

European standardisation to support R+I

Online Seminar
25-03-2024

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Project Manager

Spanish Association for Standardisation – UNE



Normalización
Española



UNE

Normalización
Española

EU Projects registered for participating in the Standardization Seminar



Additive Manufacturing of Amorphous
Metals for Soft Magnetics



BIOMET4D



InStruct



Digital method for improved manufacturing of next-generation
multifunctional airframe parts



RECOIL3D SALMONE



Funded by the
European Union



Javier LÓPEZ-QUILES

Project Manager

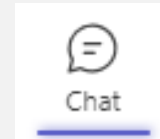
Spanish Association for Standardisation – UNE

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- Seminar is being **recorded**
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- This presentation will be **shared**





Introduction to standardisation



Benefits of including standardisation in R+I projects



How to include standardisation in R+I projects



Development of CWAs



Success cases

Quizzes!!



Introduction to standardisation



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Development of CWAs



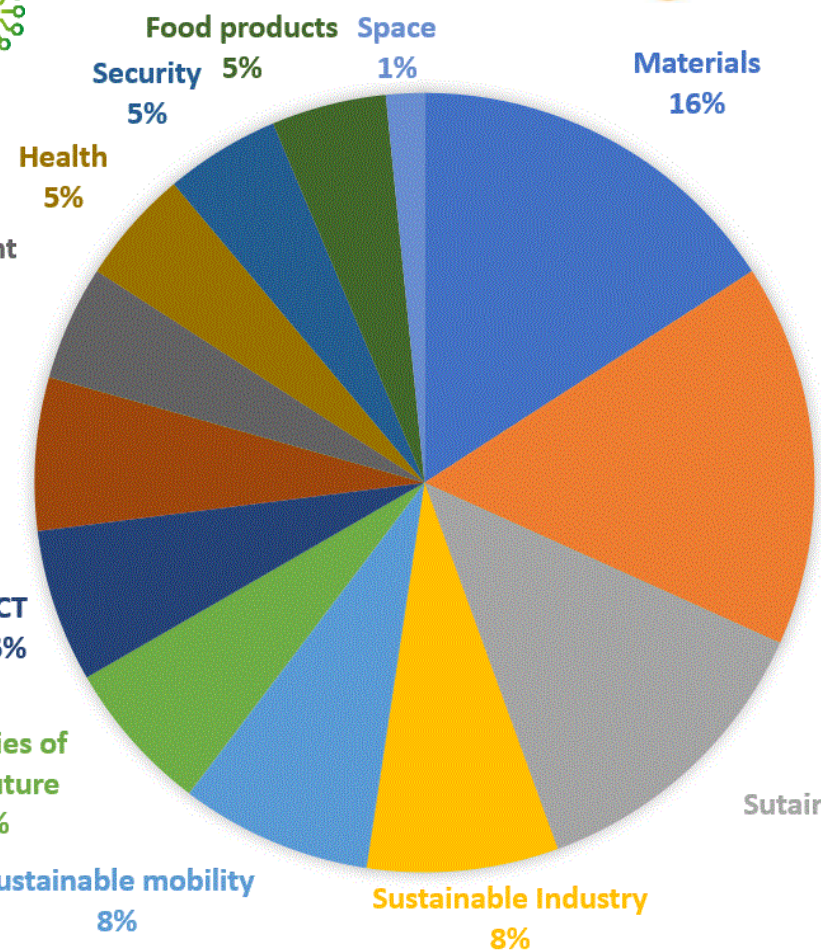
Success cases



- Non-profit, private and independent organization
- Legally designated as Spanish National Standardization Body since 1986
- Location: Madrid
- Staff: 80 persons (60% female)
- Main activity:
 - National, European & International Standardization: 35000 standards in catalogue, 13000 experts involved...
 - Integration of standardization in R&I: >100 projects.
- Member of:



Introduction to standardisation R+I projects with UNE involvement



Logos of participating organizations:

- BIONIC AIRCRAFT
- PLATFORM
- GEOFIT
- aïd4 GREENEST
- LOGIMATIC
- upPE-T
- PASSENGER
- NEST
- NEXTOWER
- SALEMA
- DEEP PURPLE
- MADRAS
- INKplant
- FORM PLANET
- CHARISMA
- INN PRESSME
- smooth GDPR
- Optogenerap
- VALUEWASTE
- USER-CHI
- AIRPOXY
- SeaTitan
- preventomics
- ENERWATER
- InComEss
- MONSOON

Logos of participating organizations:

- STRATEGY
- elastislet
- VEEP
- Agro2Circular
- PROEIPAHA
- PHOCNOSIS
- circpack
- BRESAER
- REGEN by
- GLAMICAVE
- DEFACTO
- ASIS
- ON.GIANT
- UP4HEALTH
- ECOFACT
- FATIGUE 4LIGHT
- OPTIntegral
- ECOBULK
- FORE SEE PROJECT
- ALEHOOP
- PROGRESSIVE
- hycool
- MIRACLE
- D2EPC
- A4BLUE
- wiseGrid
- ROBOOST
- INNOMEM
- share work
- INCOVER
- SunCO₂Chem
- FISSAC





Technical document, designed to be used a **rule, guideline or definition**



What is a standard?



Voluntary but highly and widely recognized (standards are not mandatory, are not regulations, but can support legislation)

Produced in the framework of **standardisation organizations** by all interested parties in a transparent, open and consensus-based process





International



www.iso.org



www.iec.ch



www.itu.int

European



www.cencenelec.eu



www.etsi.org

National



www.elot.gr



www.din.de



www.sfs.fi



www.ipq.pt



www.une.org



www.uni.com



www.portail-qualite.lu

and more...

- Subject to European/national regulations
- International Agreements (WTO)
- Common rules
- Linked participation





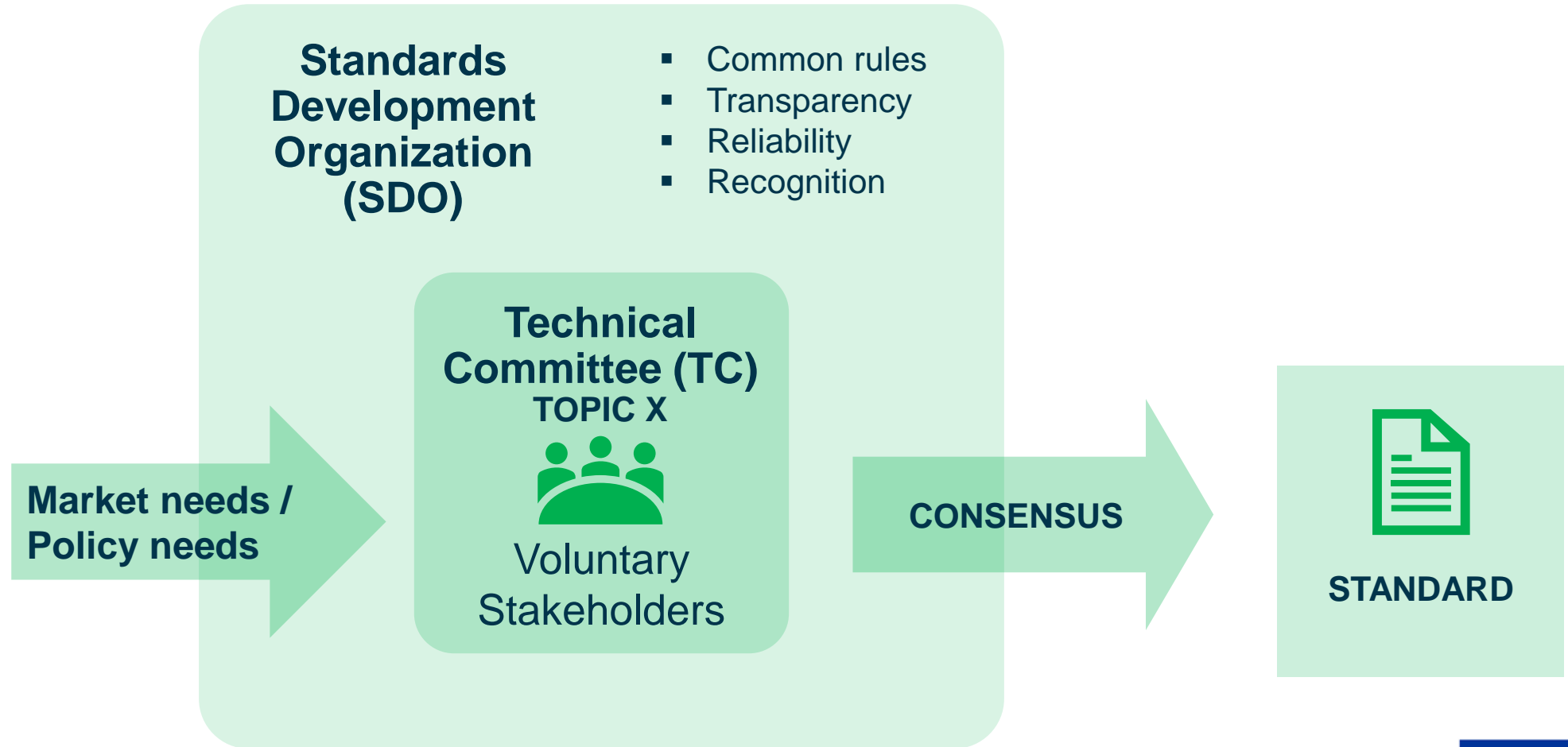
- Great number
- Sectoral
- Different own rules
- Not subjected to international agreements or legal constraints
- Some of them have agreements with Official Standards Organizations





Stakeholders

- Manufacturers
- Users
- Research
- Academia
- Authorities
- Consulting
- Societal actors
- Associations
- etc.





EUROPEAN STANDARD
NORME EUROPÉENNE
EUROPÄISCHE NORM

EN 1090-2

June 2018

ICS 91.080.13

Supersedes EN 1090-2:2008+A1:2011

TECHNICAL SPECIFICATION
SPÉCIFICATION TECHNIQUE
TECHNISCHE SPEZIFIKATION

CEN/TS 17184

August 2018

ICS 35.240.60

TECHNICAL REPORT
RAPPORT TECHNIQUE
TECHNISCHER BERICHT

CEN/TR 10261

October 2018

ICS 77.040.30

Supersedes CEN/TR 10261:2013

**CEN
WORKSHOP
AGREEMENT**

CWA 17260

May 2018

ICS 13.310

English version

Standard

- EN, ISO, IEC, UNE, DIN, NF...
- Top level document. Full consensus

Technical Specification

- CEN/TS, ISO/TS...
- Less consensus or not consolidated knowledge
- Limited duration

Technical Report



















- CEN/TR, ISO/TR...
- No requirements, informative document

Workshop Agreement

- CWA, IWA, DIN Spec, Especificación UNE...
- Reduced consensus
- Fast elaboration





 CHEMICALS	 CONSTRUCTION	 CONSUMER	 ACCUMULATORS, PRIMARY CELLS AND PRIMARY BATTERIES	 DEFENCE AND SECURITY	 DIGITAL SOCIETY
 FOOD AND AGRICULTURE	 HEALTHCARE	 HOUSEHOLD APPLIANCES AND HVAC	 ELECTROTECHNOLOGY GENERAL	 ENERGY AND UTILITIES	 HEALTHCARE
 SERVICES	 TRANSPORT AND PACKAGING	 EUROPEAN LABELS	 LOW VOLTAGE ELECTRICAL EQUIPMENT AND INSTALLATIONS	 MECHANICAL AND MACHINES	 OCCUPATIONAL HEALTH AND SAFETY

Standards for

Test methods

Services

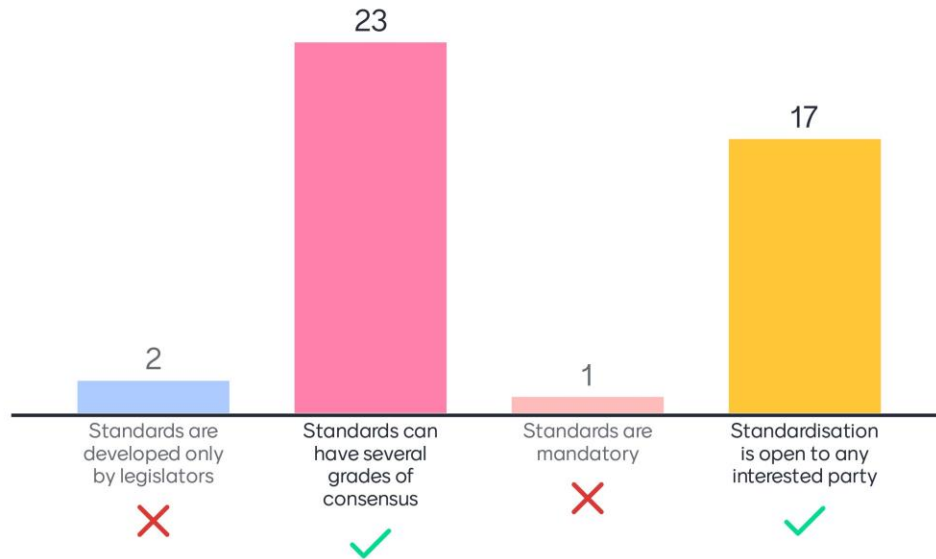
Products

Definitions





Standardisation and standards.
Choose the correct statements:





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Development of CWAs



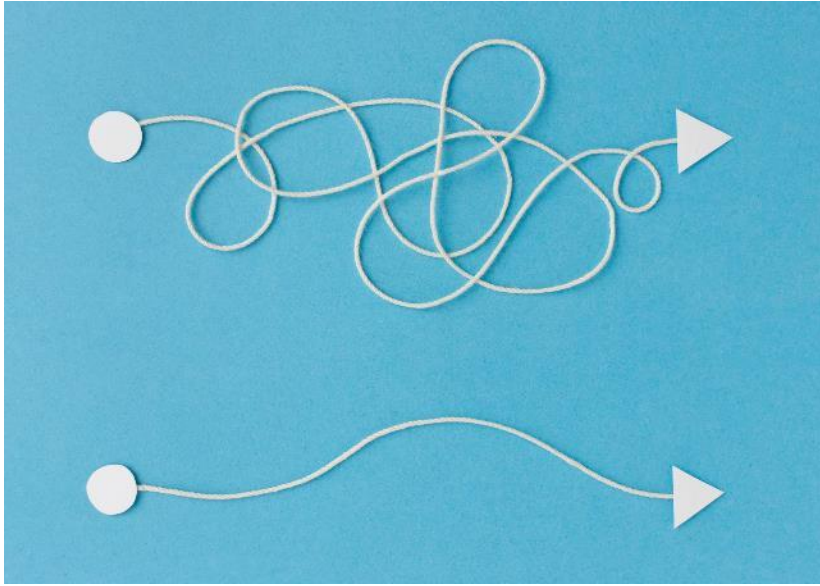
Success cases



Standards ensure **comparability, compatibility,** and **interoperability**

Standards help to achieve better levels of **performance, reliability and quality,** helping to make a process, service or business successful





The use of standards **optimise** the organisations' management and services provision, leading to a reduction of production time and cost



Standards **build trust** among stakeholders in the value chain



Using standards contributes to **disseminate knowledge** and to facilitate the application of technology

Standards facilitate the **access to markets** and the organisations' operations in other countries



Standards **support public policies, legislation and regulations** (national or European), and ensure that products and services fulfil their requirements





In line with:

- [EU Policy on Knowledge Valorisation](#)
(Council Recommendation (EU) 2022/2415)
- [Code of Practice on Standardisation in the ERA](#)
(Commission Recommendation (EU) 2023/498)

Code of practice on standardisation in the European Research Area
Commission Recommendation

"Standards bridge the gap between research and market up-take. Together with stakeholders we have developed the code of practice to ensure that research and innovation results create marketable solutions and respond to societal challenges".

Mariya Gabriel,
Commissioner for Innovation, Research, Culture, Education and Youth



HORIZON EUROPE

HORIZON EUROPE, 9th Framework Programme, 2021 a 2027

- Main funding programme for European Research and Innovation, with a budget of 95,5 kM€.
- *"Horizon Europe (...) anticipates standardisation needs and links strategic priorities with pre-normative research. Therefore, the evaluation and review process of EU-funded projects **considers standardisation**, e.g. as part of the KPIs and justification obligations.*

- Calls: in 2023-2024, 130 explicitly request standardisation
- Project assessment: specific indicator in every project

Grant Management		Project Continuous Report															
101058589 (AI-PRISM)	HORIZON-IA	Project Summary	Researchers involved in the project	Deliverables	Milestones	Critical Risks	Publications	Results	Disseminat activities	Standards	Patents (IPR)	Communic... Activities	Datasets	Beneficiaries Feedback	Impact	Impact Continuation	Other Results
Call: HORIZON-CL4-2021-TWIN-TRANSITION-01	Topic: HORIZON-CL4-2021-TWIN-TRANSITION-0	✓	⚠	i	i	✓	i	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓





Standardisation Booster

Pilot Project to provide information and advise on standardisation to H2020 and Horizon Europe projects.

- The projects should have foreseen resources and budget for these activities



Code of Practice on standardization

Recommendations on the use of standardisation in R+I activities and projects

- Published in March 2023
- Interesting to know before preparing Project proposals



Standards + innovation

CEN/CENELEC website providing information and advise on standardisation to H2020 and Horizon Europe projects.

- Possible Benefits of standardisation
- Focused in researchers and innovators
- Awards
- Stories

Standards + Innovation

Home Researchers Innovators Awards Get started Stories Learn more

Could your R&I project benefit from standardization?

Some questions to consider

What is standardization?



Mentimeter

Benefits of including standardisation. Choose the correct statements:





Introduction to standardisation



Benefits of including standardisation in R+I projects



How to include standardisation in R+I projects



Development of CWAs



Success cases



For an innovation (technology, methodology, product, service...) it is beneficial in order to be successful:

- **to comply** with existing standards

A. Build on **existing** standards when preparing and running the projects

- Interoperability
- Compatibility
- Rationalize efforts

- to be **included** in standards

- that the existing standards or in development are **not** active or passive **limitations**

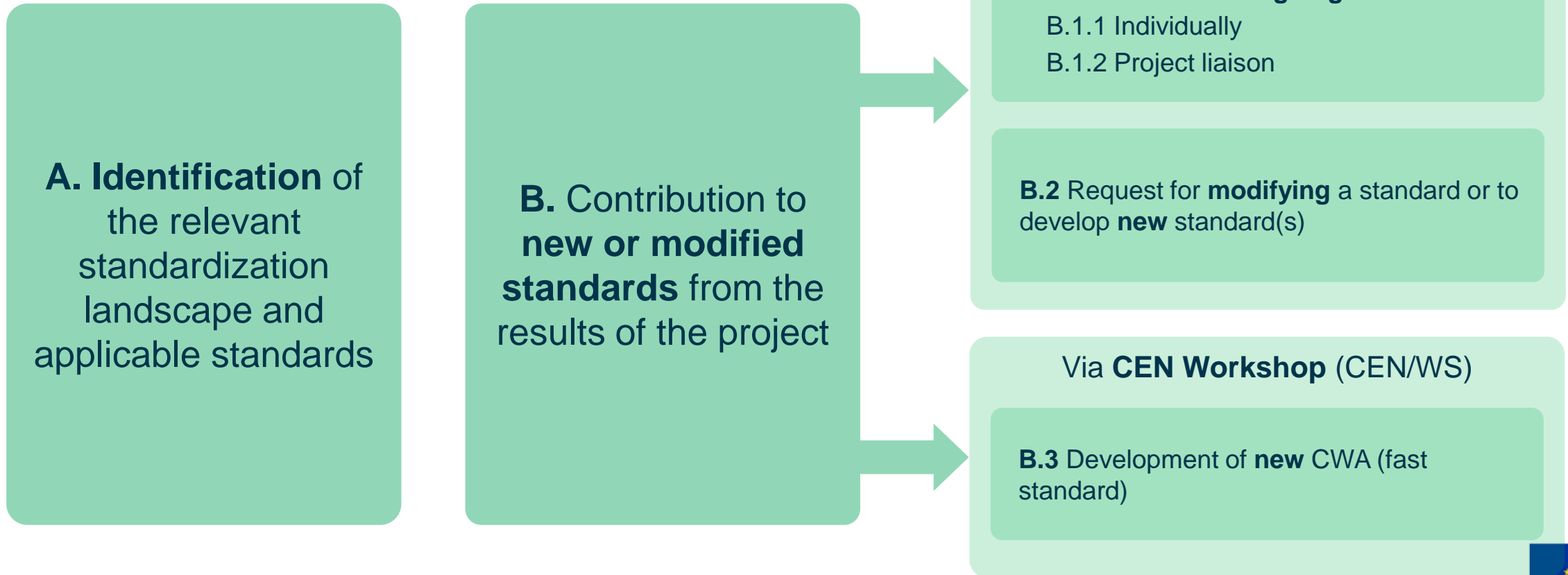
B. Contribution to ongoing and **future** standardisation

- Increased impact
- Users confidence
- Market opening
- Recognition
- Transfer to Industry, Society, Public Authorities

For funding institutions:

- tool to valorise the investment and to transfer the knowledge gained







A. Identification of the relevant standardization landscape and applicable standards

The **follow up of the standardisation activity** and the elaboration of updates for the R+I project. This is usually performed by the partner Standardisation body, in a "*Report on the standardization landscape*".

What is needed from partners?

- Information on standards being used by partners and related to the R&I project
- Information on technical committees or standardisation activities related to the R&I project tasks

When is this needed?

- All along R+I project development





B.1.1 Contribution to **ongoing** work on standardization **individually**

The follow up through the **joining and participation** of one or more R+I project representatives in standardisation committees (TC) or working groups (WG).

- Standardisation is an open activity and all interested parties may participate in a CEN or ISO TC through its National Mirror Committee and National Standardization Body.
- Advisable if some standard under development is identified as crucial for the R+I project and there is interest in a **close follow up** or in **contributing** to the content of the standard.

What is needed from partners?

- Availability to study and comment draft standards by correspondence
- Availability to participate in TCs/WGs meetings

When is this needed?

- When new documents are released by a TC/WG
- When a meeting is scheduled





B.1.2 Contribution to **ongoing** work on standardization via **Project Liaison**

The establishment of a Project Liaison with a CEN Technical Committee. Under this figure, the consortium of a R+I project can **participate as an entity** in the TC works, without voting rights. This implies an economic cost and is only advisable when the TC is developing a related standard during the life of the project.

What is needed from partners?

- Availability to study and comment draft standards by correspondence
- Availability to participate in TCs meetings

When is this needed?

- When new documents are released by a TC
- When a meeting is scheduled





B.2 Request for **modifying** a standard or to develop **new** standard(s)

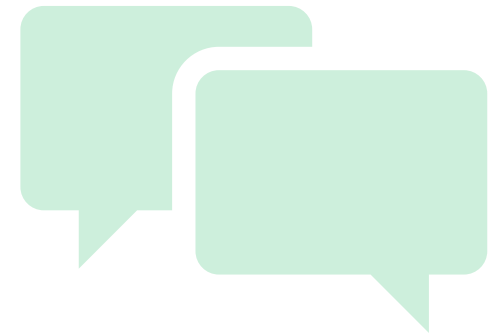
Elaboration of specific standardisation **proposals** based on identified standardisation **gaps** in standards used by partners, or based in standardisation **needs** of partners. Once sent to technical committees, this information can be considered or developed by TCs in the future, e.g. the improvement of existing standards or development of new standards.

What is needed from partners?

- Identification of gaps in existing standards being used in a R+I project
- Identification of needed standards for the future exploitation of a R+I project

When is this needed?

- All along R+I project development





B.3 Development of **new** CWA (fast standard)

Development of CEN Workshop Agreements (CWA) by consortium partners in a CEN Workshop, when for example some R+I project result is identified as standardisable. CWAs are the most appropriate and feasible deliverable to be developed during the project life.

What is needed from partners?

- Availability to attend on site and virtual workshop meetings
- Availability to adapt R+I project deliverables according common standard drafting rules
- Availability to study and comment eventual draft standardisation deliverables

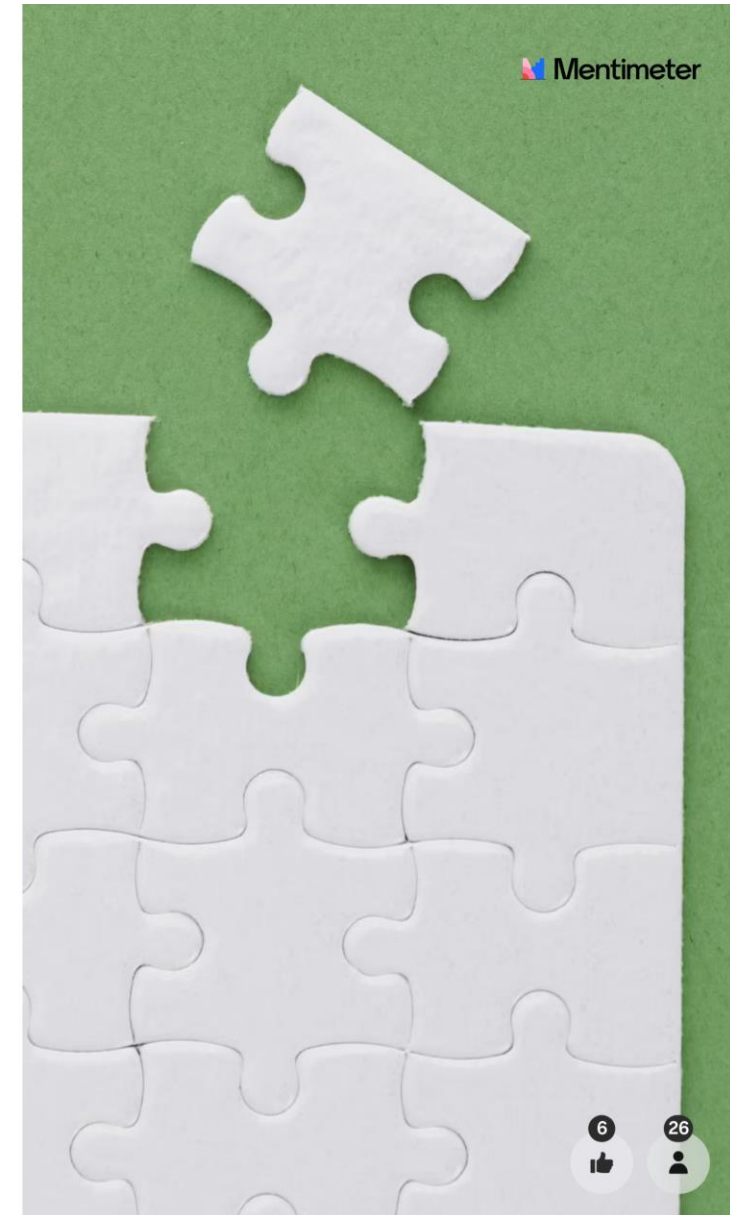
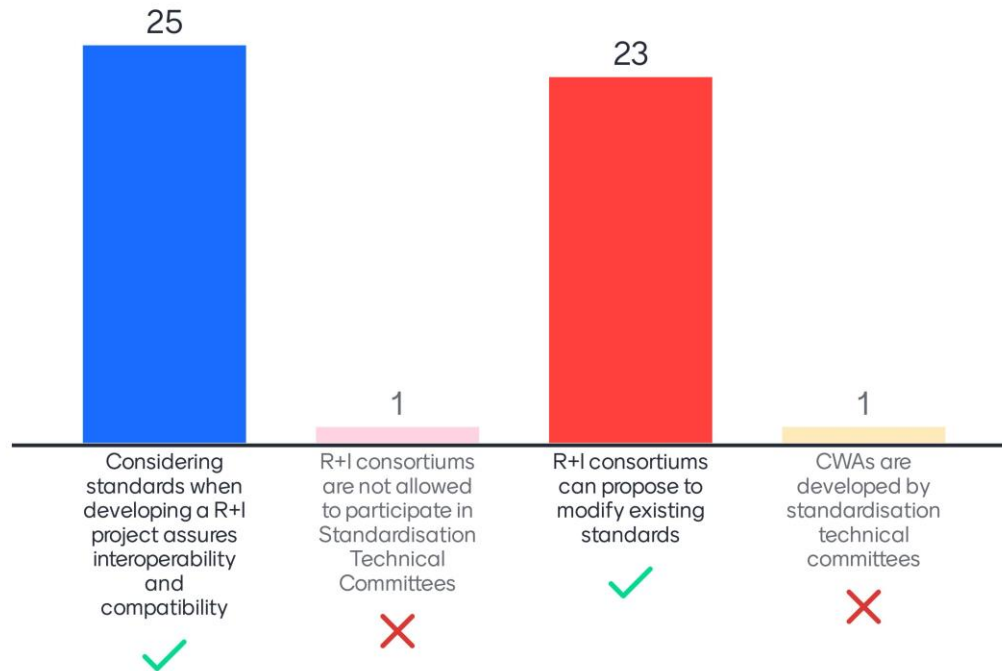
When is this needed?

- When a CEN Workshop meeting is scheduled
- When requested by the CEN Workshop secretariat
- When a draft CWA is circulated for commenting or approval





How to include standardisation in R+I projects.
Choose the correct statements:





Introduction to standardisation



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How to include standardisation in R+I projects



Development of CWAs



Success cases



CEN/CENELEC Workshop (WS)

- Temporary working group (not an event!)
- Open to the participation of any interested parties
- For elaboration of CEN/CENELEC Workshop Agreements (CWA)



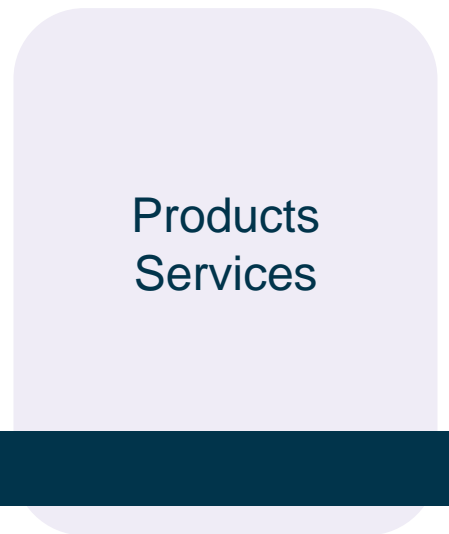
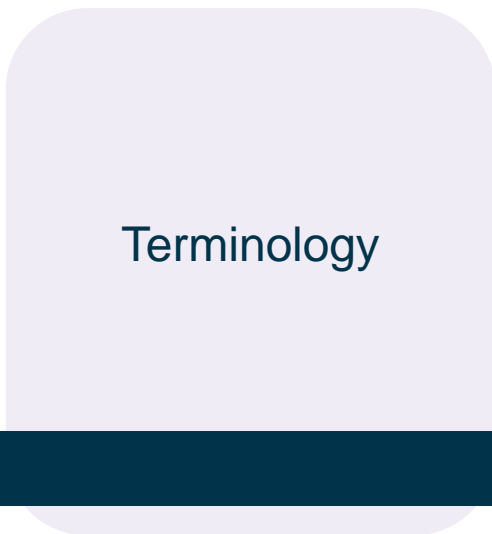
CEN Workshop Agreement (CWA)

- CEN/CENELEC publication
- Elaborated in a WS (out of the TCs)
- Well-fitted for emerging knowledge (R&I projects)
- Reduced consensus (just from participants)
- Fast elaboration
- Limited duration (6 years)
- Various forms (e.g. text file or computer code)



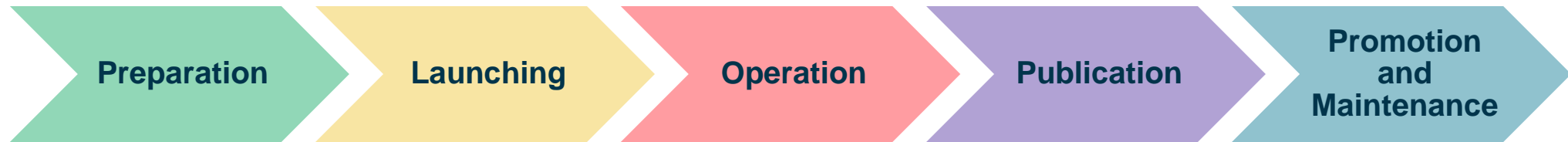
- **Impact:** Recognized reference document published outside the consortium
- **Agility:** A few months – ‘Fast Track’ standard
- **Openness** in process and visibility to all market players
- Suitable document to cover **new knowledge** arising from R&I activities
- Can **test different solutions** in the market (can diverge from other CWAs)
- Can be a **first step** towards a further EN or ISO standard

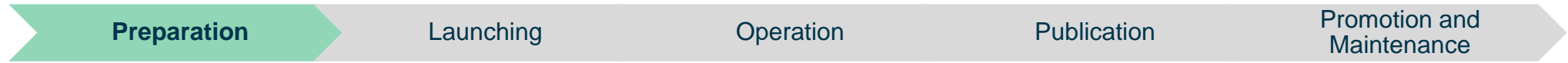




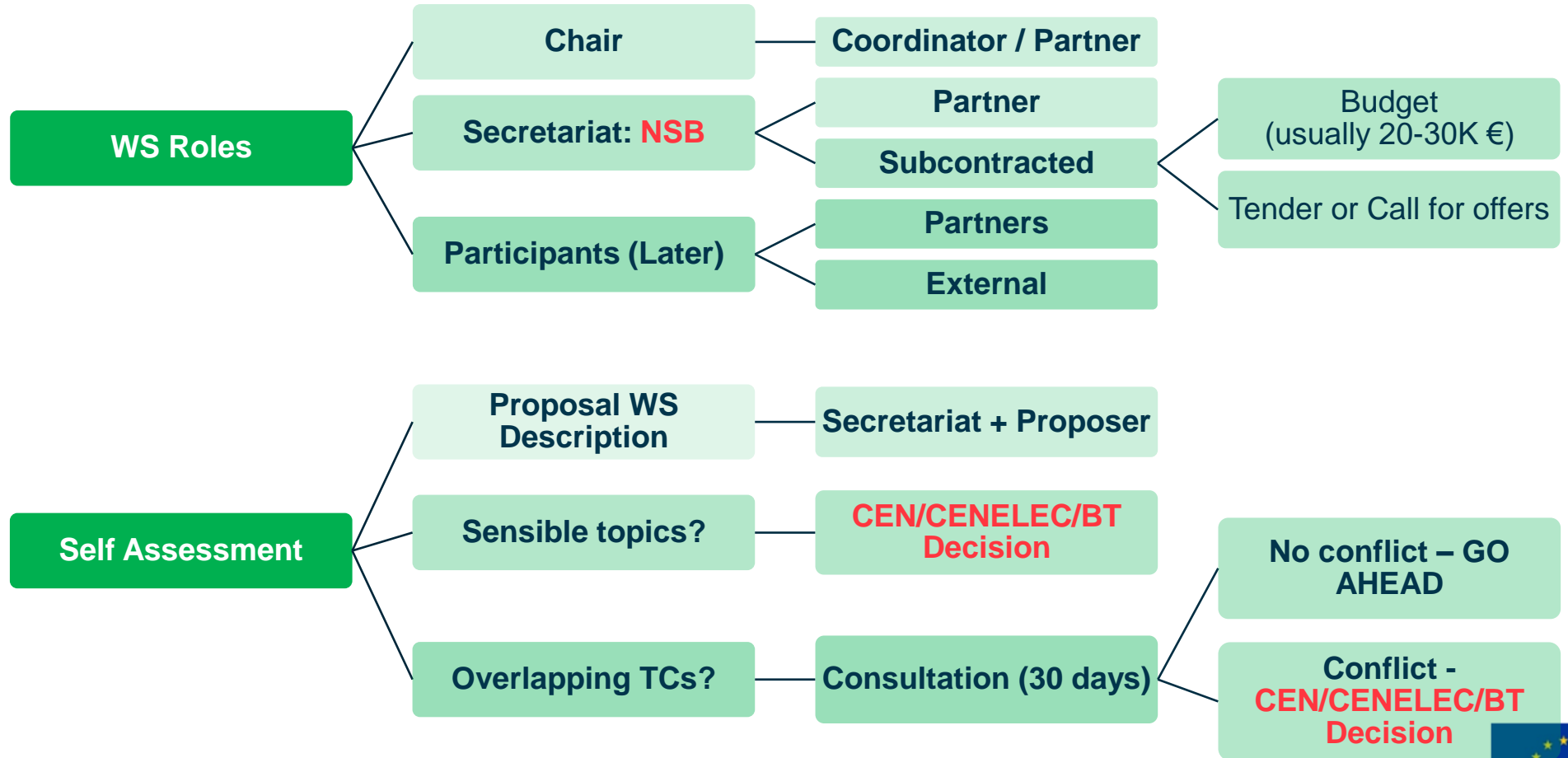
Possible contributions to standards

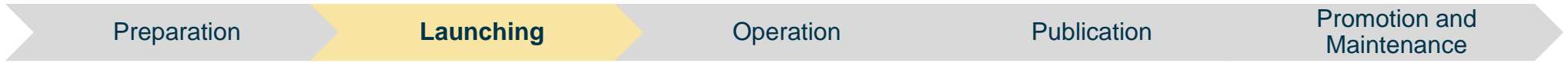






Preparation

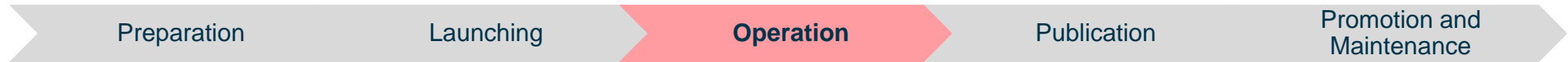




Launching

- **If Self Assessment is positive (no conflicts):**
- Secretariat triggers the process in CEN/CENELEC
- 30 days public announcement:
 - In CEN & CENELEC webpage
 - Open to comments
 - Open to appointment of external experts
 - Promotion to increase participation





WS Kickoff Meeting

- Description of the WS and expected CWA(s)
- Appointment of Chair / Secretariat
- Appointment of WS participants: Registration Form:
 - Property of the shared knowledge: The owner
 - Property of the published CWA document: CEN & CENELEC

Drafting / Agreement building

- Meetings and homework until there is an agreement on the draft text
- Inform/Consult relevant TCs

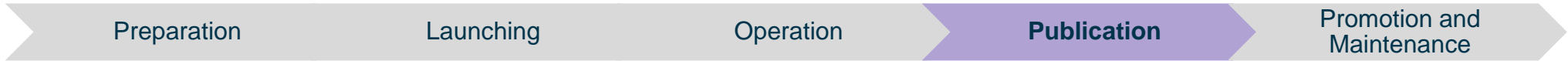
Public web consultation (30 days)

- Optional (but recommended)
- Open to public comments

Resolution of comments and final agreement

Operation





- Secretariat sends the final draft to CEN & CENELEC
- CEN & CENELEC publishes the document.

Free download of the CWA:

- Payment to CEN & CENELEC for revenue losses.
- Fee: 8% of budget for WS Secretariat.
- Available in: <https://www.cencenelec.eu/get-involved/research-and-innovation/cen-and-cenelec-activities/cwa-download-area/>

Publication

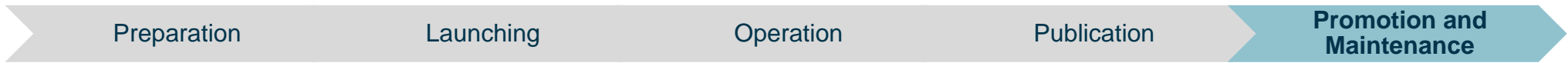


EUROPEAN STANDARDIZATION GET INVOLVED AREAS OF WORK NEWS AND EVENTS

GET INVOLVED

CWA download area





Promotion and Maintenance

Promotion

- Use project media to promote the CWA
- Inform to related TCs, etc.

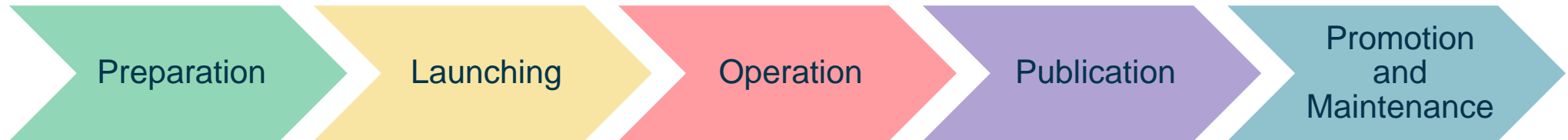
Maintenance

- 3 years: Consultation to the Secretariat / Chair / Participants on:
 - Confirmation
 - Review
 - Withdrawn
 - Conversion into another kind of document
- 6 years: CEN/CENELEC/BT Decision on withdrawal





Timing



- Decide the topic, approach, etc – Undetermined
- Subcontract a NSB – 1 month apr.
- Prepare the proposal – 2 weeks apr.
- Consult overlapped TCs – 1 month apr.
- BT Consultation (to be avoided) – 2 months apr.

Send to CEN-
CENELEC – 1 week
apr.

Public announcement –
1 month

KoM – 1 day
Drafting and
agreement –
Undetermined

Send to CEN-
CENELEC – 2 weeks
apr.

Availability – 1-2 weeks
apr.

Minimum: 3 months

Usual: 6-12 months





Possible Topics

- Examples of usual topics:
 - Terminology
 - Test methods
 - Methodologies
 - Criteria / indicators
 - Product specifications, etc.

- No safety aspects (forbidden)
- Avoid sensible topics leading to CEN/CENELEC/BT Decisions:
 - Management systems (PDCA)
 - Conflicts with existing TCs





Internal considerations

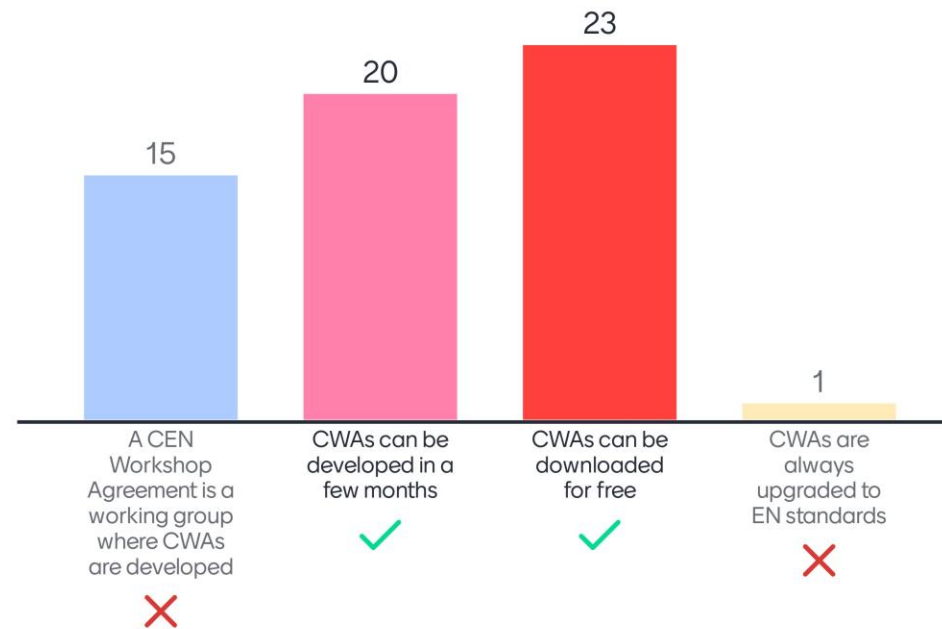
- Available information:
 - Select successful project results
 - Use existing deliverables as sources
 - Confidentiality (even if deliverables are confidential, information can be extracted – Performance, not specific details)
 - Enough time in the project for the process
- Exploitation of results:
 - A standard can support the commercialization or market uptake of a result
 - Consider IP protection strategy (e.g. patent application process)
- Standardization potential:
 - The CWA must be useful outside the project
 - Must be general (avoid direct references to the project, deliverables or results, except as examples)
 - Think on the applicability to one or more sectors





Mentimeter

Development of CWAs. Choose the correct statements:





Introduction to standardisation



Benefits of including standardisation in R+I projects



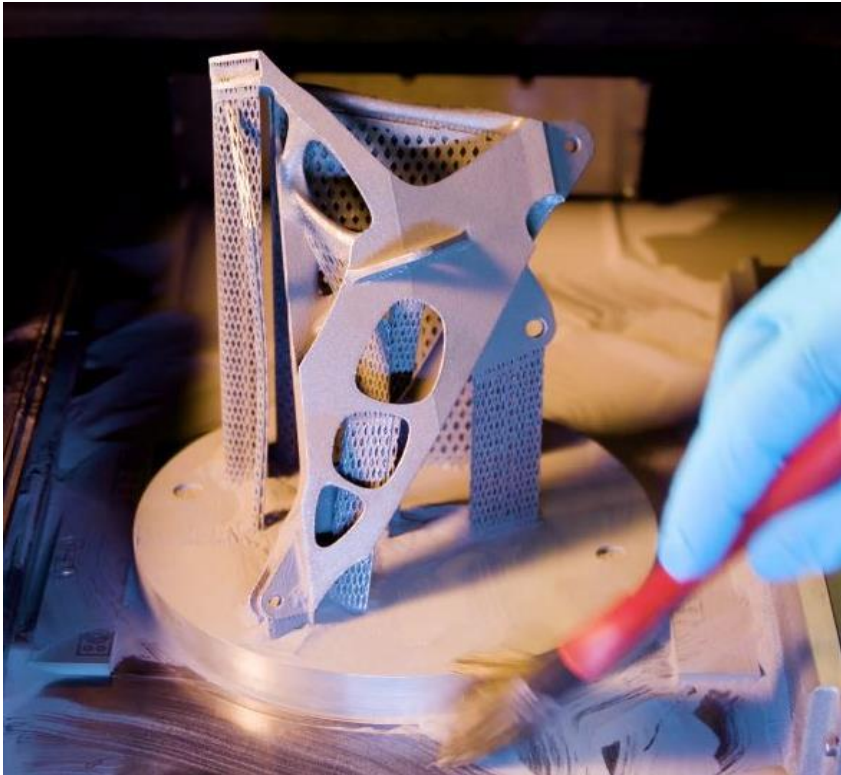
How to include standardisation in R+I projects



Development of CWAs



Success cases



Title

BIONIC AIRCRAFT

Increasing resource efficiency of aviation through implementation of ALM technology and bionic design in all stages of an aircraft life cycle

Programme

H2020 MG-1.2-2015 – "Enhancing resource efficiency of aviation"

Duration

2016 to 2019 (36 months)

Partners

11 partners from 5 countries

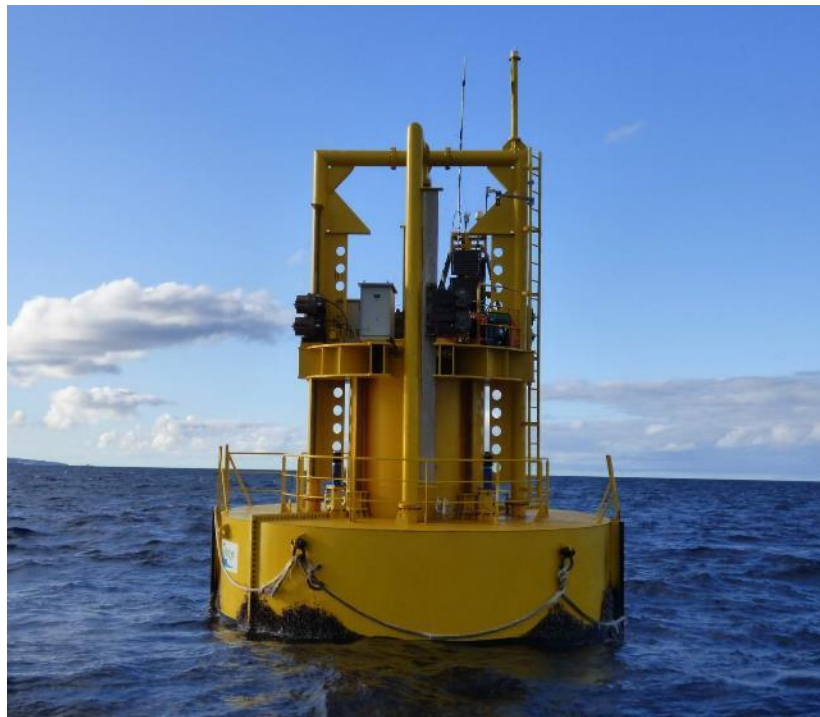
Results

CWA 17453 & CWA 17454 on aluminium parts optimized by additive manufacturing. **Possible upgrade to ISO standard in ISO/TC 266 "Biomimetics"**.





SeaTitan



Title

SEA TITAN

Surging Energy Absorption through Increasing Thrust and Efficiency

Programme

H2020 LCE-07-2016-2017 – "Developing the next generation technologies of renewable electricity and heating/cooling"

Duration

2018 to 2021 (42 months)

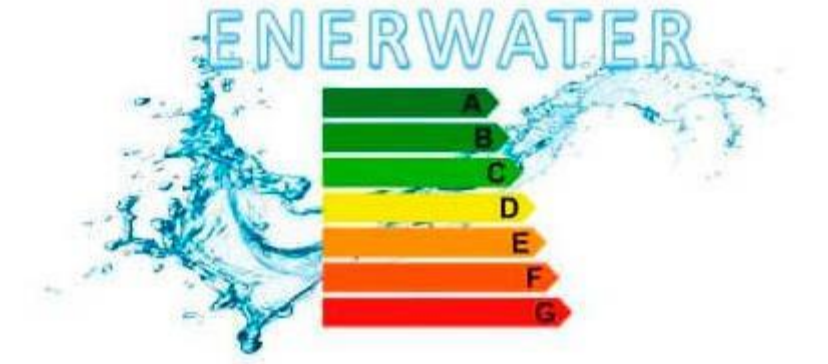
Partners

12 partners from 7 countries

Results

CWA 50271 & CWA 50272 on wave energy converters (requirements and compatibility test) in **collaboration with IEC/TC 114** "Marine energy"





Title

ENERWATER

Standard method and online tool for assessing and improving the energy efficiency of wastewater treatment plants

Programme

H2020 EE-16-2014 - Organisational innovation to increase energy efficiency in industry"

Duration

2015 to 2018 (42 months)

Partners

10 partners from 4 countries

Results

CEN/TR 17614:2021, Measuring and improving the energy efficiency of wastewater treatment plants, published by **CEN/TC 165** "Wastewater engineering".





Title

NEXTOWER

Advanced materials solutions for next generation high efficiency CSP tower systems

Programme

H2020 CIRC-01-2016-2017

"Systemic, eco-innovative approaches for the circular economy: large-scale demonstration projects"

Duration

2017 to 2021 (54 months)

Partners

24 partners from 9 countries

Results

CWA 17726, Accelerated ageing test of ceramics for solar receivers. Coordination with the revision of **ISO 18755** in **ISO/TC 206** "Fine ceramics".





D²EPC



Title

D²EPC

Next-generation Dynamic Digital EPCs for Enhanced Quality and User Awareness

Programme

H2020 LC-SC3-EE-5-2019 "Next-generation of Energy Performance Assessment and Certification"

Duration

2020 to 2023 (36 months)

Partners

13 partners from 7 countries

Results

Creation of CEN/TC 371/WG 5

"Operational rating of energy performance of buildings".





BiZeolCat



Title

BIZEOLCAT

Bifunctional Zeolite based Catalysts and Innovative process for Sustainable Hydrocarbon Transformation

Programme

H2020 CE-NMBP-24-2018 “Catalytic transformation of hydrocarbons”

Duration

2019 to 2022 (48 months)

Partners

13 partners from 9 countries

Results

CWA 17944, Method for the synthesis of nanocatalysts, **previously patented.**





Title

FORMPLANET

Sheet metal forming testing hub

Programme

H2020-NMBP-TO-IND-2018-2020

“Foundations for Tomorrow’s Industry”

Duration

2019 to 2021 (36 months)

Partners

16 partners from 5 countries

Results

CWA 17793, Test method for determination of the essential work of fracture of thin ductile metallic sheets.

CWA 17794 Measurement of diffusible hydrogen in metallic materials - HELIOS 4 HOT PROBE method

CWAs including patented technologies



Questions?



- AID4GREENEST: <https://aid4greenest.eu/>
- UNE: <https://www.une.org/>
- CEN/CENELEC: <https://www.cencenelec.eu/>
- HSBooster: <https://www.hsbooster.eu/>
- Code of practice on standardisation: <https://research-and-innovation.ec.europa.eu/>
- Standards+Innovation: <https://www.standardsplusinnovation.eu/>

**Thank you very much for your
attention and participation!**

Javier LÓPEZ-QUILES
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jlopezquiles@une.org