

# WonderfulVinyl



The European Council  
of Vinyl Manufacturers

PVC in architecture  
and design



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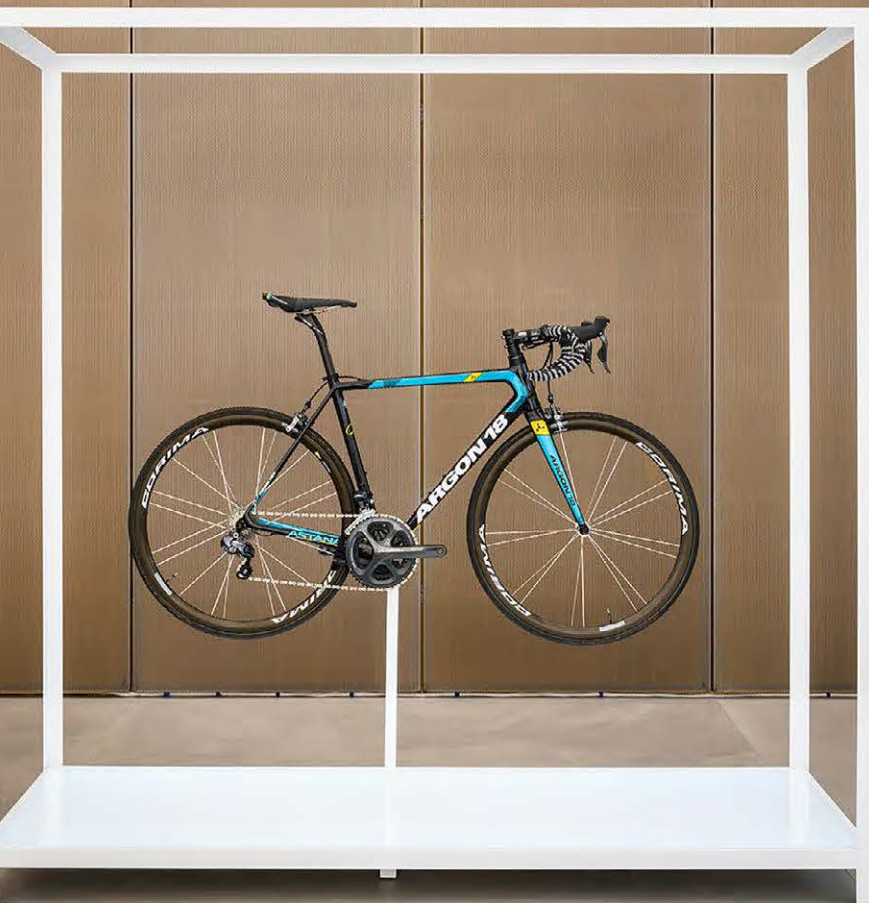
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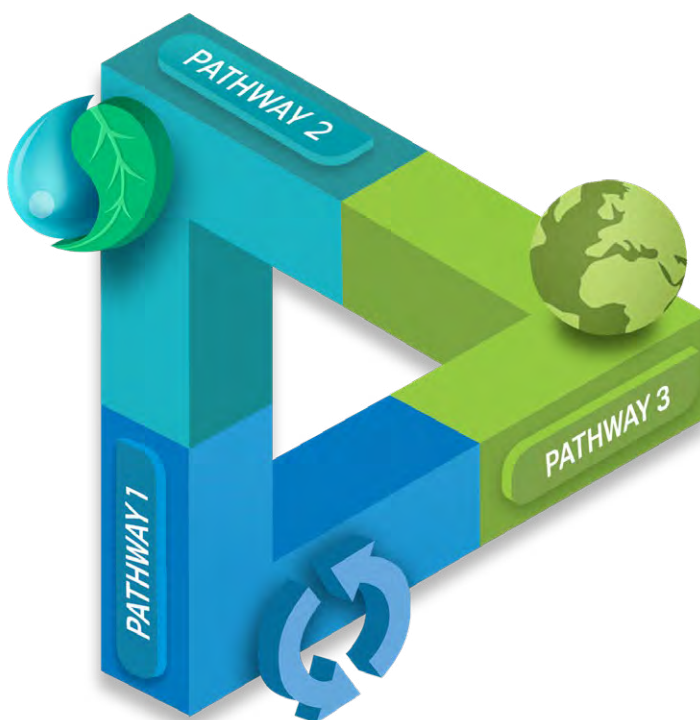
GLAMPING  
RESORT



# VINYLPLUS® LAUNCHES VINYLPLUS 2030:

## ITS NEXT 10-YEAR COMMITMENT TO SUSTAINABILITY

VinylPlus, the European PVC industry's commitment to sustainable development, is a frontrunner that has focused on sustainability and the circular economy for over 20 years. At the VinylPlus Sustainability Forum 2021 in June, the entire PVC value chain reaffirmed its dedication to progress towards a sustainable and circular future with the official launch of VinylPlus 2030, the next 10-year commitment of the European PVC industry to sustainable development.



VinylPlus 2030 identifies three pathways, further broken down into 12 action areas in alignment with EU policy objectives and the United Nations Sustainable Development Goals (UN SDGs).

### PATHWAY 1



#### Scaling Up PVC Value Chain Circularity

Through Pathway 1, the European PVC industry commits to advancing towards full circularity of the PVC value chain and confirms its recycling commitments: 900,000 tonnes of PVC recycled per year into new

products by 2025; and one million tonnes by 2030, made with the European Commission as a signatory to the Circular Plastics Alliance.

Research and innovation will play a critical role to achieve this objective, and VinylPlus will concentrate efforts and resources to support technical projects,

R&D and innovation in three main directions: improving existing collection and recycling schemes and setting up new ones for additional PVC streams, supporting the development of recycling and sorting technologies, and investigating solutions to detect, sort and remove legacy additives from end-of-life PVC products.

## PATHWAY 2



### Advancing Towards Carbon Neutrality and Minimising Our Environmental Footprint

Pathway 2 aims at the decarbonisation and minimisation of the environmental footprint of production processes and products.

The use of sustainable feedstocks and renewable energy are at the heart of the strategies to fight the climate change.

## PATHWAY 3



### Building Global Coalitions and Partnering for the UN SDGs

Pathway 3 was developed in recognition of the key role the UN SDGs play to advance global development and promote human well-being and environmental protection. Stakeholder engagement, coalition building and forging partnerships have always been key to VinylPlus' success. VinylPlus will continue to engage

with a diverse set of stakeholders at regional and global levels and encourage VinylPlus' partner companies to adopt the most sustainable practices, while integrating maximum transparency and accountability in our own governance and reporting.

VinylPlus is excited to continue to build on its experience of 20+ years. With its next 10-year commitment towards 2030, the PVC value chain strives to ensure that PVC remains a safe and circular material, fit for the circular economy.



**Find more  
on VinylPlus 2030  
and VinylPlus'  
achievements**

VINYLPLUS 2030  
EXECUTIVE SUMMARY

[Download](#)

THE PROGRESS  
REPORT 2021

[Download](#)





# SOLAR TREES



## TECHNICAL INFO

PVC Coated  
Fabric

## ARCHITECTS

Schmidhuber + Partner,  
Munich, Germany  
[www.schmidhuber.de](http://www.schmidhuber.de)

## LOCATION

Darmstadt,  
Germany

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The Merck headquarters campus represents one of the first international architecture projects to use innovative solar trees. The architects had the opportunity to do more than just incorporate existing technology: they had free rein in designing flexible membrane modules and to incorporate them into the overall design of the trees.

The printed hexagonal Organic Photovoltaics (OPV) modules are laminated between clear plastic sheets and attached to a delicate steel net, acting as both structural support and electrical conductor for the energy generated. The OPV cells generate electricity in a similar way to traditional solar cells with the difference of capturing light from any direction and generating electricity even in hazy conditions.

The electricity produced during the day is collected in an innovative

storage system at the base of the five 'Idea Seedlings' which is then used to power a high-performance LED ring at night that enlightens the trees from below. Thanks to the closed energy cycle inspired by nature, the solar trees are self-sufficient and contribute

to reducing the facility's overall energy consumption.

The solar trees are covered with PVC coated fabrics. The textile material is extremely light and resistant and appears transparent or opaque, depending on the light.



**PICTURE  
CREDITS**

Kristof  
Lemp,  
Merck



# CONNECTING FOOTBRIDGES



## TECHNICAL INFO

PVC Roofing  
and Flooring

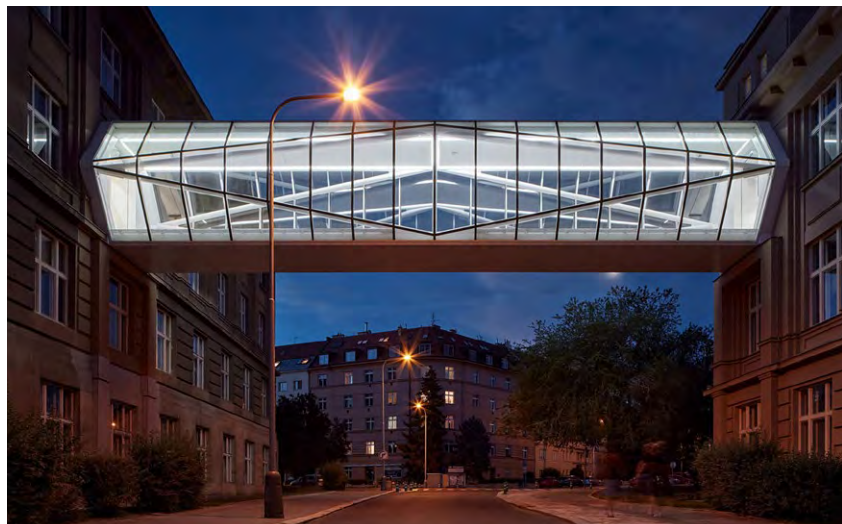
## ARCHITECTS

OV-AArchitectki,  
Prague, Czech Republic  
[www.ov-a.cz](http://www.ov-a.cz)

## LOCATION

Prague,  
Czech Republic

The crystalline footbridges stretched between two historical buildings are the new symbol of the University of Chemistry and Technology in Prague. Transparent, sculptural and geometrical, the glass footbridges bring a fresh and contemporary element to the existing architecture, bridging the old with the new.



Embodying dynamic transitions between two geometric shapes, the hexagonal steel ends of the footbridges intersect via rectangular steel frames in the middle.

The structure of the footbridges consists of a simple crossbar placed on two reinforced concrete pillars, attached to the buildings and hidden under their façades. The construction is glazed from the

exterior with thermal insulation double glazing with a sealed joint.

The full PVC ceiling of the footbridges strengthens the structure and prevents excessive overheating while the PVC flooring dampens the vibration of the structure. The footbridges are closed by automatic glass doors.



## PICTURE CREDITS

BoysPlayNice

JULY 2021

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WONDERFULVINYL





# NATURALIS BIODIVERSITY CENTER

## TECHNICAL INFO

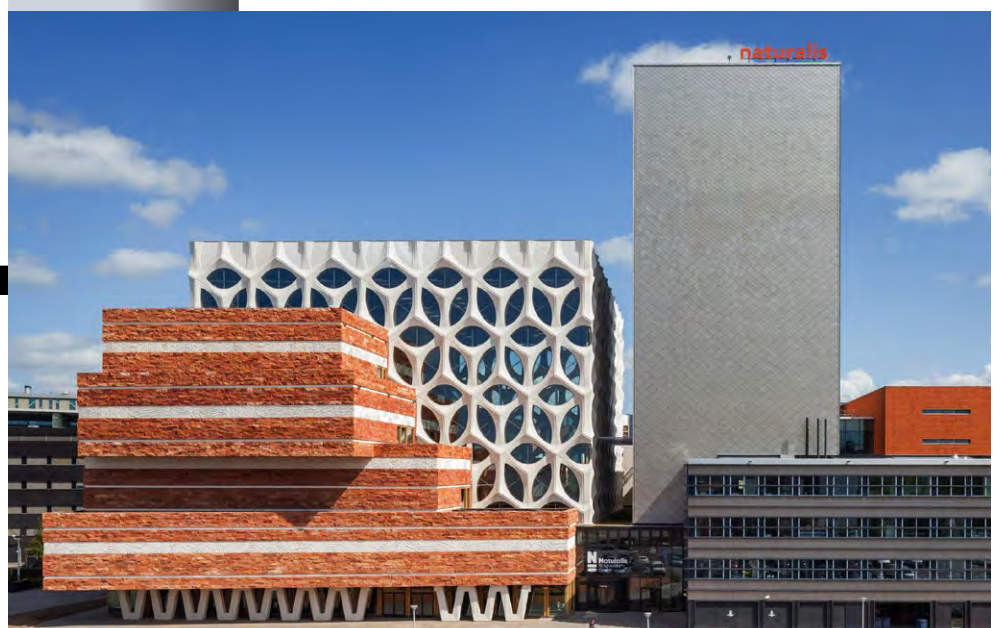
PVC  
Membrane

## ARCHITECTS

Neutelings Riedijk Architecten,  
Rotterdam, The Netherlands  
[www.neutelings-riedijk.com](http://www.neutelings-riedijk.com)

## LOCATION

Leiden,  
The Netherlands





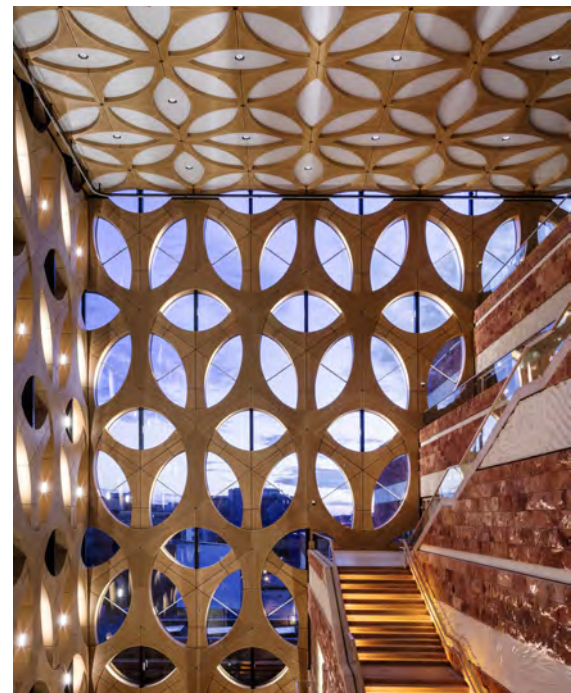


Naturalis is the national research institute for biodiversity, dating from 1820, founded by King Willem I in Leiden, the Netherlands. The institute boasts a long and rich history and has experienced an exponential growth during the last decade, necessitating a long-overdue renovation.

The institute's new design forms a sustainable ensemble of existing and newly constructed buildings where each activity is housed in

a specific form. The central atrium connects the various parts of the institute, consisting of old offices and depots alongside newly built museum and laboratories.

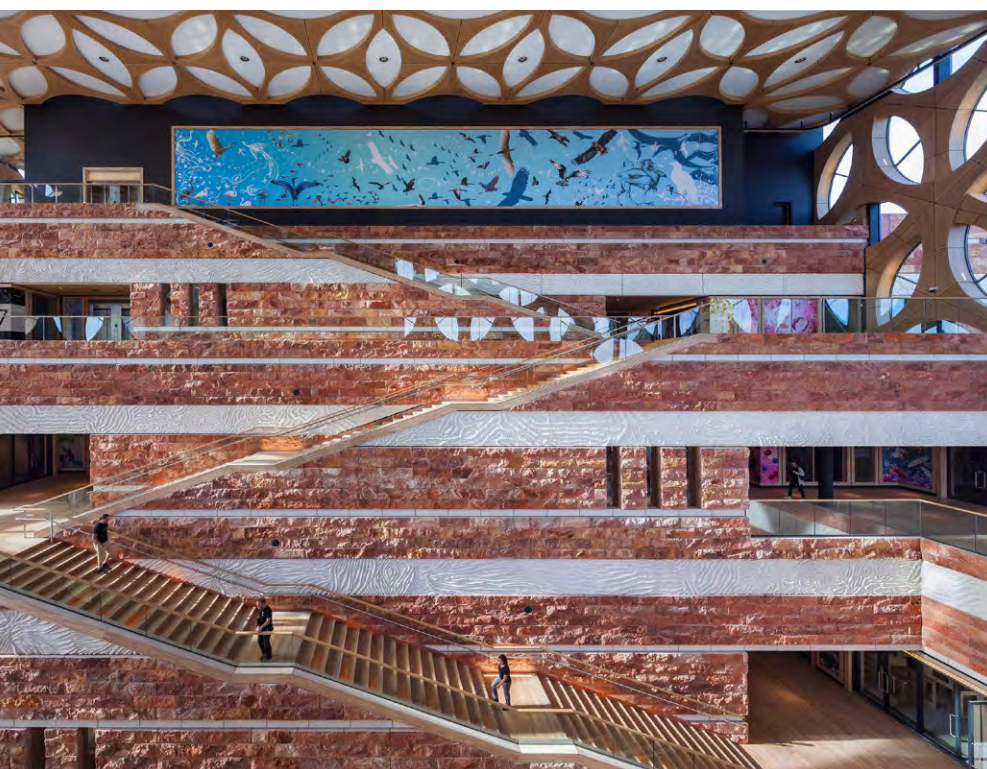
The design of the atrium embodies the shape of interlocking molecules through three-dimensional concrete that shows a mix of ovals, triangles and hexagons. The filtered light that enters through circular windows act as a 'glass crown'



of the atrium where scientists, staff, students and families meet, reinforcing the monumentality of the space. Like the body of the atrium, the structure on the ceiling also mimics the form of interlocking molecules made with wood frames and a white satin PVC membrane.

The exterior of the exhibition hall recalls a geological structure. The stone used for the façade has developed natural crystals over time, creating a beautiful sparkle. The layers of stones are interrupted by friezes of white and concrete elements, designed by the famous Dutch fashion designer Iris van Herpen.

The museum hosts nearly 100 striking and colourful wall panels created by the Dutch industrial product designer Tord Boontje. They consist of visual stories that blend photography and drawings to reveal the wonders of the natural world. The project covers a total of around 38,000 m<sup>2</sup> of which 18,000 m<sup>2</sup> consists of renovated space and 20,000 m<sup>2</sup> of new construction.



#### PICTURE CREDITS

ScagliolaBrakke



# PLACE ROGIER



## TECHNICAL INFO

PVC  
Roof

## ARCHITECTS

XDGA,  
Brussels,  
Belgium  
[www.xdga.be](http://www.xdga.be)

## LOCATION

Brussels,  
Belgium



The design of Place Rogier, located in Brussels, and its surroundings is set on different levels. On the square, a patio has been carefully excavated to serve as a vertical connector that allows smooth transitions of passengers in and out of the intermodal transit hub while providing natural daylight to dimly lit spaces that are conventionally adorned with artificial lighting.

On the surface, an enormous floating canopy - 64m in diameter - covers the square beneath, with triangular PVC panels installed on rigid steel frames. The triangles project a checkered shade on the ground where a green walking zone connects the structure to the surrounding neighborhoods. A total of 1,700 m<sup>2</sup> of PVC material was used for this project.



The previous conditions of Place Rogier originates from the accumulation of infrastructure over time as its form was originally defined by the construction of the first North train station. When the train station was moved further away from the square during the 50s, the location became chronically overlooked. From then until the 70s, Place Rogier developed into a complex underground transportation hub that had failed to establish a connection with the street level, to the discomfort of pedestrians.

The Place Rogier renovation project embodies a daring new approach to seamlessly bridge public space and public transport in metropolitan areas.

#### PICTURE CREDITS

Matthias  
Van Rossen

# UNITED CYCLING LAB & STORE



**TECHNICAL  
INFO**  
PVC  
Membrane

## ARCHITECTS

Johannes Torpe  
Studios,  
Copenhagen,  
Denmark  
[www.johannestorpe.com](http://www.johannestorpe.com)

## LOCATION

Lyngø,  
Denmark

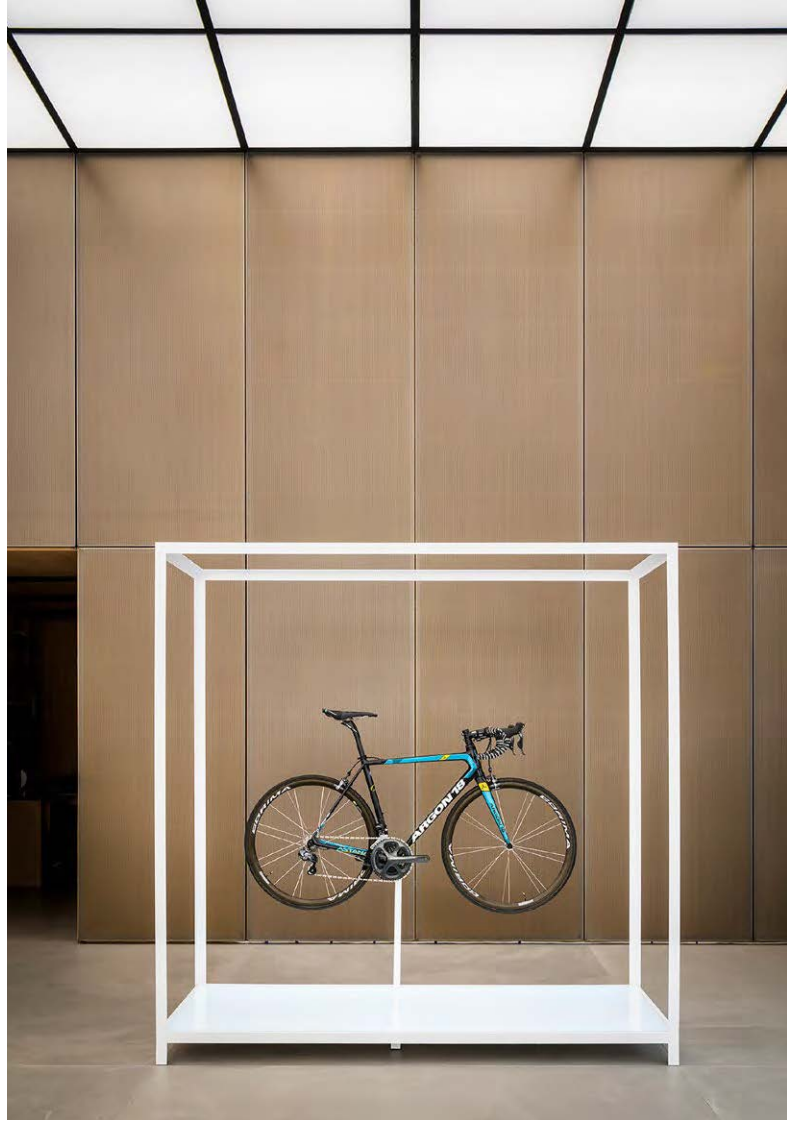


Bicycles floating in the air, a ceiling height of nearly 6m, illuminated furniture with light white PVC membranes and mirrored glass giving the illusion of infinity - these are just some of the effects that makes the new showroom for high-end bicycles an extraordinary experience.



In a little over a year, Johannes Torpe Studios have successfully transformed a dull industrial building from the 1990s into a gleaming cathedral dedicated to the science of cycling. With 'the power of the product' as its mantra, the design team has created a retail space that fosters knowledge, learning and innovation.

Reflecting on the team's vision, Johannes Torpe shared "Our client sells some of the most advanced bicycles in the world. Athletes win Olympic medals on them. With our design, we have tried to highlight the engineering and dreams the bikes represent. By staging the bicycles in a futuristic, minimalistic and etheric universe, their power and sovereignty are emphasised."



**PICTURE  
CREDITS**

Peter Larsen



## TECHNICAL INFO

PVC  
Strips

### DESIGNERS

DeFerrari+Modesti,  
Florence, Italy

[www.deferrari-modesti.com](http://www.deferrari-modesti.com)

### LOCATION

Florence,  
Italy

# TARGETTI TH01 HUB



The TH01 project was conceived by the architectural studio DeFerrari+Modesti for the Italian lamp producer Targetti, in occasion of the 90<sup>th</sup> anniversary of its Florence headquarters.

TH01 consists of a flexible space located on the first floor of an

industrial building. A transformative space that can host meetings, events, installations and exhibitions, its contemporary, informal and unstructured character marvels the visitors. The space is divided into various distinct yet interconnected areas where each element intrigues and tells its own story.





The architects worked to maintain the strong identity of the location, seeking to recover and enhance the existing elements while keeping the space closely linked to the setting within which the company was built. TH01 is a dynamic and evolving environment, serving as a workspace, laboratory, showroom, conference room and workshop area, depending on the occasion.



TH01, conceived as a flexible container, is dynamic, everchanging and offbeat, all the while retaining its functionality. Each architectural element plays an important role in telling the company's story, values and products. Throughout a visitor's passage, volumes alternate in a

game of textures, colours and materials: a space where each element communicates with one another where the industrial architecture plays a game of light and shadow according to a precise luminous scenography.

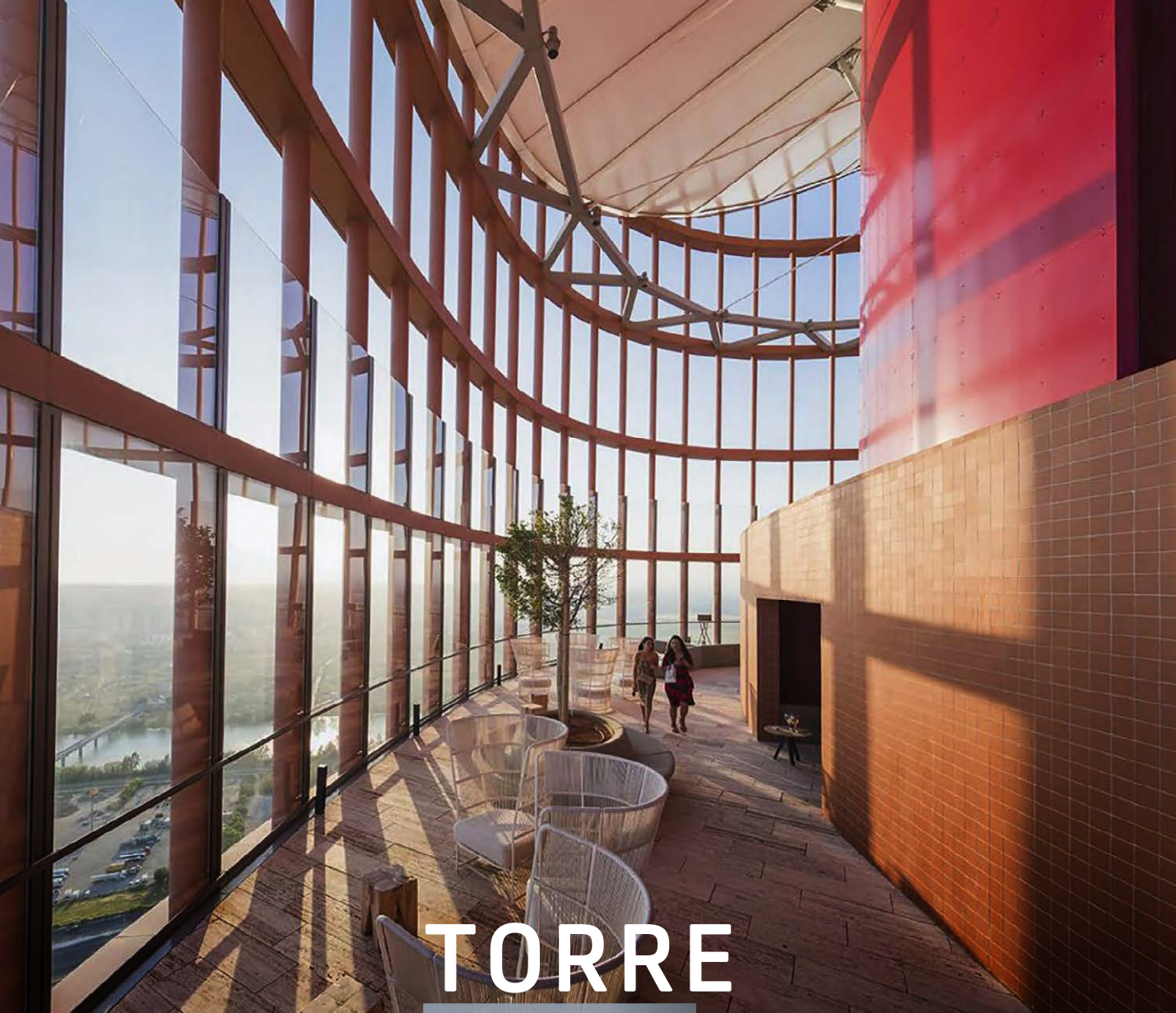


Visitors are welcomed in a reception that introduces them to the electric blue platform, a multifunctional area in which a story is displayed and presented. The auditorium is a large steel ambient that overlooks the 'light box' - a cage lined with red PVC strips where light sources are tested. The route ends with a view of the former warehouse now used as an event area.

#### PICTURE CREDITS

Anna Positano





# TORRE SEVILLA

## TECHNICAL INFO

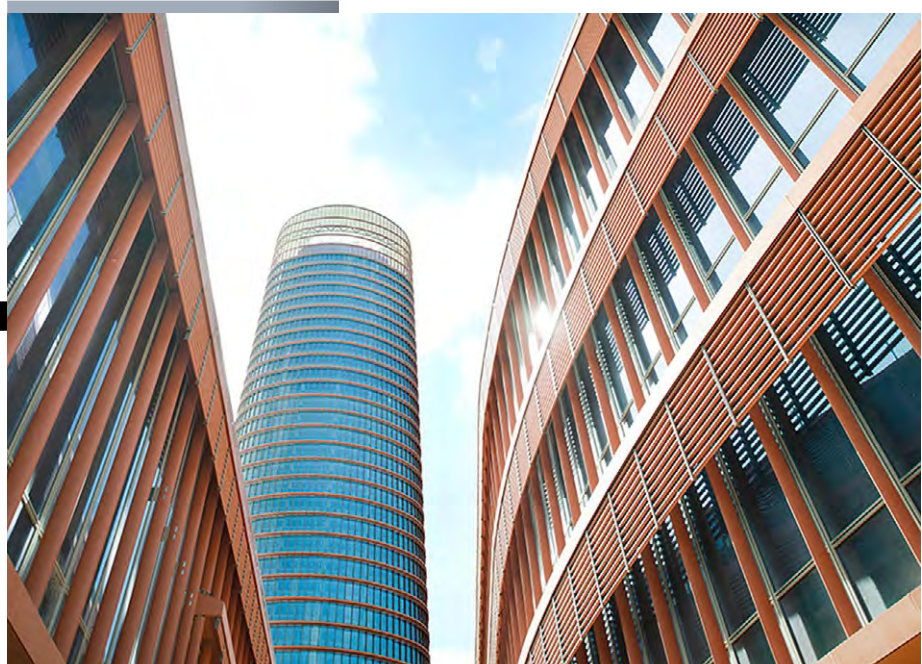
PVC  
Membrane

## ARCHITECTS

Pelli Clarke Pelli Architects,  
New Haven, USA  
[www.pcparch.com](http://www.pcparch.com)

## LOCATION

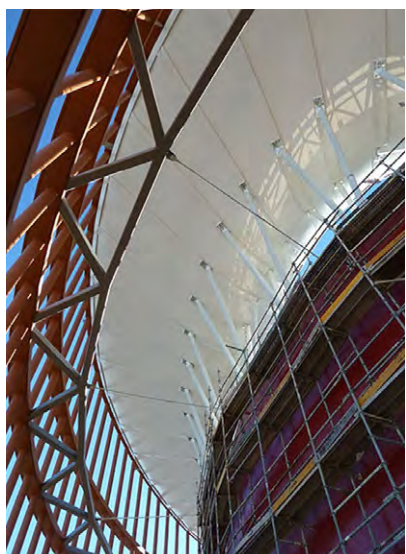
Sevilla,  
Spain  
[www.torre-sevilla.com](http://www.torre-sevilla.com)





Located on the site of the 1992 World's Fair in Sevilla, the Torre Sevilla project consists of a 37-storey, multi-tenant office and hotel tower combined with a 4-storey podium containing retail space. The tower creates a new urban skyline that is in harmony with iconic Seville landmarks, such as the bell tower of Seville La Giralda, together with masts along the bridges that contribute to the rich architectural character of the city.

The curved edges of the podium buildings define a plaza that opens on the north and south sides, narrowing towards the center creating a pedestrian commercial street protected from the sun. In the north, the plaza grows to accommodate café terraces shaded with orange and jacaranda trees. A long canopy and three linear fountains extend through the center, guiding pedestrians to the entry of the auditorium located under the plaza.



The tower shows a simple geometric form that is elliptical in shape, becoming thinner in diameter as it rises. Topped with a public terrace and restaurant, the building offers spectacular views of Seville while incorporating architectural solutions to combat the location's extreme heat. To reduce heat absorption, a green roof was installed that also serves as

a gesture to the building's environmental sustainability. To protect pedestrians from intense sunlight, retractable PVC canvas awnings can be extended during the hottest times of the year while the tower's façade incorporates horizontal and vertical metal shading devices. Publicly accessible, the roof offers an open space for visitors to stroll and enjoy.

#### PICTURE CREDITS

Pelli Clarke Pelli



# BOOKFAIR PAVILION



## TECHNICAL INFO

PVC  
Membrane

## ARCHITECTS

Schneider and Schumacher,  
Frankfurt, Germany  
[www.schneider-schumacher.de](http://www.schneider-schumacher.de)

## LOCATION

Frankfurt,  
Germany





"Books only ever show their inside when you look closely. Then, at best, they will pull you straight under their spell..." - this was exactly what architects Schneider and Schumacher had in mind when they designed the multimedia playable space pavilion. At the center of the Frankfurter Buchmesse Fair, an inviting place for booklovers emerged.

#### PICTURE CREDITS

Norbert Miguletz;  
Jörg Hempel



For the Frankfurt Book Fair, a temporary construction needed to be designed in order to be stored and reassembled easily. This required a search for a geometric shape that could create a unique sense of space where encounters between authors and readers would become memorable experiences. The supporting structure had to be stable and efficient while manufacturing costs had to be kept within a limit. The result was a three nested, shell-shaped wooden rib construction covered

by a PVC membrane. Like a tent, the PVC membrane is attached to the main frame of the rib structure which together with the wooden interior forms the supporting structure.

Resembling an ensemble of closed shells on the exterior, the impressive light wooden interior surprises the spectator once more: the wooden conception encompasses the entire room, having the appearance of an oversized bookshelf.





# GLAMPING RESORT

## TECHNICAL INFO

PVC  
Membrane

### ARCHITECTS

Atelier Chang,  
Seoul, South Korea  
[www.atelierchang.com](http://www.atelierchang.com)

### LOCATION

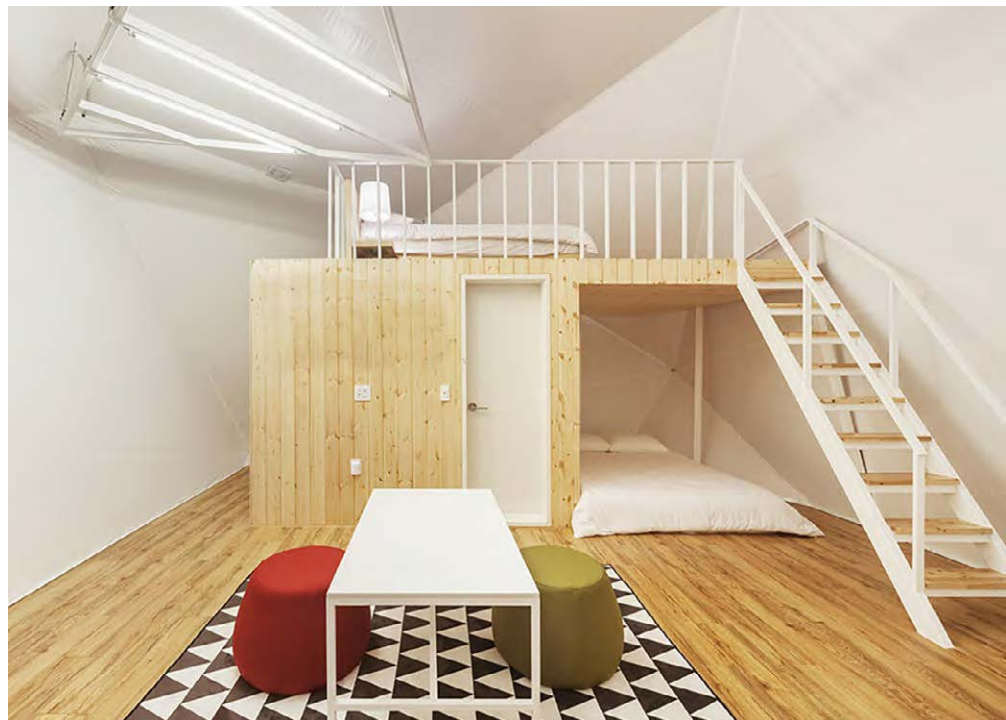
Suncheon,  
South Korea







Atelier Chang has designed a cluster of colourful tents for the Seungju Country Club Glamping Resort that offer tourists a luxury camping experience on a cypress covered mountain near the South Korean city of Suncheon. This new 'minimalist luxury' resort consists of 16 brightly coloured living units with the reception/restaurant facility at the focal point of the community.



Each unit offers guests approximately 50m<sup>2</sup> of living area, two sleeping areas, a kitchen and a bathroom. The resort's restaurant and viewing terrace are screened by an elegant geometric arrangement of white steel louvres that diffuse sunlight.

The project is located some 300 km south of Seoul within lush cypress forests and enjoys distant views over the Korean Strait. Drawing diverse references

from natural elements such as the site's dramatic topography, pebbles and fireflies, the resort offers guests a direct and vivid connection to their natural surroundings. Each unit is well-screened from surrounding units while offering guests breathtaking views of the Suncheon Ecological Bay.

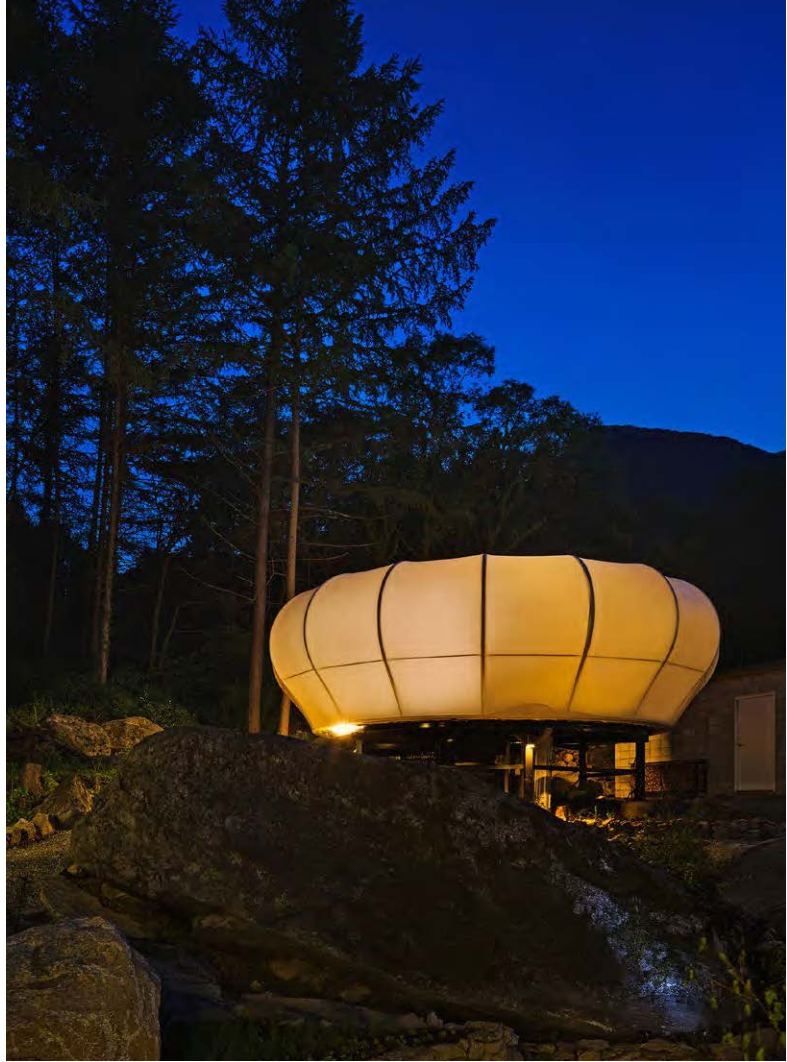


The resort includes three unique glamping unit designs - 'Mountain', 'Cutent' and 'Firefly' - each with a distinctive plan and colour scheme. 'Mountain' follows the curvature of a hilltop with a roof made with a PVC membrane. Inside, the spaces are divided into two compartments to allow maximum privacy between rooms.

Shaped like a pebble, 'Firefly' boasts ample width that feels both luxurious and relaxing. Its nature inspired form adapts seamlessly to any natural settings and thanks to the PVC tensioned membrane, it is highly resistant to wind-load.

In the shape of an angular rock, 'Cutent's interior duplex structure boasts a 5m ceiling height contained within a brightly coloured PVC membrane. The unit's vibrant façade redefines whichever landscape it sits on.

Atelier Chang developed a new, patented technology to achieve both the comfort and lightness which the space and design concept demanded.



The technology uses double layers of PVC fabric with insulation between layers to keep the glamping units sustainable and viable in a climate where annual temperatures can range from as low as - 20°C to as high as 40°C. The units are expected to have a lifespan of at least 10 to 15 years.

#### PICTURE CREDITS

Kyungsub Shin



# Wonderful Vinyl



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