



REUSING ROOFTOPS

BARCELONA 2024

Architecture Competition

organized by:



in collaboration with:





Organizer

Archstorming

Archstorming has organized more than 20 architecture competitions since 2017, becoming the leading platform for innovative and humanitarian sustainable architecture across various platforms, among which Archstorming and Archademy.ai stand out.

We select themes that seek to transform the current architectural paradigm and organize competitions, courses, and events both online and in-person, involving all sector stakeholders.

We have a community of over 600,000 people from 150 countries committed to sustainable architecture.



In partnership with

Mies van der Rohe Foundation

The Mies van der Rohe Foundation was created in 1983 by the Barcelona City Council with the initial goal of carrying out the reconstruction of the German Pavilion designed by Ludwig Mies van der Rohe and Lilly Reich for the Barcelona International Exposition of 1929.

In addition to attending to the conservation and knowledge of the Mies van der Rohe Pavilion, the Foundation promotes debate, dissemination, and awareness on contemporary architecture and urbanism topics. It also promotes the study of the work of Ludwig Mies van der Rohe, Lilly Reich, and the Modern Movement. Fulfilling

its purposes, the Foundation carries out different activities such as awards, congresses, conferences, exhibitions, workshops, and installations.

Among these programs, the joint organization with the European Commission of the European Union Contemporary Architecture Award – Mies van der Rohe Award stands out as one of the most prestigious architecture awards in Europe.

Collaborators



Main Sponsor

Soprema

The SOPREMA Group has a long history of offering construction solutions in waterproofing and insulation that demonstrate a solid commitment to innovation and sustainability.

Its clear commitment to ecological architecture and adaptation to climate change is a prime example of the values promoted by the "Reusing Rooftops Barcelona 2024" initiative, making the SOPREMA Group a key ally in efforts to revitalize rooftops, terraces, and courtyards, transforming them into valuable spaces that improve the quality of life in urban settings.



Main Sponsor

Sika

Sika España, part of the Sika Group, excels in the construction chemistry sector with its innovative products for sealing and waterproofing roofs and pavements.

Committed to ethical and sustainable construction, Sika España plays a vital role in the 'Reusing Rooftops Barcelona 2024' initiative, transforming roofs and terraces into functional and energy-efficient spaces. This aligns perfectly with the initiative's goals to enhance urban living through sustainable and practical modifications to existing structures.



Introduction

Reusing Rooftops Barcelona 2024 seeks innovative and sustainable ideas for the **reuse of unused rooftops, terraces, and courtyards** in densely populated urban environments. It is focused on the city of **Barcelona** and invites the international community of architects to submit proposals that transform these often-forgotten spaces into living spaces with endless possible uses, thus fostering a new way of experiencing cities from the heights.

Transforming rooftops into productive spaces not only contributes to the creation of areas for recreation and nature in the city but also plays a **crucial role in improving air quality, reducing urban heat islands, better rainwater management, thermal insulation of buildings with the consequent energy saving, and increasing and protecting local biodiversity.** In addition, we seek that the innovative

proposals arising from this competition can serve as replicable models for other cities facing similar challenges.

At a time when the climate crisis demands concrete actions, “Reusing Rooftops Barcelona 2024” becomes a platform to address urban sustainability and climate adaptation in regions particularly exposed to the impacts of the climate crisis, such as the Mediterranean region.

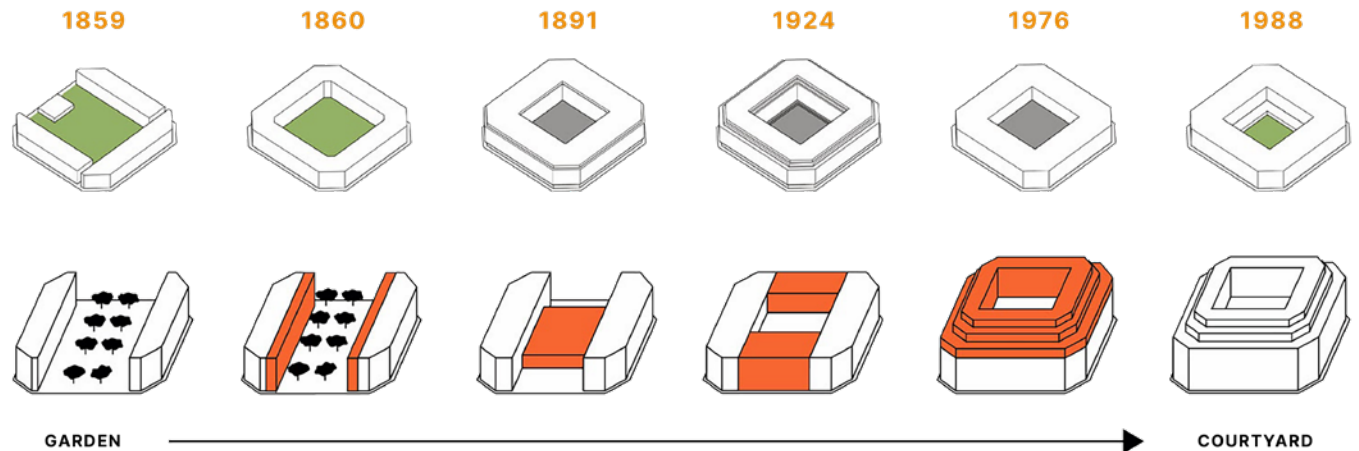
▼ 67% of Barcelona's buildings have flat roofs, and most of them are underutilized.



Location: the "Eixample" of Barcelona

The chosen environment to develop the proposals is the emblematic "Eixample" of Barcelona, a district known for its unique urban configuration and rich architectural heritage, currently facing **significant challenges** such as **high construction density** and the **scarcity of green areas**.

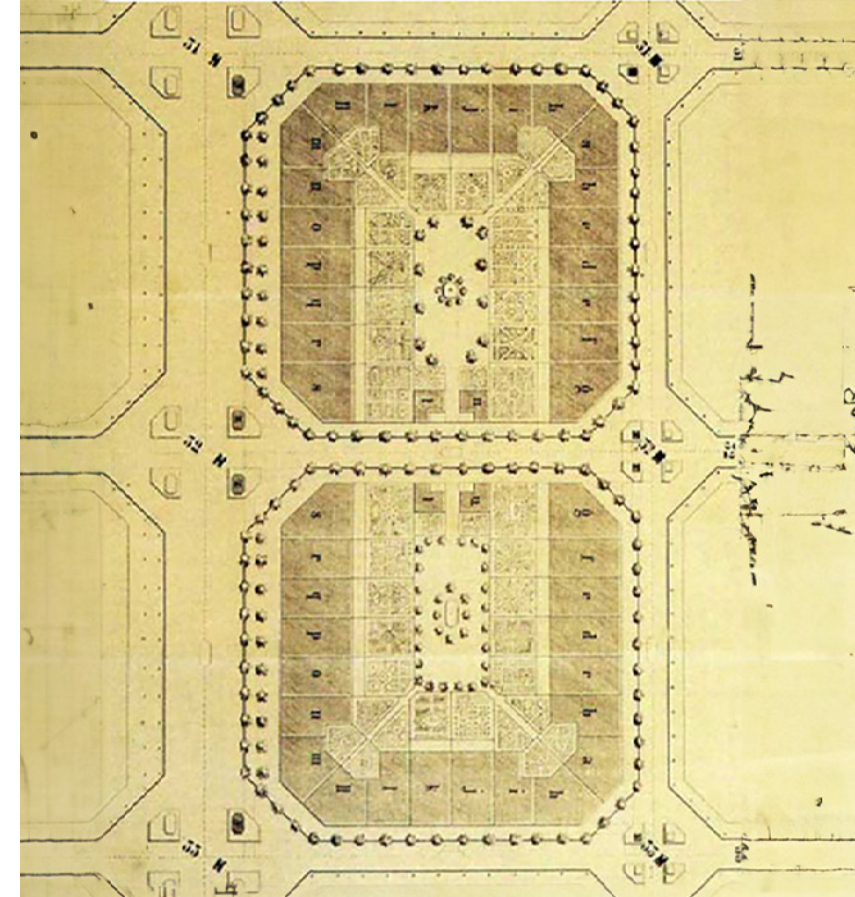
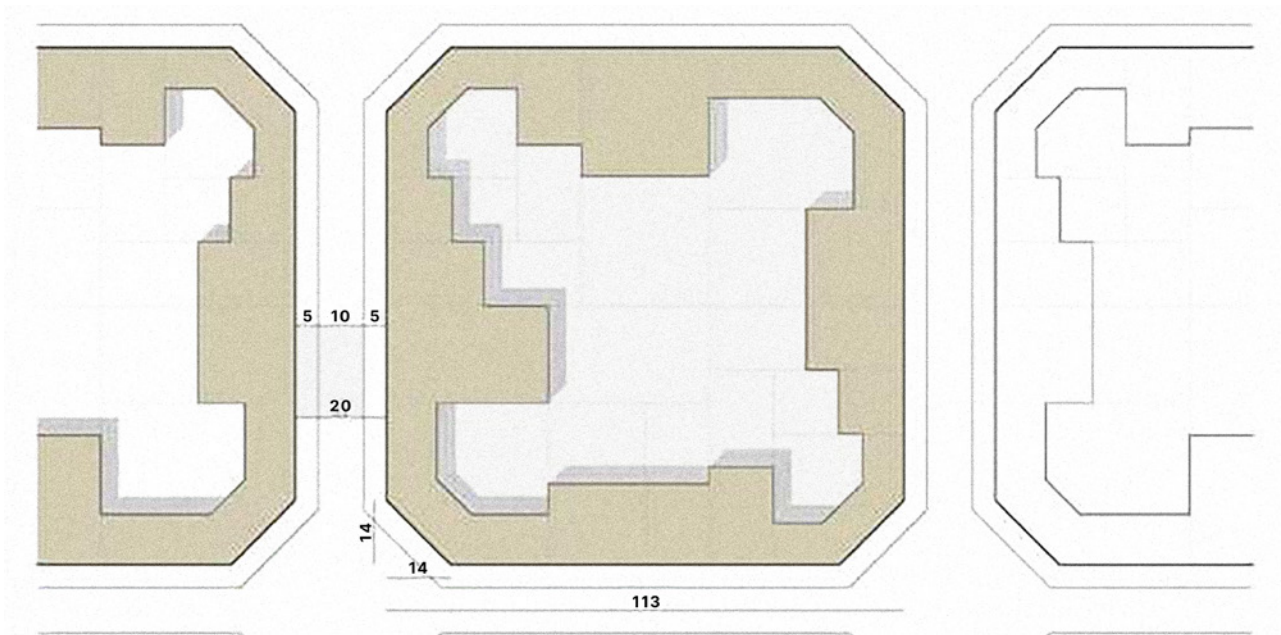
For this, the competition will be developed on the **rooftops, terraces, and the inner courtyard** of a **prototypical and imaginary block** of the "Eixample" of Barcelona. The dimensions and configuration of these blocks are defined in the Cerdà Plan of 1860, a true urban landmark in functional and aesthetic terms. The blocks are 113 meters on each side; however, they present two chamfered corners, each one of 14 meters, to improve visibility at intersections and facilitate transit.



The creation of the Eixample

A milestone in urban development

The history of Barcelona is a narrative of constant growth and urban transformation, where the creation of the “Eixample” stands out as a milestone of visionary planning and innovative architecture. In the mid-19th century, Barcelona was experiencing a population explosion and an industrial boom that pressured the medieval walls that confined the city. The need for expansion was imperative, both to alleviate population density and to integrate the surrounding urban nuclei and promote economic development.



The solution came in 1860 when Ildefonso Cerdà, a civil engineer and urban planner, was commissioned to design the city's expansion plan. His proposal, the Cerdà Plan, was revolutionary: it covered not only the distribution and urban design but also paid attention to the design and construction techniques of the buildings to adapt them to the new era beginning in the city. He presented a grid design that prioritized equality in access to light, air, and public space. Cerdà imagined the “Eixample” (which means ‘expansion’ in Catalan) as an extension that would break with the congestion and limitations of the old town, introducing wide streets, blocks with interior courtyards, and an efficient network of services and transport.

The buildings of the Eixample

Architectural characteristics and construction techniques

The architecture of the “Eixample” reflects the modernist Barcelona and the industrial revolution of the late 19th and early 20th centuries. Its buildings have **distinctive architectural characteristics** that make them easily recognizable.

- **Facades decorated** with wrought iron balconies, integrated sculptures, and colorful ceramics that stand out in the works of architects such as Antoni Gaudí, Lluís Domènech i Montaner, and Josep Puig i Cadafalch.

- Buildings grouped in **square blocks** with chamfered corners that allow greater visibility and traffic flow at intersections.

- **Uniform height** to maintain a coherent aesthetic and ensure equity in exposure to natural light.

On the other hand, the buildings of the “Eixample” are characterized by a series of **construction techniques** that reflect both the innovation and functionality of the era.

They are notable for the use of **unreinforced masonry**, that is, exterior and load-bearing walls made of local materials such as stone and brick, and without steel reinforcements.

One of the most characteristic elements of these buildings and fundamental for this competition is the **ventilated roofing system “à la catalane”** that helps mitigate the Mediterranean climate conditions. This system consists of two slabs that create a space for ventilation through holes in the facade and interior patios, creating an air circulation that eliminated humidity and protected the structure from thermal variations.

Another space subject of this competition is the **interior patios** that provided light and ventilation to the buildings and served as small islands of tranquility in the midst of the dense urban fabric, improving the health and well-being of its inhabitants.

▼ The “Block of Discord” is a milestone of modernist architecture with buildings by Gaudí, Domènech i Montaner, or Puig i Cadafalch



The use of rooftops: a pending task

Although Cerdà took into account every detail in the “Eixample,” there was one aspect that, given the era, did not require his attention: **the use of rooftops**. At that time, the needs were different, and the pressure on the efficient use of every urban square meter was not as pressing as it is today.

However, the spectacular urban growth of the 20th century and the growing concern for sustainability, the well-being of the inhabitants, and adaptation to climate change turn the reuse of rooftops, terraces, and interior courtyards into an imperative need.

Reusing Rooftops Barcelona 2024 seeks to close this circle of innovation that characterized the creation of the “Eixample,” proposing to reinvent these forgotten spaces and turn them into valuable resources for the city and its inhabitants that allow creating greener, more liveable, and more resilient urban environments.



Climate Emergency

The drought

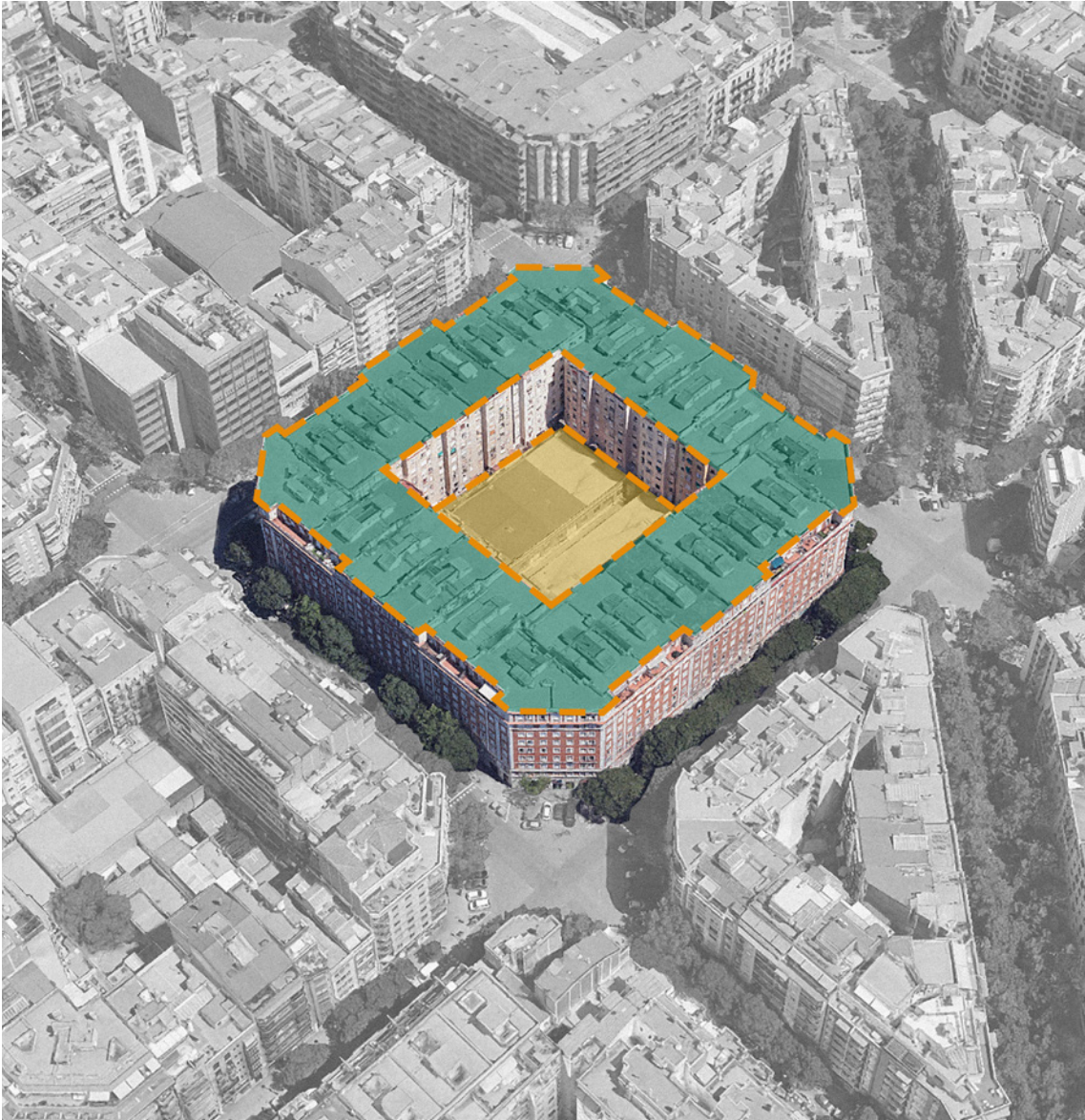
The **Mediterranean basin** is especially vulnerable to the effects of climate change. Recent studies show an increase in the frequency and intensity of heatwaves while there is a significant decrease in precipitation and its regularity. This, coupled with a growing demand for water, has aggravated the drought situation, endangering even the water supply for human consumption.

It is essential to **adapt solutions** for the reuse of terraces, rooftops, and interior courtyards **to the specific characteristics of each region**. In Barcelona and, by extension, much of the Mediterranean basin and southern Europe, the challenge focuses on maximizing every available drop in the face of prolonged absence of rains and increased evaporation due to global warming.

In this context, Reusing Rooftops Barcelona 2024 acquires special relevance as it urges thinking about architectural and urban solutions that contribute to mitigating these effects.



- Reuse the rooftops of a prototype block of the Eixample. What uses would you give it?
- Give a new life to the interior courtyards. Take advantage to place the heaviest elements.



Competition Objectives

Reusing Rooftops Barcelona 2024 is an opportunity to rethink how we live and interact with our urban environment, placing sustainability, innovation, and collective well-being at the center of architectural interventions. The competition objectives focus on:

- 1. Giving a new use to rooftops, terraces, and interior courtyards**, turning them into attractive spaces for neighbors and society. We invite participants to think beyond conventional solutions, exploring new ideas for the use of urban space.
- 2. Promoting sustainable architecture** through innovative strategies, ecological materials, efficient water management, and the incorporation of renewable energy sources in urban environments.
- 3. Contributing to climate change adaptation** by creating urban green spaces that can act as “lungs” for the city, improving air quality, and reducing the urban heat island effect.
- 4. Improving urban biodiversity** by promoting the reintroduction of native flora and the creation of habitats for local fauna, turning rooftops into crucial nodes for biodiversity in the urban environment.
- 5. Developing solutions that can be applied in other cities** with similar challenges of sustainability, urban density, and water management to generate a global dialogue on the importance of urban architecture in the era of climate change.

The Challenge

We encourage participants to propose **new creative and innovative uses for the rooftops, terraces, and interior courtyards** of the blocks of the “Eixample” of Barcelona.

We aim to create spaces that **improve urban life quality** and **strengthen the connection of communities with their natural environment**.

For this, participants will be able to reference a “model” block for which they will have both 3D in Revit format and 2D in AutoCAD format.

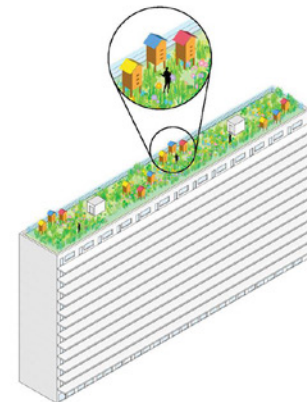
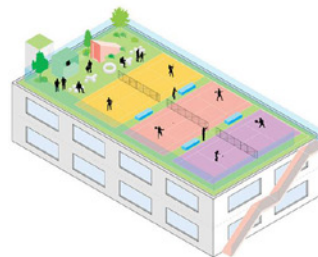
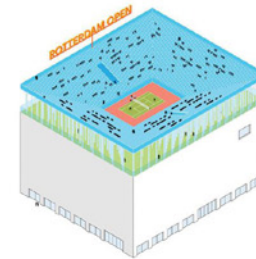
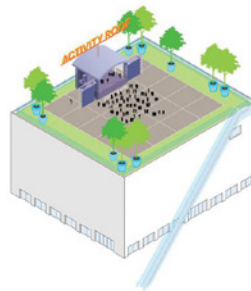
In it, we seek realistic, viable, and flexible solutions that can be taken as examples and inspiration for their effective implementation in the revitalization of urban rooftops in urban contexts with similar challenges.

What uses can we give to these spaces?

The decision of what use to give to rooftops and interior courtyards is entirely yours. From parks, solar farms, urban gardens, spaces for sports, or small vacation homes, any use is accepted as long as it adds value and respects the competition objectives.

In this sense, the Dutch firm **MVRDV** did a magnificent job with the **Rooftop Catalogue for Rotterdam**. You can click [here](#) to consult it and get inspired.

Additionally, at [this link](#), you can also consult the **Guide to Living Rooftops and Green Roofs** (in Spanish) written by **Elisabeth Contreras** and **Isabel Castillo** for the Barcelona City Council, which is a great reference to better understand the many possibilities that these city spaces offer.



These are some of the 130 uses that MVRDV proposes in its Rooftop Catalogue.

Evaluation Criteria

The jury of Reusing Rooftops Barcelona 2024 will evaluate the proposals presented that stand out for their creativity, sustainable approach, and are technically viable and potentially transformative for the urban environment.

1. Innovation and Originality

We are looking for designs that break with the conventional and bring new, original ideas to the use of terraces, rooftops, and interior courtyards.

2. Technical Feasibility

We are looking for proposals that are technically viable to achieve a real impact and ensure compatibility with a wide range of structures, including the oldest ones.

3. Sustainability

The proposals must demonstrate their sustainability and how they contribute to mitigating the effects of climate change and improving the quality of life in the urban environment.

4. Flexibility and adaptability

We aim to identify flexible, adaptable, and scalable proposals that can serve as a reference for the sustainable transformation of other cities globally.



Awards

We offer a total of €5,500 in prizes distributed as follows:

1st PRIZE
3,000€

2nd PRIZE
1,000€

3rd PRIZE
500€

SOPREMA SPECIAL MENTION
500€

SIKA SPECIAL MENTION
500€

10 HONORABLE MENTIONS

30 FINALISTS

The winning projects and all finalists will be published in various architecture magazines, blogs, social networks, and on our website. All participants will receive a digital certificate of participation.





Reusing Rooftops Barcelona 2024

invites you to transform unused rooftops, terraces, and interior courtyards into attractive spaces that revitalize our cities and improve the lives of their inhabitants.

Participate and take this opportunity to show that architecture and design are powerful tools for social innovation capable of improving urban life quality and forging stronger and more connected communities with their environment.

Calendar

When you register, you will have access to the competition for you and your team (from 1 to 4 members). The registration periods, submission deadline, and announcement of winners are as follows:

Early registration

April 22 - May 22

Normal registration

May 23 - June 26

Submission deadline

June 26, 2024

Announcement of winners

July 10, 2024

Registration

To register for the competition, visit our official website and complete the registration form. Upon completion of the form, you will be redirected to the payment page where you need to complete the payment to finalize the registration process.

The registration fees are tiered based on the date of registration as follows:

- Early Registration: €40 + VAT
 - Regular Registration: €60 + VAT
- *Please note that VAT is charged at 21%.

We accept Visa, Mastercard, Discover, and American Express credit or debit cards. Payments can also be made through PayPal. Please note that we will not have access to your credit card details. Once the registration and payment process is completed, no refunds will be issued.

Immediately after registration and payment, you will receive a confirmation email to the address provided during payment. This email will include your unique registration number. When submitting your proposals, you will be required to provide this registration number for identification purposes, and it should be clearly displayed on your competition board, preferably in the lower right corner.

FAQs & Eligibility

- For common queries, refer to the FAQ section on our website. During the competition, individual responses will be provided to questions sent via email.

- The competition is open to all, including architecture students, professional architects, and individuals from other disciplines such as engineering, philosophy, sociology, photography, etc. All nationalities are welcome, we appreciate as diverse participation as possible.

- Teams can consist of one to four members, all of whom must be at least 18 years old. The registration fee is per team, irrespective of team size.

- If a team or participant wishes to submit more than one proposal, they must register and pay the fee for each submission.

- Jurors, the organization, or anyone directly related to the jury are not allowed to participate in this competition.

Submission

For this competition, participants are required to submit **two digital files**: an **“A1 Board”** and a **“Project Description”**. Submissions should be made through the ‘Submit’ section on our website.

A1 Board: Participants are required to present their project on a single A1 format board (594×841 mm or 23.4×33.1 inches), which can be either landscape or portrait oriented.

A1 Board Content: The board should contain a variety of visual aids that contribute to a clearer understanding of the project. The registration number must be clearly visible in the lower right corner of the board.

A1 Board File Details: The board must be delivered in JPEG or JPG format with a maximum size of 10 MB. The file name must be the registration number provided upon registration (e.g., 432465423.jpg).

Project Description: A project description, of no more than 400 words, must be submitted along with the A1 Board.

Project Description File Details: The description must be submitted in PDF format. The file name must be the registration number provided upon registration (e.g., 432465423.pdf).

Language: All texts, both on the A1 Board and in the Description, must be written in Spanish or English.

Anonymity: The materials cannot contain any name or reference to participants or teams. Only the registration number should be included in the files’ names to ensure anonymity.

Rules & Conditions

Intellectual Property: Participants maintain the rights over the intellectual property of their submissions. However, by participating, they grant Reusing Rooftops (Archstorming, S.L.) a global, free, and non-exclusive license to reproduce, publish, and distribute the project in any format and through any dissemination medium. Reusing Rooftops will make sure to give proper attribution to the project authors.

Use of Copyright-Free Images: Participants are responsible for ensuring that any images or materials used in their submissions are copyright-free. Reusing Rooftops is not responsible for any copyright infringements made by participants.

Changes to Competition Rules: Reusing Rooftops reserves the right to change the competition rules at any time, in compliance with current legislation. Any modifications will be published on the website and will be binding for participants.

Right to Cancel the Competition: Reusing Rooftops reserves the right to cancel the competition due to lack of enrollment or other justified reasons. In such cases, participants will be notified individually and the registration fees will be refunded within 15 days from the notification of the cancellation.

Adherence to Terms and Conditions: Participants are required to adhere to the terms and conditions of the competition as stated on our website. Failure to comply may result in disqualification.

No Responsibility for Third-Party Use: Reusing Rooftops is not responsible for the use of participants’ submissions by third parties, including content that has been shared by third parties or indexed by search engines.

Please note that these rules are a summary and participants should refer to the full terms and conditions on our website for complete information.



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