ARCHI-TECTONICS

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FIRM HISTORY

ABOUT ARCHI-TECTONICS

Founded in 1998 by Winka Dubbeldam, and now co-led by Justin Korhammer, Archi-Tectonics is a global design studio headquartered in New York City, with offices in Los Angeles, Amsterdam and Hangzhou. The firm is engaged in over 250,000 sqm of new developments across North America and Europe, including an urban superblock of 31-story residential towers and urban forest in Albania.

Adaptive Hybrids and Organic Systems. We think of buildings as active systems rather than inert objects. Like organisms, our buildings dynamically adapt to their environments, and are designed to be energy efficient, and react to changing functional demands, thus expanding the traditional boundaries of program and typology. By treating buildings, landscape, and environments as a continuum, and by understanding architecture as a way of shaping processes and flows, we create buildings that have agency in their environments and ecospheres and promote the well-being of both the inhabitants and their habitat.

Designs through Research, Prototyping, and Testing. We value performance over form and design intelligence over style and use 3D digital generative design processes that create new building forms that deliver optimized for performance and identity. Archi-Tectonics continuously refine these forms through extensive testing and prototyping to deliver purpose-driven, efficient, sustainable, and imaginative solutions for 21st-century challenges.

Innovation through Collaboration / Non-Standard. Arch-Tectonics fosters creative synergies to generate highly efficient, adaptable buildings and environments by fully integrating a team of creative collaborators, engineers, and fabricators into the design process. Working closely with manufacturers through continuous prototyping and pre-fabrication, enables us to disrupt the standards and limitations of conventional building production, and to generate highly customized but economic structures and materialities.

Archi-Tectonics' work has been exhibited and presented internationally, with solo shows and lectures in Rotterdam, Bogotá, Milan, Munich, Venice, Berlin, and at global forums and climate conferences including COP Dubai, AIA New York, UIA Copenhagen, CTBUH Singapore, and TED Edinburgh.

Archi-Tectonics' work has been widely recognized with awards including the CTBUH Award of Excellence, the Luban Prize, the Architizer A+ Award, The Plan Award, and multiple honors from AIANY.

The firm's research and projects have been published in five monographs: Monsters and Mutants: Explorations in the Architecture–Nature Continuum (Park Books, 2025); Strange Objects, New Solids And Massive Things (Actar, 2021); Archi-Tectonics: Winka Dubbeldam (DAAB, 2011); AT-INdex (Princeton Architectural Press, 2007); and Winka Dubbeldam, Architect (010 Publishers, 1996).

Archi-Tectonics is a certified Women Business Enterprise (WBE) in New York State.

INTRODUCTION

FIRM STATEMENT

Archi-Tectonics, a WBE certified company, founded by Winka Dubbeldam in 1998 and joined by Justin Korhammer as partner in 2016, has developed an extensive portfolio of high-performance, hybrid buildings and urban strategies around the world, driven by rigorous research in addressing complex socio-economic challenges and combating climate change.

Our projects vary in scale and type, from bottom-up urban “acupunctures” like the such as the 116-acre eco-park with seven green buildings in Hangzhou and the 80-acre Healthy Living Village in Staten Island to advance climate-responsive structures that feature material innovation and advanced production, including the Londonw Solar House, the 512GW Climate Skin, the V33 Building in Tribeca, and the 497GW passive solar condominiums. Each of our interventions serves as a catalyst for making our cities more resilient – imbibing an evocative, haptic quality that fosters communities and promotes wellbeing of humans, non-humawns, and the planet.

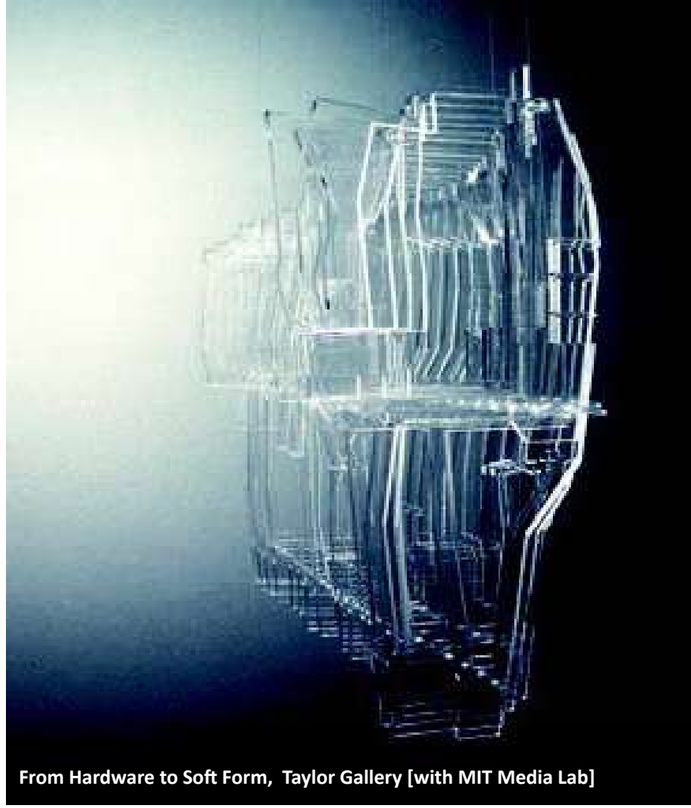
Our design process is aimed at developing an object (as building) not with a focus on a particular aesthetic or style, but on its ‘coming into being’. Edmund Husserl described this as the linguistic translation from the mental, spiritual space of the inventor, where the originaliter resides, to a formation of the “ideal object.”

The design as ‘growth’ originating from the seed’s ‘inner logic,’ often results in another aesthetic, approximating what others might consider unusual, or ugly, by conventional standards. This newly formed original with its almost ugly or uncanny nature is in fact an indicator of the autonomous nature of the “building as object”, an object with character and identity.

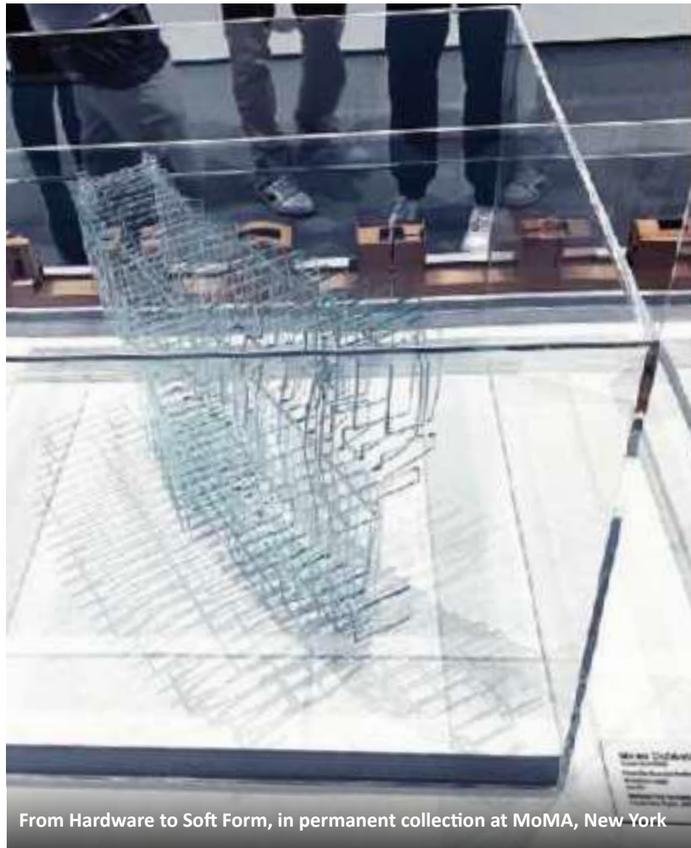
“Strange Objects Exhibit”: Venice Architecture Biennale 2023

“Synthetic Natures Exhibit”: Spazio Milesi, Milan 2025

Monsters & Mutants Exhibit”: Architekturgalerie, Munich 2025



From Hardware to Soft Form, Taylor Gallery [with MIT Media Lab]



From Hardware to Soft Form, in permanent collection at MoMA, New York

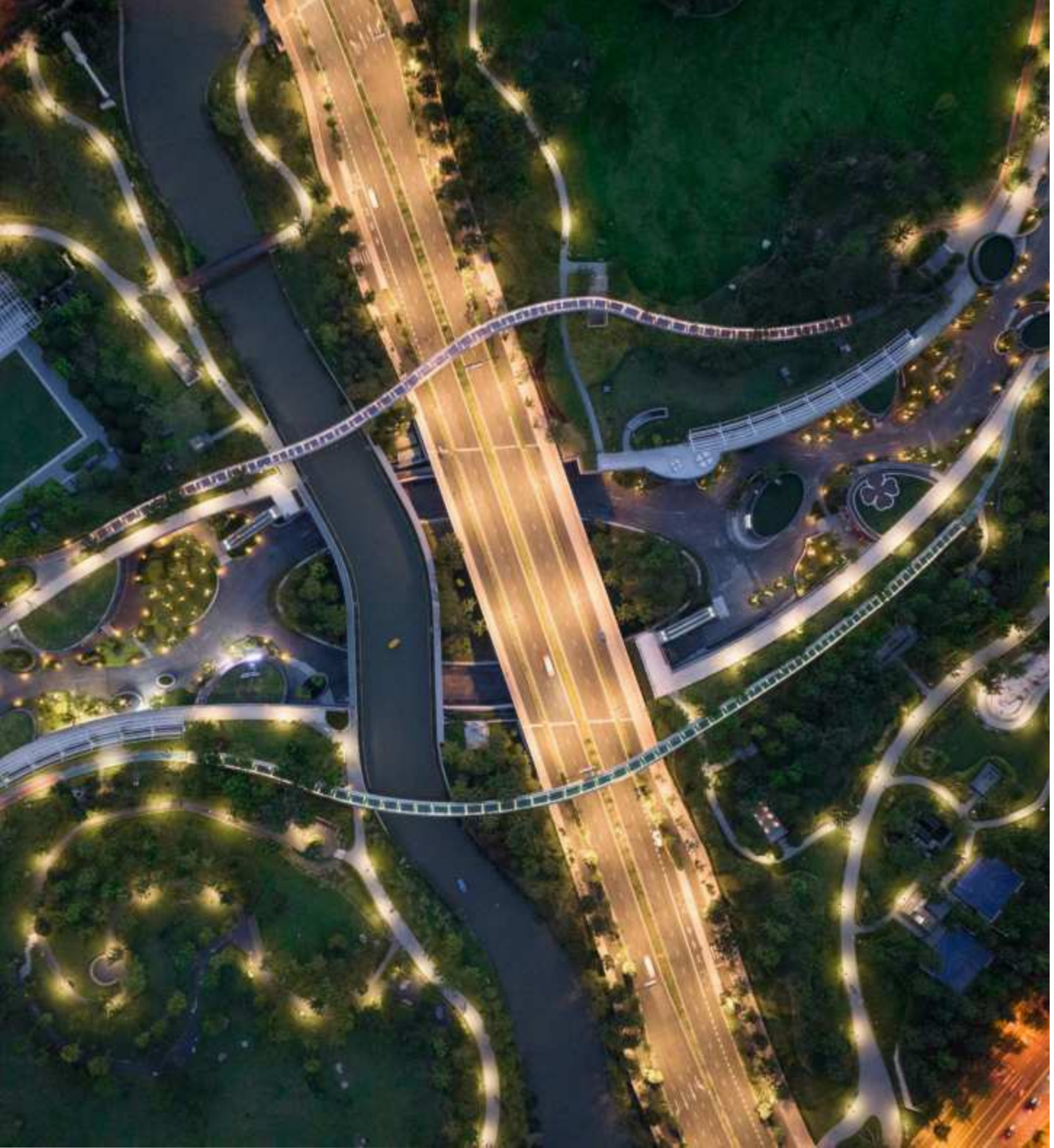
RETHINKING CITY FUTURES OVERVIEW

FUTURE OF NYC : MASTERPLAN EXHIBITION: GRAND CENTRAL NY

ALTA VIEW HEALTHY LIVING MASTERPLAN - ADAPTIVE REUSE & TERRACE HOUSING STATEN ISLAND NY

BOTTOM-UP DESIGN DOWNTOWN BOGOTA EXHIBIT: AEDES BERLIN

ASIAN GAMES 2023
VENICE ARCHITECTURE BIENNALE 2023 AND 2025



SECTION 01

URBAN STRATEGIES
HYBRIDS
EARTH BUILDINGS

VALLEY VILLAGE HYBRID
SHOPPING IN HANGZHOU CHINA

Green Valley Shopping Concept:
A New Social Artery

VISION

The vision for the Valley Village project was to create a vibrant social artery that seamlessly unites the two halves of Hangzhou's Gongshu Park, home of the 2023 Asian Games. Conceived as an 800-meter recessed green shopping valley, the design integrates circular glass pavilions, restaurants, and leisure spaces beneath a landscaped surface that preserves the park's continuity while linking two landmark venues—the Field Hockey Stadium and the Hybrid Stadium & Concert Hall. By tucking much of the development below grade, flanked by discreetly connected parking garages, the project minimizes visual impact while setting a precedent for sustainable, ecologically conscious urban growth in one of China's fastest-growing cities..

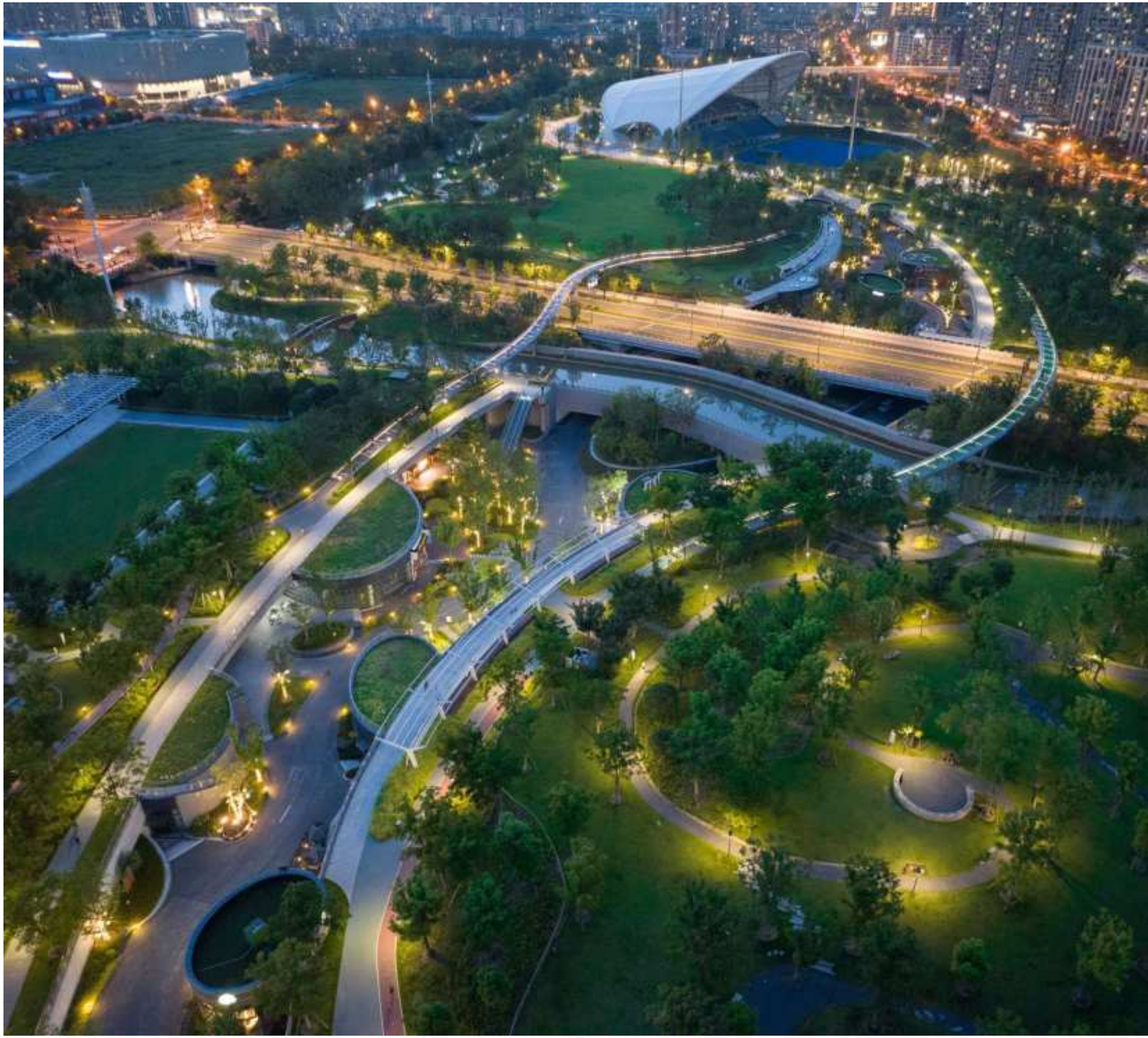
INNOVATION

The Valley Village Mall re imagines a conventional underground shopping complex as an open-air "green valley" of glass pavilions, seamlessly connecting the two halves of Hangzhou's Gongshu Park beneath a road and river via new aqueduct and viaduct links. Powered by two solar-shading wings that provide energy, ventilation, and shade, the design integrates solar lighting, green roofs for natural insulation, and escalators and pedestrian bridges that link directly to the city. Employing a Zero-Earth Landscape Strategy, the site was reshaped into rolling hills over 20 meters high without importing soil, creating nature reserves that enhance biodiversity. Beneath the landscape, a 68,000 m^2 network of parking, service passages, and leisure spaces—including a cinema—ensures efficient operations while preserving the park's ecological integrity.

SUSTAINABILITY IMPACT

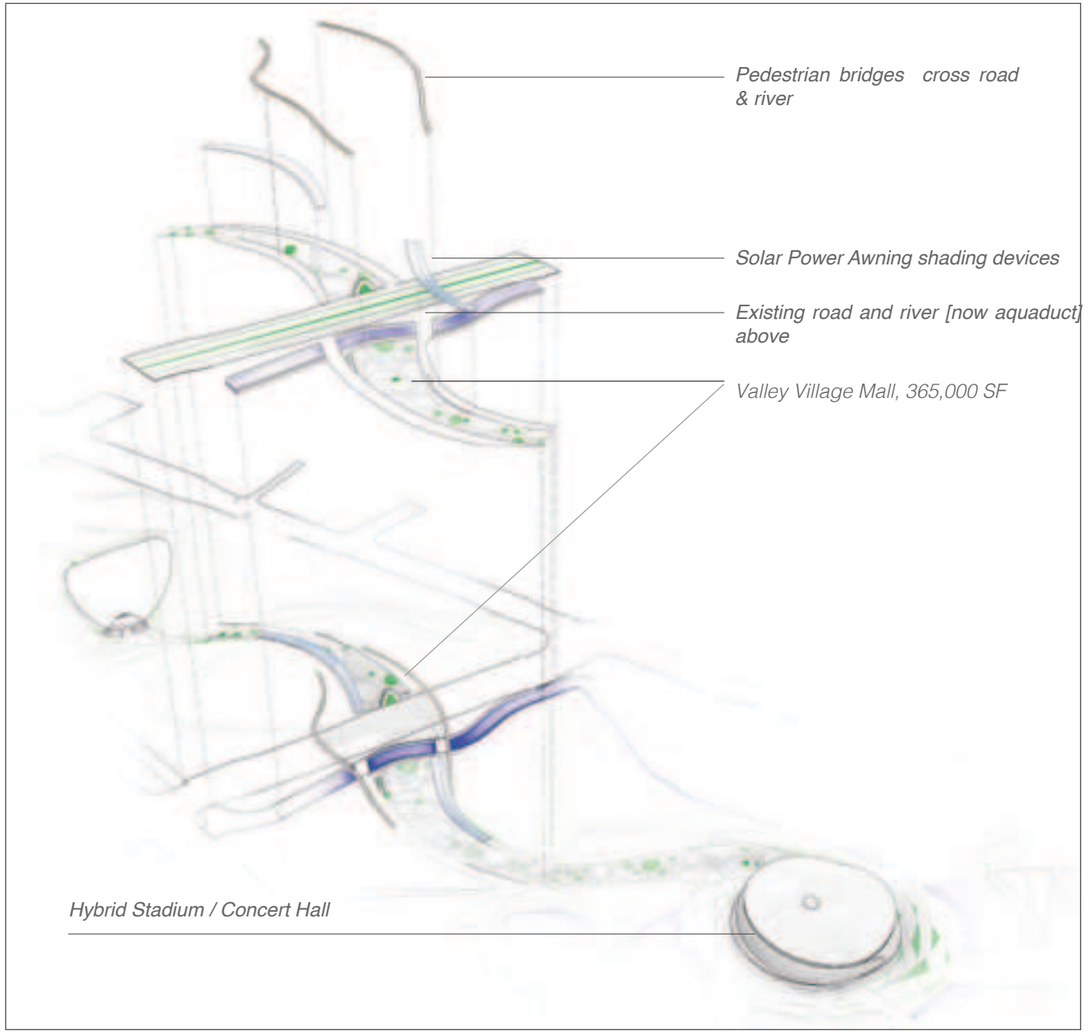
The Valley Village Mall integrates solar-powered shading wings for energy generation, fresh air, and comfort, along with solar lighting and green roofs to reduce energy demands. Using a Zero-Earth Landscape Strategy, the site was reshaped into rolling hills and wetlands without imported soil, creating nature reserves that promote biodiversity. Preserving 85% of the site as parkland and enhancing pedestrian connectivity further supports its ecological and recreational value.

STATUS	Completed 2023
LOCATION	Hangzhou, China
CLIENT	Gongshu District City Village Reconstruction Department
PROGRAM	Valley Village Hybrid Shopping Concept
SIZE	365,000 SF and 800m long



SOCIAL CONDENSOR

The Valley Village Mall, a pedestrian green shopping spine lined with retail spaces dips under the road & river as a recessed green valley creating an open-air social core that feels connected to surrounding landscapes and city. Two parking garages flank the shopping area and connect underground to provide delivery access.



800 M LONG VILLAGE VALLEY MALL AS CONNECTOR

Connecting the two stadiums is the Valley Village Mall, a pedestrian green shopping spine lined with retail spaces that activates the entire site. Passing underneath an existing road and river, this connector guarantees not only seamless circulation during the Asian Games, but also the future success of the project as a lively and active urban spine. Solar wings provide permanent lighting.

ZERO-EARTH STRATEGY

Digging out the wetlands and the Valley Village to connect the 2 halves of the park, made it possible to shape the previously flat site into a landscape of rolling hills that rise more than 20 meters above grade without bringing in additional soil, adhering to a ‘zero-earth’ strategy to minimize the environmental impact of soil removal

HYBRID STADIUM & CONCERT HALL [LEED PLATINUM]

Adaptive Hybrid Building evoking the region's heritage, developed with parametric design and optimizing design

VISION

The 6,500-seat 377,000sf Hybrid Stadium & Concert Hall is the architectural centerpiece of the project, which will serve as a venue for sports events during the Games, and afterwards be adapted as a cultural center for concerts and performances, hence becoming an asset for the city.

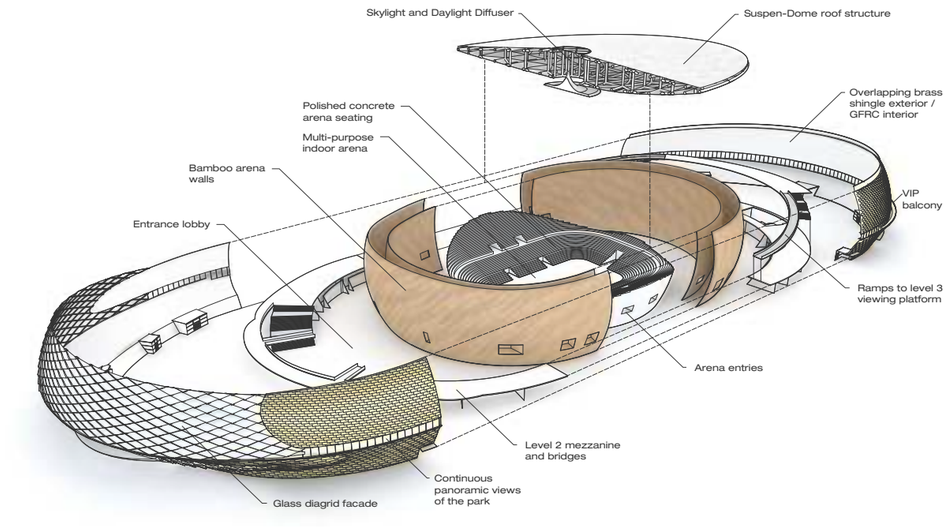
INNOVATION

Starting with a geometry inspired by the Cong, an ancient Hangzhou jade-stone artifact, Archi-Tectonics parametrically designed this optimized shape to facilitate the stadium's conversion from a sports arena to a performance venue. The stadium features a suspen-dome roof resting on the inner bowl and cantilevering out to support the outer shells with brass shingle cladding and a glass diagrid. The choice to keep the the glass planar on a double-curved surface led to the design of aluminum 'eyelids', which optimized costs, construction time and beauty. The interior arena is entirely clad in locally sourced bamboo, and receives natural light and air through a ring of openable windows and a central skylight.

SUSTAINABILITY IMPACT

The Hybrid Stadium & Concert Hall was designed with sustainability as a top priority. It incorporates passive energy strategies such as natural daylighting, ventilation, and water cooling via wetlands to reduce energy demand. The structure uses renewable and recycled materials, including bamboo and brass, and applies Sponge City principles for stormwater management and landscape integration. Through BIM-driven optimization, the project minimized material waste, reduced

STATUS	Completed 2023
LOCATION	Hangzhou, China
CLIENT	Gongshu District City Village Reconstruction Department
PROGRAM	Hybrid Stadium & Concert Hall
SIZE	377,000 SF / 6,500 seats

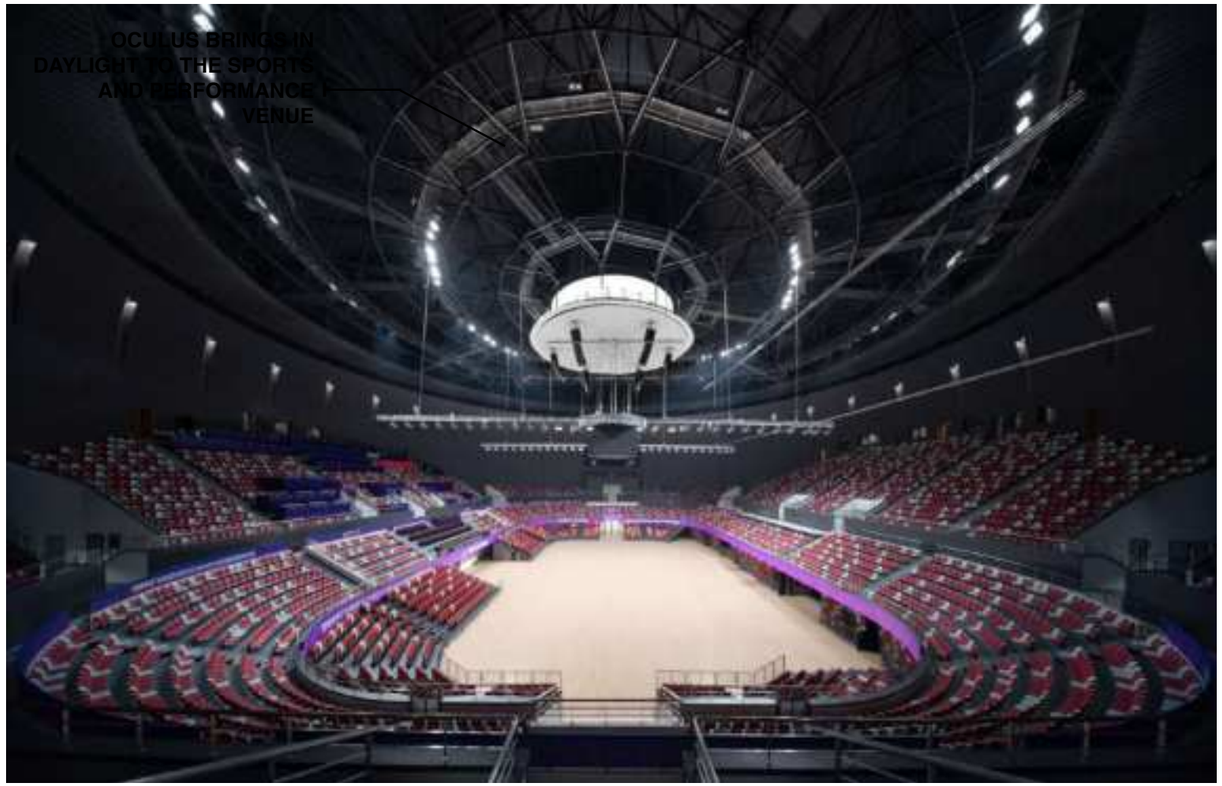


IMPACT

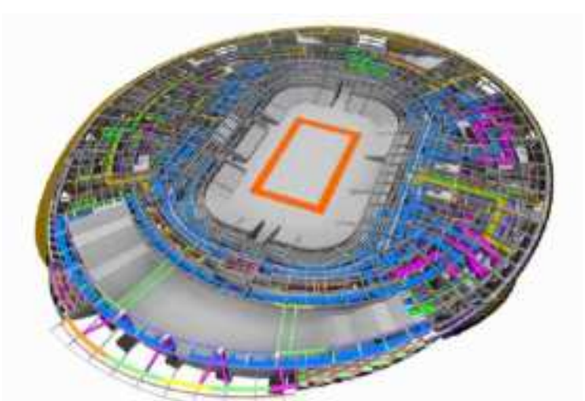
MATERIALS EFFICIENCY AND CONSTRUCTION OPTIMIZATION

The parametric design process optimizes the design to reduce the material and energy cost of construction and accelerate the schedule The stadium features a diagrid facade, a structurally efficient approach that combines lateral- and gravity-load bearing resistances into a single diagonal grid system that eliminates the need for columns and reduces the material cost of the structure.

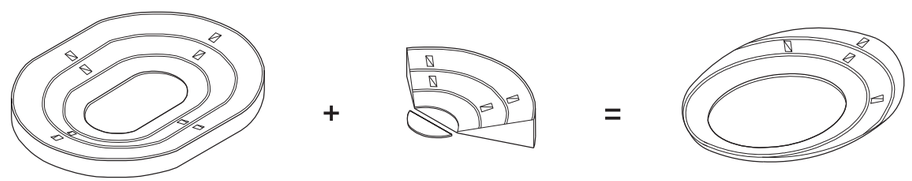
BIM coordination with the structural engineer and local fabricator facilitated tests in how different module dimensions impacted the cost, constructibility, and visual effect of the facade. The final design—which uses planar glass panes with aluminum “eyelids” to achieve the curving effect—is optimized for materials efficiency and ease-of-construction.



Super-Dome Roof



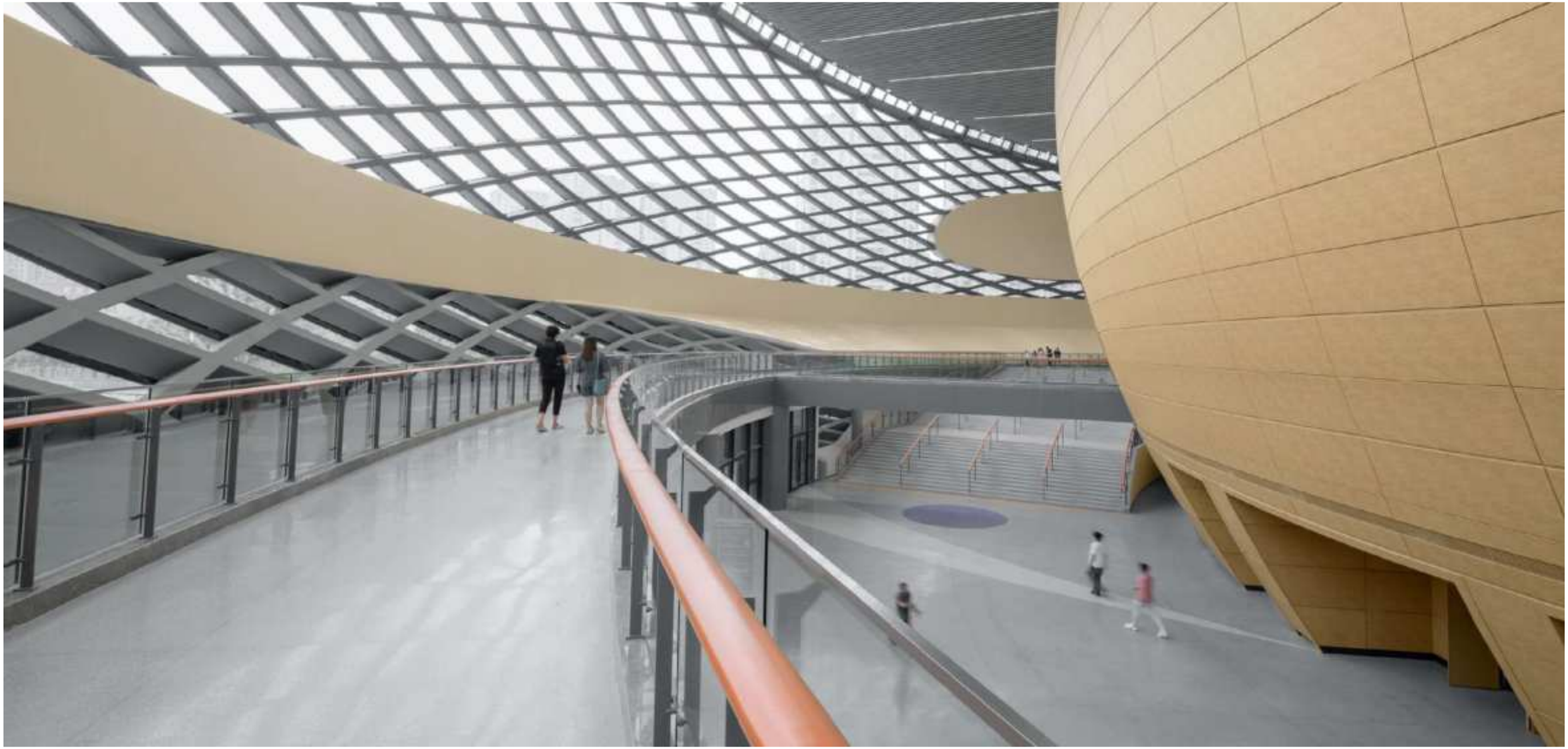
BIM Coordination of MEP and Structure



ARENA AMPHITHEATER STADIUM

HYBRID STADIUM: SPORTS AND CONCERTS

The design of the stadium's bamboo clad bowl merges arena and amphitheater seating schemes, allowing the stadium to adapt the central viewing layout preferred for sporting events into an asymmetric, stage-centered configuration for performances. An oculus at top brings in daylighting to the performance space.



Wind Analysis

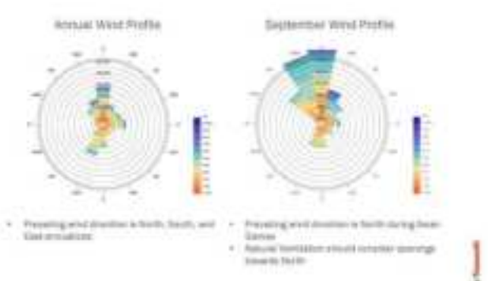
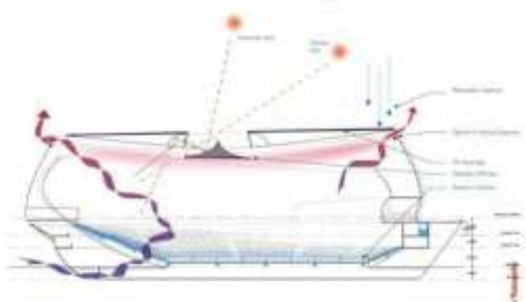


Table Tennis - Sustainable Strategies



BREATHING BUILDING

An openable ring of windows under the roof let the building breath while the glass diagrid and the oculus at top brings in daylighting . By only cooling the visitor's seats energy costs are drastically reduced.

AFTER WORK PEOPLE COME TO THE PARK TO DANCE, CAMP,
FISH, KAYAK, DO YOGA

A BREAKDANCE FESTIVAL DREW
GREAT CROWDS

LIU LIYANG'S 'RECENT TOUR IN HANGZHOU
REACHED FULL CAPACITY

LEGACY HYBRID

NOW after the 2023 Asian Games the Hybrid is functioning as concert hall and performance space for the city of Hangzhou with breakdance festivals and an amazing concert by Liu that fiulled all 6500 seats!

ASIAN GAMES FIELD HOCKEY STADIUM

A 410-foot free-span roof allows this stadium to double as a center for open-air community events

VISION

This stadium was designed as an anchor for the other half of 2022 Asian Games Park opposite the Hybrid Stadium. This stadium is developed as Land-Art, as it is recessed in the landscape.It's field is shielded from wind and views and doubles as a space for open-air community events after the game—all while embracing the region's design heritage.

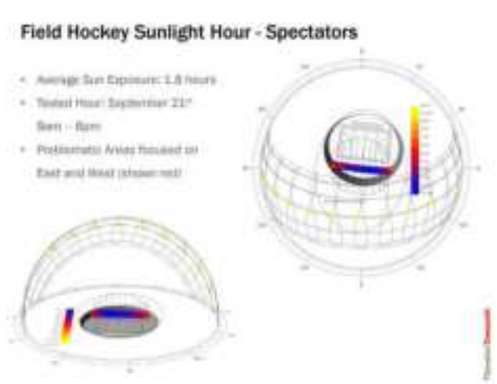
INNOVATION

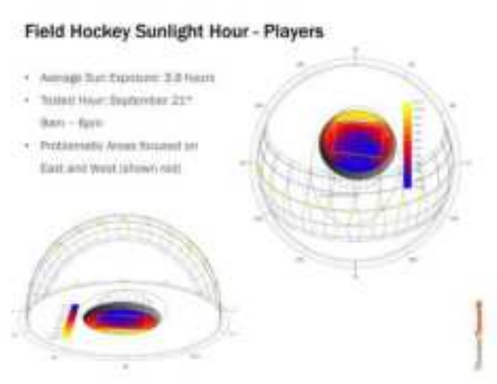
The stadium is defined by its 125m free-span translucent wing inspired by the structure and materiality of the traditional oil-paper-and-bamboo umbrella. A single curving beam supports the roof, keeping the entire mesh in tension. The ring beam—1 meter in diameter at its thinnest and 1.5 meters at its thickest—is held down by 4 massive concrete abutments .

SUSTAINABILITY IMPACT

The Field Hockey Stadium, designed by Archi-Tectonics for the Hangzhou Asian Games 2023, is a landmark of sustainable and integrated design. Set within a 47-hectare eco-park, the stadium merges architecture with landscape, partially embedded in the terrain to reduce visual and environmental impact. The 125-meter free-span wing creates passive cooling through natural airflow, reducing energy consumption and shades viewers, players and the curved glass enbtry facade. The structure incorporates locally sourced bamboo, sponge city landscape strategies for stormwater management, and was fully designed using BIM to optimize material efficiency and reduce waste. Originally planned as a temporary venue, it will now serve a long-term cultural function—extending its environmental, ecological and social value.

STATUS	Completed 2023
LOCATION	Hangzhou, China
CLIENT	Gongshu District City Village Reconstruction Department
PROGRAM	Field Hockey Stadium & Events Venue
SIZE	192,000 SF / 5,000 seats





INNOVATION

410-FOOT FREE SPAN WING ROOF

Working closely with structural engineer Thornton Tomasetti, we prototyped and tested several iterations of the wing roof, arriving at an ultra-lightweight structure that makes possible its 410-foot free span. The Wing shades not only viewers and players but also the curved glass entry facade

IMPACT

STADIUM AND OPEN-AIR COMMUNITY SPACE

The playing field acts also acts landscape element in the park, becoming a space for space for outdoor concerts, nightmarkets, gatherings, and play after the Games end. The wing roof defines shaded gathering spaces around the building, activating it as an informal gathering place and social hub and sheltering community events on the playing field. The entrance plaza features paving designed by !Melk.

Field Hockey Stadium: The concrete blocks tie the structure to the ground to keep the roof in tension, actually holding it down rather than keeping it up.

EXHIBITION HALL AND VISITOR CENTER

HANGZHOU CHINA

An sculptural landform that merges architecture, landscape, and community

VISION

The vision of this project is to create an exhibition center that seamlessly blends with the rolling hills of the Asian Games Park, functioning as both a cultural landmark and an ecological destination. Designed as a sculptural, boomerang-shaped landform with green roofs and open courtyards, it invites natural light, ventilation, and community engagement while preserving the surrounding landscape. Beyond hosting art and interactive exhibits during the Games, it aims to serve as a lasting green heart for Hangzhou—supporting year-round cultural events, recreation, and biodiversity, and fostering a vibrant public life well into the future.

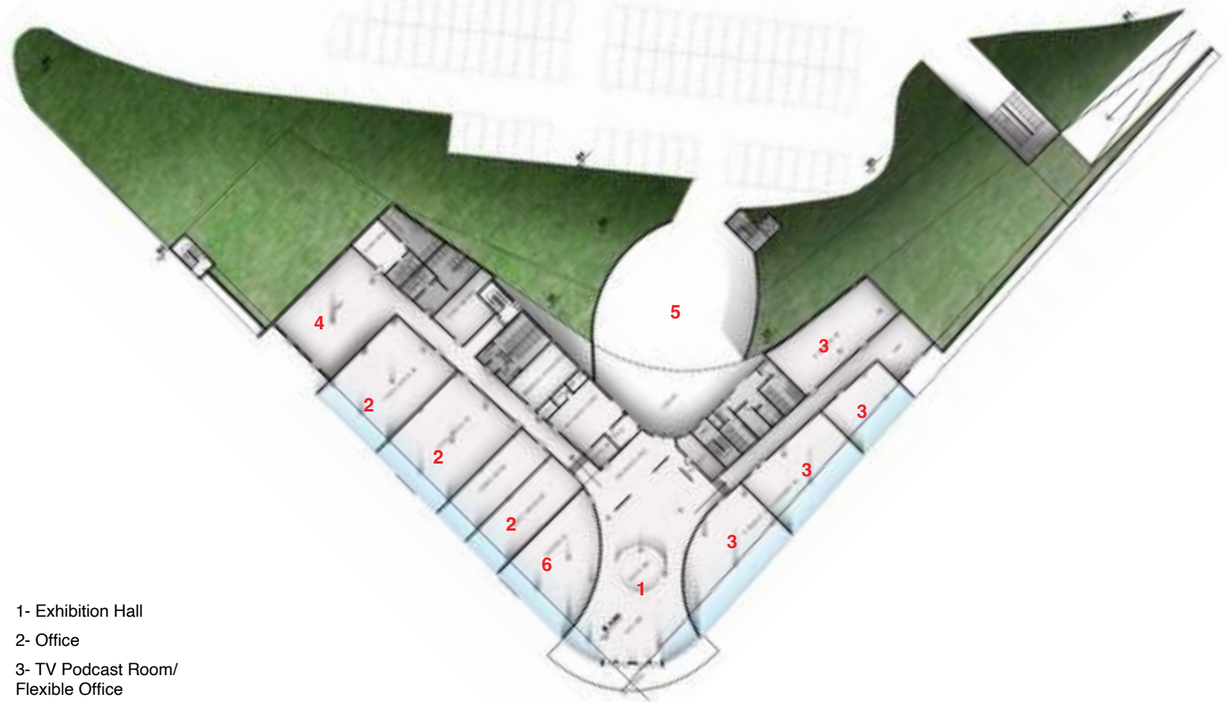
INNOVATION

The exhibition center's innovative design integrates a boomerang-shaped concrete structure into the park's rolling hills, tucking museum-quality galleries beneath a 7,060 m^2 walkable green roof that absorbs CO2, releases O2, and manages stormwater. Full-height glass walls provide natural light and ventilation, while a recessed circular sculpture courtyard brings daylight deep into the interior from both sides. Inside, sweeping curved walls create a sculptural backdrop for exhibitions, and an underground parking garage offers convenient access without disturbing the pedestrian landscape.

SUSTAINABILITY IMPACT

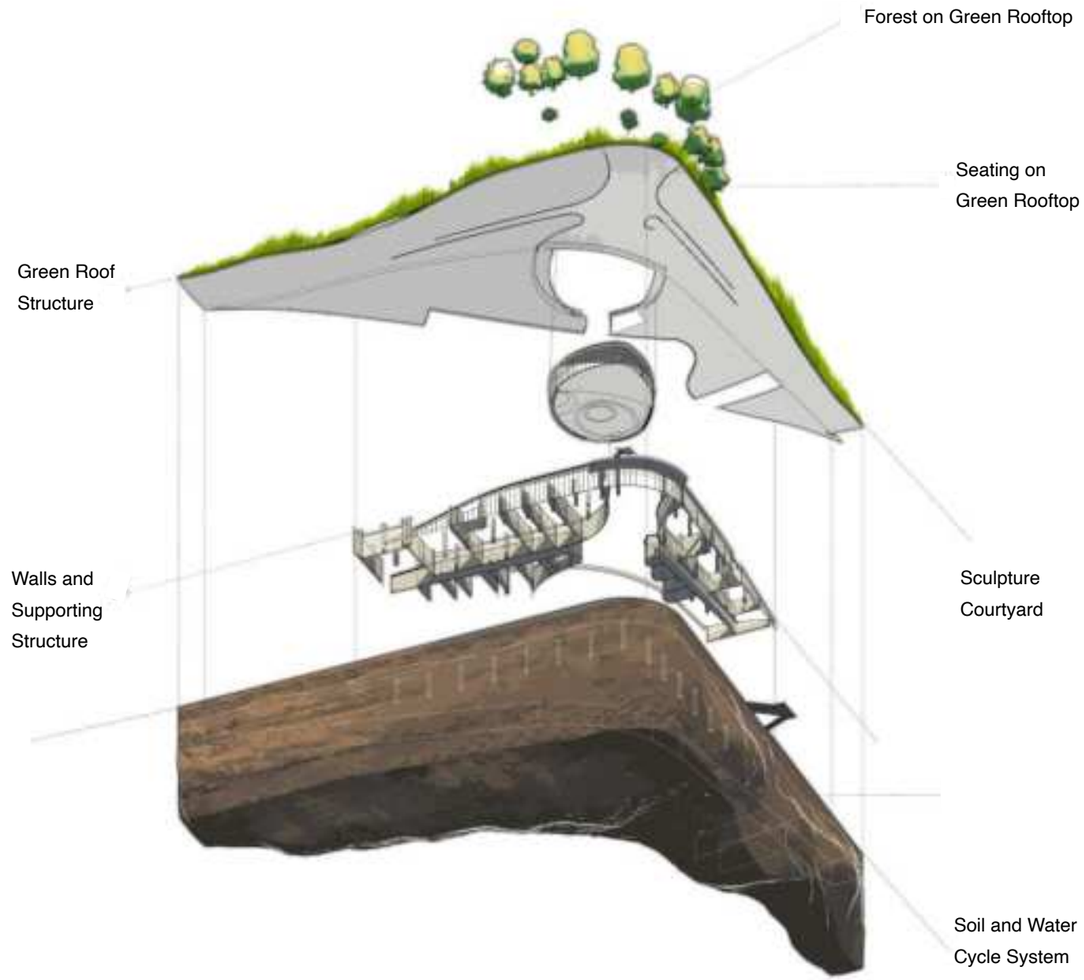
The exhibition center's 7,060 m^2 green roof significantly reduces its carbon footprint, absorbing over 12,600 kg of CO2 and releasing more than 9,100 kg of O2 annually, while also managing stormwater through retention and filtration. By integrating the building into the natural landscape, the design minimizes ecological disruption and offers a walkable green surface for public use. Full-height glass walls maximize daylight and natural ventilation, reducing energy demand, while the center's multi-functional role ensures it remains an active, sustainable community asset long after the Asian Games.

STATUS Completed 2023
LOCATION Hangzhou, China
CLIENT Gongshu District City Village Reconstruction Department
PROGRAM Exhibition Space with Offices and Sculpture Courtyard
SIZE 1,193,750 SF

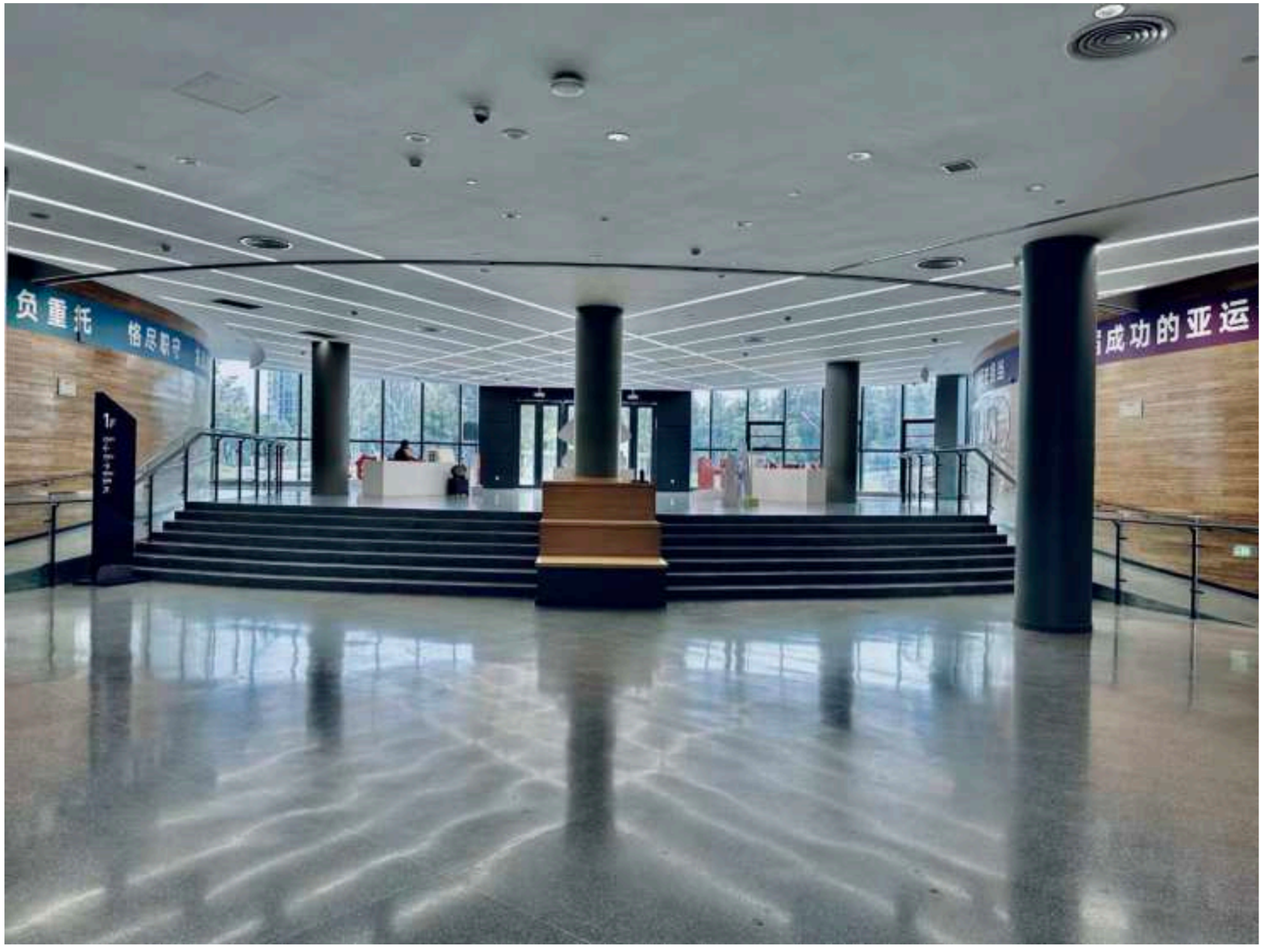


1- Exhibition Hall
2- Office
3- TV Podcast Room/
Flexible Office
4- Meeting room
5- Courtyard
6- Admin

Ground Floor Plan



SCULPTURE COURTYARD WITH LOCAL VEGETATION



LOCALLY SOURCED BAMBOO LINES EXHIBITION HALL WALLS

BOGOTÁ: MY IDEAL CITY

A BOTTOM-UP PLAN FOR DOWNTOWN

GROWING MIDDLE CLASS

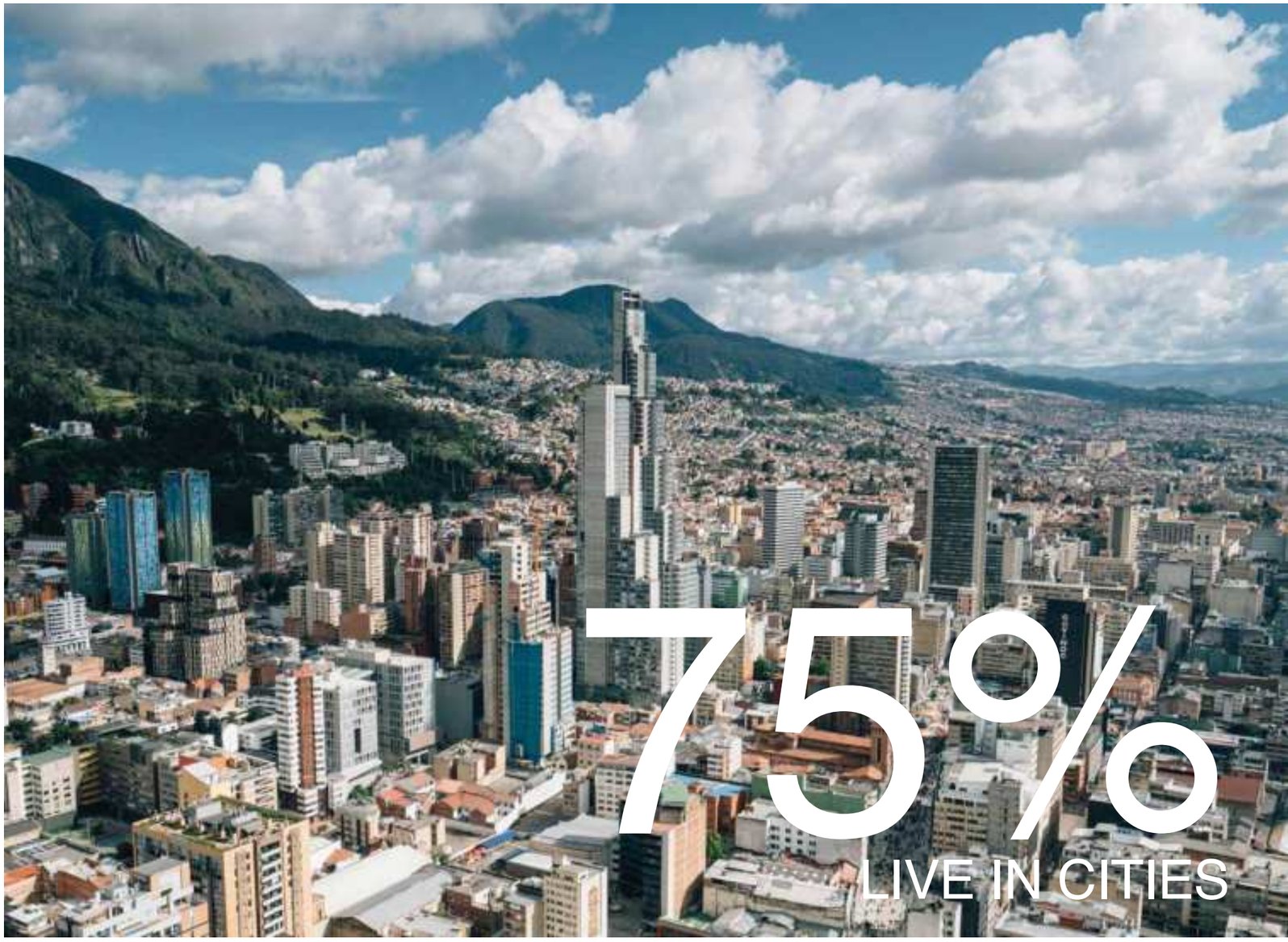
Bogotá's population increases by almost 6% each year, with the highest growing middle class in the Americas. This new group of Citizens has new demands and expectations; 75% live in the city! Downtown Bogota is in dire need of an urban upgrade to support this growth. But history shows traditional governmental masterplans collapse under corruption and the short term presidents have.

BOTTOM UP

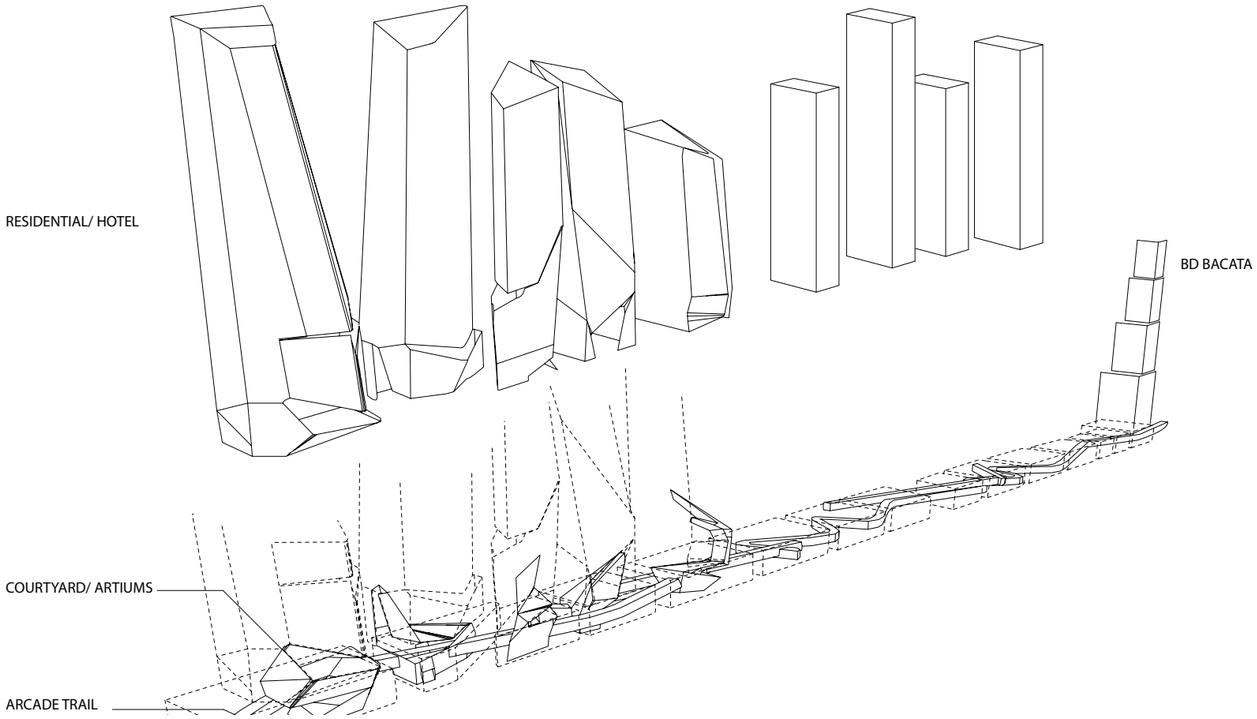
To bypass this broken system and respond directly to the needs of the Bogotá citizens, the client asked Archi-Tectonics to develop a Bottom Up Urban Plan. Together with PSFK, an english trend research company, a website "My Ideal City" was developed with 2500 questions for the people in Bogota. The client also arranged airtime on the radio and the people from Bogota started answering our questions for their "dream" city. We analyzed the outcomes and came up with 5 preferred strategies.

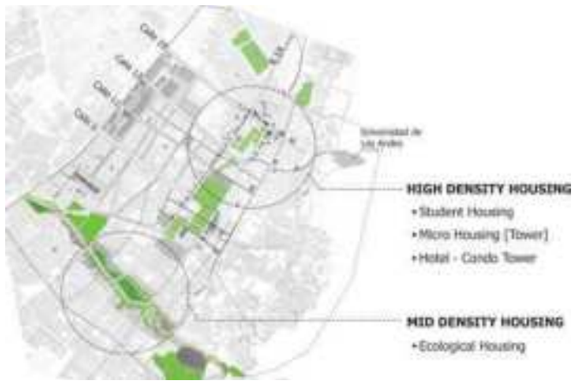
RESEARCH

Analyzing the crowd information, assisted us in analyzing the pressure points for Downtown Bogota that lacks inhabitants [only 130,000 people lived there] and derived its intrinsic qualities to introduce high precision "acu-puncture" strategies. Our Bottom-up model created 6 strategies that were all tested for feedback loops generating a multiplicity of optimizations. These introduced not only architectures, but also cultural, economical, ecological, and social growth, rebuilding the city from the inside out, this time with the people of Bogota.



Location	Downtown Bogotá, Colombia
Project Type	Bottom Up Urbanism, crowd funding
Clients	Prodigy Network, BD Promotores
Consultants	Gary Hack (Urban Planning) PSFK (Trend research) Rodrigo Nino, Prodigy Network (Crowd Funding)
Featured	Solo Exhibit & Conference Aedas, Berlin (2014) TED Global - Talk (2017) UIUC Chicago (2019)





SCENARIO 1
DOWNTOWN HOUSING

Bogotá's central business district lacks housing and basic public facilities that make a livable neighborhood. Only an estimated 260,000 people reside in the heart of the city while an estimated 1,707,745 people commute to the center daily, a large group students, as the center houses 33 schools.

This scenario would propose micro-housing for students in the center empowering them to live Downtown rather then commute up to 4 hours daily. This of course then also reduces traffic jams, pollution, and will

SCENARIO 2
BIG BOX + RECYCLING

This scenario combines a large commercial center with a public transportation hub on the edge of downtown Bogotá. This again reduces traffic & pollution and generates a commercial destination & recycling hub, as the commuter parks, shops and switches to public transport.

The strategic location of the Carrefour Hypermarkets combines daily needs with a recycling program that educates and incentives consumers about how to recycle their waste—

SCENARIO 3
PARQUE TERCER MILENIO

One of Bogotá's newest parks, Tercer Milenio aimed to replace what was a run-down area rampant with drug trafficking and prostitution. The park, although well-intentioned, displaced many of the residents of the area and under-performs as a recreational destination.

The introduction of micro-housing along the edge together with sports and playgrounds in the park would create a lively edge, making the park safe, and transforming it into a center of a local residential community that connects the disparate surroundings into a cohesive urban district with views over the now newly invigorated park

SCENARIO 4
RIO FUCHA

As most wetlands were destroyed and rivers canalized, Downtown experiences major floods. The Rio Fucha is one of those channeled rivers that flows through Bogotá. The proposal to renaturalize the Rio Fucha would create a natural habitat and a prime opportunity for restored wetlands, urban agriculture and a new mid-density residentitial structures.

This scenario would transform a derelict area into a self-sufficient community with urban agriculture, farmers markets, and eco-friendly housing that reconnects the city to its waterway.

EXHIBITION//CONFERENCE

AEDES GALLERY BERLIN

Rodrigo Nino invited us at Archi-Tectonics as the lead architect to help create a team of experts. Together with important innovators such as Gary hack, an Urban Planner responsible for Manhattan's West Side Park, PSFK a trend research group, we worked together with Rodrigo and the Sponsor BD Promotores to develop a platform where the people in Bogota help create their city by interacting in proposals made for their Downtown in crowd sourcing [web and radio] thus impacting design through real time interaction and direct feedback.

The exhibit in Aedes was framed by website reactions of Bogatanians, and the Urban acu-punctures presented as non linear "Chunks". A TED talk was later that year presented in Edinburgh at TED Global.

SECTION 02

ADAPTIVE REUSE AND LIVING

LONDON SOLAR HOUSE

Transforming a compact historic townhouse into a high-performance, future-forward prototype for sustainable urban living

VISION

The London Solar House envisions a new prototype for sustainable, high-density urban living by transforming a compact, century-old brick structure into a richly layered, future-forward home. Guided by the idea that “small is beautiful,” the design turns spatial constraints into opportunities, creating a 4-dimensional experience defined by movement, perspective, and material interplay. By preserving the original masonry shell and integrating the home into its tight urban and vegetated context, the project redefines urban infill as both contextually respectful and experientially rich.

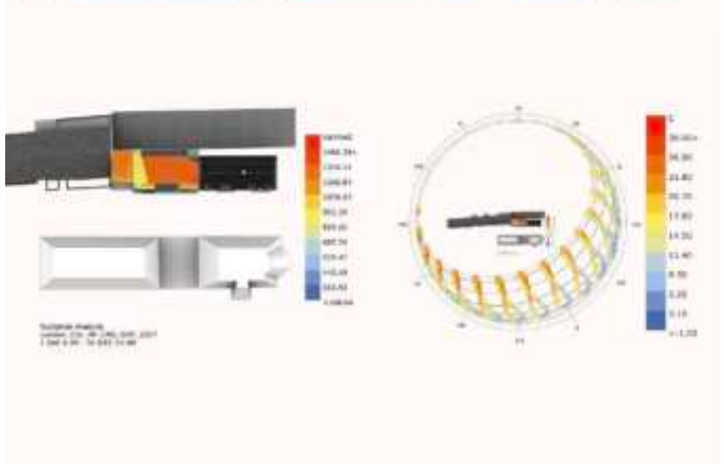
INNOVATION

Advanced design and environmental strategies are introduced; including a sculptural steel helix stair that unifies public spaces in a continuous sweep. A folded zinc-and-glass envelope generates unique apertures that maximize daylight and spatial flow. Fully integrated PV panels power heat pumps, lighting, and radiant floors, with energy stored in a Tesla battery system—bringing the home close to off-grid performance. Upcycled roof beams, double-glazed windows with shading collars, and passive solar design showcase a fusion of design intelligence, sustainability, and cutting-edge technology.

SUSTAINABILITY IMPACT

The project exemplifies sustainable urban living by combining adaptive reuse, renewable energy, passive design, and a high-density layout. By preserving the historic masonry core and integrating prefabricated zinc and glass extensions, the project minimizes waste and honors the building’s heritage. Solar panels, a Tesla battery, and energy-efficient systems support near self-sufficiency, while passive strategies maximize daylight, comfort, and ventilation. The design transforms a compact townhouse into a resilient, future-forward home that balances environmental responsibility with spatial richness and long-term livability.

STATUS Completed 2024
LOCATION London, UK
CLIENT Documentary Maker and her family
PROGRAM 3-Story Residence Renovation and Extension
SIZE 1850 SF + 450 SF Outdoor Space

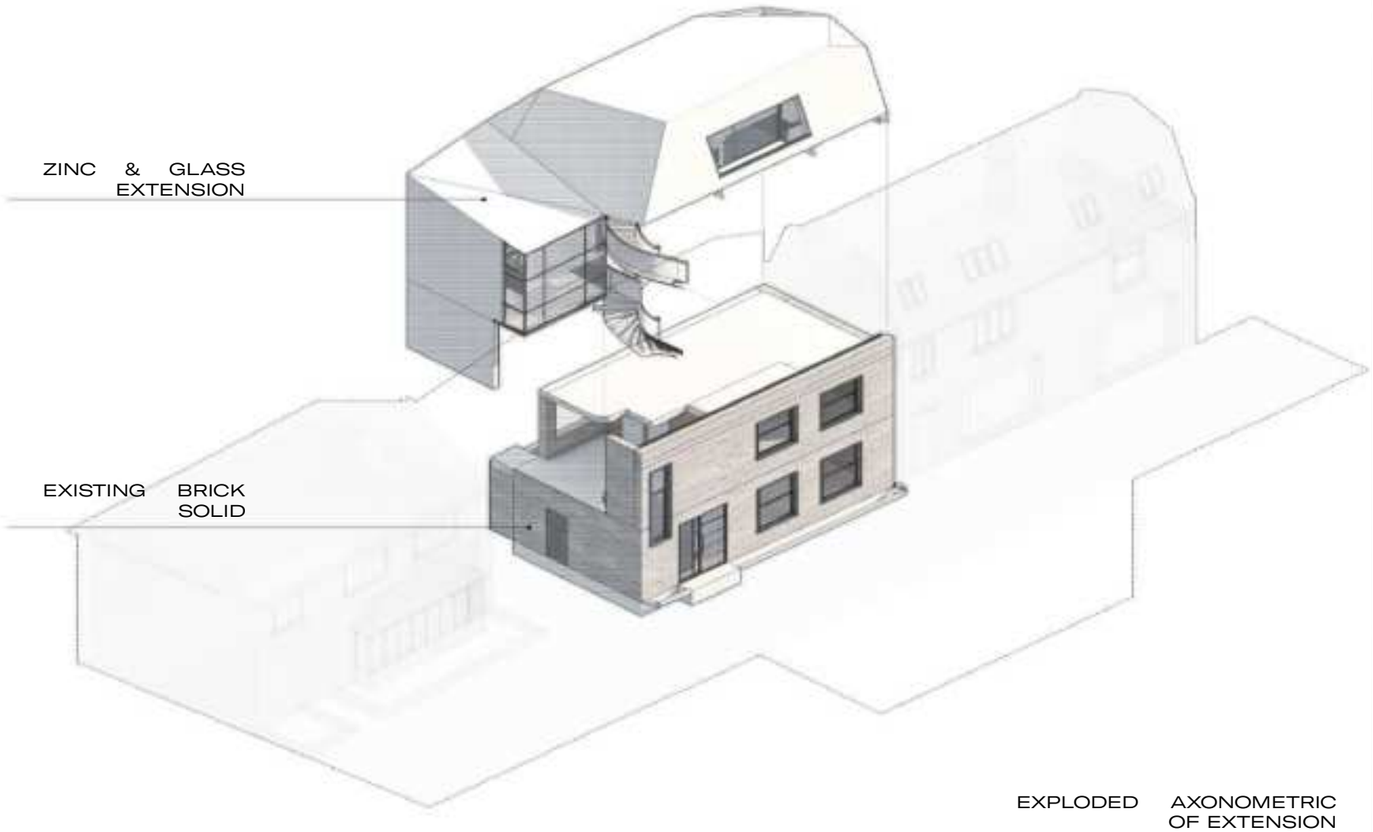


SOLAR ROOF

INNOVATION

SUSTAINABLE URBAN LIVING

Fully integrated PV panels power heat pumps, lighting, and radiant floors, with energy stored in a Tesla battery system—bringing the home close to off-grid performance.



EXPLODED AXONOMETRIC
OF EXTENSION

IMPACT

ADAPTIVE REUSE + RENEWABLE ENERGY INTEGRATION

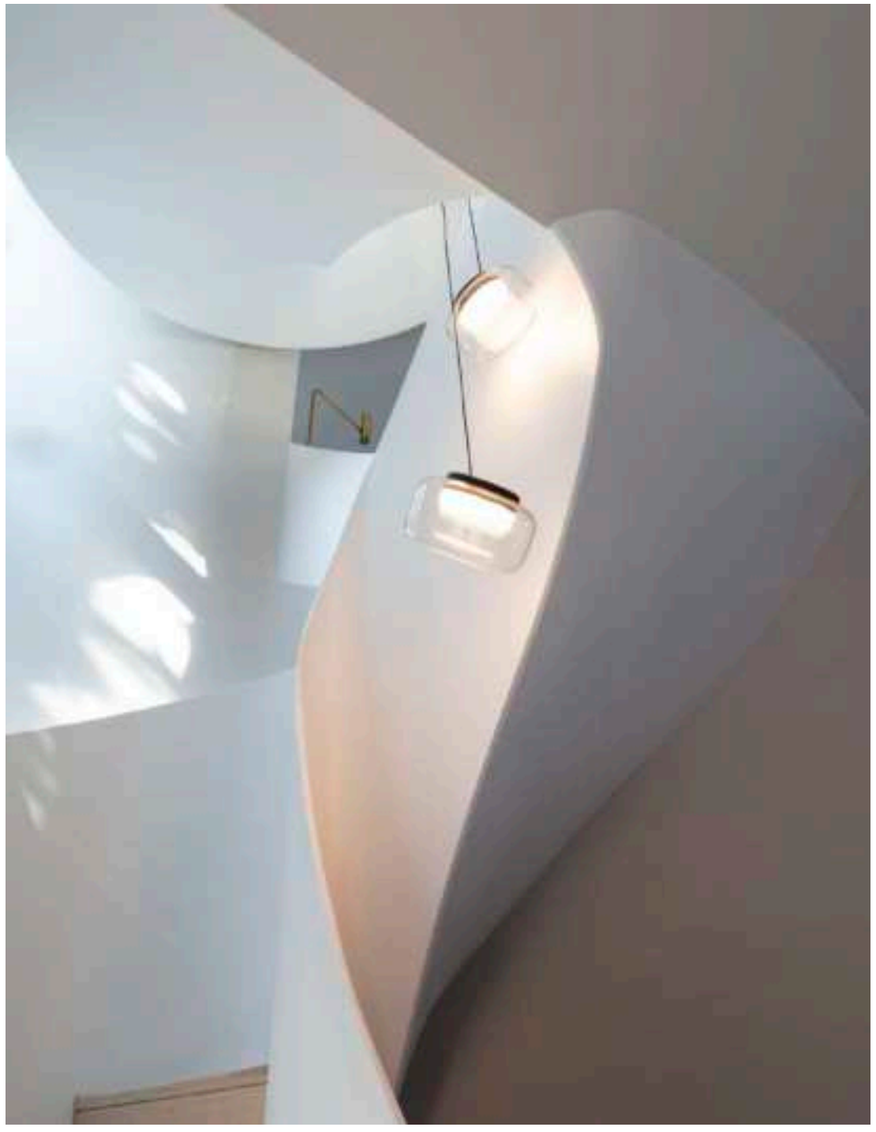
This apporach both reduces embodied carbon through reuse and lowers operational energy consumption with renewable systems, making it a strong model for resilient, sustainable urban living.

EXTENSION OVER CARPORT:
DOUBLE-HEIGHT LIVING

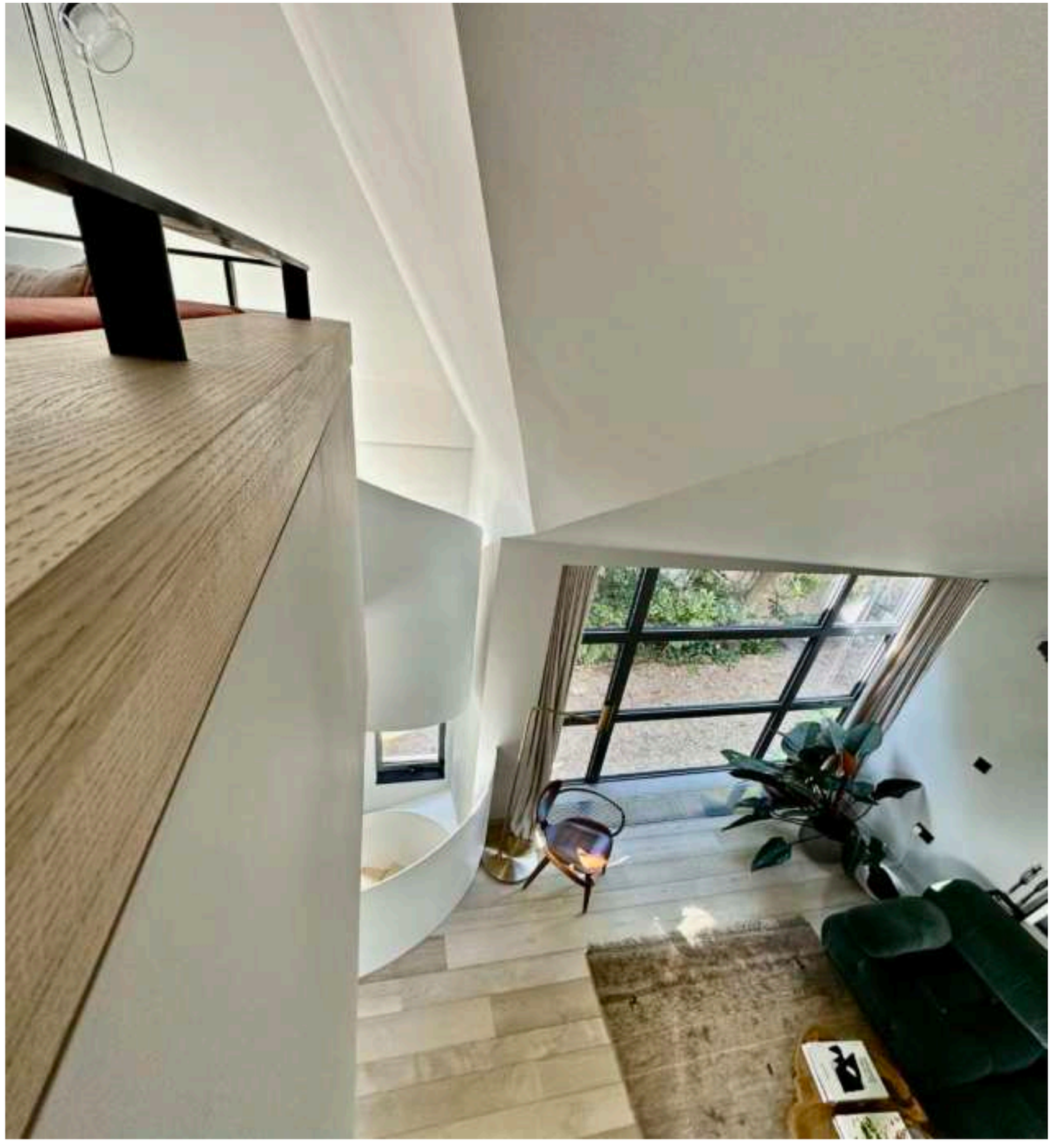
FIRST FLOOR PLAN

SECOND FLOOR PLAN

THRID FLOOR PLAN



CUSTOM STEEL STAIRS, CONMNECTS 3 FLOORS



FROM DINING INTO DOUBLE-HEIGHT LIVING

512 GW PASSIVE SOLAR

BUILDING

AIANY DESIGN AWARDS 2022

rtf AWARDS 2020

This project achieves 45% energy savings with an innovative operable folding screen that was integrated into a residential building

VISION

The goal of this renovation of and extension to this former industrially zoned building was to create a townhouse for 1 family in SoHo, and to rethink how a building could actively contribute to a more sustainable urban realm.

INNOVATION

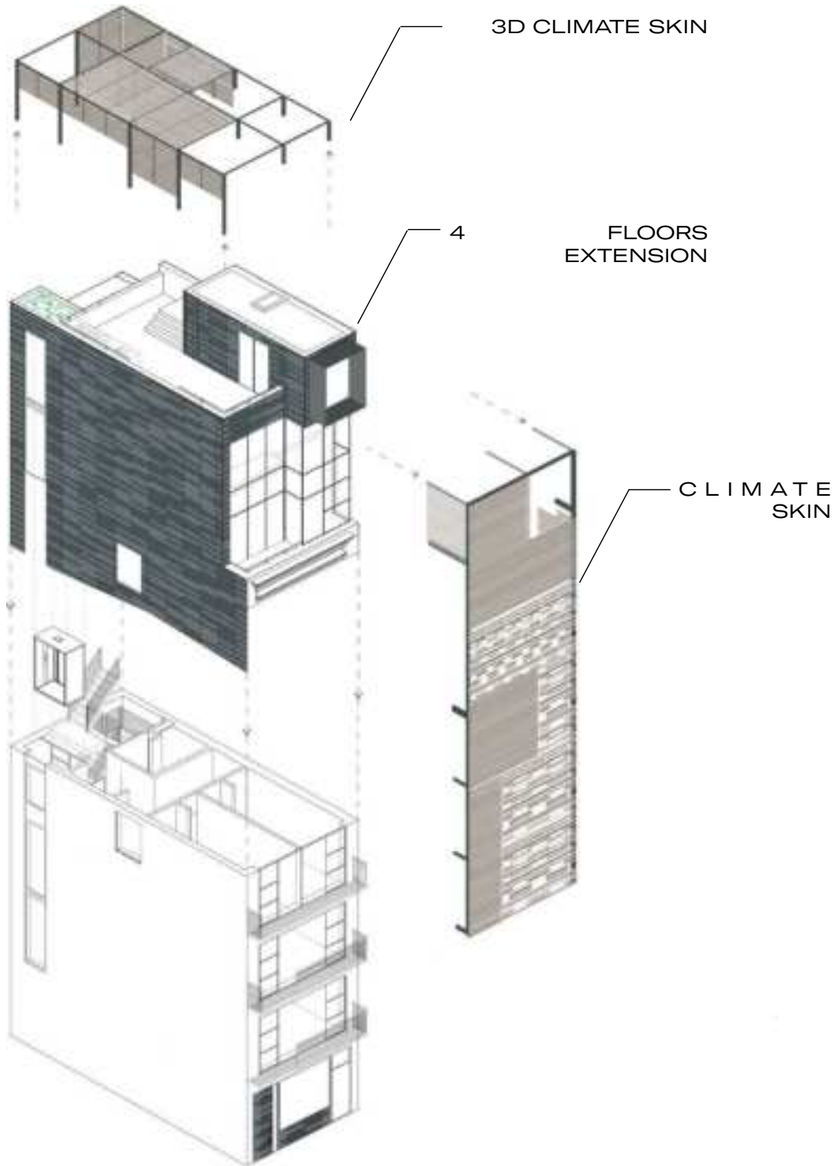
By adding a large extension onto an existing building with a modest footprint of 19 x 40 feet, we converted the building into an 8-story townhouse for 1 family, its exterior spaces wrapped by a spacious 3D lattice envelope functioning as a climatic skin, a third 'building'. A glass elevator connects the floors with connective voids that allow for a fluid living environment

The highly recognizable climate envelope, whose spatial and performative properties serves as an adaptable perimeter of the building. Made from a lightweight steel frame and folding panels, this climate skin can be opened and closed with ease and adds new exterior spaces in different, variable conditions.

SUSTAINABILITY IMPACT

The 512GW project is a model of sustainable urban transformation through adaptive reuse, smart systems, and passive environmental design. Archi-Tectonics preserved and upcycled the original industrial structure, minimizing embodied carbon and construction waste. Its standout feature, the Climate Skin, is a flexible facade that regulates light, ventilation, and temperature, significantly reducing energy use. Smart systems and thermally efficient materials enhance performance, cutting annual energy consumption by 45%. Green roofs add insulation, promote biodiversity, and manage rainwater. The 8-story vertical townhouse demonstrates how dense, compact urban living can be both luxurious and environmentally responsible.

STATUS	Completed 2020
LOCATION	SoHo, NY
CLIENT	Private
PROGRAM	Residential Building
SIZE	4,500 SF + Roof Terraces and Balconies



INNOVATION

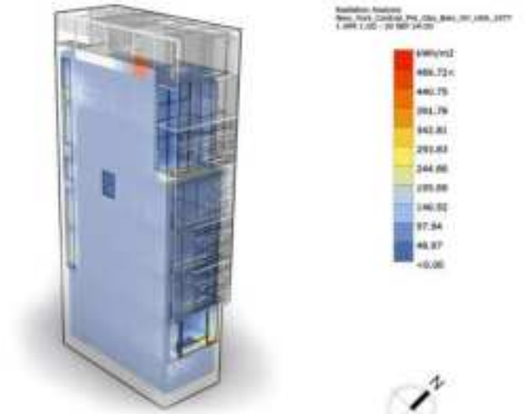
OPERABLE SMART ENVELOPE

The design adds a 3D folding lattice that visually unifies the building's elevations and can be easily folded or unfolded to regulate sun exposure.

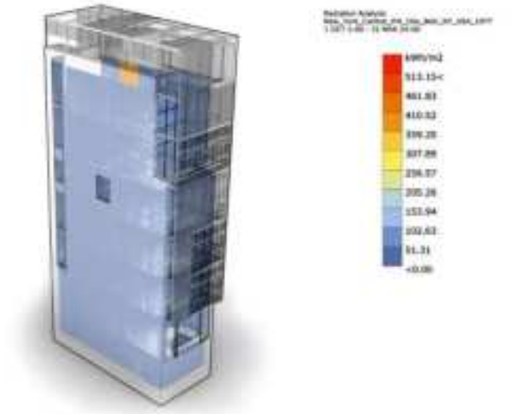
OPEN: PASSIVE SOLAR (WINTER)

CLOSED: COOLING (SUMMER)

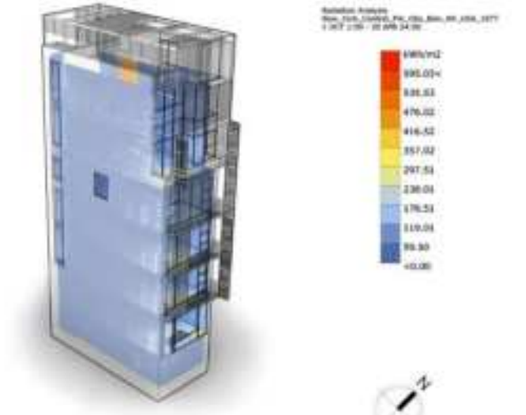
Without trellis



With trellis



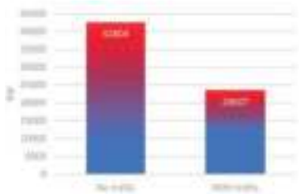
Trellis closed



Trellis open

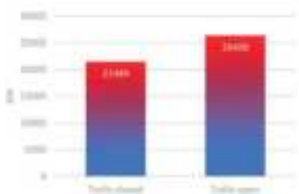
SUMMER

Radiation Analysis



WINTER

Radiation Analysis



45%

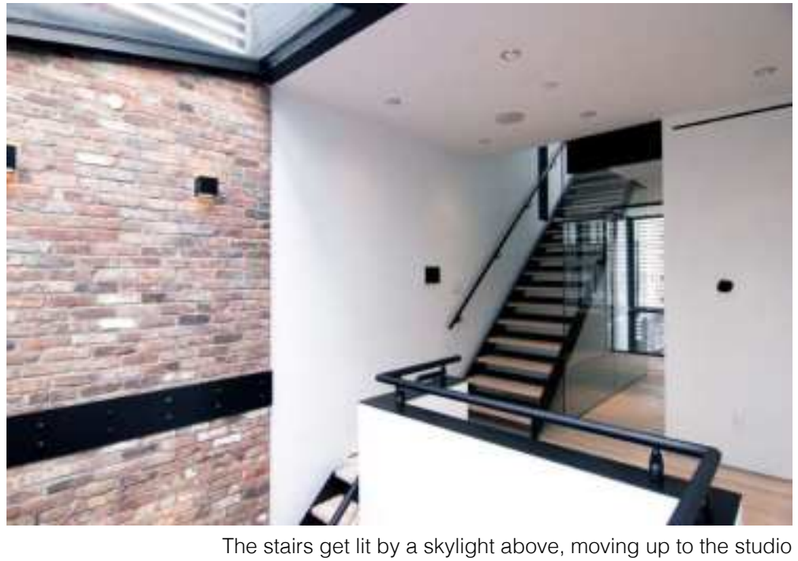
IMPACT

45% ENERGY SAVINGS

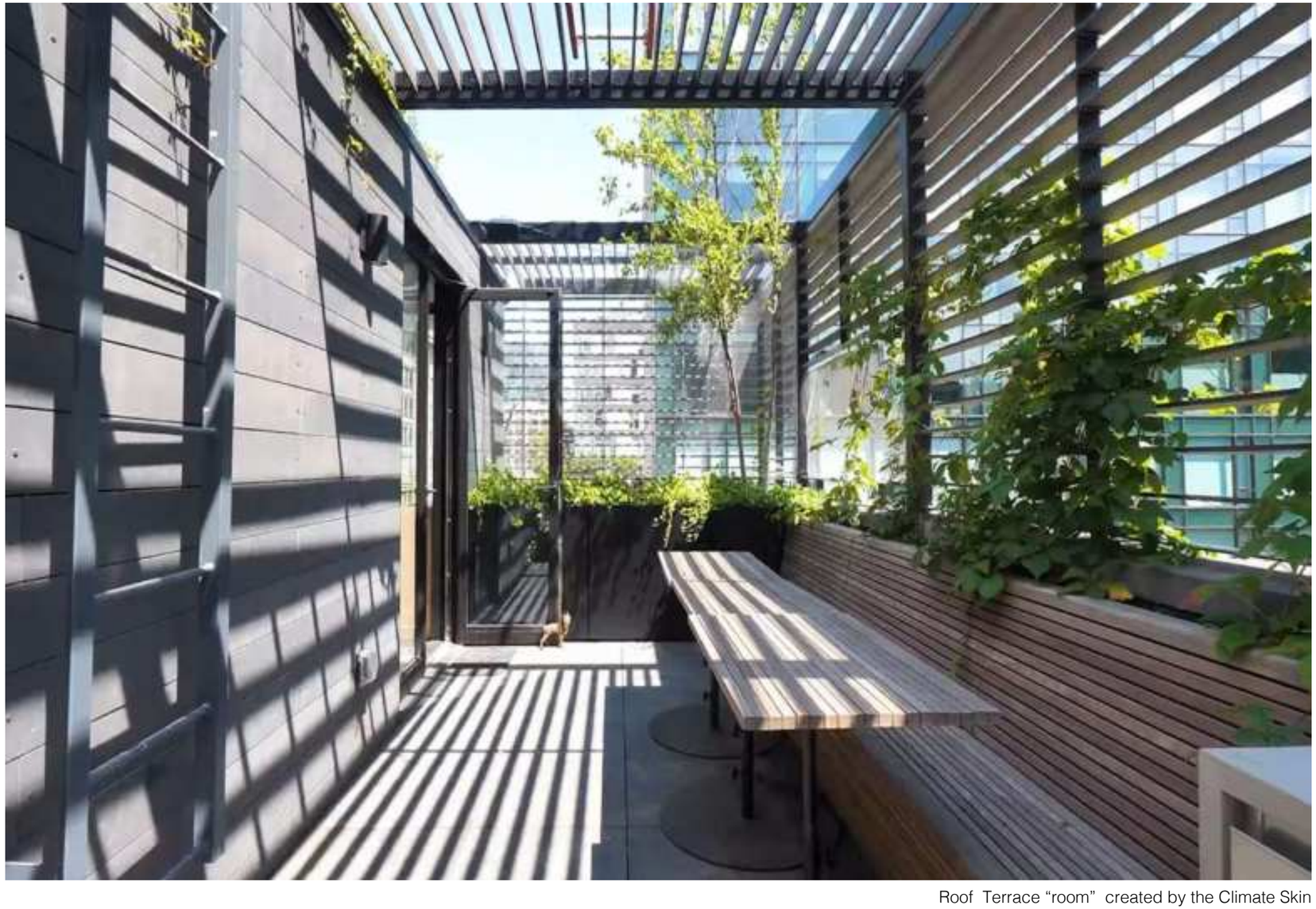
By allowing residents to calibrate exposure, the folding lattice offers up to 45% energy savings. In the Summer, the screen can be closed to offer passive cooling / shading. In the Winter the screen can be opened to maximize passive solar heating.

Living Spaces with View of Climate Skin folding

Images showing transparencies shifting as one moves up the 8 floors of stairs



The stairs get lit by a skylight above, moving up to the studio



Roof Terrace “room” created by the Climate Skin

V33 BUILDING

A pixelated facade mediates scales in New York's Tribeca Landmark district, a mix of warehouses, historic buildings

VISION

Over the years, the Tribeca landmark district has evolved. First a center of textile manufacturing, it became an area of artists warehouses and is now a neighborhood of contemporary residences. The challenge of this project was to introduce a new condominium building that offered state-of-the-art living environments while mediating between the area's landmark requirements and disparate scales and building types.

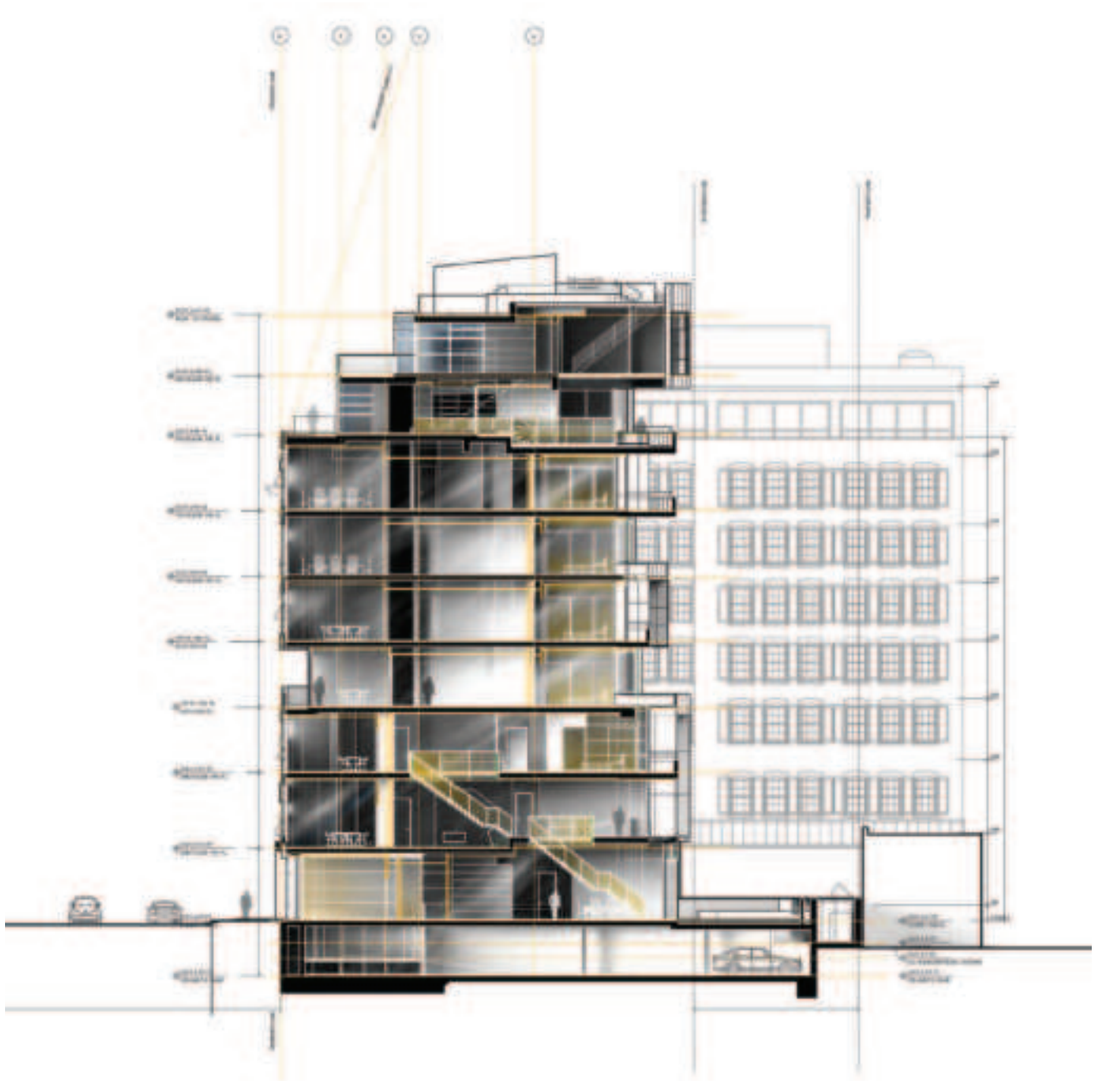
INNOVATION

V33 unifies the historically varying facades with a 'pixelated' facade, a pattern in translucent stone and glass—making this the first time translucent stone was used as an exterior building skin. The facade encloses 7 urban villas, shifting double-height volumes that cantilever over a rear garden to offer expansive living environments in the heart of the city.

SUSTAINABILITY IMPACT

The V33 residential building in TriBeCa integrates sustainability through its Smart Skin façade, which combines translucent stone and double-glazing to optimize insulation and daylight. Passive design strategies—such as deep balconies, sunrooms, and dual façade exposure—maximize natural light and ventilation, reducing energy consumption. Each unit benefits from private outdoor spaces, enhancing biophilic design while maintaining urban density. Additional sustainable features include a car elevator and underground parking for efficient land use. Altogether, V33 demonstrates how thoughtful architectural innovation can blend historical context with environmentally responsible design.

STATUS	Completed 2014
LOCATION	New York, NY
CLIENT	Vestry Acquisitions, LLC
PROGRAM SIZE	9-Story Residential: 32,500 SF



INNOVATION

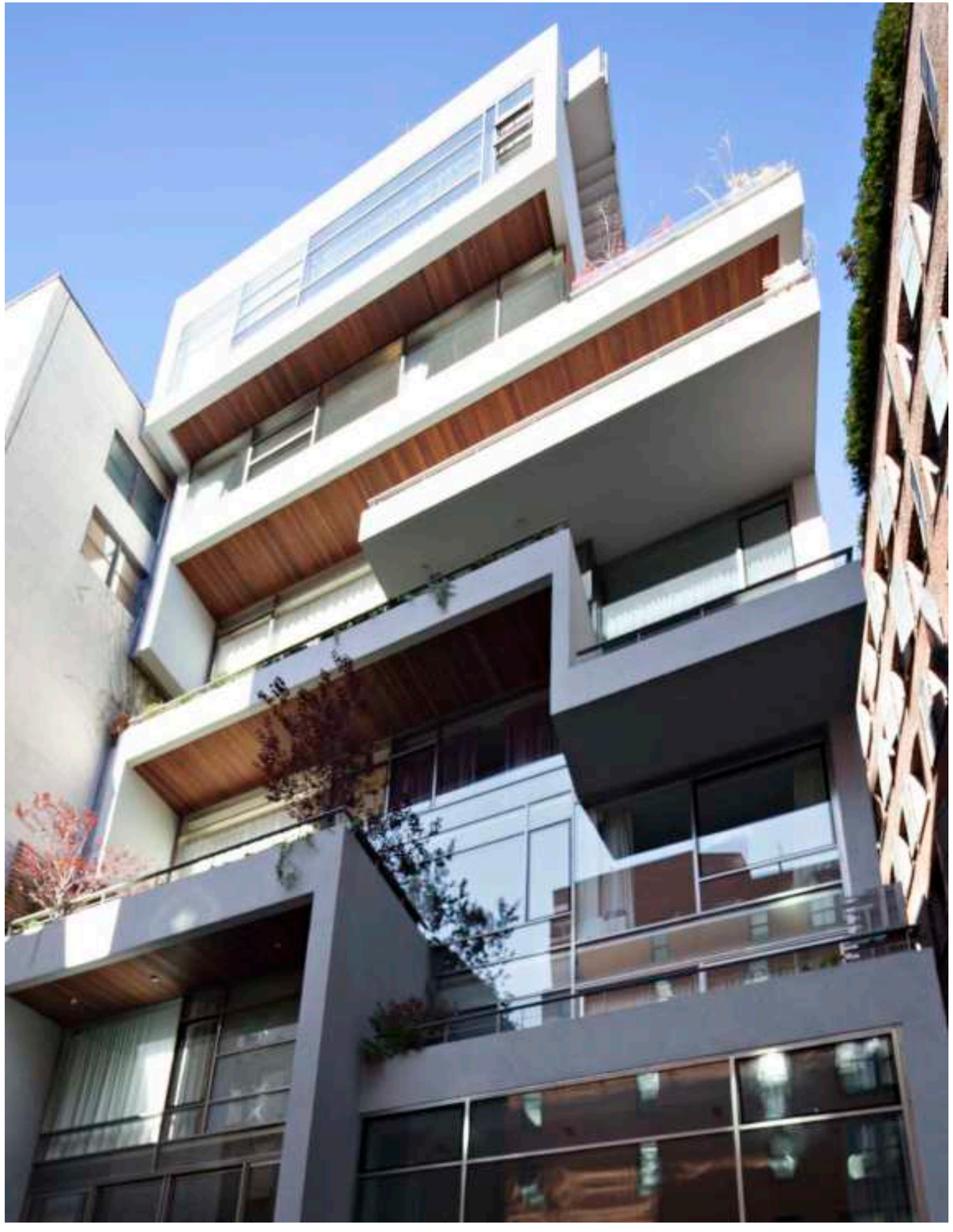
PIXELATED FACADE

The front facade is developed as a translucent stone & glass pixelation, combining the area's historically-varying facade levels into a pattern of glass and stone. The translucency of 3mm stone laminated on glass was tested in a mock-up shown above.

IMPACT

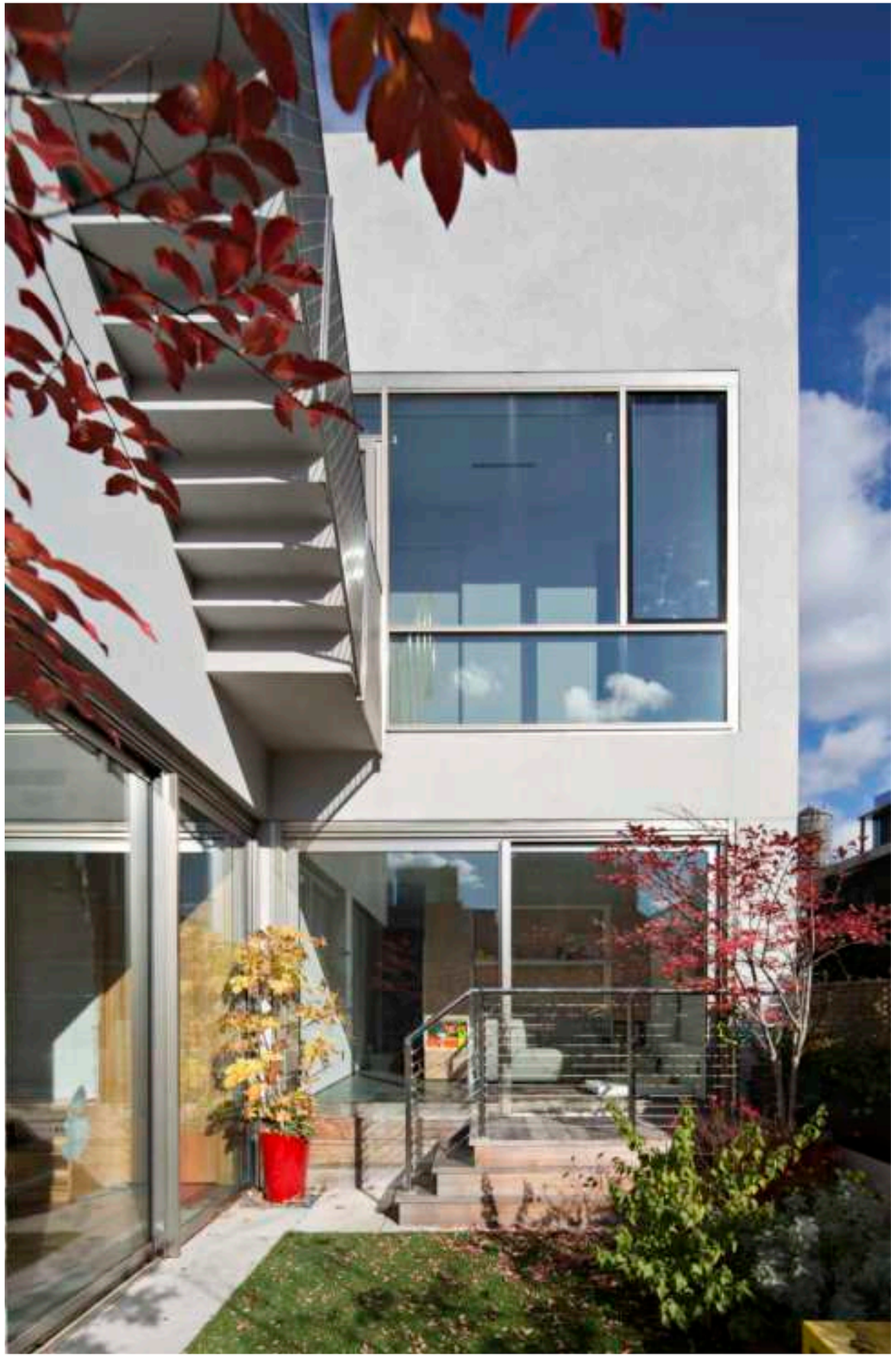
INTERIOR LIGHT, EXTERIOR GLOW

Beyond meeting Landmark Preservation Commission regulations, the glass-and-stone facade's varying levels of transparencies fill the interiors with a comfortable, diffuse light, privacy and activate the exterior facade at night with a warm glow.



INNOVATION
URBAN VILLAS

By stacking the buildings volumes, the design creates 7 custom-designed Urban Villas in single-, double-, and triple-height with varying configurations and generous outdoor terraces. The 12’ deep terraces and blaconies also provide shading for these south facing spaces..



IMPACT

3-DIMENSIONAL GARDEN LANDSCAPE

The stacked design of the urban villas animates the back facade with garden terraces that offer outdoor living spaces for each of the residences and boast commanding views over the Hudson River and the cityscape.

497 GW MIXED-USE BUILDING

A parametrically-designed smart skin turns a warehouse into a mixed-use building with contemporary lofts, galleries, a screening room, and a fitness center

INNOVATION

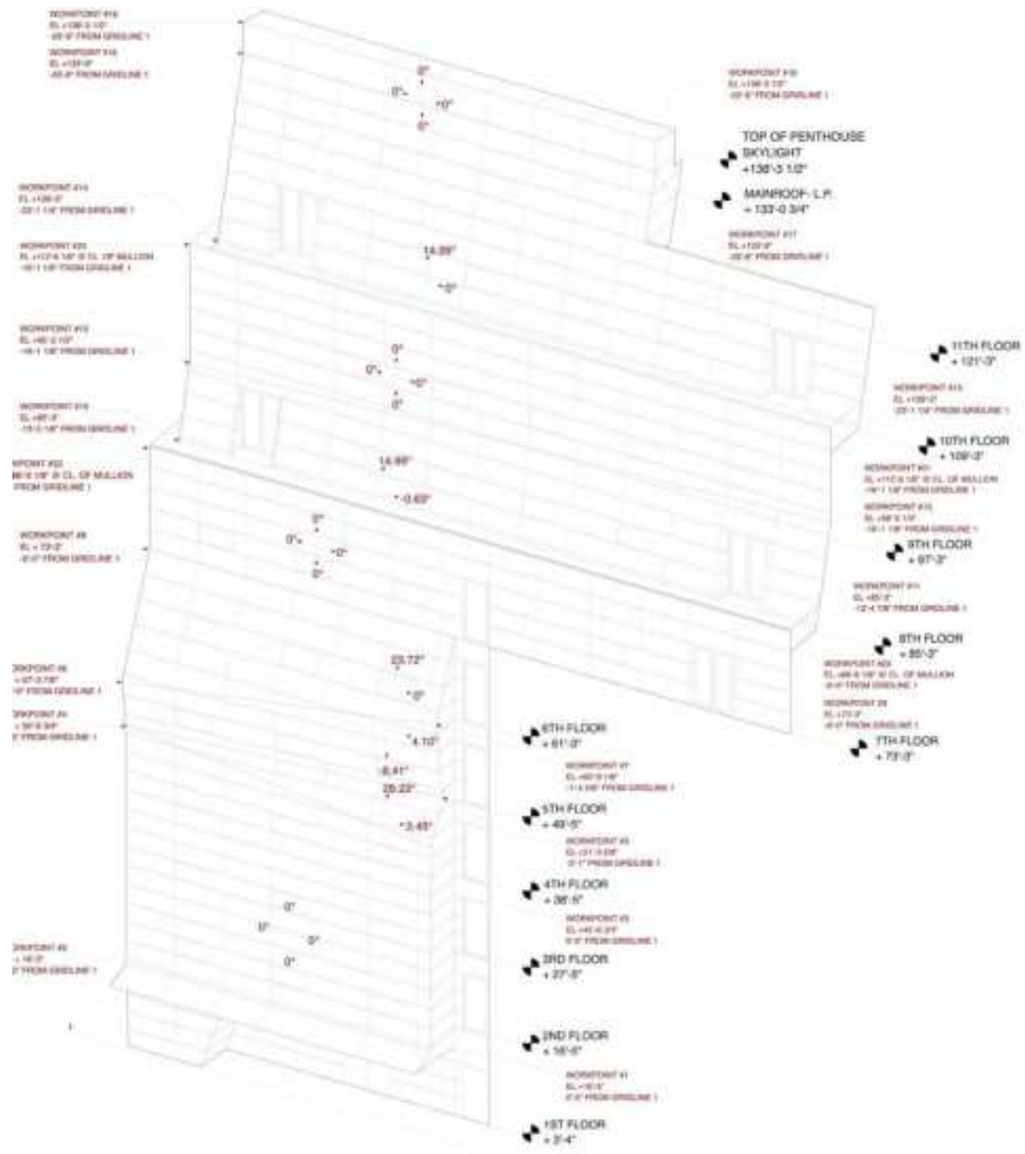
We renovated the warehouse and wrapped it in an 11-story smart loft building with an innovative smart skin: a parametrically designed facade that optimizes energy efficiency while adhering to the neighborhood's setback laws, precisely executed through full parametric coordination. This was a true innovation: the building was completed in 2004, long before parametric design was adopted as valuable design tools.

The custom-designed and -manufactured facade uses annealed double-glazed panels—a material typically reserved for industrial and automotive design—that are folded to 1/16th tolerance to achieve a distinctive form and seamlessly integrate with the existing warehouse. Prefabricated concrete balconies and stairs negotiate the 2 structures.

SUSTAINABILITY IMPACT

The 497 GW Project showcases a cutting-edge approach to sustainability by combining passive solar energy, smart systems, and advanced fabrication. Its solar glass west facade captures heat to reduce energy use, while the folded glass structure was optimized for material efficiency and minimized waste. Using parametric modeling and a digital "file-to-factory" process, components were manufactured globally with precision, reducing embodied carbon. Outdoor terraces enhance biophilic living, supporting natural ventilation and daylighting. Each loft includes efficient, recessed heating and cooling systems, further lowering energy demand. The project sets a benchmark for sustainable, high-performance urban

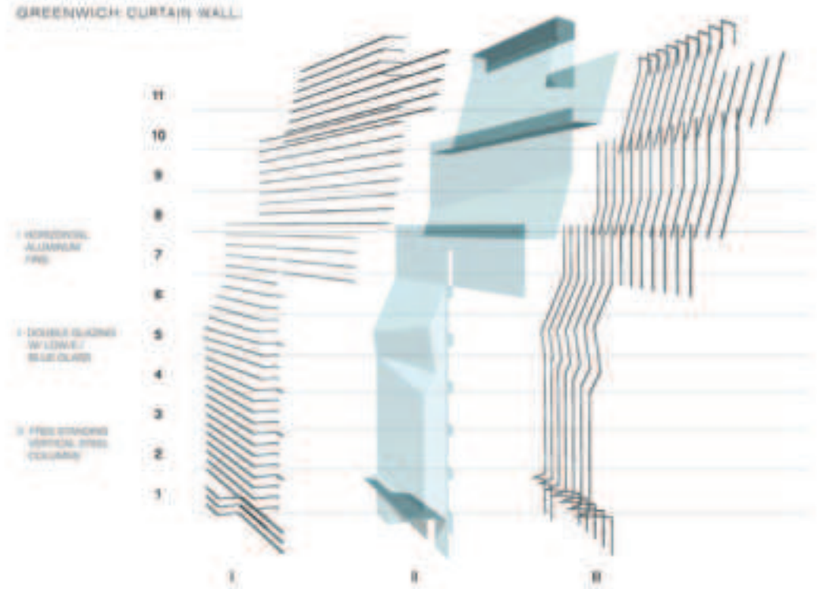
STATUS	Completed 2004
LOCATION	New York, NY
CLIENT	Take One, LLC
PROGRAM	11-Story Mixed-Use Building
SIZE	80,000 SF



INNOVATION

EARLY ADOPTERS: PARAMETRIC FROM START TO FINISH

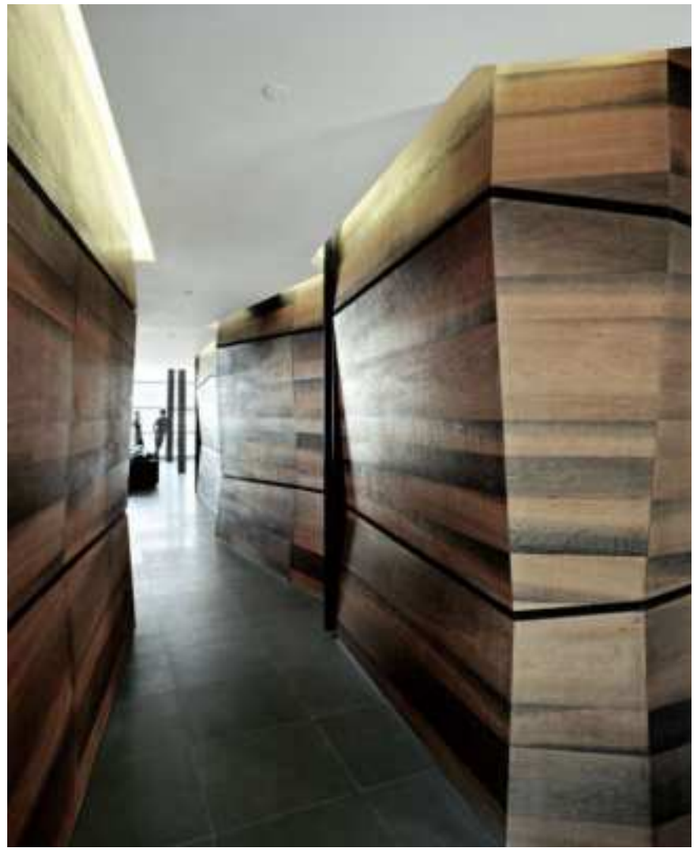
Completed in 2004, this project was one of the world's first to make full use of parametric digital design to create a comprehensive 3-dimensional model that integrated everything from design documentation, fabrication sets, and the contractor's installation drawings. The comprehensive 3D model allowed the glass panels to be pre-fabricated and installed on site using techniques developed in the automotive industry.



IMPACT

COMPLEX DESIGN, PRECISELY REALIZED

The parametric design process and 3D model afforded us unprecedented control over the fabrication and installation process, allowing us to realize an extraordinarily complex design that required precise installation efficiently. Each panel was unitized in Brooklyn and secured on vertical steel profiles with suspended custom-designed aluminum mullions creating thermal breaks, and minimizing heat loss to optimize energy efficiency. Smart glass enhances passive solar energy in Winter and shields from Summer sun, while also generating signature spaces, generous balconies and spectacular views.



IMPACT

BOG-OAK WALLS

The folded glass facade is continued in the interior where here on the 8th floor private ares are defined by folded walls clad with Bog-Oak, a wood that has been for more than 25 years under water; hence creating a natural blond & black patterning.

INSCAPE MEDITATION CONCEPT

A pre-fabricated system for immersive meditation environments

VISION

For this project, Inscape tasked us with developing a concept space that would offer an immersive meditation environment and allow Inscape to easily scale to new locations.

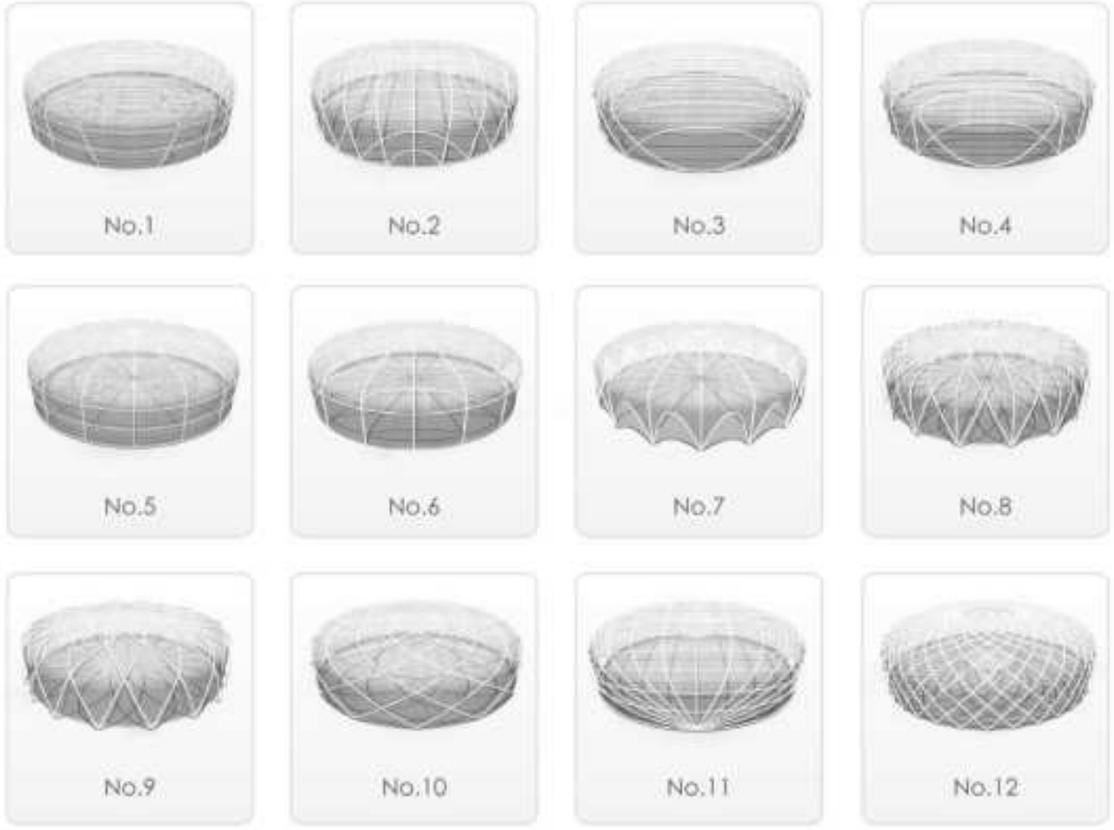
INNOVATION

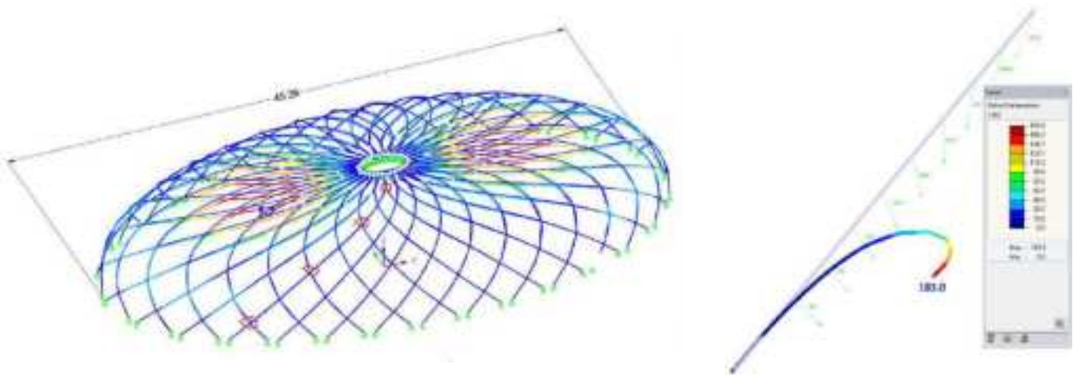
Working closely with the client and experts on the psychology of meditation, we designed a space concept that actively encourages a deep state of meditation through controlled sensory experiences. We collaborated with a local fabricator to translate the design into a pre-fabricated system that can be easily manufactured, transported, and installed in various locations.

SUSTAINABILITY IMPACT

The project emphasizes sustainability through the use of renewable materials like bamboo, linen, and cardboard, and employs prefabrication and parametric design for efficient construction. The bamboo Dome, a central feature, creates a calming, immersive environment with integrated LED lighting, aromatherapy, and sound systems. These elements support both environmental performance and user wellness. By combining natural materials, smart systems, and holistic spatial design, Inscape offers a sustainable and innovative model for wellness-oriented architecture.

STATUS	Completed 2018
LOCATION	Chelsea, NY
CLIENT	Inscape
PROGRAM	Meditation Concept & Retail and Prototype
SIZE	6,000 SF Meditation Space and Retail





INNOVATION

GRIDSHELL DOME FOR LARGE SPAN

We used a parametric design process informed by principles of gridshell engineering to create an encapsuled space that encourages deep and restorative states of meditation. Our process developed twelve iterations that tested how different forms affect both the space and the meditation experience.

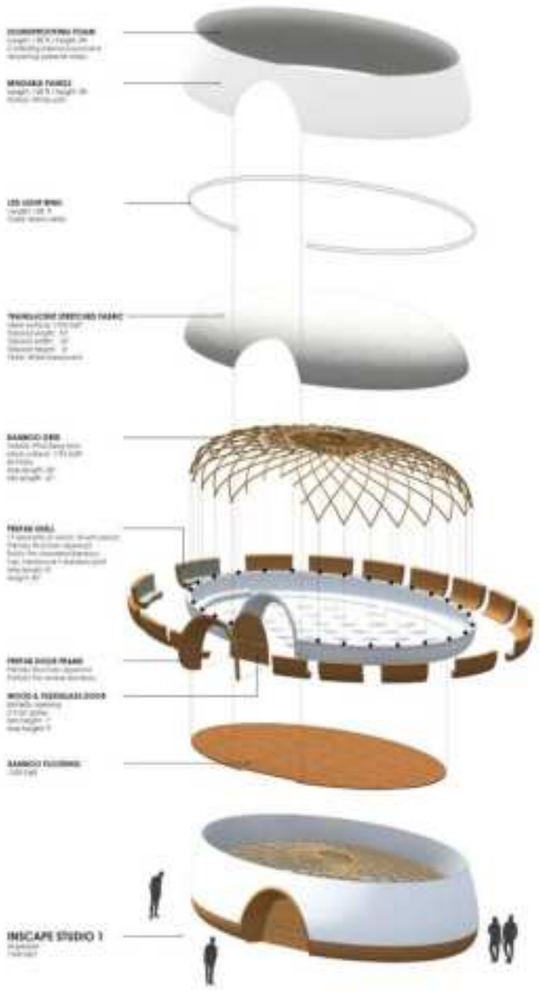
Pre-Fabricated

Robot-Milled Prototype

INNOVATION

MEDITATION SYSTEM FROM ROBOT-MILLED AND PRE-FABRICATED PARTS

Working directly with a car manufacturer on 1:1 prototypes, we created optimized the system for prefabrication, ease-of-transportation, and installation efficiency. The meditation room is made of robot-milled and pre-fabricated parts, shown above.



IMPACT

SCALABLE MEDITATION CONCEPT

The flexible pre-fabricated system allows Inscape to scale their meditation concept to new studios both domestically and internationally, enhancing access to wellness resources around the world.