

Final Conference
February, 22nd, 2022



Aitor Aragón
Spanish Association for Standardisation

Task 8.4: Pre-standardisation activities

8.4.1: Analysis of the applicable standardization landscape

- Deliverable 8.2 *Standardization Landscape Report*

8.4.2: Contribution to standardization developments

- Contacts with relevant CEN and ISO Technical Committees, providing information about FORESEE developments and requesting feedback
- Presentations in CEN and ISO working groups
- Creation of a standardisation group (CEN/CLC/WG 018) and publication of a **Workshop Agreement: CWA 17819:2021**
- Deliverable 8.4 *Pre-standardisation activities*



What is a CWA?

A CEN Workshop Agreement (CWA) is a document agreed by the participants of a Workshop convened by CEN



The CWA:

- is meant to **meet a market need** with an **innovative solution**
- provides **peer review** → experts from **34** standardization bodies / countries
- provides more **visibility** to innovation projects within industry
- is a reference which can be cited in **public or private procurement**
- can be **transformed** into other type of standardisation document (within a Committee) after publication: **EN, CEN/TS or CEN/TR**





Drafting by Bryan and Claudio

**FORE
SEE**

CT

- **Proposal**

- Project plan
- Self-assessment
- Analysis of interest

- **Submission to CEN**

- **Workshop set up**

- Notification within the standardization system
- Call for experts



DRAFT

**Project Plan for the CEN or CENELEC Work
Steps to measure and set targets for the, the levels of service
and the resilience of, transport infrastructure**

WS LoS+R-INFRA

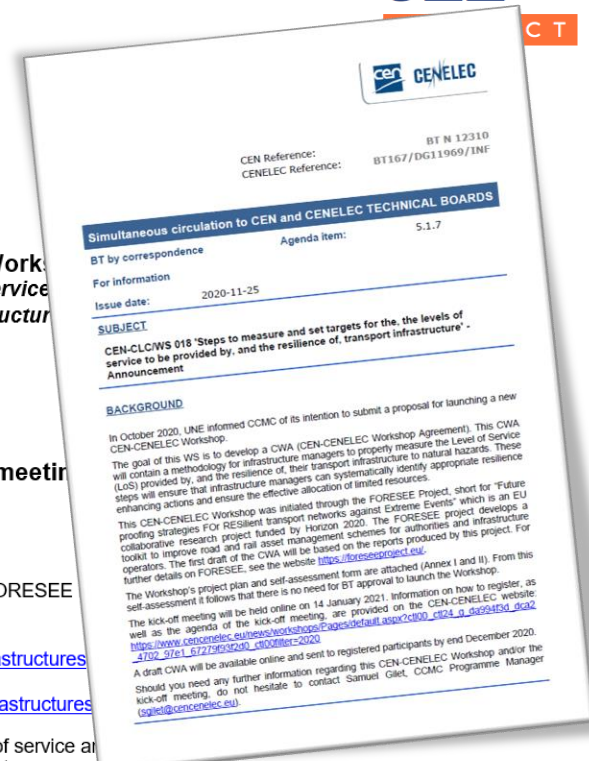
**Workshop
(to be approved during the Kick-off meeting)**

1. Status of the Project Plan

The first draft will be based on the research developed within the FORESEE particular the following reports:

- [Guideline to measure Levels of Service and resilience in infrastructures](#)
- [Guideline to set target levels of service and resilience for infrastructures](#)

The goal is to provide a guideline to measure and set target levels of service and resilience for transport systems, such as roads and railways. These systems are, in many cases, critical to ensure the provision of basic services in the event of intentional or unintentional disruptions.





- Meetings
- Commenting phase
- Approval in the VWS

$$P_{Fric,sw} = 1 - \frac{\sum_{i=1}^I RS_{value,sw} + \sum_{i=1}^I IC_{value,sw}}{\sum_{i=1}^I RS_{worst,sw} + \sum_{i=1}^I IC_{worst,sw}} \left(\frac{\sum_{i=1}^I RS_{worst,sw} + \sum_{i=1}^I IC_{value,sw}}{\sum_{i=1}^I RS_{worst,sw} + \sum_{i=1}^I IC_{worst,sw}} \right)$$

· 100%

$\sum_{i=1}^I RS_{value,sw}$ = the expected reductions in service with the actual values due to the value of all indicators in the indicator category using equal resilience weights

$\sum_{i=1}^I IC_{value,sw}$ = the additional intervention costs with the actual values all indicators due to the value of all indicators in the indicator category using equal resilience weights

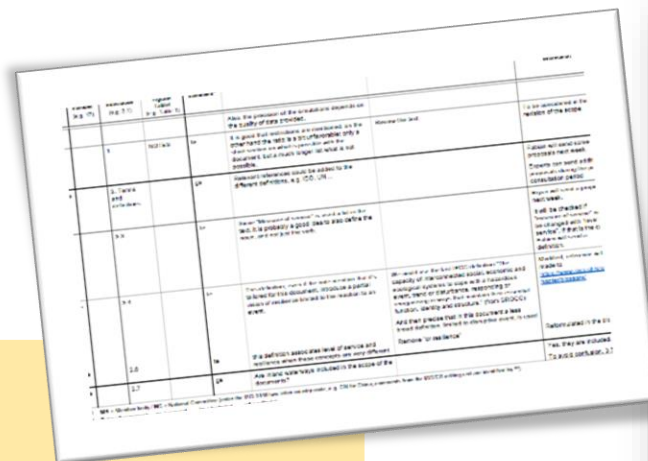
$\sum_{i=1}^I RS_{worst,sw}$ = the maximum reductions in service if the indicators in the indicator category (I) have the worst values of all indicators using equal weights

$\sum_{i=1}^I IC_{worst,sw}$ = the maximum additional intervention costs with the worst values of all indicators using equal weights if the indicators in the indicator category (I) have their worst value using equal resilience weights

# Item	Topic	Speaker/Timing
1	Opening of the meeting	CCMC
2	Roll call of participants	CCMC
3	Adoption of the Agenda	CCMC
4	Presentation of Workshop concept	CCMC
5	General presentation of the Workshop a. Background of the proposal b. Draft of CWA presented c. Expression of needs	Dr. Bryan T. Adey, (WS Chairman) Mr. Aitor Aragón (WS Secretary)
6	Official establishment of the <i>INFRA-R</i> Workshop CEN/CLC/WS 018	
6a	Appointment of Workshop Chairman and Confirmation of the Secretariat	CCMC
	15' break	11:00 – 11:15
6b	Project plan: Discussion on title and scope	WS Chairman and Sec
6c	Project Plan a. Review of comments received b. Adoption of the WS CEN/CLC/WS 018 Project Plan	WS Chairman and Sec
6d	Organisation of the work	WS Ch
6e	Any other business	
7	Next meeting, follow-up actions and their assignment	
8	Closure of the meeting	

Other organisations joined for next meetings

1. CEN/CENELEC Management Centre (CCMC)
2. Fraunhofer IAIS (FHG) - Germany
3. European Union Road Federation (ERF)
4. French Ministry for the Ecologic Transition (DIT/MARRN) – France
5. Deutsche Bahn AG (DB) – Germany
6. Gerthoffert, Jonathan (CEREMA) – France
7. CEMOSA – Spain
8. ETH Zürich (ETHZ) – Switzerland
9. Public centre for studies and testing of civil engineering works (CEDEX) – Spain
10. FORESEE project
11. German Center for Rail Transport Research (DZSF) – Germany
12. European Commission, as observer



- Meetings
- Commenting phase
- Approval in the WS



3 years period of validity after the publication, to check if the document is to be reviewed, maintained other 3 years or superseded. In the first case, more organizations will probably participate, with more experience gathered with the use of different methodologies to assess the resilience of transport infrastructures.

The experts agree to send the draft to CEN for publication as CEN Workshop Agreement (CWA).

The draft with the updated figures will be uploaded during the following days.

The Secretariat will send an email asking experts if they want their organization to be listed in the Foreword.

This WS developed the CWA (CEN-CENELEC Workshop Agreement) 'Guidelines for the assessment of resilience of transport infrastructure to potentially disruptive events'. This CWA describes a methodology for infrastructure managers to properly measure the Level of Service (LoS) provided by, and the resilience of, their transport infrastructure to natural hazards. These steps will ensure that infrastructure managers can systematically identify appropriate resilience enhancing actions and ensure the effective allocation of limited resources.

This CEN-CENELEC Workshop was initiated through the FORESEE Project, short for "Future proofing strategies FOR Resilient transport networks against Extreme Events" which is an EU collaborative research project funded by Horizon 2020. The FORESEE project develops a toolkit to improve road and rail asset management schemes for authorities and infrastructure operators. The first draft of the CWA will be based on the reports produced by this project. For further details on FORESEE, please visit the website <https://foreseeproject.eu/>

The WS has finalised the draft CWA 'Guidelines for the assessment of resilience of transport infrastructure to potentially disruptive events', which is hereby made available for a commenting phase of 45 days. Any interested party is invited to submit comments on the draft CWA to the WS secretary Mr Aitor Aragon Basabe (aaaronb@une.org), by 27 August 2021, using the below commenting form.

• Draft CWA 'Guidelines for the assessment of resilience of transport infrastructure to potentially disruptive



- Submission to CEN
- Publication



... and now

- The CWA is **publicly available** (free of charge) on CEN website
- **Industry and public bodies can use it**, including for procurement → feedback
- A CEN Committee can **transform** the CWA in a European Standard (EN), Technical Specification (TS) or Report (TR)

POSTED: 2021-11-22

A new Workshop Agreement contributes to enhancing the resilience of transport infrastructure

Transport and Packaging

EN in the spotlight

CEN

The functioning of society depends on the transportation of goods and persons. The infrastructure required to enable transportation is built to ensure that this can happen safely and smoothly, providing specified high levels of service.

As Europe has already experienced on many occasions, reductions in service due to potentially disruptive events, such as floods, earthquakes, heavy snow falls, fog, high winds, or cyberattacks can have significant societal consequences.

In this context, transport infrastructure managers must minimise the impact and potential consequences of these disruptive events. To do so, objective information on the service provided by their transport infrastructure and its resilience to external adverse events is necessary.

In order to help them acquire this information, in November CEN and CENELEC published new [CWA 17819:2021 'Guidelines for the assessment of resilience of transport infrastructure to potentially disruptive events'](#). This document provides managers with guidance to proceed a complete and systematic definition of service and measure resilience, in all situations with which the manager is confronted, and to help identify the suitable interventions to enhance such resilience.

This work was initiated through the FORESEE Project, 'Future proofing strategies FOR RESilient transport networks against Extreme Events', which is an EU collaborative research project funded by Horizon 2020. For further details on FORESEE, please visit the website <https://foreseeproject.eu/>.

CWA 17819:2021 is freely available for download [here](#). It was developed by [CEN/CLC/WS 018 'Assessment of the resilience of transport infrastructure to potentially disruptive events'](#), whose Secretariat is held by UNE, Spain's National Standardization Institute.



Contact:

Thierry LEGRAND
tlegrand@cencenelec.eu

TAGS: Transport | CWA | Transport infrastructure

Bryan and Claudio and José

**... and Iñaki, Jesús, Concepción,
Noemi and Manfred**

**... and Alberto, Andras, Benjamin,
Carlos, Eric (and Eric), Fabien,
Jonathan, Josefina, Marti, Radoine,
Samuel, Sonia, Vigile**

**... and the organisations and TCs
which commented and sent input**

... and the colleagues from CCMC and UNE

... and all of you for attending today !!

