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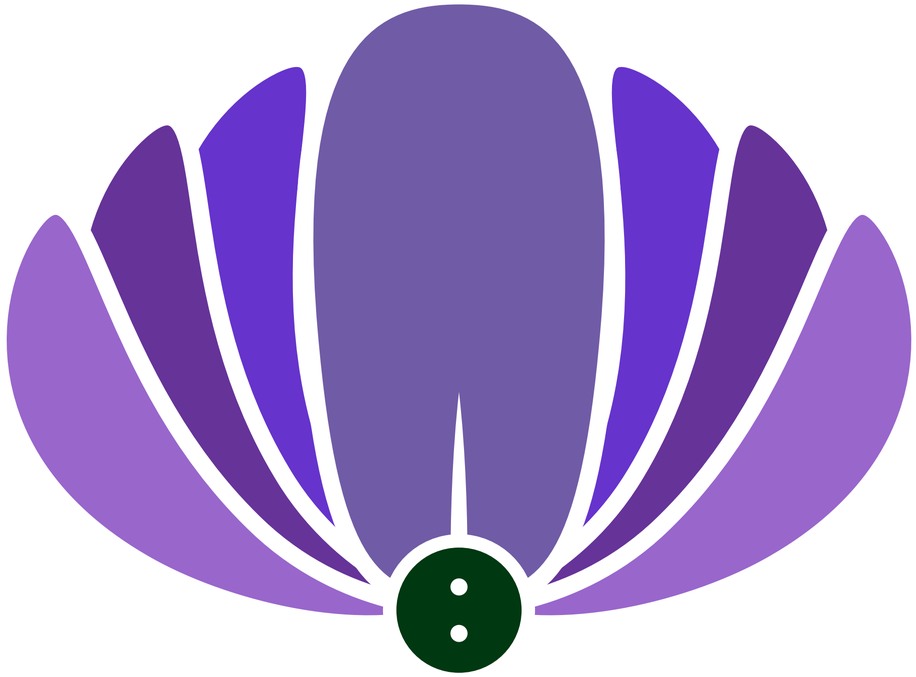


Capsule Piezoelectric Courts

combining the world of Squash with Green Transformation

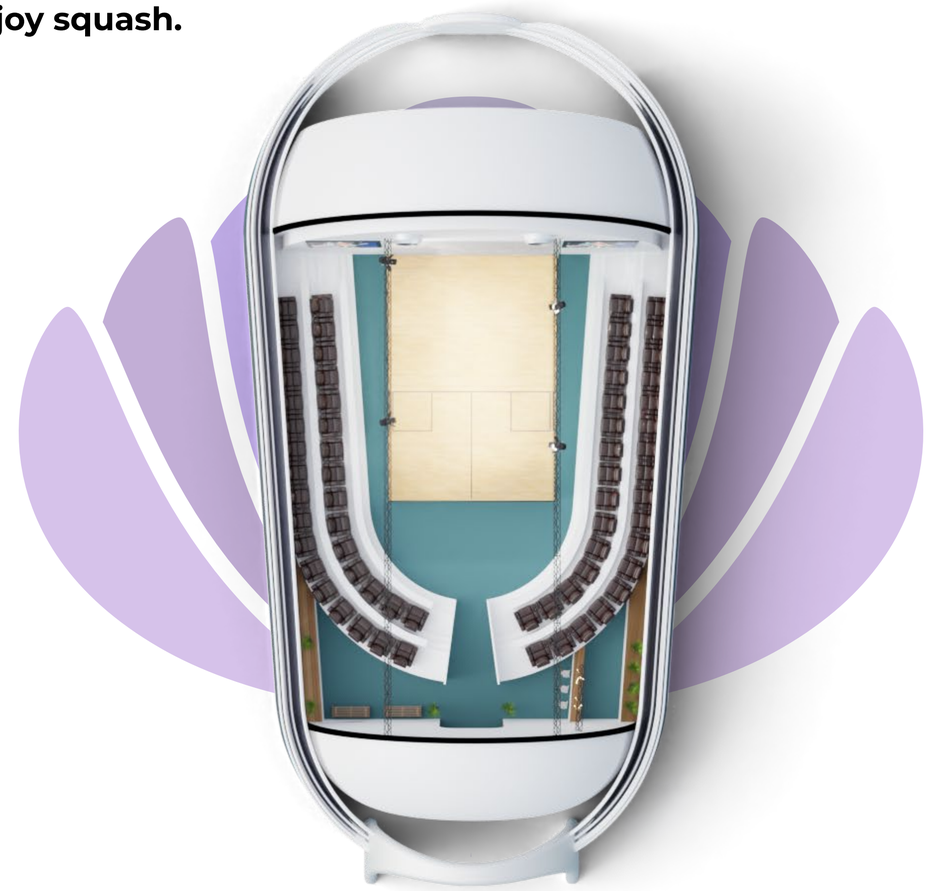
Our Idea

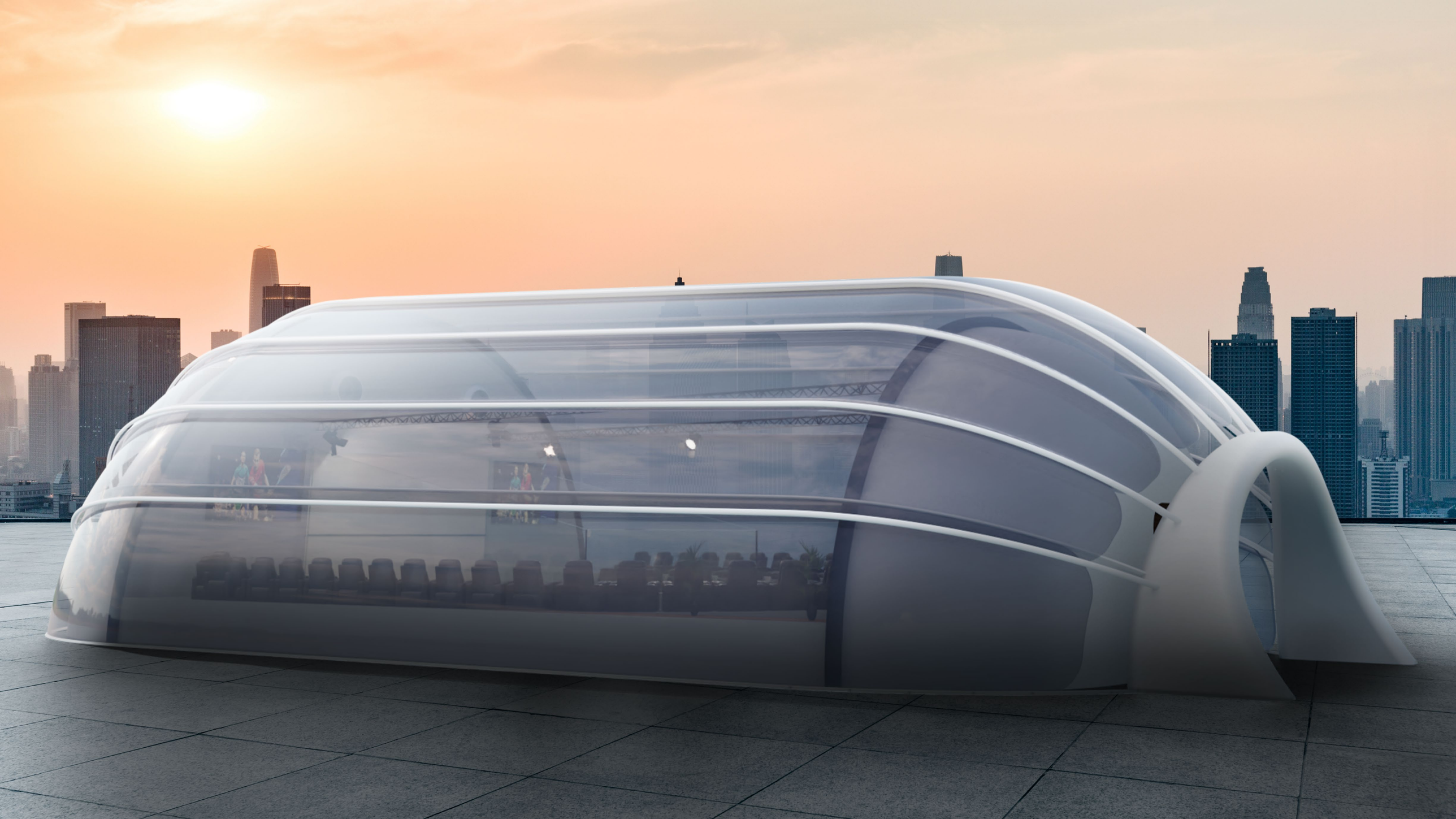
Imagine an universal, easily deployable structure that houses both true sportsmanship and cutting-edge technologies.

It’s possible with our **Capsule Piezoelectric Courts** that use pioneering Piezoelectric, Quantum and Thermogenerating technologies for generation and storage of clean energy.

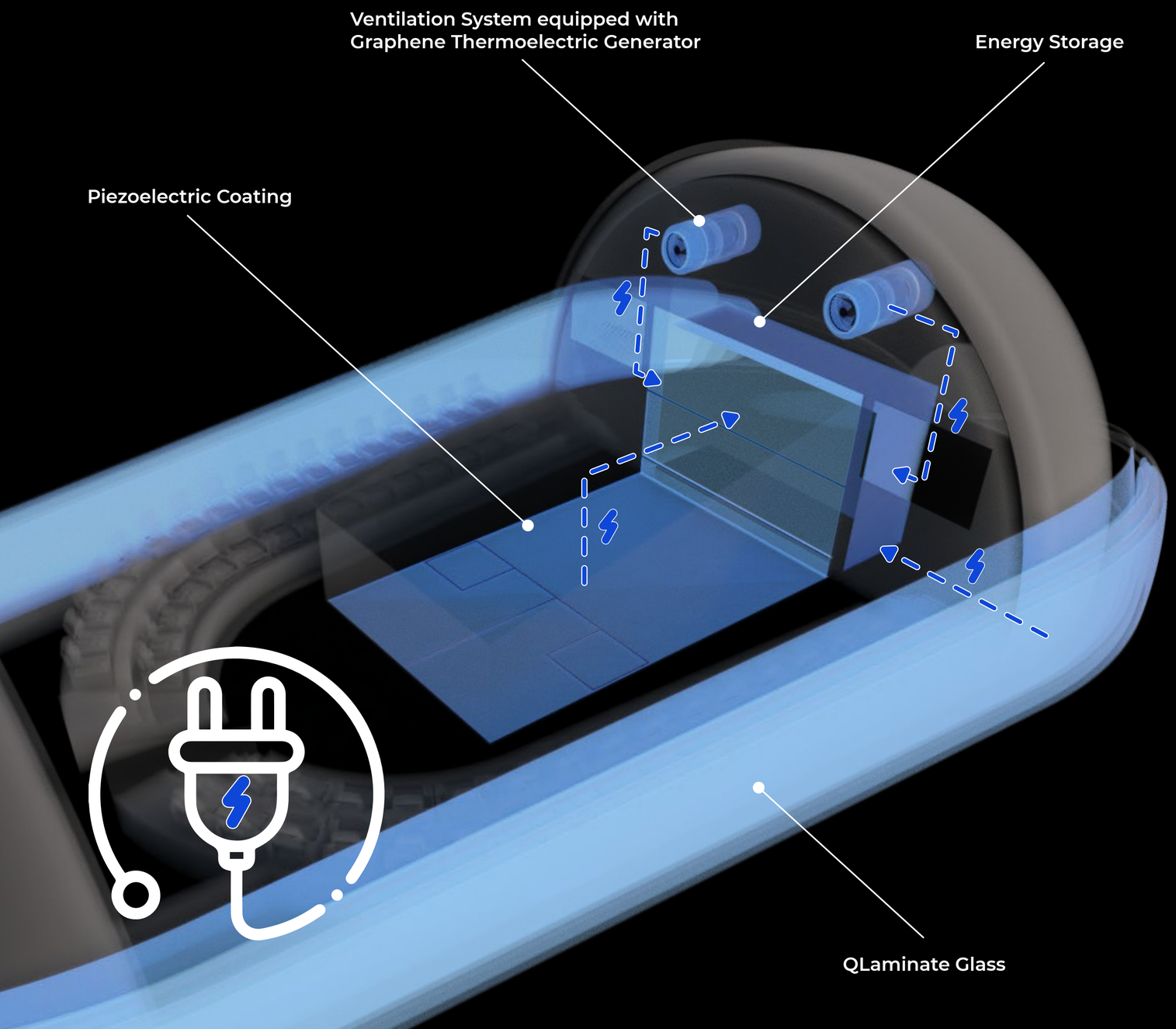
And all that happens while you simply enjoy squash.

Now the question is not only who will win,
but also **who will generate more energy**?





Generating Energy



Piezoelectric

A seemingly ordinary court hides a pioneering piezoelectric coating underneath, generating electrical energy with every step the players take and every bounce of the ball.

The layer also enables precise activity mapping for sports analysis.

Quantum

The glass capsule is actually **QLaminate** – a multifunctional polyester-glass laminate with quantum dots. It is a plastic integrated with fourth-generation photovoltaics (BIPV). QLaminate generates renewable energy from scattered sunlight.

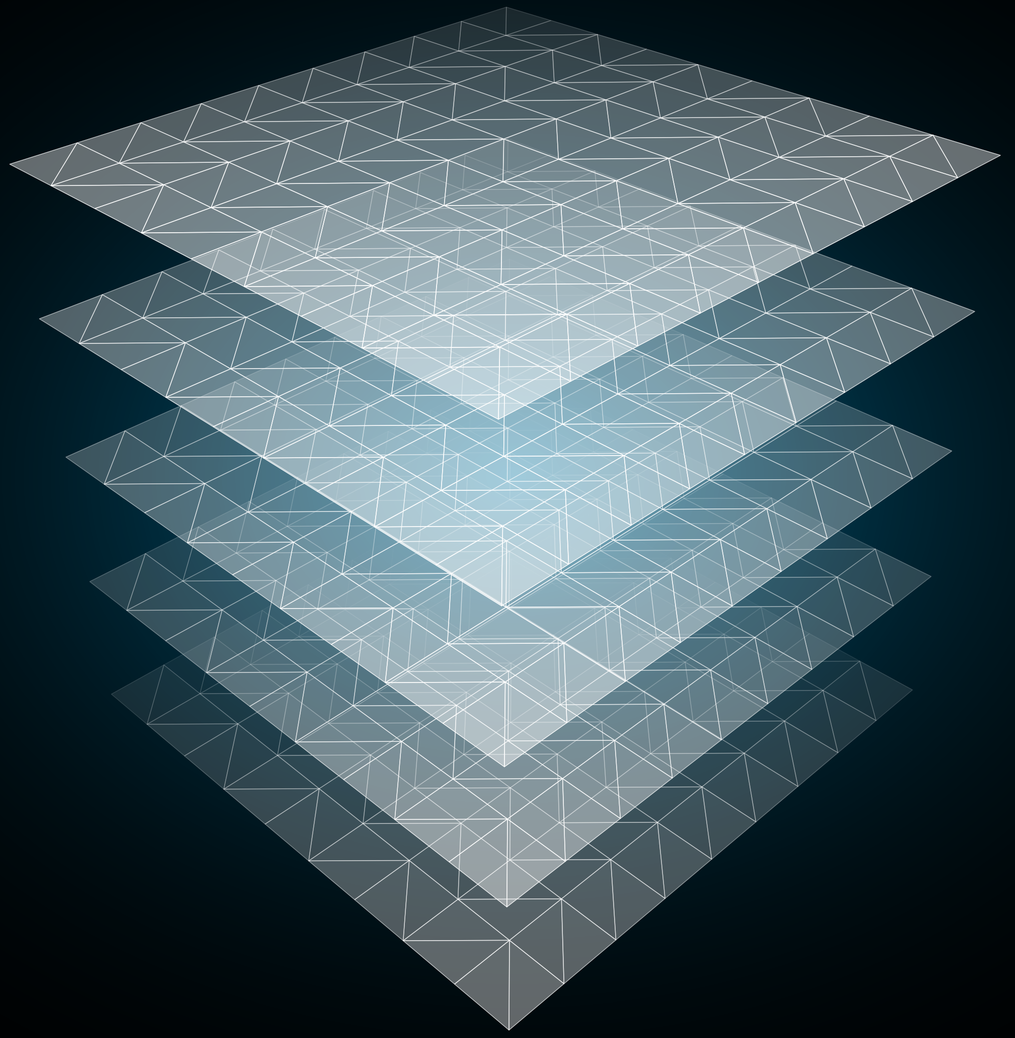
Thermogenerating

Integrated into the ventilation system will be the **GTG** – **Graphene Thermoelectric Generator** – the world's first fully flexible and personalized in shape thermoelectric cell, based on the two-dimensional material graphene. It enables the production of electricity from thermal energy.

The energy generated by the Court is stored at the back, from where it is distributed further to the building or city grid.

QLaminate

multi-functional composite
that generates electricity



We have created a new construction material: a multifunctional polyester-glass laminate with quantum dots. It is a plastic integrated with fourth-generation photovoltaics (BIPV). QLaminate generates renewable energy from scattered sunlight.

Thanks to EU funding, we are beginning laboratory adaptive research on the further development of this active composite with quantum wells for the shipbuilding, aerospace and automotive industries.

Our next milestone is the construction of a Capsule Piezoelectric Court, combining our green energy technologies, as well as a vessel with renewable energy storage and research laboratory, for research in a marine environment, under real conditions.

QLaminate is the first on a global scale to offer power generation where classic electricity fails. For shipbuilding, off-shore, railroad, aerospace or medical equipment.

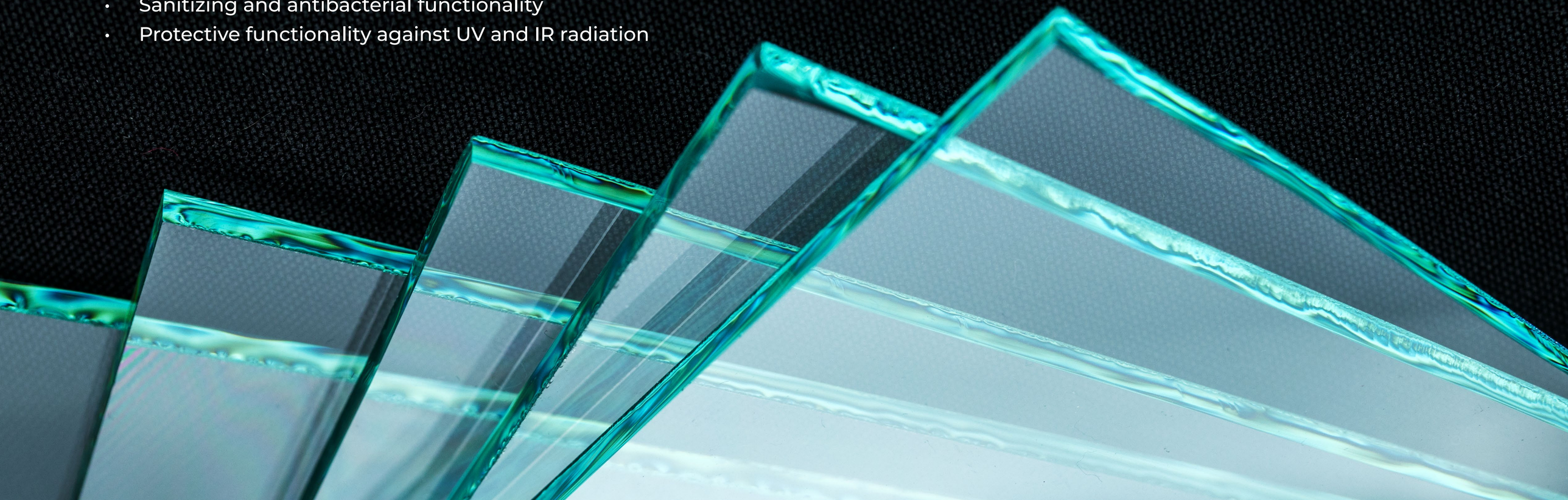
QLaminate

multi-functional composite
that generates electricity

Advantages of the composite

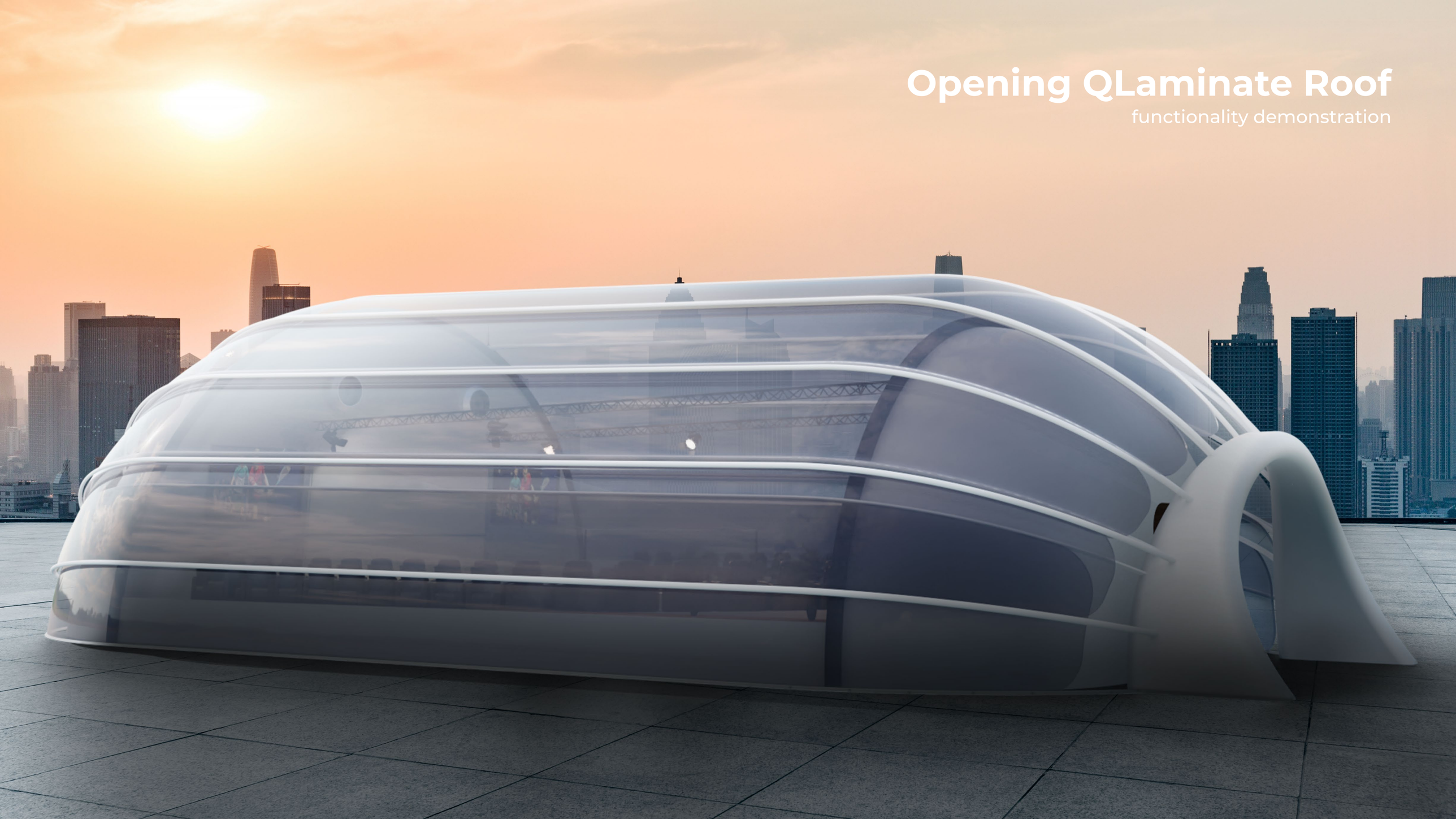
Combining materials with complementary properties, the final composite has all the advantages of the base materials plus new features resulting from their synergy:

- Generation of electricity from scattered sunlight
- Greater strength with less weight
- High impact resistance
- High thermal stability
- Resistance to fatigue corrosion
- Ease of installation
- Sanitizing and antibacterial functionality
- Protective functionality against UV and IR radiation



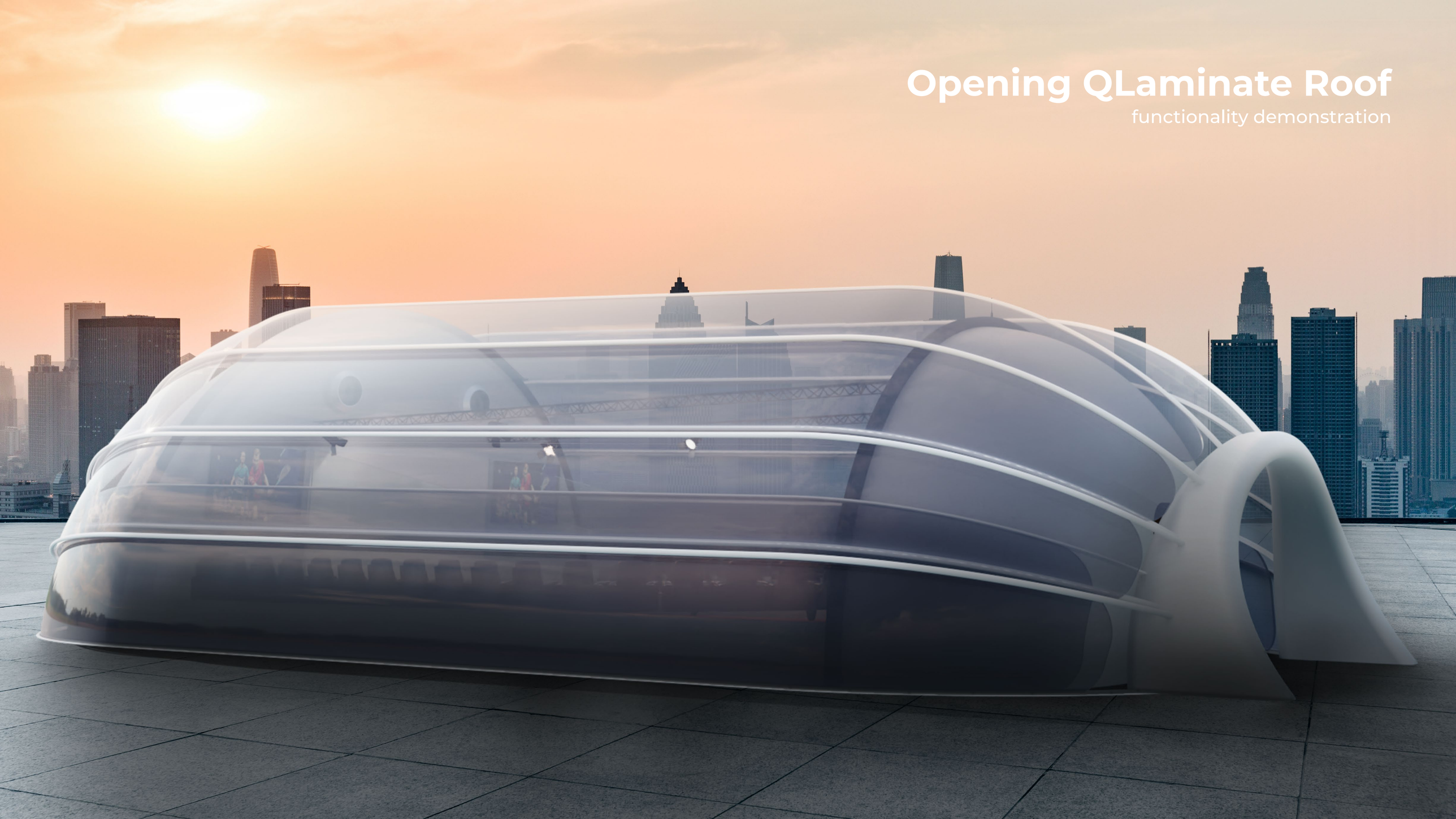
Opening QLaminate Roof

functionality demonstration



Opening QLaminate Roof

functionality demonstration



Opening QLaminate Roof

functionality demonstration

Opening QLaminate Roof

functionality demonstration

Locations

high-rise rooftops

Our Capsules offer full flexibility and can be installed in spots such as rooftops of apartment buildings or modern office buildings, hotel parks, exclusive estates, glamping sites, houseboats or cruise ships.


Locations:
hotel courtyard

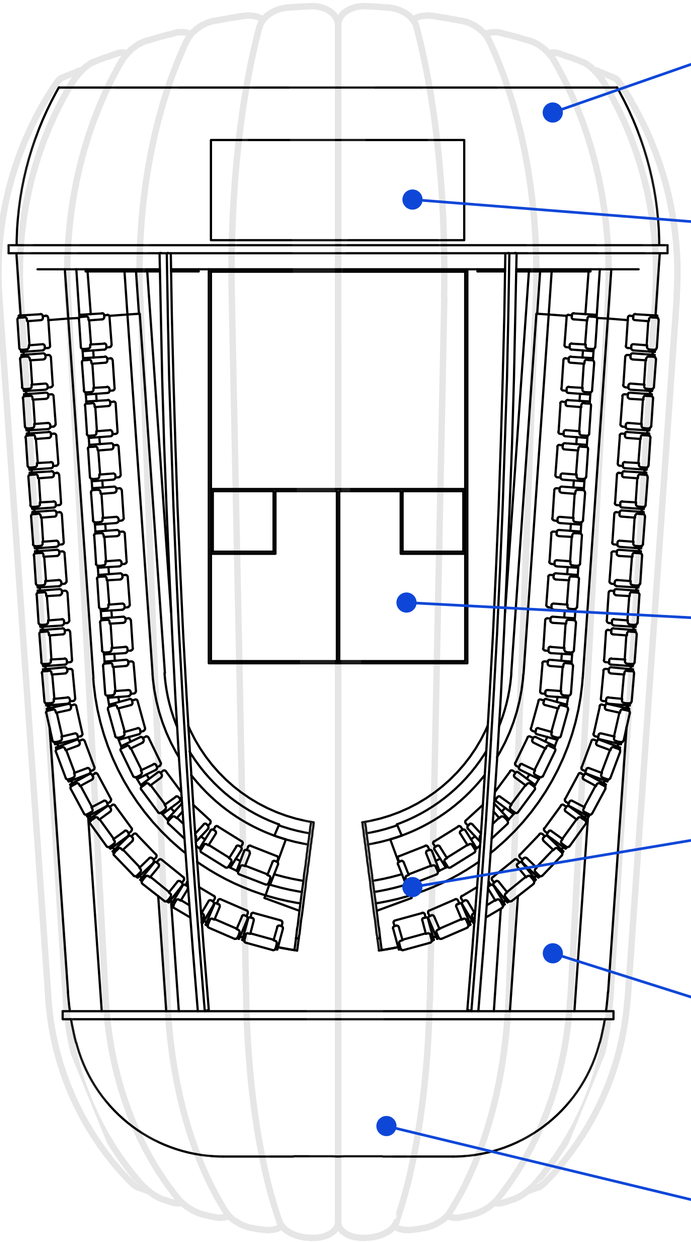
Locations:

cruise ships

Locations:

hotel courtyard

Structure



Back Storage Space
(space for staff + ventilation)

Energy Storage

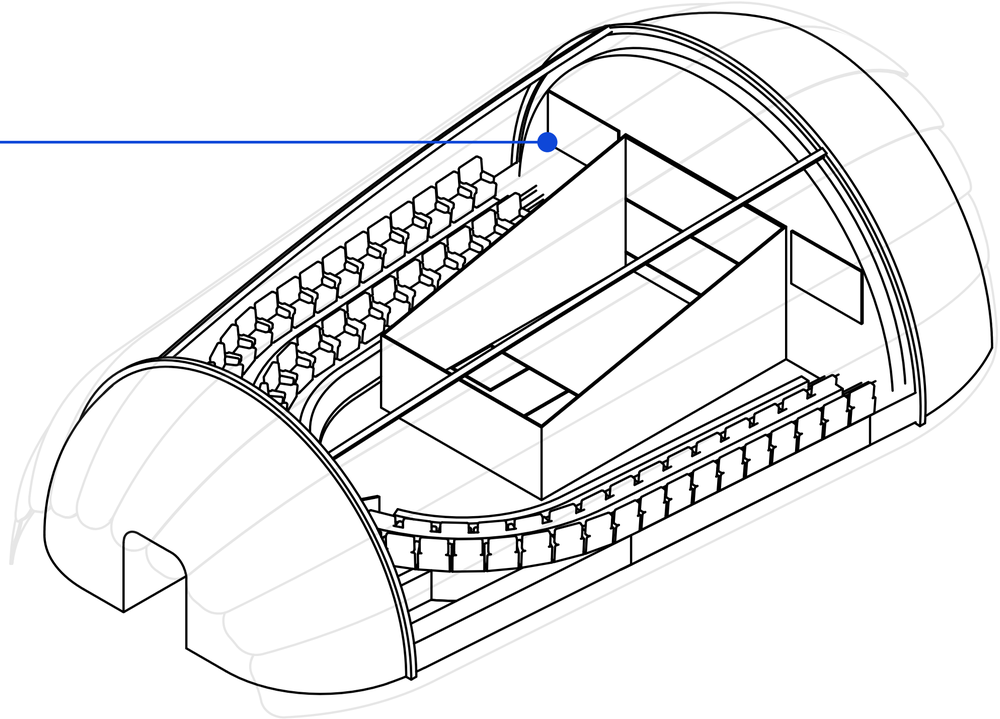
Video Screens

Court
(equipped with a piezoelectric layer)

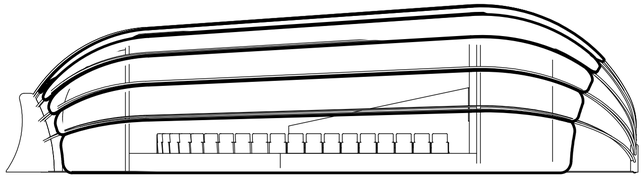
Audience

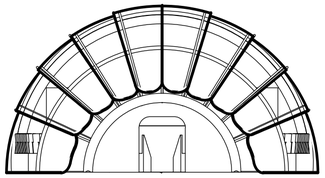
Bar/Lounge
(both sides of the lobby can be functional)

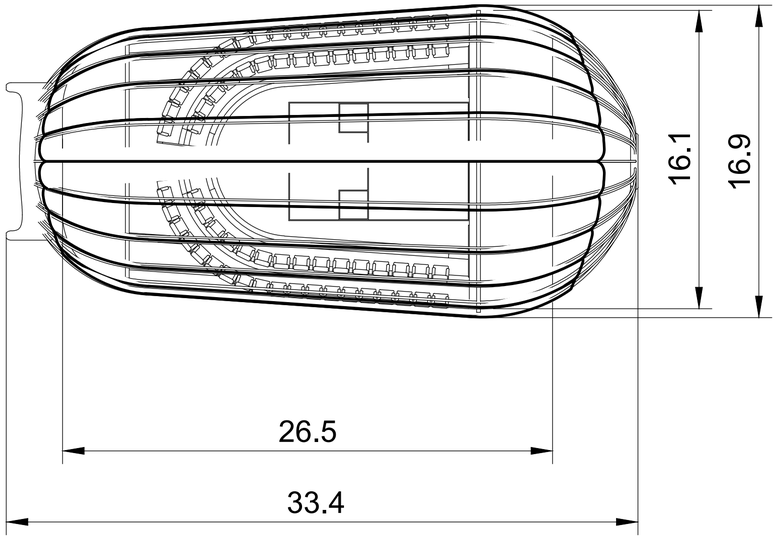
Entrance Structure
(space for staff + cameras + ventilation)



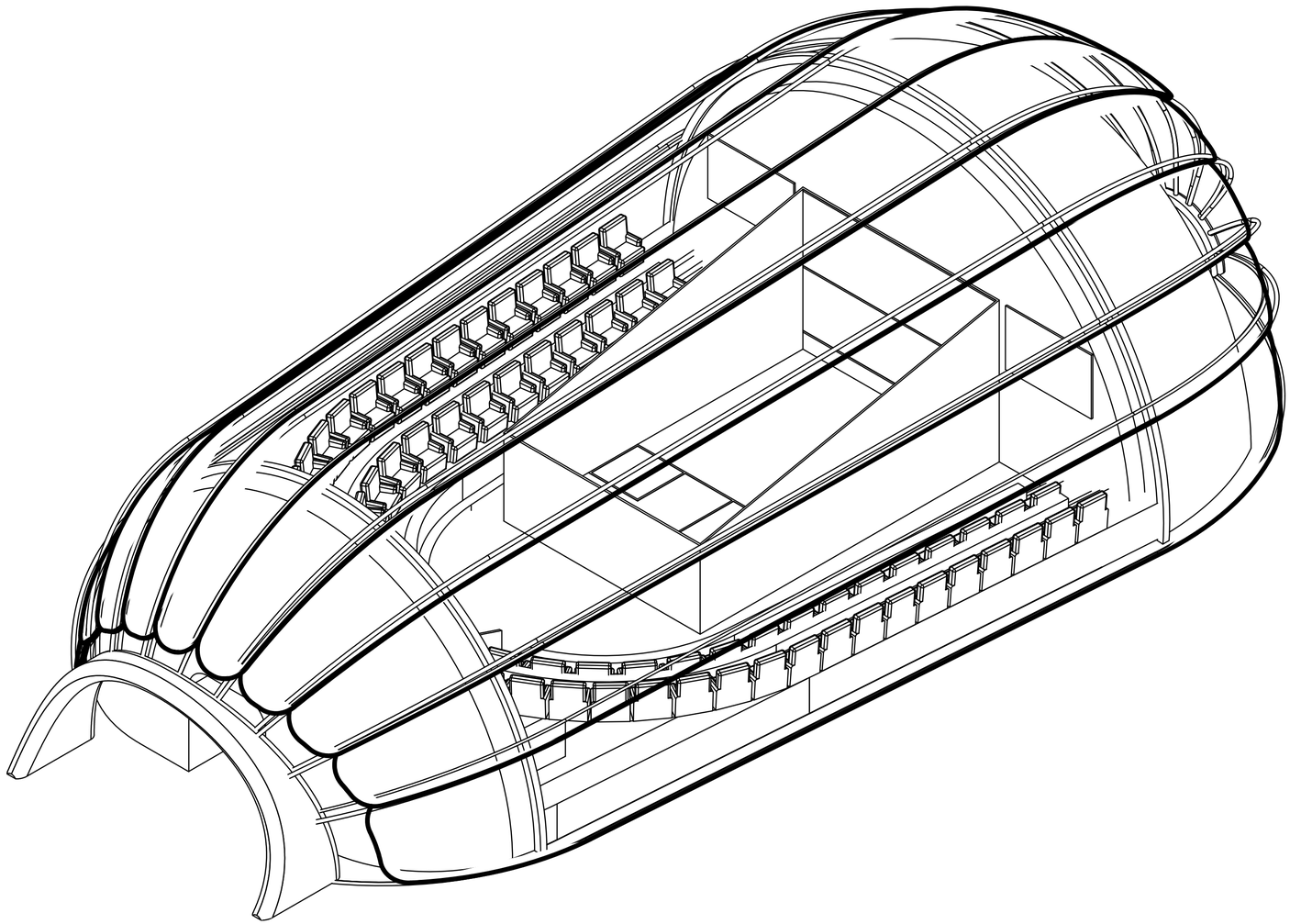
Size







dimensions in meters



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