



# Curved Composite

Lightweight solutions for free-form designs

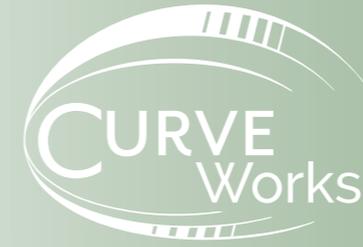


● countries served to-date

#### Curve Works

Curieweg 17A  
Alphen aan den Rijn  
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Curve Works BV is a privately held company founded in 2015. Located in Alphen aan den Rijn, The Netherlands, we supply products for architecture and high-end performance marine applications to an international customer base.



We are composite materials specialists changing the approach to design and manufacture with an eye on clean technologies and materials. With our team of highly motivated engineers we are able to create innovative solutions for your demands.

We are specialised in large curved panels and organic constructions, realising them without expensive and wasteful moulds.

*We create*

Lightweight composite panels for free-form architectural applications

### *Our products*

are **RESPONSIBLE** Materials are carefully selected to have the smallest impact on the environment and are safe for people who work with them.

are **LIGHT** Lightness is an important factor in eco-design. Less material means less carbon-footprint.

are **TAILORABLE** Our products are tailored to create the desired look and engineered to cope with environmental & structural loading

The image features a solid green background. In the lower-left quadrant, there are three thick, white, curved lines that sweep upwards and to the right, creating a sense of movement and depth. The lines are parallel to each other and have a consistent thickness.

Product range



## BASALT FIBRE REINFORCED PANELS

Basalt fibres are an alternative to glass fibres. They have a lower carbon footprint because they are extruded directly from basalt rock. Additionally, once the basalt fibre is separated from the resin at the end of life, the fibres can either be reused directly, or the basalt is returned back to nature.

Thanks to the basalt fibres, our VULCAN panels have a beautifully dark bronze hue and therefore can be used even without a finishing.

### Use

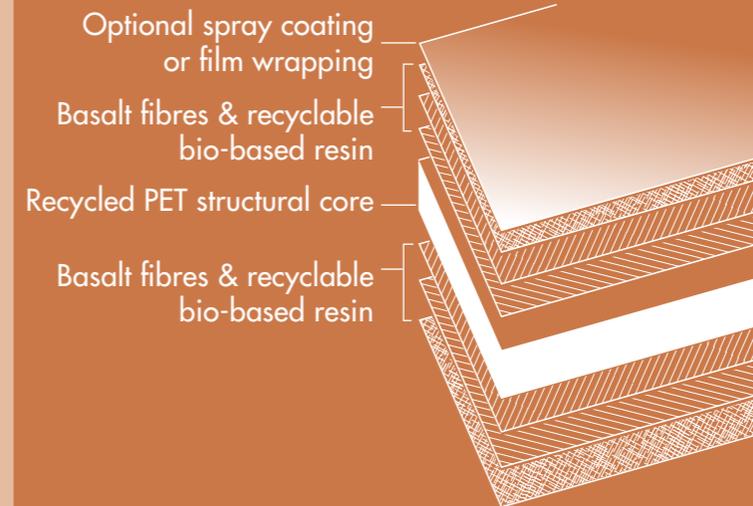


Decorative



Structural

### Composition



### Properties



Mass  
8 – 15 kg/m<sup>2</sup>



Strength  
Identical to steel



Thermal expansion  
Identical to steel



Other  
No corrosion

# VULCAN

Reinforced  
by nature



## VULCAN

Left: close up of vulcan displaying the dark bronze surface colour of the panel.  
Right: a vulcan panel assembly of two panels.

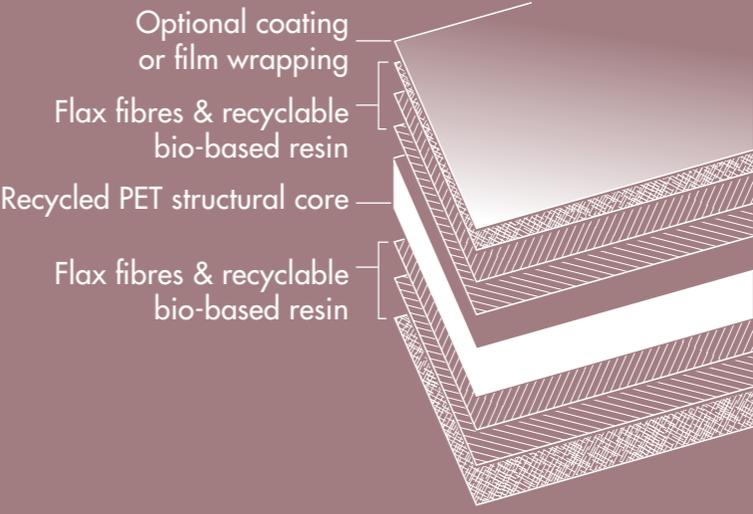




## FLAX FIBRE REINFORCED PANELS

Flax fibres are the strongest and stiffest of all the natural fibres. From the molecular level to the finished product, we have engineered the panels with as much respect for the planet as possible. We use European-grown flax fibres and also offer recyclable bio-based resins.

Our ENLIGHTEN panels radiate such a natural look, we recommend to use these panels only with a transparent coating.

Use	Composition	Properties
 <p>Decorative</p>  <p>Structural</p>	 <p>Optional coating or film wrapping</p> <p>Flax fibres &amp; recyclable bio-based resin</p> <p>Recycled PET structural core</p> <p>Flax fibres &amp; recyclable bio-based resin</p>	 <p>Mass</p> <p>8 – 15 kg/m<sup>2</sup></p>  <p>Strength</p> <p>Identical to steel</p>  <p>Thermal expansion</p> <p>Lower than steel</p>  <p>Other</p> <p>No corrosion</p>

# ENLIGHTEN

The most sustainable composite solution



## ENLIGHTEN

The natural golden surface colour of the panel and the natural golden look of the woven flax fibres.



## PANELS WITH ACRYLIC RESIN

With TEMPERA we offer our most environmentally friendly resin solution. Additionally, the reinforcing fibres and structural core are fully recoverable at end-of-life.

TEMPERA panels are strong decorative panels for interior and exterior applications. From stone to corroded steel, anything is possible in terms of texture and appearance.

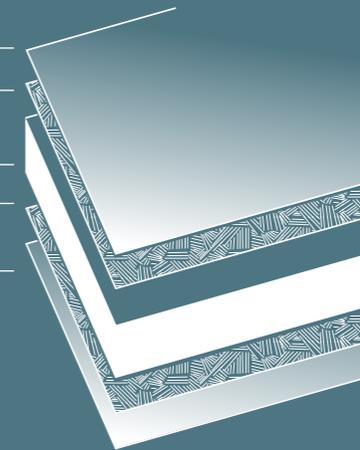
### Use



Decorative

### Composition

- Smooth or textured painted finish
- Glass/basalt fibres & acrylic resin
- Recycled PET structural core
- Glass/basalt fibres & acrylic resin
- Smooth or textured painted finish



### Properties



*Mass*  
8 – 15 kg/m<sup>2</sup>



*Fire class*  
B s1 d0 according to EN 13823



*Thermal expansion*  
Identical to steel



*Other*  
No corrosion

# TEMPERA

Water-based resin  
that lasts for an age



# TEMPERA

A doubly curved TEMPERA ceiling  
Central Park Office building, Utrecht, The Netherlands

Image by Jordi Huisman



## CURVED PLYWOOD

Built up of thin planks of solid wood, our COPPICE panels are laminated together using bio-based recyclable adhesive. They are shaped in a cold-forming process directly on our adaptive mould. The thickness of the panels are tailored for their end-use.

COPPICE panels are perfect for luxurious free-form creations. The planks can be replaced with other shapes of wood for a truly unique look.

### Use



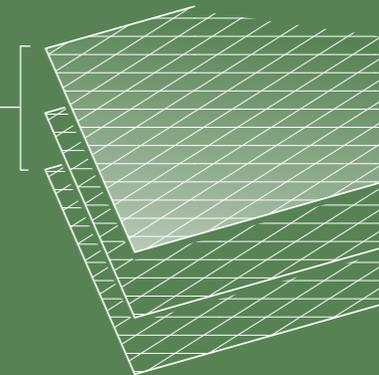
Decorative



Structural

### Composition

Wood planks or wood blanks of any shape & bio-based recyclable adhesive.



### Properties



*Mass*  
8 – 15 kg/m<sup>2</sup>



*Strength*  
Identical to laminated wood



*Other*  
Many options in types of wood available

# COPPICE

Free-form laminated wood



## COPPICE

Above left: Curved COPPICE in elegant laminated Mahogany.

Right: Sustainably sourced Accoya® wood are laminated in thin planks and diamond blanks (furthest right).

# Additional Materials



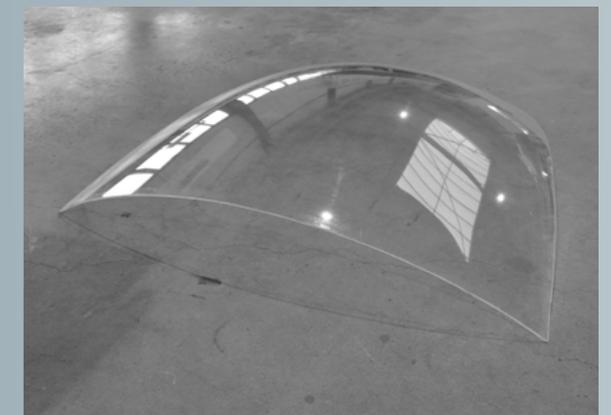
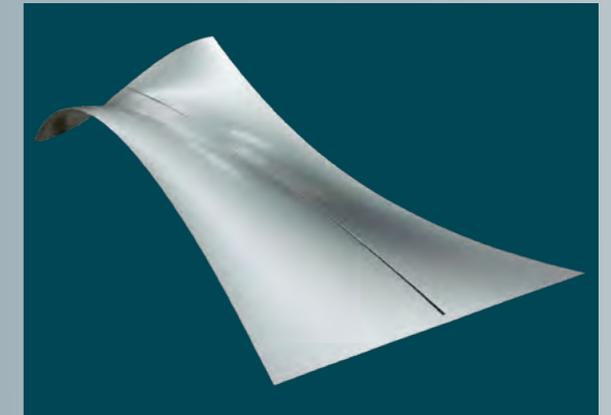
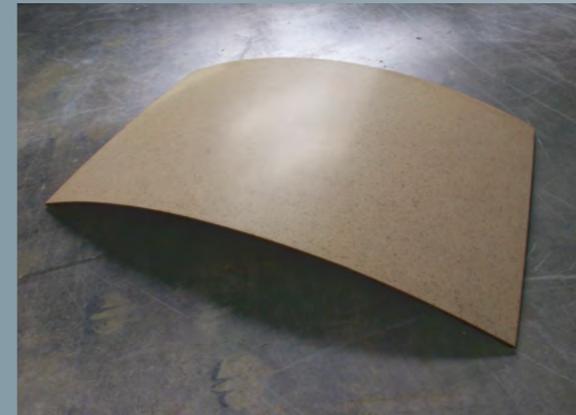
# CUSTOM COMPOSITIONS AND MATERIALS

Besides our own product range, we also offer curved panels in other materials

**SIMOWOOD:** an innovative blend of rice husks and thermoplastic providing a durable weather-proof alternative to tropical hardwood for indoor and outdoor applications.

**ACRYLIC STONE:** Dupont's Corian® is perfectly suited to our adaptive mould process.

**Acrylic or PET-G:** transparent thermoplastic sheets, also available with a coloured or patterned wrapping film. Ideal for interior installations and architecture.



# Mounting Solutions

INTERIOR - EXTERIOR - WALLS - CEILINGS - FLOORS



## SOLUTIONS FOR SEAMLESS WALLS AND CEILINGS

For the ultimate visual effect we offer seamless panel assemblies for interior and exterior applications.

Seamless joints are enabled using our FlexSkin design. FlexSkin allows the panel skins at the edges of the panels to overlap, regardless of the curvature of the panel. The joints are bonded and finished for a strong, watertight and seamless finish.

Below: VULCAN panels with seamless connections.  
Details of the FlexSkin edges on VULCAN panels



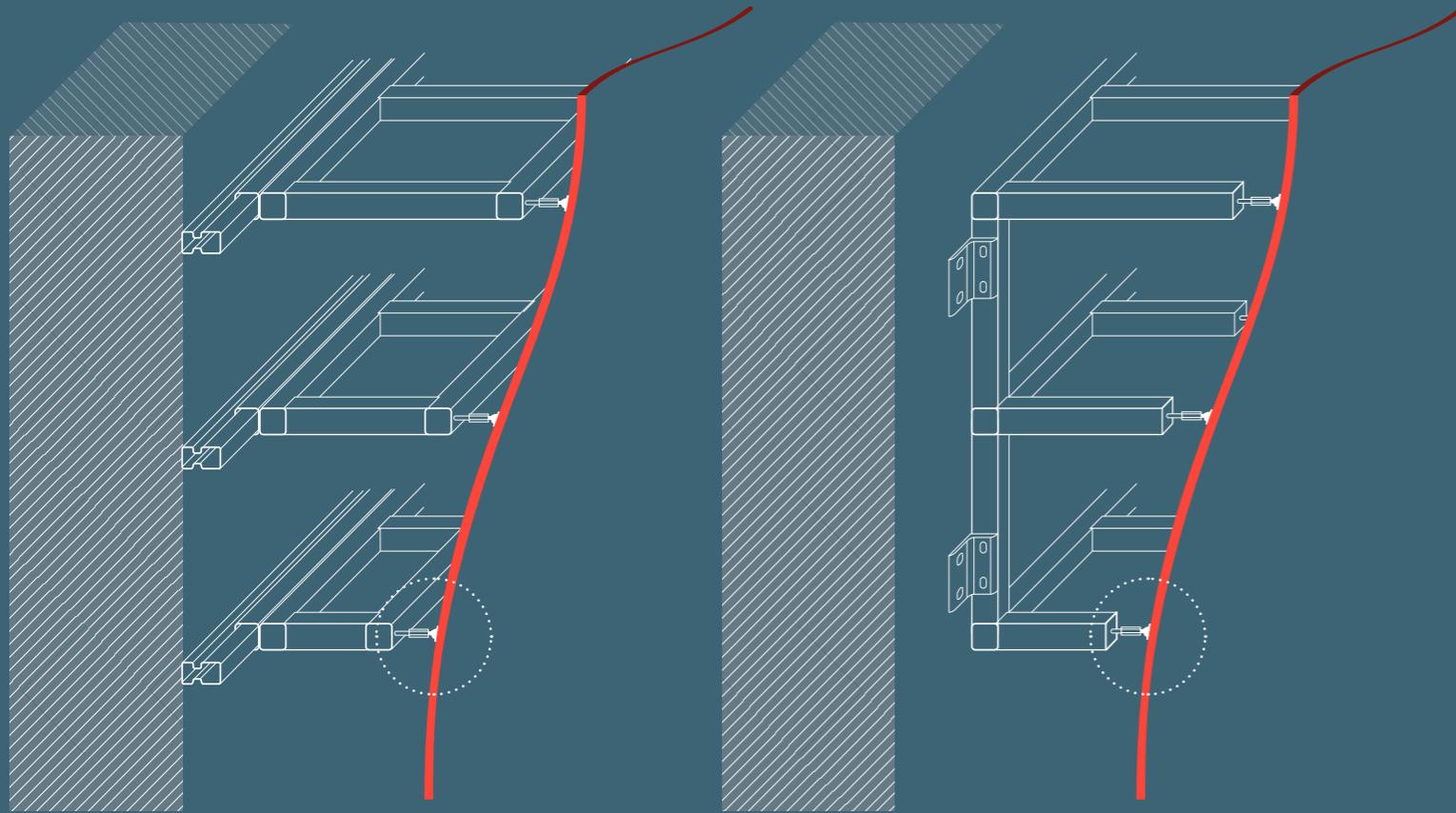
## CONCEALED STRUCTURAL MOUNTING SYSTEM

All our panels are available with our blind-mounting system suitable for even the most demanding situations.

Each curved panel is supplied blind-mounted to metal frames. The dimensions of the metal frames are engineered according to the leading requirements on the panels. Alignment of the panels are first checked at Curve Works before leaving the factory to ensure fit on-site.

The panel with frames are mounted directly or simply slid into place along rails mounted onto the building surface. The profiles of the mounting frames are fixated with brackets.

The result is a very efficient installation process.



Wall or ceiling with rails.  
Frame slides into place

Curved panels mounted on  
metal mounting frame



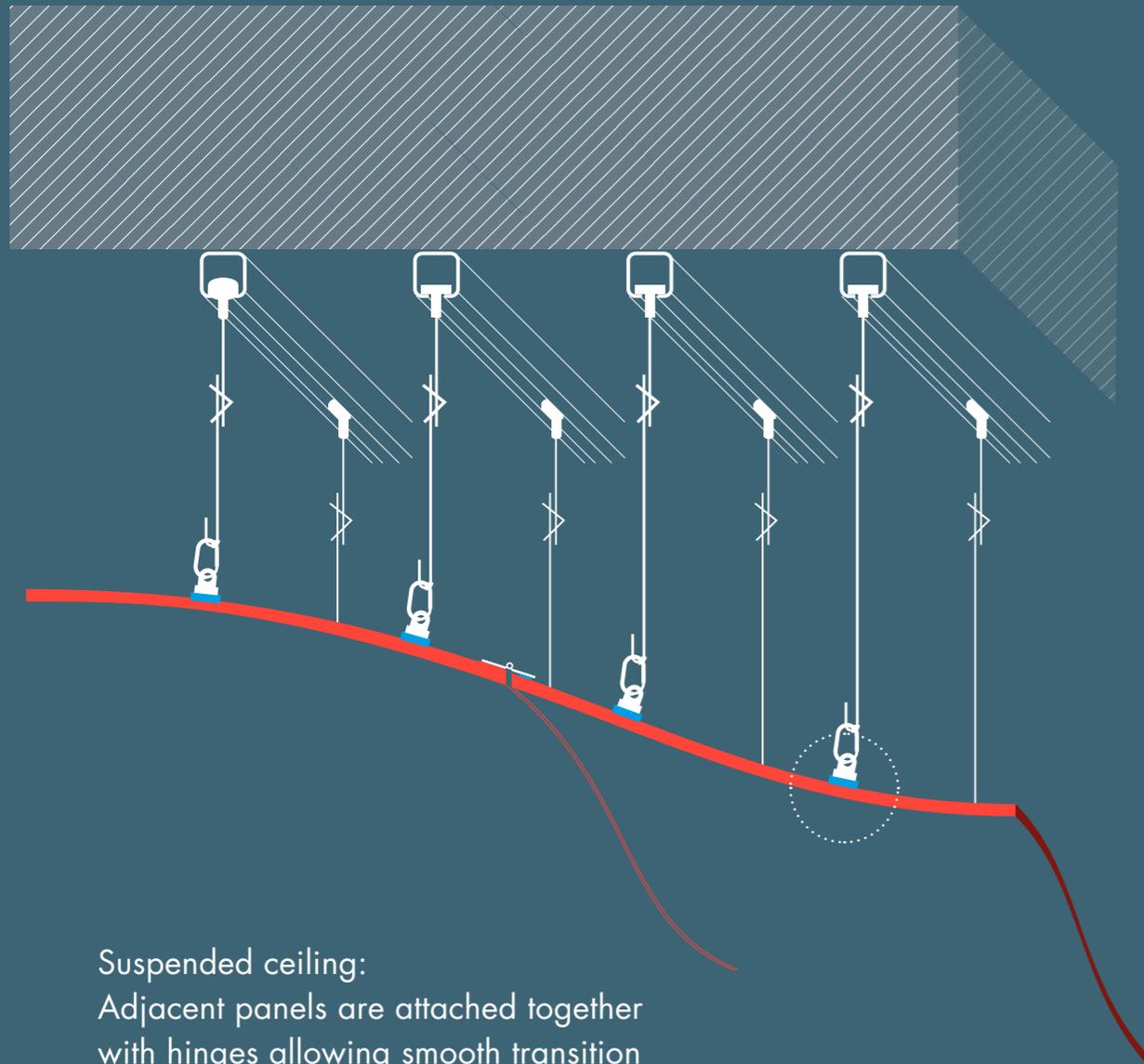
Ball-and-socket hinge allows for  
excellent alignment of the panel  
to the mounting frame

## CONCEALED SUSPENDED SYSTEM FOR INTERIOR CEILINGS

All our panels are available for interior ceiling applications. The ceiling panels are supplied with the full blind mounting system, for a plug-and-play solution.

Magnetic connections and hinged attachments are used in our blind mounting system that is quick to install and maintenance-friendly.

Each individual panel can be removed without disturbing adjacent panels. This enables easy installation and maintenance of air-ducts or electrics behind the panels.



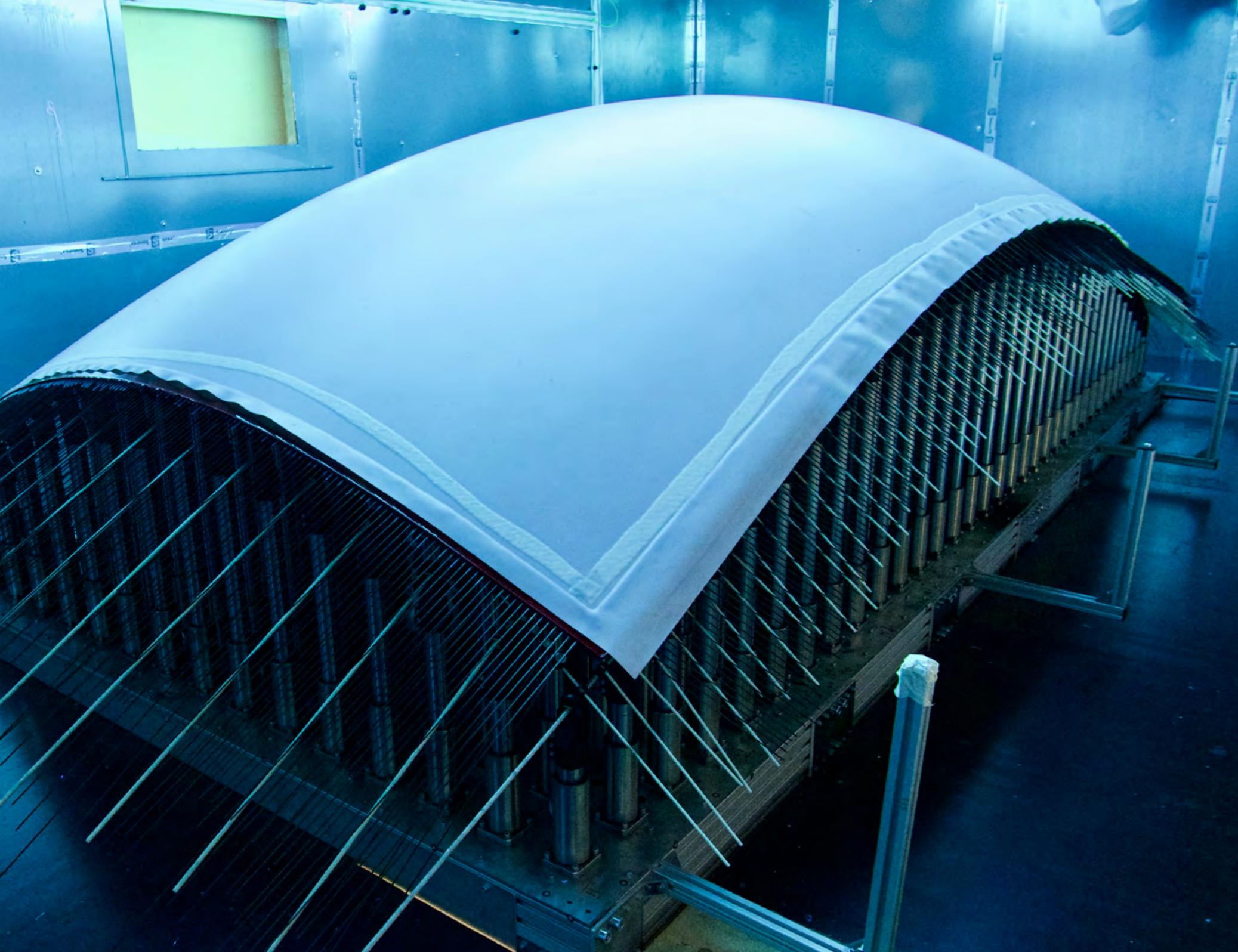
Suspended ceiling:  
Adjacent panels are attached together with hinges allowing smooth transition from one curved panel to another.



Curved panel with metal fixture attached to magnet.

Responsible manufacturing

The image features a light blue gradient background. In the lower-left quadrant, there are three thick, white, curved lines that sweep from the left edge towards the right, creating a sense of motion or a stylized wave.



## ADAPTIVE MOULD TECHNOLOGY

We take pride not only in our respectful choice of materials but also in our approach to responsible manufacturing.

Our solution is a CAD/CAM based system of adaptive mould technology coupled to state-of-the-art software. The software operated through Rhino3D lets the user create, check and select the shapes of the panels for manufacture. The panel information is sent to the adaptive mould which shapes itself in minutes to the desired shape. Production can begin.

This is its essential function, to be able to be reshaped and reused over and over again.

One mould, unlimited possibilities,  
no waste from tooling.

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