

SuPeRBE Training Material

Macro Area of Expertise:

2 RBE Assessment System

Area of Expertise:

2.2 RBTool

Level of competence: 3

What is RBTool?

RBTool (Resilient Building Tool) is a framework that applies the RBE Method at the building scale. It enables the assessment of climate risk for individual buildings, both new and existing, by analysing the vulnerability of their components. The tool structures this analysis into two main macro-categories: building components (such as materials, technical systems, and structural elements) and exposed elements (including occupants, functions, and location-specific factors). Through this approach, RBTool **integrates hazards, exposure, and vulnerability** to provide an accurate risk profile of a building. The results support building-level adaptation strategies, renovation planning, and climate-resilient design.



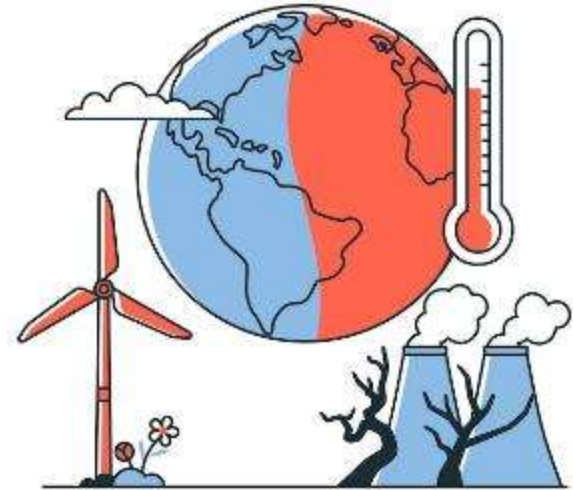
RBTOOL IMPLEMENTS THE RBE Method

RBTool is a generic frameworks that implements the RBE Method.

The RBE Method is a multi-criteria analysis approach developed to evaluate climatic risk at the building and neighbourhood scale.

RBTool generates an overall risk score for a given building, and a set of complementary indicators that detail the level of climate-related risk across specific risk categories and building components.

The RBE Method is grounded in the IPCC AR6 Risk Concept. The IPCC AR6, or the Intergovernmental Panel on Climate Change Sixth Assessment Report, is the most recent comprehensive assessment of scientific knowledge on climate change. It defines climate risk as the interaction of hazard, exposure, and vulnerability.



STRUCTURE OF RBTOOL

The RBTool Central European version supports climate risk assessment based of the following structure:

1. Issues (Hazards)
2. Macro-Categories (Building components)
3. Risk Categories (Hazard x Exposed element)
4. Criteria (Indicators)

RBTool Structure

The RNTool is divided into:

1. **Issues:** Most significant climate-related hazards for buildings in Central Europe.
2. **Macro-Categories:** Building Systems/components
3. **Exposed Elements:** Physical subcomponents within each macro-category.
4. **Risk Categories:** Specific hazard x exposed element pairs
5. **Indicators:** Qualitative and quantitative

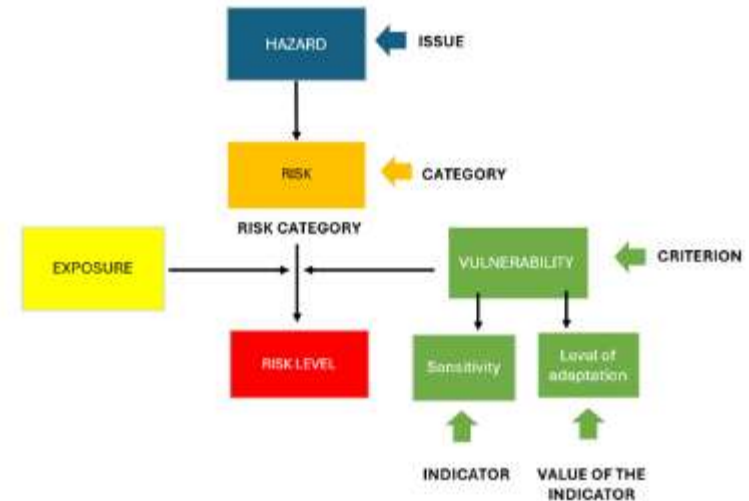


Figure 3 – Impact chains and components of the RBE Method

ACTION IS CENTRAL

Structure of RBTool

ISSUES

The RBTool Central European version supports climate risk assessment in relation to the following 7 Issues:



A Heavy precipitation



D Droughts



G Mass Movement



B Floods



E Storms



C Extreme heat

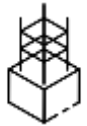


F Wild-fire

Structure of RBTool

Macro categories

Representing key Building Components (12), addressed in RBTool for Central Europe are:



Foundations



Load Bearing Structural Frame



Non-load Bearing Elements



Energy System



Ventilation System



Sanitary Systems



Other Systems



Utilities



Landscaping



Occupants



Location

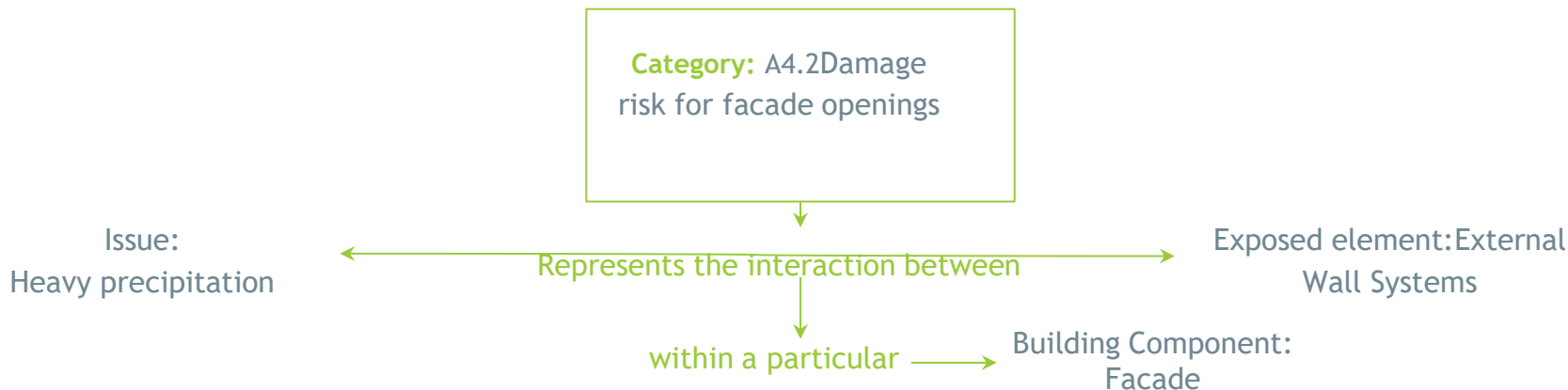


Community

Structure of RBTool

Risk categories

A Risk Category represents the specific risk arising from the interaction between an issue and an Exposed Element within a particular Building Component (Macro Category).



Risk Categories have been defined in the Central European version of the RBTool. These categories cover all seven Issues addressed in the tool and span across the key Urban Sectors most relevant for neighbourhood-scale climate adaptation.

Structure of the Tool

A	Heavy Precipitation
A1	Foundations
A1.1	Damage risk for piles
A1.2	Damage risk for basements
A2	Load bearing structural frame
A2.1	Damage risk for frame (beams, columns and slabs)
A2.3	Damage risk for external walls
A2.4	Damage risk for balconies
A3	Non-load bearing elements
A3.1	Damage risk for ground floor slab
A3.2	Damage risk for internal walls, partitions and doors
A3.3	Damage risk for stairs and ramps
A4	Facade
A4.1	Damage risk for external wall systems, cladding and shading devices
A4.2	Damage risk for facade openings
A4.3	Damage risk for external paints, coatings and renders
A5	Roof
A5.1	Damage risk for structure
A6	Fittings and furnishings
A6.3	Damage risk for ceilings
A7	In-built lighting system
A7.2	Efficiency of control systems and sensors
A8	Energy system
A8.3	Efficiency of electricity generation and distribution
A9	Ventilation system
A9.2	Efficiency of ductwork and distribution
A10	Sanitary systems
A10.1	Efficiency of cold water distribution
A10.3	Efficiency of water treatment systems
A10.4	Efficiency of drainage systems
A11	Other systems
A11.1	Damage risk for lifts and escalators
A11.2	Efficiency of firefighting installations
A11.3	Damage risk for communication and security installation
A12	Utilities
A12.1	Damage risk for connection and diversions
A13	Landscaping
A13.1	Damage risk for paving and other hard surfacing
A13.3	Efficiency of drainage system
A14	Location
A14.1	Proximity
A14.2	Greenery
A15	Occupants
A15.3	Emergency
A16	Community
A16.1	Safety

B	FLOODS
B1	Foundation
B1.1	Damage risk for piles
B1.2	Damage risk for basements
B1.3	Damage risk for retaining walls
B2	Load bearing structural frame
B2.1	Damage risk for frame (beams, columns and slabs)
B2.3	Damage risk for external walls
B3	Non-load bearing elements
B3.1	Damage risk for ground floor slab
B3.2	Damage risk for internal walls, partitions and doors
B4	Facade
B4.1	Damage risk for external wall systems, cladding and shading devices
B5	Roof
B5.1	Damage risk for structure
B6	Fittings and furnishings
B6.1	Efficiency of sanitary fittings
B6.2	Damage risk for cupboards, wardrobes and worktops
B6.5	Damage risk for floor coverings and finishes
B7	In-built lighting system
B7.1	Damage risk for light fittings
B7.2	Efficiency of control systems and sensors
B8	Energy system
B8.1	Efficiency of heating plant and distribution
B8.2	Efficiency of cooling plant and distribution
B8.3	Efficiency of electricity generation and distribution
B9	Ventilation system
B9.1	Efficiency of air handling units
B10	Sanitary systems
B10.1	Efficiency of cold water distribution
B10.2	Efficiency of hot water distribution
B10.3	Efficiency of water treatment systems
B10.4	Efficiency of drainage systems
B11	Other systems
B11.1	Damage risk for lifts and escalators
B11.3	Damage risk for communication and security installation
B12	Utilities
B12.1	Efficiency of connection and diversions
B12.2	Damage risk for substation and equipment
B13	Landscaping
B13.1	Damage risk for paving and other hard surfacing
B13.2	Damage risk for fencing, railing and walls
B13.3	Efficiency of drainage system
B14	Location
B14.1	Proximity
B14.2	Greenery
B15	Occupants
B15.2	Accessibility
B15.3	Emergency
B16	Community
B16.1	Safety

C	Extreme Heat
C2	Load-bearing system
C2.3	Damage risk for external walls
C4	Facade
C4.1	Damage risk for external wall systems, cladding and shading devices
C4.2	Damage risk for facade openings
C4.3	Damage risk for external paints, coatings and renders
C5	Roof
C5.1	Damage risk for roof structure
C5.2	Damage risk for roof weatherproofing
C7	In-built lighting system
C7.2	Efficiency of control systems and sensors
C8	Energy system
C8.1	Efficiency of heating plant and distribution
C8.2	Efficiency of cooling plant and distribution
C8.3	Efficiency of electricity generation and distribution
C9	Ventilation system
C9.1	Efficiency of ductwork and ventilation distribution
C10	Sanitary systems
C10.1	Efficiency of cold water distribution
C10.3	Efficiency of water treatment systems
C11	Other systems
C11.3	Efficiency of communication and security installation
C11.4	Efficiency of telecoms and data installation
C13	Landscaping
C13.1	Damage risk for paving and other hard surfacing
C14	Location
C14.1	Proximity
C14.2	Greenery
C15	Occupants
C15.1	Comfort

D	Droughts
D7	Fittings and furnishings
D7.1	Damage risk for sanitary fittings
D10	Sanitary systems
D10.1	Efficiency of cold water distribution
D10.3	Efficiency of water treatment systems
D9	Ventilation systems
D9.1	Efficiency of air handling units
D9.2	Efficiency of ductwork and distribution
D14	Location
D14.1	Proximity
D14.2	Greenery
D15	Occupants
D15.3	Emergency

Structure of the Tool

E	STORMS
E1	Foundation
E1.2	Damage risk for basements
E2	Load bearing structural frame
E2.1	Damage risk for frame (beams, columns and slabs)
E2.3	Damage risk for external walls
E3	Non-load bearing elements
E3.2	Damage risk for internal walls, partitions and doors
E4	Facade
E4.1	Damage risk for external wall systems, cladding and shading devices
E4.2	Damage risk for Facade openings
E4.3	Damage risk for External paints, coatings and renders
E5	Roof
E5.1	Damage risk for Structure
E7	In-built lighting system
E7.1	Damage risk for light fittings
E7.2	Efficiency of control systems and sensors
E8	Energy system
E8.1	Efficiency of heating plant and distribution
E8.3	Efficiency of electricity generation and distribution
E9	Ventilation system
E10.4	Efficiency of drainage systems
E11	Other systems
E11.3	Damage risk for communication and security installation
E12	Utilities
E12.1	Efficiency of connection and diversions
E14	Location
E14.1	Proximity
E14.2	Greenery
E15	Occupants
E15.2	Accessibility
E15.3	Emergency
E16	Community
E16.1	Safety

F	WILDFIRE
F2	Load bearing structural frame
F2.1	Damage risk for frame (beams, columns and slabs)
F3	Non-load bearing elements
F3.1	Damage risk for ground floor slab
F3.2	Damage risk for internal walls, partitions and doors
F3.3	Damage risk for stairs and ramps
F4	Facade
F4.1	Damage risk for external wall systems, cladding and shading devices
F4.2	Damage risk for facade openings
F5	Roof
F5.1	Damage risk for structure
F6	Fittings and furnishings
F6.1	Damage risk for cupboards, wardrobes and worktops
F7	In-built lighting system
F7.1	Damage risk for light fittings
F8	Energy system
F8.1	Efficiency of electricity generation and distribution
F9	Ventilation system
F9.1	Efficiency of ductwork and distribution
F11	Other systems
F11.1	Damage risk for lifts and escalators
F11.2	Damage risk for firefighting installations
F12	Utilities
F12.1	Damage risk for substation and equipment
F13	Landscaping
F13.2	Damage risk for fencing, railing and walls
F14	Location
F14.1	Proximity
F15	Occupants
F15.1	Emergency
F16	Community
F16.1	Safety

G	Mass Movement
G1	Foundations
G1.1	Damage risk for piles
G2	Load bearing structural frame
G2.3	Damage risk for external walls
G7	In-built lighting system
G7.2	Efficiency of control systems and sensors
G14	Location
G14.1	Proximity
G14.2	Greenery

Criteria and Indicators

As for RNTool, each Risk Category in RBTool is assessed through a structured set of vulnerability, exposure and hazard criteria, which are operationalised via indicators.

Each indicator is documented with:

- a description and unit of measure (if applicable)
- performance direction (Higher is Better, Lower is Better, or Qualitative)
- benchmarks:
 - value 0 = optimal condition (score = 0)
 - value 1 = critical condition (score = 1)
- assessment method
- data sources
- references



Exposure Criteria

Concerning exposure, RBTool adopts a unique qualitative criterion called “Exposure Magnitude”, associated with the qualitative indicator “Exposure Level”. This indicator is used to express the extent to which a specific Exposed Element (see Table 20) is present, and thus potentially affected by a given climate hazard. The Exposure Level answers the question: 'How many elements are exposed?', focusing on the quantity or prevalence of Exposed Elements within the building.

Exposure Level Normalised Value	Scenario
0,1	Very few isolated Exposed Elements or total surface area <5% of the related building component (Macro-category)
0,3	Few Exposed Elements or total surface area less than 15% of the corresponding building component)Macro-category)
0,5	Moderate number of Exposed Elements or total surface area between 15% and 30% of the corresponding building component (Macro-category)
0,7	Numerous Exposed Elements or total surface are between 30% and 60% of the corresponding building component (Macro Category)
0,9	Exposed Elements dominate the relevant building component (Macro category) or total surface area >60% of the related building component (Macro category)

Contextualisation

To be used effectively, the RBTool requires contextualisation, which transforms the generic framework into a local operational assessment tool tailored to specific buildings and territorial needs.

It ensures:

- Relevance of indicators
- Use of applicable benchmarks
- Meaningful risk values
- Efficient assessment focused on what really matters



Overview of the Contextualisation Process

Main Steps:

1. Selection of relevant Hazards
2. Selection of Macro-Categories and Risk Categories
3. Benchmark definition
4. Weight assessment
5. Local data and indicator validation

Step 1: Selection of Relevant Hazards

Not all climate hazards are equally relevant in all territories. Therefore, the first contextualisation step is to select the most significant Issues (Hazards) for the local building stock. This selection may be based on:

- local or regional climate vulnerability assessments
- SECAPs or national adaptation strategies
- historical damage data to buildings
- stakeholder consultation (e.g., local engineers, facility managers)

Hazards with negligible probability or impact may be excluded from the local RBTTool version.



Step 2: Selection of Macro-Categories and Risk Categories

Macro Categories

Each Macro Category corresponds to building components, spaces, or users that may or may not be present depending on the building's design, function, and context. The inclusion of a Macro Category in the assessment process should reflect its actual relevance and presence in the specific building

Risk Categories

The Risk Categories linked to each Macro Category must be selected considering the building's typology and use. A hospital and a residential apartment block, for example, may require different sets of Risk Categories due to differing vulnerability profiles and critical functions

Step 3: Benchmarks Definition

For the Vulnerability criteria and the Hazard criteria, the contextualisation process requires:

- Assigning local benchmarks (value 0 for optimal performance and value 1 for critical performance).
- Defining or adapting the assessment method for calculating the indicator value.

When localising benchmarks and methods, the following hierarchy of sources should be respected:

- Binding regulations (e.g., building codes, laws).
- Recognised technical standards (e.g., ISO, CEN, national standards).
- Authoritative guidelines (e.g., national planning documents, EU reports).
- Peer-reviewed scientific literature and other technical references.

Step 4: Assignment of weights

In RBTool, the assignment of weights to Risk Categories and Macro Categories should be based on their relative importance in the specific context of the assessment. The weighting process should consider:

- Functional relevance.
- Vulnerability sensitivity.
- Potential consequences of damage or disruption.
- Expert judgement and participatory methods



Step 5: Indicator Validation and Data Sources

1. Validate local data depending on:

- Availability and accuracy of the information.
- Compatibility of the data with the assessment method.

2. Adjust indicators if needed.

3. Document data sources like energy audits, BIM, on-site inspections.



Practical Example of RBTool

Step 1 Assignment of Hazard Values to Issues

Option 1

1.1 The value of likelihood of Hazard is assigned (HV)

Code	Hazard	HV
A	Heavy Precipitation	0,8
C	Extreme Temperatures	0,9



HV value ranges from 0 to 1. HV answers the question: how severe is the hazard ?

Practical Example of RNTool

Step 1

Option 2

In alternative, climatic indicators can be used to determine HV. The following is an example for Hazard A Heavy Precipitation

Code	Hazard criteria	Hazard indicator	Unit of measure	Value
H.A1	R20	Number of Days with Precipitation ≥ 20 mm	number	2
H.A2	SDII	Simple Daily Intensity Index	mm/day	8
H.A3	RX1DAY	Maximum total precipitation that falls in a single day	mm	60

Practical Example of RBTool

Step 1

Option 2

The value of climatic hazards is normalised in the interval (0-1) - Example for H.A3

Code	Hazard criteria	Hazard indicator	Unit of measure	Value
H.A3	RX1DAY	Maximum total precipitation that falls in a single day	mm	60

Type: Lower is better

Benchmark 1 - Critical	Xmax	100
Benchmark 0- Optimal	Xmin	20
Value of the indicator	Xi	60
Normalised Value		0,5

$$Nv = \frac{Xi - Xmin}{Xmax - Xmin}$$

Practical Example of RBTool

Step 1

Option 2

The value of climatic hazards is normalised in the interval (0-1) - Example for H.A3

Code	Hazard criteria	Hazard indicator	Normalised Value	Weight	Weighted value
H.A1	R20	Number of Days with Precipitation ≥ 20 mm	0,7	0,33	0,23
H.A2	SDII	Simple Daily Intensity Index	0,7	0,33	0,23
H.A3	RX1DAY	Maximum total precipitation that falls in a single day	0,5	0,33	0,17

Note: Weighted value = normalised value * weight

HV: 0,63

Practical Example of RBTool

Exposure Value (EV) calculation for Risk Categories

The **value of the Exposure Indicators** associated with the Risk Categories is calculated

A	Heavy Precipitation					
A4	Facade	Exposure Criteria		Exposure Indicator	Unit	Value
A4.2	Facade openings	E.4.2.1	Extension of the glazed envelope	Total area of glazed elements in the envelope of the building	m² of glazing/ m² total envelope surface	60%

Type: Lower is better

Benchmark 1 - Critical	Xmax	100%
Benchmark 0- Optimal	Xmin	0%
Value of the indicator	Xi	60%
Normalised Value		0,6

$$Nv = \frac{Xi - Xmin}{Xmax - Xmin}$$

Practical Example of RBTool

Vulnerability Values calculation for Risk Categories

The value of the Vulnerability Indicators of Risk Categories is calculated (example for the Risk Category C8.1)

A4.2	Facades	Criterion	Indicator	Unit	Value
	A4.2.1	Safe Windows and Shutters	Share of windows protected against hail	%	25
	A4.2.2	Sealing Effectiveness	Share of openings with effective water/air infiltration protection	%	30
	A4.2.3	Glass Strength Against Water Pressure	Share of windows rated for pressure resistance	%	15
	A4.2.4	Ease of Disassembly & Material Change	Share of materials that can be replaced easily	%	40

Practical Example of RBTool

Step 3/4/5 Vulnerability Values calculation for Risk Categories

The value of the Vulnerability Indicators of Risk Categories is normalised in the interval 0-1 (Example for criterion A4.2.1)

Criterion	Indicator	Unit	Value
Safe Windows and Shutters	Share of windows protected against hail	%	25

Type: Higher is better

Benchmark 1 - Critical	Xmax	0
Benchmark 0- Optimal	Xmin	100
Value of the indicator	Xi	25
Normalised Value		0,75

$$Nv = \frac{Xi - Xmin}{Xmax - Xmin}$$

Practical Example of RBTool

Step 3/4/5 Vulnerability Values calculation for Risk Categories

To calculate the Vulnerability Value (VV) for Risk Categories a weight shall be assigned to Vulnerability Indicators (Example for Risk Category C8)

A4.2	Facades	Criterion	Normalized Value
	A4.2.1	Safe Windows and Shutters	0.75
	A4.2.2	Sealing Effectiveness	0.70
	A4.2.3	Glass Strength Against Water Pressure	0.85
	A4.2.4	Ease of Disassembly & Material Change	0.60

Practical Example of RBTool

Step 3/4/5 Vulnerability Values calculation for Risk Categories

The value of the Vulnerability Indicators of Risk Categories is calculated (example for the Risk Category C8.1)

A4.2	Facades	Criterion	Normalized Value	Weight
	A4.2.1	Safe Windows and Shutters	0.75	0.30
	A4.2.2	Sealing Effectiveness	0.70	0.20
	A4.2.3	Glass Strength Against Water Pressure	0.85	0.25
	A4.2.4	Ease of Disassembly & Material Change	0.60	0.25

Practical Example of RBTool

Step 3/4/5 Vulnerability Values calculation for Risk Categories

The value of the Vulnerability Indicators of Risk Categories is calculated (example for the Risk Category C8.1)

A4.2	Facades	Criterion	Normalized Value	Weight	Weight Value
	A4.2.1	Safe Windows and Shutters	0.75	0.30	0.22
	A4.2.2	Sealing Effectiveness	0.70	0.20	0.14
	A4.2.3	Glass Strength Against Water Pressure	0.85	0.25	0.21
	A4.2.4	Ease of Disassembly & Material Change	0.60	0.25	0.15

0,72

Practical Example of RBTool

Calculation of the Risk Value for Risk Categories

Risk Value of Risk Categories is calculated as a weighted geometrical mean of HV, EV and VV (Example for Risk Category A4)

A4	Facades	Weight
Hazard (HV)	0,63	0,25
Exposure (EV)	0,6	0,25
Vulnerability (VV)	0,68	0,5
Category risk value		0,61

Note: Weights are assigned by the user, Total value must be 1

Practical Example of RBTool

Calculation of Risk Value for the Building Element(Macro-Category)

Risk Value of Macro Categories is calculated as a weighted sum of Risk Values of the Categories

A4	Facades	Category risk level	Weight	Weighted value
A4.1	Damage risk for external wall systems, claddings and shading devices	0,67	0,5	0,33
A4.2	Damage risk for facade openings	0,71	0,25	0,18
A4.3	Damage risk for external paints, coatings and renders	0,81	0,25	0,2
Macro category risk value				0,71

Note: Weights are assigned by the user, Total value must be 1

Practical Example of RBTool

Calculation of Risk Value for a Hazard

Risk Value in relation to the Hazard calculated as a weighted sum of Risk Values of the Macro Categories (Example for Hazard A)

A	Heavy precipitation	Macro category risk level	Weight	Weighted value
A4	Facade	0,71	0,5	0,35
A5	Roof	0,65	0,5	0,32
Hazard risk value				0,68

Note: Weights are assigned by the user, Total value must be 1

Practical Example of RBTool

Calculation of overall Risk Value

Overall Risk Value calculated as a weighted sum of Risk Values of Hazards

Code	Hazard	Hazard risk value	Weight	Weighted value
A	Heavy precipitation	0,68	0,4	0,27
C	Extreme temperatures	0,75	0,6	0,45
Overall risk value				0,72

Note: Weights are assigned by the user, Total value must be 1

RISK ASSESSMENT RESULTS BY CATEGORY

Building Component: Facades

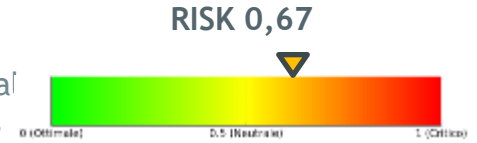
- The rating system also produces results at the level of the Exposed Elements within a building.



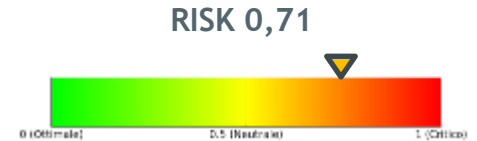
Risk Category



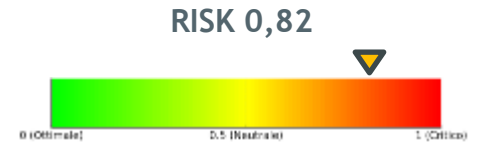
Damage risk for external wall systems, claddings and shading devices



Damage risk for facade openings



Damage risk for external paints, coatings and renders



RISK ASSESSMENT RESULTS BY BUILDING COMPONENT

Hazard: Heavy precipitation



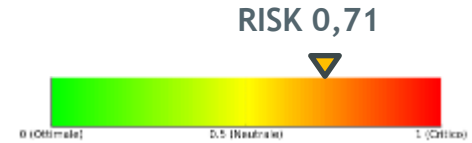
- For each climate hazard, the rating system produces a score that indicates the risk level of the Building Components included in the assessment.



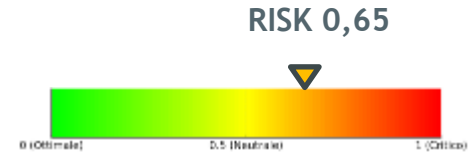
Building Component



Facades



Roofs



RISK ASSESSMENT RESULTS BY HAZARD AND OVERALL

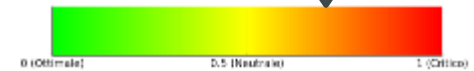
The application of the assessment system produces scores (0,1) that represent:

- the overall risk level of the Building
- the risk associated with each individual Issue
- the risk by Building Component
- the risk concerning specific Exposed Elements

RISK PER HAZARD

Extreme Temperatures

RISK 0,75

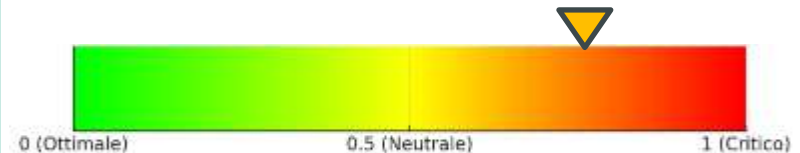


Heavy Precipitation

RISK 0,68



OVERALL RISK - 0,72

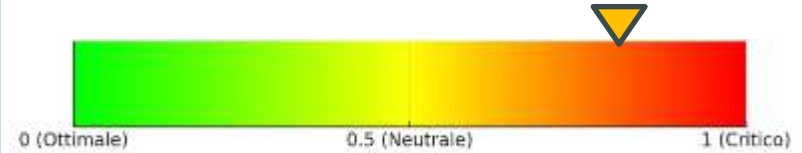


RISK ASSESSMENT RESULTS

The application of the assessment system produces scores (0,1) that represent:

- the overall risk level of the building
- the risk associated with each individual hazard
- the risk by Building Element
- the risk concerning specific exposed elements

OVERALL RISK - 0,72



RISK PER HAZARD

Extreme Temperatures



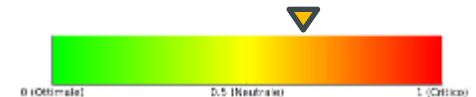
RISK 0,75



Heavy Precipitation



RISK 0,68



Cross Scale Assessment

Urban Sectors are harmonised between RNTool and RBTool, enabling consistent data use and coordinated planning across scales. This ensures that building-level measures contribute to urban resilience goals and that neighbourhood strategies are informed by building vulnerabilities.

Macro Category	Urban Sector
Foundations	Buildings
Load Bearing Structural Frame	Buildings
Non-load Bearing Elements	Buildings
Facade	Buildings
Roof	Buildings
Fitting and Furnishings	Buildings, Water
In-built Lighting Systems	Energy, Health
Energy System	Energy, Health
Ventilation System	Energy, Health
Sanitary Systems	Energy, Health
Other Systems	Energy, Health
Utilities	Energy, Health
Landscaping	Environment and Biodiversity
Occupants	Health
Location	Buildings
Community	Civil Protection and Emergency

Specificity of RBTool Indicators

The Vulnerability and Hazard Criteria are similar to the ones in RNTool: guaranteeing a cross-scale assessment- that the same sector (e.g., Water, Energy, Transport) can be analysed in its entirety, from its origin in buildings up to its management at neighbourhood level.

-The exposure is assessed via single qualitative criterion:

Exposure Level: How many elements are exposed.

Normalised scale: from 0.1 being very few to 0.9 being a dominant presence.



Outputs and Their Use

Risk values provided at multiple levels:

- By Risk Category:** Enables a detailed understanding of the specific types of climate-related risks affecting the building (e.g., flood risk, heat stress, wind damage).
- By Macro-Category (e.g., façade, roof):** Facilitates targeted assessments of building components, helping to identify which structural elements are most vulnerable.
- Overall Building Risk:** Aggregates all categories into a single metric, offering a comprehensive view of the building's overall climate risk profile.

Supports decision-making for:

- Climate-resilient building renovation:** Guides the design and implementation of adaptation measures to increase the building's resilience against projected climate hazards.
- Prioritisation of interventions:** Helps stakeholders allocate resources efficiently by identifying the most urgent and impactful actions.
- Integration with neighbourhood-level RNTool results:** Ensures consistency between building-scale assessments and wider neighbourhood-scale resilience strategies, fostering coordinated climate adaptation planning.