

E3G

With the support of the Renovate Europe National Partners

BRIEFING

SPEEDING UP THE DELIVERY FOR RENOVATION

*Investing in
Skills*

October 2022

Summary

Labour and skills shortages in the renovation sector are one of the main obstacles that need to be overcome to successfully implement the Renovation Wave in the EU, contributing to achieving climate neutrality and social goals¹. The unfolding events in Ukraine and skyrocketing energy prices in 2022 have brought these labour and skills shortages into sharper focus and amplified the need to seriously address workforce bottlenecks in the energy renovation market.

ADDRESSING KEY CHALLENGES

Renovate Europe highlights examples of action taken to address the key skills-related challenges in the renovation sector:

1. Attracting young people and professionals from other sectors to the construction sector
2. Upskilling current professionals to cater for a variety of new skills requirements
3. Designing forward-looking training programmes in line with evolving digital trends

CALL FOR ACTION

Renovate Europe calls for further action on skills development for renovation via the following mechanisms:

1. Enact stronger regulatory requirements via MEPS and National Roadmaps in the EPBD
2. Use EU funding such as MFF to support scalable buildings-related training programmes
3. Develop strong National Plans on Skills to facilitate public-private partnerships

This briefing takes stock of the situation of skills training for renovation at national level and highlights best practice examples that could be scaled-up or replicated in other Member States to boost the workforce for renovation across the EU.

¹ See the EU's 2030 target of 78% employment and 60% adult learning participation. European Commission, 2022, [European Pillar of Social Rights: State of play on the national targets for 2030](#)

Introduction

The implementation of the European Green Deal signalled significant changes for the labour market. The Renovation Wave Communication² in 2020 made a clear call for industry and governments to invest in human capital: *“the transformation towards a climate-neutral building stock will only be possible if existing jobs are transformed to include green skills and if new job profiles emerge, such as specialists in deep building renovation, installers for advanced technological solutions, or Building Information Modelling managers.”*

Sustained investment in human capital is necessary to ensure there is a **sufficiently large and skilled workforce to be able to deliver Renovation Wave objectives** and support at least doubling the renovation rate in the EU. Fragmented supply chains in the construction sector can make such investment a challenge, but good practices are emerging across member states and at EU level, which can be scaled to deliver change. Challenges can only be addressed through sustained cooperation between government, industry, social partners, professional bodies and networks, and education and training providers.

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ADDRESSING KEY CHALLENGES

Member States and the EU are already working to improve the number and variety of workers in the buildings sector. Initiatives include campaigns to improve the image and attract new professionals through re-skilling opportunities, mandatory continuous training for those already in the sector, upskilling of both medium- and high-skilled workers by state-sponsored programmes, certification regimes encouraging practitioners to specialise, private sector-led activities to promote upskilling, and partnerships with Vocational and Educational Training (VET) providers.

Several key challenges must continue to be addressed to unlock the full potential of the Renovation Wave. The construction sector still struggles to reach new talent pools, whether young people, women in a traditionally male-dominated sector, or workers from other sectors. New skill demands for the Renovation Wave mean that **current workers require upskilling** to fully participate. The growth of digitalisation in construction can be used to support renovation projects and requires highly-skilled workers.

² European Commission, 2020, Renovation Wave Communication: [Renovation Wave Communication \(europa.eu\)](https://ec.europa.eu/press/press_corner/detail/renovation-wave-communication).

1 ATTRACTING YOUNG PEOPLE AND PROFESSIONALS FROM OTHER SECTORS TO THE CONSTRUCTION SECTOR

Renovation is a labour-intensive sector which requires the availability of a large workforce in sufficient numbers. Forecasts by CEDEFOP predict that provisions in the European Green Deal, including the Renovation Wave, will create an additional 485,000 jobs in construction by 2030 compared to a baseline scenario without the Green Deal (+3.6%)³. Attracting new professionals to allow for this strong growth in workforce should be a priority for the sector, especially in the context of an ageing workforce. This will require sustained effort to change the reputation of the construction sector and create career opportunities for young people, as well as professionals looking for career transition from other sectors like fossil fuel industries.

Incentivising and providing high quality technical education and training is one of the entry main paths to the sector. There can be a negative perception and low value attributed to some VET training in the construction sector, with apprenticeship schemes sometimes lacking in quality and accessibility⁴. The EC previously has launched a communication campaign targeted at the sector in cooperation with the European Alliance for Apprenticeships (EAfA), but its voluntary uptake has remained limited in scale⁵. The construction industry in some Member States is participating in schemes to directly promote the sector amongst young people.

Improvement in working conditions, development of new career paths and better careers guidance can help reduce potential negative stereotypes around construction⁶. The sector suffers from major gender imbalances: in the EU, women make up less than 9% of the building sector workforce, meaning that the sector is missing out on potential talent and women risk not being able to access employment benefits of the Renovation Wave⁷. Creating fair working conditions for the existing workforce will remain a priority for the sector with ongoing needs to address unattractive employment conditions, short-term contracts, provision for social dialogue and enforcement of health and safety requirements⁸. The public sector can play a role in driving change, for example by requiring direct employment contracts for public authorities to access EU funding. Innovative business models like off-site construction and project management of deep renovation projects can open new opportunities.

³ CEDEFOP, 2021, The green employment and skills transformation: Insights from a European Green Deal skills forecast scenario. This is 500 000 more jobs than the number predicted without green deal policies, representing a 9% increase compared to 2020 (the increase in the baseline scenario is 5.2%).

⁴ European Construction Sector Observatory, 2020, Improving the human capital basis: Analytical Report

⁵ European Commission, DG GROW, [Apprenticeships for the construction industry of tomorrow](#)

⁶ CEDEFOP, 2021, The green employment and skills transformation: Insights from a European Green Deal skills forecast scenario

⁷ Heffernan, Heidegger, Köhler, Stock, Weiser, 2022, A Feminist European Green Deal, Friedrich-Ebert-Stiftung

⁸ See European Commission, [Fair working conditions](#)

Best practice example to be replicated or upscaled:

1. The *Blueprint for the Construction Industry* launched in 2019 and *Pact for Skills in Construction* launched in 2022⁹ are the two most prominent initiatives at EU level, seeking to bring stakeholders together to develop strategies and promote skills development. The *Blueprint for the Construction Industry* is funded by the Erasmus+ programme and gathers 3 EU umbrella sectorial organizations, 9 national sectorial representatives and 12 Vocational and Education Training providers from 12 EU countries, mostly outside central and eastern Europe.



2. The *CraftEdu* project created a national qualification and training scheme for energy efficient renovation in Czechia using an e-learning platform, aimed both at existing and future construction practitioners. There is an emphasis on making the courses attractive to young people to encourage entry into the sector. Courses have been designed to be as visual as possible, making it simple to use the content for similar programmes in Slovakia, Austria and Bulgaria.

3. The *Women Can Build* project brought together partners from six EU countries¹⁰ to work on gender equality in construction with women interested in the sector, VET centres and trainers, and construction companies. The project produced guides for gender mainstreaming in construction VET and for increasing diversity in construction companies¹¹.

4. The biggest Dutch construction trade association Bouwend Nederland has introduced a campaign aimed at attracting new professionals from four target demographics: young people, professionals from other fields, interested in career change, unemployed people and foreign workers¹². The initiative aims to improve the image of the construction sector and to inform about reskilling opportunities.

⁹ *Blueprint for the Construction Industry* website [here](#); *European Pact for Skills* is a voluntary initiative launched by three umbrella sectorial organisations: European Federation of Building and Woodworkers (EFBWW), European Construction Industry Federation (FIEC) and European Builders Confederation (EBC), for info: [here](#)

¹⁰ Spain, Germany, Portugal, France, Italy, Belgium.

¹¹ Wom

¹² European Construction Sector Observatory, 2020, Improving the human capital basis: Analytical Report [here](#)

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UPSKILLING CURRENT PROFESSIONALS TO CATER FOR VARIETY OF NEW SKILLS REQUIREMENTS

The renovation sector also requires a large variety of professionals, from blue to white collar workers, and a wide range of new skills: elementary, middle- and high-skilled profiles¹³, from vocational trainers to environmental lawyers and architects. In addition to boosting the number of technical workers to cover for shortages in the unskilled field, it has been estimated that 3 to 4 million construction workers across various occupations will need upskilling in the fields of energy efficiency and renewable energy¹⁴. On an occupational level, there is expected to be a 3.1% employment increase in buildings and related trades (excluding electricians)¹⁵, the largest increase of any occupation¹⁶.

Attention must therefore also be given to upskilling current professionals. Surveys among construction industry businesses have identified critical needs for skills across Digitalisation, Occupational Health and Safety, Circular Economy and Energy Efficiency, including strategic areas such as insulation, air tightness and ventilation, heat pumps and photovoltaics, smart metering and smart home automation¹⁷. The market will need renovation project managers who can manage different trades on behalf of customers, or installers who are competent in rolling out simultaneous energy improvement measures, combining new materials and technologies to achieve higher energy savings.

Development of skills has a crucial role to play in promoting a just transition by enabling workers in less sustainable activities to shift towards job opportunities in new, greener occupational areas¹⁸.

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¹³ Elementary-skilled jobs include labourers, middle-skilled jobs include heat-pump installation, high-skilled jobs include environmental lawyers and architects.

¹⁴ European Construction Sector Observatory, 2020, Improving the human capital basis: Analytical Report

¹⁵ Medium-skilled occupation

¹⁶ 250 000 jobs more than in a baseline scenario without the European Green Deal.

¹⁷ Construction Blueprint, 2018, Skills needed in European companies, available [here](#)

¹⁸ ILO, 2019, Boosting Skills for a Just Transition and the Future of Work - 6 June, 2019, available [here](#)

Best practice example to be replicated or upscaled:

1. The region of Upper Austria has funded an energy savings academy to provide **upskilling opportunities for white-collar professionals** in the buildings industry. Credits can be collected towards qualification as an energy auditor or energy consultant¹⁹. Around 30 different courses ranging from one-day events to multiple sessions are offered each year. Target groups include construction managers, energy auditors, property developers and architects.

2. In France, a national training body for energy renovation brings together state of the art **upskilling programmes** for craftspeople and construction managers, architects and project managers, and further education teachers and training providers. It is subsidised by three energy companies through the national energy savings obligation from the EED. There are training centres across France and the training programmes are supported and recommended by relevant ministries and industry associations²⁰.



¹⁹ <https://www.energiesparverband.at/veranstaltungen/energy-academy>

²⁰ <https://www.feebat.org/mieux-nous-connaître/>

3 DESIGNING FORWARD-LOOKING TRAINING PROGRAMMES IN LINE WITH EVOLVING DIGITAL TRENDS

Construction remains one of the least digitalised sectors in the economy and offers ample opportunities to take advantage of digital technologies including Building Information Modelling (BIM), to support digitalisation of permit systems, policies and databases, and to encourage centres of excellence. The evolving skills needed for renovations must also take account of the increased need for digitalisation in the sector, as the demand for highly skilled non-manual workers in construction is expected to increase significantly in areas such as computer modelling²¹.

For renovation, there are significant opportunities to roll out digital building logbooks and smart readiness indicators, and to scale existing R&D projects (e.g., applying BIM tools to deep renovation, improving measurement performance gap, SME digital tools and standards). Reskilling or upskilling programmes must be forward-looking, with an emphasis on digitalisation skills, in order to improve productivity, reliability and collaboration in the renovation sector.

Best practice example to be replicated or upscaled:

A series of research and innovation projects funded through Horizon Europe have laid the groundwork for the development of training programmes for BIM. These include BIMplement²², which developed a standardised BIM qualifications framework across five EU Member States, training over 1400 blue- and white-collar workers to improve the overall quality of nZEB construction and renovation. An instruction guide for implementing the methodology in other Member States is available²³.



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²¹ Additional 125 000 jobs in highly skilled non-manual construction-sector occupations

²² <https://www.bimplement-project.eu/about-bimplement/>

²³ <https://www.bimplement-project.eu/wp-content/uploads/2021/02/D5.2-A-self-instruction-guide-for-implementing-new-technical-or-conceptual-topics-and-for-implementation-in-other-Member-States-1.4.pdf>

CALL FOR ACTION

Significant progress to expand and improve the renovation labour market is needed across all Member States and at all levels. Renovate Europe calls for action on skills development for renovation via the following mechanisms:

1 ENACT STRONGER REGULATORY REQUIREMENTS VIA MEPS AND NATIONAL ROADMAPS IN THE EPBD

Stronger regulation can play a key role in supporting investment in skills, both at Member State and EU level. At EU-level, setting a clear trajectory for the renovation of the building sector will provide the needed market certainty and the right long-term investment signals for businesses to invest, also on skills. Ambitious **Minimum Energy Performance Standards (MEPS) in the Energy Performance of Buildings Directive (EPBD)** which is currently under review is the ideal opportunity to drive confidence, planning and investment in the buildings sector.

Establishing a clear regulatory pathway for the buildings sector through ambitious MEPS in the EPBD should also be supplemented with specific requirements for skills development at national level, for example requirements to assess the gaps between available and needed professionals and reporting on progress to close the gaps as part of National Building Renovation Roadmaps. Such reporting is necessary in order to get a better picture at national level to trigger action. Requiring Member States to address skills and worker shortages as part of the **National Building Renovation Roadmaps** in the Buildings Directive currently under review will also ensure a better acknowledgement and integration of workforce provisions as a necessary element of energy policy, a valid point made by the #Skills4Climate²⁴ campaign already since 2019.

Strengthening of accreditation and certification schemes linked with training programmes is also important and will significantly contribute to the reliability and wider use of Energy Performance Certificates for example. Strengthened certification schemes can help create trust in the sector and ensure continuous implementation of the latest standards. Requiring practitioners to be formally certified in order to deliver publicly-funded projects would be an important steps to ensure that such training is taken up.

²⁴ <https://europe-on.org/skills-4-climate/>



Best practice example to be replicated or upscaled:

1. Czech energy auditors are legally obliged to undertake continuous training in order to retain their right to practice. This helps to maintain high standards and knowledge of latest best practice in the sector. The Ministry of Industry and Trade provides training through a programme of workshops and seminars.
2. In Austria a similar initiative is run by a professional network of energy consultants through self-regulation. High quality energy consulting and auditing from members is guaranteed by providing continuous training in cooperation with the regional further education authority and national working group on energy consultants²⁵.
3. A voluntary certification regime in Denmark promotes high quality renewable energy installation by requiring companies to undergo specific training in order to receive the 'RES approval' label. The government provides official endorsement to help consumers choose companies with the label for installations of heat pumps and solar panels. A certification programme provided by the private sector-led Romanian Green Buildings Council provides upskilling training in green construction for existing construction practitioners²⁶.

²⁵ https://www.net-eb.at/ueber_uns.html

²⁶ <http://www.rogbc.org/en/certification-and-training-program/program-description>

2 USE EU FUNDING SUCH AS MFF TO SUPPORT SCALABLE BUILDINGS-RELATED TRAINING PROGRAMMES

Member States must better channel the funding available through the Multiannual Financial Framework (especially ESF+), the Recovery and Resilience Facility, the Just Transition Fund, the LIFE and Horizon Europe programmes towards upskilling and reskilling initiatives for the buildings sector. The current imperative and opportunity is to bring these tools together around skills development work that can be scaled for maximum impact. For example, public funding can be targeted to support the improvement of Vocational Education and Training provisions, “training the trainers” programmes and improved availability and quality of apprenticeships.

EU FUNDING OPPORTUNITIES

Member States should build up the provision of skills for the Renovation Wave into their MFF Operational Programmes. Operational Programmes should be designed in such a way that MFF funding kickstarts long-term investment in renovation beyond the end of the funding period. The allocated MFF funds should be used as a basis to attract and leverage private investment. They can also be used in tandem with other national and EU funding streams to maximise impact.

Funding for upskilling and reskilling to support labour market needs for the Renovation Wave can be found under **specific objective (g)** of the ESF+ programme: *‘promoting lifelong learning, in particular flexible upskilling and reskilling opportunities for all taking into account entrepreneurial and digital skills, better anticipating change and new skills requirements based on labour market needs, facilitating career transitions and promoting professional mobility’*.

Funding for improving the labour market relevance and quality of training systems can be financed under **specific objective (e)**: *‘improving the quality, inclusiveness, effectiveness and labour market relevance of education and training systems including through validation of non-formal and informal learning, to support acquisition of key competences including entrepreneurial and digital skills, and by promoting the introduction of dual-training systems and apprenticeships’*.

Measures promoting women’s role in the construction sector could be funded under **specific objective (c)**: *‘promoting a gender-balanced labour market participation, equal working conditions, and a better work-life balance including through access to affordable childcare, and care for dependent persons’*.

Measures promoting Occupational Safety and Health (OSH) in construction could be funded under **specific objective (d): ‘promoting the adaptation of workers, enterprises and entrepreneurs to change, active and healthy ageing and a healthy and well-adapted working environment that addresses health risks’.**

Best practice example to be replicated or upscaled:

A host of initiatives have grown out of EU Horizon funding, especially under the Build Up Skills programme²⁷. For example, two programmes provided training for blue- and white-collar construction professionals in nearly zero-energy buildings (NZEB) deep renovation and took place across eight Member States²⁸.



3 DEVELOP STRONG NATIONAL PLANS ON GREEN SKILLS TO FACILITATE PUBLIC-PRIVATE PARTNERSHIPS

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Member States must set up a National Plan to develop green skill competences, with a focus on the challenges addressed in this briefing (improving attractiveness of sector, upskilling current professionals and designing forward-looking training programmes). National and local governments have an important role to play in outlining a clear picture about skills gaps and worker shortages in the country (for example as part of National Building Renovation Roadmaps) in order to trigger action and complementarity from all actors. The International Energy Agency (IEA) also calls for a better focus on addressing skills and workforce in the energy transition, and specifically recommends “developing tailored government support for communities and workers as well as opportunities for reskilling and training” and “using robust stakeholder engagement, social dialogue, and policy co-ordination across ministries of energy, employment, and education to deliver better outcomes”²⁹.

National and local governments, trade unions and employer associations and civil society all have significant experience to build on to address the challenge in their specific local contexts, and need to be working together on the basis of a strong National Plan on addressing skills gaps and shortages for energy renovation. The education authorities also

²⁷ <https://www.buildup.eu/en/skills/about-build-skills>

²⁸ Bulgaria, Czech Republic, Romania, Ireland, Croatia, Italy, Greece, Austria. Train-to-NZEB and Fit-to-NZEB.

²⁹ IEA [World Energy Employment](#) report, p50

need to be brought onboard, in order to change mindsets about technical education and careers at the earlier stages, but also to support lifelong learning opportunities for professionals³⁰. Better coordination between industry and educational authorities would also help facilitate work placements and boost employability levels for graduating students, while ensuring the workforce keeps abreast with technological developments.

EU-level actions can also help to set a strong overarching framework with realistic timetables to guide the National Plans. The recently launched Pact for Skills in construction aims to attract enough signatories to secure the upskilling and reskilling of at least 25% of the industry's workforce over the next five years, reaching 3 million workers, with a focus on energy efficiency, circular economy, and digitalisation³¹. The delivery of this objective will critically depend on actual commitments and on the ground activity by businesses and institutions across the EU. Participation can be encouraged and monitored by relevant regional and national authorities.

Some of the enabling conditions to support such activity are already in place. In March 2022, the European Commission published a taxonomy of skills for the green transition in European Skills, Competences, Qualifications and Occupations (ESCO), identifying knowledge and skills that are essential for different occupations, including building construction and renovation. The classification can be used by public employment services, private companies, and VET providers to guide, invest in and develop green career paths³².

To further focus attention to renovation as a specific sub-set of construction activity, a 'Renovation Sector Compact' can be launched and coordinated at EU level. It can further help to unlock targeted government-industry efforts to boost the market, skills, and supply chains for energy renovation.

³⁰ European Construction Sector Observatory, 2020, Improving the human capital basis: Analytical Report

³¹ European Commission, 2022, Pact for Skills: Commission facilitates upskilling and reskilling of workers in the construction ecosystem, <https://ec.europa.eu/social/main.jsp?langId=en&catId=1517&newsId=10160&furtherNews=yes>

³² European Commission, 2022, Green Skills and Knowledge Concepts: Labelling the ESCO classification <https://esco.ec.europa.eu/en/publication/green-skills-and-knowledge-concepts-labelling-esco-classification>

Best practice example to be replicated or upscaled:

1. A multi-stakeholder coalition of construction companies, relevant ministries and research institutions in the Netherlands has mapped available training in energy renovation and potential labour sources in other sectors. The coalition also gathers obstacles to upscaling renovation and tries to develop solutions³³.

2. A BUILD UP Skills initiative in Latvia provided upskilling training for building workers based on a partnership between VET certification bodies, industry and government. While the project finished in 2016, the structure of the training programme continues to be used and modules can be easily updated to reflect changing needs³⁴.



³³ <https://www.mensenmakendetransitie.nl/>

³⁴ <https://www.cedefop.europa.eu/en/tools/matching-skills/all-instruments/build-skills-force-energy-training-builders-latvia>

OVERVIEW OF STATE OF PLAY AT NATIONAL LEVEL

The table below shows incidence of different policy types found in Member States' Long-term Renovation Strategies and feedback from Renovate Europe's National Partners. The table is a simplified version of the tables found in the annex, which contains brief descriptions of the initiatives identified in each Member State.

	 Crafts-person training programmes	 White-collar training programmes	 Certification system	 Continuous training	 Online learning / MOOC	 Attractiveness of sector	 Facilitation of access to upskilling / coalitions	 Creation of occupation profiles
Austria		✓	✓	✓			✓	
Belgium	✓						✓	
Bulgaria	✓	✓						
Croatia	✓	✓					✓	✓
Czechia	✓		✓	✓	✓			✓
Denmark	✓	✓	✓	✓	✓		✓	
France	✓	✓	✓		✓		✓	
Germany	✓	✓	✓	✓			✓	✓
Greece								
Hungary	✓	✓			✓		✓	✓
Ireland	✓	✓	✓		✓		✓	✓
Italy	✓	✓	✓					✓
Latvia			✓					
Netherlands	✓						✓	✓
Poland			✓					
Romania	✓	✓	✓					
Slovakia	✓	✓			✓			✓
Slovenia	✓	✓	✓	✓			✓	
Spain		✓						

This table and national tables in the annex are subject to change as more data is collected.

Annex

Initiatives implemented by Member States

Data collection is ongoing and therefore the following tables and the simplified table above should be considered subject to change.

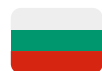


Craftsperson training programmes	White-collar training programmes	Certification system	Continuous training	Online learning / MOOC	Attractiveness of sector	Facilitation of access to upskilling / coalitions	Creation of occupation profiles
	The Energy Academy - target groups include energy managers in companies, municipalities, and institutions, building and home technology specialists, planners, energy consultants, energy auditors	Public register of energy auditors / consultants; specific training required	Continuous training for energy consultants via ARGE-EBA (an organisation of Austria's provinces and their energy agencies)			'Qualification as a European Energy Manager' course from the Austrian Economic Chambers (WKO); regional training services (e5 scheme for municipal employees)	



Belgium

Craftsperson training programmes	White-collar training programmes	Certification system	Continuous training	Online learning / MOOC	Attractiveness of sector	Facilitation of access to upskilling / coalitions	Creation of occupation profiles
Sustainable renovation included in training programmes (Wallonia)						Sustainable construction portal for professionals	



Bulgaria

Craftsperson training programmes	White-collar training programmes	Certification system	Continuous training	Online learning / MOOC	Attractiveness of sector	Facilitation of access to upskilling / coalitions	Creation of occupation profiles
CraftEdu online training	Fit-to-NZEB and BuildUp digitalisation projects						



Croatia

Craftsperson training programmes	White-collar training programmes	Certification system	Continuous training	Online learning / MOOC	Attractiveness of sector	Facilitation of access to upskilling / coalitions	Creation of occupation profiles
Croskills (part of Build Up Skills) promotes lifelong learning and training for craftspeople, employed and unemployed workers	Green Building professional training programme aims to educate multidisciplinary experts in the field of green and sustainable building, energy efficiency, renewable energy sources, and sustainable transport and e-mobility. Fit-to-NZEB + several digitalisation projects (NetUBlep, BIMcert, BIMzeED)					Centre of excellence on EE buildings planned	Part of Croskills (24 modules for EQF level 4)



Czechia

Craftsperson training programmes	White-collar training programmes	Certification system	Continuous training	Online learning / MOOC	Attractiveness of sector	Facilitation of access to upskilling / coalitions	Creation of occupation profiles
CraftEdu		Certification for energy auditors	Certified energy auditors must continually train	CraftEdu			For 'Energy performance of buildings - energy specialist; installation of renewable energy sources - person authorised to install equipment to produce energy from renewable sources; building design.'



Craftsperson training programmes	White-collar training programmes	Certification system	Continuous training	Online learning / MOOC	Attractiveness of sector	Facilitation of access to upskilling / coalitions	Creation of occupation profiles
Knowledge centre for EE and buildings	Knowledge centre for EE and buildings	RES energy accreditation scheme (small installations in private homes i.e. Heat pumps, PV cells, solar heating, biomass boilers) & mandatory certification for energy consultants	Energy consultant training (certification required; responsibility of companies)	SparEnergi.dk - central information platform targeting both private and public building owners (incl. tools)		The Danish Knowledge Centre for Energy Savings in Buildings collates and systematises knowledge, disseminates and develops tools and training materials for executive and vocational training courses	



Craftsperson training programmes	White-collar training programmes	Certification system	Continuous training	Online learning / MOOC	Attractiveness of sector	Facilitation of access to upskilling / coalitions	Creation of occupation profiles
<p>FEEBat (since 2007) - training for builders (funded by EDF, social security bodies run jointly by employers and unions, training benefit fund for building trades). Dorémi advisory service that offers training to craftspeople</p>	<p>Feebat; immoreno - programme for informing estate agents about energy efficient renovation</p>	<p>RGE label; 25% of installers accredited to work with heat pumps (more than DE or PL)</p>		<p>MOOC Batiment durable platform - upskilling practitioners; ACTIMMO & Expertise rénovation copropriété - standardised awareness-raising tools for professional building management bodies</p>		<p>Feebat; PACTE (ended 2019); Profeel (comprises actors from the construction sector, funding bodies, the public authorities and project promoters - the Scientific and Technical Centre for Building (CSTB) and Agence Qualité Construction)</p>	



Germany

Craftsperson training programmes	White-collar training programmes	Certification system	Continuous training	Online learning / MOOC	Attractiveness of sector	Facilitation of access to upskilling / coalitions	Creation of occupation profiles
Training and qualifications	Training and qualifications	Accreditation database of energy auditors rated by clients (BEUC). master craftsperson's certificate required for many trades (incl. construction industry professionals)	Continuing training database lists more than 5 000 continuing training opportunities in skilled trades across Germany, of which more than 320 in the area of energy-efficient construction. Federal Government has promoted the provision of inter-company apprenticeship training in skilled trades (ÜLU) since 1950s			German Confederation of Skilled Crafts (ZDH) quality assurance of training. New training code (2016) provides e.g. those training as roofers learn to account of trade-transcending aspects (prep for solar power units). Support of Energy Scouts (trainees acquiring knowledge from chambers of commerce and industry) targeting EE in SMEs.	Uniform federal professional standards; supplemented by regional curricula for teaching in vocational schools. Since 2017 qualified experts from other sectors (e.g. craftspeople, energy companies, chimney sweeps) can provide advice in federal support subject to qualification requirements)

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Greece

Craftsperson training programmes	White-collar training programmes	Certification system	Continuous training	Online learning / MOOC	Attractiveness of sector	Facilitation of access to upskilling / coalitions	Creation of occupation profiles



Craftsperson training programmes	White-collar training programmes	Certification system	Continuous training	Online learning / MOOC	Attractiveness of sector	Facilitation of access to upskilling / coalitions	Creation of occupation profiles
<p>Training / retraining of 20 000 planned before 2030 (LTRS - need more detail)</p> <p>Review of VET in Hungary led to rationalisation of available professions - among new professions, insulation craftspersonship. Training design at regional chambers of industry of commerce</p>	<p>training / retraining of 20 000 planned before 2030</p>			<p>Hungarian green Building Council has set up online training for white-collar building workers to learn about and apply environmentally conscious approach.</p>		<p>One project under ERASMUS+ (Strategic Partnership) programme targets new training materials, methodologies, etc targeting BIM & NZEB.</p>	<p>Development of occupational guidance and VET cooperation planned from 2023 with the Sectoral Skills Councils coordinated by the Hungarian Chamber of Commerce and Industry</p>



Craftsperson training programmes	White-collar training programmes	Certification system	Continuous training	Online learning / MOOC	Attractiveness of sector	Facilitation of access to upskilling / coalitions	Creation of occupation profiles
Training from public and private bodies (incl. the Education & Training Boards and accredited private sector; and establishment of training policy from national training body SOLAS.)	Training from public and private bodies; Collaboration between Ministry and higher education to ensure that high education institutions adapt courses to needs; pilot 10-module course, 'Fundamentals of Energy Renovation for Traditional Buildings', was co-developed with expert input from key stakeholders	General registers exist for technical advisors and the construction industry (see sources), but not for energy advisors or builders that have upskilled in energy renovation		ETBs and professional bodies offer online/blended training courses for blue and white collar workers		High Performance Building Alliance	Department of Enterprise has produced research on green skills - Skills for Zero Carbon Report (see sources)



Craftsperson training programmes	White-collar training programmes	Certification system	Continuous training	Online learning / MOOC	Attractiveness of sector	Facilitation of access to upskilling / coalitions	Creation of occupation profiles
EU projects piloting training; National Energy Efficiency Information and Training Plan for 2021-2030	EU projects piloting BIM training	Multiple degrees require meeting requirements and level of professional training, but no detail on certification. Entry into force of law of presidential decree setting out skills requirements for retrofitters - grant dependent on retrofitters having the qualification					As part of BUILD UP Skills II, BRICKS, coordinated by ENEA, has developed qualification schemes for a dozen professional roles.



Craftsperson training programmes	White-collar training programmes	Certification system	Continuous training	Online learning / MOOC	Attractiveness of sector	Facilitation of access to upskilling / coalitions	Creation of occupation profiles
		Certification system for 'independent experts'					



Craftsperson training programmes	White-collar training programmes	Certification system	Continuous training	Online learning / MOOC	Attractiveness of sector	Facilitation of access to upskilling / coalitions	Creation of occupation profiles
Public-private training provision. Strong connection with the 'district-oriented' approach						Mensenmakend transitie coalitie Green Deal for the Development of Decentralised Sustainable heating and Cooling Technologies - installation of H&C 'Declaration of Intent on the Labour Market and Training in the District Approach' FW for training planning. Building and technology innovation centre links to VET	Occupational profiles developed for blue-collar work in energy neutral buildings with skills required



Poland

Craftsperson training programmes	White-collar training programmes	Certification system	Continuous training	Online learning / MOOC	Attractiveness of sector	Facilitation of access to upskilling / coalitions	Creation of occupation profiles
		Certification and training system for RES installers					



Romania

Craftsperson training programmes	White-collar training programmes	Certification system	Continuous training	Online learning / MOOC	Attractiveness of sector	Facilitation of access to upskilling / coalitions	Creation of occupation profiles
Train-to-NZEB and Fit to NZEB	Train-to-NZEB and Fit to NZEB	Green Building Professional certification, organised by Romanian Green Building Council; Certification requirement for energy auditors					



Slovakia

Craftsperson training programmes	White-collar training programmes	Certification system	Continuous training	Online learning / MOOC	Attractiveness of sector	Facilitation of access to upskilling / coalitions	Creation of occupation profiles
CraftEdu and StavEdu	Energy auditor training Horizon pilot projects			CraftEdu			Sectoral qualification framework for energy efficiency skills in the construction sector



Slovenia

Craftsperson training programmes	White-collar training programmes	Certification system	Continuous training	Online learning / MOOC	Attractiveness of sector	Facilitation of access to upskilling / coalitions	Creation of occupation profiles
Formal & informal, implemented by different institutes & private sector and as part of EU projects (e.g. Care4Climate (LIFE) project - running for 6 years)	Implemented by different institutes & private sector and as part of EU projects (e.g. Erasmus+ projects by Chambers of Commerce; Construction cluster of Slovenia; Care4Climate (LIFE))	Professional engineers certificates managed by Chamber of Engineers and Chamber of Architects	Building and Civil Engineering Institute (ZRMK) manages obligatory refresher courses for energy auditors at regular intervals			Care4Climate (LIFE) project based on intensive cooperation between academic, public sector (ministries, agencies, institutes), private sector and professional bodies. Exchange of best practices to support NZEB part of COSME ESCP4x project	



Craftsperson training programmes	White-collar training programmes	Certification system	Continuous training	Online learning / MOOC	Attractiveness of sector	Facilitation of access to upskilling / coalitions	Creation of occupation profiles
	Training and seminars organised by public sector, private sector and academia						

About the Renovate Europe Campaign:

Renovate Europe is a political communications campaign with the ambition to reduce the energy demand of the EU building stock by 80% by 2050 through legislation and ambitious renovation programmes. Accelerating the rate of renovation is a key tool in the fight against climate change, and will deliver major benefits for people, their quality of life, and the economy.

www.renovate-europe.eu

#Renovate2Recover

REC Partners (October 2022)

There are currently 49 partner companies and associations actively engaged in the work of the REC, of which 18 National Partners active in the Member States.



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