



Dedicated to stimulate demand for sustainable  
energy skills in the construction sector

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

<b>Report:</b>	<b>D.2.5 Recommendations and adapted qualification Report</b>
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## CHANGE RECORDS

Version	Date	Author	Changes
Version 1	12-11-2021	IVE	First draft provided
Version 2	07-12-2021	ISSO	Review of first draft
Version 3	20-12-2021	IVE	Consolidated version
Version 4	12-05-2023	IVE	Modifications as suggested by the Project Officer: "task" section removed, link to "qualification framework" added ("summary" section).
Version 5	20-05-2023	All	Modifications as suggested by the Project Officer: added entity profile in the table (section 2), narrative description added to the slides (section 3).
Version 6	25-05-2023	IVE	Consolidated version
Version 7	25-05-2023	ISSO	Modified version reviewed and finalised for submission

## SUMMARY

In order to stimulate demand, the BUSLeague project designs a qualification for Recognition of Energy Skills since all actors in the value chain need to have a proper, transparent and up-to-date set of knowledge, skills and competences.

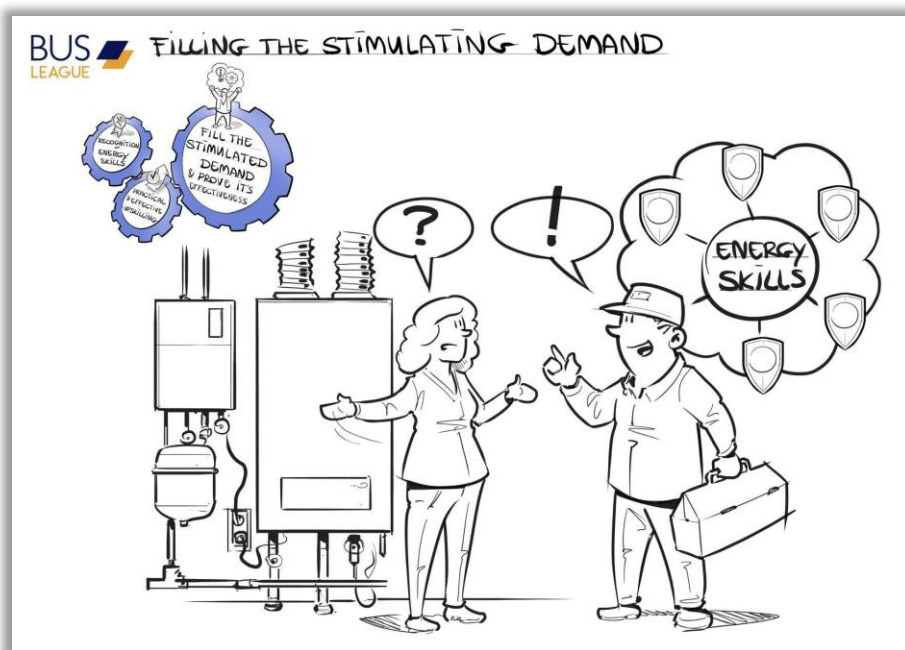
The previous document D2.4 "Qualification for the recognition of energy efficiency skills" covered the results of Task 2.3 "Compile qualification for recognition of energy skills". In D2.4 the BUSLeague team working on the qualification for recognition of Energy Skills documented their quest on finding out the right approach, scope, and its contents. It also included an overview of the main tasks defined as part of the Energy Skills qualification.

This document D2.5 "Recommendations and adapted qualification Report" summarises the stakeholder consultation process conducted in the six partner countries in order to validate the results obtained in the previous T2.3.

The compiled qualification mechanisms were presented and discussed in at least three small focus group sessions (2-10 persons) per country by M13, where all key stakeholders were represented. IVE prepared a protocol describing the methods and tools to be used in the focus group sessions as well as a list of potential topics that should be discussed related to the qualification mechanisms compiled. Each of the partners involved in the task was responsible to conduct the focus groups in their respective countries and collect feedback from participants according to the protocol.

The focus group research consisted of interviews about their perceptions, opinions, beliefs, and attitudes towards a product, service, concept, advertisement, idea, or packaging. Results gathered were discussed in an online round table working session with all consortium partners involved at M13.

This deliverable on Market Validation includes activities and outputs including design of participation incentives, focus groups guidelines, focus groups discussions, round table presentations and functioning design, and round table minutes. The resulting EE-skills qualification including detailed Unit of Learning Outcomes will be available online in the Unit of Learning Outcomes database of the BUILD UP Skills advisor-app and as Excel file from the BUSLeague website in January 2021 ([click HERE](#)).



# I FOCUS GROUP GUIDELINES

IVE elaborated a work document to support BUSLeague project partners participating in task T2.4 "Market validation of the compiled qualification for recognized energy efficiency skills": ISSO, AVE, BCC, BH, IGBC, AEA.

T2.4 is directly connected to T2.3 "Compile qualification for recognition of energy skills" since it validates in the market the qualification developed in T2.3. But it is also closely related to T2.5 "Preparing for Personal Recognition" since in most cases, stakeholders want to be involved in deciding the scope of recognition, practical implementation processes and governance structures.

Partners involved in T2.4 were asked to:

- Carry out (at least) **three small focus group sessions** (2-10 participants) in their respective countries and collect feedback from participants.
- Prepare a **country report (.doc)** collecting the participants feedback and main conclusions on the adaptation of the QF in their countries and how personal recognition could be implemented.
- Prepare a **country presentation (.ppt)** based on the country report, to be explained in a round table working session during CM3 in M13 (per country: presentation 10 min. + Q&A 5 min).

Support materials to guide partners in discussion during group sessions were also provided on Dropbox:

- T2.4 Validation of the EE-Skills Qualification.pptx
- Workdocument T2.3 Compiling EE Qualification.docx
- BUSLeague Qualification on EE-skills Processing.xlsx

## I.1 PLANNING

For the proper achievement of the objectives of the task, the following time schedule was agreed upon:

- June 2021: small focus group sessions T2.4
- July 2021: small focus group sessions T2.4
- August 2021: small focus group sessions T2.4
- First half of September 2021: Finalizing focus group sessions T2.4
- 14, 15 or 16 September 2021: round table working session during CM3 WP2 work session (3 hours). Focused on sharing lessons learned, discussing adaptations to the QF and how personal recognition can be implemented.
- October 2021: D2.5 submission of T2.4 deliverable and delivering the EE-Skills qualification fully worked out (in English) in the Unit of Learning Outcomes database of the BUILD UP Skills advisor app & as Excel file.

## I.2 STEPS TO FOLLOW

### I.2.1 Stakeholder selection

Partners could organise multiple sessions with one group or choose for three or more different groups since key stakeholders could vary, based on the national implementation plans. Partners were asked to report beforehand which stakeholders they were going to involve by filling in a table as follows:

COUNTRY	STAKEHOLDER	ENTITY	Comments

### 1.2.2 Calendar

Each country was asked to fill in the focus group sessions planning in the table below. The table should be updated by changing the "status" to "done" when the sessions took place.

COUNTRY	Nr	STAKEHOLDER	DATE	Status

### 1.2.3 Country report (.doc) on market validation

In order to collect the participants' feedback and main conclusions on the adaptation of the QF in their countries and how personal recognition could be implemented, a minute template was provided to be filled for each session held.

### 1.2.4 Country presentation (.ppt) on market validation

Based on the country report, a presentation was to be given in a round table working session during CM3 in M13 (per country: presentation 10 min. + Q&A 5 min). A Powerpoint template was provided for this presentation.

## 1.3 FAQs

In this section some questions and answers about T2.3 and T2.5 were reflected since they could be useful to prepare content-oriented meetings and obtain enriching conclusions at the national level.

### 1.3.1 Is BUSLeague developing a stand-alone qualification?

No, in BUSLeague we are developing a set of task-based learning outcomes that gives an overview of important cross-trade EE-skills. Some holistic, some specific (when needed to ensure competence).

This to scaffold towards an aware and competent construction sector.

Each country and each training institute can pick from this set the tasks that they want to address in trainings (based on country, stakeholder and trainee needs)

### 1.3.2 Who do we want to train?

Based on country and trainee needs, a choice has to be made about who will be trained.

The set of tasks can be different for different stakeholders. For example, an energy-counter will focus on more generic and advisory tasks while a housing association can ask for a more full-blown set (indoor quality and airtightness). For nZEB maintenance, a different set can also be defined for example how to preserve airtightness when adding or replacing installation components.

### 1.3.3 How to deal with existing schemes?

It is not wise to compete with existing schemes. If there is a good scheme (for example for energy advisors) we can better choose another target group (for example E-installers) or look if we can add some elements from BUSLeague to strengthen the existing scheme (e.g., on cross trade issues).

A good next step can be to inventory such choices together with stakeholders at national level.

## 2 FOCUS GROUP SESSIONS

The table below summarises the thirty sessions held for the validation of the qualification, thanks to which 100 stakeholders were consulted in the six participating countries: Netherlands, France, Bulgaria, Spain, Ireland, and Austria.

COUNTRY	Nr	ENTITIES	ORGANISATION'S TYPE	DATE	Nr attendees
NL	1	Breman Academy Zwolle	Training providers	07/07/21	3
NL	2	Building Changes	SMEs	08/07/21	2
NL	3	ROVC IW	Training providers	13/07/21	2
NL	4	Bouwend Nederland	Professional associations	14/07/21	2
NL	5	Regionaal Energieloket	SMEs, energy corner	23/08/21	1
NL	6	Techniek Nederland	Professional associations	27/08/21	2
FR	1	ADEME, Ministry of National Education, Ministry of the Ecological Transition, Maison de l'Emploi Saint Quentin	National governments Regional governments Local governments	20/04/21	4
FR	2	Constructys, Maison de l'Emploi et de la Formation du Saint Quentinoise, EDF, Montpellier Méditerranée Métropole, CAPEB HDF, ADEME, ADEL	Professional associations Training providers Financial bodies Regional governments Local governments	21/06/21	8
FR	3	ADEME (French Agency for Environment and Energy Management), Cambrésis Emploi, CAPEB Haut-de-France, Constructys, Leroy Merlin, Ministry of National Education (GRETAs)	National governments Regional governments Local governments DIY retail companies Professional associations	19/10/21	10
BG	1	Ministry of Education and Science (MES), National Agency for VET (NAVET), Employment Agency (Pazardzhik, EA), University of Architecture (Civil Engineering and Geodesy, UACEG), Professional School for Construction and	National government (ministries and executive agencies) Professional chambers Universities Business associations	02/09/21	10

		Architecture (PSCA – Pazardzhik), Head of Regional Office of the Chamber of Architects in Bulgaria (CAB – Pazardzhik), Bulgarian Association for Construction Insulation and Waterproofing (BACIW), Bulgarian Construction Chamber (BCC) Pazardzhik office, Bulgarian Construction Chamber (BCC) Headquarters			
BG	2	EcoEnergy	Local authorities	07/09/21	1
BG	3	Ministry of Education and Science, Construction Qualification Ltd (BCC subsidiary), FCIW (Podkrepa), Construction Qualification Center (FCIW – Podkrepa subsidiary)	National government Training providers Social partners	13/09/21	4
SP	1	FEVEC, IVE Certification Entity	Professional association (of construction companies) & Certification Entity	05/02/21	3
SP	2	GVA DG FPERE (Vocational Training Department of the Regional Government)	Regional government	09/02/21	1
SP	3	FEVEC, GVA DG FPERE (Vocational Training Department of the Regional Government)	Professional association & Regional government	01/03/21	3
SP	4	GVA DG FPERE (Vocational Training Department of the Regional Government), Learning centre IES Gran Vía, Learning centre IES Villajoyosa, Learning centre IES Cavanilles, Learning centre Alicante	Regional government & Training providers	17/03/21	7
SP	5	GVA DG FPERE (Vocational Training Department of the Regional Government), Learning centre IES Gran Vía	Regional government & Training providers	25/03/21	3
SP	6	FEVEC	Professional association (of construction companies)	29/03/21	1
SP	7	GVA DG FPERE (Vocational Training Department of the Regional Government)	Regional government	08/07/21	1
SP	8	FEVEC, Masuno consultancy	Professional association (of construction companies) & Consultancy	09/07/21	2
IE	1	Technological University Dublin, Department of Housing (Local Government and Heritage), Munster	Training providers National governments	09/07/21	6



		Technological University, Wexford and Waterford Training Board, Department of Housing, Local Government and Heritage, Dept. Environment Climate and Communications	Local governments		
IE	2	Construction Industry Federation, Department of Enterprise, Trade and Employment, Department of Housing, Local Government and Heritage, Dept. Environment Climate and Communications, Wexford and Waterford Training Board	Professional associations National governments Training providers	23/07/21	5
IE	3	Department of Environment Climate and Communications, Department of Housing Local Government and Heritage, Society Chartered Surveyors Ireland, Dublin City Council, Department of Enterprise Trade and Employment, Construction Industry Federation	National governments Professional associations Training providers Local governments	08/09/21	7
AT	1	WILO	Product manufacturer	08/04/21	1
AT	2	Siblik	Product manufacturer	12/04/21	2
AT	3	OCHSNER	Product manufacturer	23/04/21	1
AT	4	EASt	Energy consultant & education provider	28/04/21	2
AT	5	Sonnenkraft	Product manufacturer	06/05/21	2
AT	6	EASt	Energy consultant & education provider	15/07/21	2
AT	7	EASt	Energy consultant & education provider	04/08/21	2
<b>Total nr of stakeholders interviewed</b>					<b>100</b>

### 3 QF MARKET VALIDATION AT NATIONAL LEVEL

The validation process carried out in each country was presented in detail by the partners during a round table discussion. For this purpose, the following presentations were shown:

#### 3.1 QF MARKET VALIDATION IN THE NETHERLANDS



## MARKET VALIDATION in the Netherlands

### STAKEHOLDERS CONSULTED



Advisors

Learning centres

Construction companies & workers



2



## MARKET VALIDATION in the Netherlands

### 1. Generic impression – The sunny side

- “It is a good development to teach to look more broadly and to be more aware.”
- “The EE-skills qualification of BUSLeague gives insight in upskilling challenges”
- “What really appeals to me is the more integral view of craftsmanship....”
- “The EE-skills qualification fills the gaps / strengthens the weakest links in the value-chain and the building team”



3

As part of the market validation the Dutch team applied the lessons learned from applying anthropology; by listening to the impressions stated by the stakeholders involved and quote their wording.. In this slide four of the quotes that summarises the overall impression of the BUSLeague qualification for crosscraft craftsmanship on sustaining the built environment. Especially the holistic and total value chain approach are appreciated.

## MARKET VALIDATION in the Netherlands



### I. Generic impression – Open questions

- “BUSLeague asks a lot from lower qualified workers.”
- “The BUSLeague qualification tends to ‘want to be complete.... quite broad... all known issues are covered....’ Is the scope not too wide - or the depth too deep?”
- “I agree that these cross-trade elements should be addressed ... although the content is very comprehensive ... take out low hanging fruits ...
- “Cross-craft --> a bit too much of a wish...” Everybody agrees on the importance... but who will implement in practice?
- More distinction is needed between tasks for mechanics and work planners / designers



4

Besides the positive impressions we also got some quite good feedbacks in the form of open questions. Such as do we not ask too much from craftsmen, is it too much wishful thinking, are all items needed or do for example 20% cover 80% of the gaps. These open questions were especially helpful for preparation of the upskilling interventions.

## MARKET VALIDATION in the Netherlands



### I. Generic impression – Missing elements

- “How do you work on the mindset of the entrepreneur...?”
- “Craftsmen working in the built environment also must be able to recognize nZEB relevant aspects. For example, as an owner of a new built nZEB asks for a rooftop extension this extension has to fit perfectly in the existing nZEB without degrading its performance.”
- “Also ensure continuation of assurance in the use and maintenance phase...”
- “Work planner has a key position (materials, transfer from work planner to craftsmen...)”
- “How to complement with other developments such as EE-skills requested from perspective of the powergrid manager / the manager of a heatnetwork [cross sectoral]”
- “Add more techniques for measurement of airtightness and heatloss”



5

Although even if the open questions raised the concern that it is too much, the stakeholders all had their opinions on elements missing. Most of these missing elements indicated are targeted at the entrepreneur and foremen/planner functions. It also broadened the perspective to facility management.

## MARKET VALIDATION in the Netherlands



### 2. Usefulness for upskilling

- “Provider training Energieloket for companies joining Energieloket & As part of online training module for energy coaches”
- “Introduce the BUSLeague learning goals to compile a starter training in the neighborhood approach”
- “Aspects of BUSLeague also apply to the professional profiles... -- energy technology technician..(system integrator)”
- “Greenskills training/energy transition: in itself we would like to make something for that, but then we must look at it again when the, in particular when the unit of learning outcomes are ready. “
- “Mobile training unit for training onsite is very interesting!”



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During the stakeholder dialogue several further implementation ideas have been gathered from the respondents.

## MARKET VALIDATION in the Netherlands



### 3. Usefulness for procurement & financing

- “How to include criteria in the tender for purchasing organisation.. E.g. installing of hybrid heat pump systems + hydraulic tuning”
- “Being able to put down something as a requirement”
- “Something we can use when we rate offers”
- “Interesting to find out via Breman BREINN”
- “Link to brand sustainable provider → branding”



7

With regards to the usefulness for procurement and financing we observed enough ideas; although none of the stakeholders had already a sound experience; except for Regionaal Energieloket that indicates skills requirements in their request for offers from heatpump installers as part of collective purchasing.

## MARKET VALIDATION in the Netherlands



### 4. Usefulness for recognition

- “To include in the sustainable provider qualification (Bouwend Nederland) for adding competence descriptions on task level”
- “Yes, to address the great scarcity of professionals --- recognize competences acquired elsewhere and, if necessary, train further”
- “Reward upskilling initiatives”
- “Link BUSLeague outcomes with skills passport and the use of edu-badges”
- “Recognition of skilled persons is very important”
- “To define craftsmanship requirements for energy counters on national level”
- “Find out what BUSLeague can contribute to update(s) of choice parts and qualification files of VET”



8

For recognition of skills an abundance of opportunities and stressing out the importance have been put on the table by the stakeholders. Although the ideas also highlighted the fragmentation on the purposes of personal recognition. Every stakeholder defined the needs and possibilities from their own perspective. Most important remark was the use to link BUSLeague outcomes with digital skills passports, a Dutch initiative that is using the Open Badge standard to ensure that recognitions are exchangeable; so, you can have one recognition issued that can be used for multiple purposes.

## MARKET VALIDATION in the Netherlands



### 5. Next steps for our National Implementation Plan

- Include criteria in the tender for purchasing organisation.. E.g. installing of hybrid heat pump systems + hydraulic tuning
- Include cross-trade points of attention in existing trainings: we like to do this based on very concrete examples of the 5 most common mistakes, etc. into existing courses.
- Explore replication possibilities for Mobile training unit for full team training onsite
- Link with sustainable provider qualification (Bouwend Nederland) for adding competence descriptions on task level
- The learning goals have to be checked with the actual business Breman provides in the energy transition. This is also the case for Building Changes.
- Breman would like to take the lead in NL by adapting and implementing elements of the EE-skills qualification
- Connect BUSLeague results to cross sectoral upskilling



In this slide actions retrieved from the stakeholder consultations have been summarised in an overview.

## 3.2 QF MARKET VALIDATION IN FRANCE

### INTRODUCTION



#### EXPECTED QUALIFICATIONS OF A BBC PROFESSIONAL

Companies engaged in energy renovation projects should domain 3 skills groups beyond their “core professions”:

1. The master of gestures and the capacity to coordinate with different professions at the same worksite (**cross-work skills**): Mobile and fixed PRAXIBAT platforms, and training methods like FIT or AFEST.
2. A **global understanding** of the renovation projects.
3. The **accompaniment of the clients** for the project execution and the access to funding and subventions.



2

In France, efforts are being made to improve and recognize skills in energy renovations. Initiatives include human resources training by CAPEB, engineering and advisory services by Constructys, and voluntary trainings such as Feebat and FIT. The RGE label is recognized but deemed insufficient. The focus is on enhancing skills, providing guidelines, and ensuring the successful execution of energy renovation projects.

### INTRODUCTION



#### CURRENT TRAINING AND TRADITIONAL APPROACHES

In France, lots of efforts are being doing in the field of the skills improvement and recognition. Some of them are listed below:

- **Human resources trainings** are provided to the managers of small companies by the CAPEB.
- **Engineering and advise services** are provided to the project owners by Constructys.
- **RGE label** (Still insufficient for solving the market problems).
- **Feebat Trainings** (voluntarily focussed on energy renovations topics)
- **FIT** (dealing with constraints and implementation limits).
- **AFEST** (looking for instructions/Mediators).
- The **training clause** imposed to the project managers by the project owners (he markets size constraints its implementation).
- **BTP method**, implemented by the local employment authorities in the Hauts de France.
- New **WorkBooks** (*référentiels*) are being examined..



3

These challenges highlight the need for further investment in training resources, the development of qualified trainers, longer and more comprehensive training programs, and a better alignment between training offerings and market demands.

## MARKET VALIDATION in France



### STAKEHOLDERS CONSULTED

National Government	Regional Public Agencies
<ul style="list-style-type: none"><li>Ministry of National Education (GRETAs)</li><li>Ministry of Ecological Transition.</li><li>Minister of Labour, Employment and Economic Inclusion</li></ul>	<ul style="list-style-type: none"><li>French Environment and Energy Management Agency</li><li>Employment and Training House (Maison de l'Emploi et de la Formation) of Saint Quentin.</li><li>Hauts-de-France region</li></ul>
Industry associations	Others
<ul style="list-style-type: none"><li>Constructys</li><li>Building French Federation (Hauts de France).</li><li>Construction Quality Agency.</li></ul>	<ul style="list-style-type: none"><li>EDF</li><li>Saint Gobain</li><li>Leroy Merlin</li><li>Trainers</li><li>Social landlords</li></ul>



4

## MAIN DIFFICULTIES AT THE SKILL RECOGNITION



### TRAINING SUPPLY

Despite the efforts done, the training supply still faces difficulties like the mentioned above:

- The public **funding does not cover the local engineering** required for training programs like FIT or FEST, highly preferred.
- There is a **lack of qualified trainers** going beyond of the “just teaching”.
- 3 days of RGE training are not enough** for 8/10 candidates to master the EE contents and skills.
- There is a trend of **holding the old practices** even after succeeding the training sessions.
- The **training programmes** supply usually **do not fit** into the market requirements and expectations.



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## MAIN DIFFICULTIES AT THE SKILL RECOGNITION



### ENTREPRISES

In the case of the enterprises, additional constraints can be identified, like:

- Most of the SME and their employees are **not active training seekers**.
- Some of enterprises seeks for sell their products **regardless the complements necessary for the optimal performance** of their products (Ex. Healing pump).
- The big majority of the **SME managers don't pursuit the trainings** and even consider hard to send their employees (unless it is mandatory).
- Usually, the **enterprises do not engage in formal Work groups**.



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## MAIN DIFFICULTIES FOR SKILLS RECOGNITION



### Control and monitoring

Finally, in what concerns to the control tool, is can be highlighted that:

- **Tools for control and valorise are insufficient.**
- It is **still** a relevant and common **issue the cross-professional coordination** inside the worksite.



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These factors hinder the development of a skilled workforce and hinder the exchange of knowledge and best practices within the industry.



## ACTIONS PROPOSAL



### Increasing the qualifications of companies and their employees by:

- Developing information and training activities for craftsmen and managers of very small businesses
- Offering continuous on-site training, including for small sites, combining FIT and AFEST + FEEBAT.
- Training trainers who would provide these trainings.

### Supporting the up-skilling process:

- Local support for RGE companies
- Different versions of the "training clause"
- A RGE "plus" approach (to be designed for each territory?)
- Territorial measures such as ERBM: Property owners receive subsidies linked to performance targets. To reach these objectives, service providers to include a "training clause".
- Performance obligations
- Control systems.



8

## ACTIONS PROPOSAL



### Training Clause

- Rather than a training = mediation which will contribute to the improvement of the quality.
- Develop and diversify the use of the training clause in connection with "relevant" training actions, responding to the needs of the market and the companies.
- Leverage effect of the clause (social, green, training), as part of the responsible procurement
- Common adherence is necessary for a smooth implementation of trainings

### Paths to be explored locally

- A local charter would be proposed for signature to the companies labeled RGE
- A training program allowing companies to respect their commitments would be developed each year
- Trainers would be accredited to provide these training courses at the end of a skills enhancement program
- A monitoring and control procedure



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## ACTIONS PROPOSAL



### DIY partnerships

DIY stores can help up-skilling SMEs :

- PRACTEE : awareness-raising actions for the general public + training actions with Leroy Merlin stores.
- World Campus for Sustainable Housing by ADEO (Leroy Merlin)
- An experiment has been launched so that Leroy Merlin stores can be RGE qualified : 2 stores.
- Up-skilling of craftsmen and VSEs/SMEs to respond quantitatively and qualitatively to the demand for renovation work.
- Experimental training actions for craftsmen working with Leroy Merlin. These actions could combine: One or several FEEBAT training modules and PRAXIBAT platforms,



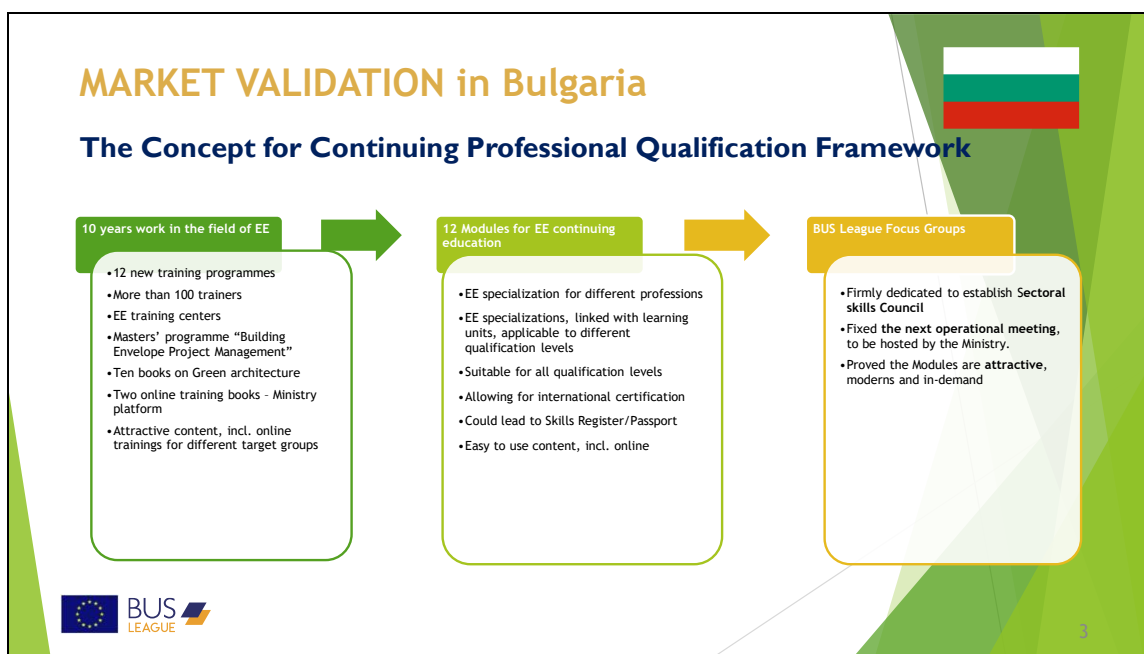
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These efforts reflect a comprehensive approach to improving qualifications, emphasizing both practical skills development and a supportive ecosystem for continuous learning. They have the potential to positively impact the construction and renovation industry by fostering a culture of upskilling and innovation.

### 3.3 QF MARKET VALIDATION IN BULGARIA



The comprehensive consultation process involved the key stakeholders in multiple events, joining forces with other ongoing initiatives in the field. The discussions engaged representatives of the responsible ministries and executive agency, the full range of education and training providers, professional and industrial chambers and associations, energy experts and non-governmental organisations.



The concept for continuing professional development designed by EnEffect is based on the experience of multiple coordination and support projects in the area of training and education and practical training courses with thousands of highly qualified building professionals, tradespersons, and blue-collar workers. It includes ten areas split into modules based on achievement of a coherent sets of pre-defined learning outcomes. The concept and the modules were presented to the key target groups at the above-mentioned events.

## MARKET VALIDATION in Bulgaria



### 1. Generic impression – Open questions to all stakeholders



*Ministry of Education and Science, National VET Agency, Employment Agency, Bulgarian Construction Insulation Association, Bulgarian Construction Chamber, University of architecture, Regional Chamber of Architects*

- The Concept improve imbalance supply and demand of skills
- 100 % grant schemes; low demand for educational services; adapt existing well established policies/training schemes for deep renovation
- We need to make sure there are good career prospects for the EE specialists
- There is no adequate educational system in the field of EE
- EE in buildings is the inevitable future – we have to be prepared to meet the increased demand



While the discussions with the national authorities and professional chambers revealed a generally positive attitude to the concept, a number of barriers were identified. Among them were the dependence of the construction sector to grant-intensive public financing, with results targeted to the minimum energy efficiency criteria, easily achieved by mainstream measures. This has a detrimental impact on the demand for new skills and knowledge, as the assignments are unproblematically executed with the existing ones. On the other hand, it was confirmed that nZEBs are the future of the sectors and targeted policies for their practical market enforcement are needed.

## MARKET VALIDATION in Bulgaria



### 2. Generic impression – Brainstorming with training developers



*Do we have enough trainers? What should be improved? Is our training product aligned with the legislative norms? The bad image of the construction sector?*

- Expand the trainers' network to attract more collaborators and practitioners
- Expand partnerships with professional organizations/associations
- Design good informative materials to illustrate the Concept
- Position ourselves as knowledge/know-how leaders on the markets
- Make the content more attractive



The discussions with the training developers were mostly targeted to the quality of the supply side, with the innovation diffusion and flexibility in shape and format taking the main stage. A strong accent was put on the collaborations with product manufacturers and professional associations, which are considered as main carriers of new knowledge and skills. The attractiveness of the training materials and the professional training for the trainers themselves were also mentioned as important elements of the system's development.

## MARKET VALIDATION in Bulgaria



### 3. Generic impression – Training service providers' perspective



*Employers' organization, Trade union, Training Centers, Ministry of education*

*What do we need to turn the Concept into Reality*

- **Ministry of Education and Science:** impressive results! Online modules – in demand; modular structure is useful; the Concept is aligned with the ministry's strategic framework for VET development for 2030; sectoral skills council - invitation to be part of the team updating and modernizing the state educational standards on EE; the career counselling is excellent idea;
- We need to reach the parents and convince from early stages about the benefits of choosing this profession
- The gray economy is a key factor for the bad image of the industry! Only 7% of the graduates from construction schools are actually working in construction
- EE and Digitalization go hand in hand – higher qualification, higher salaries, improved image



6

The perspective of the training providers was governed on the dependence on the regulations and financing instruments, which are driving the interest of the professionals towards continuing qualification and upskilling activities. However, it was confirmed that the concept is aligned with the latest requirements promoted by the Ministry of Education and Science and should be forwarded for endorsement to the national sectoral council in construction, which is expected to be formed in the near future.

## MARKET VALIDATION in Bulgaria



### 4. Next steps for our National Implementation Plan



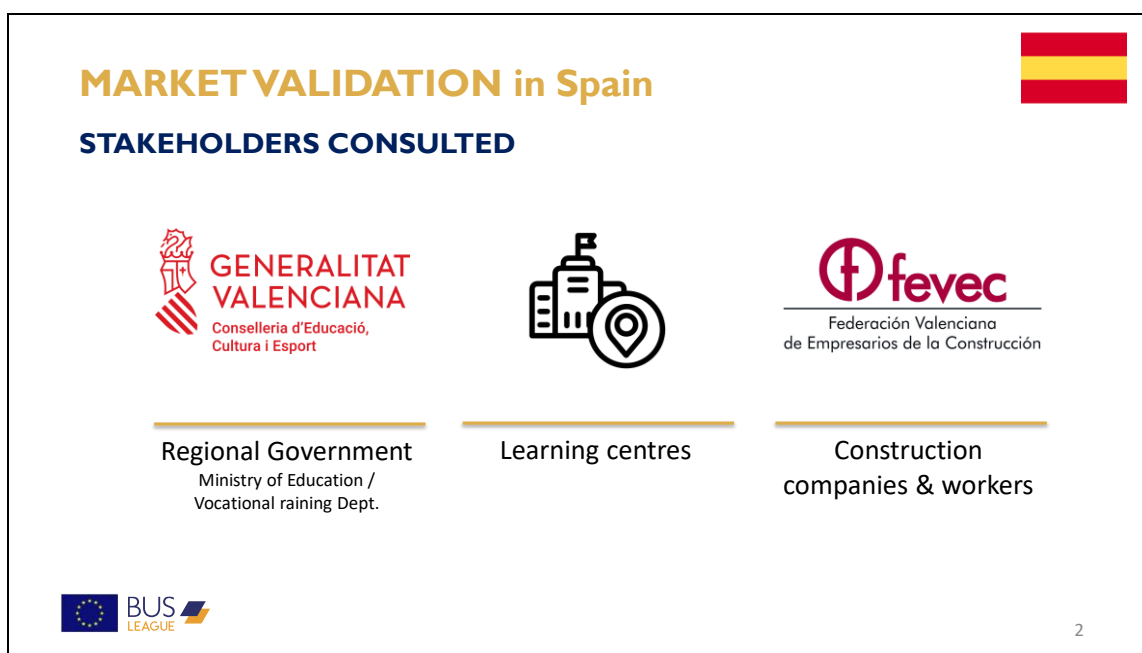
- On the right track and at the right moment
- Next meeting, hosted by the Ministry in the next two months
- Design a good informative material to illustrate the concept and attract collaborators
- Attract more practitioners



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According to the majority of the stakeholders, these developments should be supported by the renovation programmes financed by the National Recovery and Resilience Plan, which should embrace improved requirements for quality and, potentially, skilled construction services. Additionally, an informational campaign should be organized to stimulate the interest of the professional community, and ultimately, the end investors and end users of the construction product.

### 3.4 QF MARKET VALIDATION IN SPAIN



The IVE organised eight focus group meetings in Spain between March and July 2021. These were attended by representatives from the regional government (Generalitat Valenciana), VET providers and an association of construction companies.



Among the different topics discussed, three priority lines of action were highlighted: micro-learnings, micro-credentials and mutual recognition.

## MARKET VALIDATION in Spain



### 1. MICRO-TRAINING



IVE has carried out a **comparative analysis** of the current competence map of the Spanish Ministry and the qualification framework of the BUSLeague project. The main conclusions of this comparative analysis are:

- The Spanish current competences are very long and general, so it is suggested to advance in working on them partially, offering "micro-training" (shorter courses) and "micro-recognition" (certification of more specific competences or "micro-competences").
- Energy efficiency is a cross-cutting issue, but should be explicitly mentioned in at least those competences with significant energy saving potential, either through passive measures (design and implementation of the building envelope) or active measures (efficient installations and incorporation of renewable energies).



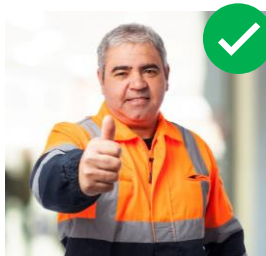
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When showing the BUSLeague QF, attendees were very positive about working with very small (micro) units for a bottom-up methodology. Working on a "micro" scale allows for more flexible, personalised, and easily adaptable training pathways to market demands.

## MARKET VALIDATION in Spain



### 2. MICRO-CERTIFICATION



IVE and FEVEC (\*) agree to collaborate in the creation of a new certification for the **on-site recognition of EE-skilled workforce** (mainly aimed at blue-collar workers).

This new certification will consider **micro-competencies** that will be evaluated in a theoretical but also **practical** way. The methodology will be scalable and will fit into the general methodology of the Ministry of Spain.

The regional government will be informed periodically so that they can evaluate the proposed methodology and the results of the pilot test. The regional government will be required to show and discuss the main conclusions of this task to the Ministry of Spain, with the aim of their **replication at national level**.



(\*) FEVEC: Valencian Federation of Construction Companies



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As a consequence of micro-learning, micro-credentials are needed to evidence the knowledge acquired. In the construction sector, a lot of knowledge is acquired through experience (rather than training).

## MARKET VALIDATION in Spain



### 2. MICRO-CERTIFICATION

#### Steps to follow

- State of the art of personal recognition in Spain.
  - How the certification should be: general requirements.
  - Analysis of the map of competences of the Ministry of Spain.
  - Analysis of the BUSLeague qualification framework.
  - List of energy efficiency micro-competencies in buildings.
  - Establishment of a monitoring committee.
  - Creation of the "Evaluation and certification process"
  - Testing for 1 micro-competence and 10-15 applicants.
  - Review of the evaluation and certification process.
  - Conclusions and lessons learned to be discussed at the national level with other regions and the Ministry of Spain.
- Oct. 2021
- July 2022
- Dec. 2022



6

Therefore, it was considered interesting to create a scheme that would assess workers' competences through a test conducted on site under the supervision of an examiner. FEVEC in collaboration with IVE agreed to develop a certification scheme and to test it with fifteen professionals.

## MARKET VALIDATION in Spain



### ENERGY EFFICIENCY SKILLS

#### INSULATION

- Insulation of areas with thermal bridges
- External attic insulation
- Inner attic insulation
- Exterior thermal insulation
- Thermo-acoustic insulation
- Thermal insulation, air chambers
- Partition wall insulation
- Insulation Facades with facing bricks
- Ceiling insulation: sprayed insulation
- Installation of window insulation systems
- Installation of insulation systems for refrigeration systems

#### RENEWABLE ENERGIES

- Installation of solar thermal energy for hot water production
- Installation of photovoltaic solar energy
- Installation of ventilated facades

#### PIPES

- Insulation of pipes from the distribution network, incorporating thermostatic valves in radiators.

#### AIR-CONDITIONING

- Installation of efficient mechanical ventilation systems, especially dual-flow systems.
- Installation of passive heating systems with glazed conservatories and trombe walls.
- Ultra-low energy installations: Passive Houses

#### CARPENTRY

- Installation/replacement of joinery and glazing.

#### LIGHTING

- Installation/replacement of low energy consumption/high energy efficiency luminaires, with lighting control systems.



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## MARKET VALIDATION in Spain



### 3. MUTUAL RECOGNITION



GVA (\*) is interested in creating a system of mutual recognition of skills and competences of professionals. GVA has many databases, managed by different departments, which could be made public (with the necessary consent of the registrants in compliance with GRDP).

The first step is to involve the different departments at the beginning of the process and reach **an agreement to co-create a single, common system** where all available data are published.



(\*) GENERALITAT VALENCIANA: Regional Government



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## MARKET VALIDATION in Spain



### 3. MUTUAL RECOGNITION

IVE has prepared an **introductory document** on "systems of mutual recognition of skills and competences of professionals" including description, modalities and examples at national and European level. This document will be useful to start discussions.

The **1<sup>st</sup> version should be a simplified one** in collaboration with a reduced number of organisations (database of professionals published on an official website) which in the longer term may become more sophisticated (with virtual cards or "skills passports").

If the system proves successful, it will be able to **add more information and data in the future**, managed by public but also private bodies. It can also be **replicated** in other regions and even at national level.



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## MARKET VALIDATION in Spain



### 3. MUTUAL RECOGNITION

To participate in this initiative, each organisation must organise itself internally and allocate human resources and budget. In addition to the people in charge of **coordination and monitoring, IT technicians and security experts** will be needed to ensure data protection.

Organisations to be involved in version 01:

ORGANISATION	INFORMATION
Regional Ministry of Education	Regulated training and recognition of competences acquired through experience
Regional Ministry of Economy	Certificates of professionalism
Social Security	Work life
Regional Ministry of Labour	Professional cards and non-regulated training



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Finally, the public recognition of the professional's competences, through virtual cards, professional cards, apps or "passports" was agreed as very necessary as it strongly stimulates the professional to continue learning and acquiring other more innovative competences, which are increasingly in demand in the market.

### 3.5 QF MARKET VALIDATION IN IRELAND




## Market Validation in Ireland

### Participating Stakeholders

**Education Providers**

Technological University Dublin  
Munster Technological University  
Wexford and Waterford Training Board

**Government**

Department of Housing, Local Government and Heritage  
Department of Environment, Climate and Communications  
Department of Enterprise, Trade and Employment  
Dublin City Council

**Industry**

Construction Industry Federation  
Society of Chartered Surveyors Ireland






  



The IGBC and TUS organised three focus group meetings in Ireland in the summer of 2021. These were attended by education providers, professional associations (industry) and representatives from local and central government.

## Market Validation in Ireland

### Qualification Framework

**Initial Impressions**

- The proposed QF was welcomed by the group.
- QF aligns with the existing framework for nZEB training in Ireland
- A system of skills common across Europe would benefit to a mobile workforce
- Suggested QF be mapped to ESCO
- Retrofit & new build project are very different. A risk analysis is needed for retrofit.
- For retrofit, suggested QF adopt the "process" approach taken in PAS2035
- Perhaps include a communications module to improve personal skills / interaction
- Target audience needs to be clarified
- Language of learning outcomes – Craft workers may not need EU Policy context
- Materials & Technology, need to be able to identify suitable materials

The group welcomed the qualification framework, as this is very much aligned with the existing framework for NZEB training in Ireland. The development of a system of skills that would be common across Europe was perceived as highly beneficial to a mobile workforce. However, workshop participants felt that qualification for new build and renovation needed to be separated as the skillset is different. A module on communication (and other soft skills) should also be added.

## Market Validation in Ireland

### Public Procurement Training Clause

#### Training Requirements

- The group agreed that training clause could stimulate demand for upskilling in energy efficiency
- Again the preference was to use the nZEB training being currently delivered by WWETB and overseen by Solas
- Blended learning part online and part onsite
- Clause to reference a curriculum of learning outcomes
- Need to liaise with OGP (Office of Government Procurement) and OPW (Office of Public Works) about the training clause. OPW are developing GPP (Green Public Procurement) Guidelines and would probably like to include a training clause. OGP may also act as “training clause coordinator” in future.

In relation to the use of the energy efficiency training clause as part of public procurement, workshop participants felt that this should be linked to NZEB training courses being rolled out across Ireland by Education and Training Boards.

## Market Validation in Ireland

### Personal Recognition

#### Scope of recognition, implementation and governance

- The group agreed a competency database and skills card system would be a good incentive for upskilling
- A system of personal recognition is not currently available for craft workers / trades
- Scheme would support fluidity of movement of trades across EU
- Scheme would enable individuals to build their own skills profile
- Example of ECOL European Crane Operating Licence could be used
- QQI (Quality and Qualifications Ireland) ETBs (Education and Training Boards), and Solas (state further education and training body) should be involved in delivering the scheme
- Obstacles – people are busy, construction is booming again, low levels of IT literacy in target group,
- Onus that information is correct (is this with the individual?)

Overall, the feedback on the development of personal recognition for construction workers was extremely positive as it could incentivise and facilitate upskilling, as well as support the mobility of trades across Europe. The low levels of IT literacy in the target group, and the fact that the industry is currently so busy in Ireland could both be obstacles to a successful implementation of personal recognition for construction workers in the short-term.

### 3.6 QF MARKET VALIDATION IN AUSTRIA

#### MARKET VALIDATION in Austria

##### Background



AEA has already analysed the market and its needs in previous BUS projects and developed together with project partners at national and European level trainings for cross trade understanding (see outcomes of BUILD UP Skills CrossCraft and NEWCOM).

2

Austria has been involved in BUILD UP Skills projects since 2011, at national and European level. Within these projects, a strategic roadmap was developed for initial and further education until 2020. On base of this roadmap, new and innovative training courses were developed and conducted to test the acceptance in the market.

#### MARKET VALIDATION in Austria

##### Stakeholders consulted

During BUSLeague a bunch of meetings have been held with training institutes, manufacturers, installers, policy makers,...

 Federal Ministry  
Republic of Austria  
Climate Action, Environment,  
Energy, Mobility,  
Innovation and Technology



National/Regional  
Government

Ministry of Environment &  
Salzburg, Styria, Carinthia

Training Institutes

Product  
Manufacturers

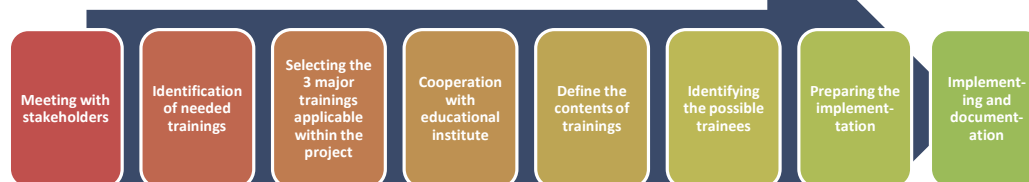


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Within BUSLeague the project team consulted with product manufacturers and training institutions in order to design and conduct micro-trainings needed in the market.

## MARKET VALIDATION in Austria

### Procedure & implemented meetings



COUNTRY	Nr.	STAKEHOLDER	DATE	Status
AT	1	Association for the education of energy consultants	24/3/2021	Done
AT	2	Product training for heat pumps	8/4/2021	Done
AT	3	Product training for electrical installation	12/4/2021	Done
AT	4	Product training for heat pumps	23/4/2021	Done
AT	5	Association for solar thermal plants	6/5/2021	Done
AT	6	Association for the education of energy consultants	15/7/2021	Done



4

Within the engagement process of the stakeholders, the needed trainings were identified, and in cooperation with the education provider (Energy Agency Styria) a concept for three short online trainings was. These trainings were conducted until the end of the project and according to the feedback from the trainees and the evaluators, they were well accepted and considered to be very timely and useful.

## MARKET VALIDATION in Austria

### Action lines for national implementation of trainings

- 1 According to the outcomes of the discussions with the stakeholders as well as the project internal focus relevant trainings for Austria are under developed** (in cooperation with the further education institute EAST)\*:
  - Construction Site Procedures in connection to the implementation of an renovation roadmap\*\*
  - Interpretation of available quality checks on the building site\*\*
  - Management of Ecological Construction Material on the building site\*\*
- 2 The implementation of the trainings will go along with the market needs:**
  - TBD (Onsite training, digital training,...)
- 3 Possibility for the mutual recognition of skills/competences**
  - The competences that go along with the developed trainings will be integrated into the developed competence description in BUSLeague.



\* The fundament of the developed trainings will be the training modules of the building inspector developed in the NEWCOM project.

\*\* Draft-titles

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In line with the planned activities, the developed trainings contained three very relevant training needs of the market: Construction Site Procedures in Connection to the Implementation of a Renovation Roadmap, Interpretation of the Available Quality Checks on the Building Site (e.g., Air-tightness test) and Management of the Ecological Construction Materials on the Building Site. For two of these micro-trainings, the basis for the mutual recognition of the gained skills and competences were prepared.

## 4 ROUND TABLE CONCLUSIONS

After having listened to the presentation of the validation of the Qualification Framework (QF) conducted in each country, it is concluded that:

- Great progress has been achieved in involving different stakeholders even reaching ambitious commitments with some of them.
- There is a wide variety of approaches to the Qualification Framework, but it is not yet sufficiently clear how each country will use the elements of the qualification in their training interventions.
- The Qualification Framework is very broad and also flexible. This will allow it to be adjusted in the coming months to ensure its usability in WP4.
- The Qualification Framework cannot be considered as final until the training interventions have been made. Only after that, the links will be sufficiently clear and missing competences can be added to the set.
- It would be advisable to organise a working session after the training interventions have taken place to consolidate a final version of the Qualification Framework.

In conclusion, Jan Cromwijk indicates that he will finalise the Qualification Framework in its current format by adding more details to the competences in order to make it useful for the preparation of future trainings. In addition, the Qualification Framework will be translated to ensure that it is understood in partner countries and usable in the BUS advisory app.



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