
**Draft Project plan for the CEN-
CENELEC Workshop on
"Definition of parameters
required for modelling of the
material, cell and
manufacturing process
behaviour for battery cells for
the automotive market"**

**Requests to participate in the Workshop
and/or comments on the project plan are
to be submitted by 2022-06-24 to
jjimenez@une.org**

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, 2022-05-19 (Version 1.0)

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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 jjimenez@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 2022-06-28.

2 Workshop proposer and Workshop participants

2.1 Workshop proposer

Person or organisation	Short description and interest in the subject
This workshop is proposed by the project DEFACTO 'Battery DEsign and manuFACTuring Optimization through multiphysic modelling'. See subclause 3.1 for more information.	
Name: Elixabete Ayerbe Organization: CIDETEC Postal address: Parque Científico y Tecnológico de Gipuzkoa Pº Miramón, 196 20014 Donostia-San Sebastián, Spain Email: eayerbe@cidetec.es Phone: +34 943 30 90 22 Webpage: www.cidetec.es	CIDETEC is a private organization for applied research founded in 1997. Located in the city of Donostia-San Sebastián, CIDETEC is comprised of three international technological reference institutes in Energy Storage, Surface engineering and Nanomedicine. CIDETEC Energy Storage is specialised in creating new battery technologies according to specific challenges, and its ultimate transference to the industry. The institute has the capacity to develop complete products and processes and offers material validation, pilot manufacture, pack engineering and battery testing services.

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:

- Manufacturers of cells/batteries,
- Material manufacturers
- OEMs
- COMMISSARIAT A L'ENERGIE ATOMIQUE ET AUX ENERGIES ALTERNATIVES (France)
- ETHNIKO KENTRO EREVNAS KAI TECHNOLOGIKIS ANAPTYXIS (Greece)
- DEUTSCHES ZENTRUM FUER LUFT - UND RAUMFAHRT EV (Germany)
- FRAUNHOFER GESELLSCHAFT ZUR FOERDERUNG DER ANGEWANDTEN FORSCHUNG E.V. (Germany)
- ESI GROUP (France)
- ASOCIACION ESPANOLA DE NORMALIZACION (Spain)
- IRIZAR E-MOBILITY SL (Spain)
- LECLANCHE GMBH (Germany)

- TECHNISCHE UNIVERSITAET BRAUNSCHWEIG (Germany)
- UNIVERSIDAD POLITECNICA DE MADRID (Spain)
- AVESTA BATTERY & ENERGY ENGINEERING (Belgium)

take part in the development of this CWA.

3 Workshop objectives and scope

3.1 Background

This workshop is created under the Task T8.5 “Standardization activities” of the DEFACTO ‘Battery DEsign and manuFACTuring Optimization through multiphysic modelling’ project. This project has received funding from the European Union’s Horizon 2020 research and innovation programme under grant agreement No 875247.

The DEFACTO project has a specific objective of making an effective contribution to new standardisation in the batteries sector, especially regarding shortened validation of cell endurance (measurement of functionalities, ageing and safety...) and cell production. This workshop is proposed to meet this objective, and to allow interaction with the project stakeholders so that the knowledge generated in the project is transmitted to the industrial community and the stakeholders can also specify their requirements.

The DEFACTO project is aimed at developing a multiphysics and multiscale modelling integrated tool to better understand the material, cell and manufacturing process behaviour, therefore allowing to accelerate cell development and the R&I process. This approach will allow developing new high capacity and high voltage Li-ion cell generation 3b battery. This will increase the understanding of multiscale mechanisms and their interactions, reducing the R&D cell development resources, therefore unlocking an innovation-led cell manufacturing industry. The validated computational simulations will be a powerful tool to (i) tailor new optimum cell designs, (ii) optimise manufacturing steps of electrode processing and electrolyte filling, and (iii) shape new generation 3b materials. In order to perform this modelling, it is essential to define the required input parameters and the appropriate experiments and characterisation techniques.

This workshop will not develop documents related to cell safety. The final validation of the prototype developed by modelling will be performed according to the applicable standards according to the final application (IEC/EN 62660, IEC/EN 61427, IEC/EN 62619, etc). To integrate with existing industry standards, the project is developing a test profile according to the IEC/EN 62660 standard.

No legal issues related to this proposal have been identified. The modelling process can provide an estimate of the final product performance according to applicable standards or legislation, but it is not a substitute for the usual conformity assessment processes. But it can be considered useful for meeting the requirements of the applicable regulation, for example, UN Regulation No. 100 - Electric power trained vehicles, UN Manual of Tests and Criteria (UN Transportation Testing) or the proposal for a REGULATION OF THE EUROPEAN PARLIAMENT AND OF THE COUNCIL concerning batteries and waste batteries.

3.2 Scope

The planned Workshop defines the data required for modelling the material, cell and manufacturing process for cells for the automotive market and the experiments and characterisation techniques for these data.

This WS will develop two CWAs, namely:

- CWA on Data required for modelling the material, cell and manufacturing process for cells for the automotive market
Scope: This CWA specifies the data required for modelling the material, cell and manufacturing process for cells for the automotive market, based on physical and chemical characteristics of cells of NMC622/G, NMC811/G-Si, LMNO/G-Si chemistry types.
- CWA on Experiments and characterisation techniques for data required for modelling cells
Scope: This CWA specifies the most suitable experiment(s) needed for obtaining the data required for modelling the material, cell and manufacturing process for cells for the automotive market, based on physical and chemical characteristics of cells of NMC622/G, NMC811/G-Si, LMNO/G-Si chemistry types.

3.3 Related activities

The scope of the planned CWAs is not at present the subject of a standard. However, there are 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 21X Secondary cells and batteries
- CEN/TC 301 Road vehicles
- CEN-CENELEC eMobility Coordination Group
- IEC TC 21 Secondary cells and batteries
- ISO/TC 22/SC 37 Electrically propelled vehicles

4 Workshop programme

4.1 General

The kick-off meeting is planned to take place on 2022-06-28 by web conference.

A total of 5 Workshop meetings (kick-off meeting and Workshop meetings) and web conferences will be held, during which the content of the CWA(s) will be presented, discussed and approved.

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

4.2 Workshop schedule



Table 1: Workshop schedule (preliminary)

CEN/CENELEC Workshop	04/22	05/22	06/22	07/22	08/22	09/22	10/22	...	04/23	05/23	06/23	07/23	...	
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										█				
										█				
Dissemination			█						█					
												█		
Milestones				K	V			V	V			V / A	P D	

- B CEN/CENELEC BT meeting deciding on establishment of a CEN/CENELEC Workshop
- 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

This workshop is financed by the DEFACTO ‘Battery DEsign and manuFACTuring Optimization through multiphysic modelling’ project. This project has received funding from the European Union’s Horizon 2020 research and innovation programme under grant agreement No 875247.

All costs related to the participation of interested parties in the Workshop’s activities have to be borne by themselves. The meetings will be held by teleconference, so no major expenses are expected.

6 Workshop structure and rules of cooperation

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.

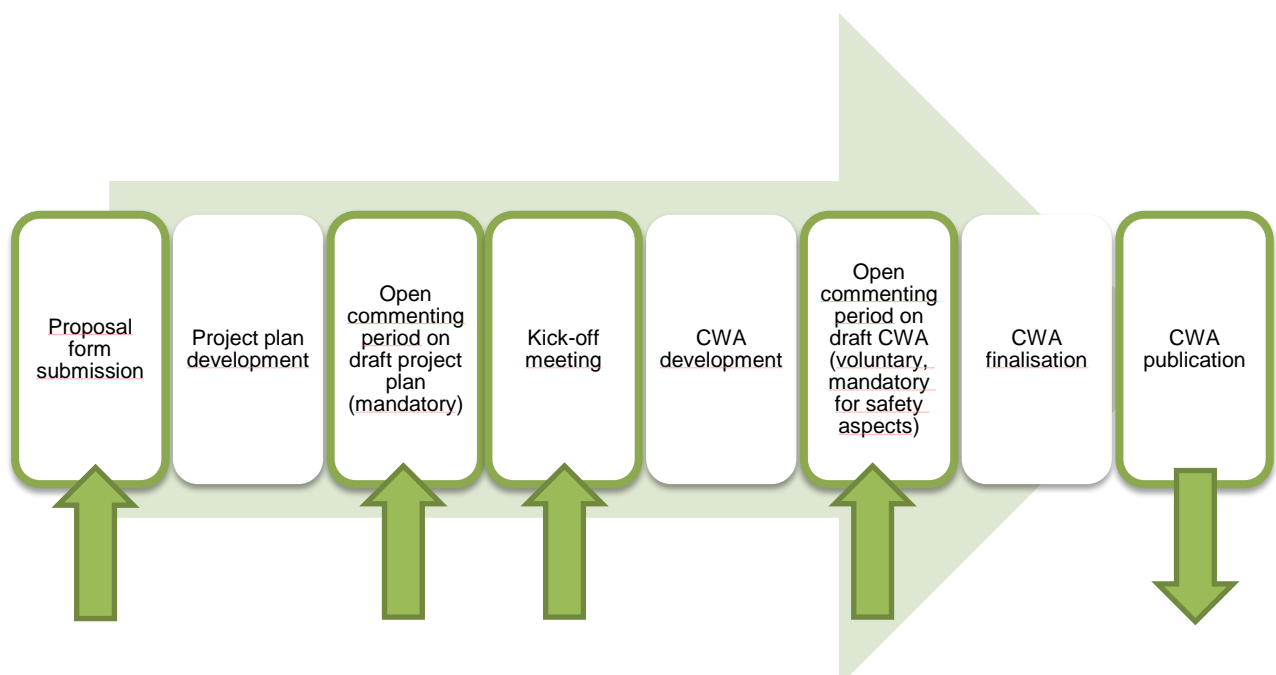
- Administrative and organisational contact point for the Workshop
- Ensures that the development of the CWA respects the principles and content of the adopted project plan and of the requirements of the CEN-CENELEC Guide 29
- Formally registers Workshop participants and maintains record of participating 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 Dissemination and participation strategy





Proposal form submission, Open commenting period on draft project plan, CWA publication

These stages of the workshop will be disseminated to the following relevant stakeholders and bodies for consultation:

- The standardization technical committees identified in subclause 3.3.
- LiPLANET project consortium, where there is a EG working on standardization protocols
- Battery2030+ initiative, that are working on the standardization activities

In addition to the CCMC website, these stages of the workshop will be advertised on the DEFACTO communication channels to raise awareness.

To allow maximum diffusion of the resulting CWAs, they will be freely downloadable from the CEN/CENELEC website. UNE will cover the pre-payment for compensation for the possible loss of revenue to the CEN and CENELEC members.

8 Contacts

- Workshop Chair:

<name>
<Organisation>
<address>
<tel>
<fax>
<e-mail>
<web>

- **Workshop Secretariat:**

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– Workshop proposer

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