Skills in transition: the importance of skills intelligence

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Joint workshop on workforce shortages and upskilling for the clean energy transition

Madrid, September 28th, 2023

Cedefop looks into labour markets' changing skill needs and the development of vocational education and training policies across the EU Member States

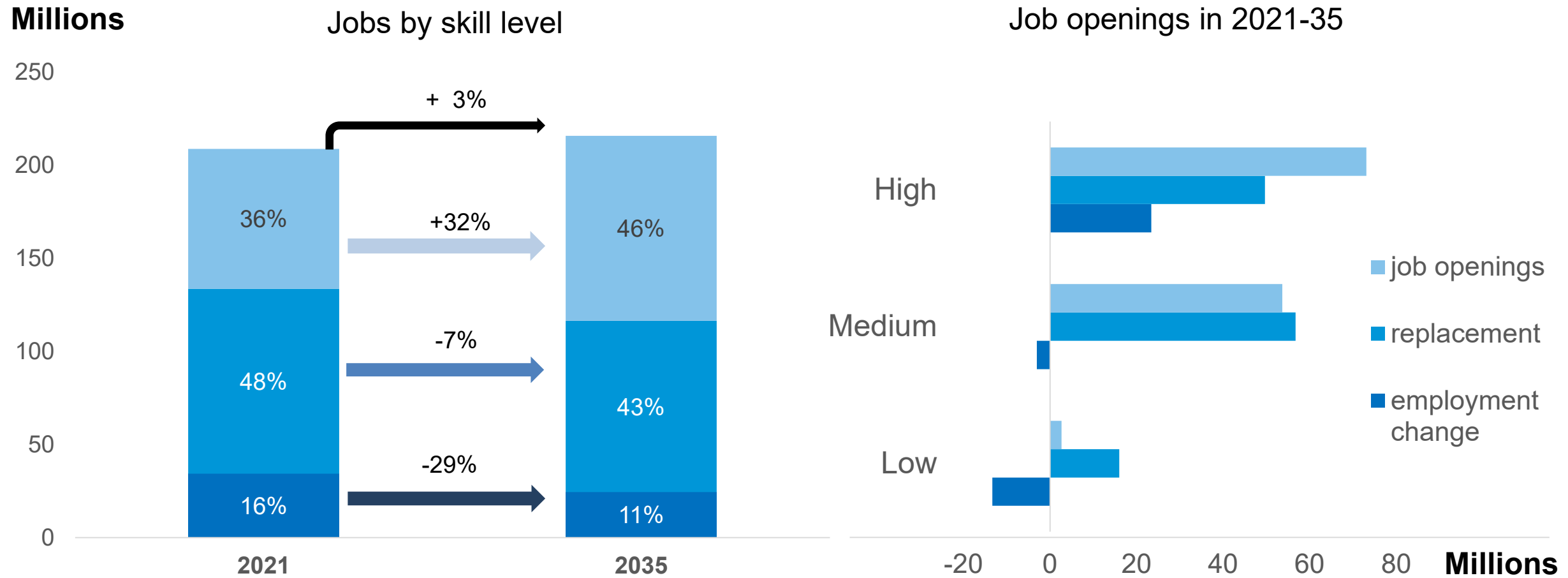With its research and policy analyses, it supports the European Commission in designing and promoting EU VET policy

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Cedefop blends insights to develop **skills intelligence**

EU skills forecast

Sectoral skills foresight

Online job ads analysis

Qualitative research & analysis

Expert groups

Information from Cedefop networks

Change in sectoral, regional and local skills ecosystems

Long term labour market impact of greening (forecasts)

Target setting, emerging green tech and skill trends

Cedefop Green Observatory ([Cedefop GO](#))

The labour market up to 2035
megatrends make jobs rapidly more skills intensive

Millions

Jobs by skill level

Job openings in 2021-35

+ 3%

+32%

-7%

-29%

	2021	2035
	36%	46%
	48%	43%
	16%	11%

High

Medium

Low

job openings

replacement

employment change

Millions

Source: Cedefop skills 2021-35 forecast

Just digital transition via up and reskilling people

Learning potential in digital activities (% adult workers)

Higher

Manage or merge databases	**81%**
IT systems, hard/software	**87%**
Programme or code	**92%**

Medium

Use specialised software	**50%**
Prepare presentations	**60%**
Advanced spreadsheets	**74%**

Basic

Browsing, e-mail, social media	**20%**
Write or edit text	**28%**
Use spreadsheets	**38%**
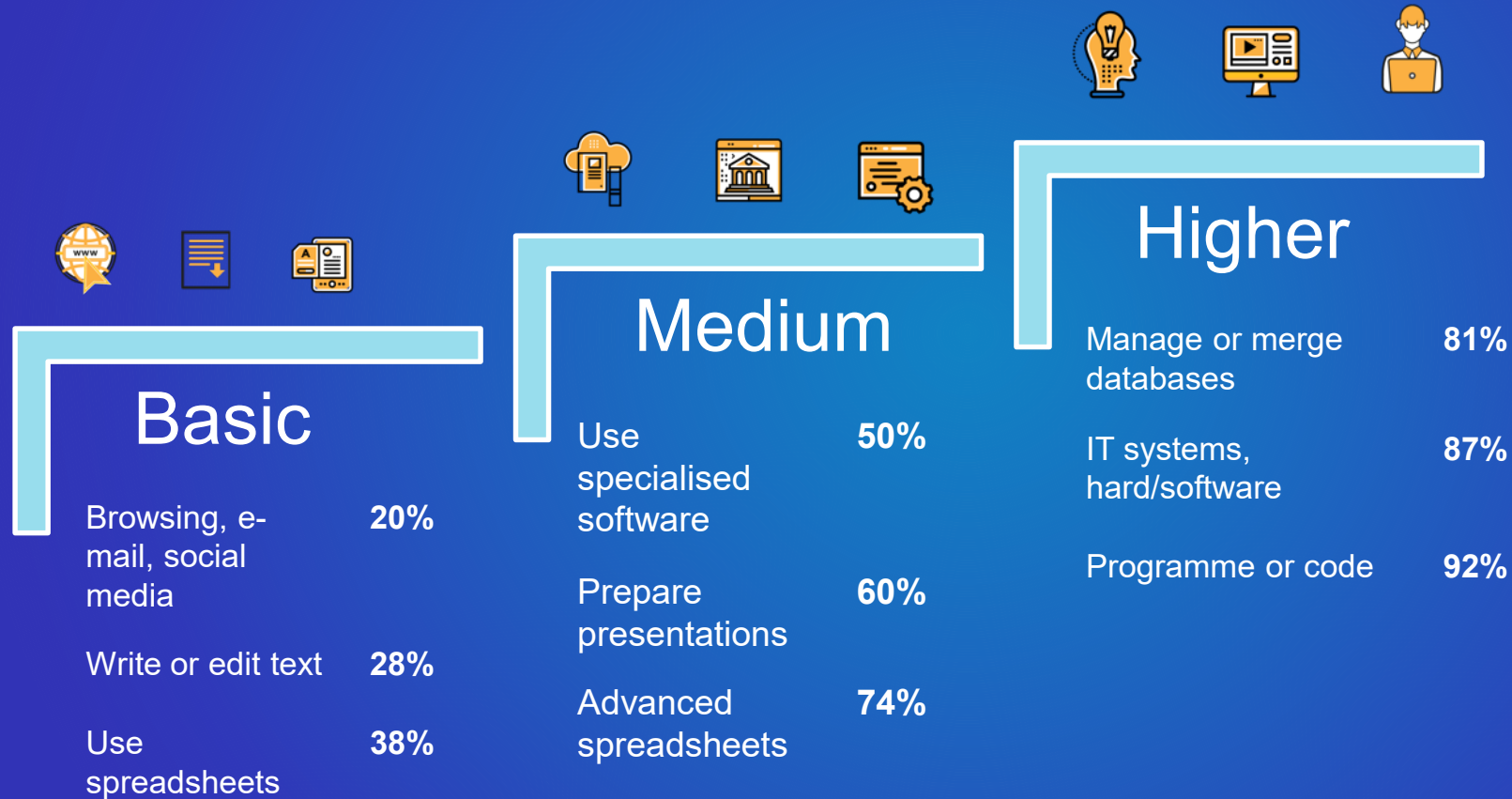
Source: Cedefop 2nd European Skills and Jobs Survey (2021)

Job and skill impacts of greening

- **European Green Deal skill forecast scenario**

- About 2.5 million additional jobs by 2030

- Employment benefits in most sectors, some negatively affected (e.g., coal mining)

- Indirect employment benefits mainly for service-based sectors (e.g. ICT, real estate)

Cedefop (2021) The green employment and skills transformation

- **Up-/reskilling for all workers**:

- Targeted policy for 'key' and 'thyroid' occupations

- VET for workers' transitions in 'brown' sectors (e.g. conventional electricity)

- IVET to prepare future workers for green(er) jobs

Online job advertisements by 'greenness' (averages for Q1 2020 - Q4 2022)

- high green skills intensity 13%
- medium green 25%
- no green skills 46%
- some green skills 16%
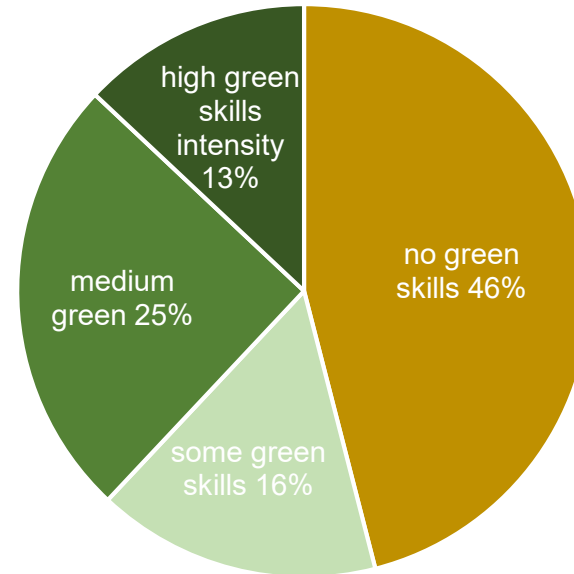
Source: Cedefop (2023). *Skills in transition: the way to 2035.*

Many types of jobs will drive green transition:
Frontline green jobs Greentech specialists
Green management Digital specialists
Green minds
Cedefop foresights: cities, waste management , agri-food, circular economy

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Green jobs in the future of work
and VET's role in accelerating transition

Frontline green jobs
Construction professional
Repair specialist
Energy professional
Material extraction/recycling/reuse expert
Material and process engineers
Circular product designers
Transport and mobility specialist
Environmental protection specialist

Greentech specialists
Industrial problem analysts
Industrial symbiosis facilitators
Hydrogen specialists
Urban space specialist
Energy expert
Circular economy plant designer
Agronomists

Green management
Green/smart city manager
Logistics manager
(Strategic) waste manager
Waste valorisation professional
Renewable energy managers

Digital specialists
ICT professional
Data scientists and data analysts
E-commerce specialists
GPS experts (precision agriculture)
Waste sorting optimisation professional

Green hearts and minds
HR specialists
Consumer behaviour specialists
Sustainability trainers
Waste management trainer
Citizen engagement specialist

Green transition accelerators
'Marketing' green jobs/careers

Trusted skills intelligence

Green apprenticeship

Strong feedback loops for agile VET

Microcredentials

Networks

Systems thinking

Empowered local players

Source: Cedefop green skills foresights in cities, waste management , agri-food and circular economy
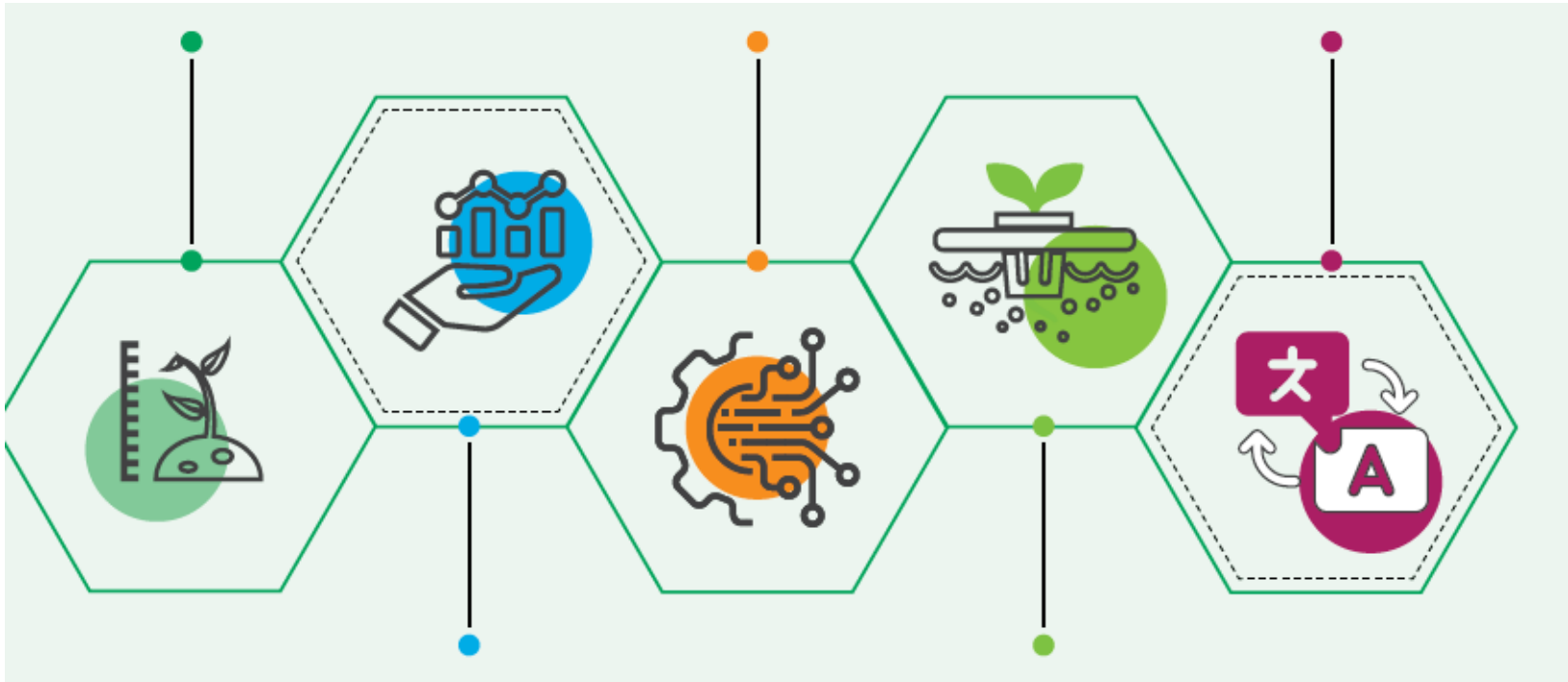
Skill sets driving the green transition

Strategic skills

Production skills

Marketing / communication skills

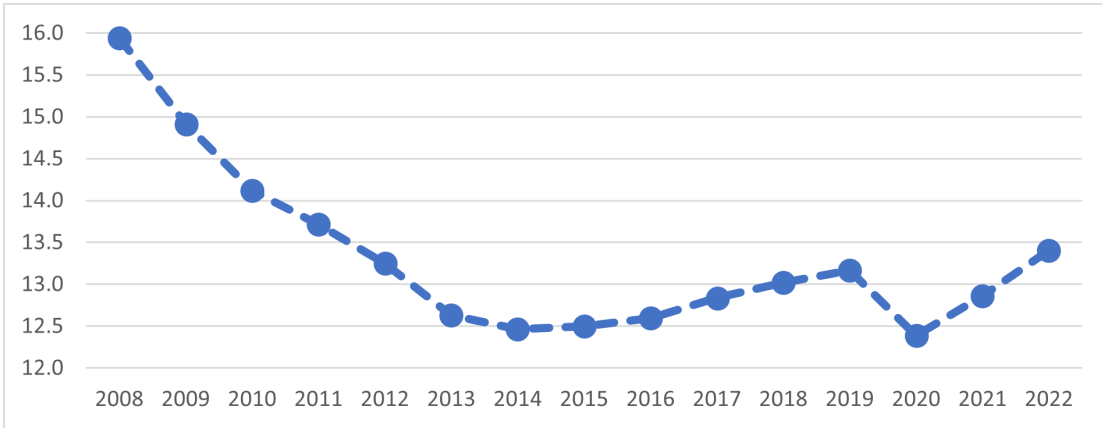Systems thinking, empathy

Enabling skills: digital and data analysis skills & product and process design skills

Source: Cedefop green skills foresights in cities, waste management , agri-food and circular economy

Construction: current and future employment trends

## Employment in construction, 2008- 2022 (data for Q2)

Source: Eurostat Labour Force Survey. Online data code: LFSQ_EGAN2

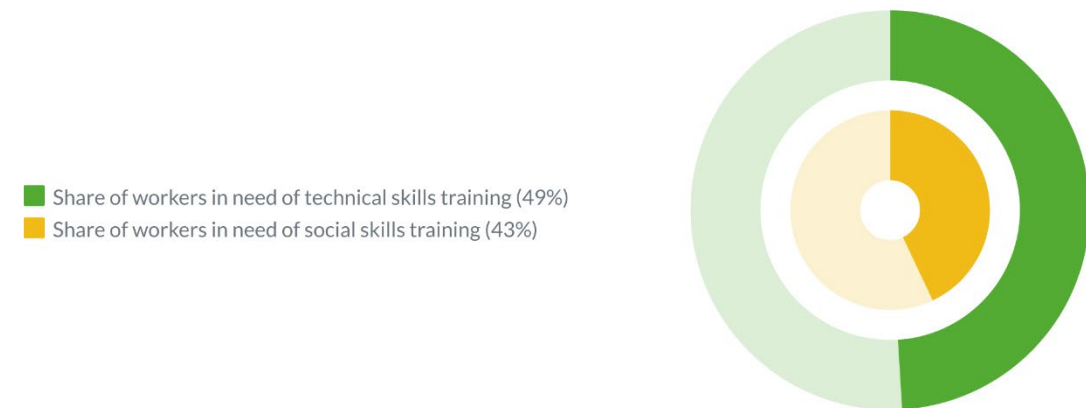## Employment share of technology-intensive occupations (in %)

Construction: 2007: 12%, 2021: 14%, 2035: 15%
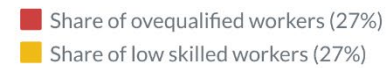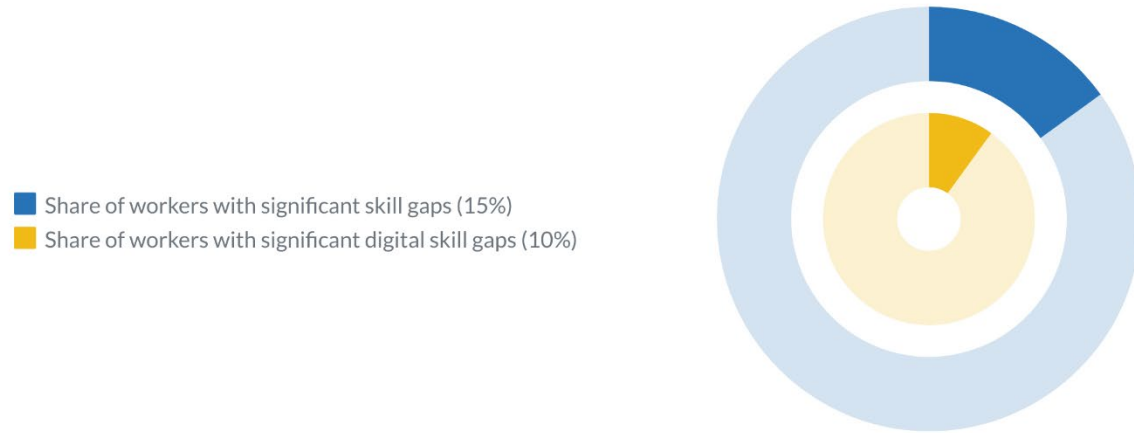Manufacturing: 2007: 14%, 2021: 18%, 2035: 20%
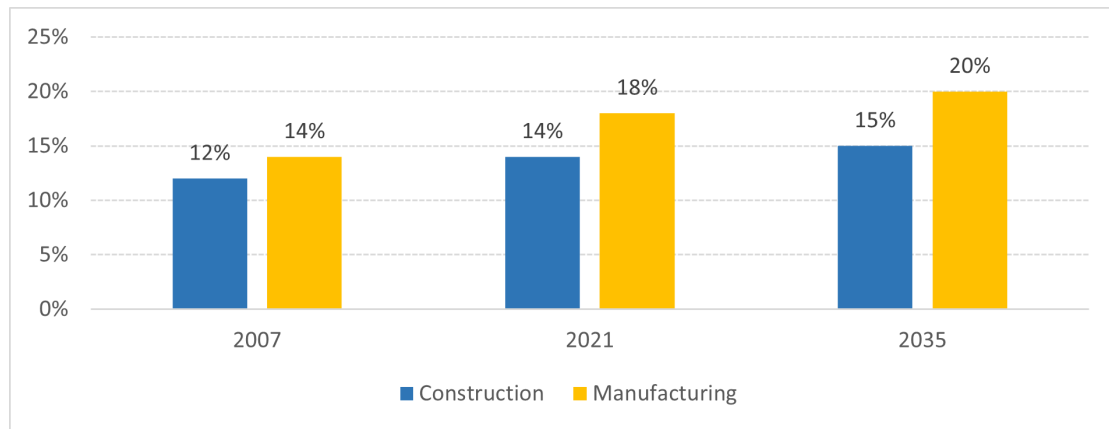
Source: Cedefop Skills forecast database. Own calculations.

Employment shares of key occupations in construction (in %)

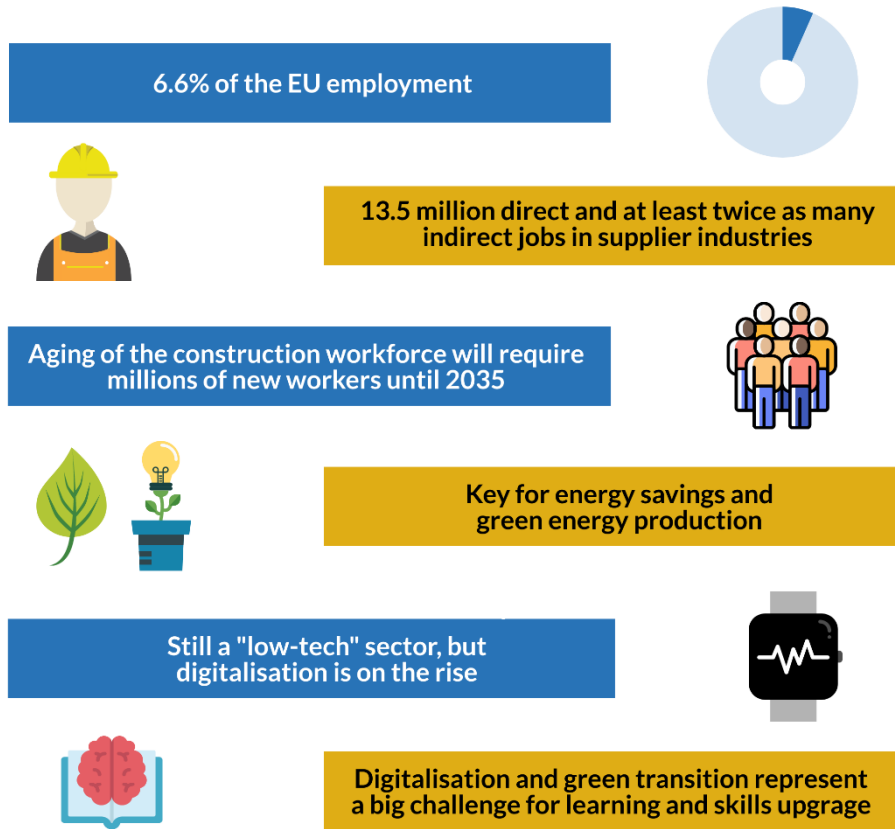*Source: Cedefop Skills forecast database. Own calculations.*
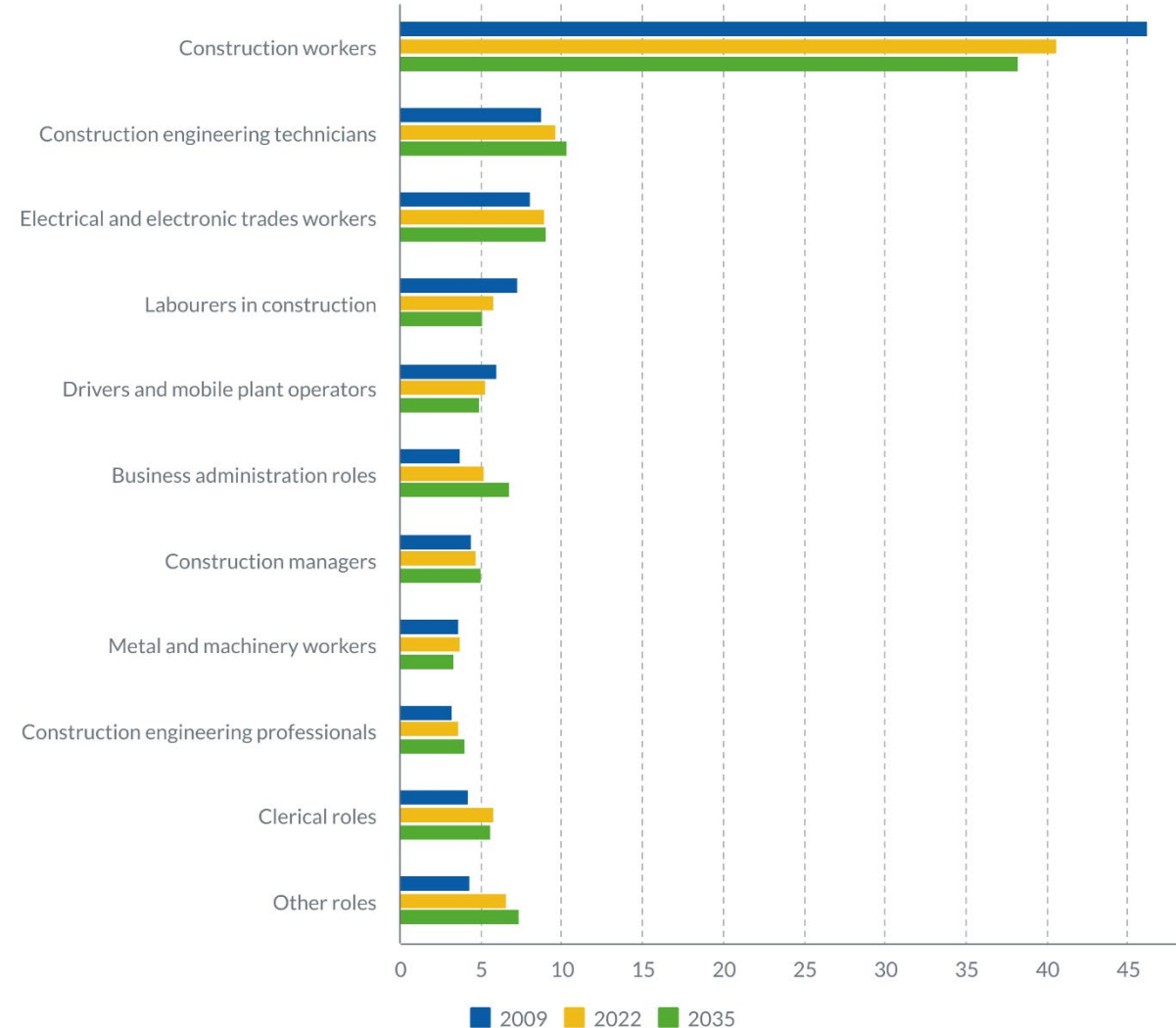
Cedefop data insight, (2023). The greening of the EU construction sector

Skill challenges in the construction sector

- ■ Share of workers with significant skill gaps (15%)
- ■ Share of workers with significant digital skill gaps (10%)

- ■ Share of ovequalified workers (27%)
- ■ Share of low skilled workers (27%)

- ■ Share of workers in need of technical skills training (49%)
- ■ Share of workers in need of social skills training (43%)

Challenges and opportunities for the construction sector

6.6% of the EU employment

13.5 million direct and at least twice as many indirect jobs in supplier industries

Aging of the construction workforce will require millions of new workers until 2035

Key for energy savings and green energy production

Still a "low-tech" sector, but digitalisation is on the rise

Digitalisation and green transition represent a big challenge for learning and skills upgrage

Most frequently required skills in construction OJAs* (2020-22)

Skills (top to bottom):
- Work in teams
- Planning and scheduling
- Developing solutions
- Use CAD applications
- Use digital apps for collaboration
- Providing assistance to people
- Creative designing
- Performing clerical and administrative tasks
- Communication and collaboration with others
- Complying with legal and organizational guidelines
- Allocating and controlling resources

■ 2022   ■ 2020

Sources: Cedefop Skills OVATE. Own calculations.
Cedefop data insight, (2023). The greening of the EU construction sector

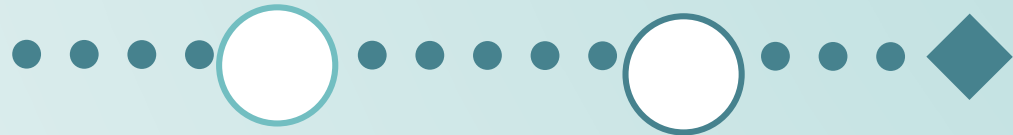*OJA limitations- overrepresentation bias favouring high-skilled jobs

VET's enabling role and responsibility

Short-term (*sprint)*

Accompany change

Long-term (*marathon)*

Trigger change

- Recalibrating VET

- Targeted CVET: Adjust training to learners' needs (e.g., short-training modules; microcredentials)

- Work-based learning/apprenticeships

- Shaping circular economy citizenship

- Technical and digital skills; but also *empathy*

- "Green" skills anticipation

Cedefop reaches out in the European Year of Skills

Cedefop's approach and work on EYS

Main events

Skills, Skills, Skills – 20/9

At the European Parliament with the European Commission, Eurofound, ETF, ELA and EU-OSHA

Mind the gaps – Skills and learning in a changing world of work - 12/10

Cedefop flagship event in Brussels

Contact Cedefop for more information

EYS virtual get-togethers (90min), 2023/24

- Sectoral skills intelligence & strategies: 26/9/23

- Valuing all skills - The European approach to validation: 3/10/23

- Matching skills to quality jobs - From evidence to action

- Tackling the digital divide in the EU and beyond (with ETF)

- What does going green mean for skills? (Green Observatory)

Info on Cedefop webportal & social media

Thank you

Green
Observatory

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