understanding of institutional implications of these changes.

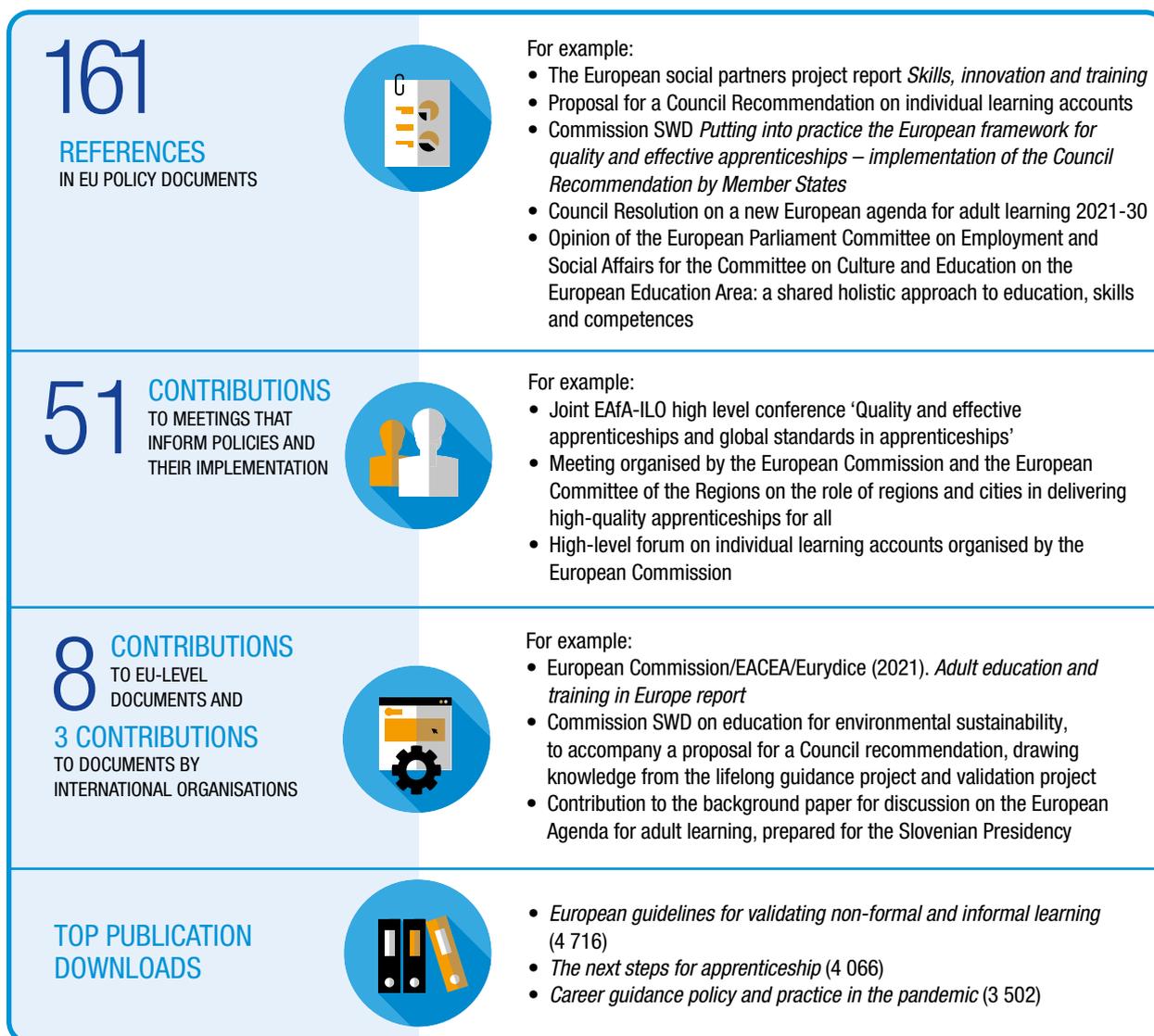
Research in 2021 focused on the impact of assessment on VET learning and the changing interaction between initial and continuing VET. Particular attention was paid to the changing content and profile of VET, notably by seeking to understand how job-specific skills are balanced with research-based knowledge and transversal competences. The research focuses on exploring the extent to which the objectives set by curricula – in terms of content and profile – are supported by assessment. The underlying questions are the relationship between the content and profile of VET qualifications, on the one hand, and the influence of assessment on the content-related priorities of learners and teachers, on the other.

To explore changes in the content of VET, the study collected information through a survey among Cedefop's ReferNet network, eight in-depth country case studies, complementary ad hoc research for the remaining 22 countries, and a VET provider survey, addressing managers, heads or directors of VET provider institutions. In parallel, the study looked closely into changes in the delivery of VET, addressing the diversification of institutions and the potential development of hybrid institutions, combining general and vocational content.

Cedefop's research on the future of VET, builds on the findings from the *Changing nature and role of VET* project, which has directly informed various EU policy initiatives. Continuing research seeks to identify alternative development paths for European VET in the 21st century and Cedefop makes sure that the perspectives of different stakeholders, particularly those of national and regional authorities, enterprises and social partners, are reflected.

2.2. OPERATIONAL ACTIVITY: VALUING VET AND SKILLS – FOSTERING CVET AS A SYSTEM FROM A LIFELONG PERSPECTIVE

PERFORMANCE



In 2021, the work of this strategic area of operation was organised around three main thematic objectives and a transversal one: enhancing young people's employability and participation in lifelong learning; empowering adults through upskilling/re-skilling and a systematic approach to CVET; supporting lifelong learning for all through guidance, validation and incentives; and streamlining and enhancing the information base on VET. There was

special focus on fostering CVET as a system from a lifelong perspective through the launch of a new study and two country reviews on upskilling pathways in Italy and France.

Work is supported by three networks: [Ambassadors tackling early leaving from VET](#), [Cedefop community of apprenticeship experts](#) and [CareersNet](#).

(a) Enhancing young people's employability and participation in lifelong learning

This thematic objective encompasses work on teachers and trainers, tackling early leaving from VET and empowering NEETs and apprenticeships.

On the occasion of the webinar **'Making excellence inclusive: towards a new Cedefop survey of VET teachers and trainers'** in February, Cedefop launched a feasibility study for a future **pan-European survey** on VET principals, teachers, learners and in-company trainers. An advisory group with representatives from the six pilot countries – Greece, Spain, Croatia, Lithuania, the Netherlands and Austria – was set up to support the implementation of the feasibility study on insight into VET systems, institutions, learning and working environments to inform policy-making. Cedefop also intensified its research on **VET teachers and trainers** to collect, in cooperation with ReferNet, updated information about initial and continuing professional development of VET teachers and trainers in both school and work-based settings in the EU-27 plus Iceland and Norway. Preliminary findings reveal efforts made in European countries to support teachers and trainers in the digital age and aiming at inclusiveness in VET. However, there are considerably fewer initiatives focusing on the professional development of teachers and trainers on green skills and sustainability issues.

Building upon its **VET toolkit for tackling early leaving** and its network of ambassadors, Cedefop released its new **VET toolkit for empowering young people not in employment, education or training (NEETs)**. The toolkit provides a wealth of resources for policy-makers and practitioners using VET as a life jacket for NEETs. The risk factors for young people to become NEETs and the different profiles

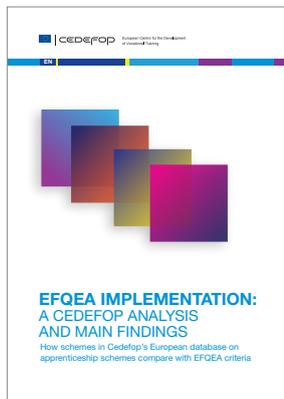
of NEETs were shaped in close cooperation with Eurofound. Cedefop's work on inclusiveness also supports one of the new European Commission's thematic working groups on schools, the strand on 'Pathways for school success'.



In line with the priorities set by the Council Recommendation on VET and the Osnabrück Declaration, on the occasion of the **second joint Cedefop-OECD symposium** on the role of apprenticeships for greener economies and societies, Cedefop launched a cross-area collaboration on apprenticeship and green transition; this will be pursued in the coming years and be expanded to the digital transition. The event was the first opportunity to reflect on the potential role of apprenticeship in supporting the green transition with the creation of new apprenticeship programmes or by adapting existing ones. The event brought together policy-makers, practitioners and researchers from around the world to discuss new research and analysis of practices and implications for policy-making.



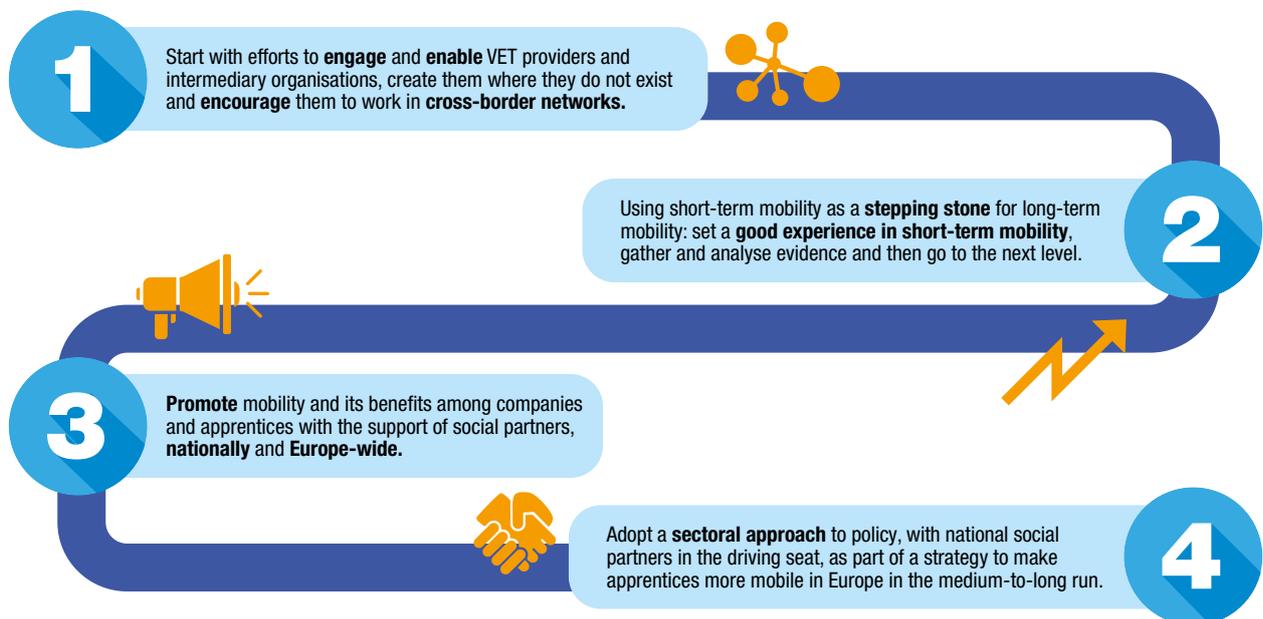
Participants reported that they can apply this knowledge in their work (84%) and will use it to influence policy-making (68%).



Cedefop issued seven publications on apprenticeships, including on [mega trends and the link to apprenticeships](#), [governance and in-company training](#), long-term mobility of apprentices – a [short information series paper](#) and a [reference publication](#) – and on the [number of apprentices](#) in the EU. The [briefing note](#) and the information series paper containing an [analysis of apprenticeship schemes against EFQEA criteria](#) were published in time to inform the Commission’s monitoring of the implementation of the European Framework on Quality and Effective Apprenticeships (EFQEA) 3 years after its adoption by the Council. The analysis of how apprenticeship schemes in [Cedefop’s European database](#) compare with several of the

EFQEA criteria complemented the Commission’s EAFA monitoring survey 2019-20; the latter built on Cedefop’s database. Cedefop’s analysis revealed areas of strength but also pointed to issues and gaps that require further action: Cedefop argues that more attention needs to be paid to the nature of the written agreement between the learner and the employer, as it may make a difference in terms of apprenticeship quality. Attention also needs to be paid to the status of the learner undergoing apprenticeship training. Is the learner a regular worker, a regular student or both? Together with apprentice status, the nature of the agreement has implications for entitlement to social protection and the nature of the compensation.

Cedefop’s two publications on long-term mobility of apprentices caught the attention of the European Commission and the French Presidency. The keynote speech Cedefop delivered at the French Presidency conference on 20 January 2022, ‘[New generation Erasmus: developing the mobility of apprentices](#)’, focused on [Cedefop research data](#) and highlighted that mobility is a popular option among school-based VET learners but less so among in-company apprentices. This is due to the nature of apprenticeship, which is at the crossroads between education and employment, and due to the greater difficulties apprentices face in getting an in-company training experience abroad, especially when it comes to [long-term mobility](#). Following the conference, the [Euro App Mobility](#), an association chaired by the



former French Minister Jean Arthuis, prepared an infographic referring to and promoting Cedefop's work.

(b) Empowering adults through upskilling/reskilling and a systematic approach to CVET

In addition to the country reviews launched in 2021 in Italy and France, Cedefop initiated a 3-year project *Strategies and partnerships for CVET – towards systems for learning conducive work environments and learning-intensive working lives*. The project aims at identifying approaches and strategies leading, in the long term, to CVET systems underpinned by learning-conducive work environments and learning-intensive working lives, and by a shift in enterprises' and people's attitudes to CVET. Its outcomes will directly feed into one of the main VET priorities of the next decade: CVET and the need to build a systematic approach to it, as argued in the Cedefop-ETF position paper, and acknowledged in the Osnabrück Declaration, the VET Recommendation and the updated Skills Agenda. In 2021, work focused on analysing external and internal dimensions and challenges relevant for CVET. Apart from desk research, several interviews with experts from academia were conducted on the challenges that CVET currently faces and is likely to face in the future. Experts pointed out that CVET policies are dependant, in their effectiveness, on the initial vocational education and training (IVET) achieved and on individuals' learning attitude; and on how the distinction between IVET and CVET might be rethought. Experts also suggest reconsidering the scope of policies relevant for CVET systems, as it might be quite broad. For example, transportation policies might have some bearing on individuals' training needs, employability and labour prospects. To account for this, CVET policies might become a transversal policy stream that needs to consider several other fields and initiatives, not only labour and social, but also sector-specific and more industry-related. CVET policies are also related to retirement schemes and policies, and so linked to particularly hot topics in politics, not only to policy.

Together with the Slovenian Presidency, Cedefop organised the 11th Cedefop Brussels seminar, with a focus on inclusive participation in CVET. There was consensus among participants

that a multifaceted strategic approach is necessary for Europe to reach the target of high-quality and inclusive CVET.



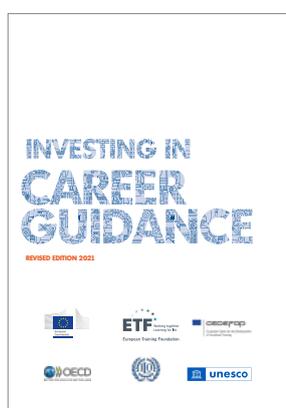
(c) Supporting lifelong learning for all through guidance, validation and incentives

Under this thematic objective, Cedefop continued approaching guidance, validation and incentives in a coherent and holistic manner, while keeping their specific identity.

In lifelong guidance, Cedefop published its second working paper: *Digital transitions in lifelong guidance: rethinking careers practitioner professionalism*. The extensive collection consists of diverse contributions from CareersNet experts and other contributors to the 2020 CareersNet annual meeting. This is an example of Cedefop's effort to investigate how the pandemic and unfolding digitalisation affect policies, in this case initial and continuing training and professional development of careers practitioners. It also feeds into core project work on quality career guidance systems, including digital offers and self-help platforms. The briefing note, *A fresh look at guidance practitioner professionalism*, was presented at the network meeting in December. The *5th CareersNet annual meeting* 'New directions for partnerships in lifelong guidance and career development' was held in December in partnership with the Slovenian Ministry of Education. The meeting was flagged in the Slovene Presidency calendar as an accompanying event, with one session organised by Slovenia focused on their national guidance expert group. Working group sessions aimed at sharing policy insights and national practices since the pandemic, including career guidance and

career development in new skills, lifelong learning and cross-sectoral guidance strategies, integrative tools, and cooperation.

Collaboration with international organisations remained strong in the area of lifelong guidance within the work of the inter-agency group on TVET ⁽¹⁰⁾. In 2021, a new subgroup on career guidance was formed. To further a joint vision, the group published an update of the advocacy leaflet *Investing in career guidance*, available in English, French, Spanish and Russian.



Cedefop work on validation focused on continuing updating the European guidelines. A group formed by experts and members of the EQF advisory group was set up for this purpose. Two notes drafted by Cedefop, together with the Commission, were discussed in plenary meetings: *Developing high-quality methodologies* and *Exploring complementary routes to certification*. The first discussed the main elements to consider when developing validation methodologies. All methodologies should refer to some reference point or standard that needs to be well-designed, linking directly to the challenges of writing and applying learning outcomes. Regardless of the methodology used, it is important to communicate and make transparent the way the validation process was carried out and how certification has been obtained. This is important for both the individual candidates and potential users of validation. In addition, methodologies will differ depending on the purpose of validation: they can be summative (aiming at certification) or formative (supporting learning). It is critical to select and apply fit-for-purpose methodologies. For every

validation approach, a balance between validity, reliability, scalability and cost should be ensured. The second note Cedefop drafted looks at how the changing landscape of qualifications and the emergence of alternative credentials, such as microcredentials and digital badges, is affecting the certification phase. Validation should be seen as a ‘continuous’ process that can happen at different stages of an education and employment career path. For this increased connectivity and accumulation of credentials to be achieved, we need to ‘unpack’ the certification process and identify the factors influencing its currency and exchange value: the awarding body, the learning outcomes that are certified, the standards to which the certification refers to, and the type of assessment, including its reliability and validity, as well as the technical format, digitalised or not.

The two notes formed the basis of an *expert event* organised by Cedefop together with the Commission in November to discuss the updating of the guidelines. Around 100 experts discussed the implications of the thematic focuses ⁽¹¹⁾ of the European guidelines for validation. A flash survey carried out between April and June gathered opinions on the current guidelines, their use and necessary improvements; it produced valuable materials that feed the drafting of the new guidelines, expected to be completed in 2022.

Cedefop provided support to the EAfA’s Apprenticeship Support Services by leading the webinar ‘*Financing apprenticeships in the EU*’ in February. The webinar aimed at demonstrating the variety of financing arrangements for apprenticeships in the EU, explaining differences in apprentice pay, discussing the changes to the financing arrangements introduced in reaction to the COVID-19 crisis and related challenges. It also investigated costs for apprenticeships and how they are shared between employers, apprentices, State, schools and other training providers. The 100 participants discussed the main financial flows between the actors involved and mechanisms for collection and distribution of funds. There was special focus on apprentice remuneration and financial support for apprentices. The webinar provided an opportunity to present the findings of Cedefop’s study *Financing apprenticeships in the*

⁽¹⁰⁾ UNESCO, ETF, OECD, ILO, European Commission and Cedefop.

⁽¹¹⁾ Validation in national skills strategies (integrated approach), making validation a reality for individuals, developing high quality validation methodologies, exploring complementary routes to certification.

EU, which was a first-time attempt to collect and analyse systematically information on financing arrangements for all apprenticeship schemes in the EU and the UK.

Cedefop continued updating its [database on financing adult learning](#). Comprehensive information was collected and analysed on instruments targeting companies and individuals: training funds, tax incentives, grants/vouchers/ILA, loans and paid training leave. Country overviews presenting national systems and approaches to financing adult learning were developed, with a focus on demand-side funding. Based on the updates, Cedefop provided input to the Commission's study ⁽¹²⁾ on individual learning accounts impact assessment and delivered a presentation during the [Commission's high-level forum on individual learning accounts](#) (March); this was opened by Commissioner Nicolas Schmid and brought together nearly 800 participants from 48 countries. Cedefop contributed to the debate by reflecting on the key features of individual learning accounts (ILAs), presenting country examples and providing an overview across all EU Member States, indicating which countries have instruments playing a role similar to that of ILAs in terms of the level of public financial support for individual adult learning.

Reference to Cedefop's database on financing adult learning is made in the Commission's proposal for a Council Recommendation on individual learning accounts. Findings from Cedefop's database were also presented at various events (co) organised by social partners: the BusinessEurope and EESC Employers' group event '[Improving EU and national policies – Way ahead](#)' (October); and the seminar '[Financial incentives for research and development and skills investments](#)' organised as part of the European social partners' project on skills and innovation (June).

To support EU-level work on the ILA initiative ⁽¹³⁾, and explore further the synergies between financing, guidance and validation, Cedefop launched a study on individual learning accounts and the potential for integrated policies and systems for CVET/adult learning.

Cedefop also continued working on policies/incentives for increasing training provision in micro, small and medium-sized enterprises. The study offers detailed description and typology of the identified financial and non-financial/structural incentives. It examines the interplay of these incentives and their effectiveness against the backdrop of the relevant institutional national, regional or sectoral environments.

(d) Streamlining and enhancing the information base on VET

Cedefop developed a concept to serve as blueprint for continual development and strengthening of statistical information on its web portal. The [entry point to statistics](#) provides users with clear, harmonised and user-friendly access to Cedefop's statistics. The VET statistical overviews, were updated and upgraded to produce [key indicators on VET](#), and provide users with interactive visualisations of quantitative data on key aspects of VET policy. Through graphs and tables, the overviews provide a comprehensive framework of data to describe the status and developments of VET and VET-related labour market outcomes in countries and the EU-27 overall.

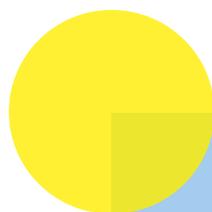


⁽¹²⁾ Cedefop provided the whole data set, short information for each instrument included in the database and additional information on selected instrument operation, as requested by the Commission.

⁽¹³⁾ In particular, the [Commission's proposal for the Council Recommendation on ILAs](#).

Cedefop has also been working on the development of a dashboard on European VET policy. It draws from the indicators to monitor progress by the EU-27 overall and individual countries towards achieving the agreed quantitative policy targets for 2025-30 set out in the European VET policy documents.

The key indicators and the dashboard signal the transition from the old to the new European VET policy cycle (2020-25 to 2030) by incorporating the framework provided by the new VET policy documents, statistical developments and new target indicators. Cedefop also worked with the Commission and Eurostat to improve statistics, for example on VET graduate tracking and mobility in IVET.



2.3. OPERATIONAL ACTIVITY: INFORMING VET AND SKILLS POLICIES

PERFORMANCE

241

REFERENCES
IN EU POLICY DOCUMENTS



For example:

- Commission SWD accompanying the proposal for a Council Recommendation on ensuring a fair transition towards climate neutrality
- BusinessEurope recommendation for an EU talent pool
- European Parliament resolution on impacts of EU rules on the free movements of workers and services: intra-EU labour mobility as a tool to match labour market needs and skills
- EESC opinion on vocational training: *The effectiveness of systems to anticipate and match skills and labour market needs and the role of social partners and different stakeholders*

40

CONTRIBUTIONS
TO MEETINGS THAT
INFORM POLICIES AND
THEIR IMPLEMENTATION



For example:

- Event on big data for the future of work organised by the European Bank for Reconstruction and Development
- Several meetings on the green transition and the green skills for VET
- High-level conference on skills for industry organised by the European Commission
- Eurostat 2021 conference on new technologies and techniques in statistics
- Meetings of the ETUC's education and training committee

2

CONTRIBUTIONS
TO EU-LEVEL DOCUMENTS AND
2 CONTRIBUTIONS TO DOCUMENTS
BY INTERNATIONAL ORGANISATIONS



- *Inferring job vacancies from online job advertisements – 2021 edition* (Eurostat)
- *Big data, better skills intelligence? Using online job advertisements to map skill trends presented at the ISI world statistics congress on skills intelligence based on big data*
- *Preparing the tourism workforce for the digital future* (OECD)

TOP PUBLICATION
DOWNLOADS



- *Insights into skill shortages and skill mismatch* (3 799)
- Briefing note – *Preventing skill obsolescence* (3 500)
- Briefing note – *Trends, transitions and transformation* (3 387)

In 2021, work in this strategic area of operation focused on: producing and disseminating new skills research and policy analysis, and labour market and skills intelligence; supporting national and sectoral stakeholders; and moving towards labour market and skills intelligence 2.0 – Reshaping skills and policy analysis. All activities contributed directly to realising the priorities outlined in the 2020 EU Commission Skills Agenda, which emphasises the role of skills intelligence in future-proofing VET and up- and reskilling initiatives. Because of their

relevance to EU policy priorities, Cedefop's findings and conclusions also contributed to expanding the evidence base relevant to the priorities laid down in the Osnabrück Declaration and Council Recommendation on VET, policies supporting the green and digital transitions, the social rights pillar and other policy documents.

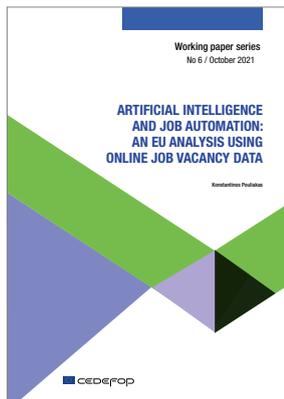


The flagship high-level conference ‘Getting the future right’ held on 13 April was one of Cedefop’s highlights of the year. Cedefop presented its research and labour market and skills intelligence (LMSI) work to 230 participants from Europe and beyond and discussed with policy-makers opportunities to shape a new generation of skills intelligence. Among the speakers were European Commissioner for Jobs and Social Rights Nicolas Schmit. Apart from presenting findings linked to current megatrends, such as the twin transitions and ageing population, the event also showcased how skills intelligence can help learners see what it takes to start a career while supporting people already employed in further shaping it in a rapidly changing work of work. Actively involving conference participants in identifying issues, trends and challenges, and expert discussion at the four workshops that followed the main conference contributed to shaping Cedefop’s future skills intelligence work.

(a) Producing and disseminating new skills research and policy analysis and LMSI

In 2021, Cedefop continued collecting and analysing online job advertisements in close cooperation with Eurostat, which took over responsibility for data production and storage at the start of the year. A new Skills-OVATE release with new functionalities was launched at the April conference and was updated quarterly to incorporate newly collected online job advertisements. Throughout the year, jointly with Eurostat, Cedefop identified data shortcomings and inconsistencies and implemented solutions to address them.





In 2021, Cedefop conducted a study on data representativeness, which identified improvement possibilities, and developed a prototype tool to identify emerging skill needs in five countries. Skills-OVATE data were also analysed in a [Cedefop working paper](#), which uses machine and deep learning models to assess how well task profiles of occupations can predict automation risk. Cedefop also contributed to shaping a second round of landscaping, a primarily qualitative expert-driven exercise steered by Eurostat aimed at mapping national online labour markets and the trends that shape them. First findings confirm that the online job market keeps growing and show that, in several countries, public employment services are actively reshaping their portals to become more important players. In 2021, Cedefop also prepared several Skills-OVATE development activities to be taken forward in 2022. These include new work on identifying green jobs and skills and using several alternative taxonomies to classify occupations and skills.

Cedefop engaged with the European Commission's Europass team to discuss possibilities for using Skills-OVATE to develop and disseminate skills intelligence to Europass users. Discussions with the Commission's ESCO team aimed at identifying and exploiting synergies between ESCO and Skills-OVATE.

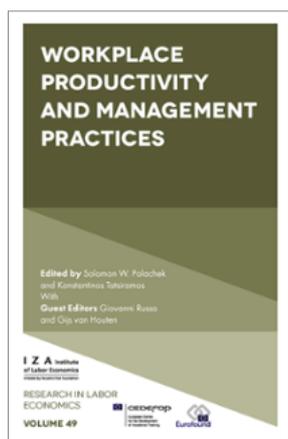
Regular requests for information, invitations to present at a wide range of events and continuing close contacts and cooperation with the Commission, international organisations and other parties are clear signals that Cedefop's real-time labour market information is valued and appreciated. On several occasions social partners expressed their interest in learning more about Cedefop's Skills-OVATE, its findings and its potential. Jointly with Eurostat, Cedefop organised

a virtual workshop at the [World Statistical Congress](#) in July, where it presented its approach to developing real-time labour market information.

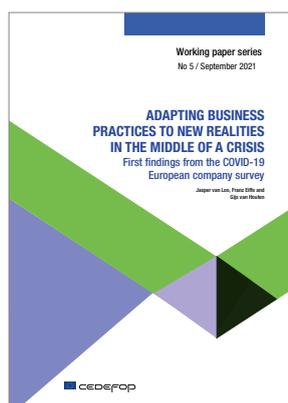
Cedefop took the lead in reflecting on the potential of big data for skills analysis and policy in a broader perspective. On behalf of the inter-agency advisory group on technical and vocational education and training (IAG-TVET), Cedefop released a [policy-maker-focused publication](#) in March. Apart from drafting the report, Cedefop also developed its Perspectives on policy and practice, a format which will be reused for an IAG-TVET report on post-pandemic employment and skills policies.



Cedefop reached several important milestones in its work and skills surveys in 2021. Following an extensive testing and translation phase, the second European skills and jobs survey was fielded in all EU Member States, Norway and Iceland. Preliminary data reached Cedefop at the end of the year. Initial findings showcase the potential of the survey in advancing insight into changing skill needs in jobs, skill development and mismatch among EU adult workers in the context of rapid technological development and digitalisation. After consulting with ETF experts, Cedefop agreed to making available the survey instrument to the ETF with a view to implementing the survey in several of their partner countries.



The work on exploiting the microdata of the fourth joint-Cedefop/Eurofound European company survey (ECS) continued throughout the year. The survey was used for a [Cedefop working paper](#) released in December on the determinants and impacts of workplace learning. The paper uncovered that, while such learning is crucial for employee wellbeing and corporate performance, most EU companies are not offering optimal learning environments and opportunities. The [Research in Labour Economics volume on workplace productivity and management practices](#) jointly edited by Cedefop and Eurofound was published at the end of 2021.



Cedefop and Eurofound experts jointly analysed and reported on an online follow-up to the 2019 European company survey on COVID-19. A [Cedefop working paper](#) on how companies reacted to the pandemic was released in September ⁽¹⁴⁾. Key findings include the slowdown of employer-

facilitated training and the acceleration of skill needs spearheaded by the pandemic.

To address the lack of skills intelligence focused on learning, one of the key conclusions of the April conference, Cedefop started working on the first European training and learning survey, which will complement Cedefop's other surveys and research on work and skills. This survey aims at developing new insight into the factors and contextual conditions driving and inhibiting training, workplace learning and other forms of work-related learning among employed adults. In 2021, Cedefop defined the survey concept and started preparing the questionnaire.



Cedefop's European skills forecast work featured prominently in publications, events and presentations throughout the year. Four skills forecast scenarios – on ageing, greening, automation and COVID-19 – formed the basis for a [short report](#) showcasing key labour market trends up to 2030 and their policy implications. The COVID-19 scenario was also used in a [Cedefop working paper](#) to offer insight into the variation in employment loss, due to the pandemic, between countries, sectors and occupations. Following the early release of key findings on social media, the full results of a dedicated forecast scenario on implementing the European Green Deal were published in a [Cedefop report](#) in December. The report concludes that, to facilitate the employment shifts between sectors, occupations and regions, and the greening trends within them, policy needs to focus on extensive accelerating of up- and reskilling and on providing guidance and support to the workers concerned.

In 2021, Cedefop started preparing the work on its next skills forecast and the release of the 2022 European skills index (ESI). As in previous

⁽¹⁴⁾ Eurofound released a [report](#) based on the ECS 2020 follow-up in December.

releases, the index was further fine-tuned, and the ESI methodology was audited by the Joint Research Centre ⁽¹⁵⁾. To benefit from national expertise necessary to interpret and contextualise findings, Cedefop’s ReferNet was requested to provide feedback and to promote the findings nationally. To complement Cedefop skills forecasts, which typically have a future horizon of 10 years, a new project aimed at developing a short-term anticipation system for occupations and skills that will rely on conventional and big data was launched in the beginning of 2021. The system will be developed in 2022 and first results are expected in 2023.

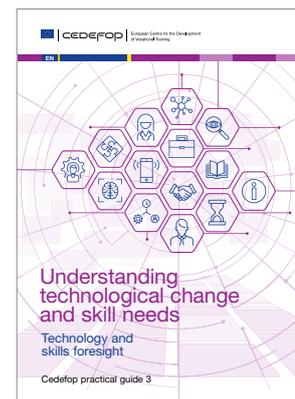
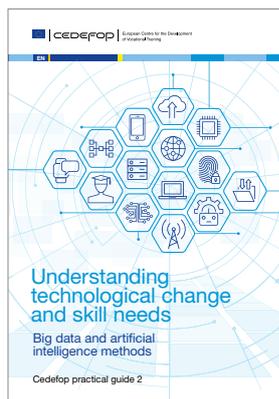
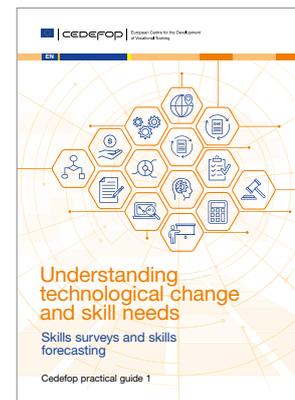
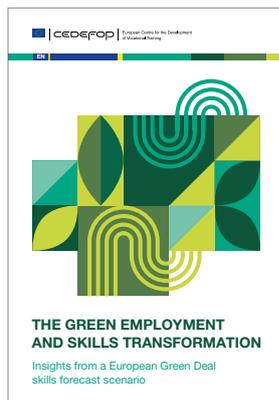


New findings from **CrowdLearn**, Cedefop’s project on skills and learning in platform work, were released as a **Cedefop research paper** in July. The paper combines survey information on microworkers with the original CrowdLearn survey among online freelancers. The report highlights the potential role of microwork as a viable avenue for labour market integration, income supplementation and skill development opportunities for workers who otherwise underutilise their skills. At the same time, it shows the importance of being aware of crowdwork features – such as repetitive and solitary tasks – that could be a barrier to learning. The findings and their policy implications were widely disseminated to platform work stakeholders and via media channels.

⁽¹⁵⁾ The JRC audit report, which acknowledged the significant efforts by the developers team to obtain a balanced and transparent result, concluded that the ESI framework is well-constructed, the ESI is reliable and the methodological framework has a good statistical coherence.

(b) Supporting national and sectoral stakeholders

To promote good skills anticipation practices and hands-on advice for stakeholders on how to implement them, Cedefop published three practical guides: on **skills surveys and skills forecasting**, on **big data and artificial intelligence methods** and on **technology and skills foresight**. These guides inform analysts and policy-makers about skills anticipation methods available to navigate through the uncertainty of changing technologies and skill demands. The **Matching skills web tool** was restructured, updated to ensure all major national skills anticipation initiatives are covered, and prepared for release in 2022.



The sectoral focus of four newly developed green transition foresight exercises aims at supporting stakeholders in managing the implementation of the European Green Deal. Cedefop launched the first foresight on smart and green cities in 2021 and started preparing the second foresight on waste management. The foresights use multiple rounds of expert consultation and interaction to shed light on the implications of greening for jobs and skills. They

provide a solid basis for understanding how VET and up- and reskilling can contribute to helping sectors, organisations and people make transitions that contribute to more sustainable economies and societies. The sectoral approach to greening has sparked considerable interest. Cedefop was invited to present its green foresight work and approach several times during the year by organisations and initiatives involved in greening; these included events in the context of smart cities, urban greening and green economy opportunities for NEETs.

At the request of the Slovenian Labour Ministry, Cedefop supported the country in developing a national skills forecast and a career platform, and in strengthening the governance of skills anticipation and matching. At a [first workshop](#) in February, the focus was on providing insight into the challenges of organising and setting up a skills forecast in a small country, discussing opportunities to overcome them. A [second workshop](#) in November placed emphasis on managing expectations and shaping effective feedback loops between the labour market and education and training.

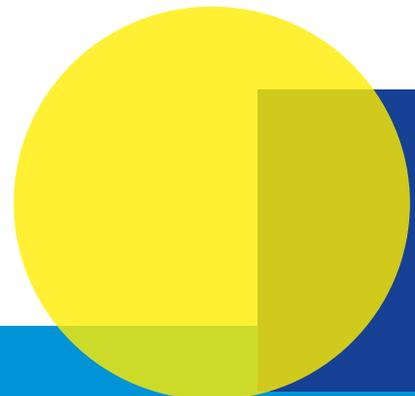
Stakeholders regularly contacted Cedefop to take part in events in order to benefit from the Agency's knowledge and expertise on skills anticipation methods and skills governance. While not all requests could be accommodated, Cedefop delivered several presentations on its skills intelligence and governance work. These included interventions at events in Greece and Catalonia, in workshops organised by the creative/cultural sector, in a webinar on drivers of employment change in the private security sector, and in a webinar on skills in the healthcare sector.

(c) Towards LMSI 2.0 – Reshaping skills and policy analysis

As part of the development of the new corporate web portal, Cedefop focused in 2021 on reorganising the presentation of its labour market and skills research and skills intelligence. Moving to a thematic and user-centred approach, the labour market and skills information has a more consistent thematic structure and stronger links between different types of evidence on skills and labour market trends. At the end of the year, it was decided to reshape the web portal section on the green transition to become the Cedefop Green Observatory.

Cedefop also successfully accomplished the transition of its skills intelligence from the Skills Panorama portal to the new Cedefop web portal in November. In 2021, only essential updates were made to the Skills Panorama, which remained accessible until its shut-down in December. Preparations for the transition involved informing users and targeted actions to retain them, finalising the selection of content to be retained, and reorganising the different indicators and qualitative information to fit the philosophy and approach of the new portal.

Several achievements in 2021 contributed to laying the foundation for developing next-generation skills intelligence. The integration of Cedefop skills intelligence in the web portal proved to be a stepping stone towards better linking different types of information on skill needs and trends. The [‘Getting the future right’](#) conference helped identify what it takes to future-proof skills intelligence. The forward-looking and innovative orientation of Cedefop skills research, analysis and survey work helped provide novel insight into how jobs and work are changing, and point towards important priorities for research and policy analysis. The 2021 briefing notes [Trends, transitions, and transformation](#) and [Shifting our perspective on learning](#) give a succinct and forward-looking snapshot of the key features of the skills intelligence work ahead.



COMMUNICATION, INFORMATION AND DISSEMINATION

PERFORMANCE

82 000
DOWNLOADS OF CEDEFOP
BRIEFING NOTES



404 ARTICLES
REFERRING TO CEDEFOP IN
EUROPEAN MEDIA

13 VIDEOS (CLIPS, ANIMATIONS AND INTERVIEWS), INCLUDING TWO ANIMATIONS ON VET IN PORTUGAL (MARCH) AND SLOVENIA (NOVEMBER), WERE PRODUCED, PLUS 17 SHORT-FORM VIDEOS (LOGOMOTION/GIF), WITH A TOTAL OF OVER

514 000
VIEWS

VIEWS ON SOCIAL MEDIA (FACEBOOK, YOUTUBE, TWITTER AND LINKEDIN)



16 730
FOLLOWERS ON **FACEBOOK**
(INCREASED BY 8.6% SINCE 2020)

11 570
FOLLOWERS ON **TWITTER**
(INCREASED BY 11.25% SINCE 2020)

5 650
FOLLOWERS ON **LINKEDIN**
(MEASURED SINCE JUNE 2021)

EVENTS

ORGANISED BY CEDEFOP – VIRTUALLY



CLOSE TO
98% of respondents considered them as good or very good and 88% gave the same rating to audience engagement/ interactivity.

58% were POLICY-MAKERS at EU/national level

20% RESEARCHERS

5% SOCIAL PARTNERS

4% REPRESENTATIVES OF ENTERPRISES

4% PRACTITIONERS

The Agency's corporate communication focuses on achieving the best possible outreach for Cedefop's key messages on VET, skills and qualifications policy to its stakeholders at European, national and local levels. In the second year of the COVID-19 pandemic, in a radically changing environment, Cedefop continued to optimise its communication activities and adapt to the information needs of its stakeholders.



In 2021, all Cedefop conferences and workshops continued being held virtually. Ongoing and systematic analysis of participants' feedback and close monitoring of technical developments enabled Cedefop to identify and continuously implement new virtual conference requirements. This resulted in high online participation rates and an overall satisfaction rate of 98%. Examples of Cedefop's successful virtual events include the Brussels seminar with the Portuguese Presidency 'Towards lifelong learning – Future-proofing VET skills and competences', and high-level Cedefop conferences such as 'Getting the future right: towards smarter and people-centred skills intelligence' and 'Microcredentials', where the outreach by far surpassed comparable Cedefop physical events in the past. The conference on microcredentials stood out, with about 250 attendees, including participants from Australia, Canada, Colombia, Hong Kong, South Africa and Turkey.

Media and stakeholder communication activities were complemented by 17 press releases, three issues of the magazine *Skillset and match*, 10 issues of Cedefop's electronic newsletter, 56 website headlines, 180 Facebook posts and over 10100 tweets and retweets. A total of 13 video productions and two animations on the VET systems of the Presidency countries Portugal and Slovenia were published, achieving

an excellent outreach with a total of over 514000 views on Facebook, YouTube, Twitter and LinkedIn. Cedefop counted by the end of the year 16730 Facebook followers (+8%), 11570 Twitter followers (+11%) and 5650 LinkedIn followers, a platform which was added to the Agency's social media channels in June 2021.

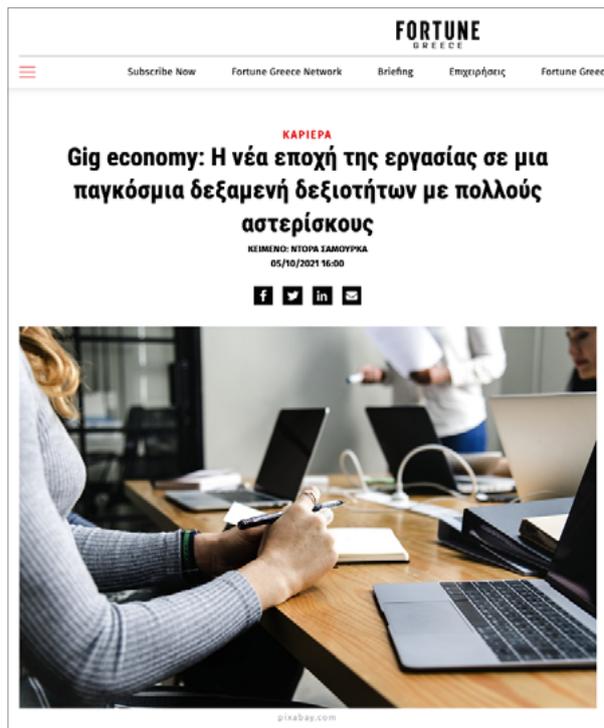
Several interviews with Cedefop management and staff complemented the Agency's communication activities: [VET in Spain](#) in the Spanish newspaper El País; Cedefop and ENISA Directors' interview with Greek news agency AMNA about [EU agencies based in Greece](#); contributions to the *Confédération Européenne des Syndicats Indépendants* CESI talks [The EU and workers](#); and interviews about the gig economy with [Fortune Greece](#) and the Greek radio station [SKAI 100.3](#).

Cedefop published six [briefing notes](#): *The EU's port of call for VET*; *Apprenticeship: a pill for every ill?*; *Trends, transitions and transformation*; *Analysing and comparing VET qualifications*; *Shifting our perspective on learning*; and *A fresh look at guidance practitioner professionalism*. All briefing notes are available online as PDF and eBook in eight languages, plus the language of the EU Council Presidency countries (DE, EL, EN, ES, FR, IT, PL, PT and SL). More than 30 additional publications, plus language versions, were produced and made available online in 2021. All titles are free to download, and users can [subscribe](#) on Cedefop's web portal for alerts of new content.

A new audiovisual format was introduced in the last quarter of the year and promoted via web portal and social media: the first two episodes of Cedefop's [podcast series Skillset and match](#), produced and published in October and December, are based on interviews with European Commissioner for Jobs and Social Rights, Nicolas Schmit, and Cedefop Executive Director Jürgen Siebel.

The close collaboration between Cedefop and DG EMPL continued mainly in the area of online events and social media activities. Unfortunately, the European vocational skills week had to be postponed to 2022. The #CedefopPhotoAward initiative, closely linked to the Commission's vocational skills week and being an integral part of the Awards for VET excellence since 2016, was again heavily affected by school closures and other COVID-19-related measures. The competition was postponed to the second semester and was finally concluded in 2021. Three winning teams will be announced in January 2022: two will participate with their photo stories as Cedefop nominees at the European vocational skills week's Awards for VET excellence in May 2022, and the winners of the new category 'best video' will be invited to the Thessaloniki International Documentary Festival in Greece.

Cedefop's Research Support Centre raised the Agency's visibility at the 2021 [EU open data days](#) and efficiently took care of the its records management and archives obligations, adapting related EC decisions and data protection requirements.



RELATIONS WITH EU AGENCIES



European Training Foundation

4.1. COOPERATION WITH THE EUROPEAN TRAINING FOUNDATION – ETF

Since 1997, the ETF and Cedefop have created synergies in areas of work 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. 2021 was the first year of the new framework of cooperation, covering the period 2021-23, which enhances and structures the collaboration in thematic areas and activities of common interest to stakeholders and regulatory functions.

Cooperation and systematic exchange of information took place in the frame of the EU Agencies Network and in the TVET inter-agency group coordinated by UNESCO.

The two agencies continued working together on monitoring and analysing countries' progress within European cooperation on VET and in shaping an integrated approach in monitoring the Council Recommendation on VET and the Osnabrück Declaration. Cooperation also continued in EQF implementation, covering all EU, EEA and (potential) candidate countries, and on learning outcomes and validation of non-formal and informal learning.

Collaboration continued on apprenticeships and other forms of work-based learning in the framework of the inter-agency working group on work-based learning together with the OECD, the ILO, UNESCO and other international organisations. Joint work also included work on skills anticipation and matching, and the scope, objectives and key milestones of the skills survey from a multiannual perspective.

In 2021, due to the prolonged COVID-19 crisis, the two Cedefop-ETF knowledge-sharing seminars took place virtually. During the first event, 'hosted' by Cedefop, ETF experts presented key messages from the ETF conference 'Building LLL systems', ongoing work on innovative teaching and learning, methodological insights and key findings of the recent youth-focused studies and the ETF communication campaigns. In the second event, 'hosted' by ETF, Cedefop experts presented work on the refugee project, microcredentials and the new web portal. The two agencies attended each other's virtual Management Board meetings.



4.2. COOPERATION WITH EUROFOUND

Cooperation with Eurofound is governed by a yearly action plan that is annexed to the Memorandum of Understanding agreed between the two agencies. In 2021, most activities defined in the yearly action plan were carried out successfully.

Direct cooperation focused on further exploiting the results of the 2019 European company survey. Work progressed on a paper on skills based on the survey, which is expected to be published in mid-2022. The agencies cooperated in analysing the results of the 2020 online COVID-19 follow-up to the 2019 survey. The report *Adapting business practices to new realities in the middle of a crisis* was published as a Cedefop research paper, jointly authored by the experts involved. Additionally, the report *Business not as usual: how EU companies adapted to the COVID-19 pandemic* was published as a Eurofound report in December. A joint working paper *Innovation and workplace practices in European establishments* and policy brief *Innovation in EU companies: do*

workplace practices matter? were published in July. The *Research in Labour Economics volume on workplace productivity and management practices* jointly edited by Cedefop and Eurofound was published at the end of 2021.

On top of the planned activities, Cedefop drafted a [working paper](#) using the European company survey data and focusing on the determinants and benefits of workplace learning in companies. The paper was released at the end of 2021. Cedefop also produced a [briefing note](#) in September.

The two agencies regularly engaged in discussions, participated in each other's work and events, and shared information. Discussions took place in the context of producing the joint ECS publications and to plan the promotion of COVID-19 and other work via social media. Eurofound's Deputy Director took part in a panel discussion at Cedefop's 'Getting the future right' conference in April. Information was exchanged via the agencies' participation in the EUANSA subnetwork and thematic cluster work on sustainability. Cedefop and Eurofound coordinated a survey among the EUANSA agencies and jointly produced a [mapping report](#) on socioeconomic aspects of sustainable development. Cedefop has sought input from Eurofound and benefited from its expertise in shaping the [VET toolkit for empowering NEETs](#).

A series of meetings was organised in spring 2021 to exchange recent methodological developments in 'outcome' performance indicators, which led to cross-fertilisation of pioneering approaches to shaping key performance indicators. There was also exchange between the agencies to build on good internal control and risk assessment practices.

Following exchange of programming documents and feedback rounds, a yearly coordination meeting at Directorate level took place in December. At the meeting, a proposal for the 2022 action plan was presented and discussed. The 2022 action plan was agreed by both agencies on 15 December.



4.3. COOPERATION WITH THE EUROPEAN LABOUR AUTHORITY (ELA)

Cedefop was involved in the ELA activities from the outset. As observer in the advisory group set up in 2018 to assist the Commission on the swift establishment of the Authority, Cedefop helped lay the ground for setting it up, including by assisting with identifying means of cooperation with other EU agencies.

In 2021, Cedefop attended the three ELA Management Board meetings, in its role as observer, and the ELA opening conference in November.

Cedefop also contributed its long-standing expertise to the intra-agency workshop on building capacity, organised by ELA in January, and provided advice and information to the Authority on data protection and records management.



4.4. COOPERATION WITH ENISA

In December, the Executive Directors of ENISA and Cedefop signed a Memorandum of Understanding laying down the principles of constructive collaboration and handling by the agencies' respective confidential counsellors of alleged harassment cases. Throughout 2021, Cedefop's Data Protection Officer (DPO) maintained close and fruitful collaboration with ENISA's DPO.



4.5. COOPERATION WITH THE EUAN: EUROPEAN AGENCIES NETWORK

In 2021, Cedefop engaged at highest levels in the further development of the European Agencies Network strategy. Two avenues were pursued: refining the EUAN communication and stakeholder engagement framework; and kicking off a project towards a greener EUAN administration of excellence. Cedefop's contribution to the first, as one of the three tripartite agencies, focused on incorporating the social partners more explicitly as both providers of input and multipliers of information and messages. For the second, Cedefop's contribution, as one of the smaller agencies, focused on the need to share expertise and possibly resources when it comes to certification according to the EU Eco-Management and Audit Scheme (EMAS), a key building block of the EUAN sustainability strategy.

Cedefop participated in two EUAN task forces: on professional incompetence and underperformance; and on diversity and inclusion. For the latter, Cedefop, jointly with EIGE, hosted a workshop on how to address biases at work, during the DG HR-EUAN event on gender balance. It also continued being an active member of the EUAN advisory group on return to work, which shares agencies' experiences and strategies to cope with the COVID-19 crisis.

Cedefop continued to benefit from, and contribute to, the work of the EUAN performance development network. This work directly supports the common approach of EU decentralised agencies to increase their cost-effectiveness, with emphasis on performance improvement and accountability. Cedefop participated in the network's plenary meetings (June and November) and working groups, contributing more specifically to discussions on agencies' evaluation and user feedback approaches, internal control, risk assessment and time recording. The exchange of ideas and practices has been highly beneficial to Cedefop. This was particularly the case in bilateral

exchanges with EUIPO and Eurofound to improve Cedefop's data collection methods for the performance indicators used to measure the uptake of its work in the policy documents, in academic literature and media coverage.

More generally, Cedefop continued its effort in sharing resources and capabilities with other agencies, either bilaterally or by supporting/joining initiatives of the EUAN network.

RESOURCES

Performance indicators attest to the efficient and effective delivery of administrative services, in support of the core business, despite the significant challenges of moving all processes and procedures online and ensuring business continuity in the context of the prolonged COVID-19 crisis.

BUDGET IMPLEMENTATION

The rate of commitment of budget appropriations for the year 2021 was 100% and the rate of payment appropriations was 99%.

This demonstrates Cedefop's optimal use of resources entrusted to the Agency, for yet another year and despite the significant budget adjustments required in the context of the COVID-19 crisis, as well as the unexpectedly high salary cost increase in 2021, mainly attributed to the 3.8 base points increase in the correction coefficient for Greece.

Cedefop closely monitors budget execution. Appropriate means and controls are in place to ensure that potential savings in administrative expenditure (Titles 1 and 2) are used to fund operational activities included in the work programme (Title 3).

SELECTION PROCEDURES AND HR PROCESSES

Cedefop's multiannual HR strategy was adopted in mid-2020, aiming at enabling the achievement of the Agency's multiannual objectives by fostering high staff engagement, performance and a change-embracing culture. The strategy includes three building blocks: talent acquisition and matching, talent management and staff wellbeing. In 2021, the implementation of the strategy continued, and attention was given to refining the selection procedures further, enriching the induction and onboarding processes, and supporting staff health and wellbeing. Cedefop purchased a talent acquisition platform that offers leaner and more efficient recruitment processes. With respect to modernisation and digitalisation – a key enabling factor of the strategy – the workflows related to the approval of outside activities and authorisation to publish a text or speech have been auto-

ated. Other processes are in the pipeline. Selection processes were adjusted to allow for remote assessment of candidates ⁽¹⁶⁾.

Staff security and wellbeing remained high priorities. Implementation of the health and wellbeing plan put in place in 2020 continued in 2021. Throughout the year Cedefop offered its staff and family members access to an assistance programme providing 24/7 psychological support and counselling in Greek and in English. A follow-up targeted survey ('pulse' survey) was concluded in September, focusing on staff's perception of their wellbeing, and how productivity has been affected by the COVID-19 crisis. Results indicate that staff continue maintaining a balanced mental and physical wellbeing status and feeling optimistic and motivated. Most respondents reported that they are well-equipped to work remotely, remain productive and enjoy the flexibility to dedicate time to their families. Concerns were raised over the lack of informal office interactions, difficulties in disconnecting at the end of the working day, and the heavy workload, which remains an issue.

Information was provided to staff via regular general staff assemblies, information notes and 'question time' meetings. Using a bottom-up approach, the last allow staff to shape meeting content. Proposed by the working group on boosting organisational culture built on trust, the meetings are one of the tangible actions taken following the 2019 staff engagement survey.

ICT DEVELOPMENTS

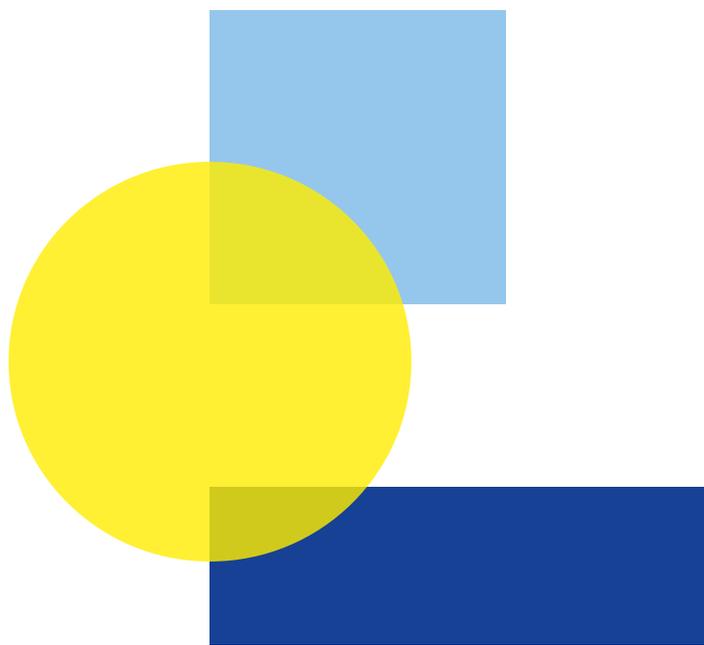
Throughout the COVID-19 pandemic, Cedefop ensured seamless remote working for all its staff. Electronic signatures were provided to all staff. Migration to ABAC ⁽¹⁷⁾ took place in June, harmonising Cedefop's IT landscape with that of other EU agencies and institutions. To complement the migration, digital financial workflows were successfully deployed. Aspects of cybersecurity were also covered by directing a phishing exercise to all Cedefop staff.

⁽¹⁶⁾ Cedefop successfully ran 10 selection procedures remotely, resulting in 20 job offers.

⁽¹⁷⁾ Accrual-based accounting system.

In accordance with its ICT and digital strategy, Cedefop initiated a landscaping exercise for the deployment of a data architecture best able to support the Agency's core business. The objective is to propose a data architecture ⁽¹⁸⁾ that can cope with large data sets and with complex elaboration algorithms.

⁽¹⁸⁾ I.e. a coordinated set of technical solutions for the storage, processing, querying, documentation, knowledge-sharing, standardisation and visualisation of both quantitative and qualitative data.

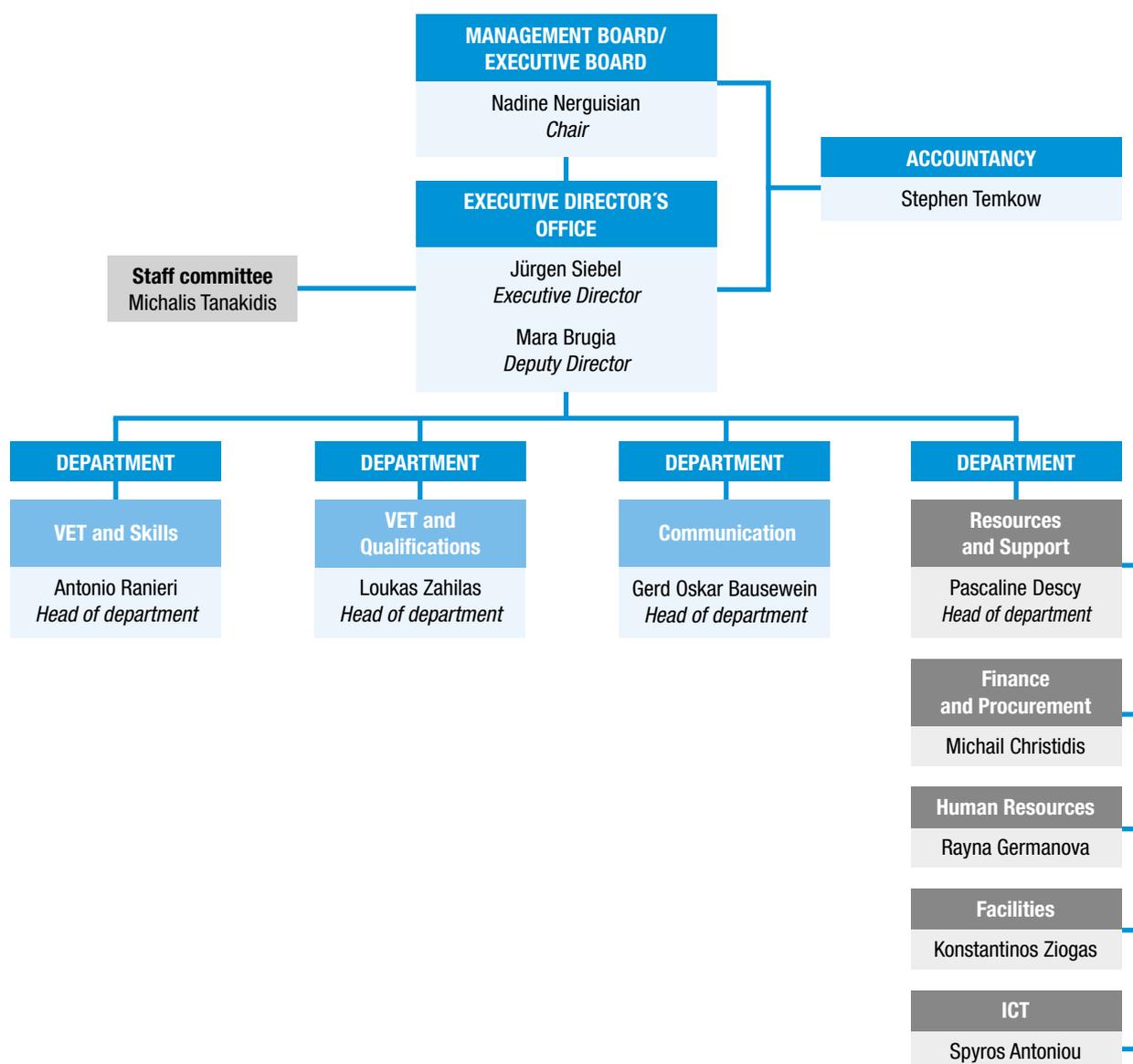


ACRONYMS

ACVT	Advisory Committee on Vocational Training
CVET	continuing vocational education and training
DG BUDG	European Commission's Directorate General for Budget
DG EMPL	European Commission's Directorate General for Employment, Social Affairs and Inclusion
DGVT	Directors General for Vocational Education and Training
DPO	Data Protection Officer
EAfA	European alliance for apprenticeships
EC	European Commission
ECS	European company survey
ECVET	European credit system for vocational education and training
EEA	European Economic Area
EESC	European Economic and Social Committee
EFTA	European Free Trade Association
EMAS	Eco-management and audit scheme
ENISA	European Union Agency for Cybersecurity
EQAVET	European quality assurance in vocational education and training
EQF	European qualifications framework
ESI	European skills index
ESJS2	(second) European skills and jobs survey
ETF	European Training Foundation
ETLS	European training and learning survey
ETUC	European Trade Union Confederation
EUAN	EU Agencies Network
EU-OSHA	European Agency for Safety and Health at Work
GO	Cedefop Green Observatory
IAG-TVET	Inter-agency advisory group on technical and vocational education and training
IAS	Internal Audit Service
ICT	information and communication technology
ILA	individual learning account
ILO	International Labour Organization
IVET	initial vocational education and training
KPI	key performance indicator
LMSI	labour market and skills intelligence
MSMEs	micro and small and medium-sized enterprises
NEET	not in employment, education or training
NQF	national qualifications framework
PDN	performance development network
TCR	thematic country review
TVET	technical and vocational education and training
UP	upskilling pathways
VET	vocational education and training

ANNEXES

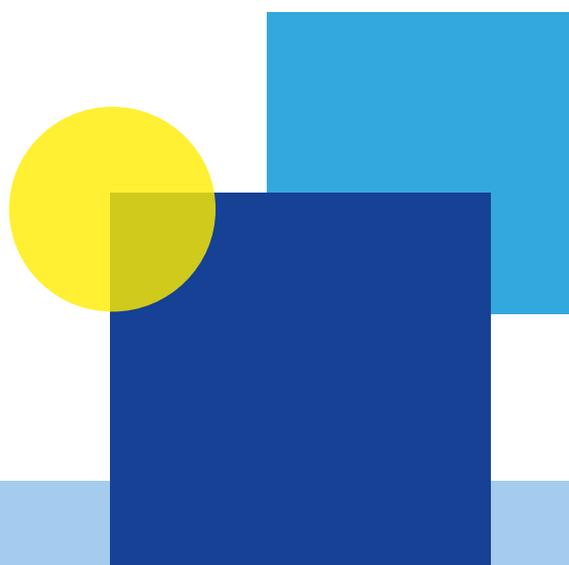
I. ORGANISATION CHART SITUATION ON 31 DECEMBER 2021



II. SELECTED PERFORMANCE INDICATORS: 1 JANUARY TO 31 DECEMBER 2021

Outcome indicators	2021
Citations of Cedefop's work in policy documents of	
a. EU institutions	189
b. International organisations	128
<i>Captures references to and take-up of Cedefop's work; demonstrates that Cedefop is acknowledged and valued as European source of evidence and information on VET, skills and qualifications; demonstrates alignment and relevance of Cedefop work to the EU policy framework</i>	
Cedefop's contribution to the preparation of policy documents	
a. Contribution to EU policy documents	58
b. Contribution to policy documents of international organisations	6
<i>Captures written input Cedefop is asked to provide to inform and report on policy development in VET and skills; demonstrates alignment and relevance of Cedefop work to the EU policy framework</i>	
Cedefop's contribution to meetings that inform policies and their implementation	164
<i>Captures Cedefop contributions to committees, working and expert groups and other high-level events at European, international, and national levels; demonstrates alignment and relevance of Cedefop work to the EU policy framework</i>	
Downloads of Cedefop publications	498 000
	of which briefing notes 82 000
Citations of Cedefop publications/studies/analyses in academic literature	988
Quality and expected impact of events organised by Cedefop	98%
Website traffic	
Visits	306 000
Unique visitors	192 000
Visits by returning visitors	118 000
Returning visitors	34 000
Page views	968 000
Media coverage	
a. Take-up of Cedefop's work in press clippings	404
b. Take-up of Cedefop's work in social media	
	Facebook followers 16 730
	Twitter followers 11 570
	LinkedIn followers 5 650

Key performance indicators for the Director	2021
Rate of implementation of commitment appropriations (budget execution)	100%
Rate of outturn (payment appropriations)	99%
Rate of payments completed within the legal/contractual deadlines	87%
Percentage of establishment plan filled	97%
Output indicators	
Number of Cedefop publications	40
Number of meetings/events organised by Cedefop	34
of which policy learning activities	1
Number of participants at Cedefop events	1 961
Number of Cedefop press releases	17
Environmental indicator	645.29
<i>Assesses Cedefop's environmental performance such as greenhouse gas emissions and overall waste emissions</i>	







2021

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