

SKILLS FOR people competitiveness sustainability





FOREWORD	3
1. CEDEFOP IN NUMBERS	4
2. CONNECTING FLEXIBLE TRAINING PROVISION TO CHANGING TRAINING NEEDS	5
3. CONNECTING PEOPLE'S SKILLS TO LABOUR MARKET NEEDS	8
4. CONNECTING PEOPLE AND LEARNING OPPORTUNITIES	11
5. PROJECT HIGHLIGHTS	
Focus on green skills and VET	15
Focus on microcredentials	18



A message from our Executive Director

The green and digital ‘twin’ transitions, combined with the upheavals of geopolitics, are affecting and disrupting our economies and societies. At the same time, they offer opportunities for a new, competitive and sustainable economic growth model. To embrace these changes, we need skills: this is why most of 2023 (including the first months of 2024) was designated the European Year of Skills.

Cedefop is the European Union agency undertaking research and policy analyses to boost our understanding of labour markets’ rapidly changing skill needs, and of how vocational education and training (VET) is adapting to address them. In 2023, with our evidence and intelligence on VET, skills and qualifications, we spelled out what Europe needs to make and shape the skills revolution.

To handle skill shortages and mismatch, we need to invest in people and upgrade jobs. VET provides the blueprint: for training the young; for re- and upskilling the adult workforce; for reaching out to those neither in training nor employment; and for making work itself more conducive to learning. Governments and social partners rely on Cedefop. Our 2023 flagship event in October, *Mind the gaps*, gathered them, along with other European, national, sectoral and regional stakeholders, in Brussels to discuss Europe’s skill challenges.

To provide direction as the skills revolution unfolds, it is important to know what works. Since Member States agreed on common priorities in VET in 2020, Cedefop has been monitoring

their progress towards them, analysing about 400 measures in 2023 alone. Its *Timeline of VET policies in Europe* showcases national VET strategies, regulations, action plans, and practical measures, enabling cooperation between VET policy-makers, analysts and practitioners across Europe.

Cedefop also accelerated its own ‘twin transitions’. It continued to invest in its digital infrastructure and communication capacities and started to implement its decarbonisation strategy, aiming to become a climate neutral organisation by 2030.

This brochure presents Cedefop’s core achievements in 2023. Read about our Green Observatory, our big data and foresight capabilities, our take on microcredentials and adult learning, our facilitation of networks and peer-learning, and our main events such as *Skills Skills Skills!*, co-organised with our sister agencies, the European Parliament and the Commission in September.

Our thanks go to Cedefop’s tripartite Management Board and to our European and international partners for their contributions to our work. Cedefop will continue to count on their wisdom and support, and looks forward to achieving new milestones through partnership.

This is Europe’s decade of skilling! Stay tuned.

Jürgen Siebel
Cedefop Executive Director



WEBSITE TRAFFIC

+31.1% visits

SOCIAL MEDIA FOLLOWERS

f 17 620 (+ 2%)

in 11 203 (+ 40%)

X 13 582 (+ 7%)

PUBLICATIONS

447 000 downloads

Take-up (citations) in 2022-23 of Cedefop's work in

177 EU policy documents

140 papers of int. organisations

875 academic articles



QUALITY OF CEDEFOP EVENTS

96% satisfaction rate

CONTRIBUTIONS TO MEETINGS that inform policies

170 virtual

102 physical



2023 YEAR OF SKILLS

14 events organised including

6 Virtual get-togethers

652 participants

FLAGSHIP EVENT
'Mind the gaps'
100% satisfaction



connecting flexible training provision to changing training needs

Monitoring, analysing
and helping shape
countries' VET policies

Cedefop supports the development of VET qualifications, policies and systems that are responsive to the changing skill needs of people, economies and societies.

Labour-market-oriented training provision combined with effective support policies (such as lifelong guidance, validation of prior learning and financing VET) allow people to progress in their learning and working careers throughout their lives.

Council Recommendation on VET & Osnabrück Declaration

In 2020, European countries agreed to work together on common priorities in their VET policies that would equip young people and adults with skills to overcome the pandemic and to welcome and manage the transition to a greener and digital economy based on social fairness and resilience. These priorities are depicted in the [Council Recommendation on VET](#) and the [Osnabrück Declaration](#). Countries have been implementing them during 2022 and 2023.

More agile, resilient, and attractive VET

In 2023, Cedefop monitored and analysed about 400 [measures that countries have taken towards these common goals](#). They have moved forward on making VET more agile, resilient, and attractive. Areas of further action include: embracing the green transition more prominently in VET programmes and curricula; ensuring access to digital learning for people at risk of digital exclusion; implementing integrated approaches

In 2023, Cedefop concluded its [research on entrepreneurship competence in VET](#) and disseminated its findings.

Entrepreneurship competence is a set of crucial skills empowering people to manage change, including technological, climate, demographic, and safety challenges.



reaching out to those who need reskilling and upskilling; and strengthening the involvement of social partners in VET.

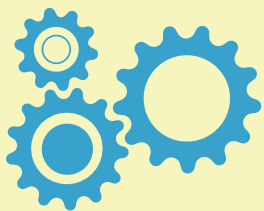
ReferNet

To foster mutual learning and understanding, Cedefop, together with [ReferNet](#), its European network of expertise in VET, provided input to the 2023 Education and Training Monitor and published [short descriptions](#), [spotlights](#) and [video animations](#) of Presidency country (Sweden, Spain) VET systems. There was also online [national news on VET](#) from the EU Member States, Iceland and Norway, including initiatives to promote the European Year of Skills.

National qualifications frameworks

National qualifications frameworks (NQFs) make understanding of qualifications easier within and between countries and help people progress in education, training and learning throughout their lives. In 2023, Cedefop continued its [work on the transparency and transferability of qualifications](#), including [microcredentials](#), updating its [European inventory of NQFs](#) and the corresponding [NQF online tool](#). It also worked on its [Brussels seminar](#) with the Spanish Presidency on citizens' lifelong learning and mobility.

Recognising the value of what people know and can do, whether acquired in formal or non-formal settings, is a fundamental step in ensuring mobility and labour market integration for learners and employees moving across Europe. Cedefop hosted for the first time the meeting of the [Interagency Group on Technical and Vocational Education and Training \(IAG-TVET\)](#), which discussed developments in VET, the impact of artificial intelligence on skills, and crisis response strategies.



connecting people's skills to labour market needs

Cedefop's skills
intelligence



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Cedefop work on skills intelligence, in 2023, helped policy-makers and other skills system stakeholders understand labour market trends and skill bottlenecks.

As part of the European Year of Skills, Cedefop put its next-generation skills intelligence in the spotlight and continued to argue for strengthening skill matching across Europe. It disseminated the findings of its second European Skills and Jobs Survey, which were used in the Commission's first State of the digital decade report and a European Parliament resolution on VET for Industry 4.0. And it fielded its first European training and learning survey to map all forms of learning and to generate new insights into how to shape and stimulate up- and reskilling.

Skills forecast

Cedefop's skills forecast, released in 2023, emphasises the need for up- and reskilling. The forecast found that, from now up to 2035, **57 out of every 100 job openings** will be for **people with high-level qualifications**, **41 for people with medium-level** and **only two for people with low-level qualifications**. These long-term trends partly account for shortages and recruitment difficulties in today's labour market.

In 2023, Cedefop's evidence emphasised that such imbalances and other skill challenges are not only a matter of lacking supply: its contribution to the 2023 ESDE report showed that demand factors, such as poor working conditions, also play a role. In a joint report and virtual get-together with Eurofound, Cedefop argued that supply-side skills policy and demand-side policy that supports skills utilisation in workplaces, are complementary.

flagship report
SKILLS IN TRANSITION

BIG-DATA analysis

Green and digital transition

- The green and digital transitions can be seen as interrelated skills transitions affecting the whole workforce. In 2023, Cedefop used its big-data-powered analyses of job ads to advocate accelerating digital strategy and policy implementation by up- and reskilling the workforce, investing in the skills of teachers and trainers and modernising education and training systems.
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Cedefop's *Skills in transition* flagship report showed that digital skill needs are growing fastest in low-skilled jobs, reinforcing the message that a successful digital transition requires targeted digital skills training for people who have been excluded from the digital revolution and whose jobs may be at risk because of it. The impact of technological innovation is also evident from Cedefop's care sector analysis, which showed that massive upskilling is required to give carers the skills to work with assistive and remote care, and other emerging technologies to help older people.

In 2023, Cedefop contributed to EU greening initiatives. It worked with the Swedish EU Presidency on the links between green innovation and skills anticipation, and expanded its green observatory.

Cedefop's unique perspective on analysing green trends has helped it become a recognised hub of reliable information on jobs and skills for the green transition in Europe and beyond.



EU GREENING initiatives

info on **JOBS & SKILLS**
FOR THE GREEN TRANSITION

connecting people and learning opportunities

European VET policy
benchmark targets:
Cedefop's data insights



Sound statistical information is essential to European VET policy-making and to monitoring the EU's and Member States' progress towards agreed benchmarks.

To support both, Cedefop has developed a framework of core indicators to observe developments and trends under its [Key indicators on vocational education and training \(VET\)](#) and its [European VET policy dashboard](#).

The latest available data offer key insights.

2021 Council Resolution on the European Education Area

The EU has some way to go to meet its **2025 target of 47% of adults participating in lifelong learning**, set in the [2021 Council Resolution on the European Education Area](#). The [2021 European Pillar of Social Rights Action Plan](#) **increased this to 60%, by 2030**.

However, according to the 2016 Adult Education survey, which asked adults if they had participated in training in the previous 12 months (excluding guided on-the-job training), current baseline estimates are that **adult participation in lifelong learning in the EU is 37.4%**.

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2020 European Skills Agenda

strives for **30% of low-qualified adults**



to participate in lifelong learning by 2025

CURRENT RATE **17.9%**

2

Adults need better digital skills

In 2021, an estimated **53.9% of adults** had at least basic digital skills



Target
70% by 2025 : **80%** by 2030



Supporting the upskilling of low-skilled adults

In 2023, Cedefop published the preliminary findings from its first two country reviews for the [Recommendation on upskilling pathways](#). Limited resources, ad-hoc funding and territorial disparities often lead to gaps in service cooperation; small companies have limited capacity to provide tailored training, with the investment required outweighing the perceived benefits. These first two reviews (on [France](#) and [Italy](#)) offer insights and examples showing that there is consensus on the need for holistic approaches addressing the multiple barriers low-skilled people face and offering them personalised pathways.

Improving lifelong guidance

Developing adults' skills refers not only to training but also to information, career choices and guidance to give individuals agency in pursuing their learning and working pathways. But improving lifelong guidance systems is difficult without comparable information on costs, outputs, outcomes, and impacts.

Common standards and monitoring systems for lifelong guidance are needed to foster a better understanding of associated costs as well as guidance outcomes and impacts. Cedefop's 2023 reports on [setting European standards for monitoring and evaluation of lifelong guidance systems and services](#), proposing [potential indicators](#) provide a starting point for policy discussions on consistency and coordination in data collection.

project highlights

FOCUS ON
Green skills and VET
Microcredentials



GREEN SKILLS AND VET

Difficulties in identifying ‘green’ occupations show that the green transition is not limited to sectors, such as energy or occupations, such as environmental engineers, but permeates all sectors and occupations.

Europe’s net-zero climate targets are influencing the regulatory framework in which the manufacturing, administrative and finance sectors operate and so changing how products and technologies are designed and made.

Green occupations

This extends the types of skills needed to deliver the green transition from ‘green skills’, originally perceived mostly as technical and job-specific, to skills fostering a ‘green mindset’. Green occupations are not only those powering ‘green’ technological change and infrastructure, but also those that support the shift towards new, more circular sustainable EU economies and societies. The need for this shift emphasises the importance of VET and its role, not only in delivering the skills to produce and use technologies, but in developing sustainable attitudes and innovation.

Green transition

Cedefop complemented its long-term message of the [green transition being an engine of job growth at all skills levels](#) with analyses of latest



trends. It also showed increasing skill bottlenecks in the energy sector and high-tech services, while job opportunities for high-skilled greentech professionals (scientists, R&D researchers, specialised engineers, and other [thyroid occupations](#)) are booming.

Skills foresight findings

Cedefop released two skills foresight findings that translate sectoral green trends into skill needs and VET opportunities to meet those needs. Turning [linear thinking into green growth mindsets](#) for the circular economy requires much more than technical skills for product and process design. Transversal skills such as systems thinking, multidisciplinary teamwork, and data analysis are integral to the circular economy. These include skills that help the [agri-food sector grow greener](#) and alleviate shortages, such as skills for using sensors and understanding the data they provide, entrepreneurship skills and empathy skills required to manage people.

Financial analysts can help companies evaluate opportunities and support investment in green solutions.

But not all financial analysts need skills directly relevant to the green transition.

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Cedefop extracted information from [online job advertisements](#) for financial analysts, assessing ‘greenness’ by the job’s skills and tasks, not only its title. Its study shows differences across countries.

For example: **job adverts for financial analysts mentioned ‘green’ tasks and skills**



Netherlands more than 18%

Germany 4%

MICROCREDENTIALS

Sweeping changes in economies and jobs require education and training systems to provide more flexible learning pathways and valid credentials.

Microcredentials can offer both.

They are agile and can respond quickly to emerging labour market needs; if well-designed, issued by acknowledged providers and quality-assured, they can offer a recognised market value users can trust.

Microcredentials certify the outcomes of short learning experiences. They can:

CVET

be useful in continuing vocational education and training (CVET), either stand-alone or as building blocks of longer learning experiences or courses;

strategies

support national, regional and sectoral upskilling and reskilling strategies, foster business innovation and help shape industrial ecosystems such as innovation clusters;

learners

offer learners targeted training for better employment prospects;

productivity

help employers improve productivity and employee retention.



In 2022-23, Cedefop mapped microcredentials in two sectors, manufacturing and retail, and looked at their emerging role in supporting labour-market-relevant education and training.



manufacturing



retail



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Microcredentials can play a role in the modularisation of qualifications, the validation of prior learning, and possibly in enabling the inclusion of the most vulnerable by providing low-threshold labour market access.

Cedefop, through its [research work](#) on their take-up, characteristics and functions, has helped foster European and national [stakeholder understanding of microcredentials' labour market value and their benefits for end users](#).

- How do microcredentials relate to and interact with existing qualifications?
- Are they thoroughly assessed and quality-assured, recognised or certified?
- Are they integrated into national qualifications frameworks?
- Are they treated as stackable building blocks of full, recognised credentials or qualifications?

All these features determine the value learners and employers will ultimately ascribe to them and the way in which they will be integrated into national VET systems.



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SKILLS FOR

people
competitiveness
sustainability



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