



## **“AZERBAIJAN - TREASURE OF BIODIVERSITY” AT EXPO 2015** **The pavilion conceptualized, designed and built by the Italian network** **Simmetrico**

Harmony and natural and cultural diversity are the protagonists of Azerbaijan’s pavilion for Expo Milano 2015, designed by Simmetrico, an Italian network of creatives, project managers and multimedia experts. Founded in 2007 by Daniele Zambelli, Simmetrico specializes in the planning and management of projects relating to cultural communication, making integration between different languages and disciplines a strong point.

In line with their desire to tell stories that focus on man and his relationships, the talented Simmetrico team has brought Italian excellence to the creation, planning and completion of the pavilion, from its foundations through all the content found inside. The result is an astonishing, immersive journey through installations, videos, sound recordings, virtual reality and an app dedicated to the treasures found in the country.

The pavilion celebrates the biodiversity and culture of the nation, a place where different elements live side by side in perfect harmony. The project is based on the idea of a biosphere as a metaphor for the country: a system open to external flows that also values and protects the diversity within it.

Azerbaijan, which is participating in a universal exposition for the first time, is focused on the promotion and appreciation of its identity, being an ancient cultural meeting place that is open to innovation. It is also a unique example of biodiversity, with nine out of the eleven climate zones existing in the world within its borders.

Designed to be dismantled at the end of Expo 2015 and then rebuilt in Baku, the pavilion was made by the Simmetrico network in collaboration with the architecture firm Arassociati, structural planners from iDeas, and the landscape architects of AG&P.

Among the many interesting details built into the pavilion, the large spheres in curved glass and steel stand out, examples of truly complex architecture built by People&Projects, using innovative, patent-pending technology derived from the aeronautics industry.

More than 300 people worked on the design of the pavilion: 250 in Italy and 50 in Azerbaijan. More than 18 months were spent on the research and the development of the content, and more than 5,000 photographs and 250 videos were processed after 150 days of shooting, 100 of which were in Azerbaijan. More than 150 hours were spent shooting the time-lapse videos and there are more than 55 minutes of stop-motion animation that recreates iconic elements from Azerbaijan and its rich traditions.

## **AZERBAIJAN PAVILION – EXPO MILANO 2015**

The pavilion is based on the idea of a biosphere: a system open to external fluxes that also protects and encourages the development of life within it. From this cardinal idea, the pavilion's three biospheres were born, encased like precious jewels in the building's overall plan.

Undulating wooden walls, which embrace the building and evoke the typical wind of Azerbaijan, a symbol of the cultural and creative flows that have historically crossed through the county, preserve the microclimate inside the pavilion.

The materials used to build the pavilion also reflect the nation's history and desire to look towards the future: wood, a traditional resource that has been processed in an innovative way, has been combined with universal materials such as glass and metal.

### **Biosphere 0 - CULTURAL CROSSROADS**

At the entrance, the visitor finds himself in the middle of a compass that represents the centrality of the nation, which has always been a crossroads for dialogue, oriented towards each of the four cardinal directions. Unlike the others, this sphere isn't closed as it was designed to encourage the flow of visitors entering the pavilion.

The space includes large, curved totems with LEDs that display striking images of the country's cultural heritage, represented through time lapse videos and stop-motion animation.

Within the sphere, visitors will walk on a floor of suspended crystal, a light installation dedicated to geomorphology in Azerbaijan. This sphere, like the others, is suspended between two floors and is accessible from both of them. Above, a luminous, dynamic sculpture is dedicated to the nation's aspirations, echoing the shape of its borders: an eagle in flight heading from West to East.

### **Biosphere 1 - THE TREE OF BIODIVERSITY**

This is the sphere that looks out towards the decumano, a distinct symbol that characterizes the main facade of the pavilion. On the inside, a large wood and light installation creates an imposing tree whose foliage is made from real pomegranate trees. The pomegranate is a meaningful plant for the country's traditions, symbolizing life and prosperity.

The entire installation is dedicated to the country's natural wealth. In the lower half of the tree, an installation of screens called "Portraits of Azerbaijan" displays more than 100 video portraits of men and women, representing a cross section of society. These individuals are the true, deep energy that nourish the country: we must focus on investing in human resources, an indispensable resource for sustainable growth in the future.

In the canopy of the pomegranate tree, an interactive installation with 3D viewers allows visitors to discover the iconic symbols of the country.

### **Biosphere 2 - INNOVATION AND TRADITION**

The third sphere, wedged between the second and the third floors of the building, holds an upside-down tree, a metaphor for the relationship between positive changes and traditions in Azerbaijan. Its roots point upward, taking inspiration from the sky to feed a vision for the future and nourish the fruit of innovation. In the upper part of the biosphere, these roots also represent the strong traditions that support a vision for the future.

The "Treasures of Azerbaijan" are suspended among the roots, containing handicrafts and items relating to history and traditional culture.

The lower half welcomes visitors in the upside-down tree's canopy. The spirit of renewal that

invigorates Azerbaijan today is displayed on three screens where visitors can choose between three paths (by helicopter, by boat, on foot) to explore Baku, the capital and a quintessential symbol of national innovation.

### **Floor 0 - THE SYMPHONY OF THE COUNTRY**

The ground floor welcomes visitors and brings them closer to the history, cultural heritage and natural beauty of the country. A cafeteria looks out onto a small square and echoes the pavilion's interior.

### **MIRRORING BAKU**

The first installation that the visitor comes across when entering from the decumano is Mirroring Baku, a wood structure with a life-size, interactive projection connected to an identical installation in Baku. The two installations allow Pavilion visitors to interact, creatively and in real time, with pedestrians in the city of Baku.

The aim is to project visitors and Azerbaijanis directly into each other's realities, bringing distant cities, Milan and Baku, together for the first time to celebrate Expo 2015. The installation represents the curiosity and the desire for exchange and shared experiences that the people of Azerbaijan have when meeting people from other parts of the world.

### **MUSICWALL**

A large interactive wall displays a musical stave made of wood with metal inserts, recalling the importance of Azerbaijani music, which has been recognized as intangible cultural heritage by UNESCO.

The staff continues throughout the entire pavilion: dozens of monitors make up the *Symphony of the Country* with videos, stop-motion animation and important information about Azerbaijan.

### **Floor 1 - SYMPHONY OF COLOURS**

The first floor is strewn with colourful flower beds and LED monitors, as well as audio showers to ensure an immersive experience in the colours of Azerbaijan's diverse scenery.

This floor is dedicated to the nation's colours, displayed through the wide variety of landscapes that make it one of the 25 hotspots of biodiversity in the world. In addition to panoramas, the monitors show the growth of the nation through the most advanced technological, agricultural and artistic projects.

### **Floor 2 - SYMPHONY OF TASTE**

The second floor is dedicated to the flavours of Azerbaijan: the world of typical foods, their variety, GMO-free production, recipes, health benefits and the strategies to preserve this heritage for the future. The floor is entirely experiential with interactive tables and heightened reality installations.

### **Floor 3 - TERRACE**

On the third floor is a restaurant with a large terrace and garden that will host special events during the six months of Expo.

## **TECHNICAL DATA**

- 1,800 sq m of total area set up

## **THE SPHERES:**

- 1,200 sq m of curved glass made with 36 different moulds for a total of 680 glass panels
- The chemical composition of the glass (silica-soda-calcium) was made specifically for the Pavilion in order to guarantee the transparency and flexibility of the sheets
- 15 tonnes of iron per sphere resting on the flooring
- 18 km of soldering
- 12,600 screws to attach 720 total nodes between the two spheres that guarantee they will be able to be disassembled and rebuilt in a new location
- 9,500 workshop hours

## **LOUVER: (lamine façade covering)**

The design had 4 guidelines:

- Buildability of the complete form
- Lightness
- Resistance to weather conditions
- Disassembly

To satisfy these demands, the project includes:

- Construction design that derives from aeronautics, a multicellular structure in thin steel
- Use of engineered wood for maximum durability over time
- Creation of pre-assembled modules to ensure quick assembly/dismantling

## **MAIN STRUCTURE:**

- 450 technical drawings
- All nodes are bolted to ensure they can be removed entirely
- Only the screeds made with lightweight concrete, which are ANAB certified (Ass. Nazionale Architettura Bioecologica, the National Association of Bio-ecological Architecture), will be demolished

## **SYSTEMS**

- A 25 Kw photovoltaic system on the roof with the best solar panels in the market
- Use of an innovative technique called “killerwatt” to manage energy consumption
- Cooling system that has been calibrated to use the least amount of energy possible and to best employ the building’s natural ventilation

In general, all the materials used are green-building and LEED (Leadership in Energy and Environmental Design) certified.

The entire architectural structure took less than 6 months to build

## **CONTENT**

- More than 18 months were spent on the research and development of the pavilion’s content
- More than 150 graphic interfaces were developed
- More than 55 minutes of stop-motion animation was created

- More than 5,000 photographs and 250 videos were developed
- 46 interactive points were designed and programmed
- More than 150 days were spent in Azerbaijan recording audio and video
- More than 150 hours recorded for the time lapse video, a technique where the footage appears to move quicker than normal

## **STAFF**

From the planning to design phase, from production to management, from content research to its development and production, the project involved a team of more than **300 people in Italy and Azerbaijan.**

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## **CREDITS AND PARTNERSHIPS**

Client: The Republic of Azerbaijan  
Ideation and project supervision: Simmetrico  
Construction and project management: Simmetrico  
Creative director: Daniele Zambelli  
Project manager: Riccardo Cigolotti

### **Pavilion design:**

Architect: Arassociati  
Landscape architect: AG&P  
MEP and structural engineering: iDeas

### **Interior design and installations:**

Exhibit design: Fratelli&Co.  
Project management staging: Design Direct  
Technical direction: Black Engineering  
Lighting design: Voltaire Design

### **Content design and development**

Research, planning and development of content: Simmetrico  
Content manager: Marta Marchesi  
Artistic director: Devis Gobbi  
Graphics: Iriden  
Video producer: Nicoletta Sinatti  
Video production: Bonsaininja – Dadomani studio  
Sound design: Gianmaria Serranò  
Digital strategy: Advice Group  
Cultural communication: Elena Croci

### **Construction partners:**

Siding: Façade and spheres – People&Projects  
Steel structure: Speirani  
Construction site: Edil Lombarda  
Staging: Interfiere - Carli Produzioni  
Interior finishes: Esseci  
Lighting: Marco Rocca Agency  
Screeds: Laterlite  
Lifts and escalators: Kone  
Gardens: Agripanda  
MEP: Bilfinger VM impianti  
Outdoor flooring: Sirtech  
Railings: Ind.i.a.  
Eagle installation: Maskot 23 - Neu Zoo  
AV system: CinemaScope

### **Technical sponsors:**

Tiles: Florim  
Special electrical installations: Vimar  
WC supplies: Zucchetti

**Press and communications office:** Media Beats