CEN and CLC Workshop ‘Digital Product Passport for Printed Circuit Boards’

Workshop description form

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

PART A – Workshop SUMMARY

1	WS details		
1.1.	**Organization**	☐ CEN ☐ CENELEC ☒ Joint with ☒ CEN lead ☐ CENELEC lead	
1.2.	**Title**	CEN/CLC WS Digital Product Passport for Printed Circuit Boards (select CEN or CLC or leave CEN/CLC in case of joint WS)	
1.3.	**Scope**	This WS creates a CWA which defines the content and data of a digital product passport (DPP) for printed circuit boards (PCBs). The document excludes the definition of an IT infrastructure and will be orientated on the current developments of CEN/CLC-JTC 24 - DPP.	
1.4.	**Does this WS stem from an EU Research project?**	☒ YES Name of the project: Circular Integration of independent Reverse supply Chains for the smart reUse of IndusTrially relevantSemiconductors (CIRC-UITS) Grant number: 101091490 ☐ End date 12/2025 NO	
1.5.	**Financial support**	☒ EU Research project ☐ EC/EFTA Grant reference: Type here ☐ Other Specify, if needed: Type here	
1.6.	**WS Proposer/Proposed Chair** **WS proposer**	Name: Organization: Postal address: Email: Phone: Webpage: Contact person (name and email):	Paolo Rosa Politecnico di Milano (POLIMI) Piazza Leonardo da Vinci 32, 20133 Milan - Italy paolo1.rosa@polimi.it +39 0223999537 www.polimi.it Sergio Terzi - sergio.terzi@polimi.it
1.7.	**WS Secretariat**	Organization: Postal address: Email: Phone: Webpage: WS Secretary name: Email: Phone:	DIN – Deutsches Institut für Normung e. V. Burggrafenstr. 6, 10787 Berlin info@din.de +49 30 2601 0 www.din.de/en Sarah Köhler sarah.koehler@din.de +49 30 2601 2831 Type here
1.8.	**CEN and CENELEC Management Centre (CCMC) contact**	Organization: Postal address: Webpage: CCMC Project Manager name: Email: Phone:	CEN and CENELEC Rue de la Science 23B - 1040 Brussels, Belgium https://www.cencenelec.eu/ Benjamin de Ville de Goyet Bdeville@cencenelec.eu +32 2 550 09 74 Type here
1.9.	**Tentative date and place of the Kick-off Meeting**	Date: 2025-01-20	Place: Online

1.10.	**Does the proposed Workshop fall within the scope of existing CEN and/or CENELEC Technical Bodies?[1]**	☒ ☐	YES Specify: CEN/CLC-JTC 24 - DPP; CEN Workshop Guidelines to create a Digital Product Passport; NO			
1.11.	**Are there other Technical Bodies or Joint Advisory and Coordination Groups potentially interested in the Workshop? ?[2]**	☒ ☐	YES Specify: IEC/TC 91 NO			
1.12.	**Are the following aspects affected?**	Safety matters Management system aspects Conformity assessment aspects Security matters	YES[3] ☐ YES[4] ☐ YES[5] ☐ YES[6] ☐	NO ☒ [7] ☒ NO ☒ NO ☒ NO [8]		
		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**	☒ ☐	Same as WS title (1.2) Other: Type here			
2.1.2	**Scope**		This CWA defines the content of a digital product passport (DPP) for printed circuit boards (PCBs)			
2.1.3	**Does the proposed CWA conflict with a published EN**	☐ ☒	YES Specify: Type here NO 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

Considering the increasing demand for data gathering, management and analysis, the global economy is becoming even more semiconductor-dependent. Several sectors are embedding within their products lots of sensors, actuators, electronic control units and telecommunication systems allowing a direct interconnection of the product with the world wide web and a real-time exchange of information. However, a strong dependency from semiconductor-based systems is presenting (especially in the last years) several weaknesses and risks that Europe should solve as soon as possible (e.g. the lack of European semiconductors companies and the full dependency from extra-EU suppliers). Another important issue relates with the scarce ability of the European economy to recover strategic components/materials embedded in electronic equipment and exploit them to make new (high value) products, mainly because of an absence of information on Printed Circuit Boards (PCBs). Trying to cope with all these challenges, the European Commission (EC) published (and in some cases is still working on) specific EU strategies/directives (e.g. Digital Product Passport, Chips Act, Critical Raw Materials Act), but no specific measures have been defined yet to support the standardized reuse/repair/reman of electronic components. The Horizon CIRC-UITS project is focusing on demonstrating the improvement to the circularity of automotive and mass electronics sectors by recovering components/materials from wasted products. In this context, the project is interested in developing a specific DPP for PCBs. As CIRC-UITS consortium, we are strongly convinced that a DPP for PCBs should be the right mean to really support the adoption of circular approaches in semiconductor-dependent sectors through a better (and more standardized) management of existing data and information. This WS will be initiated in order to define the type of data to be embedded in a DPP for PCBs. The need for this WS is giving the chance to all the actors involved in PCB manufacturing to share their perspective about the potential development of a DPP for PCBs. The issue solved by the WS is the lack of information in the electronics sector about materials, components and whole PCBs embedded in current products in any sector. The future benefit of the CWA is establishing a common view on how a DPP for PCBs should be structured and which kind of data are mandatory in order to really allow and apply circular approaches in electronics. Not part of the CWA is the analysis of existing data and/or their completion.

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 **2025-01-20**.

2 Workshop proposer and potential Workshop participants

2.1 Workshop proposer

Person (and organization) 1: Paolo Rosa is a Post-Doc researcher in the Manufacturing Group of Politecnico di Milano, Department of Management, Economics and Industrial Engineering. He got his MSc in Management Engineering from Politecnico di Milano in 2009. Since 2014, he carries out his research at Politecnico di Milano,

by focusing on Product Lifecycle Management and Circular Manufacturing. He has been (and he is still) involved in industrial, regional and European research projects and he won two H2020 projects (FENIX and TREASURE) and one Horizon project (CIRC-UITS) in the last 6 years. He has been (and he is still) involved as Assistant Professor in several Bachelor & Master of Science Courses of Politecnico di Milano. He is co-author of 45 papers published in international journals, 19 papers presented at international conferences, 5 book chapters and 4 editorials and he is co-guest editor of a Special Issue in the Sustainability MDPI journal. He was awarded for the best paper in August 2015 with the Elsevier Atlas Award.

Short description and interest in the subject:

As Coordinator of the Horizon CIRC-UITS project (focusing on demonstrating the improvement to the circularity of automotive and mass electronics sectors by recovering components/materials from wasted products), I'm interested in developing a specific DPP for PCBs because I'm strongly convinced that a DPP for PCBs should be the right mean to really support the adoption of circular approaches in semiconductor-dependent sectors through a better (and more standardized) management of existing data and information. Considering the increasing demand for data gathering, management and analysis, the global economy is becoming even more semiconductor-dependent. Several sectors are embedding within their products lots of sensors, actuators, electronic control units and telecommunication systems allowing a direct interconnection of the product with the world wide web and a real-time exchange of information. Among these sectors, mass electronics and automotive sectors are those that, more than others, have seen an exponential adoption of these technologies since many years. However, a strong dependency from semiconductor-based systems is presenting (especially in the last years) several weaknesses and risks that Europe should solve as soon as possible (e.g. the lack of European semiconductors companies and the full dependency from extra-EU suppliers). Another important issue relates with the scarce ability of the European economy to recover strategic components/materials embedded in electronic equipment and exploit them to make new (high value) products, mainly because of an absence of information on PCBs. Trying to cope with all these challenges, the European Commission (EC) published (and in some cases is still working on) specific EU strategies/directives (e.g. Digital Product Passport, Chips Act, CRM Act), but not in terms of specific measures for electronic components.

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
- producer of electronics, e.g. PCBs
- recyclers
- from component producer to assembler in electronic industry
- etc.

take part in the development of this CWA.

3 Workshop objectives and scope

3.1 Workshop background

This WS is initiated in order to define the type of data to be embedded in a DPP for PCBs. The need for this WS is giving the chance to all the actors involved in PCB manufacturing to share their perspective about the potential development of a DPP for PCBs. The issue solved by the WS is the lack of information in the electronics sector about materials, components and whole PCBs embedded in current products in any sector. The future benefit of the CWA is establishing a common view on how a DPP for PCBs should be structured and which kind of data are mandatory in order to really allow and apply circular approaches in electronics. Not part of the CWA is the analysis of existing data and/or their completion.

4 Workshop programme

4.1 General

The kick-off meeting is planned to take place on January 20th 2025 as virtual meeting. A draft for public commenting will be published for 30 days.

A total of 6 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	M11	…
Initiation												
1. Workshop description form submission and TC response												
2. Open commenting period on draft project plan (mandatory)												
Operation												
3. Kick-off meeting												
4. CWA(s) development												
5. Open commenting period on draft CWA(s) (optional)												
6. CWA(s) finalized and approved by Workshop participants												
Publication												
7. CWA(s) publication												
Dissemination (see 7)												
Milestones			K	V	V	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 Union 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

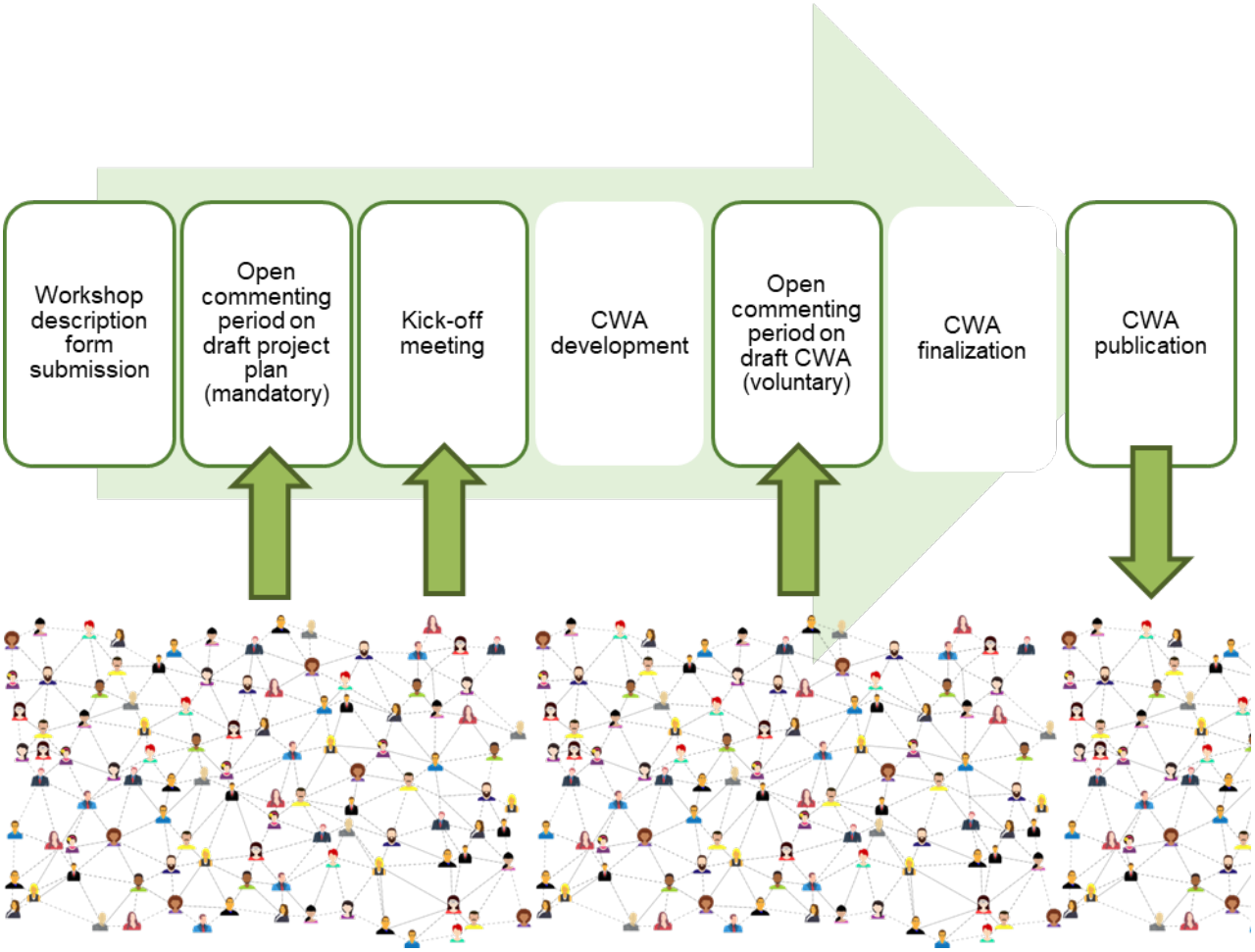
The CEN and/or CENELEC Workshop Chair is responsible for ensuring that the development of the CWA follows the principles and content of the project plan described in this document and the requirements of CEN-CENELEC Guide 29. The CEN and/or CENELEC Workshop Chair may take decisions on the conduct of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