

# 15th BUILD UP Skills European exchange meeting, 26-27/10/2023

## SESSION 2A: How to design a robust and market-ready qualification framework

### SEETheSkills e-tools for recognition of skills

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# SEEtheSkills

Sustainable EnERgy Skills in construction: Visible, Validated, Valuable

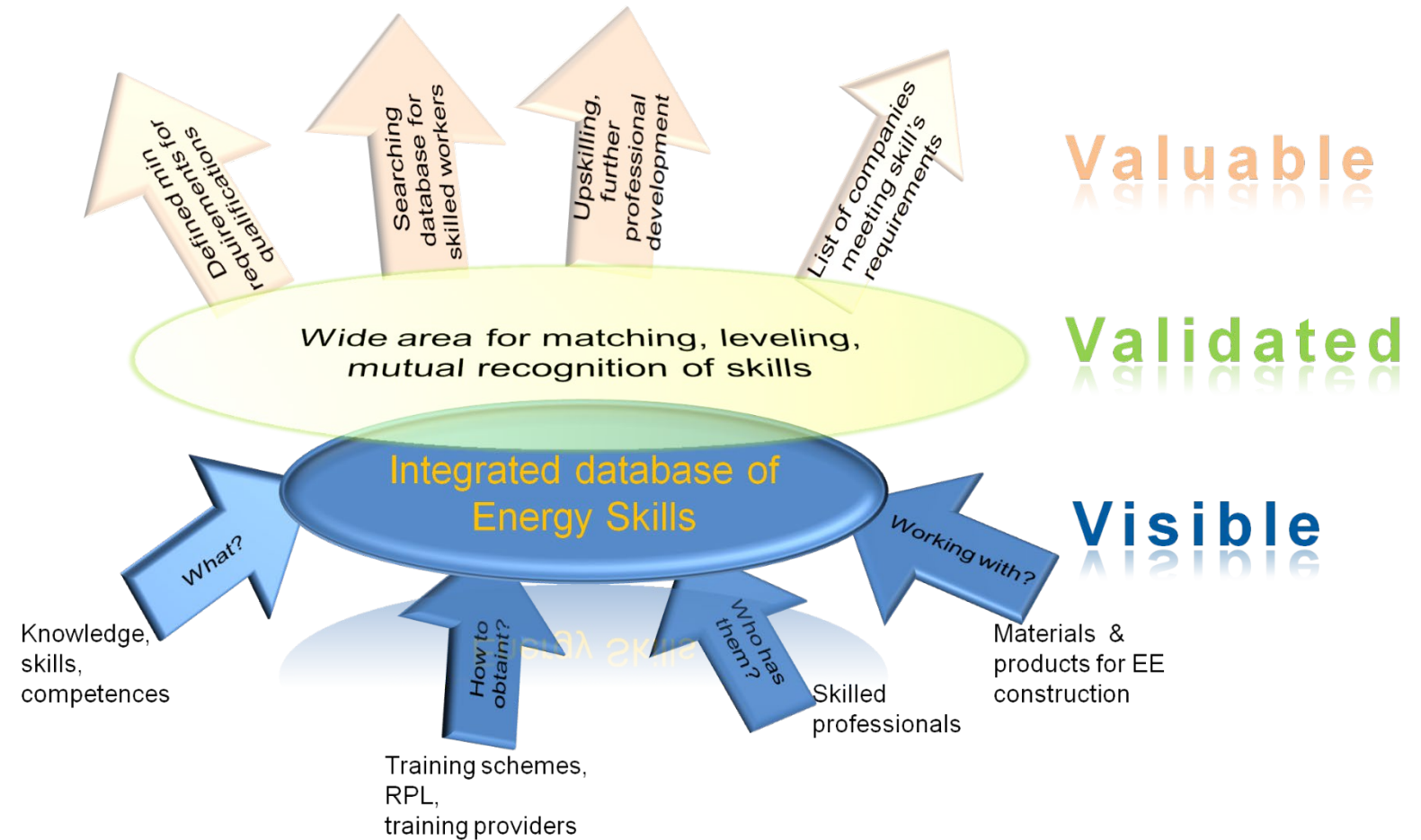
Project partners



# SEetheSkills 3V approach for raising the value of energy skills

Concept and approach

Creation of Integrated database of Energy skills to serve as a wide area for matching, leveling and mutual recognition of skills



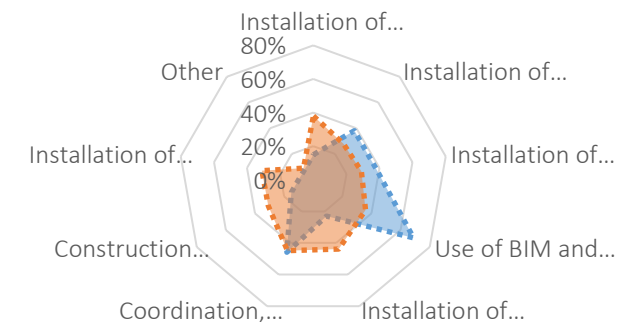
# Main findings and best practices in the field of energy skills on EU level

## 1. EU survey on the status of EE skills

- Lack of registers of skilled person – the need for VISIBILITY
- Less than 25 % of respondents have some form of published (announced, visible) information about their EE skills
- **Only 30 % of respondents have formal documents that certify their skills**
- A share of 82% of the respondents have declared that have achieved their skills through the trainings organized by professional organisations
- Crucial actions are needed to increase the AWARENESS of the VALUE of skills
- When lacking EE and digital skills
  - Only 33% will reskills existing employed workers
  - Only 11% will redeploy existing workforce
  - More than 50 % will hire external experts (skilled professionals)

### PRIORITISED TRAININGS

 Companies

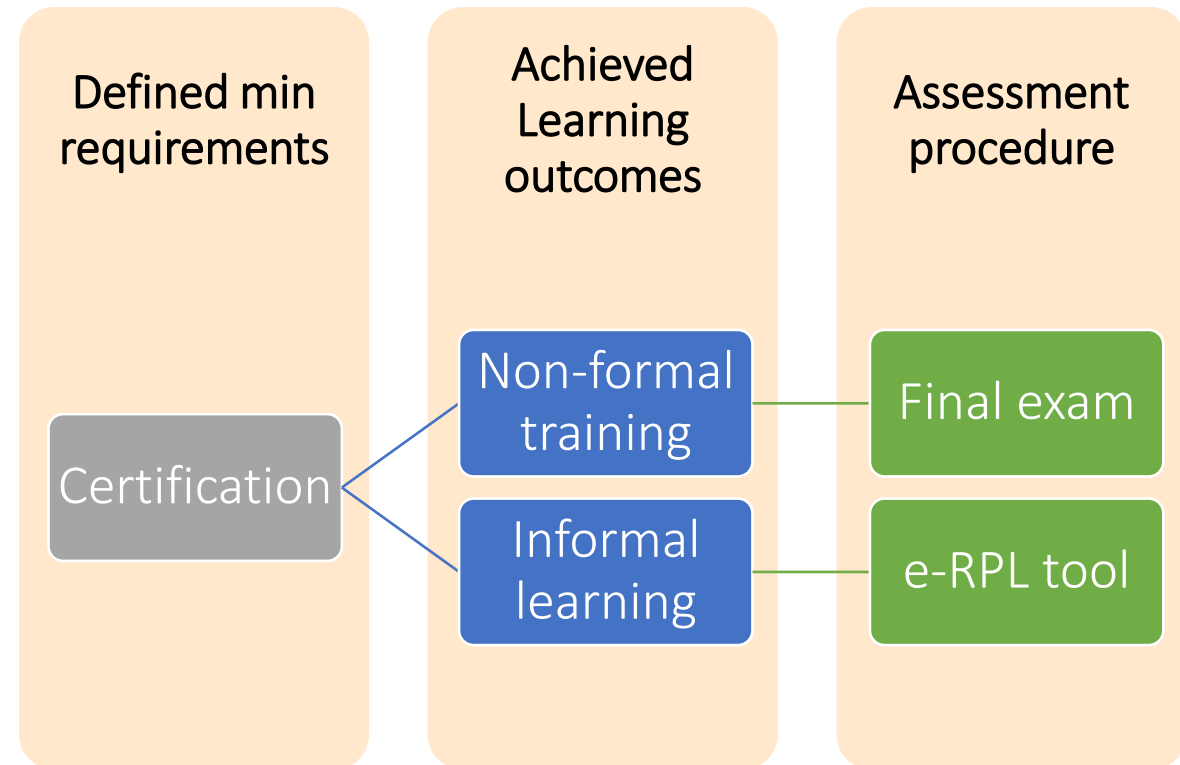


## Two different approaches for skills' VALIDATION

- **e-learning platform**, that will include the following e-trainings in form of webinars created by project partners:
- 2 webinars on RES qualification
  - 2 webinars on BIM qualifications for blue collars
  - 2 webinars on BIM qualifications for white collars
  - 2 webinars on cross-craft skills qualifications

- **Creation of e-RPL tool.** The process of recognition of previous learning RPL, based on defined steps of identification, documentation, evaluation and certification adjusted as on-line process, including:
- communication to identify the necessary skills
  - submitting documentation for evaluation
  - evaluation of submitted documents and
  - issuing certification
- realized through web-based platform for e-learning. Besides the necessary documents to be filled by the applicants, the tool will include guidelines for explaining the process to ensure successful applications.

# Certification available within the Integrated Register of Energy skills



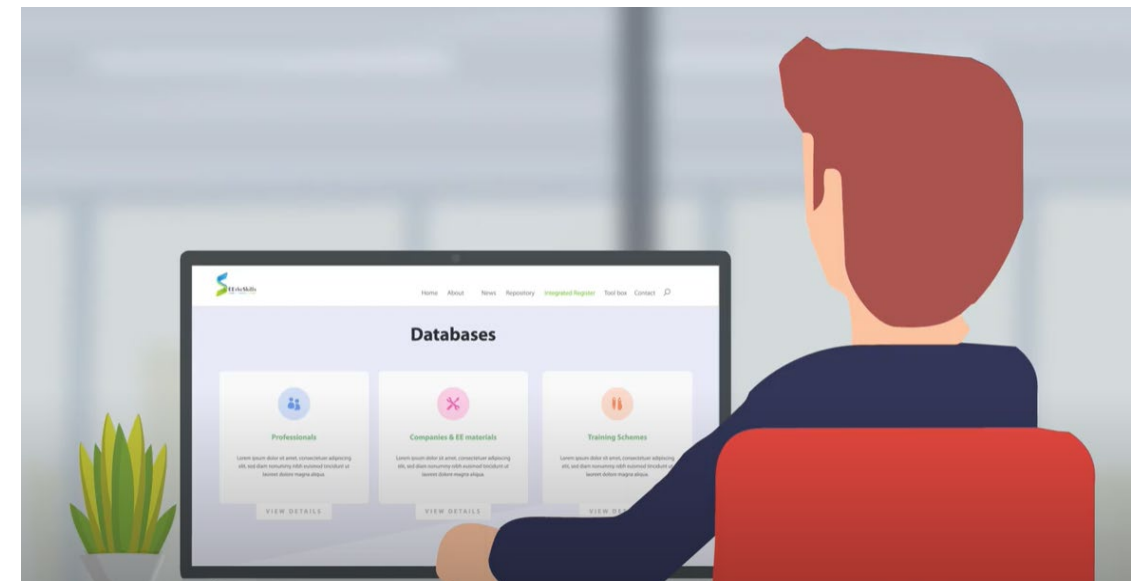
# The utmost project result - toward the VISIBILITY of skills



## Integrated Register of energy skills

Single spot for everything related to energy skills

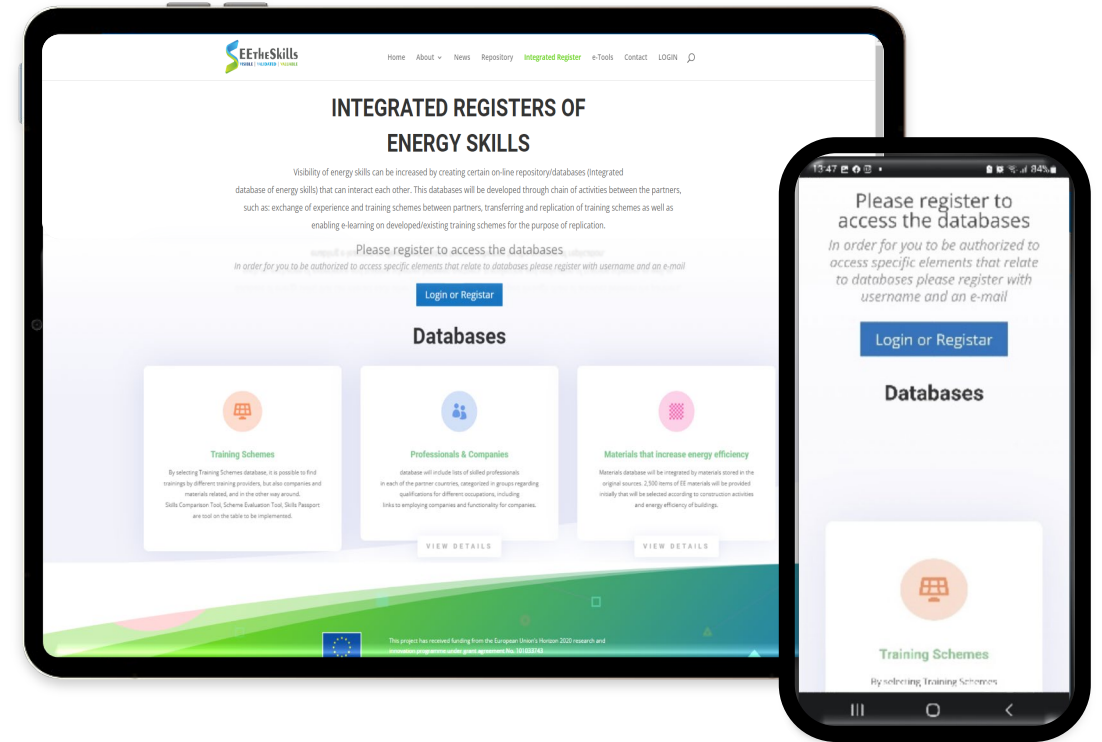
- 👉 Training schemes
- 👉 Certified professionals
- 👉 Construction materials



# Launching the Integrated Register of Energy skills as user-friendly web-based application available in desktop and mobile version

The Integrated Register of Energy skills is available for access to all interested professionals and companies, through the website [www.seetheskills.eu](http://www.seetheskills.eu).

It can be easily accessed through desktop or mobile device.



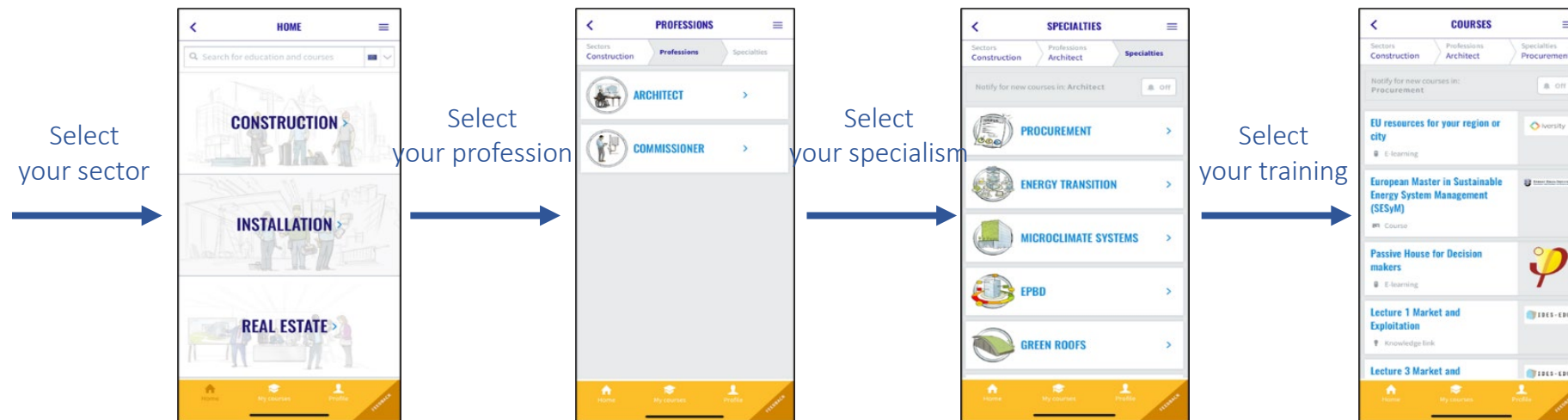
Remember me
 [Forgot Password?](#)

Registration form



# Catalogue of training schemes within the Integrated Register of Energy skills

The catalogue of training schemes is the well recognized on EU level application: **BUILD UP Skills Advisor** that aims to equip and advise the next generation of construction and installation sector workers with the knowledge and energy skills necessary to secure construction and renovation projects by digital technology. With the app, you can get good insights and update their knowledge and skills on topics such as energy savings and sustainable energy generation.



## Professionals' register within the Integrated Register of Energy skills

### Digital Register of certified workers and trainers

Boosting market acceptance of skilled professionals in construction will enable harvesting direct benefits from the skills for building professionals and on-site workers, and consequently the recognition of their market value.

To achieve the visibility and to enable promotion of certified workers and professionals, **Digital Register of certified workers and trainers** is created.

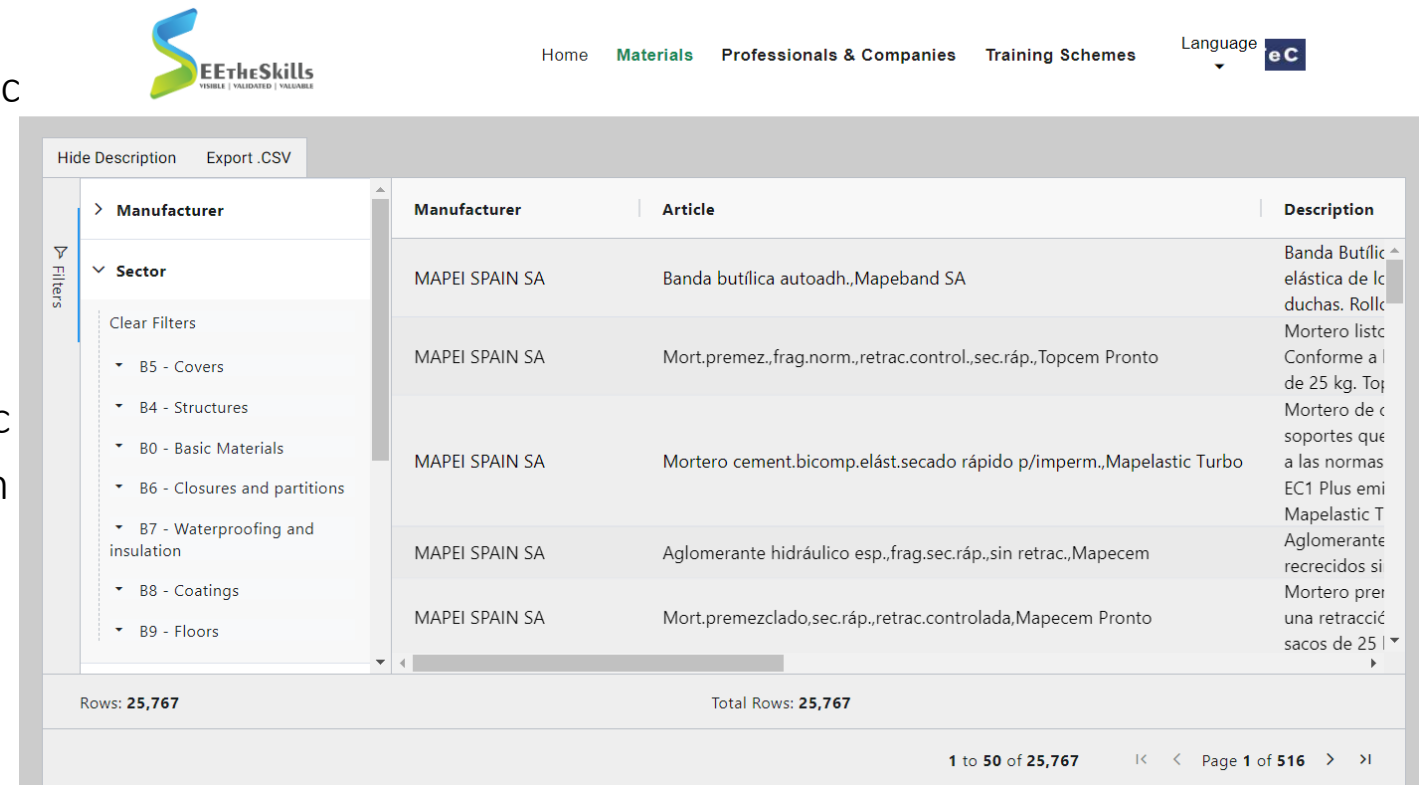


The Professionals listed in the **Professionals' register** will receive a Digital badge that will include each skills, knowledge and competence that a worker has ever gained, it will contain an information on the education of the worker in formal and non-formal form with the list of trainings, and moreover this personal skills' passport will have levelled all the achieved learning outcomes.

# Database of Construction Materials within the Integrated Register of Energy skills

SEetheSkills Materials Database provides economic and environmental information regarding construction elements used in Efficient Energy actions in the construction market.

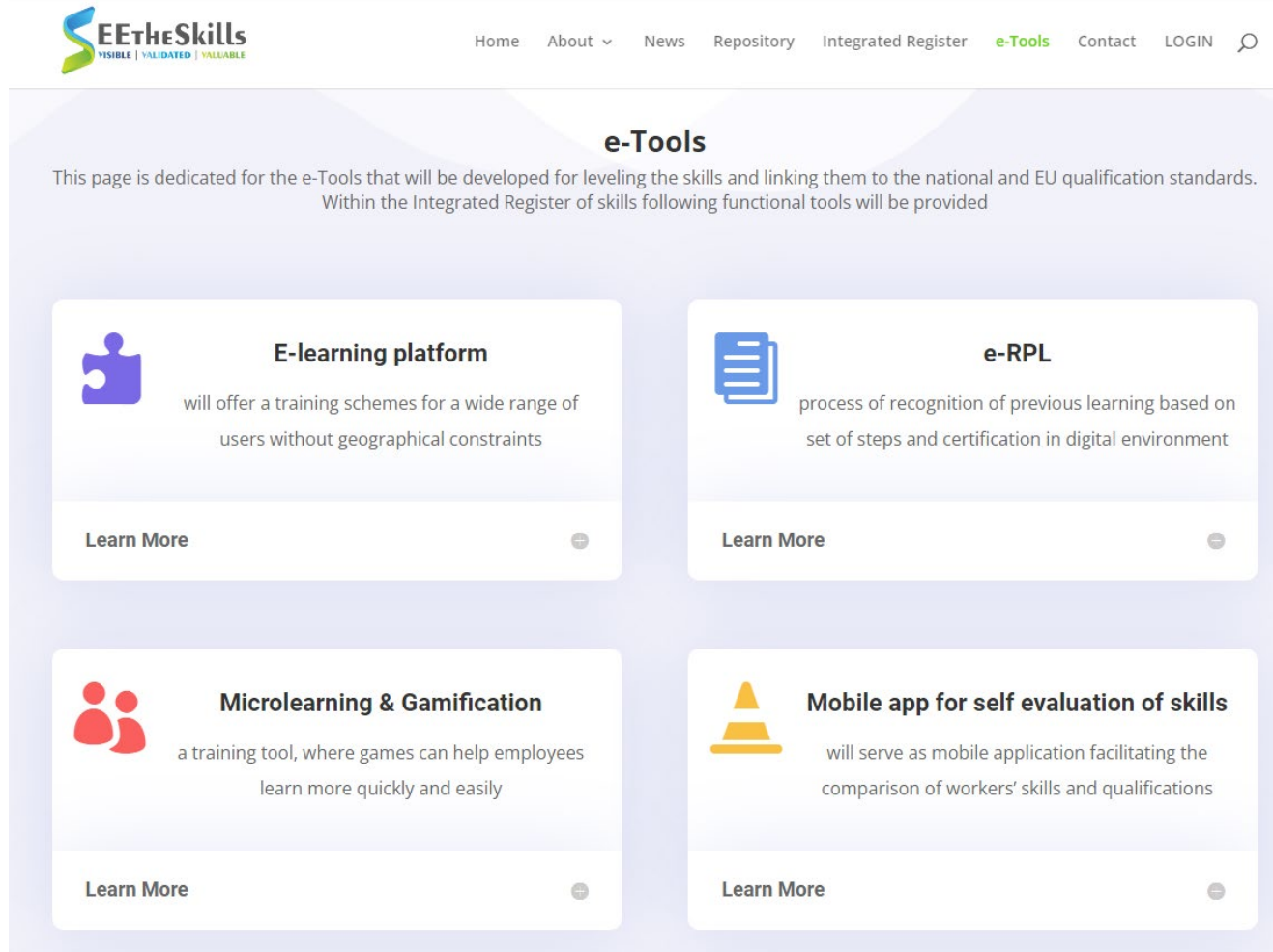
It brings a technical, environmental and economic information regarding all kind of elements used in each phase of construction, including the level of their greenness and listed necessary skills to be incorporated in the buildings.



The screenshot shows the SEetheSkills Materials Database interface. At the top, there is a navigation menu with 'Home', 'Materials', 'Professionals & Companies', 'Training Schemes', and 'Language'. The 'Materials' section is active. Below the navigation, there are options to 'Hide Description' and 'Export .CSV'. A 'Filters' sidebar on the left shows a tree structure with 'Manufacturer' and 'Sector' (with sub-items B5-B9). The main table displays a list of materials with columns for 'Manufacturer', 'Article', and 'Description'. The table shows 5 rows of data, all from 'MAPEI SPAIN SA'. At the bottom, it indicates 'Rows: 25,767' and 'Total Rows: 25,767', along with pagination controls showing '1 to 50 of 25,767' and 'Page 1 of 516'.

Manufacturer	Article	Description
MAPEI SPAIN SA	Banda butílica autoadh.,Mapeband SA	Banda Butílic elástica de l duchas. Rollo
MAPEI SPAIN SA	Mort.premez.,frag.norm.,retrac.control.,sec.ráp.,Topcem Pronto	Mortero listo Conforme a l de 25 kg. Top
MAPEI SPAIN SA	Mortero cement.bicomp.elást.secado rápido p/imperm.,Mapelastic Turbo	Mortero de c soportes que a las normas EC1 Plus emi Mapelastic T
MAPEI SPAIN SA	Aglomerante hidráulico esp.,frag.sec.ráp.,sin retrac.,Mapecem	Aglomerante recrecidos si
MAPEI SPAIN SA	Mort.premezclado,sec.ráp.,retrac.controlada,Mapecem Pronto	Mortero pre una retracci sacos de 25

# Different functionalities and e-Tools within the Integrated Register of Energy skills



**e-Tools**

This page is dedicated for the e-Tools that will be developed for leveling the skills and linking them to the national and EU qualification standards. Within the Integrated Register of skills following functional tools will be provided

- E-learning platform**  
will offer a training schemes for a wide range of users without geographical constraints
- e-RPL**  
process of recognition of previous learning based on set of steps and certification in digital environment
- Microlearning & Gamification**  
a training tool, where games can help employees learn more quickly and easily
- Mobile app for self evaluation of skills**  
will serve as mobile application facilitating the comparison of workers' skills and qualifications

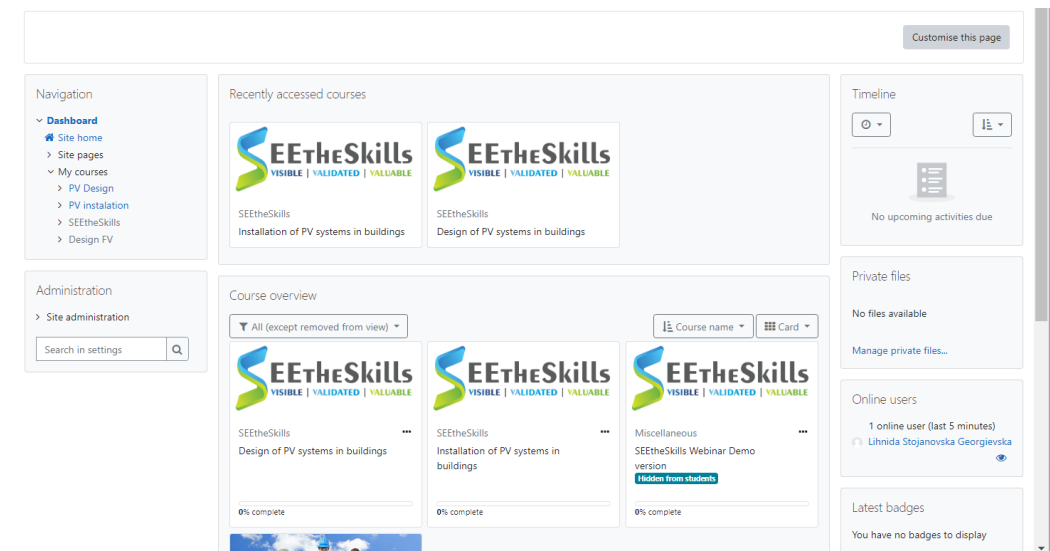
- e-learning platform for organising webinars/trainings
- e-RPL tool for digitalization of the process of recognition of prior learning
- microlearning and gamification tools for upskilling
- mobile app for self-assessment of skills by workers
- Digital badge for professionals from the Professionals register
- POE (post occupation evaluation) web tool for owners
- “Find your craftsman” functionality, automatically launched for users of POE web tool as proposed solution for improvement of energy performance of building

## E-learning platform within the Integrated Register of Energy skills

The platform is fully accessible across all modern Internet browsers, including Internet Explorer, Edge, Chrome, Safari, Firefox, and on most devices, meaning you can learn anytime anywhere.

So what does anytime anywhere actually mean? The SEetheSkills Learning Management System (LMS) is a central on-line platform with a search feature to find the course you need in English or in national language when available. The structure is modular; you can either take the full series of courses or just those that are useful to you.

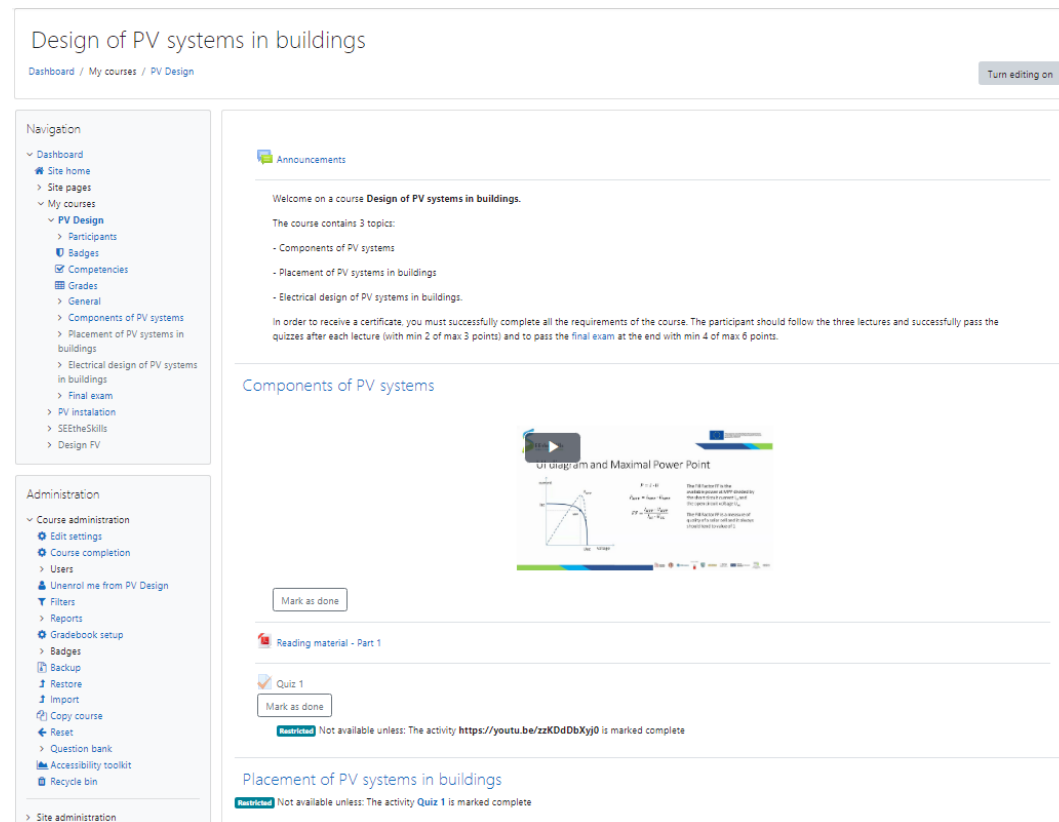
- Self guided learning - no dates and deadlines
- **Easy-to-use**     **intuitive**     **Moodle**  
**based platform**
- Modular trainings – selected module or a series of courses
- Full access to the training material, video presentations, assignments and direct contact to the trainer or other classmates



# Content of E-learning platform within the Integrated Register of Energy skills

## Available micro learning pieces on SEetheSkills e-learning platform:

- Installation of PV systems in buildings
- Design of PV systems in buildings
- BIM Certification vs Certification in BIM
- BIM skills – Necessary skills in Construction 4.0
- Effective data collection for digitization of existing assets
- Effective coordination and clash-detection processes in pre-construction phase
- Cross-craft skills influence to optimization of radiant heating and cooling
- The influence of cross-craft collaboration in the design phase to potential defects during construction and operation of the building



The screenshot shows the course page for "Design of PV systems in buildings". The main content area includes:

- Announcements:** A welcome message stating the course contains 3 topics: Components of PV systems, Placement of PV systems in buildings, and Electrical design of PV systems in buildings. It also mentions requirements for receiving a certificate.
- Components of PV systems:** A section with a video player titled "UI diagram and Maximal Power Point" showing a graph of power vs. voltage.
- Reading material - Part 1:** A section with a "Mark as done" button.
- Quiz 1:** A section with a "Mark as done" button and a restriction message: "Not available unless: The activity https://youtu.be/zxKDDbXyJ0 is marked complete".
- Placement of PV systems in buildings:** A section with a restriction message: "Not available unless: The activity Quiz 1 is marked complete".

The left sidebar contains navigation and administration options, including "Dashboard", "Site home", "My courses", "PV Design", "Participants", "Badges", "Competencies", "Grades", "General", "Components of PV systems", "Placement of PV systems in buildings", "Electrical design of PV systems in buildings", "Final exam", "PV Installation", "SEetheSkills", "Design PV", "Course administration", "Edit settings", "Course completion", "Users", "Unenrol me from PV Design", "Filters", "Reports", "Gradebook setup", "Badges", "Backup", "Restore", "Import", "Copy course", "Reset", "Question bank", "Accessibility toolkit", "Recycle bin", and "Site administration".

# Further actions: The value of energy skills recognized by the owners – POE tool

**Post-occupancy evaluation** is based on the idea that better living space can be designed by asking users about their needs. Many people associate POEs with a one-time online survey provided to occupants.

- A complete POE includes hard data as well as occupants' satisfaction with the space and comfort. A full post-occupancy evaluation usually examine:
  - energy and water performance
  - performance of the indoor environment—air quality, thermal comfort, acoustics, lighting, and ventilation
  - usability of systems and spaces
  - occupant behavior

Start your journey toward the good things energy efficiency brings – **comfort.**

Learn how to save energy and make your home comfortable by using **Energy Assessment tool**, or identify problems at home that you want to fix and we will give you solution with **Energy Performance gap tool.**

Get my online energy assessment

Energy Performance gap solutions



The screenshot shows the website for the TRAINER Energy Performance Gap Tool. It features a navigation menu with 'How it works', 'About us', and 'Our mission', along with a 'Register' button. The main content area includes the headline 'Start your journey toward the good things energy efficiency brings - comfort.' and a sub-headline 'Learn how to save energy and make your home comfortable by using Energy Assessment tool, or identify problems at home that you want to fix and we will give you solution with Energy Performance gap tool.' Below this are two buttons: 'Get my online energy assessment' and 'Energy Performance gap solutions'. A central illustration shows a house with various energy efficiency features labeled: Roof insulation, Wall insulation, High performance windows, Efficient lighting, Efficient appliances, and Heat pump water heater. The 'Project partners' section lists logos for KREBAWDA, BIM Academy, and others. A disclaimer at the bottom states: 'The information, documentation and figures in this deliverable are written by the TRAINER project consortium under EC grant agreement 795005 and do not necessarily reflect the views of the European Commission. The European Commission is not liable for any use that may be made of the information contained herein. All intellectual property rights are owned by TRAINER consortium members and are protected by the applicable laws. Reproduction is not authorized without prior written agreement. The commercial use of any information contained in this document may require a license from the owner of that information.' At the bottom, it mentions funding from the European Union's Horizon 2020 research and innovation programme under grant agreement No. 795005.

## SEetheSkills outputs with innovation potential

No	Innovative solution
I1	Integrated repository of energy skills a) Database of training schemes b) Database of skilled workers c) Database of EE materials
I2	e-RPL tool
I6	POE web tool





INTENSE PROMOTION !!!

INCREASED VISIBILITY !!

EASY UPTAKE OF RESULTS !

VALUABLE IMPACT



### Skills for Green Construction

The project group Skills for Green Construction specifically addresses the topic of training and skills for sustainable and green construction. Their outputs are relevant for industrial and public operators as well as policy actors at various levels.

#### Challenges

- Sustainable energy upskilling for construction professionals
- Accreditation recognised across borders
- Adoption of Building Information Modelling
- Nearly Zero Energy Buildings

#### Results

- Training modules
- E-Learning Platforms
- Qualifications
- Standards

#### Stakeholders

- Training Providers
- Policy Makers / Policy Experts
- Building Professionals


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[www.horizonresultsbooster.eu](http://www.horizonresultsbooster.eu)

### Skills for Green Construction

#### Meet the Projects

- HP4ALL** - Improving capacity and skills within the Heat Pump (HP) industry and securing the energy efficiency benefits that HP technology offers. [hp4all.eu](http://hp4all.eu)  
Grant Agreement No.891775
- nZEB ready** - Increasing market readiness for an effective nearly Zero Energy Building (nZEB) implementation by addressing the main barriers in Bulgaria, Croatia, Portugal, Poland and Romania and supporting skills enhancement with a mutual recognition training and certification scheme. [nzereready.eu](http://nzereready.eu)  
Grant Agreement No.101032723
- EETheSkills** - Collecting best practices in meeting needs for energy efficiency in the building sector and promoting the visibility of sustainable energy skills in the construction of new and renovation of existing buildings by creating an online repository. [seetheskills.eu](http://seetheskills.eu)  
Grant Agreement No.101033743
- arise** - Developing a recognition scheme of digital energy efficient Building Information Modelling (BIM) construction skills in an innovative system of universal learner focused stackable micro-credentials for micro module units of learning supported by a blockchain-based micro-credentialing system. [ariseproject.eu](http://ariseproject.eu)  
Grant Agreement No.101033864
- PRO-Heritage** - Establishing a permanent education resource for professionals and craftsmen providing excellent competences and skills for built heritage and support the exchange of those competences and skills across Europe. [pro-heritage.eu](http://pro-heritage.eu)  
Grant Agreement No.785211
- BUS LEAGUE** - Addressing and controlling the challenges created by the rise in demand for energy-skilled and experienced workers for the building planning, operation and support value chain. [busleague.eu](http://busleague.eu)  
Grant Agreement No.892894
- INSTRUCT** - Providing an operational framework for workers, in order to enhance their skills and provide them with a certification. [instructproject.eu](http://instructproject.eu)  
Grant Agreement No.894756
- CraftEdu** - Setting up the national qualification and training scheme for craftsmen and on-site workers in the field of energy efficiency and use of renewable energy sources in buildings in the Czech Republic. It will also develop the training offer delivered via Slovak national scheme STAVEDU. [craftedu.eu](http://craftedu.eu)  
Grant Agreement No.785036
- TRAIN4SUSTAIN** - Establishing future-oriented training and qualification quality standards to foster a broad uptake of sustainable energy skills in the European construction sector, also addressing the issue of mutual recognition of qualifications between countries. [train4sustain.eu](http://train4sustain.eu)  
Grant Agreement No.894514


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# Conclusions



Sustainable construction

*Let's change the workforce to  
change the sector !!*

*Thank you*



[www.seetheskills.eu](http://www.seetheskills.eu)



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SEetheSkills – EU Project



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