European Standardization Organizations

Webinar 'Mainstreaming Adaptation to Climate Change in Standards'

Training on using "Tailored Guidance for Standardization Technical Committees"

We start at 10:00 CEST

Webinar moderator

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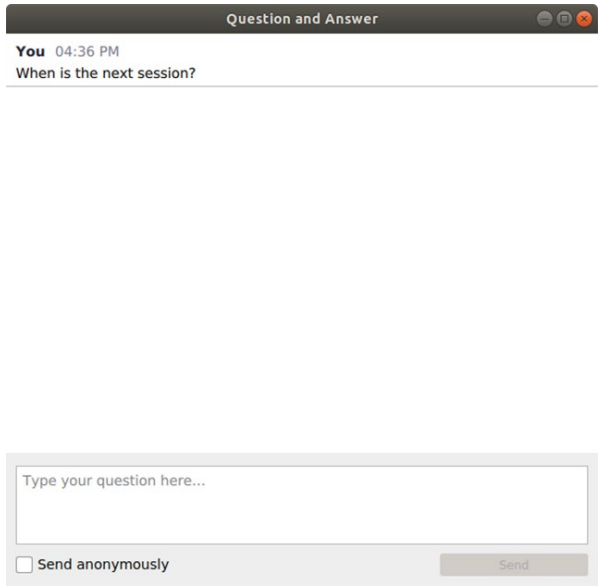
Get the most out of the webinar today

- You are muted
- Use the Q&A panel to submit your questions



- Talk about us on Twitter/X #training4standards @Standards4EU

Speakers

- Saskia MARESCH
  DIN - Project Manager

- John DORA
  Climate Sense - Technical Lead

- Doogie BLACK
  Climate Sense - Technical Expert

Mainstreaming Adaptation to Climate Change in Standards – Training on using "Tailored Guidance for Standardisation Technical Committees"

7th October, 2024

Prof. John DORA
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What's this about? – Scope

- First of two Briefing/Training sessions
- Supporting TCs and WGs to include Adaptation to Climate Change (ACC)
- Shows how to use Tailored Guidance (QR code) to identify climate issues in their standards
- All to address these in line with the EU Mission on Adaptation to Climate Change
- Identify TCs and WGs that identify as able to proceed with minimum further assistance

Agenda

1. **Introduction (10 minutes)**
   - Climate change, adaptation v mitigation
   - EC and Standardization Request
   - Adaptation guidance in CEN
     - Guide 32/ Tailored Guidance

2. **Presentation on the Tailored Guidance (45 minutes)**
   - To demonstrate how the guidance has been arranged
   - To outline what TCs or WGs need to do to follow the guidance
   - To show where relevant data can be sourced
   - **Case study** from past work

Agenda

3. Break (10 minutes)

4. Supporting TCs and WGs (60 minutes)

- Tailored Guidance Discussion and Poll
- Engagement Poll

5. Philosophy (15 minutes)

- Discussion and Survey
- More on 12th November, seeking users' and writers' initial thoughts

6. Next steps and wrap-up (10 minutes)

Introduction

- **Climate change, adaptation v mitigation**
- EC and Standardization Request
- Adaptation guidance in CEN

Climate Change Impacts

- Impacts from climate change can be seen everywhere
- Greenhouse gas emissions are, and will continue to influence the climate for decades

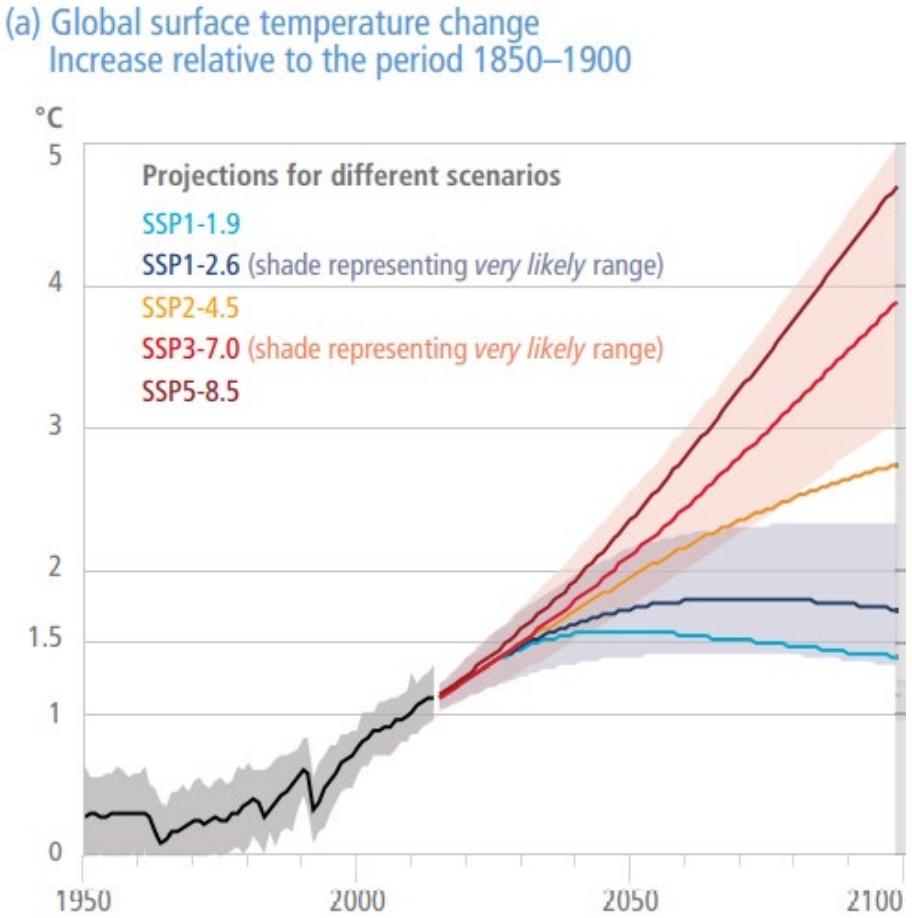
Source: Chris Gallagher on Unsplash

Source: Joanna Francis on Unsplash

Language: Mitigation, Adaptation

Even if emissions stop today the temperature will continue to rise . Uncertainty: 'Shared socio-economic pathways' , Representative Concentration pathways'

Plan for 2 °, Assess 4 °, Consider H++



Source: IPCC AR6 Working Group 1, Summary for Policymakers

How we respond

- Organisations are realising they need to become resilient to the future climate
- Major impacts on products, activities and services
- On the ‘bottom line’
- Greenhouse gas mitigation efforts have helped push climate action up the agenda e.g., TFCD
- Adaptation brings an understanding impacts - risks, vulnerabilities – over time

Introduction

- Climate change, adaptation v mitigation
- **EC and Standardization Request**
- Adaptation guidance in CEN

EC and Standardization Request

- On 2023-11-21, CEN/CENELEC received a draft Standardization Request (SReq) regarding the mainstreaming of climate adaptation in European standards
- Background: As a follow-up of M/526, EC DG CLIMA conducted a screening exercise of standards which are in need of a revision
- Status: Elaboration with TCs and EC DG CLIMA

Introduction

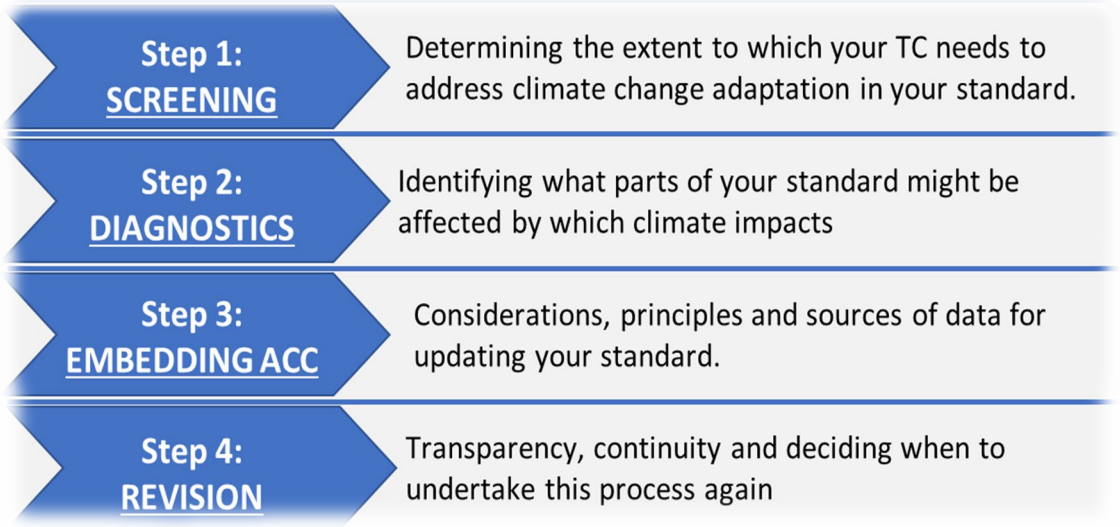
- Climate change, adaptation v mitigation
- EC and Standardization Request
- **Adaptation guidance in CEN**

Adaptation guidance in CEN

- Introduction to Guide 32/ Tailored Guidance
- Opportunity to engage and influence review and modifications to these and CEN processes
- Technical Report for Standards' Users
- November 12th Workshop

2. Presentation on the Tailored Guidance (45 minutes)

- To demonstrate how the guidance has been drafted
- To outline what TCs or WGs need to do to follow the guidance
- To show where relevant data can be sourced
- Case studies from past work



Climate Change Adaptation:

Tailored Guidance for Infrastructure Standards Writers

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Tailored Guidance For WGs and TCs:

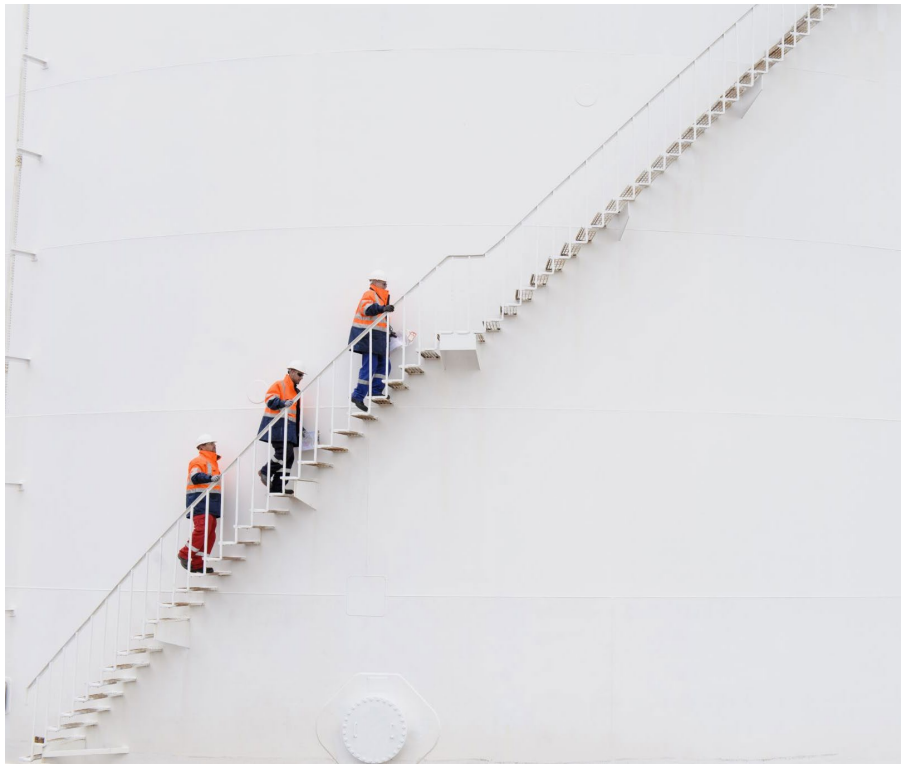
How to include Climate Change Adaptation in European infrastructure standards

Rationale:

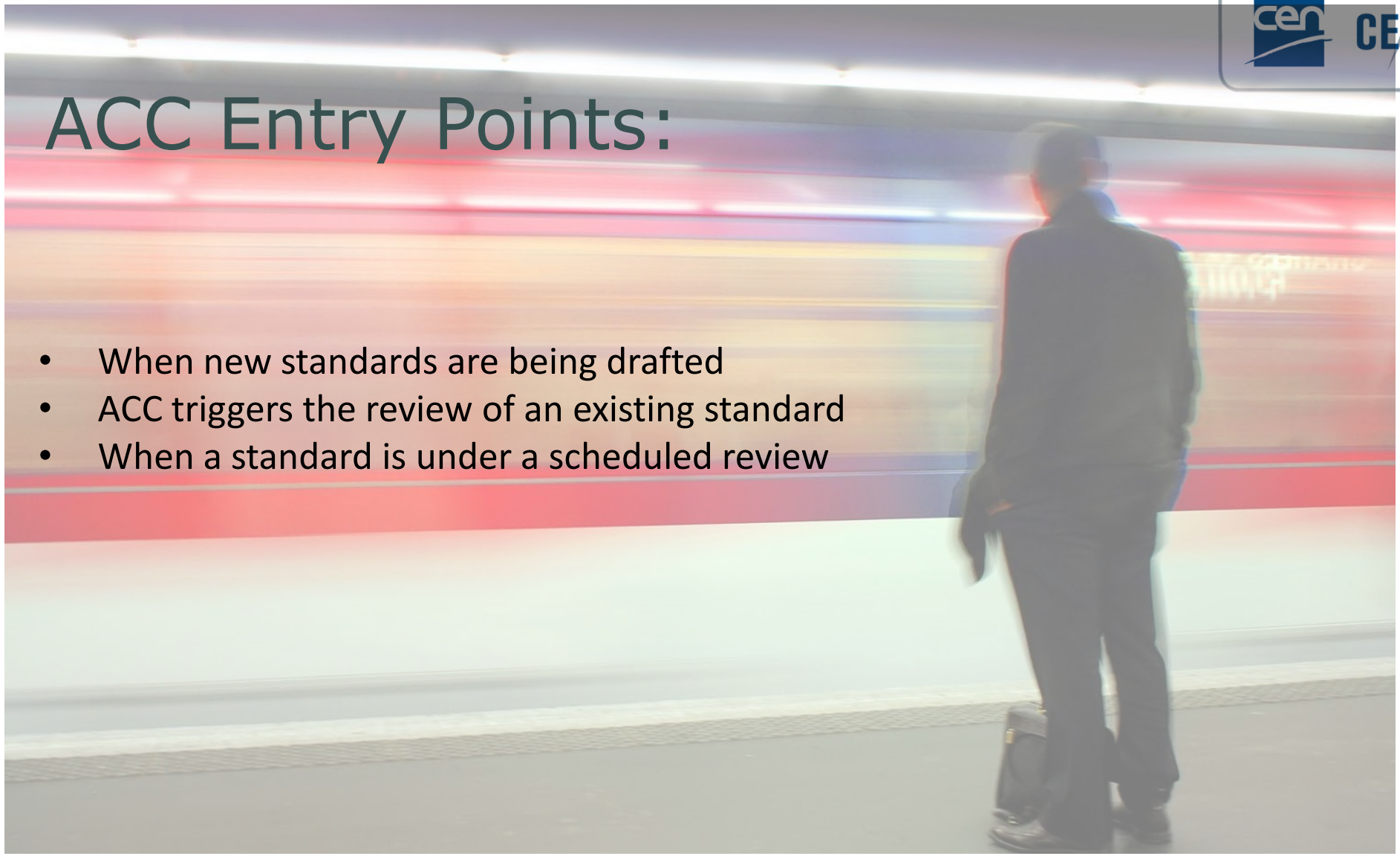
- Help accelerate the transition to a more climate resilient Europe
- Focus on the risks and opportunities presented by changes in climate upon physical infrastructure and how people interface with that infrastructure
- Focus on “infrastructure standards writers”
  - Build upon CEN-CENELEC Guide 32 “addressing climate change adaptation in standardization”
  - Learn from ISO Guide 84 “guidelines for addressing climate change in standards”
- Respect the expertise of TCS and WGs who are already familiar with addressing extremes of weather
- Infrastructure has relatively long lifespans and numerous interdependencies

Evolution of Guidance:

- Previous work commenced in 2018
- 10 drafts were produced prior to publication (2022)
- Experience of 25 Working Groups
- Sectors: water, gas, construction, energy, IT, and Transport
- Different stages of standard development (from conception to reviewing existing standards)
- Different levels of data required for different standards (weather / climate / both)
- Existing levels of ACC required different approaches (‘early stages’ to ‘advanced’)
- Differing emphasis on standard user vs standard writers (who needs the data?)



ACC Entry Points:



- When new standards are being drafted
- ACC triggers the review of an existing standard
- When a standard is under a scheduled review

Tailored Guidance (4 – Step Process)

Step 1: SCREENING	Determining the extent to which your TC needs to address climate change adaptation in your standard.
Step 2: DIAGNOSTICS	Identifying what parts of your standard might be affected by which climate impacts
Step 3: EMBEDDING ACC	Considerations, principles and sources of data for updating your standard.
Step 4: REVISION CYCLES	Transparency, continuity and deciding when to undertake this process again

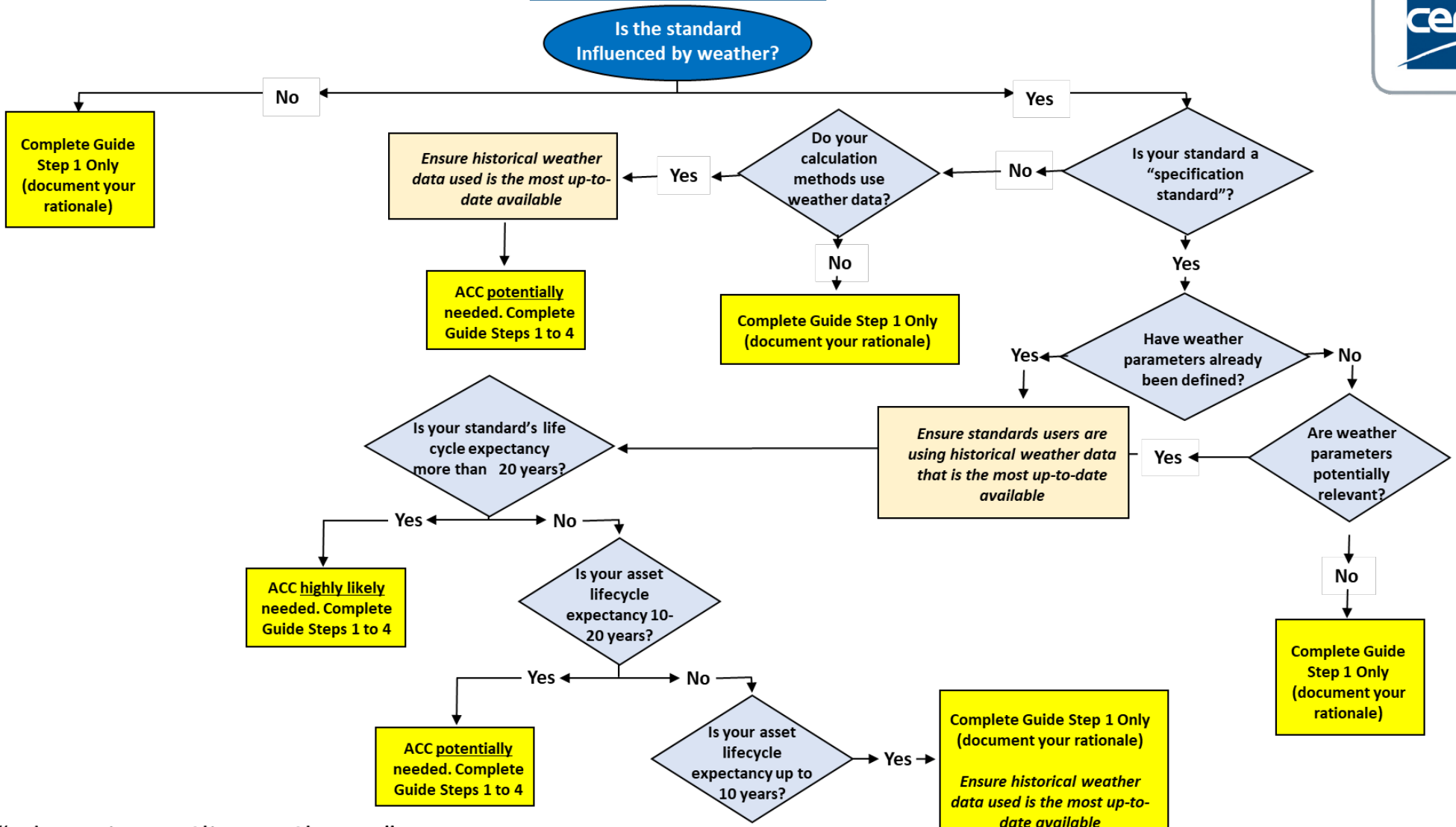
Tailored Guidance (4 – Step Process)

Step 1: SCREENING

Determining the extent to which your TC needs to address climate change adaptation in your standard.

The principal premise of this step, is that if your standards has defined direct and indirect weather parameters, then these parameters are likely to change as a result of climate change.

START: All Infrastructure Standards



ACC = "Adaptation to Climate Change"

Tailored Guidance (4 – Step Process)

Step 2: DIAGNOSTICS

Identifying what parts of your standard might be affected by which climate impacts

WGs identify each of the weather sensitive elements, and where possible, their respective weather thresholds (e.g. the point at which a weather event could render that asset, service, or component compromised or inoperable).

It is important to identify any other areas of the standard that might be impacted.

Tailored Guidance (4 – Step Process)

Step 3: EMBEDDING ACC

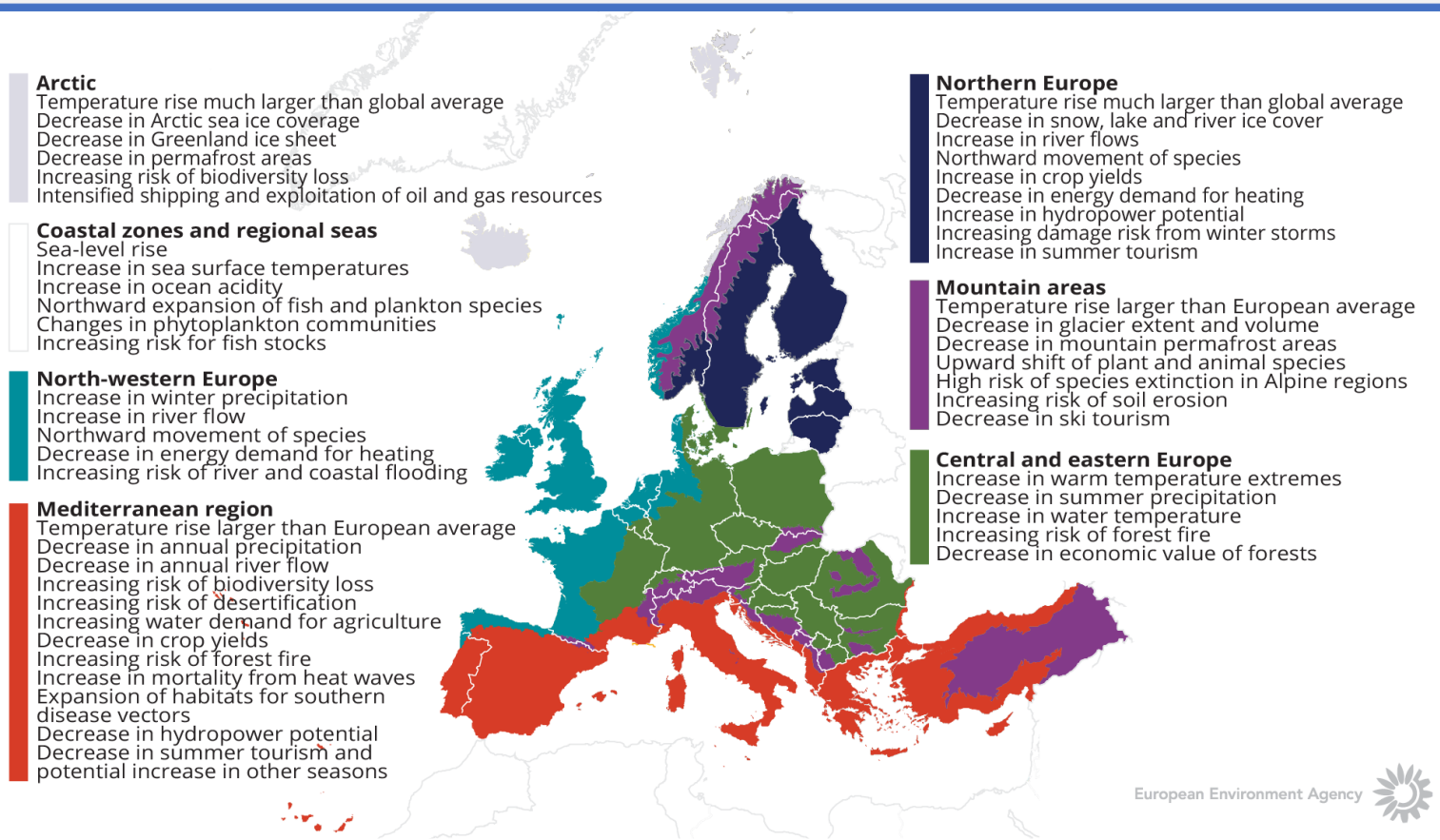
Considerations, principles and sources of data for updating your standard.

- Identify a range of adaptation options that could be incorporated in product design
- Consider carrying out or commissioning research to identify thresholds
- Define what level of risk or what level of impact the product needs to be resilient to
- Consider 'designing for degraded performance’

Tailored Guidance (4 – Step Process)

Step 3:
EMBEDDING ACC

Considerations, principles and sources of data for updating your standard.



Tailored Guidance (4 – Step Process)

Step 4: REVISION

Transparency, continuity and deciding when to undertake this process again

Important that standard/s stay relevant and viable. Approaches to embedding ACC considerations within standards remains as flexible as possible, to allow approaches to evolve over time.

Annexes:

Annex 1: Climate effects to consider

Annex 2: List of climate impacts

Annex 3: Online climate change data sources per EU country

Annex 4: Case Examples

i. Standards for transport sector
ii. Interlinked standards for Gas Infrastructure
iii. Examples of ACC generic terminology in infrastructure standards
iv. Using climate change scenarios to influence infrastructure
v. A high-level assessment that does not use climate data

Tailored Guidance For WGs and TCs:

How to include Climate Change Adaptation in European infrastructure standards

Case Study: Tailored Guidance for Infrastructure Standards Writers

EN 17928 (2024)
Gas infrastructure — Injection stations — Part 1: General requirements

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Tailored Guidance (4 – Step Process)

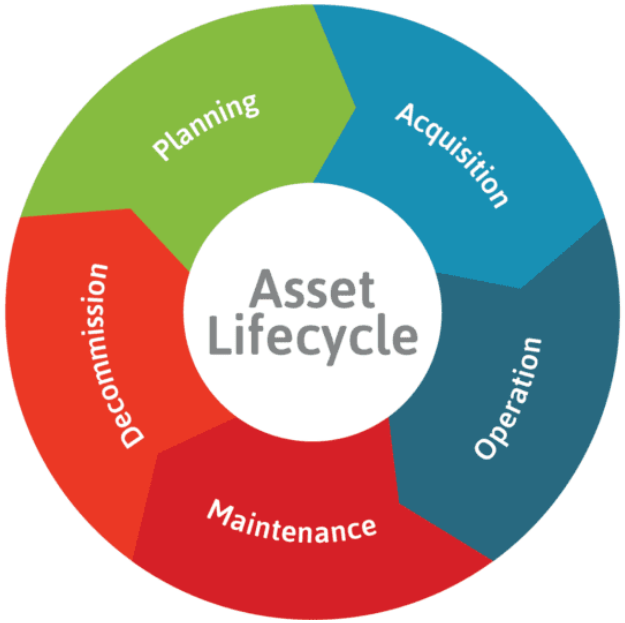
Step 1: SCREENING	Determining the extent to which your TC needs to address climate change adaptation in your standard.
Step 2: DIAGNOSTICS	Identifying what parts of your standard might be affected by which climate impacts
Step 3: EMBEDDING ACC	Considerations, principles and sources of data for updating your standard.
Step 4: REVISION CYCLES	Transparency, continuity and deciding when to undertake this process again

Common text changes across WGs:

- Current and future climate change
- Design working life / Full asset cycle
- Medium and high emissions scenario
- RCP 4.5 and 8.5
- 2°C and 4°C
- 1 in 100 year floods
- Historical weather data
- Thresholds (esp. temperature and flood)
- Emphasis on user experience

CASE STUDY

EN 17928 (2024)
Gas infrastructure — Injection stations
Part 1: General requirements



EN 17928 (2024)
Gas infrastructure — Injection stations
Part 1: General requirements

Subclause X: **Quality and management system**

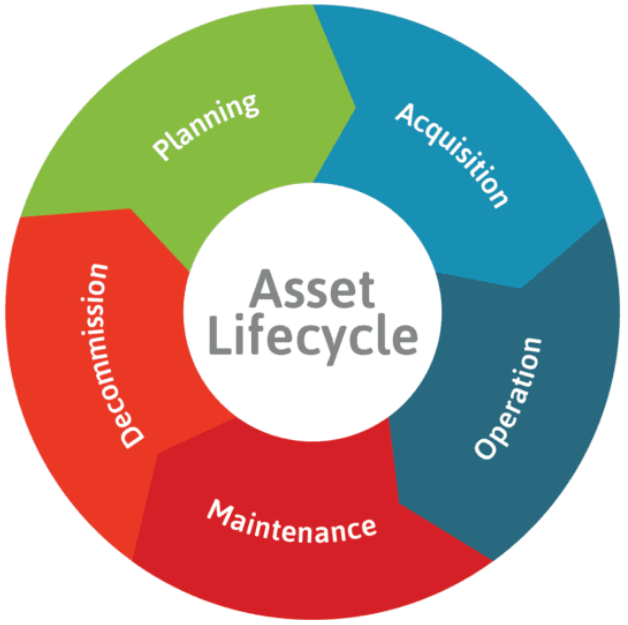
The life of a station can be divided into four phases:

— the design;

— the construction, testing and commissioning;

— the operation and maintenance;

— decommissioning and disposal.



NOTE The full life expectancy of the consequences of each of the four phases shall be considered. The full life expectancy of a component shall be used to determine the relevant timeframes to be assessing climate change aspects that could affect it.

EN 17928 (2024)
Gas infrastructure — Injection stations
Part 1: General requirements

Text added to existing ACC text:

Two main climate change considerations shall be recognized depending on the location where the injection station operates:

- **Extreme weather events** - Climate change is likely to bring an increased number, and increased intensity, of weather events (e.g. more heatwaves, higher temperatures, floods, droughts, and increased storminess)

- **Shifts in averages** - Slow-onset changes in, for example, mean summer temperatures, average rainfall over a given season and sea-level rise.

EN 17928 (2024)
Gas infrastructure — Injection stations
Part 1: General requirements

Text added to existing ACC text:

Design phase

During the technical design phase, assessment of climate change impacts over the full expected lifetime of the station relevant to the specific conditions and locality of the site shall be done. For example, establishing whether higher expected extreme temperatures will impact the design of cooling devices.

EN 17928 (2024)
Gas infrastructure — Injection stations
Part 1: General requirements

Text added to existing ACC text:

Construction, Commissioning and Decommissioning

Climate change impacts shall be assessed over the full life of the activity regarding construction, commissioning, and decommissioning activities. For example, ensuring a workforce is not expected to work in temperature extremes without adequate precautions.

EN 17928 (2024)
Gas infrastructure — Injection stations
Part 1: General requirements

Text added to existing ACC text:

Operation and maintenance

Maintenance checks and updating activities shall be carried out according to national rules and according to the maintenance strategy of the TSO/DSO, but as well as exceptional checks following extreme weather events, that could potentially compromise the function of the injection station. Activities shall ascertain whether the station has been compromised and identify and take remedial action.

EN 17928 (2024)
Gas infrastructure — Injection stations
Part 1: General requirements

Text added to existing ACC text:

Operation and maintenance

Operation and maintenance activities shall include:

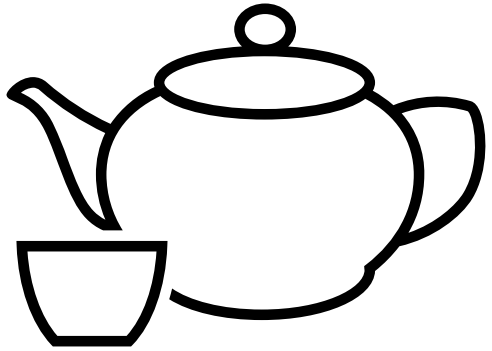
- Changing site characteristics due to extreme weather events being experienced. Including how these may change due to climatic changes over the expected full life of the station.
- Physical accessibility of the injection station;
- Functionality of the injection station;
- Integrity of the injection station;
- Ensure that repairs are capable of withstanding changing site characteristics due to climate change over the full expected life of the repair.

EN 17928 (2024)
Gas infrastructure — Injection stations
Part 1: General requirements

Other text changes to existing subclauses:

- Gas cooling systems (capacity impacted by CC over full life expectancy)
- Protection against harmful external influences (changes in flood frequency and extent over full life cycle)
- Current and future climatic influences (shift from seeing CC as ‘future’)

3. Break (10 minutes)



Comments on tailored guidance

Zoom Poll:

- Introduction - discussion on liaisons and challenges - two parts
- Tailored Guidance Discussion then Poll
- Engagement

Tailored guidance

Discussion

Tailored guidance - Poll

Is the tailored guidance a logical approach to embedding adaptation to climate change in infrastructure standards?

- Yes, it covers all aspects and there is little room for improvement
- Yes, but it is overly complex for standards writers to use
- Yes, but it is overly simplified and not yet fit for purpose
- No, it does not meet the needs of infrastructure standards writers
- I don’t know

Tailored guidance - Poll

In your view, to what extent does tailored guidance need an ‘adaptation to climate change expert’ to work with Working Groups to deliver it?

- Working groups can find the appropriate expertise within their own networks using the current guidance
- Working groups can find the appropriate expertise within their own networks using the guidance if the guidance was improved
- Working groups will require the support of an adaptation expert no matter how good the guidance is
- Adaptation to climate change experts are not needed for this purpose
- I don’t know

Tailored guidance - Poll

Are there things you would like the tailored guidance to do better?

- Yes - If yes please state [text field]
- No
- I don’t know

Is your Technical Committee or Working Group keen to be part of this project to test and update the tailored guidance?

- Yes - If yes please give details of the TC or WG contact details) [text field]
- No
- I don’t know

Engagement - Poll

- Who would you engage in your TC/ WG in this process? [State in text field]
- Do you think your TCs/WGs need minimal/ad-hoc support? Yes/ No
  - Why is this? [State in text field]
- Do you think your TCs/ WGs can work with tailored guidance and need in-depth support? Yes/ No
  - Why is this? [State in text field]
- Do you think your TCs/ WGs would be unable to engage? Yes/ Np
  - Why is this? [State in text field]

Considering all the above - Poll:

- Do you think your TC/ WG could engage now, as you need minimal, ad-hoc support from the experts? Yes, No.
  - If yes please give TC / WG and contact details
- Do you think your TC/ WG could engage now, but you need in-depth support from the experts support from the experts? Yes, No.
  - If yes please give TC / WG and contact details

5. Philosophy (15 minutes)

- This is to **start** discussion on whether there are **preferred ways** to deal with climate data in standards (e.g., is it better to offer parameters in the standard or to require standards' users to source relevant parameters)
- Talk more on 12th November, seek users' and writers' **initial thoughts**
- **MS Forms Questionnaire Link QR:**

6. Next steps and wrap-up (10 minutes)

- Team will review outputs
- Select TCs/ WGs for engagement
- Volunteers sought to influence outputs – merging Tailored Guidance with Guide 32 etc
- Assist with drafting Technical Report for Standards' Users
- November 12th Workshop

Some thoughts…

Thank you!

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Your feedback

European Standardization Organizations

Thank you for your participation!

Upcoming webinars/events

2024-11-12 - **Workshop on collaboration between standards users, writers and data providers to foster long term climate resilience**

2025-01-16 - **Webinar 'Introduction to CEN-CLC/JTC 23 - Horizontal Topics for PPE'**