
Draft Project plan for the CEN Workshop on “A harmonization of KPIs for supporting the next generation of EPCs”

**Requests to participate in the Workshop
and/or comments on the project plan are
to be submitted by
<24th April 2023 deadline for comments>
to Fabio.rossi@uni.com¹**

Recipients of this project plan are kindly requested
to name all patent rights known to them to be
relevant to the Workshop and to make available all
supporting documents.

Milan, 24/03/2023, version No 2.0

¹ Applications for participating in the Workshop and comments on the project plan that are not received by the deadline do not need to be taken into consideration. Once constituted, the Workshop will decide whether or not to consider the comments received in good time.

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Summary

Starting from the request for the transformation of the existing building stock in the EU member states into more sustainable and energy efficient buildings, envisaged by the Green Deal of the European Commission, the EUB SuperHub project carried out research on EPCs issued in the various Member States by analyzing the individual indicators that compose them and their process of elaboration. The result was a heterogeneity of the certificates in terms of quality, for example different indicators, methodologies, data and skills, visibility and usability. The request of a CEN CWA has the objective of take concepts of EUB SuperHub project and provide the contents of the new generation of EPCs, defining unique and shared indicators and calculation methodologies based on existing technical standards, legislative devices and evaluation protocols of sustainability. This information, aggregated to the building logbook, can be entered in a specific database, with the possible support of other IT tools, through a process of digitization so that they can be used by professionals and public administration for any energy and sustainable requalification interventions and verification of existing assets.

1 Status of the project plan

Draft project plan for public commenting (Version 2.0)

This draft project plan is intended to inform the public of a new Workshop. Any interested party can take part in this Workshop and/or comment on this draft project plan. Please send any requests to participate or comments by e-mail to fabio.rossi@uni.com.

All those who have applied for participation or have commented on the project plan by the deadline will be invited to the kick-off meeting of the Workshop on **28th April 2023**.

Approved project plan for CWA development will be adopted at the kick-off meeting of the Workshop on **28th April 2023**.

2 Workshop proposer and Workshop participants

The proposer of this CEN Workshop is the EUB SuperHub project funded by Horizon2020 Programme under Grant agreement n. 101033916 and coordinated by:

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The main contact point for the CEN Workshop is:

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Fakultät für Architektur/ Faculty of Architecture
Fachgebiet Bauklimatik / Institute for Building Climatology
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The CEN national member holding the Workshop secretariat is:

UNI - Ente italiano di Normazione
Via Sannio n.2, Milano, Italy (20137)

2.1 Workshop proposer

Person or Organisation	Short description and interest in the subject
Peter Gyuris – EUB SuperHub /Geonardo	EUB SuperHub Project Coordinator and expert in the field

2.2 Other potential participants

This CWA will be developed in a Workshop (temporary body) that is open to any interested party. The participation of other experts would be helpful and is desired. It is recommended that:

- Academic and research bodies
- Funded European Projects (i.e. Horizon 2020, Horizon Europe)
- Industry and commerce
- Non-governmental organizations (NGO)
- Standards application

take part in the development of this CWA.

2.3 Participants at the kick-off meeting

All relevant EUB SuperHub project partners will be invited to attend the kick-off meeting, the invitation will also be extended to experts from twin projects.

The following persons or organizations already signed up to the kick-off meeting prior to the publication of the draft project plan.

<u>Person</u>	<u>Organisation</u>
<u>Workshop proposer</u> Peter Gyuris	<u>Workshop proposer</u> EUB SuperHub
Ahmed Khoja (Chairperson)	EUB SuperHub
Andrea Moro (Vice chairperson)	EUB SuperHub
Letizia Roccamena and Sylviane Nibel (Project leader)	EUB SuperHub
Paola Borgaro	EUB SuperHub
Elena Bazzan	EUB SuperHub
Natalie Essig	EUB SuperHub
Sylviane Nibel	EUB SuperHub
<u>Workshop secretariat</u> Fabio Rossi	UNI

2.4 Registered Workshop participants

Relevant EUB SuperHub project partners will actively participate in the development of the CWA.

The following persons or organizations have expressed an interest to be involved as Workshop participants at the kick-off meeting and to actively participate in the development of the CWA:

<u>Person</u>	<u>Organisation</u>
<u>Workshop Chair</u> Ahmed Khoja	<u>Workshop Chair</u> EUB SuperHub
<u>Workshop Vice-Chair</u> Andrea Moro	<u>Workshop Vice-Chair</u> EUB SuperHub
<u>Workshop Project Leader</u> Letizia Roccamena Sylviane Nibel	<u>Workshop Project Leader</u> EUB SuperHub
<u>Workshop secretariat</u> Fabio Rossi	<u>Workshop secretariat</u> UNI

3 Workshop objectives and scope

3.1 Background

This CEN Workshop Agreement (CWA) is based on the results of the European Building Sustainability performance and energy certification Hub (EUB SuperHub) project, funded under the Horizon2020 framework programme of the European Union. The developed EUB SuperHub platform allows for calculating the building assessment criteria defined in the EUB SuperHub passport.

European buildings' current weighted annual energy renovation rate stands at low levels. The Renovation Wave Strategy, published in October 2020 by the European Commission, draws the way to reach EU-wide climate neutrality by 2050 by increasing the number of deep renovations, speeding up the integration of renewables in building and promoting broader use of waste heat and circularity principles, and doubling the annual energy renovation rate of residential and non-residential buildings by 2030.

The Renovation Wave Strategy stresses that building renovations can generate social, environmental, and economic benefits alongside the energy and cost reductions at the building use stage.

There are many novelties introduced with the newest proposal for a directive on the energy performance of buildings (EPBD) published by the European Commission in December 2021, such as the introduction of minimum energy performance standards for existing buildings, a definition of zero-emission buildings referring to new buildings, calculation of the life-cycle global warming potential of new buildings as of 2030, calculation of the Smart Readiness Indicator (SRI) for large non-residential buildings with high energy demand as of 2026, addressing the issues of healthy indoor climate conditions, adaptation to climate change, fire safety, risks related to intense seismic activity and accessibility for persons with disabilities.

The main objectives of this EPBD revision are to increase the rate and depth of building renovations, improve information on energy performance and sustainability of buildings, and ensure that all buildings will be in line with the 2050 climate neutrality requirements. The proposal for the EPBD revision that “*buildings are responsible for greenhouse gas emissions before, during and after their operational lifetime*” leads that the whole life-cycle emissions must be considered.

Lack of information in the construction sector is one of the many barriers that prevent the renovation rate from growing. As a solution, the Renovation Wave Strategy introduced first the concept of a digital building logbook. The proposal for the EPBD revision defines a digital building logbook. Moreover, the EUB SuperHub project noted differences between the EPC issued in the different Member States (MS) in terms of their quality (inputs, outputs, data, methodologies, experts), visibility (awareness, communication, image, perception of certifications, range, how certifications call to action, advertising) and usability (information, how triggers lead to action, choices made, interoperability). This low level of EPC harmonization between the MS hinders the creation of unified EU EPC and constrains the EPC application to the national and sometimes regional boundaries.

From the above-mentioned, further evolvement of the existing Energy Performance Certification schemes encompassing environmental, social, and economic aspects of buildings' life cycle and whole life carbon thinking by applying a holistic view of buildings is necessary to build a solid foundation for accelerating building renovations by ensuring at the same time consistency throughout the Member States.

EUB SuperHub project provides a description of a core set of transnational Key Performance Indicators of the next generation of EPCs, which are transferred in this CEN Workshop Agreement, covering the following key thematic areas:

1. Energy consumption,
2. Renewable energy,
3. Greenhouse gas (GHG) emissions (operational and life cycle),
4. Thermal comfort,
5. Indoor Air Quality (IAQ),
6. Life-cycle costs (LCC),
7. Smart readiness indicator (SRI),
8. Climate change adaption and resilience,
9. E-mobility,
10. Daylight sufficiency.

Several activities have been performed by the EUB SuperHub project consortium aiming to identify a harmonised list of exhaustive and robust indicators for evaluating the energy performance, sustainability, and smartness of buildings in the next generation of Energy Performance Certificates. Indicators selected result from a recognition of the existing transnational set of indicators (see Deliverable D1.2), such as the initiatives of the European Community (SBA, Level(s), EPBD recast proposal), the outputs of European Projects already concluded (CESBA MED, FASUDIR, NewTREND, etc.) and the standardisation process (CEN).

Many consultation activities with the key stakeholders operating in the field of energy performance (market players, professionals, public administration employees, energy certifiers, standardization experts, etc.) have been carried out, capitalising their knowledge and their suggestions (see Deliverable D1.3). In this regard, many key suggestions have been collected by the EUB SuperHub project consortium through the mapping of the National Energy Performance Certificates and Sustainability Certification systems in the EUB SuperHub participating countries, assessing their role and impact in the real estate market (see Deliverable D1.1).

Thanks to all these reconnaissance activities and subsequent accurate analysis (see Deliverable D2.2), the EUB SuperHub project consortium finally get a list of KPIs which are:

- Coherent with European Commission directives and proposals,
- Representative of the market needs,
- Exhaustive in relation to the stakeholders' demands,
- Harmonised with the European Commission EPBD recast proposal,
- Effective compared to the strategies for reducing energy consumption.

This information, aggregated to the building logbook, can be entered in a specific database, with the possible support of other IT tools, through a process of digitization so that they can be used by professionals and public administration for any energy and sustainable requalification interventions and verification of existing assets.

The request to open a CWA intends to transfer the results of the EUB Superhub project into a consensual reference document at European level, in order to support the next generation of EPCs.

3.2 Scope

The planned CEN Workshop Agreement (CWA) defines and describes a core set of transnational Key Performance Indicators (KPIs) for the next generation of assessment and certification framework of buildings energy

performance (EPCs), complemented by other sustainability indicators, which help to form a digital building logbook and a harmonized “building e-passport” as will be defined by this document.

This CWA collects many indicators, that already exist and are used heterogeneously, and tries to harmonize them in a single set, that permits to have a common denominator, a common transnational document for comparing the performances of buildings in different regions.

This core set of KPIs is drawn from an EU H2020 project entitled “European Building Sustainability performance and energy certification Hub” (EUB SuperHub for short). It is the “center of gravity” of several driving principles, taking into account stakeholders’ needs, (future) revised EPBD contents, existing EN standards, sustainability assessment frameworks in place in various EU Member States, including initiatives of attempts for an EU harmonized framework for sustainable buildings assessment.

The choice of indicators should respect the following requirements: easiness of implementation, the necessity to get added-value, transparent and reliable information for end-users, capable to trigger relevant energy efficiency decisions, so as to achieve EU carbon neutrality ambition in 2050.

The planned CEN Workshop Agreement set of indicators is applicable to various building types (residential, office, etc.), both newly built and existing ones.

The indicator framework is designed to be implemented by specialized assessors; it is intended to be understood and used by building owners and tenants, who may be professional ones, public or private, or simple citizens.

One of the objectives of the passport is to allow the transnational comparison in absolute terms of the performance reached by each building, so the CWA will address comparability issues.

The planned CEN Workshop Agreement does not provide references and target values to be respected for each indicator, because they depend on each MS context and ambition.

3.3 Related activities

The activities related to the topics addressed by the CWA are mainly afferent to three different fields of action, which are:

- The **European Project**, in particular to the sister projects of EUB SuperHub, dealing with the definition and description of a core set of transnational Key Performance Indicators (KPIs) for the next generation of assessment and certification framework of buildings energy performance (EPCs);
- The **existing standardisation work at European level**, in particular those related to the sustainability development in construction;
- Other **existing CEN/WS** related to similar issues.

Concerning other EU Projects dealing with the development of sustainability indicators for the next generation of EPCs, it’s important to mention all the following sister projects:

CrossCert <https://www.crosscert.eu/> - Creating a product testing methodology for the new Energy Performance Certificates approaches.

D²EPC <https://www.d2epc.eu/en> - Setting the grounds for the next generation of dynamic Energy Performance Certificates for buildings.

E-DYCE <https://edyce.eu/> - Increasing the reliability of the energy performance assessment process through dynamic Energy Performance Certification.

ePANACEA <https://epanacea.eu/> - Creating a Smart Energy Performance Assessment Platform to overcome the challenges to the current Energy Performance Certificates schemes.

EPC RECAST <https://epc-recast.eu/> - Supporting the development, implementation, and validation of a new generation of Energy Performance Assessment and Certification, with a focus on existing residential buildings.

iBRoad2EPC <https://ibroad2epc.eu/> - Integrating building renovation passports into Energy Performance Certification schemes for a decarbonized building stock.

TIMEPAC <https://timepac.eu/> - Improving existing certification processes towards innovative methods for energy performance assessment and certification of buildings.

U-CERT <https://u-certproject.eu/> - Introducing the next generation of user-centered Energy Performance Assessment and Certification Scheme to value buildings in a holistic and cost-effective manner.

X-tendo <https://x-tendo.eu/> - Providing public authorities and implementing agencies with improved compliance, reliability, usability, and convergence of next-generation energy performance assessment and certification.

Concerning the **existing standardisation work at European level, CEN/TC 350²** “Sustainability of construction works” can be considered a related activity of the CWA since, it describes coherent and standardised methods for the assessment of the sustainability aspects of new and existing construction works (buildings and civil engineering works) in the context of the UN Sustainable Development Goals and of the circular economy. Furthermore, it’s important to mention the **CEN/TC 465** “Sustainable and smart cities and communities”, a standardisation developed to assist cities and community decision making and support their implementation of sustainability and sustainable development.

Concerning the **existing CEN/WS**, a strong interrelationship with the CEN/WS of TRAIN4SUSTAIN about the Competence Quality Standard (CQS) is under development. The TRAIN4SUSTAIN CEN/WS fosters a common understanding of sustainable competences across Europe, developing a Competence Quality Standard (CQS) in sustainable building for facilitating transnational recognition of learning outcomes and competence levels of existing qualifications and vocational trainings.

Indeed, the TRAIN4SUSTAIN CEN/WS methodology may be adopted by EUB SuperHub for scoring the level of competence of professionals required for calculating the LOs - Learning Outcomes (which are the elementary units of the CQS, defined as statements of what a learner knows, understands and is able to do upon completion of a learning process), associated to the EUB SuperHub KPIs.

In Italy moreover the UNI/CT 058 Città, comunità e infrastrutture sostenibili is developing a national project standard about integration and interconnection of the buildings that will be taken into account.

4 Workshop programme

4.1 General

The CWA will be drawn up in **English** (language of meetings, minutes, etc.). The CWA will be written in **English**.

The drafting process is open and all comments will be considered, first by the chair person and secondarily by the participants of the workshop.

In order to minimize travelling, meetings will mostly be done remotely. If a physical meeting is desirable, it will be organized.

The kick-off meeting is planned to take place on January 2023, 19th remotely.

4.2 Workshop schedule

Table 1: Workshop schedule (preliminary)

² A call to present the proposal off he CWA with the chair and secretary of this TC is advisable. The same can be done with CEN/TC 365.

CEN/CENELEC Workshop M1-M16	M1 June 2022	M7	M10 March 2023	M11 April 2023	M13	M14	M16 Oct 2023
Project plan							
Submission to CEN							
WS announcement							
Public consultation of PP							
kick-off							
CWA drafting							
approval							
promotion							

5 Resource planning

The administrative costs of CEN Workshop Secretariat will be covered by resources from the H2020 project EUB SuperHub Grant Agreement n. 101033916.

6 Workshop structure and rules of cooperation

The workshop will be led by a chair or vice-chair, while the project leader will support them in the organization.

The CEN Workshop Chair is responsible for ensuring that the development of the CWA follows the principles and content of the adopted project plan and the requirements of the CEN Guide 29. The CEN Workshop Chair may take decisions on the conduct of the CEN Workshop on the basis of the comments expressed by the participants according to the CWA rules.

The workshop secretariat is responsible for the organization and management of the workshops according to the CEN Guide 29.

CEN Workshop participants draft the CWA and take in consideration the comments after the public commenting phase. CEN Workshop participants are the CWA proposers (the members of EUB SuperHub project), plus other relevant stakeholder, identified by the proposer.

6.1 Participation in the Workshop

The Workshop will be constituted during the course of the kick-off meeting. By approving this project plan, the interested parties declare their willingness to participate in the Workshop and will be formally named as Workshop participants, with the associated rights and duties. Participants at the kick-off meeting who do not approve the project plan are not given the status of a Workshop participant and are thus excluded from further decisions made during the kick-off meeting and from any other decisions regarding the Workshop.

As a rule, the request to participate in the Workshop is closed once it is constituted. The current Workshop participants shall decide whether any additional members will be accepted or not.

Any new participant in the Workshop at a later date is decided on by the participants making up the Workshop at that time. It is particularly important to consider these aspects:

- a. expansion would be conducive to shortening the duration of the Workshop or to avoiding or averting an impending delay in the planned duration of the Workshop;
- b. the expansion would not result in the Workshop taking longer to complete;
- c. the new Workshop participant would not address any new or complementary issues beyond the scope defined and approved in the project plan;
- d. the new Workshop participant would bring complementary expertise into the Workshop in order to incorporate the latest scientific findings and state-of-the-art knowledge;
- e. the new Workshop participant would actively participate in the drafting of the manuscript by submitting concrete, not abstract, proposals and contributions;
- f. the new Workshop participant would ensure wider application of the CWA.

All Workshop participants who voted for the publication of the CWA or its draft will be named as authors in the European Foreword, including the organizations which they represent. All Workshop participants who voted against the publication of the CWA, or who have abstained, will not be named in the European Foreword.

6.2 Workshop responsibilities

The Workshop Chair is responsible for content management and any decision-making and voting procedures. The Workshop Chair is supported by the Workshop Vice-Chair and the responsible Workshop secretariat, whereby the Workshop secretariat will always remain neutral regarding the content of the CWA(s). Furthermore, the Workshop secretariat shall ensure that CEN rules of procedure, rules of presentation, and the principles governing the publication of CWA(s) have been observed. Should a Workshop Chair no longer be able to carry out her/his duties, the Workshop secretariat shall initiate the election of a new Workshop Chair. The list below covers the main tasks of the Workshop Chair. It is not intended to be exhaustive.

- Content related contact point for the Workshop,
- Presides at Workshop meetings,
- Ensures that the development of the CWA respects the principles and content of the adopted project plan,
- Manages the consensus building process, decides when the Workshop participants have reached agreement on the final CWA, on the basis of the comments received,
- Ensures due information exchange with the Workshop secretariat,
- Represents the Workshop and its results to exterior.

The Workshop secretariat, provided by a CEN national member, is responsible for organising and leading the kick-off meeting, in consultation with the Workshop proposer. Further Workshop meetings and/or web conferences shall be organised by the Workshop secretariat in consultation with the Workshop Chair. The list below covers the main tasks of the Workshop secretariat. It is not intended to be exhaustive.

- Administrative and organisational contact point for the Workshop,
- Ensures that the development of the CWA respects the principles and content of the adopted project plan and of the requirements of the CEN-CENELEC Guide 29,
- Formally registers Workshop participants and maintains record of participating organisations and individuals,
- Offers infrastructure and manage documents and their distribution through an electronic platform,

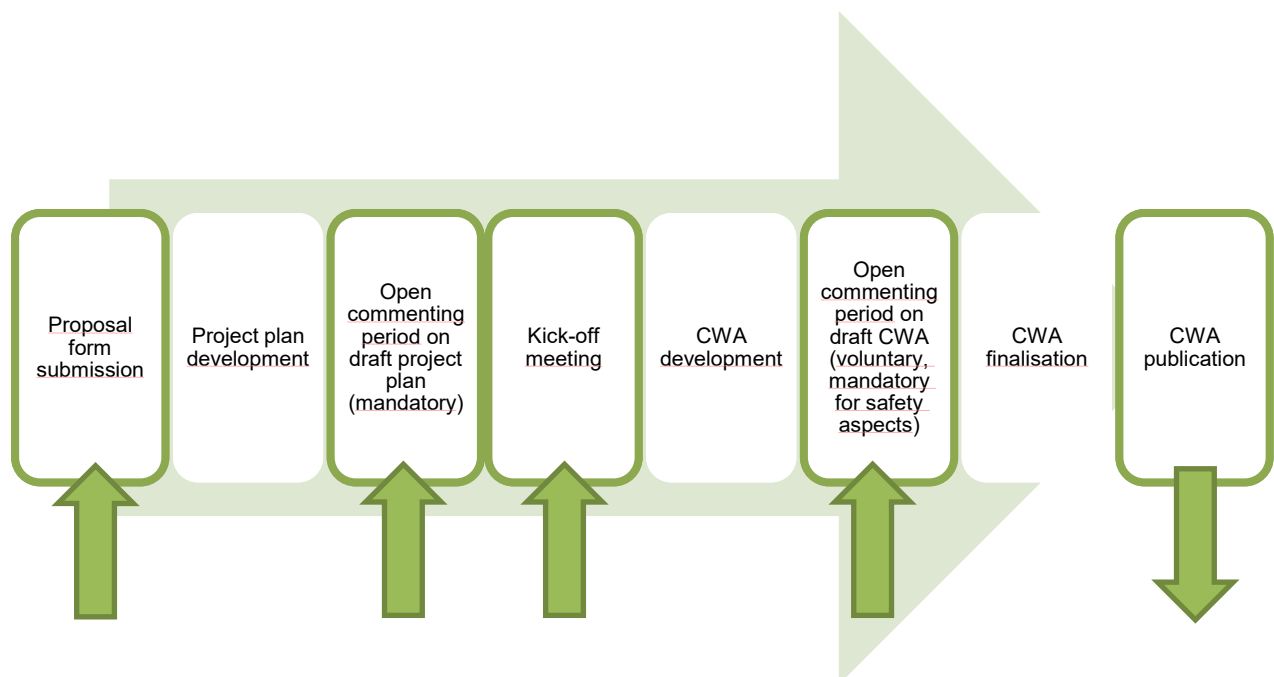
- Prepares agenda and distribute information on meetings and meeting minutes as well as follow-up actions of the Workshop,
- Initiates and manage CWA approval process upon decision by the Workshop Chair,
- Interface with CEN and Workshop Chair regarding strategic directions, problems arising, and external relationships,
- Advises on CEN rules and bring any major problems encountered (if any) in the development of the CWA to the attention of CEN,
- Administrates the connection with relevant CEN.

6.3 Decision making process

Each Workshop participant is entitled to vote and has one vote. If an organisation sends several experts to the Workshop, that organization has only one vote, regardless of how many Workshop participants it sends. Transferring voting rights to other Workshop participants is not permitted. During voting procedures, decisions are passed by simple majority; abstentions do not count.

If Workshop participants cannot be present in the meetings when the CWA or its draft is adopted, an alternative means of including them in the voting procedure shall be used.

7 Dissemination and participation strategy



Proposal form submission

The Workshop proposal will be disseminated to the following relevant stakeholders and bodies for consultation:

- standards committee, working group etc.
- publisher of technical rules
- sector forum
- focus group
- coordination group
- others (EUB SuperHub sister projects)

Open commenting period on draft project plan

The project plan will be disseminated to the following relevant stakeholders and bodies for commenting:

- standards committee, working group etc.
- publisher of technical rules
- sector forum
- focus group
- coordination group
- others (EUB SuperHub sister projects)

In addition to the CCMC website, the project plan and the date of the kick-off meeting will be advertised on the EUB SuperHub website (<https://eubsuperhub.eu/>) to raise awareness. Interested parties are requested to contribute either through commenting of the project plan (short term) or through Workshop participation (long term).

Open commenting period on draft CWA

The commenting phase is not compulsory in this case and it can be added. Decision on the submission of the draft CWA to public commenting phase can be agreed at a later stage, during the works of the CEN/W5.

CWA publication

The final CWA will be disseminated to the following relevant stakeholders and bodies:

- standards committee, working group etc.
- publisher of technical rules
- sector forum
- focus group
- coordination group
- others (EUB SuperHub sister projects)

In addition to the CCMC website, the final CWA will be advertised on:

- sector specific newsletter
- social media, such as
 - Facebook
 - Instagram
 - LinkedIn
 - Twitter
- Research Gate
- EC Newsroom
- Others

8 Contacts

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<https://www.cencenelec.eu/Pages/default.aspx>

9 Bibliography

EUB SuperHub Deliverables:

- [D1.1 - Quality, usability and visibility of energy and sustainability certificates in the real estate market](#)
- D1.2 - Transnational indicators for the next generation energy certification
- D1.3 - Next generation energy certification: stakeholders' needs and expectations
- D2.2 - Definition of common transnational indicators and assessment metrics