
**Draft Project plan for the CEN-
CENELEC Workshop USER-CHI
on "Innovative solutions for
user centric charging
infrastructure for electric
vehicles"**

**Requests to participate in the Workshop
and/or comments on the project plan are
to be submitted by
2023-07-03 to jlopezr@une.org¹**

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.

Madrid, 2023-05-25 (Version 1)

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

In order to boost the massive potential of electromobility in Europe, a user-centric perspective is required, integrating different innovative charging technologies with a holistic perspective, putting the user at the centre and empowering it, exploiting the synergies between electromobility and the process of greening and smartification of the grid which is taking place to achieve the energy transition in Europe, integrating the technological tools and business models which will transform the elements cited above into an actual, working ecosystem which improves the user experience of electric vehicles drivers beyond the current levels of internal combustion engine vehicles drivers, whilst at the same time makes financially attractive for the relevant private and public actors the large scale deployment of Europe's required user centric charging infrastructure.

The objective of this Workshop is the development of two CEN-CENELEC Workshop Agreements. The first one will provide guidelines for operators to implement advanced smart charging and management strategies over their charging infrastructure for electric vehicles and the second one will provide guidelines for the stations of the future to fulfil the needs and expectations of electric vehicle users.

1 Status of the project plan

Draft project plan for public commenting (Version 1.0)

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 jlopezr@une.org.

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 **2023-07-07**.

2 Workshop proposer and Workshop participants

The proposer of this CEN-CENELEC Workshop is the Project USER-CHI funded by Horizon2020 programme under Grant agreement n. 875187 and coordinated by:

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The CEN/CENELEC national member holding the Workshop secretariat is:

UNE – Asociación española de Normalización
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2.1 Workshop proposer

Person or organisation	Short description and interest in the subject
Horizon2020 project USER-CHI GA 875187 Ángel Moya (Coordinator of EU Project)	ETRA Investigación y Desarrollo, S.A. (ETRA I+D) is the hi-tech unit within ETRA Group, one of the leading industrial groups in Spain. Its mission is putting in the market the most advanced solutions and services in the fields of traffic, transport, energy and security,

	<p>either directly or through the 10 companies of the Group. The main market areas of ETRA Group are Spain, Portugal, Eastern Europe, LATAM, Northern Africa and the Middle East.</p> <p>ETRA I+D is key player at EU level in industry driven, applied research and innovation. It brings into the project its expertise in research and development of new technologies and applications as well as a long success record in managing large scale complex EU R&D projects. The track record of the company includes more than 80 EU projects –half of them led by ETRA- in FP3, 4, 5, 6, 7, H2020 and Horizon Europe.</p> <p>ETRA I+D has developed an intelligent charging infrastructure management platform which allows monitoring and management of charging stations. Some examples of successful implementations are the recharging points of Barcelona City Council, Metropolitan area of Barcelona (AMB), Municipal Transport Company of Madrid (EMT) and Madrid City Council (fast recharging points), thus managing more than 250 public recharging points and 14,000 unique EV users, having reached 100,000 recharging sessions. ETRA has also been selected as the installer for Spain and Portugal for IONITY, Europe's largest ultra-fast recharging network.</p>
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2.2 Other potential participants

These CWAs 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
- Charging Point Operators (CPO)
- eMobility Service Providers (EMSP)
- Electric vehicles OEM's
- Electric vehicle associations
- Electric industry associations
- Standards application

take part in the development of this CWA.

2.3 Participants at the kick-off meeting

The following persons or organisations 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>	<u>Workshop proposer</u>

<u>Workshop secretariat</u>	<u>Workshop secretariat</u>
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The list of participants is not yet fully finalized. It will be available after the kick off meeting A high participation is expected from experts coming from different funded European projects (e.g. Horizon2020).

2.4 Registered Workshop participants

The following persons or organisations have registered as Workshop participants at the kick-off meeting and will actively participate in the development of the CWA.

<u>Person</u>	<u>Organisation</u>
<u>Workshop Chair</u> Ángel Moya	<u>Workshop Chair</u> ETRA INVESTIGACION Y DESARROLLO SA
<u>Workshop Vice-Chair</u> Juan Giménez Pla	<u>Workshop Vice-Chair</u> INSTITUTO DE BIOMECANICA DE VALENCIA
<u>Workshop secretariat</u> Javier López Rodríguez	<u>Workshop secretariat</u> UNE – Spanish Association for Standardization

3 Workshop objectives and scope

3.1 Background

As the most energy-consuming sector in Europe and the largest cause of air pollution in cities the transport sector needs to tackle a profound decarbonisation revolution. Disruptive technologies and business models are also deeply transforming the way European citizens understand mobility. Citizens' rising environmental awareness and new mobility habits present a unique opportunity for the large-scale implementation of electric vehicles. EU has made a commitment to ensure full coverage of EV infrastructure across its members. However, a dense European interoperable and publicly-accessible charging infrastructure network is far from being a reality. In fact, lack of charging infrastructure, insufficient vehicle autonomy and the long-time required for recharging are considered to be the main drawbacks (leaving out the price) that differentiate electric vehicles from traditional combustion vehicles in regard to the user experience.

Decisive efforts are required to foster an EU electromobility services market, including cross-border roaming and interoperability of payments and the provision of real-time information on Electric Vehicle Supply Equipment (EVSE). The European Commission has recently adopted new Electricity Market Design rules for the integration of electromobility. These efforts include encouraging EV charging during off-peak times when electricity is cheaper and reducing barriers to self-generation, storage and consumption of renewable electricity. The Sustainable Transport Forum (STF), reflected in the Commission Communication "Clean Power for Transport: A European alternative fuels strategy" and in the Directive 2014/94/EU, assists in implementing the Union's activities that foster the deployment of alternative fuels.

On the other hand, current business models and revenues generated from charging infrastructure are not sufficient to ensure a sustained and healthy market growth. This results in a lack of confidence in the EV sector as a whole and leads to uncertain users hesitating to buy EVs, triggering a vicious circle of a frozen demand because of an unsatisfactory offer and vice versa. Similar problem arrives with the regulatory framework, especially for the new

electric and shared mobility modes; citizens are reluctant to adopt these new modes if the regulation is not clear, and cities do not want to implement new regulatory conditions before analysing the problems of a bigger roll-out of these new mobility modes.

One of the key elements to break these vicious circles is to design and develop charging solutions focused on solving and satisfying the needs and desires of users from different socioeconomic backgrounds and customer segments. Slow overnight charging, opportunity charging, and ultrafast charging solutions need be orchestrated with a user-centric approach, also ensuring interoperability and cross-border roaming capabilities. At the same time, cities need to dynamize and actively promote citizens participation in the co-creation of strategies that integrate electromobility with other smart city verticals, particularly mobility, energy, safety and urban planning. Specific e-mobility Smart city dashboards and instant citizens' feedback collection are powerful tools that allow cities to monitor citizens satisfaction and acceptance levels in order to put the existing technology advances to serve their needs.

icing on the cake, smart charging can help charging point operators to make their infrastructure more cost-efficient; grid operators to stabilize the grid, avoid capacity problems and/or offer flexibility services; users to achieve better energy prices; public transport operators to have a better management of the electric fleet; and as a whole to make the electromobility cleaner through maximising the use of renewable energy.

3.2 Scope

The CEN-CENELEC Workshop USER-CHI on "Innovative solutions for user centric charging infrastructure for electric vehicles" will develop two CWAs.

The first planned CWA named "User centric charging infrastructure for electric vehicles – Guidelines for operators to implement advanced smart charging and management strategies" will provide guidance in terms of smart charging, interoperability and payment and accounting processes among the different actors of the electromobility domain (Charging Point Operators-CPO, eMobility Service Providers-eMSP) with the aim to set up a series of homogenous strategies and methodologies that will facilitate the implementation of advanced functionalities in the electromobility operator systems. It will also embrace additional actors such as micro-CPOs and Smart Charging Service Providers (SCSP). The provided smart charging strategies will help the operators to optimize their energy-related costs, enabling a better utilization of renewable energy sources and allowing their participation as active actors in the smart grid management, both as participants of implicit strategies and explicit campaigns. The document will also contain the lab testing methodology and framework to be followed by the operators in the implementation of the smart charging as a service and for the implementation of automation of the economic compensations among all involved actors.

The second planned CWA named "User centric charging infrastructure for electric vehicles – Charging stations of the future – Stations models considering users' expectations", will provide guidelines for the stations of the future to fulfil the needs and expectations of Electric Vehicle users. This document will contribute to design the charging stations that electromobility users demand, and the requirements for its successful deployment.

3.3 Related activities

The subjects of the planned CWAs are not at present the subject of any standard. The scope of the Workshop is not included in the scope of any CEN or CENELEC/TC. The most closely related is CENELEC/TC 57 'Power systems management and associated information exchange'. This TC has been consulted (2023-04-24) and has not claimed any overlap on the scope. Furthermore, it has not expressed any objection to the launch of the Workshop or comment to this draft project plan.

There are other committees, standards and/or other technical specifications that deal with related subjects and thus need to be taken into account – and involved, where necessary – during this Workshop:

- CLC/TC 57 Power systems management and associated information exchange
- ISO/TC 22/SC 31 Data communication
- REGULATION OF THE EUROPEAN PARLIAMENT AND OF THE COUNCIL on the deployment of alternative fuels infrastructure, and repealing Directive 2014/94/EU of the European Parliament and of the Council on the deployment of alternative fuels infrastructure
- Series EN ISO 15118 Road vehicles – Vehicle to grid communication interface
- IEC 62746-10-3:2018: Systems interface between customer energy management system and the power management system – Part 10-3: Open automated demand response – Adapting smart grid user interfaces to the IEC common information model.
- Series EN IEC 63119 Information exchange for electric vehicle charging roaming service

- CEN-CENELEC GUIDE 38 Guide for multifuel stations

4 Workshop programme

4.1 General

The kick-off meeting is planned to take place online on 2023-07-07.

A total of 3 Workshop meetings (kick-off meeting and Workshop meetings) and web conferences are initially foreseen, during which the content of the CWAs will be presented, discussed and approved.

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

The CWAs will be available for free download, according to the conditions of CEN/CENELEC Guide 10.

4.2 Workshop schedule

Table 1: Workshop schedule (preliminary)

CEN/CENELEC Workshop	Apr 2023	May 2023	Jun 2023	Jul 2023	Aug 2023	Sep 2023	Oct 2023	Nov 2023	Dec 2023	Jan 2024
Initiation										
1. Proposal form submission and TC response										
2. Project plan development										
3. Open commenting period on draft project plan (mandatory)										
Operation										
4. Kick-off meeting										
5. CWA(s) development										
6. Open commenting period on draft CWA(s) (optional)										
7. CWA(s) finalised and approved by Workshop participants										
Publication										
8. CWA(s) publication										
Dissemination (see 7)										
Milestones										

- K** Kick-off
- M** Workshop meeting
- V** Virtual Workshop meeting
- A** Adoption of CWA
- P** Publication of CWA
- D** Online distribution of CWA

5 Resource planning

The administrative costs of CEN-CENELEC Workshop Secretariat will be covered by resources from the H2020 Project USER-CHI.

6 Workshop structure and rules of cooperation

The workshop will be led by a chair or vice-chair. The workshop secretariat is responsible for the organisation and management of the workshops.

a. CEN-CENELEC Workshop Chair:

Ángel Moya

ETRA INVESTIGACION Y DESARROLLO SA

Chairman main responsibilities include:

- Chairing the CEN Workshop meetings.
- Representing the CEN-CENELEC Workshop in outside meetings in cooperation with CCMC and with the Workshop secretariat.
- Monitoring the progress of the CWA in line with the Project Plan.
- Managing the consensus building process.
- Interface with CEN-CLC/WS Secretariat and CEN & CENELEC Management Centre regarding strategic indications, external relationships, problems arising in the development of the CWA

b. CEN Workshop Vice-Chair

Juan Giménez Pla

INSTITUTO DE BIOMECANICA DE VALENCIA

The Workshop vice-chair shall be appointed in the Kick-off meeting. The vice-chair shall support and assist in all responsibilities outlined for the chairperson. In the absence of the chairperson, the vice-chair will represent the CEN Workshop at outside meetings in cooperation with CEN/WS Secretariat and will interface with CCMC regarding strategic directions, problems arising, external relationships etc.

c. CEN Workshop Secretariat

The proposed CEN-CENELEC Workshop Secretariat is by UNE - Spanish National Standards Body.

CEN Secretariat is providing the formal link to the CEN system. The following main activities will be carried out by the Workshop Secretariat:

- Organizing CEN-CENELEC Workshop plenary meetings,
- Producing CEN-CENELEC Workshop minutes and action lists,
- Forming the administrative contact point for CWA project,
- Managing CEN-CENELEC Workshop attendance lists,
- Managing CEN-CENELEC Workshop document registers,
- Following-up action lists,
- Assisting Chairperson in monitoring and following-up of electronic discussions, in case the CEN Workshop is mainly working by electronic means,
- Administrating the liaison with relevant CEN or CENELEC/TCs, if applicable.

The Secretariat will also provide public dissemination of the CEN-CENELEC workshop and CWA, either via online tool (e.g. website, social media) and with dedicated seminars and workshops, exploiting liaison with international innovation community.

The proposed contact detail for UNE Secretariat is:

Javier López Rodríguez

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 organisations 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-CENELEC's 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/CENELEC 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-CENELEC Management Centre (CCMC) and Workshop Chair regarding strategic directions, problems arising, and external relationships

- Advises on CEN-CENELEC rules and bring any major problems encountered (if any) in the development of the CWA to the attention of CEN-CENELEC Management Centre (CCMC)
- Administrates the connection with relevant CEN or CENELEC/TCs

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 organisation 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 Contacts

- Workshop Chair:

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