

CEN and CLC Workshop ‘Use-case for the application of EN 45554 in the automotive industry’

Workshop description form

- PART A – Workshop Summary
- PART B – Project Plan

PART A – Workshop SUMMARY

1	WS details	
1.1.	Organization	<input type="checkbox"/> CEN <input type="checkbox"/> CENELEC <input checked="" type="checkbox"/> Joint with <input checked="" type="checkbox"/> CEN lead <input type="checkbox"/> CENELEC lead
1.2.	Title	CEN/CLC WS Use-case for the application of EN 45554 in the automotive industry (select CEN or CLC or leave CEN/CLC in case of joint WS)
1.3.	Scope	This WS will describe a use-case for the assessment of the reparability of a product in the automotive industry based on the application of EN 45554. Challenges and lessons learned will be described and recommendations for the assessment of the reparability of a product from the manufacturer’s perspective are given, which are not only relevant for the automotive industry.
1.4.	Does this WS stem from an EU Research project?	<input checked="" type="checkbox"/> YES Name of the project: Circular Integration of independent Reverse supply Chains for the smart reUse of Industrially relevant Semiconductors (CIRC-UIITS) Grant number: 101091490 <input type="checkbox"/> End date 12/2025 <input type="checkbox"/> NO
1.5.	Financial support	<input checked="" type="checkbox"/> EU Research project <input type="checkbox"/> EC/EFTA Grant reference: Type here <input type="checkbox"/> Other Specify, if needed: Type here
1.6.	WS Proposer/Proposed Chair WS proposer 1	Name: Achim Maat Organization: Robert Bosch GmbH Postal address: Robert-Bosch-Strasse 200, 31139 Hildesheim Email: achim.maat@de.bosch.com Phone: +49 5121 49 2419 Webpage: bosch-repair-service.com Contact person (name and email): Achim Maat
1.7.	WS Proposer/Proposed Chair WS proposer 2	Name: Lisa Dawel Organization: Offis Postal address: Escherweg 2, 26121 Oldenburg Email: institut@offis.de Phone: +49 441 9722-0 Webpage: https://www.offis.de/index.html Contact person (name and email): Lisa Dawel, lisa.dawel@offis.de
1.8.	WS Secretariat	Organization: DIN – Deutsches Institut für Normung e. V. Postal address: Burggrafenstr. 6, 10787 Berlin Email: info@din.de Phone: +49 30 2601 0 Webpage: www.din.de/en WS Secretary name: Sarah Köhler Email: sarah.koehler@din.de Phone: +49 30 2601 2831 Type here
1.9.	CEN and CENELEC Management Centre (CCMC) contact	Organization: Postal address:

		Webpage: CCMC Project Manager name: Email: Phone:																									
1.10.	Tentative date and place of the Kick-off Meeting	Date: 2025-04-24	Place: Online																								
1.11.	Does the proposed Workshop fall within the scope of existing CEN and/or CENELEC Technical Bodies?¹	<input checked="" type="checkbox"/> YES <input type="checkbox"/> NO	Specify: CEN/CLC/JTC 10 – WG3; CEN/TC 301																								
1.12.	Are there other Technical Bodies or Joint Advisory and Coordination Groups potentially interested in the Workshop? ²	<input checked="" type="checkbox"/> YES <input type="checkbox"/> NO	Specify: ISO/TC 22																								
1.13.	Are the following aspects affected?	Safety matters Management system aspects Conformity assessment aspects Security matters	<table border="0"> <tr> <td>YES³</td> <td><input type="checkbox"/></td> <td>NO</td> <td><input checked="" type="checkbox"/></td> </tr> <tr> <td>YES⁴</td> <td><input type="checkbox"/></td> <td>7</td> <td><input checked="" type="checkbox"/></td> </tr> <tr> <td>YES⁵</td> <td><input type="checkbox"/></td> <td>NO</td> <td><input checked="" type="checkbox"/></td> </tr> <tr> <td>YES⁶</td> <td><input type="checkbox"/></td> <td>NO</td> <td><input checked="" type="checkbox"/></td> </tr> <tr> <td></td> <td></td> <td>NO</td> <td><input type="checkbox"/></td> </tr> <tr> <td></td> <td></td> <td>8</td> <td><input type="checkbox"/></td> </tr> </table>	YES ³	<input type="checkbox"/>	NO	<input checked="" type="checkbox"/>	YES ⁴	<input type="checkbox"/>	7	<input checked="" type="checkbox"/>	YES ⁵	<input type="checkbox"/>	NO	<input checked="" type="checkbox"/>	YES ⁶	<input type="checkbox"/>	NO	<input checked="" type="checkbox"/>			NO	<input type="checkbox"/>			8	<input type="checkbox"/>
YES ³	<input type="checkbox"/>	NO	<input checked="" type="checkbox"/>																								
YES ⁴	<input type="checkbox"/>	7	<input checked="" type="checkbox"/>																								
YES ⁵	<input type="checkbox"/>	NO	<input checked="" type="checkbox"/>																								
YES ⁶	<input type="checkbox"/>	NO	<input checked="" type="checkbox"/>																								
		NO	<input type="checkbox"/>																								
		8	<input type="checkbox"/>																								
		Add information/explanations if Management System aspects and Conformity Assessment aspects are affected: Type here																									
2 WS Deliverables																											
2.1.	CWA #1																										
2.1.1	Title	<input checked="" type="checkbox"/> Same as WS title (1.2) <input type="checkbox"/> Other: Type here																									
2.1.2	Scope	This CWA will describe a use-case for the assessment of the reparability of a product in the automotive industry based on the application of EN 45554. Challenges and lessons learned will be described and recommendations for the assessment of the reparability of a product from the manufacturer's perspective are given, which are not only relevant for the automotive industry.																									
2.1.3	Does the proposed CWA conflict with a published EN	<input type="checkbox"/> YES <input checked="" type="checkbox"/> NO	Specify: Type here In case the answer is 'yes', the development of the CWA shall be stopped																								

¹ Part A and Part B of this form shall be sent by the WS secretary to the secretary of the Technical Bodies identified in this section to inform them about the creation of the WS and register any possible objection within 30 days (45 during the holiday period).

² Part A and Part B of this form should be sent by the WS secretary to the Bodies identified in this section to inform them about the creation of the WS.

³ Work on the proposed CEN and/or CENELEC Workshop shall not be initiated.

⁴ The CEN and/or CENELEC Workshop proposal shall be submitted to the CEN/CENELEC BT(s) for decision.

⁵ CEN-CENELEC Internal Regulations - Part 3, Clause 33 applies.

⁶ For projects dealing with security matters the security risk analysis provided in Annex I shall be carried out.

⁷ See Note 2 in CEN-CENELEC Guide 29, Clause 3.

⁸ See Note 2 in CEN-CENELEC Guide 29, Clause 3.

PART B – Project Plan

Abstract

In the electrical industry it is mostly an economic decision by product designers and manufacturing plants to use cheap non-reversible junctions in the product. Especially in the automotive industry junctions and components must further match to the high technical requirements. These requirements relate to safety and reliability. Solutions of reversible junctions in the consumer electronic market cannot be simply adopted. The planned CEN Workshop Agreement describes the analysis of reparability of an electronic control unit of an electronic stability program (ESP) that can be mounted in the rough environment of a motor bay or even under the car. In the product design phase reparability does not play a big role. Repair is one of the most challenging circular economy approaches in the automotive industry. It is combined with higher effort in design and manufacturing, and it is still not really desired to enable the repair by anyone to avoid the risk of a non-professional repair. The planned document aims to push the reparability by one key performance indicator (KPI). This makes products of different suppliers comparable and can initiate a sustainable competition for reparability to product designers. As a starting point the EN 45554 is used to assess the reparability of the product. The EN 45554 was applied to an electronic control design for ESP to evaluate the alignment with the suggested Repair-KPI.

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 by sending an email to the WS secretary.

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 **2025-04-24**.

2 Workshop proposer and potential Workshop participants

2.1 Workshop proposer

Person (and organization) 1: Achim Maat from Robert Bosch GmbH

- Electrical Engineer at the business unit mobility aftermarket in the automotive electronic section.
- Developer of repair and refurbish processes for Motor ECUs, Brake control units and charger-converter for more than 14 years.
- Expert in specialized processes for opening and reclosing products, repairing components on circuit board level and electrical testing to ensure the product quality.
- Our department provides a wide field of refurbished and repaired products to the OES (Original Equipment Service) and IAM (Independent Aftermarket).

Short description and interest in the subject: Bosch is partner in the Horizon Europe funded research project CIRC-UIITS (focusing on demonstrating the improvement to the circularity of automotive and mass electronics sectors by recovering components/materials from wasted products). As a pilot partner the improvement of circularity methods developed within CIRC-UIITS are tested and evaluated. In our daily business I am getting in

touch with products that are scrapped instead of repairing or refurbishing it. Either the repair is not possible by design or the effort of repair is not economic enough, although there is a high need of the market. This repair demand that comes from the automotive aftermarket can be addressed to the product designers at best in a standardized KPI for repairability.

Person (and organization) 2: Lisa Dawel from Offis

- Industrial engineer for electrical engineering and information technology
- Researcher and Developer for 3 years at OFFIS for the topic sustainable manufacturing systems with multiple projects in applied research across the manufacturing industry
- Our department deals with the manifold research questions that arise from the increasing introduction of digitization into industrial production and supports the transformation of traditional production systems and processes through digitization.

Short description and interest in the subject: Offis is partner in the Horizon Europe funded research project CIRC-UIITS. As a research partner digital tools for the improvement of circular economy in the automotive and mass electronic sector are evaluated and developed. OFFIS is conducting applied research to identify how digital tools can support the design process of a product and how the general rules can be applied to real world use cases. We are interested in how the repairability assessment can be combined with other sustainability assessments in the product design phase.

2.2 Potential participants

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

- Policymakers
- OEMs
- industry associations
- consultancy experts
- standardization bodies
- experts from standards developing consortia
- etc.

take part in the development of this CWA.

3 Workshop objectives and scope

3.1 Workshop background

In the electrical industry it is mostly an economic decision by product designers and manufacturing plants to use cheap non-reversible junctions in the product. Especially in the automotive industry junctions and components must further match to the high technical requirements. These requirements relate to safety and reliability. Solutions of reversible junctions in the consumer electronic market cannot be simply adopted. The planned CEN Workshop Agreement describes the analysis of repairability of an electronic control unit of an electronic stability program (ESP) that can be mounted in the rough environment of a motor bay or even under the car. In the product design phase repairability does not play a big role. Repair is one of the most challenging circular economy approaches in the automotive industry. It is combined with higher effort in design and

manufacturing, and it is still not really desired to enable the repair by anyone to avoid the risk of a non-professional repair. The planned document aims to push the repairability by one key performance indicator (KPI). This makes products of different suppliers comparable and can initiate a sustainable competition for repairability to product designers. As a starting point the EN 45554 is used to assess the repairability of the product. The EN 45554 was applied to an electronic control design for ESP to evaluate the alignment with the suggested Repair-KPI.

4 Workshop programme

4.1 General

The kick-off meeting is planned to take place on 24 April 2025 as virtual meeting. A draft for public commenting will be published for 30 days.

A total of 4 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 working language (language of meetings, minutes, etc.) of the WS will be **English**. The CWA will be written in **English**.

4.2 Workshop schedule



Table 1: Workshop schedule (preliminary)

CEN/CENELEC Workshop	M01	M02	M03	M04	M05	M06	M07	M08	M09	M10	...
Initiation	[Dark Blue]										
1. Workshop description form submission and TC response	[Light Blue]										
2. Open commenting period on draft project plan (mandatory)		[Light Blue]	[Light Blue]								
Operation			[Teal]								
3. Kick-off meeting			[Light Blue]								
4. CWA(s) development			[Light Blue]	[Light Blue]	[Light Blue]	[Light Blue]					
5. Open commenting period on draft CWA(s) (optional)						[Light Blue]	[Light Blue]				
6. CWA(s) finalized and approved by Workshop participants							[Light Blue]				
Publication							[Green]	[Green]	[Green]	[Green]	
7. CWA(s) publication							[Light Green]	[Light Green]	[Light Green]	[Light Green]	
Dissemination (see 7)		[Orange]	[Orange]	[Orange]		[Orange]	[Orange]			[Orange]	[Orange]
Milestones			K	V	V		A			P	D



Legend

- 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

Registration and participation at this CEN Workshop are free of charge, but each participant shall bear his/her own costs for travel, accommodation, and subsistence in the case of on-site meetings (at the moment of writing this document all meetings are planned to take place online).

The administration costs of the CEN Workshop Secretariat will be financed within the framework of a research project: European Unions Horizon Europe research and innovation program funding project CircUits (grant agreement No. 101091490). 8 % secretariats costs will be provided by DIN to CCMC to cover the free download of the published CWA.

6 Workshop structure and rules of cooperation

6.1 Participation in the Workshop

The Workshop will be constituted during 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 approved 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 did not approve the publication of the CWA will not be named in the European Foreword.

6.2 Workshop responsibilities

The Workshop Chair is responsible for content management and consensus building. The Workshop Chair is supported by the Workshop Vice-Chair (if any) 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, assesses 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 and/or CENELEC Member, is responsible for organizing and leading the kick-off meeting, in consultation with the Workshop proposer. Further Workshop meetings and/or web conferences shall be organized 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 organizational 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 organizations and individuals
- Offers infrastructure and manages documents and their distribution through an electronic platform
- Prepares agenda and distributes information on meetings and meeting minutes as well as follow-up actions of the Workshop
- Initiates and manages CWA approval process upon decision by the Workshop Chair
- Interfaces with CEN-CENELEC Management Centre (CCMC) and Workshop Chair regarding strategic directions, problems arising, and external relationships
- Advises on CEN-CENELEC rules and brings 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

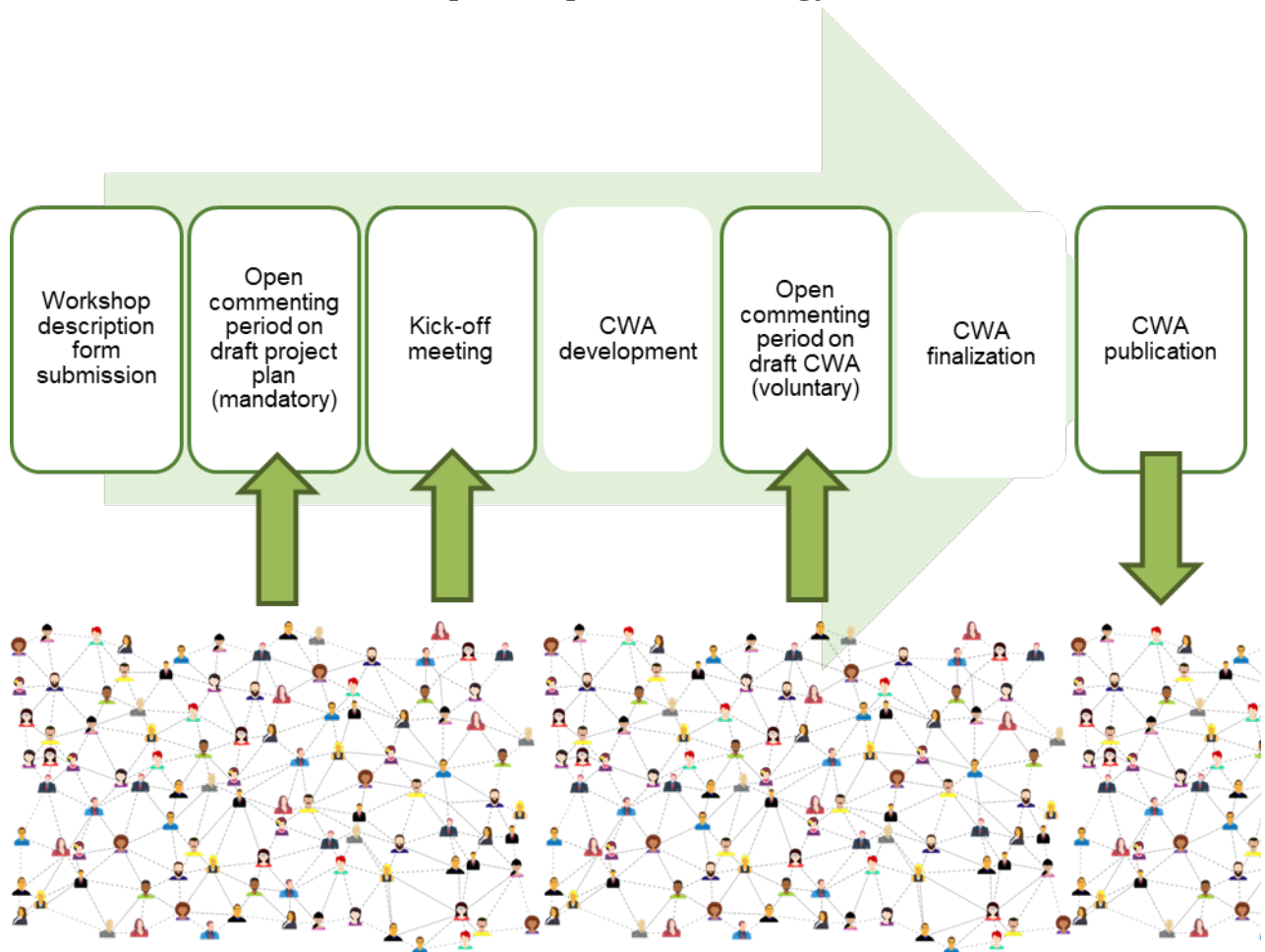
The CEN and/or CENELEC Workshop Chair is responsible for ensuring that the development of the CWA follows the principles and content of the project plan described in this document and the requirements of CEN-CENELEC Guide 29. The CEN and/or CENELEC Workshop Chair may take decisions on the conduct of the CEN and/or CENELEC Workshop on the basis of the comments expressed by the participants and of CEN-CENELEC Guide 29.

Decisions shall be taken based on consensus of the WS participants. The final draft shall be approved by the simple majority of the consortium members.

Each consortium member is entitled to vote and has one vote. If an organization sends several experts to the consortium, that organization has only one vote, regardless of how many consortium participants it sends. Transferring voting rights to other consortium members is not permitted. During voting procedures, decisions are passed by simple majority; abstentions never count.

If consortium members cannot be present when the DIN DKE SPEC or its draft is approved, an alternative means of including them in the voting procedure shall be used (e.g. in writing, electronically).

7 Dissemination and participation strategy



Potential participants identified in section 2.2 and potential interested stakeholders identified in Part A should be informed of the open commenting phase, if any, and of the publication of the CWA.

In addition to the CCMC website, the draft CWA and the final CWA might be advertised on:

- CircUits website
- sector specific newsletter
- social media, such as
 - Instagram
 - LinkedIn
- EC Newsroom
- Others