EU-Level Technical Guidance on adapting buildings to Climate Change

Stakeholder Meeting

29th June 2022

RAMBOLL

Bright ideas.
Sustainable change.

European Commission

Agenda

01 [11.00 – 11.05] Welcome

02 [11.05 – 11.20] Introduction by the European Commission

03 [11.20 – 11.25] What is the purpose and structure of the project?

04 [11.25 – 11.30] Ice-breaker – Who are you and why are you here?

05 [11.30 – 12.05] How does the draft Technical Guidance look like?

06 [12.05 – 12.15] Q&A

07 [12.15 – 12.25] How can you contribute?

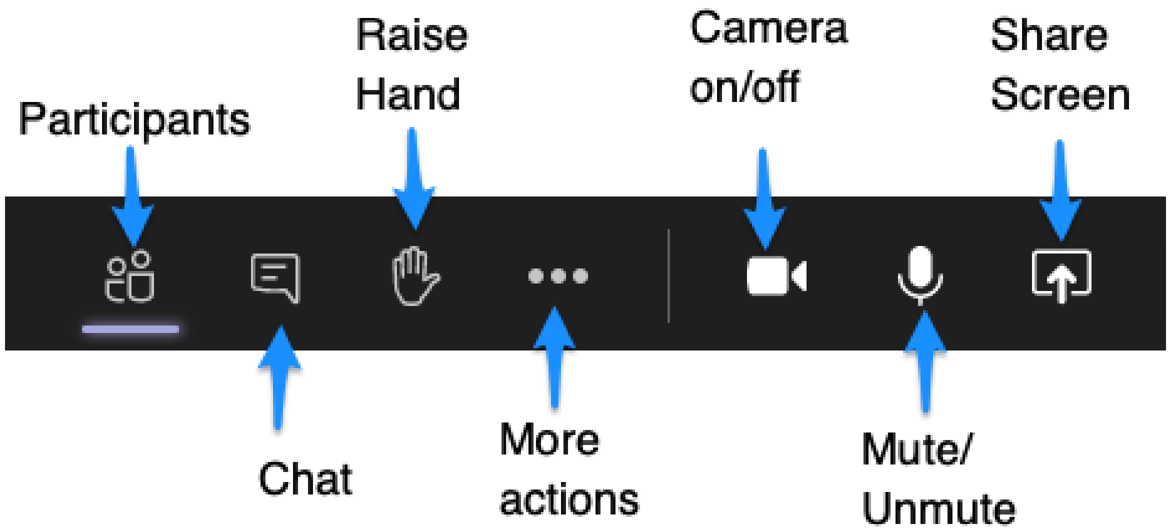
08 [12.25 – 12.30] Concluding remarks

Welcome

The aim of **this Stakeholder Meeting** is to present the **first draft of the EU-Level Technical Guidance on adapting buildings to climate change**, and to inform you on **how you can contribute** to improving it.

Online etiquette

1. Please **mute** your microphone when joining the call.
2. For feedback, please use the **chat** during presentations.
3. The **feedback sessions** are the main discussion opportunities.
4. You can **raise your hand** if you wish to speak. Once the facilitator invites you to take the floor, you can **unmute** yourself.



Reminder: The meeting will be **recorded**. Let us know in case you do not wish to appear in the record.

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Introduction

by the European Commission

Buildings in the EU’s climate adaptation policy framework –

Andras Toth

Adaptation Unit
Directorate General for Climate Action

EU-Level Technical Guidance on adapting buildings to Climate Change

Stakeholder Meeting , *29 June 2022*

EU policy on climate resilience of buildings

- **Overarching policy documents (part of the European Green Deal):**
  - Commission Communications :
    - Renovation Wave, October 2020
    - EU Climate Adaptation Strategy, February 2021
  - EU Climate Law, July 2021
- **Specific initiatives in the past two years:**
  - Level(s) Framework
  - Sustainable Finance Taxonomy
  - New European Bauhaus
  - Proposals for the revision of Energy Performance of Buildings Directive and the Construction Products Regulation
  - Digital Building Logbook
  - Green Public Procurement criteria for public buildings
  - European Standardisation Organisations (mandated by Commission) revised building standards to take into account future climate

European Commission

Thank you

European Commission

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EUTube

EU Spotify

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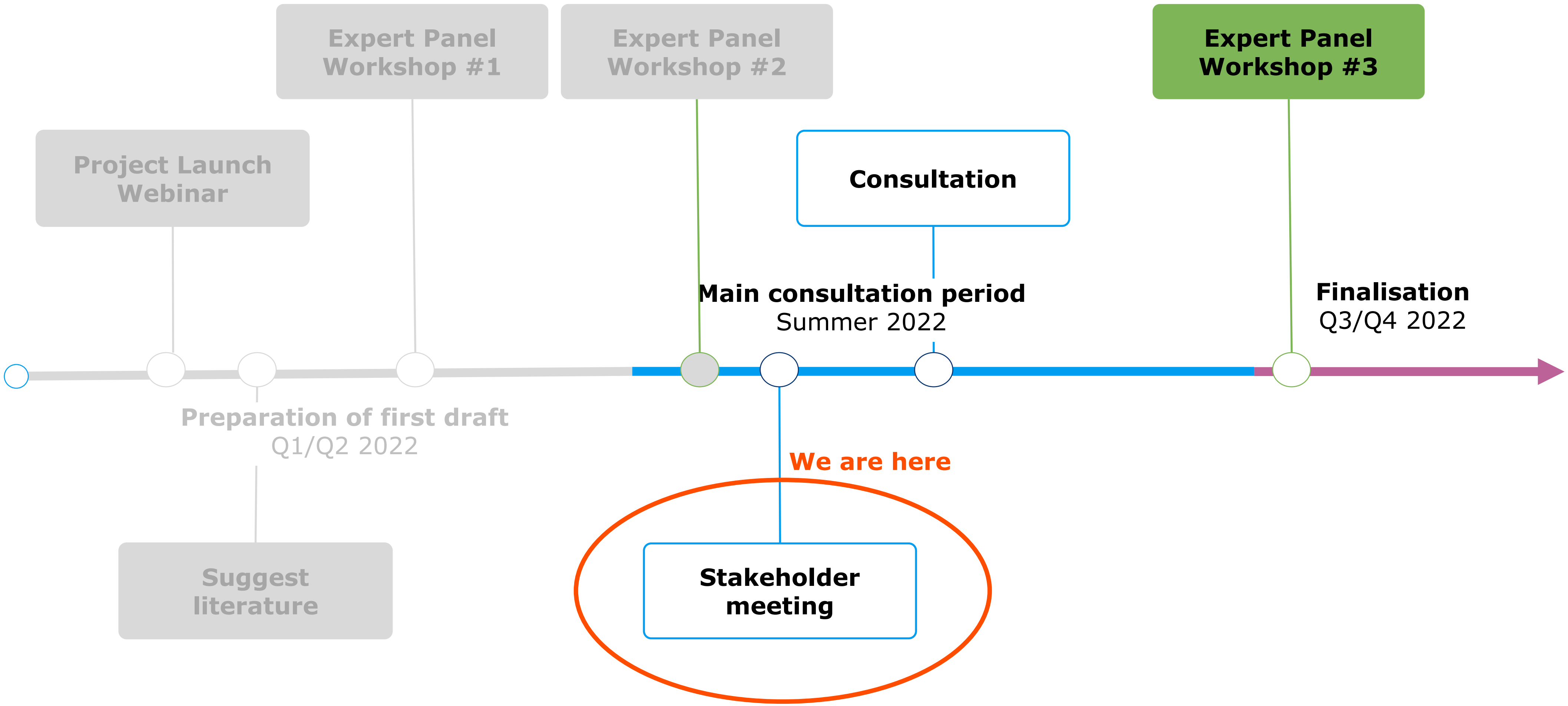
The focus of the project is to:

“to collect and synthesise existing methods, specifications, best practice and guidance for climate resilient buildings into a report that can provide practical advice.”

- **Task 1** Literature review into structured information
- **Task 2** Draft technical guidance
- **Task 3** Stakeholder Consultation
- **Task 4** Finalise and publish technical guidance

Where are we in the project?



Overview of the Technical Guidance

PROJECT WORKSTREAMS

POLICY & STANDARDS REVIEW

European Policy & Standardization Environment Adaptation Review

TOR 3.2.2

Review of EU and member state national policies and regulations relevant to the adaptation of buildings for climate change.

Climate Resilience in Structural Design Review

TOR 3.2.3

Review of the structural design of buildings to the Eurocodes and national regulations relevant to designing for climate resilience in buildings.

RISK ASSESSMENT & RATING REVIEW

Climate Vulnerability & Risk Assessment Methodology

TOR 3.2.1

Review of Climate Vulnerability & Risk Assessment methodology for buildings and blocks of buildings from existing methodologies.

Climate Resilience Rating Approach

TOR 3.2.5

Review of rating approaches for climate resilience for buildings, exploring the criteria, approach type, and link to CVRA methodology.

BEST PRACTICE GUIDANCE

Best Practice for enhancing Climate Resilience

TOR 3.2.4 + 3.2.6

Assembly of best practice climate resilience guidance for buildings and as integrated into the local environment. Best practice case studies will be categorised by climatic hazards with supporting guidance given in reference to the different processes or priorities by climatic zone, project stage and building sector actor.

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Who are you and why are you here?

We would like to get to know you and your interests with regards to the Technical Guidance better:

- Go on menti.com
- Type in the code: **6816 9661**

Or scan the QR code:

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European Policy & Standardization Environment Adaptation Review

Review of EU and member state national policies and regulations relevant to the adaptation of buildings for climate change.

Overview

- Key contents:
  - **EU strategies** for climate adaptation and their relation to buildings
  - Identification of instruments in **national policies**
  - Overview of **EU regulatory instruments** and standards
  - Summary of **impacts, synergies and trade-offs** with other EU policy objectives

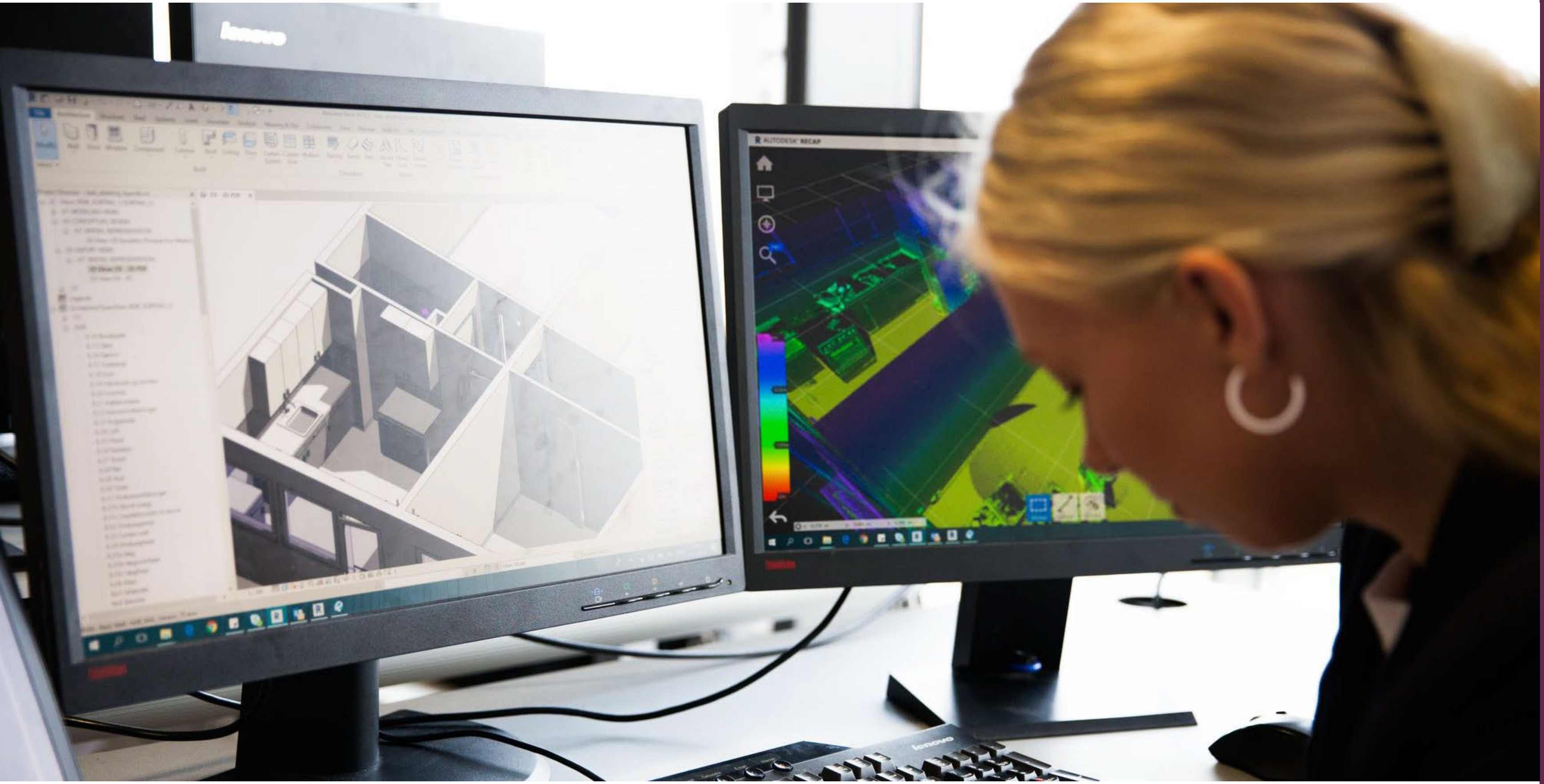
General
EU Taxonomy, Level(s) framework, Digital Building Logbooks

Designers	Investors, developers, insurers	Material producers, contractors	Public authorities
• EU Taxonomy • Level(s) Objectives 4, 5 and 2	• EU Taxonomy • Reporting regulations (NFRD, SFDR)* • Level(s) Objective 6	• Construction Products Regulation	• Green Public Procurement Criteria • Level(s), particularly Objective 5

* NFRD: Non-Financial Reporting Directive; SFRD: Sustainable Finance Disclosure Regulation

European Policy & Standardization Environment Adaptation Review

Climate Resilience in Structural Design Review



Review of the structural design of buildings to the Eurocodes and national regulations relevant to designing for climate resilience in buildings.

Overview

Structural design review

- Report summarises the current state of structural design building standards at a European and national level.
- The primary structure is considered in relation to the priority hazards identified within the EU Taxonomy classification.
- The approach of Eurocodes both present and future are discussed.
  - Future Eurocodes look to address climate resilience through scaling factors.
- Findings for national regulations are presented and includes Europe and other countries worldwide.
- Best practice guidance is provided, linked to the EU Taxonomy classification
- Typically current guidance is based on historic data sets instead of predictive data and no countries have fully implemented future climate risks.
- There is an important balance between providing resilience without over-specifying a structure and the associated increase in carbon emissions that this incurs.

Climate Resilience in Structural Design Review

Climate Vulnerability & Risk Assessment Methodology

Review of recent publications which provide information on robust approaches to climate vulnerability and risk assessment (CVRA) with a focus on those which are most applicable to the building sector.

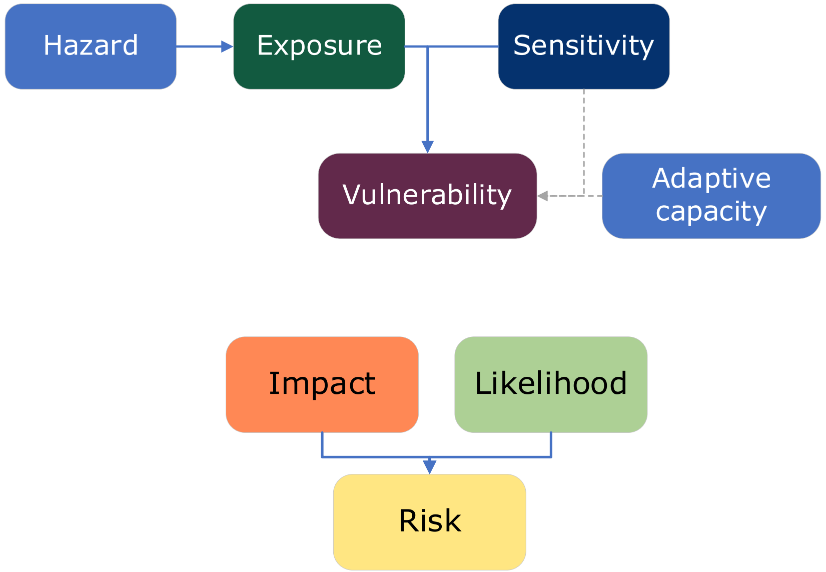
Overview

CVRA Review & Recommendations

- Report summarises existing approaches to CVRA that are potentially relevant to buildings.
- Identified core elements required and modifications needed to complete a CVRA for a building
- Suggest a practical, phased approach as outlined below.

Phase 1:

Phase 2:



Climate Vulnerability & Risk Assessment Methodology

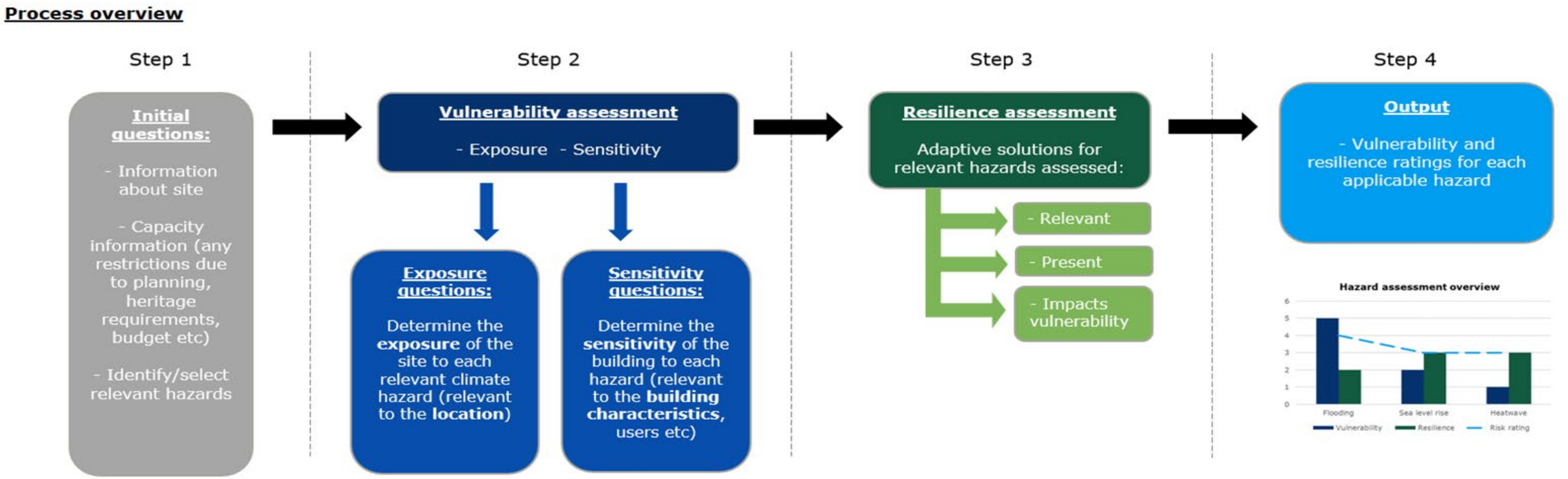
Climate Resilience Rating Approach

Review of rating approaches for climate resilience for buildings, exploring the criteria, approach type, and link to CVRA methodology.

Overview

- Focussed on approaches and tools available to rate the climate resilience of a building
- Suggest that a variety of approaches are required to meet the needs of all potential users
- Outline approach designed to provide basic climate resilience rating for small-scale developers/asset managers/owners

Climate Resilience Rating Approach



Best Practice for enhancing Climate Resilience

Assembly of best practice climate resilience guidance for buildings and as integrated into the local environment.

Overview

The document provides guidance for the development of buildings that are adapted buildings.

The document provides guidance related to:

- Climate hazards which are split into **priority hazards** and **hazards** following **EU taxonomy classification**
- The **climatic zones** of Europe
- Different **stakeholder group/building actors**
- Defined **project stages**
- Includes **case studies** of best practice for the priority hazards


EU-Level Technical Guidance on adapting buildings to climate change

BEST PRACTICE GUIDANCE

European Commission

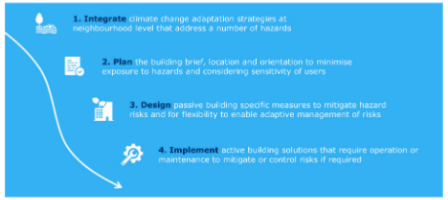
Best Practice for enhancing Climate Resilience

Sample

PRIORITY HAZARDS

This section evaluates best practice adaptation solutions for the priority hazards, i.e., those hazards that significantly impact a building and its users. The hazards evaluated are: heatwaves, storms, heavy precipitation, flooding, subsidence, and drought these are all categorised as acute hazards by the EU Taxonomy (Figure 1).

For each priority hazard, various solutions are identified and described for each part of the building's primary and secondary structure. The overall outcome is a comprehensive set of adaptation approaches which can be applied throughout the entirety of the building from its foundations to its roof. Although, the focus of adaptation approaches presented contained within the footprint of the building consideration must be paid to its immediate surroundings which interact with the building structure; adaptation approaches that are therefore not uniquely related to the structure of the buildings but may affect it have been described under the category of space considerations. The adaptation solutions described are best implemented following the hierarchy of solutions for climate adaptation presented in the figure below.



Collaboration and participation from actors involved in building construction and renovation is key to driving the implementation of the adaptation approaches put forward in this guide. However, it is not always clear for industry actors what their scope of intervention is or how they can support adaptation efforts. To facilitate this understanding, the guidance includes a series of actions and considerations that each key industry actor (governments/regulators/local authorise, design teams, buildings users, investors/developers/insurance) can take on board when assessing approaches to buildings' adaptation to climate change.

The adaptation approaches proposed may affect a building's adaptation beyond the hazard that they were originally assessed for. This may result in one adaptation approach having a positive impact on other hazards as well as having a negative impact. The interaction between adaptation approaches across hazards has been critically evaluated on a case-by-case basis. A summary table is provided in each section to identify the interaction of the solution over the priority hazards and the positive and negative outcomes. Whenever there is a '+', this means that the solution can also benefit other hazards. An exclamation point is mentioned whenever the solution acts negatively or should be considered with care regarding other hazards. A complete table with all the solutions and interactions identified is presents in Table 1 in Appendix A.

9

DG CLIMA Technical Guidance Report

Priority Hazards

1. Heat Wave

1.1 Description

A heatwave is a prolonged period of extremely high temperature for a particular region. As part of climate change, higher temperatures and heatwaves have affected all parts of Europe in the past years and will become more frequent and intense in the future. This is even more pronounced in cities, where large volumes of heat absorbing materials and limited green spaces create the so-called Urban Heat Island effect. This creates higher surface daytime temperature, and the saturated thermal mass radiates heat to its surroundings which slows night-time cooling. For residents and occupants of buildings in both urban and rural areas, higher indoor temperatures can impact human health, well-being and productivity.

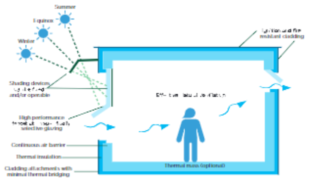
1.2 Solutions

Energy use for cooling equipment can be reduced by different adaptation mechanisms. Such mechanisms rely on reducing the exposure of the building surfaces to sunlight, reflecting sunlight, insulation, effective natural ventilation and use of elements and materials that have the capacity to absorb heat (Figure 2).

Name	Element	Impact on other hazards	Key considerations
Orientation of main facades away from direct sunlight to mimise exposure to sunlight	Building shape	N/A	Reduced energy demand and costs
Insulation	Walls, windows, roof	+ Heatwaves	+ Reduced energy demand and costs
Exterior shading for windows	Windows	! Storms	! Reduced energy demand and costs
Green roof	Roofs, vegetation	+ Drought + Heavy Precipitation	+ Benefits for biodiversity + Higher embodied carbon because of additional load from roof structure
Light outside colours	Walls, roofs	N/A	Reduced energy demand and costs
Green façades	Vegetation, walls	+ Drought ! Storms	+ Benefits for biodiversity + Reduced energy demand and costs
Photovoltaic panels on roof	Roof	! Storms	! Reduced energy source
Exterior vegetation to provide shading to the building	Vegetation	+ Drought ! Storms	+ Benefits for biodiversity + Reduced energy demand and costs
Effective natural ventilation	Space layout	N/A	Reduced energy demand and costs
Thermal mass and phase change materials	Preferred materials	N/A	+ Reduced energy demand and costs High embodied carbon from materials with high inertia
Geocooling	Other	N/A	Renewable energy source
District cooling networks	Other	N/A	Only possible where district cooling networks exist

10

Figure 2: Overview of different adaptation solutions to heatwaves.



These solutions predominantly apply to high temperature conditions in general and not only to heatwaves.

The main objective of the solutions presented here is the safeguarding of human well-being at the interior, while co-benefits and trade-offs for climate change mitigation, biodiversity and other hazards will be highlighted where relevant.

1.2.1. Building shape

Sunlight transmits substantial amounts of the heat energy to the surfaces exposed to it. In particular, the light reaching the building interior (e.g. through windows, glass facades, etc.) increases indoor temperatures. Positioning a building away from direct sunlight can therefore minimise heat gain (Porritt et al., 2011).

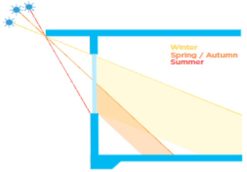
The building shape and orientation can help to reduce exposure of the building by considering the path of the sun. The direction of major facades and interior organisation of the building need to be designed in relation to this (National Building Specification NBS, 2014). Heat gains will be highest in parts of the building exposed in south-western direction. Avoiding open air flow on the inside from rooms in this direction to other parts of the buildings creates temperature zones. The result are lower temperature zones that can serve as primary work and living areas or even rescue zones during extreme heat. While such zones offer benefits for temperature regulation, considerations of indoor air quality may require specific ventilation mechanisms to ensure adequate air exchange.

The ideal orientation depends on local sun-paths and temperature profiles of other seasons. In peak summer, east and west-facing façades can heat up considerably in the morning and evening respectively. North and south-facing façades generally provide a balance of minimising heat gains in summer but allowing lighting and solar heating in winter months.

1.2.2. Foundation

Technical solutions also exist to install in a building to increase its capacity to adapt to heat. Similar to geothermal heat generation, geocooling can be an option to use heat pumps for directing heat from the indoor air to the ground, as this is usually cooler than ambient air during peak temperature hours. Such as system can be designed for geothermal heating and cooling depending on the season.

1.2.3. Walls and windows



Walls and windows offer several solutions to adapt a building to heatwaves. Firstly, the insulation of the building envelope is crucial in helping buildings adapt to higher temperatures. A building with more insulation will take longer to heat up during a heatwave event. Additionally, to avoid unwanted heat exchange and improve the energy performance of the building, design details should avoid thermal bridges, particularly around windows and the connections between floors and walls.

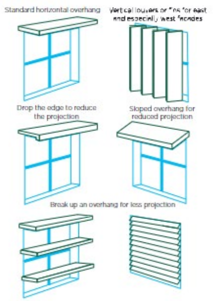
11

Sample

DG CLIMA Technical Guidance Report

Priority Hazards

Figure 3: Mechanism of overhang shading and different other shading installations



Windows allow for sunlight to directly heat up the building interior. The percentage of glazing to an elevation should be carefully considered to limit solar gain whilst still maintaining appropriate daylighting for well-being. The optimal ratio of glazed façade surface to non-glazed surface depends again on the local conditions and climatic conditions of other seasons. Fritting can be applied to glazing to help reduce the solar gain.

As windows are the main entry point for sunlight and heat in the building, high performance glazing should also be a priority for existing buildings. Replacing old windows with better insulated ones has an important impact on indoor temperatures. This measure should be considered for existing buildings even if other measures are difficult or costly to implement.

Shading installations can reduce the direct light into the building. This can include external window shutters and brise soleil above glazing to provide protection from high summer sun whilst exploiting the thermal gain of low sun during the winter. Movable blinds, either manual or automatic, can also be used but are not as effective in reducing thermal gain as the heat energy has already entered the internal space (Figure 3).

Walls and windows can also be used to reflect incoming sunlight and thereby avoid heating the building. The simplest solution is light or white colours on the building exterior. Lighter colours reflect more of the sunlight and reduce the heat gains of the materials. Special surface coatings or materials using nanotechnologies to create minuscule mirrors for sunlight can also help to reflect the energy and help maintain lower temperatures in the building (Figure 4).

Windows are also critical for effective natural ventilation of the building. Being able to open windows ensures that ventilation, particularly night-time removal of hot indoor air (see Section 1.2.7) can take place effectively.

Figure 4: Light facade colours reflect more sunlight

12

1.2.10. Other

District cooling networks have been created in southern European cities. In these systems, industrial excess cooling capacity is pumped to connected buildings, where heat exchangers can use this cooling potential as energy efficient cooling source for air conditioning systems.

1.3 Technical assessment / guidance / tools

- National and international sustainable building certification tools such as BREEAM, LEED, DNGB, HQE, etc. include criteria or recommendations for passive cooling
- The Passive House Standard contains criteria for passive cooling and can be adapted to local climate characteristics.
- Climate projection models combined with building specifications to assess the resilience to heat (in French)
- Guidance for implementing green roofs and green façades (in German)
- Thermal Resilience Design Guide of the city of Toronto
- Forecasting tools for future temperatures, for example: Weathershift

1.4 Case studies

- Cooling Singapore, a large city-wide project that resulted in a catalogue of 86 measures to mitigate the urban heat island effect and improve thermal comfort.
- Multiple existing Passivhaus houses across Europe
- SOLAR XXI, an office building in Portugal that combines façades covered in photovoltaic panels, geocooling and night-time cooling. https://www.rehva.eu/rehva-journal/chapter/solar-xxi-a-portuguese-office-building-towards-net-zero-energy-building
- Library of TU Delft, which features a large green roof that is oriented in south-western direction. https://www.greenroofs.com/projects/delft-university-of-technology-library/
- Yale Environment study of white roofs in New York. https://e360.yale.edu/features/urban-heat-can-white-roofs-help-cool-the-worlds-warming-cities

1.5 Industry actors

1.5.1. Government / Regulators / Local Authorities

Policymakers and spatial planners can support the adaptation of buildings to heat by developing an encompassing intervention framework based on the establishment of standards, raising awareness, and good quality easily accessible climatic data.

Pairing reliable and easily accessible data on climate change risks and vulnerability with climate change forecasts enables industry actors to make informed decisions and minimises the possibility of high costs of adaptation due to delayed adaptation action. Furthermore, information and data sharing of such climate change data can help to raise awareness of the need for adaptation and support its widespread uptake. This can be facilitated across all levels of government from local all the way to national.

Policies that facilitate the inclusion of climate risk considerations in standards can help ensure that climate risk is incorporated early in the planning stages, for example requirements for appropriate cooling or ventilation installations early in the construction stage can prevent costly renovations in the future. Therefore, building codes and requirements for risk assessment documentation can have substantial benefits.

Urban planners have the possibility to anticipate and influence adaptation solutions at neighbourhood level to enable individual buildings to make use of larger structures for temperature regulation. Green spaces or networks for airflow and trees along streets for shading of buildings can be implemented at a local level. Similarly, water bodies to cool air can be included in urban development plans and projects.

17

Solution	Main Hazard	Category	Cost	Ease of Implementation	Heatwaves	Storms	Heavy precipitation	Flooding	Subsidence	Drought	Commentary on benefits	Commentary on negative impacts
Active cooling and ventilation appropriate to the building needs	Heat wave	Services	LOW	SIMPLE							Beneficial impacts for drought too due providing resilience during periods of extreme heat	Higher energy consumption than passive cooling solutions. Standing water as an effect of flooding might damage the electrical components of outdoor active cooling units. Driving rain may cause damage when dirt and debris such as twigs enter the unit.
Air-Handling Unit (AHU) Condensate Capture and Reuse	Drought	Services	MEDIUM	COMPLEX							Promotes the conservation of water	Complexity of the system is increased and the water may need to be further treated for specific re-use cases.
Anti-return valves for toilets and sinks	Heavy precipitation	Services	LOW	SIMPLE							Anti-return valves are a simple solution to prevent the inflow of sewage water into the building. A possible benefit is a block-passage for smells in case of droughts.	Non-return valves may need replacing / maintenance.
Building on stilts	Flooding	Foundations	HIGH	MODERATE							Raising the building up above the flood line is a simple solution to avoid flood damage to the building.	Increasing the height of the building leads to higher wind loads and typically an increase in material required for the structure.
Building orientation to control solar gains	Heat wave	Building Shape	MEDIUM	MODERATE							Reduces energy need for cooling Beneficial impacts for drought too due providing resilience during periods of extreme heat	Potential trade-offs with natural lighting and desired heat gains during winter.
Building scale Sustainable Urban Drainage System SUDS	Heavy precipitation	Services	MEDIUM	COMPLEX							SUDS can contribute to health benefits by reducing sewage overflows and consequences to health thereof; and by exposure to greenery. Depending on the design, SUDS can also contribute to an increase in biodiversity. Vegetation as part of a SUDS contributes to heat reduction.	SUDS require maintenance and can be costly.
Favour aerodynamic shapes	Storms	Building Shape	LOW	COMPLEX							Aerodynamic shapes such as rounded corners or polygonal floor plans should be favoured as they limit wind resistance. These shapes are also earthquake resistant. A round shape will also allow the inside to have constant natural light.	Building curved walls and windows come at a high cost. Their design needs to be precise.
Rain gardens / Swales	Heavy precipitation	Vegetation & Space consideration	LOW	MODERATE							Rain gardens and swales can contribute to an increase in biodiversity and can be beneficial to health through exposure to greenery.	In dense urban areas rain gardens / swales may have a cost impact if the land value is very high. If there is a tropical or rainstorm, open water catchment areas may overflow.
Lowest liveable floor elevated above ground level / elevated building entrance and infrastructure	Storms	Structure	HIGH	SIMPLE							Storm-driven water runoffs can create intermittent flooding and soil erosion which will impact the foundations of a building. Structures in storm prone areas should be evaluated to be designed with the lowest liveable floor elevated above ground level, with appropriately anchored foundations.	However, this may have a negative impact on wind loads, therefore structures should be evaluated to provide the most appropriate storm mitigation solution.
Connection to district cooling	Heat wave	Services	MEDIUM	COMPLEX							Benefits from higher energy efficiency of centralised cooling sources Beneficial impacts for drought too due providing resilience during periods of extreme heat	District systems require masterplanning and a high level of coordination.
Blue / green roofs	Heavy precipitation	Roofs	MEDIUM	MODERATE							Blue / green roofs can provide water storage and mitigate pluvial and fluvial flooding. Blue roof water storage can be used to water plants, reducing stress on tapwater usage in case of drought. Green roofs can reduce temperatures to counter the effects of heat stress. Using the appropriate choice of vegetation for the green roof can contribute to an increase in biodiversity.	Blue roofs require a flat roof, so cannot be combined with solutions requiring, for example, pitched or domed roofs.
Designating Water Stressed Areas	Drought	Space consideration	LOW	SIMPLE							Crucial to assess current and future vulnerability to subsidence and drought induced subsidence. Help identify vulnerability of buildings to subsidence, particularly on subsidence-prone soils such as clays.	No negative impacts on other hazards have been noted
Disconnect surface water from sewage system	Heavy precipitation	Services	LOW	MODERATE							Can contribute to health benefits by reducing sewage overflows and consequences to health thereof.	Infiltration should avoid damaging foundations
Temporary flood barriers	Flooding	Services	LOW	SIMPLE							No other benefits identified.	Temporary flood barriers can be put in place only when an early warning system is in place.
Changing the size and increasing the frequency of fastenings for roof tiles, slates, and ridges.	Storms	Roof	LOW	SIMPLE							Roofs can be wholly or partly uplifted from a building's structure during high winds. To avoid this, simple improvements can be made, such as changing the size and frequency of fastenings for roof tiles, slates, and ridges. Screws and large washers are recommended.	No negative impacts have been noted.
Electrical services above flood level	Flooding	Services	LOW	SIMPLE							No other benefits were identified.	Servicing of electrical services may become more challenging.
Effective roof drainage system	Storms	Roof	LOW	SIMPLE							Around the roof, insufficient roof drainage can lead to flooding and ice dams during storms involving rain or snow. Effective drainage systems should be implemented to prevent interior water leakages and mould growth, and concentrated snow load at the eaves.	No negative impacts have been noted.

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Do you have any questions?

Let us know if you have questions about our study OR the draft Technical Guidance, by:

- Writing in the **chat**
- Raising your **hand** and taking the floor

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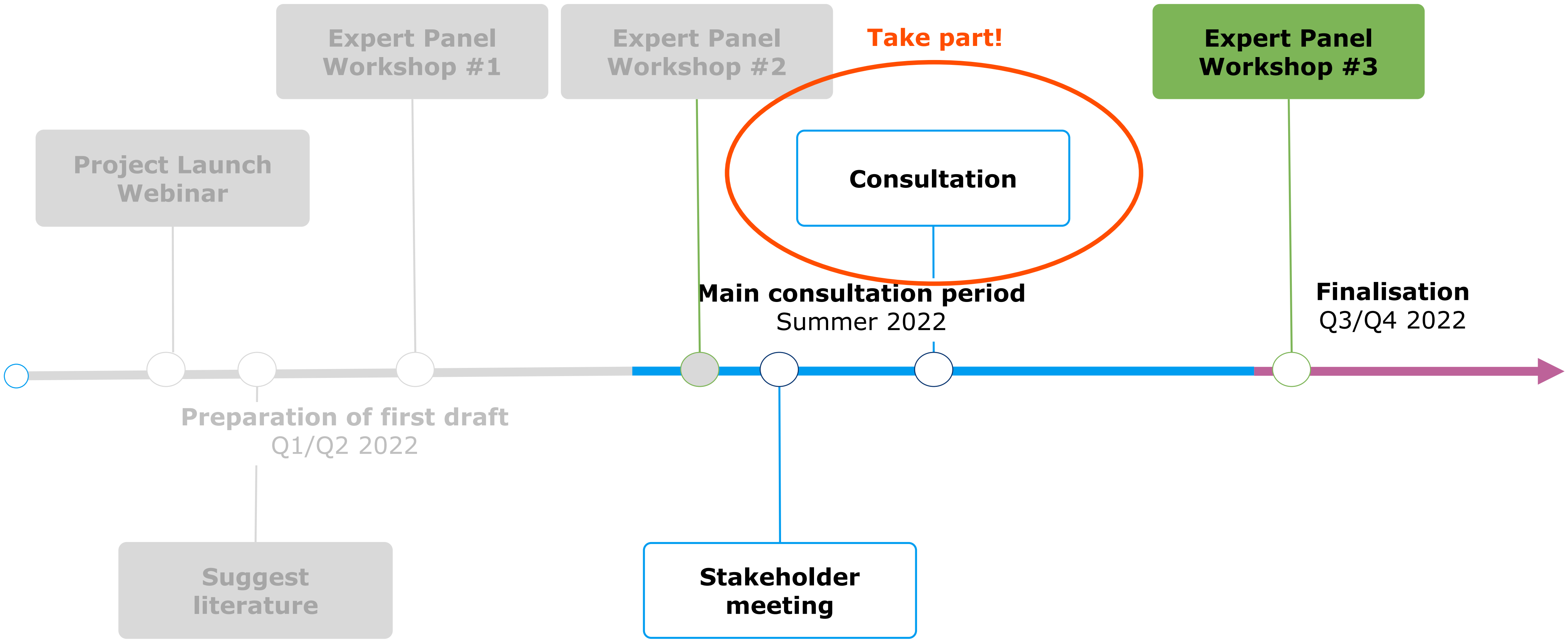


How does the public consultation work?

Why

To give (expert) stakeholders the opportunity to provide their **input to the development** of the Technical Guidance, so as to ensure that this is **useful** and **relevant** for a broad audience.

When

The Consultation will be open from the **30th of June** to the **16th of September 2022**

How

You will receive an **email** with link to download the **draft Technical Guidance**, as well as a **link to the survey** that constitutes the public consultation. You will be able to provide your feedback by filling in a short questionnaire.

What will we do with the feedback?

The study team will assess the feedback and will use it to **revise and finalise** the Technical Guidance, by the end of 2022.

RAMBOLL

Feedback on the first draft of the EU-Level Technical Guidance on adapting buildings to climate change

Why are we contacting you today?

The European Commission has initiated a **study to collect and synthesise existing methods, specifications, best practices and guidance for climate-resilient buildings into a technical guidance document that can provide practical advice** for professionals and be referenced or used in different EU policy documents. You can find more information on the study's website: https://c.ramboll.com/adapting-buildings

The study team has produced the **first draft of the EU-Level Technical Guidance on adapting buildings to climate change**. You can download the Guidance HERE.

With this short survey, **we invite you to provide your feedback on the first draft of the Technical Guidance, and to share your insights on how this could be further improved**.
This is crucial as it is of the utmost importance that this document is directly relevant and easily applicable to all relevant stakeholders within the construction industry ecosystem.

Who should answer?

The survey is targeted at all stakeholders that play a role within the construction industry ecosystem, from architects and designers to manufacturers of construction products, public authorities, insurance industry and building users. Feel free to share the link to this survey to any colleague from within your network that might have insights on the adaptation of buildings to climate change.

Please note that this survey is strictly confidential - Your identity will not be disclosed, and the survey will remain anonymous. The results will be reported at an aggregate level.

How does the survey work?

The survey is organised into 3 short sections:

Agenda

01 [11.00 – 11.05] Welcome

02 [11.05 – 11.20] Introduction by the European Commission

03 [11.20 – 11.25] What is the purpose and structure of the project?

04 [11.25 – 11.30] Ice-breaker – Who are you and why are you here?

05 [11.30 – 12.05] How does the draft Technical Guidance look like?

06 [12.05 – 12.15] Q&A

07 [12.15 – 12.25] How can you contribute?

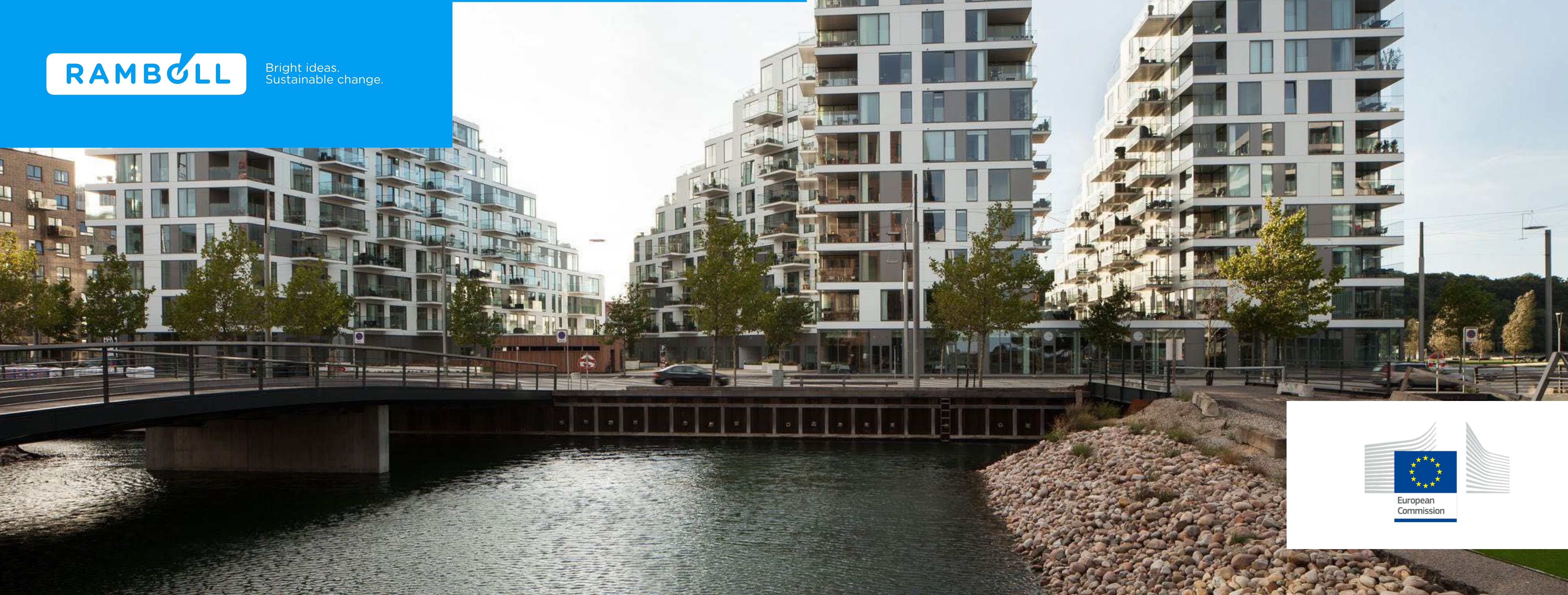
08 [12.25 – 12.30] Concluding remarks

Concluding remarks

Thank you

RAMBOLL

Bright ideas.
Sustainable change.



European
Commission