



15th BUILD UP Skills European Exchange Meeting

26-27 October 2023,
Brussels – Summary

BUILD UP

15th BUILD UP Skills European Exchange Meeting

**26-27 October 2023,
Brussels – Summary**

The 15th edition of the BUILD UP Skills European exchange meeting brought together a vibrant community of 75 participants from 22 EU-funded projects. These projects share a common mission — to elevate the expertise of building professionals. The gathering has been a tradition since the inception of the BUILD UP Skills initiative in 2011, and has sparked significant collaboration and innovation over the years. This 15th exchange meeting served as a melting pot for insights, discussions, and breakthroughs, addressing shared challenges and celebrating success stories. Moreover, it sought to push the boundaries of what's possible in the realm of energy-efficient buildings across Europe, within the context of the European Year of Skills 2023.

DAY 1: THURSDAY 26TH OCTOBER

INTRODUCTION & WELCOME:

Hans RHEIN, Head of Unit LIFE Energy + LIFE Climate, CINEA

On behalf of the Climate, Infrastructure and Environment Executive Agency (CINEA), Mr Rhein welcomed participants to the 15th edition of the BUILD UP Skills European Exchange Meeting, which after four years he is delighted to see is a face-to-face event. Since its creation in 2011, BUILD UP Skills has accomplished much and has funded no less than 94 projects. It has evolved to cover all professionals in the building value chain with national and multi-country projects. It has supported the development of national skills strategies, developed or updated qualification and training schemes to reflect emerging skills, and promoted new and innovative tools, methods and mechanisms to train the workforce and to stimulate demand for skills. However, the skills issue continues to be a major challenge, which was one of the reasons why the EU declared 2023 as European Year of Skills. One of our current challenges is how to replicate and scale-up good examples and experiences at national and European level. Some of these experiences have been gathered in the updated [CORDIS Results Pack](#) on construction skills. Another development is the revamping of the BUILD UP portal – the largest of its kind on energy efficiency and renewables in buildings in Europe. It offers a unique repository of tools and already has 15,000 registered members.



Welcoming the new projects from call LIFE-2022-CET

Moderation: Amandine DE COSTER-LACOURT, Project Advisor, CINEA

NS4nZEBs – Paul DE SCHEPPER, Energy Expert, Thomas More Kempen

The goal of this project is to assess novel technology for nearly-Zero Energy Buildings (nZEB) and close the gap between fast-changing technology and practice. Amongst other things, partners will develop new training curricula, new methodologies, e-learning, VR, and a living lab for architects, smart electricians, etc.

Lead partner is Thomas More Knowledge Centre of Europe, a university association with KU Leuven, working with partners in Bulgaria, Greece, Italy, Spain, and Ukraine.



REPowerEdU – Miro STRAKA, Association of Construction Entrepreneurs of Slovakia

This project aims to create a one-stop-shop package focusing on decarbonisation of buildings (energy efficiency measures); decentralised generation of electricity from RES; energy storage/hybrid systems; EV-chargers (e-mobility); flexibility management; non-energy services/benefits; and sector integration. It aims to create an engaging programme based around four modes of learning: didactics (being taught); discovery (finding out for oneself); discourse (interacting with others); and doing (engaging in activities). Its business plan includes increasing the number of trainers by ten per year to ultimately train 30,000 trainees by 2031. A key thrust is to use AR, VR and mixed reality to make learning more interactive and engaging. The countries covered are: Slovakia, Portugal, Spain, Germany.



RES2 – Anna MORENO, Project Coordinator, IBIMI

The aim of this project is to solve the problem of lack of green and digital skills in the construction sector in Italy, following-up from the Pillar I project developed more than ten years ago. It also leverages the results of the Construction Blueprint project outcomes and focuses on digital competences in energy efficiency, as well as on actions to increase the presence of women in the construction supply chain. Tools used include workshops, surveys and interviews with stakeholders on both the demand and offer side, to discuss obstacles and solutions and to move forward in the development and certification of single competences to better meet market needs. A further innovative tool is a virtual living lab, to experiment with new ways to obtain and certify the skills required by the market to have a truly sustainable and climate-resilient building stock.

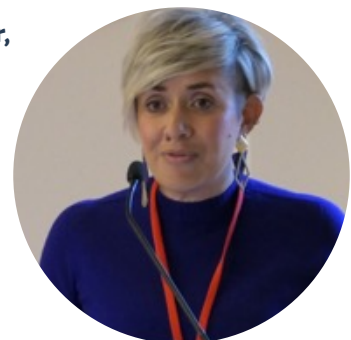


The virtual living lab will experiment the use of the [ARISE platform](#) to certify micro-competences. In relation to digital competences the [buildingSMART qualification system](#) will be proposed.

Key outputs will include the rebooted national qualification platform, the updated status quo analysis (mapping of labour force and skills gaps) and the updated national roadmap to 2030.

TOP CLever – Silvia GIORDANO, International Activities Manager, Green Building Council Italia

This training and outreach programme for a circular and Level(s) based revolution aims to empower construction professionals and workers with the skills needed to face the challenges of the whole life carbon and circular approach along a building life cycle. Innovative



Vocational Education and Training (VET) programmes and activities for white and blue collar workers will be developed and tested, and specific actions undertaken to enhance young talents' preparedness for a future career in the building sector. Women's roles will be a specific focus, alongside raising awareness for equal opportunities in the field. The countries covered are Italy, Slovenia, Spain, Hungary, Croatia, and Poland.

Synergies with other projects and initiatives – open discussion

Moderation: Maria LAGUNA, Head of Sector, CINEA

Monica FRASSONI, President, European Alliance to Save Energy (EU-ASE): the Pact for Skills for Energy Efficiency

Ms Frassoni said that despite the current surge of clean tech and green businesses, much more needs to be done to trigger the use of renewables and increase energy efficiency measures. However, one of the areas that is lacking as far as energy efficiency is concerned, is skills. The [European Alliance to Save Energy \(EU-ASE\)](#) is a cross-sectorial multi-stakeholder business-led alliance promoting the role of energy efficiency across the whole EU energy system. It brings together businesses and thought leaders, with a cross-party group of members of the European Parliament. One of its flagship initiatives concerns the launch of a Pact of Skills for Energy Efficiency. One of the Pact's commitments is to run an energy efficiency skills intelligence. It will aim to map out the jobs and skills that are needed to make the required revolution in energy efficiency. It is important to have a knowledge of what is actually needed through a coordinated platform that brings together different stakeholders. Another key commitment of the Pact is the design and launch of a European Academy of Skills for Energy Efficiency. In the area of skills EU-ASE is working closely with Italian regions and is creating networks between local and regional authorities and energy efficiency experts from the business community to understand energy efficiency technologies and support them in spending the resources for energy efficiency made available by cohesion policy funds.



Dragomir TZANEV, Executive Director, Eneffect: Learning approaches for the new generation Energy Performance Certificates and the Smart Readiness Indicator (SRI): an invitation for discussion

Mr Tzanev encouraged the BUILD UP Skills community to start addressing the skills challenges related to the next generation EPCs and the SRI. As a starting point he provided an overview of relevant EPC projects. The [iBRoad](#) project (2017-2020) developed, tested and delivered a model for the Building Renovation Passport supporting



single-family homeowners with personalised advice to facilitate stepwise deep renovation. [iBRoad2EPC](#) aims to bridge the Building Renovation Passport with the EPC, and expand, improve and broaden their format and joint scope to consider additional features and become applicable also to multi-family and public buildings, also providing a training scheme and materials for on-site building professionals. [CrossCert](#) links next-generation EPCs to energy audits, logbooks and Building Renovation Passports to boost the energy building renovation. [U-CERT](#) provided a comparison and calculation toolkit for National Annexes. The SmartReadiness Indicator is designed to enhance the intelligence of buildings in Europe. A number of projects developed SRI assessment tools (e.g. [Smart²](#); [SRI2MARKET](#); [SRI-ENACT](#); [easySRI](#)): all together seven SRI assessment tools.¹

According to studies from the EPC projects cluster, the complexity of the building auditing and auditor qualification required for energy performance certification varies greatly between Member States, e.g. only certified engineers with additional training are allowed to perform the highly complex auditing to produce an EPC in Bulgaria, whereas in Austria there are no requirements and the auditing is simple. It was also deemed that no building professional can carry out an SRI audit based on their existing competences.

**Beatriz OLLETE, Head of training projects department,
Fundación Laboral de la Construcción: the [Women Can Build project](#) (Erasmus+)**

The Women Can Build project aims to move towards an equal construction industry by promoting education, awareness-raising, and dissemination in Spain, France, Belgium, Germany, Italy and Portugal. It targets four different target groups: VET trainers, VET centres, women, and business. The surveys carried out during the project found that women can offer a higher level of precision and quality in the execution of tasks, as well as a greater respect for safety. However, they continually face difficulties finding a job, having their instructions accepted by peers, and receiving sexist and inappropriate comments. Among the many actions are a practical introductory course in construction for unemployed women, covering bricklaying, painting, tiling, electricity and plasterboard; a roadmap for training providers with course content reviewed from a gender perspective, and with specific calls for proposals aimed at women; and a brochure to provide guidance to companies on promoting gender balance and the recruitment of women. This project had a high impact in participant countries and has a continuation within Eu funding, under Capacity Building of Erasmus+, in the Women Can Build Latam, which involves Argentina and Chile together with Italy and Spain (currently signing agreement with the EU).



¹ Accessible here : https://energy.ec.europa.eu/topics/energy-efficiency/energy-efficient-buildings/smart-readiness-indicator/sri-implementation-tools_en

BREAK-OUT SESSION 1

Session 1A – Boosting demand for skills – taking stock, what's next

This session followed-up on discussions held during previous BUILD UP Skills exchange meetings to take stock of progress in this field and look at remaining challenges, which were briefly summarised by **Luca ANGELINO, Project Advisor, CINEA**. He said that public procurement is identified as a strategic instrument to support the demand for upskilling the workforce, but its potential remains largely untapped. Three main possible methods to boost energy efficiency skills through public procurement are: competency-based clauses under selection criteria; training-based clauses; and other indirect mechanisms, e.g. making the blower door tests and the use of Building Integrated Modelling mandatory in public procurement. Pilot projects completed left some questions unanswered, such as: How to express measurable and verifiable professional competence requirements? Who pays for the training? How about accreditation? Other work streams funded by BUILD UP skills to explore in the session are awareness campaigns and partnerships.

Boosting demand for skills through procurement and partnerships: What outcomes from BUSLeague?

Gloria CALLINAN, Project Support Officer, Technological University of the Shannon, Ireland

[BUSLeague](#) has provided comprehensive support to a chain of hardware/DIY stores in Ireland, with a large number of events and actions to upskill retail workers through training courses. Eco-Centres were established, and advice given on design and display improvements. The tips and tricks were found to be extremely useful to visitors to the retail stores.

Also discussed was adding training clauses on public and private tendering contracts. These allow public procurers to require companies winning nZEB projects (renovation and new build) to train their staff in energy efficiency. A training clause is currently in-use in the Hauts-de-France region, and in Ireland a version of the clause was used by Dublin City Council on St Bricin's retrofit project. A case study was described for the renovation of an old convent into a cultural and community centre. Potential projects that could use the training clause cover residential and non-residential; retrofit and new build as well as projects going for tender in the next six-months (as BUSLeague ended in early 2023). Projects should neither be too big or too small, and the benefits of using the nZEB training clause should be clearly stated and communicated.

Lessons learned from awareness campaigns – Horia PETRAN, Senior researcher INCD URBAN – INCERC

Mr Petran explained how the [nZEB Ready](#) project was established in Bulgaria, Hungary, Poland, Portugal and Romania to enhance market readiness for nZEB implementation and to answer the needs related to lack of awareness, lack of skilled professionals, and lack of support instruments. The needs of key target groups were identified and addressed with tailored awareness campaigns and learning programmes. nZEB training was given to strategic professionals via microcredits through specialised courses lasting 12-16 hours. An nZEB Roadshow was organised in Bulgaria, Croatia, Greece, Italy, and Romania, involving conferences, workshops, training sessions on nZEB principles, mock-ups, nZEB demonstrations, consultations on design, debates, nZEB site visits, games, networking, and learning.

Discussions in two parallel sub-groups moderated by: (1) Gloria CALLINAN (2) Horia PETRAN

Results from sub-groups discussions:

1. Over the past 5 years, evolution of mechanisms linking skills/qualifications to procurement

- Participants highlighted that including KPIs in mandatory procurement documents is a natural but long-term process to induce drivers for qualification.
- Many participants agreed that mandatory process works better; this means, among other things, the obligations for companies to qualify, to certify their competence but also realise the necessary quality in line with the compliance framework. The public tender could then be attended only by certified companies.
- Some participants stressed that Green Procurement is not necessarily about skills but other issues such as materials, for which the main criterion is the price.
- Another option is the reverse public procurement, meanings tendering at a fixed price but offering more (e.g. energy efficiency, quality).
- Other participants suggested to use the EPC template, with the basic building data in place, to set the tender KPIs.

2. Key success factors areas for marketing and awareness campaigns to promote energy efficiency skills

- The collaboration between the public sector and the building sector is key.
- Addressing citizens who are investing in private residential buildings with the message that they can save more later by paying more now.
- More young people need to be attracted to the construction sector. 90% of graduates from construction secondary schools move into other sectors.
- Training on-site has proven to be successful.
- Social recognition to cut the perceived difference between white and blue collar workers may help attracting people in the sector.

3. How can partnerships between trades and stakeholders boost demand for sustainable energy skills in the construction sector

- Participants agree that closer partnerships between trades and stakeholders are crucial to boost demand, for instance in the framework of one-stop-shops for energy efficiency.
- However, enough time and resources should be provided for good pilots that can be scaled up and allow more flexibility within the first six months of a project to enable the proposal to be adapted to reality.

4. Should LIFE CET further support activities boosting the demand?

- Consider training programmes on new technologies, such as digitalisation, automation, robotisation etc.
- Use gaming in training, especially when language is a challenge or for people with disabilities.
- Offer lifelong learning for construction workers by supporting virtual training at home.
- Look at approaches in other industries such as automotive or manufacturing, and how these can be implemented in the construction sector.

Suggestions for the way forward:

All participants agreed that further support activities through LIFE CET on boosting the demand can be helpful, notably through additional support for campaigns, procurement, education & training, support for partnerships, as well as to disseminating best practices to other countries.

Session 1B: Taking stock of the national Status Quo Analyses – focus on the quantitative elements

Moderation: Amandine DE COSTER-LACOURT, Project Advisor CINEA

This session gathered 14 projects from the LIFE CET call 2021 and 2022 working on the update of their national status quo of skills and qualifications. The call 2021 projects delivered their status quo shortly before the meeting and these were presented and discussed, with a focus on the quantitative part of the analysis (workforce & skills gaps).

Presenting examples of national Status Quo Analysis methodology and results (workforce and skills gaps analysis):

CRO Skills RELOAD (Croatia) – Matija DUIĆ, Policy Officer, Croatian Chamber of Trades & Crafts HOK

An analysis of several data sources and key indicators of the construction sector was carried out, to determine gaps and key needs for further training based on the current situation, including:

- EU and national data (Eurostat & National Bureau for Statistics, Ministry of Economy, Entrepreneurship and Environmental Protection, Croatian Chamber of Trades and Crafts, Croatian Employment Service and the Croatian Pension Insurance);
- Annual trends regarding number of trades and companies, workers, foreign workers etc;
- Specific data & trends (average number of construction workers on construction sites, completed construction works, share of construction in GDP by year, volume of construction works etc.) ;
- Building permits issued, data on funds spent on the reconstruction of public sector buildings and infrastructure (earthquake aftermath);
- Economic trends for adequate context and clarification.

The estimate of workforce needed by 2030 is based on the objective laid out in the national strategy, i.e. to renovate 30.84 million m² of buildings by 2030. Assumptions include a complete change of external thermal insulation for an envelope area of 1000 m² that typically requires 8 trained workers and 5 working days. For an estimate of number of engineers needed for the renovation and construction of buildings, two separate calculations were made: one for those involved in designing; one for those involved in construction

In addition, questionnaires were used to collect the knowledge of professionals, and the first Status Quo Analysis was frequently consulted. Certain questions were repeated in order to analyse changes in the observed ten-year cycle and progress in attitudes and knowledge about energy-efficient technologies.

Main conclusions drawn:

- 28% of answers came from craftsmen and entrepreneurs who perform work on the outer envelope of buildings.
- 60% claim to be well-acquainted with energy-efficient systems and technologies; 36% are moderately familiar and would like to know more; 4% consider they have a poor knowledge and would like to know more.
- 40% workers on the outer envelope need to be trained.
- Additional education and qualifications are needed for 40% of the estimated number of workers (renovation and construction of the envelopes).
- 3,760 workers need to be further educated and trained in order to contribute their knowledge and skills to efforts to achieve energy goals by 2030.



BUS2 France – Emilie ANDORNO, Project Manager, ADEME

A diagnosis of requirements in terms of markets, jobs and skills was carried out, covering the fields of new construction and energy renovation in the residential and tertiary sectors.

Two scenarios for the development of the building stock up to 2030 (a baseline scenario and a target scenario in line with European objectives) were drawn up and put to the building industry for discussion. The target scenario is essentially based on one of ADEME's four "Territorial Cooperation" scenarios, which combine technical and economic aspects with assumptions about changes in lifestyles. On the basis of the target scenario, job requirements are estimated for the prospective period 2022-2030, then compared with past trends and the trend scenario. To quantify these needs, initially expressed in full-time equivalents (FTE), the consortium used the [TETE](#) statistical tool.

Key lessons learned:

- Energy-efficient renovation of buildings will require almost 200,000 more FTEs than at present, doubling the existing pool of workers
- The sector needs to recruit massively to meet additional demand (particularly for site managers, site supervisors, electricians, heating engineers/plumbers), while compensating for people leaving the sector each year (retirement, retraining...).
- Technical and, more broadly, financial and social support for project owners needs to be developed
- Building professionals will need to strengthen their technical skills related to energy performance, as well as their cross-disciplinary skills in co-activity and co-ordination. Related professions, such as real estate professionals, also need to develop their skills.
- The new-build sector, while complying with increasingly stringent environmental requirements, could gradually incorporate more heavy rehabilitation and associated energy renovation activities.

Reflecting on the way forward:

Participants gathered in three subgroups to discuss the following questions:

1. *How to collect the missing data (if applicable for your country)?*
2. *Introducing a common table with key national indicators in the executive summary*

Results from sub-groups discussions:

Group 1: Zoé WILDIERS, Senior Project Advisor, CINEA

- A partner with a university in the consortium explains the reluctance of quantifying the needed workforce as they would prefer to do a full scientific study with various scenarios.

- The French representatives detailed the tool that is owned by Alliance Ville Emploi and ADEME converting m2 to be renovated into needs of skilled professionals. Various other countries are interested in this tool that is publicly accessible. This is not to be used for new buildings.
- It is stated that architects should know the number of m2 that they can refurbish per year. This element should be useful to calculate the needed number of architects based on the m2 that need to be refurbished.
- The trend of the robotisation of the sector was mentioned, which will also influence the number of workers needed.
- When demand reaches a certain level, the market will follow (wave).

Group 2 Pierre-Antoine VERNON, Project Advisor, CINEA

- The discussion revealed different strategies and sources for the data underlying the SQA, with Romania using extrapolated data from a pool of projects, Lithuania using social security statistics to have a comprehensive overview of building professionals and France and Lithuania using a conversion tool based on floor area to calculate full-time equivalents. Most projects used personal interviews and direct contacts with major stakeholders in complement.
- On the proposed SQA KPIs table, it was suggested to clarify between blue and white collars, to define qualifications or to replace them with 'competences', to include other professions such as project managers or energy advisor, or to reconsider the profession 'solar installer' as PV panels require electricians and solar heating and cooling require HVAC specialists.

Group 3: Piotr WAIS, Project Advisor, CINEA

- It was underlined by all participants that the collection of the missing data and quantitative part of analysis were demanding tasks.
- Apart from desk research and the analysis of publications and reports, market research was used through surveys and interviews of sector stakeholders.
- The consortia were also using data from statistics on building sector published by Eurostat, national statistics, data from pension insurance or employment services, statistics on completed construction work and number of active companies and their productivities as well as new workforce entering the labour market and wage growth.
- Having different sources of information, it was noted that further elaboration and additional examination methods had to be applied due to the fact that sometimes the differences between the same numbers, received from different sources, were higher than 100%.
- Special attention was raised by the method used by the French team to forecast the workforce needs, which could be used as a verification mean.

- Information was also exchanged on the definition of the boundaries of the SQA exercise, and difficulties faced. One of the main barriers identified was the fragmented data sources and problems with evaluating the number of professionals to be trained. Moreover, it was not clear how to address specific professions: based on the education received or the position and current work performed (e.g. not clear in which group should be architects without certificates of registration or civil engineers without licences). There was an agreement that if different approaches are used by the countries, it will have an impact on the numbers reported in the list of proposed key country indicators, their further comparison and cross validation.

Follow-up actions:

- Introducing a common KPI table seems particularly challenging, as projects have used different methodologies. CINEA to come back to the project teams on this specific point.
- Participants highly appreciated the French offer to have an online presentation of the tool to explore its application in other projects. An online presentation will be organised before the end of the year.

DAY 2: FRIDAY 27TH OCTOBER

Policy updates

Moderation: Amandine DE COSTER-LACOURT, Project Advisor, CINEA

Paula Rey Garcia, Deputy Head of Unit, DG Energy, European Commission

Ms Rey Garcia pointed out the importance of skilled workers for the clean transition in the building sector. She referred to the gap of workers needed in the sector to achieve European policy objectives like the REPowerEU Plan.

The Commission is committed to find solutions to that challenge. The [European year of skills](#) shows this continuing commitment, while other measures include the [BUILD UP Skills initiative](#) and the [Erasmus+ program](#). Under the [Pact for Skills](#), several Large-Scale Partnerships (LSP) between multiple private and public organizations in Europe are strengthening collective action on skills development. This includes a LSP in the construction sector. In the [Recovery and Resilience Facility \(RRF\)](#), skills are one of the seven priority spending areas. This further supports the development of education and training projects inside EU Member States.



The EU's regulatory framework further supports the up- and reskilling of professionals to achieve the climate and energy objectives in the building sector. Important initiatives are:

- The Green Deal Industrial Plan, the [Net-Zero Industry Act](#) and the EU's long-term competitiveness communication underline the need to step up efforts on skills. For example, via the Net-Zero Industry Academies that will aim to up-skill or re-skill in net-zero industries; public bodies will be supporting the sector with faster and clearer permitting and public procurement via designing learning content centrally with input from industry, education & training providers.
- Installers and builders are critical for implementing the [new Energy Performance and Buildings Directive \(EPBD\)](#). Therefore, it requires Member States to promote education and training, to ensure a sufficient workforce, in numbers and skills.
- The [Energy Efficiency Directive \(EED\)](#) dedicates special focus to quality and availability of skills on the market to achieve energy efficiency objectives set by the EU legislation. Being of utmost importance for the direct impact in terms of energy savings to be achieved, but also to build trust in the market and scale up investments, the EED requires Member States to develop national training and certification schemes for the implementation of energy efficiency measures.
- The [Renewable Energy Directive \(RED\)](#) requires Member States to provide certification or equivalent qualification schemes for installers and designers of renewable heating and cooling systems. Member States are requested to set up a framework to achieve the necessary numbers of installers and designers to achieve the national targets, by providing training programs as well as cooperating with private sector actors.
- With the [Heat Pump Action Plan](#) the Commission shall launch a Heat Pump Accelerator Platform and a Heat Pump skills partnership. The latter will aim to establish a “minimum common denominator” for what heat pump planners and installers across the EU should know.

Member States, as well as regional and local administrations are key **in scaling training and upskilling efforts**. The EU budget provides a substantial amount of funding to foster the development of skills for the green transition, including the [European Social Fund + \(ESF+\)](#), [European Regional Development Fund \(ERDF\)](#), [Just Transition Mechanism \(JTM\)](#), [Recovery and Resilience Facility \(RRF\)](#), [REACT-EU](#), [InvestEU](#), and [LIFE Clean Energy Transition \(LIFE CET\)](#).

Question: *Could you give us some suggestions for national contacts on the issue of skills?*

Paula Rey Garcia: Having an accessible network of contact points is very important and we need to look into how best to arrange this.

Question: *It's good to have reskilling and training opportunities, but if the demand is not there, people will not come. We need to create demand.*

Paula Rey Garcia: Creating demand is definitely fundamental. I am impressed by the investments made in the US into extremely attractive and motivating high-level campaigns that have helped to stimulate demand for construction and renovation work.

Question: How can the Commission help Member States who are facing great pressure to implement the various directives such as EPBD?

Paula Rey Garcia: In the coming year we would like to see a very strong process of implementation, along with implementation support, to help translate what is in the directives into practice on the ground.

Roman HORVATH, Policy Officer, DG Internal Market, Industry, Entrepreneurship and SMEs, European Commission

Mr Horvath spoke about the [Transition pathway for construction](#), which aims to bring a more resilient, green, digital, and competitive construction ecosystem. It is providing a non-binding, but coherent policy framework to test and validate EU policies and to encourage all stakeholders to continue working in partnership towards a transition of the ecosystem. It is founded on six building blocks: competitiveness, skills & talent, an enabling framework, R&I technology, finance, and a safe and fair built environment. The document is the result of a co-creation process including stakeholders, Member State's authorities, the European Commission, and involving the [High-Level Construction Forum](#). Eleven recommended actions to enhance skills² derived from the process, including the creation of European partnerships, the continuation of initiatives like BUILD UP Skills or the setup of a New European Bauhaus Academy. [Additional commitments to support the transition pathway to construction](#) can be made by stakeholders and are published via the secretariat of the High-Level Construction Forum.



The [Green Deal Industrial Plan for the Net-Zero Age](#) (including the [Net-Zero Industry Act](#)) was published this year, and three articles in particular deal with enhancing skills for quality job creation.

The [New European Bauhaus \(NEB\) Academy](#) has been created to accelerate upskilling and reskilling in the construction ecosystem (bio-based materials, digital technologies, increased circularity); to encourage the creation of NEB Academy Pioneer Hubs; and to create a network of NEB Academy Hubs.

The [Blueprint for Sectoral Cooperation on Skills in the Construction sector](#) was recently finalised and presented at a webinar. It includes an interactive map of good practices; training opportunities for new VET students; and focuses on attracting new talent across Member States.

Another recent initiative is the [Pact for Skills](#) to support partnerships in industrial ecosystems and to share expertise and resources. It is part of the Renovation Wave Action Plan. The construction large-scale partnership aims to upskill or reskill three

2 The complete list can be found on page 28-29 of the [Transition pathway For Construction](#).

million workers in the next five years. It's an open platform which will make it easier for anyone to contribute based on their relevant activity.

Question: *Could you explain more about the recommendations for actions that you mentioned?*

Roman Horvath: It is an ongoing action, particularly aimed at the provision of construction services across borders, the hurdles and obstacles faced, and the role of the Commission to address them. Discussions are currently in progress.

Tim VAN RIE, Policy Officer, DG Employment, Social Affairs and Inclusion, European Commission



Mr Van Rie started his presentation with a look back on the 2020 [Council Recommendation on vocational education and training \(VET\) for sustainable competitiveness, social fairness and resilience](#) and the 6 clusters for action that were identified in it. The Commission seeks to promote excellence in VET with innovative VET institutions that can rapidly adapt to economic and social needs; build local partnerships; and contribute to innovation, regional development, and social inclusion.

Relevant initiatives include the [Centres of Vocational Excellence](#), which are formed by networks of partners that develop local “skills ecosystems” to provide high quality vocational skills to young people and adults, and contribute to regional development, innovation, industrial clusters, smart specialisation strategies and social inclusion.

The Academy for Transitional Skills in the Built Environment ([BuildSkills Academy](#) project funded under Erasmus+) aims to create a pan-European framework and scheme for certification and upgrading of knowledge and skills for the “twin” transition (green and digital) with a focus on the construction sector. The project involves a number of vocational education and training (VET) organizations – who are responsible for updating and adaptation of the VET services offered to the emerging new needs in the field of green and digital skills.

Mr Van Rie also mentioned the [European Alliance for Apprenticeships \(EAfA\)](#), which is a multi-stakeholder platform to strengthen the quality, supply and image of apprenticeships in Europe, and promote the mobility of apprentices. In June 2023 a working group reported on VET and the Green Transition, and collected 57 inspiring best practices, such as Neobuild (Luxembourg), Itinérés (Belgium/Finland), and Higher VET (Sweden).

Finally he mentioned the importance of the European Year of Skills as a key awareness raising campaign, and suggested ways that countries can get involved.

BREAK-OUT SESSION 2

Session 2A – How to design a robust and market-ready qualification framework

Moderation Amandine DE COSTER-LACOURT, Project Advisor CINEA

This session gathered new and experienced projects to explore the success factors for developing and rolling out a qualification framework, while ensuring adequate recognition of the qualified professionals.

The TRAIN4SUSTAIN Competence Quality Standard – Peter GYURIS, Project Manager, Geonardo Ltd.

The Competence Quality Standard (CQS) developed by the TRAIN4SUSTAIN project is a qualification framework that enlists competences required for sustainability in buildings. It was endorsed as a CEN Workshop Agreement (CWA), a non-mandatory regulatory document valid for three years that works as a pre-standardization process. The CWA of the TRAIN4SUSTAIN Competence Quality Standard (CQS) is available for download free of charge.³ It aims to evaluate, score and report the level of competence, skills and knowledge of professionals and craftsmen in a comparable way. This is essential for increased transparency and penetration power in the market, and to avoid confusion and uncertainty. Mr Gyuris indicated that the CQS is structured in four modules, known as thematic fields and vertically into macro areas of expertise, areas of expertise, and learning outcomes (more than 1000 of LOs have been defined). The digital version of the CQS is the European Skills Registry platform (skillsregistry.eu).

Application of the TRAIN4SUSTAIN Competence Quality Standard to specific sectors and technologies – Jan Cromwijk, ISSO

[Build Up Skills Netherlands](#) used the CEN Workshop Agreement as a cornerstone of skills mapping activities in BUS-NL. Mr Cromwijk indicated that his team worked with the same categories and linked them to the unique identifiers in the Train4Sustain framework. Through skills mapping, they created a view of the TRAIN4SUSTAIN framework based on the perceptions in the Netherlands for the desired skill levels for professionals. He explained that this enables the most desirable profile to be created for each specialism. Linking to task-based qualifications gives a practical perspective on required skills for e.g. circular construction, and increased recognition of learned skills. Learning outcomes are defined for the development of training, and circularity is applied to different fields in construction. An explanation was provided on how task-based qualification works. It starts with ULOs (Units of Learning Outcome), which are statements regarding what a learner knows,

³ Available here : https://www.cenelec.eu/media/CEN-CENELEC/CWAs/RI/cwa17939_2022.pdf

understands, and is able to do on completion of a learning process, which are defined in terms of knowledge, skills and attitude/responsibility. Going forward, qualifications can also be based on specific technologies, such as in the SeetheSkills project, on specific principles (circularity in the BUS-GoCircular project) or on processes (BIM workflows in the ARISE project). Finally, the use of data in the BUILD UP Skills Advisor App was described.

SeeTheSkills e-tools for recognition of skills – Jadranka Arizankovska, Project Manager, Economic Chamber of North Macedonia

Ms Arizankovska described how the [SeetheSkills](#) project is based around a 3V approach: Visible, Validated and Valuable, with an integrated register of energy skills consisting of 3 databases: database for certified workers, database for verified trainings and database of companies producing certified energy efficient materials. Verification for skills acquired by workers and professionals was done through mutual recognition of skills based a previous project (TRAINEE). Two different approaches for skills validation were used: E-learning, and the creation of an eRPL tool (Recognition of Prior Learning) which was transferred to other partners in the project. Certification is available within the integrated register of energy skills developed by the project. A user-friendly web-based application is available in mobile and desktop versions. Also developed is an easy-to-use Moodle-based e-learning platform.

Discussions in two groups, moderated by Peter Gyuris and Jadranka Arizankovska:

1. Do the examples presented resonate with the work you are currently doing/ planning to do? Do you see potential synergies, e.g. with the Train4Sustain Competence Quality Standard?

- Overall the TRAIN4SUSTAIN standard was found to be a valuable standard.
- It is very difficult to combine qualifications of white and blue collar workers due to the differences in formal education received.
- Participants stated that all projects have a range of different schemes and tools “fit for purpose”. A proposal to the European Commission is to develop an integrated register or database of all these tools at the European level.

2. In your experience what are the effective approaches to design a market-ready qualification framework and ensure the validation and recognition of the qualifications obtained?

- If a qualification framework is operationally linked to the procurement process it can be considered market-ready. Hence the importance to continue EU support to projects working on procurement.
- The TRAIN4SUSTAIN CQS (the CWA 17939 document) is market-ready but national associations need to accept such a framework and adapt it into their own national context, and sectoral acceptance is also necessary. For example by national standardisation bodies.

- The installation sector in the Netherlands is investing greatly in skills. The BUS community should reflect on how we can facilitate them to do things better, based on lessons learned. The task-based approach to qualification frameworks is well recognised and is becoming the standard.

Projects interested to apply the TRAIN4SUSTAIN qualification framework are invited to contact Peter Gyuris. Projects interested in implementation of the BUILD UP Skills Advisor App are invited to contact Jan Cromwijk.

Session 2B – Towards the national Roadmap

Moderation: Pierre-Antoine VERNON, Project Advisor CINEA

This session gathered 14 projects from the LIFE CET call 2021 and 2022, that are currently working on the update of their national skills roadmap with a 2030 perspective. Insights from the first draft of the roadmaps were presented and discussed, followed by brainstorming on the next steps, including the work towards the final roadmap and endorsement by key national stakeholders.

Presentation: The draft Hungarian roadmap, Dorottya HJBER, ÉMI Nonprofit Llc, project coordinator ConstructSkills4LIFE

In order to set the conditions for the training of building professionals needed to meet the EU and national 2030 targets, ConstructSkills4LIFE has ‘rebooted’ the stakeholders Platform of 270 experts from 117 organisations who were involved in activities such as SQA development and in drawing up the initial roadmap with a view to assess the success of the first roadmap and the need for further training. Data collection involved desk research, 35 interviews and a questionnaire tailored to three distinct groups: building professionals, Vocational Education & Training (teachers and students) and Higher education (teachers and students). Reminders and follow up were necessary, yielding 245 responses. While the professions relevant to building energy performance are adequately mapped, specific statistics on professions are lacking as only figures for enrolment in construction, electrical engineering and building engineering are available. The project has delivered its Status Quo Analysis in July 2023 and its draft roadmap in October 2023. The further steps to the final roadmap include specific workshops on higher education, adult training and VET, as well as meeting with ministries, bilateral discussions with stakeholders and a final conference.



Discussion in 3 sub-groups – highlights:**Dragomir TZANEV, BUILDUPSkillsBG (Bulgaria)**

- The discussion demonstrated that the integration of renewables, including heat pumps roll-out, was considered in each country; however, there was unequal distribution regarding other aspects of green construction skills as digitalisation (BIM); integration with broader energy systems; circular construction/whole life carbon assessment; green public procurement; prefabricated renovation using modular components and smart buildings were only discussed on individual occasions
- The collaboration with the public authorities and the professional associations, as well as the coordination with ongoing regulatory changes and financial support schemes was identified as a decisive factor for the uptake of emerging training and educational schemes
- Skills assessment frameworks were outlined as good practices in some countries (Croatia, Hungary), enabling user-centred approach in the identification of skills needs and flexible provision of needed upskilling services
- Difficulties in quantification of the skills needs per qualification level and/or profession were reported in many of the countries due to lacking or unreliable information
- Endorsement of the proposed measures was analysed as having strong foundations in the composition of the national consortia themselves, and the relaunch of the national platforms involving the majority of the key actors. Again, the role of the state institutions and the correlation with ongoing policy actions was highlighted.

Jiří Karásek, DoubleDecker (Czechia)

- The discussion group deemed that smartness, digitalisation (BIM), heating and cooling and circularity were addressed by all, whereas off-site construction was only tackled by Austria, Croatia and Lithuania, Green Public Procurement by France, Lithuania and Greece, and Heritage buildings only by Greece.
- BIM was considered highly relevant in Slovakia, Poland, Austria, Croatia, Lithuania, Italy and Czech Republic. Specifically in the Czech Republic, digitalization is considered as the first step in increasing of the renovation rate. Smart buildings are relevant in all countries, especially implementation of SRI, Smart energy efficiency services (SEES) and BACS.
- Upskilling in LCA and Circularity was crucial in all countries represented in the group, as well as trainings in renewables, heating and cooling.
- Partial need for upskilling was presented by cultural heritage buildings and GPP. Upskilling in off-site construction is needed in all countries but Greece.
- Involvement of youth, women, people with specific needs and newcomers with different language was also discussed.
- The group identified all EQF levels as relevant with the exception of Slovakia, where the focus is on EQF 3-5.
- A focus on fossil fuel regions was identified in Greece, Slovakia and Czech Republic.

- Endorsement will be reached for specific measures or for the whole roadmap, via workshops, via organisation providing Letter of Support, via regular consultations or individual meetings.
- The sustainability of National Qualification Platform will be achieved via involving ministries, social partners, associations or via the so called “owners” of the measures.

Georg TRNKA, ReBUSk (Austria)

- The proposed measures need to be distinguished for university level and lower skilled workers. Some countries focus on the number of workers needed, whereas others on the number of skills required.
- Various countries mentioned the difficulty of attracting participants to the existing courses, therefore a lot of work is still needed on the demand side. Also, people working in public administrations, the financing sector and other professionals like notaries, real estate promoters need to be upskilled in order to accompany users.
- Circularity needs to be integrated in the existing courses.
- Public tenders need to include the requirement of working with qualified workers, but the implementation of further skill requirements in public tenders is very challenging in some countries like Austria because of the actual procurement law. A solution for these countries could be to make the blowerdoor test compulsory in procurement.
- It would be good to have a consensus on the measures to be included in the roadmap, but then these are likely to be only soft measures. With soft measures, not much will happen. Maybe some stakeholders could endorse the measures in general but specify some specific ones which they commit to implement. What is the consequence if the measures are not implemented?
- Workshops are foreseen on the endorsement of the measures with the stakeholders. Individual meetings with important stakeholders and a proper consultation process are to be foreseen.
- In order to have sustainability of the National Qualification Platform, the “owners” of the measures e.g. ministries have to be involved.

Closing session

Moderation: Maria LAGUNA & Amandine DE COSTER-LACOURT, CINEA

Ms Laguna thanked everyone for their participation in these interesting and useful discussions, and for their excellent work conducted over the last 11 years. She indicated that an online event is to be scheduled for the week of 18 March 2023, similar to the one held six months ago on the Status Quo Analysis. The next full BUILD UP Skills EU Exchange meeting is scheduled for early 2025.

Looking at future funding opportunities, Ms De Coster-Lacourt recalled the LIFE-2023-CET-BUILDSKILLS topic, which is addressing upskilling and reskilling interventions to enable

a decarbonised building stock and energy system integration. Its objective is to increase the number of skilled building professionals in one of five areas: skills supporting the EPBD; skills for the decarbonisation of the building stock; skills for small-scale renewables and system integration; innovative on-site training methods; and skills for integrated home renovation services (one-stop-shops for homeowners). Also coming up is LIFE-2023-HEATPUMPS which aims to address the shortage of skilled installers and professionals for heat pumps.

Participants were then asked for their comments on priorities in terms of sectors, technologies and activities for the years ahead. These included:

- Integrate results of the most compelling projects developed within the BUILD UP Skills community, e.g. through a platform.
- Address the implementation of the Construction 5.0 agenda by covering topics such as automation and robotisation in the construction sector.
- Innovations in construction are normally developed in laboratories. How can we support their implementation on-site, along with digitalisation?
- Address how we can help to make construction more sustainable in the future, by leveraging the expertise of manufacturers and working more closely with them.
- The new EPDB directive will be a challenge to implement. How can we support its translation in practice?
- How can we support circularity right from the beginning of a project?
- Could we learn from other sectors that have successfully implemented innovations such as robotisation, AI, circularity etc?

Ms De Coster-Lacourt thanked participants for their excellent input and closed the event.

