

SIMONE GIOSTRA & PARTNERS | GREENPIX - INVOLUCRO MULTIMEDIALE A IMPATTO ZERO, PECHINO

Simone Giostra & Partners | Architects

Simone Giostra si è laureato al Politecnico di Milano nel 1996 ed è stato Project Architect nella costruzione di numerosi edifici di prestigio in Europa e negli Stati Uniti per architetti quali Alvaro Siza, Raphael Vinoly, Raimund Abraham, Steven Holl e Richard Meier.

Le conoscenze maturate in oltre 12 anni di pratica professionale nel campo dell'architettura hanno portato Simone Giostra ad avviare uno studio orientato verso la ricerca e sviluppo di new media in architettura: l'impatto del dominio virtuale nella progettazione e costruzione di progetti di architettura guida l'interesse dello studio nel combinare una serie di nuove collaborazioni professionali e alleanze interdisciplinari.

Al momento, lo studio lavora alla progettazione ed esecuzione di alcuni tra i più innovativi progetti in costruzione in Cina, tra cui il Jinbao Entertainment Center a Pechino e il Jingya Grand Hotel a Wheihai.

Combinando la pratica professionale con l'impegno nella didattica e nella ricerca, Simone Giostra è impegnato anche nell'attività accademica ed è Visiting Professor al Master della Facoltà di Architettura del New Jersey Institute of Technology e al Pratt Institute di New York.

Giostra è stato invitato a tenere numerose Conferenze e Lezioni in Europa, Asia e Stati Uniti, inclusa una recente Lezione Magistrale al Politecnico di Milano e al prestigioso "SOM Lecture Series" di New York.

Arup

Arup è uno studio globale di progettisti, ingegneri, pianificatori e consulenti finanziari che offre una vasta gamma di servizi professionali a clienti di ogni parte del mondo.

La sostenibilità è alla base del loro lavoro e lo studio è la forza creativa dietro a molti dei progetti di architettura, ingegneria e trasporto più innovativi e sostenibili al mondo. Il loro approccio innovativo ed integrato mette a disposizione l'insieme delle loro competenze e conoscenze per la soluzione di qualsiasi progetto.

Arup ha tre principali aree di attività a scala globale – edifici, infrastruttura e consulenza – sebbene il loro approccio multidisciplinare coinvolga persone di qualsiasi settore o regione di intervento in ogni progetto. Il loro scopo fondamentale è di avvalersi dei migliori professionisti al mondo per rispondere alle necessità dei clienti.

Lo studio Arup è stato fondato nel 1946 ed ha oltre 9,000 impiegati, in oltre 90 uffici in 35 diversi Paesi, con la capacità di lavorare su 10,000 progetti allo stesso tempo. Arup è attivo in Cina da più di 30 anni e circa un quarto del personale è basato in Hong Kong e Cina.

P06 | GreenPix - Zero Energy Media Wall

Progetto

GreenPix - Zero Energy Media Wall

Località

Xicui Road, Beijing, China

Inaugurazione

Giugno 2008

Committente

Jingya Corporation

Architetto

Simone Giostra & Partners Architects

Illuminazione e strutture

Arup

Tecnologia solare

Schüco International KG, Sunways AG

Produzione pannelli solari

Suntech China

Illuminazione LED

Thorn China

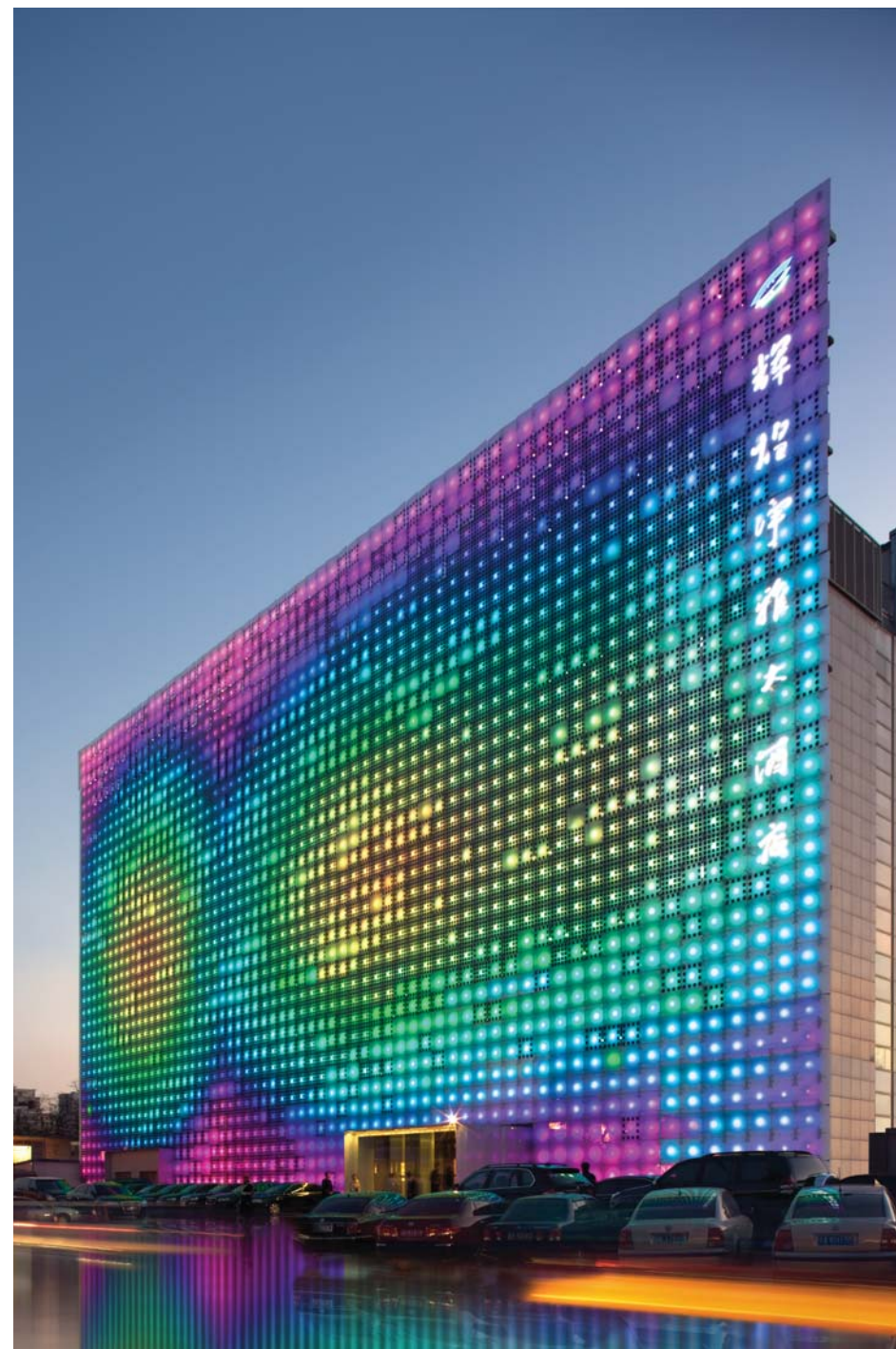
Sito web

<http://www.greenpix.org>

Simone Giostra and Partners Architects sono i progettisti di GreenPix - Zero Energy Media Wall, un progetto innovativo che applica tecnologia digitale e principi di architettura sostenibile all'involucro dell'entertainment center "Xicui" a Pechino, nel quartiere delle Olimpiadi 2008.

Con il più esteso schermo a colori LED al mondo e il primo sistema fotovoltaico integrato a un involucro vetrato in Cina, l'edificio agisce come un sistema organico autosufficiente, producendo energia solare durante il giorno e usandola per illuminare lo schermo di notte, riflettendo il ciclo climatico giornaliero.

"Il media wall offrirà alla città di Pechino il primo spazio urbano dedicato all'arte digitale e, allo stesso tempo, dimostrerà l'uso radicale della tecnologia sostenibile applicata all'intero involucro dell'edificio," spiega Simone Giostra. "Il progetto verrà inaugurato nel Giugno di quest'anno, con un programma commissionato per l'occasione ad artisti cinesi, europei e americani, di installazioni video e live performances".



The Media Wall Projecting Media Art Content



| Glass Solar Panels

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| The Media Wall During Construction

P06 | GreenPix - Zero Energy Media Wall



The Media Wall at Sunset



The Media Wall at Night

Con il supporto di Schueco e SunWays, produttori tedeschi leader nel settore, l'architetto Simone Giostra ha sviluppato una nuova tecnica per la laminazione di cellule fotovoltaiche in involucri vetriati e ha coordinato, con la ditta SunTech, la realizzazione dei primi pannelli solari in vetro prodotti in Cina. Le cellule fotovoltaiche policristalline sono inserite nel vetro del

curtain wall e posizionate con densità variabile sull'intera 'pelle' dell'edificio. La variazione di densità aumenta la performance dell'edificio, permettendo la penetrazione di luce naturale nella misura richiesta dalle varie funzioni interne e bloccando l'eccessivo irradiazione solare, che viene trasformato in energia per il media wall.

P06 | GreenPix - Zero Energy Media Wall



The Media Wall Generating Energy During the Day

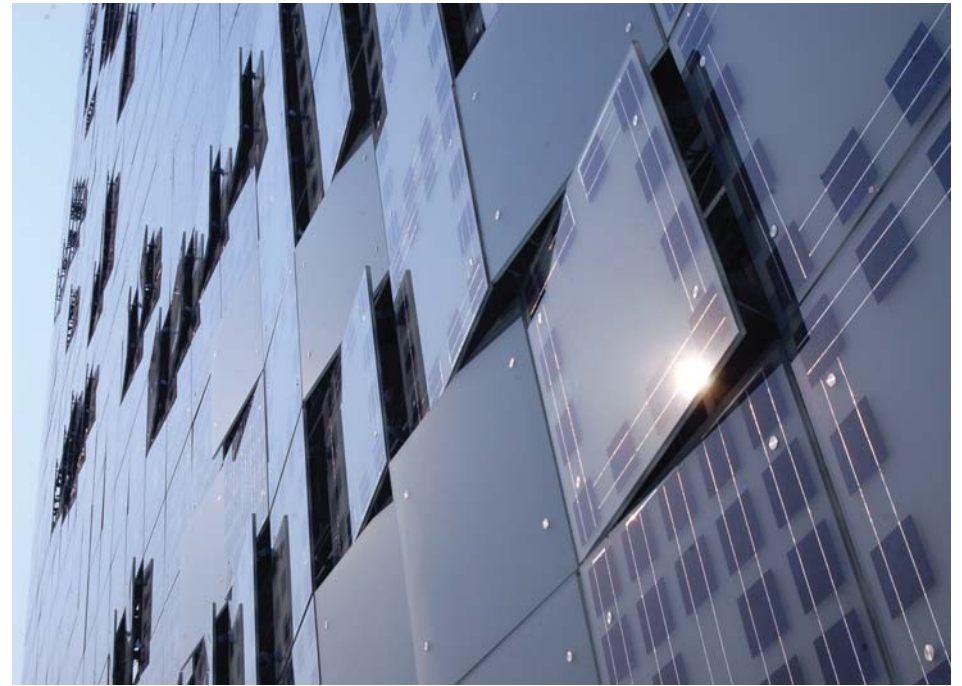
Il volume opaco e inespressivo dell'edificio commerciale si anima e acquisisce la capacità di comunicare con il contesto urbano circostante attraverso un nuovo tipo di trasparenza digitale. La sua "pelle intelligente" interagisce con l'interno dell'edificio e con lo spazio pubblico esterno usando un software originale e integrato, che trasforma la facciata stessa in un sistema interattivo finalizzato all'intrattenimento e alla partecipazione del pubblico.

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The Media Wall Main Entrance

P06 | GreenPix - Zero Energy Media Wall

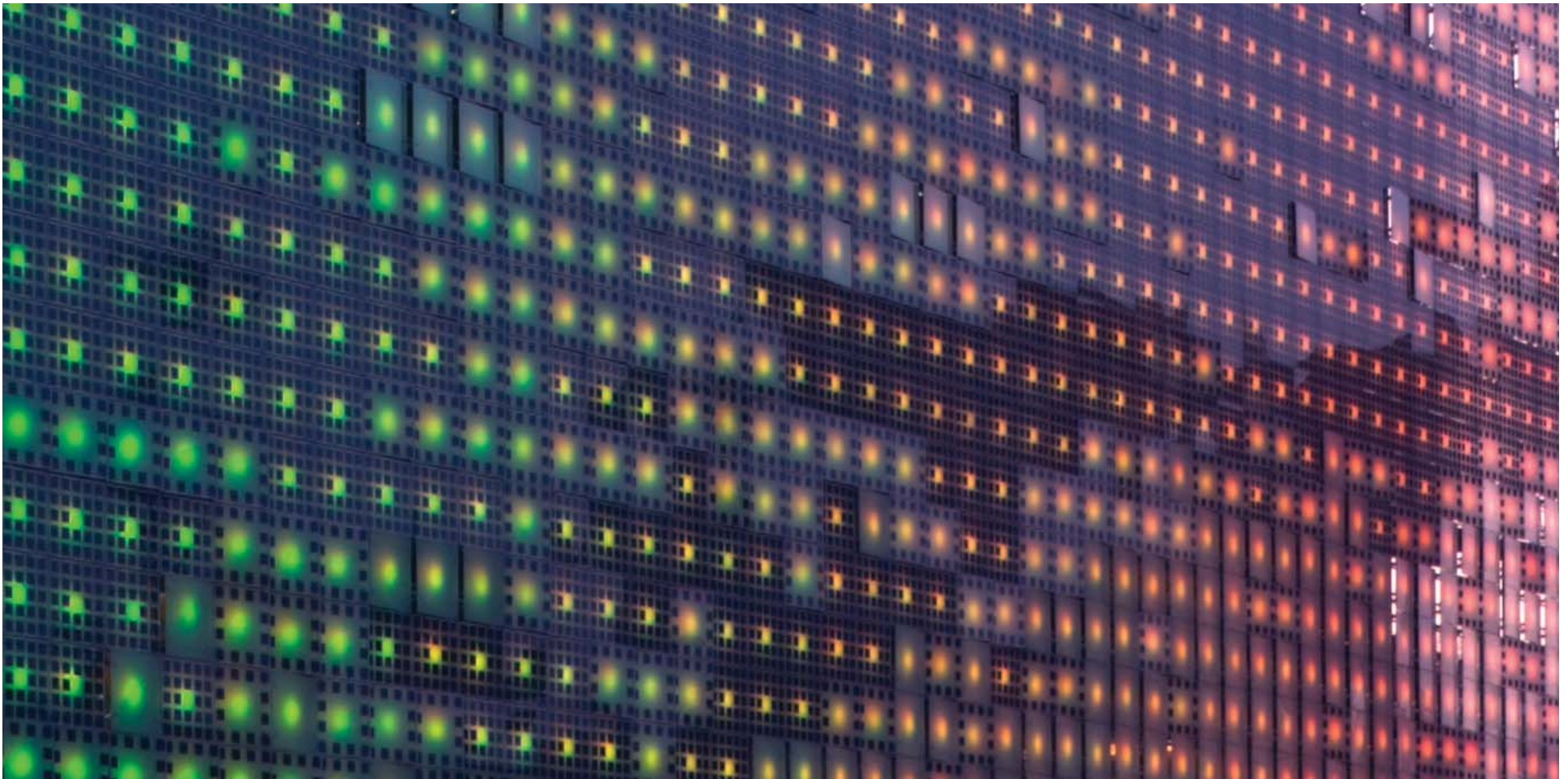


Media Wall Reflecting Different Lighth Conditions

La perfetta integrazione in un contesto urbano di tecnologia digitale/informatica e architettura offre un nuovo tipo di superficie comunicativa, aperta a forme d'arte senza precedenti e capace di proiettare informazioni sulle attività dell'edificio ad ampio raggio e per una vasta audience nella città di Pechino.

L'uso innovativo della tecnologia e l'approccio sperimentale alla comunicazione e interazione sociale definiscono nuovi standards di intervento urbano, generando un interesse globale nell'integrazione di tecnologia digitale e architettura e contribuendo all'immagine di Pechino come centro di innovazione e trasformazione urbana.

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Close-up of the Media Wall at Dusk



Workers on Site

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Installation of the Media Wall

GreenPix e' uno schermo di grande scala composto da 2,292 punti luce LED a colori (RGB) simile ad uno schermo monitor di 2.200 mq per proiezioni di contenuto dinamico. La scala enorme e la bassa risoluzione dello schermo caratterizzano il senso di astrazione e la qualità percettiva del medium, fornendo un mezzo di comunicazione adatto a nuove forme d'arte, sostanzialmente diverso dall'applicazione commerciale degli schermi ad alta risoluzione nelle convenzionali facciate-schermo.

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Lighting Test Using the Prototype



P06 | GreenPix - Zero Energy Media Wall



| The Prototype Was Used for Extensive Testing of the System

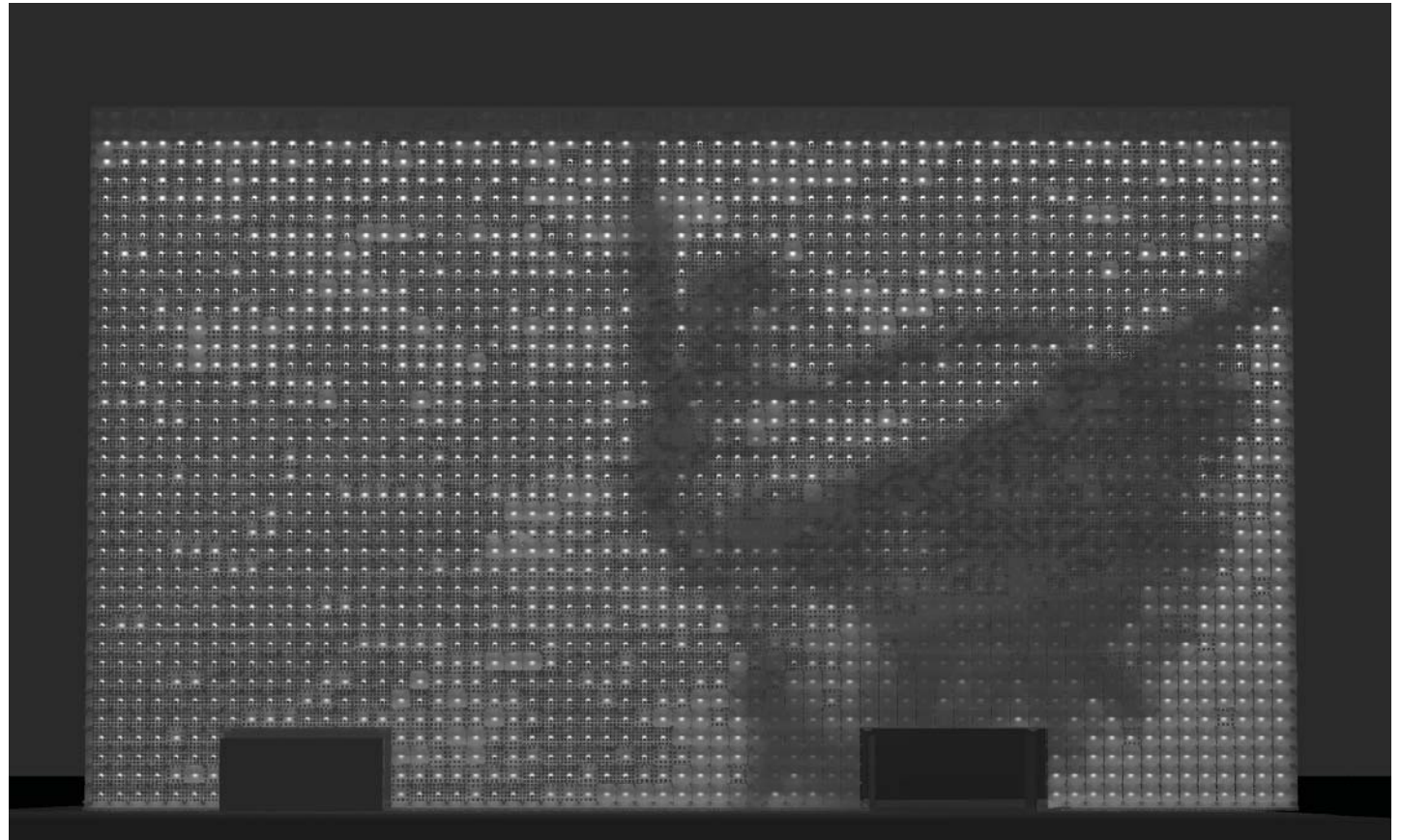


Model View



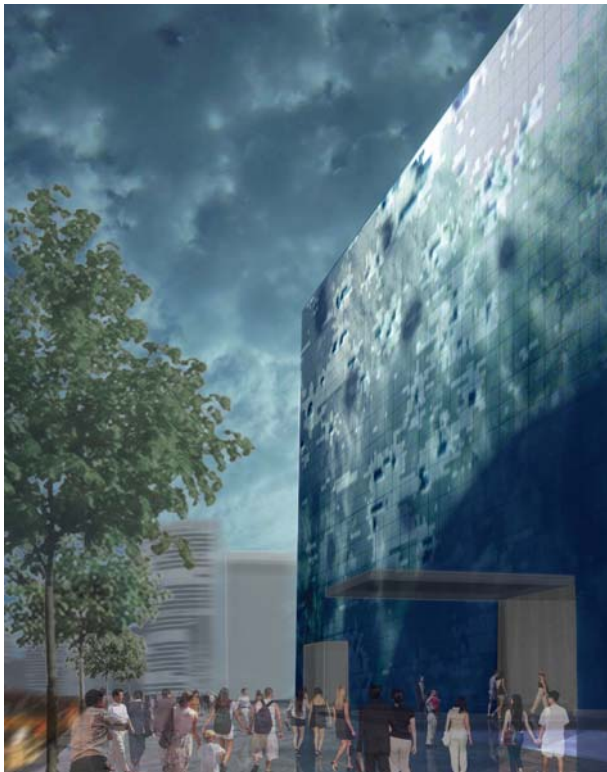
Model View - Detail

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The Media Façade: Still Frame from the Concept Animation

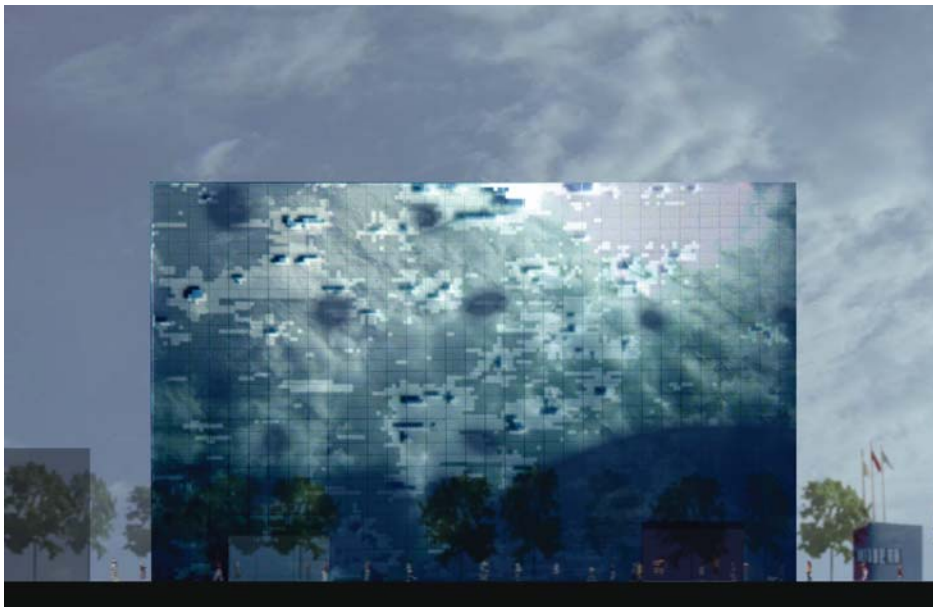
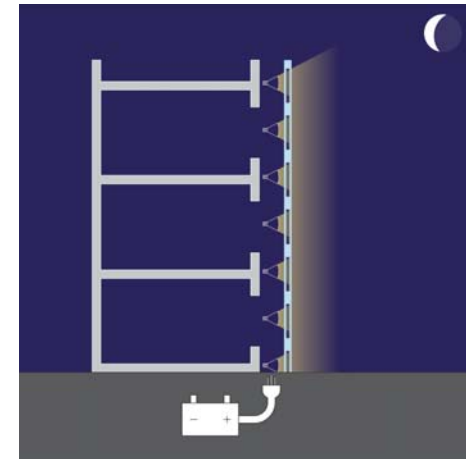
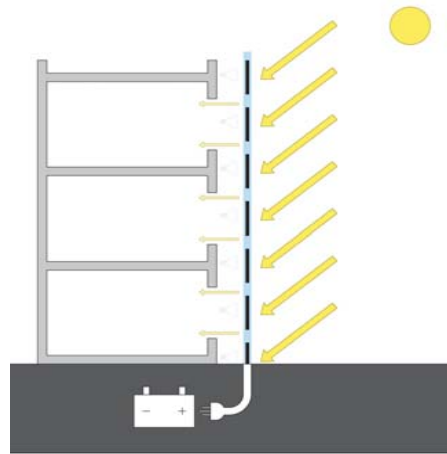
P06 | GreenPix - Zero Energy Media Wall



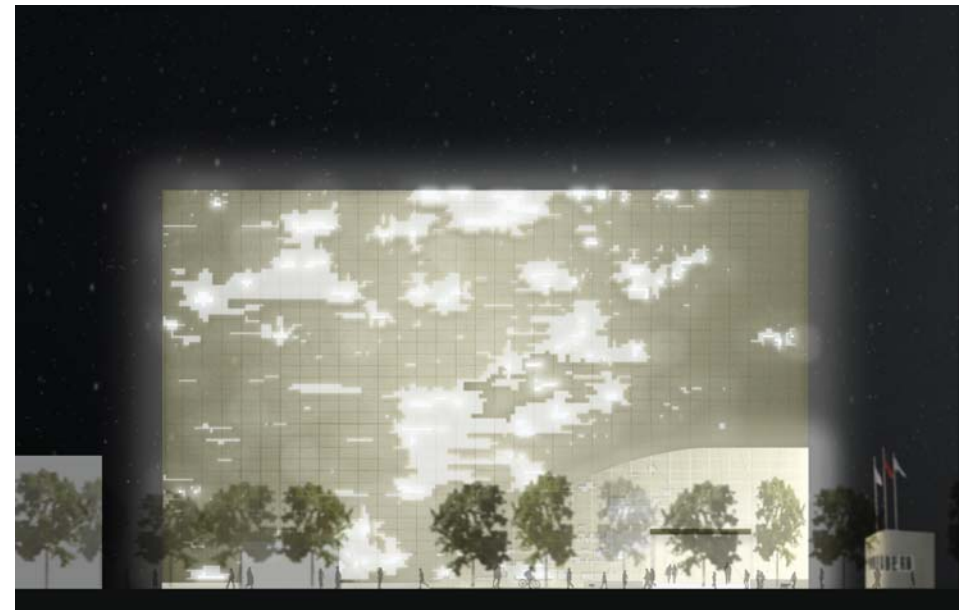
The Building Transforming Through the Day



P06 | GreenPix - Zero Energy Media Wall

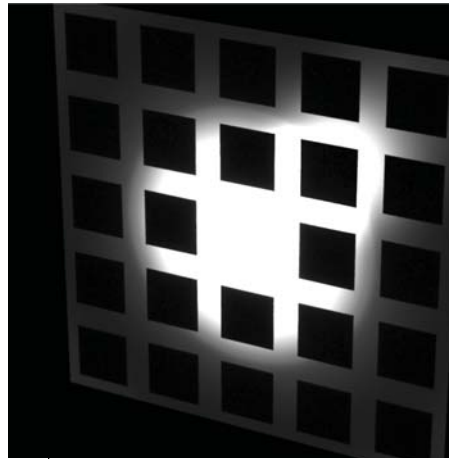


The New Façade: Midday

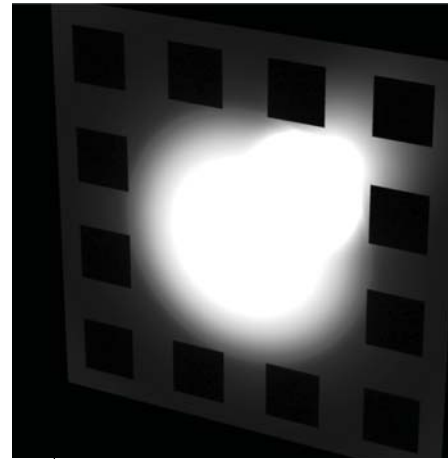


The New Façade: Midnight

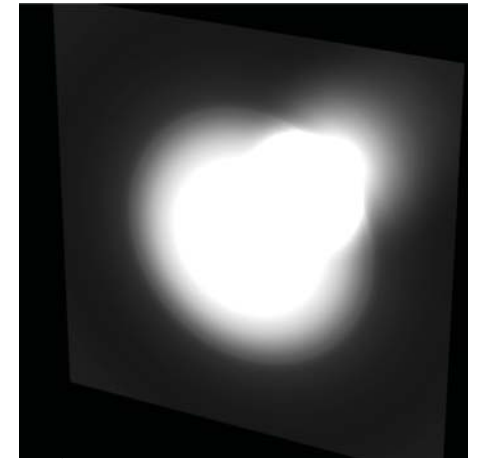
P06 | GreenPix - Zero Energy Media Wall



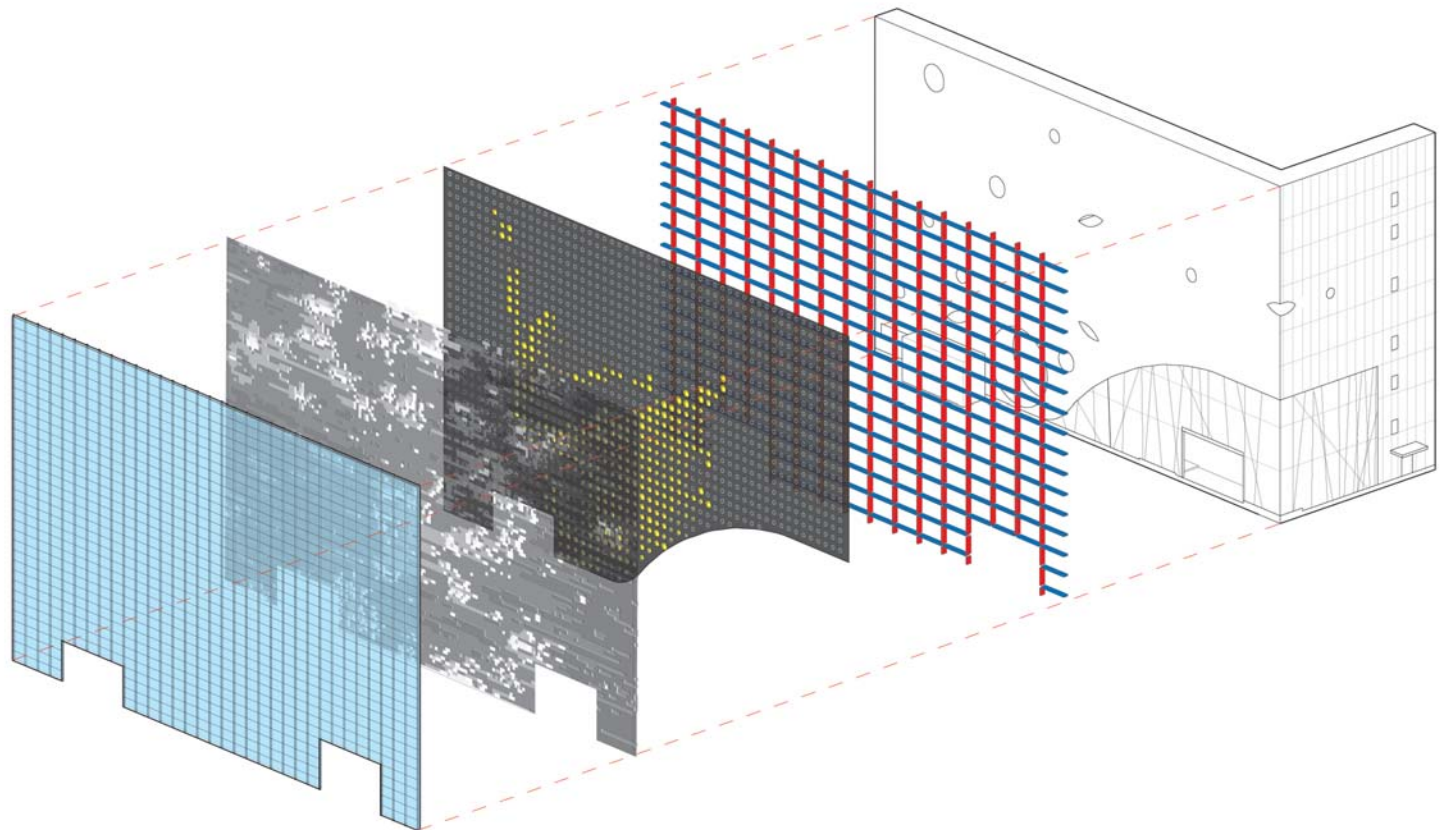
| Low Transparency Lighting Simulation by Arup



| Medium Transparency Lighting Simulation by Arup

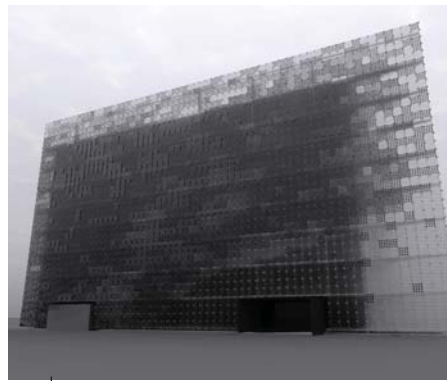


| High Transparency Lighting Simulation by Arup

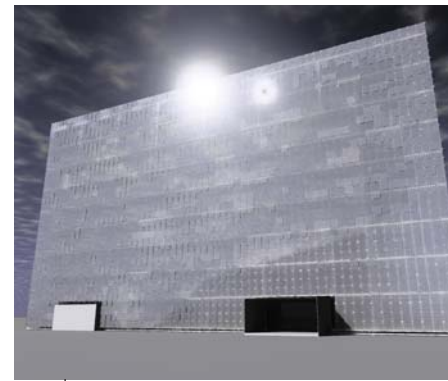


| Layering of the Façade

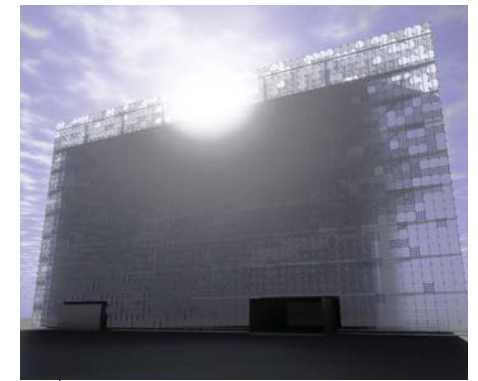
P06 | GreenPix - Zero Energy Media Wall



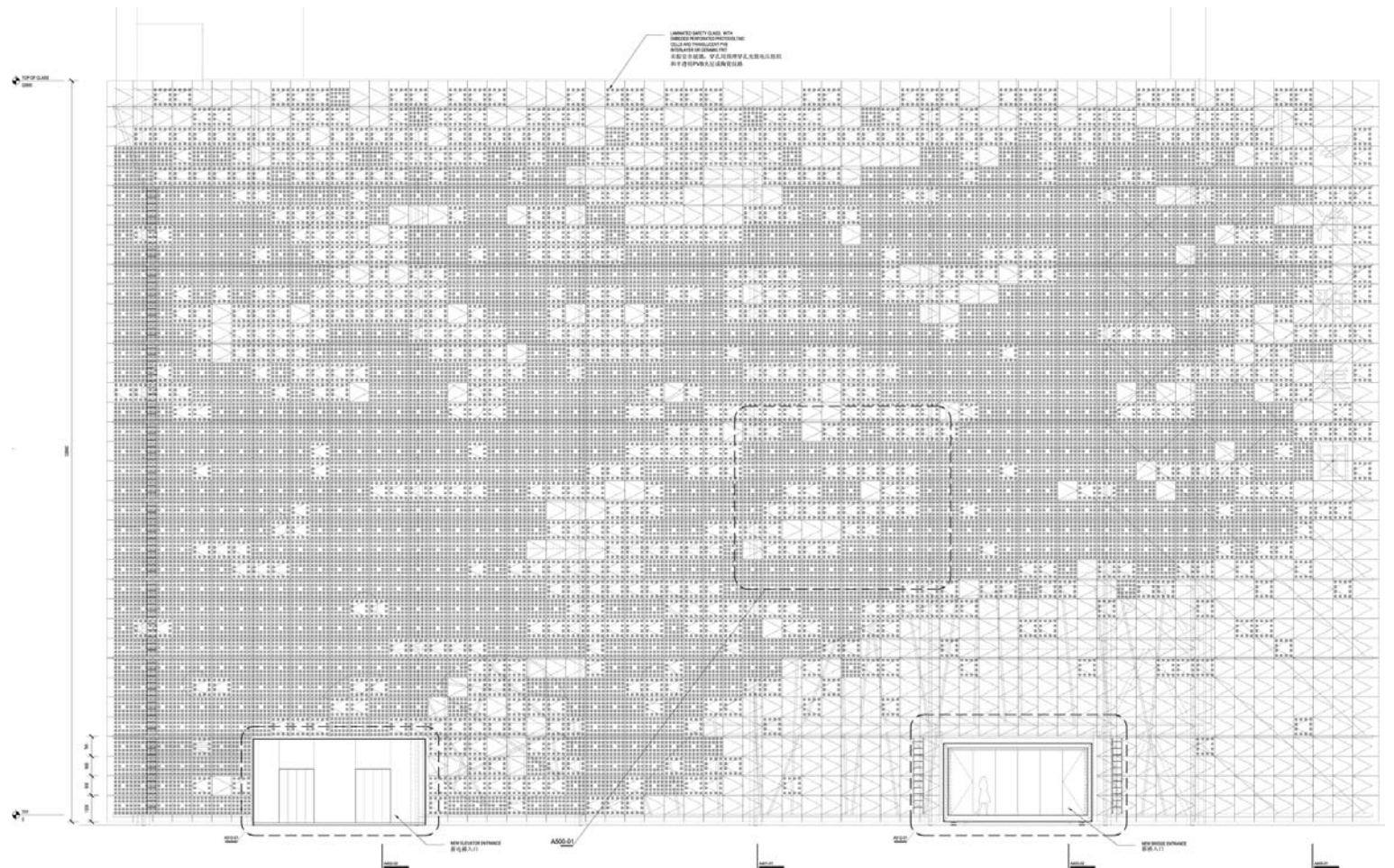
Overcast Afternoon Rendering by Arup



Clear Morning Rendering by Arup

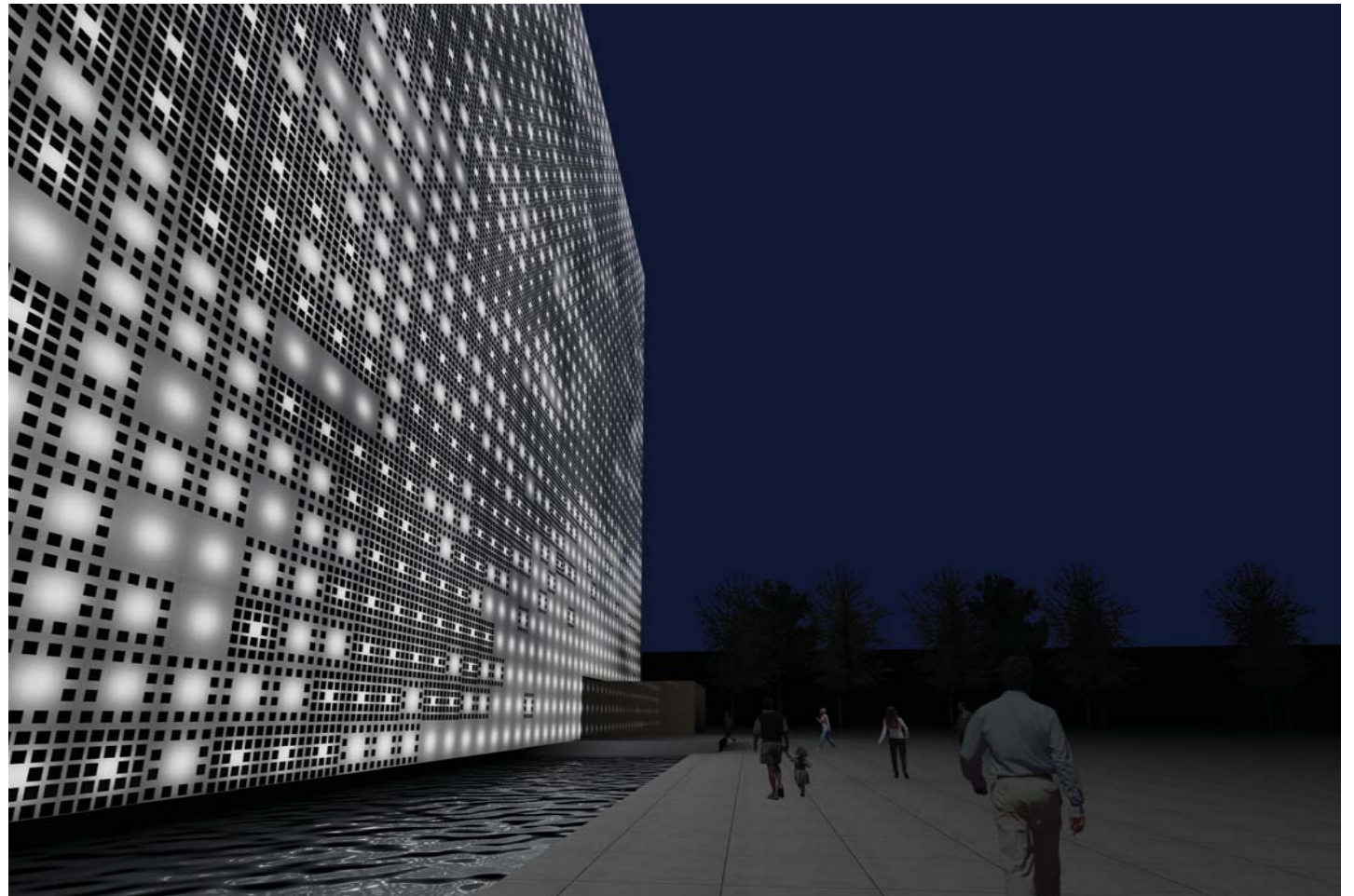


Clear Afternoon Rendering by Arup



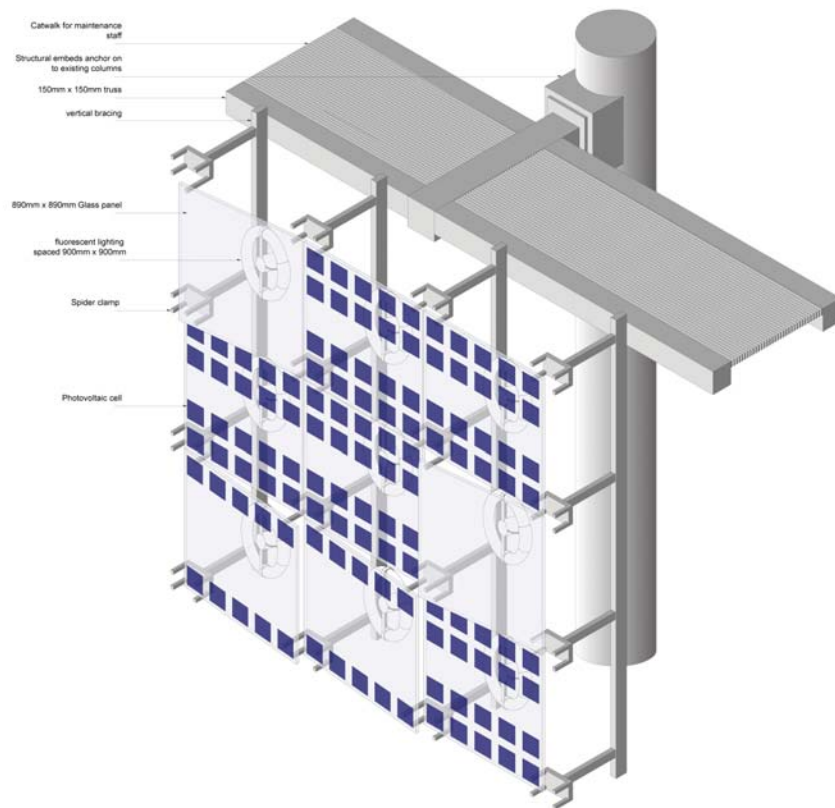
Elevation from the Construction Documents Set

P06 | GreenPix - Zero Energy Media Wall

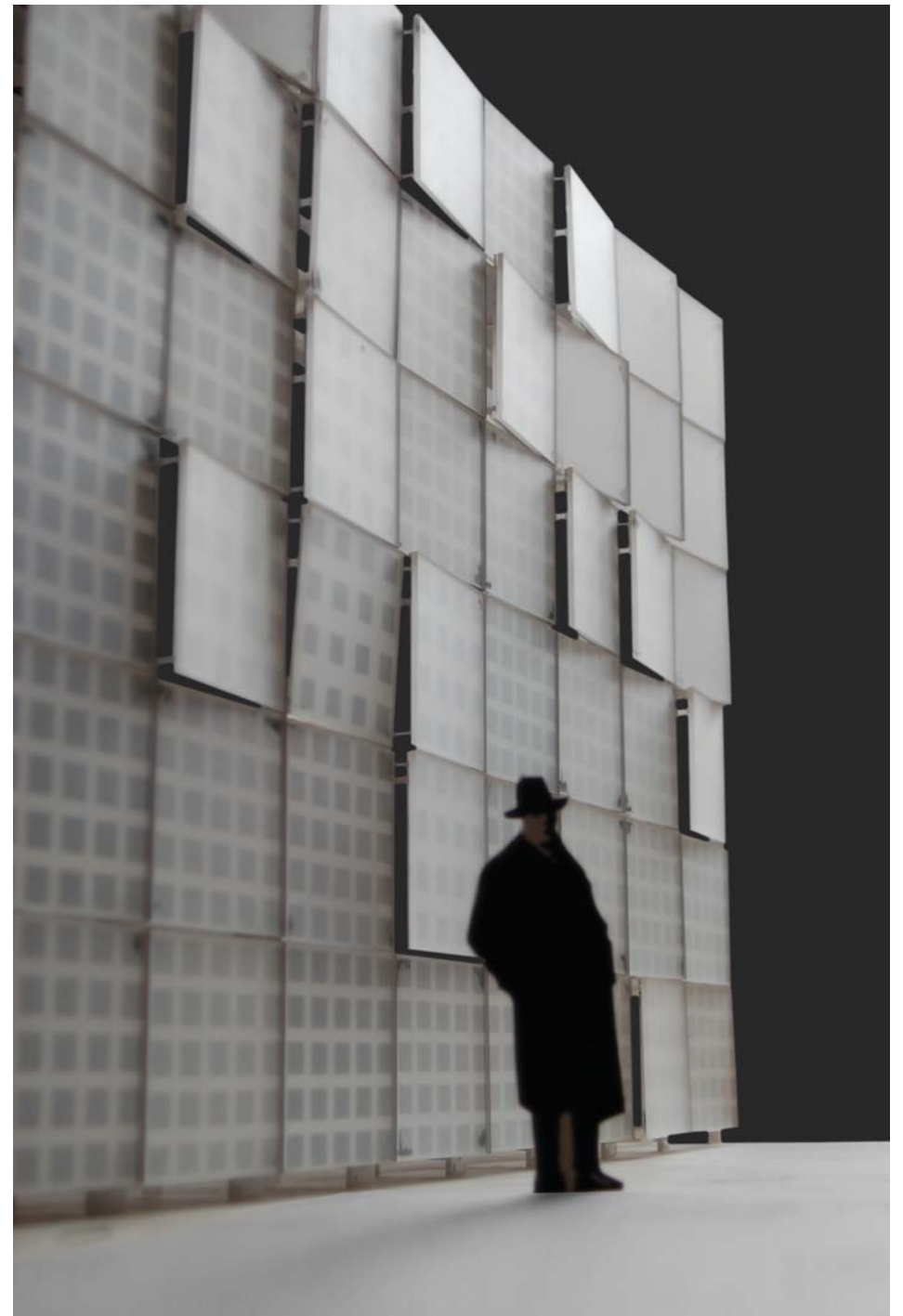


| Perspective Rendering

P06 | GreenPix - Zero Energy Media Wall

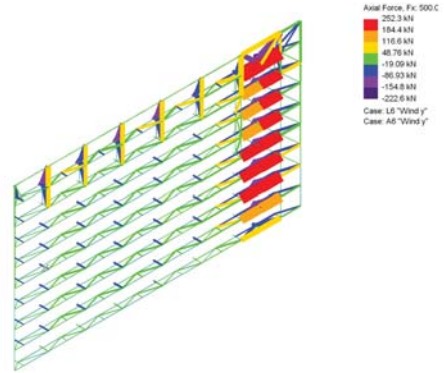


Axonometric Detail

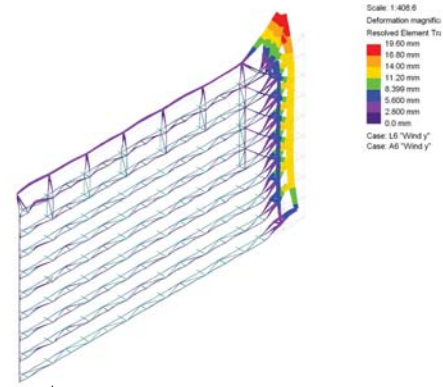


View of the Model

P06 | GreenPix - Zero Energy Media Wall



Axial Forces Simulation by Arup

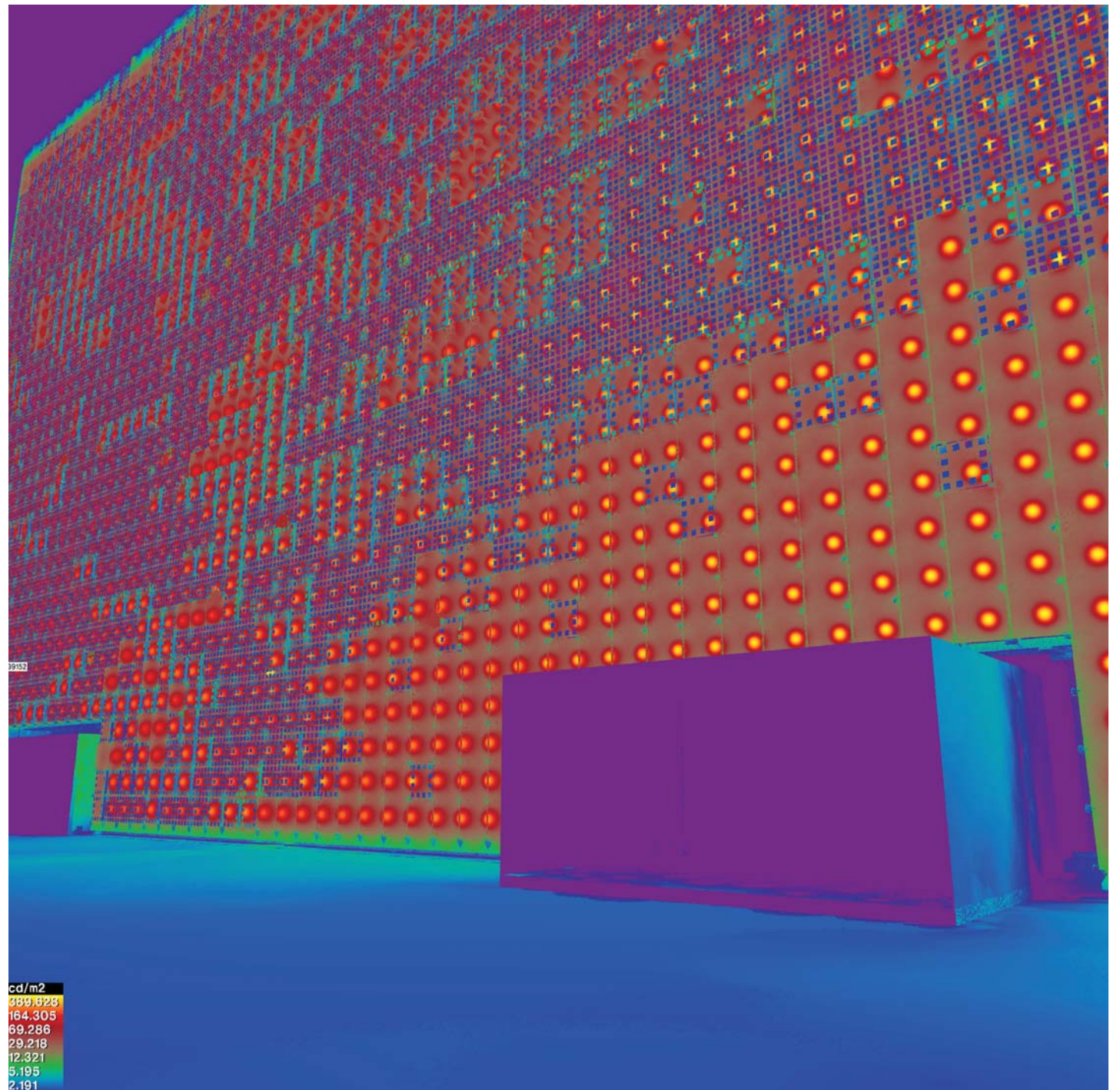


Deformation Simulation by Arup



Entrance

P06 | GreenPix - Zero Energy Media Wall



Simulation by Arup



SIMONE GIOSTRA & PARTNERS | PROJECTS

P09 | Whehai Grand Hotel

Location

Whehai, China

Project

2007

Completion

2009

Client

Jingya Corporation

Scope of Services

Architecture Design
Contract Documents
Construction Administration

Structural Engineer

TianJin Engineering

Gross Floor Area

120,000 sf

Construction Cost

Confidential

Program

Hotel
Entertainment Center

P08 | GreenPix
Content Management System

Location

Beijing, New York

Project

2007

Completion

2007

Client

SGPA

Scope of Services

Software Development
Content Management

Media Development

Jeremy Rotsztain

Gross Floor Area

20,000 sf

Construction Cost

Confidential

Program

Content Management System for
Xicui Media Wall

P07 | D'EAR Flagship Store

Location

Frankfurt, Germany

Project

2006

Completion

2007

Client

Hubertus von Alvensleben

Scope of Services

Concept Design
Design Development

Gross Floor Area

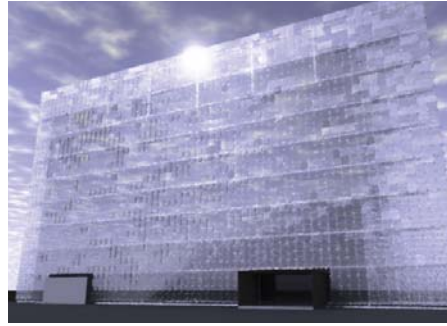
5,000 sf

Construction Cost

Confidential

Program

Store Concept and Flagship Store
for hearing-impaired equipment



P06 | Xicui Entertainment Center and Media Wall

Location
Beijing, China

Project
2005

Completion
2008

Client
Jingya Corporation

Scope of Services
Architecture Design
Contract Documents
Construction Administration

Media Concept
Mark van S.
Bernardo Zavattini

Structural Engineer
Ove Arup & Partners

Lighting Engineer
Ove Arup & Partners

Gross Floor Area
180,000 sf

Construction Cost
Confidential

Program
Entertainment Center
Sustainable Media Wall



P05 | "Foragers" Green Supermarket

Location
Dumbo, New York

Project
2005

Completion
2006

Client
Anna Castellani

Scope of Services
Architecture Design
Contract Documents
Construction Administration

Gross Floor Area
25,000 sf

Construction Cost
Confidential

Program
New-concept "green" supermarket,
offices and storage place.



P04 | Castiglion del Bosco Hotel and Resort

Location
Tuscany, Italy

Project
2005

Completion
2006

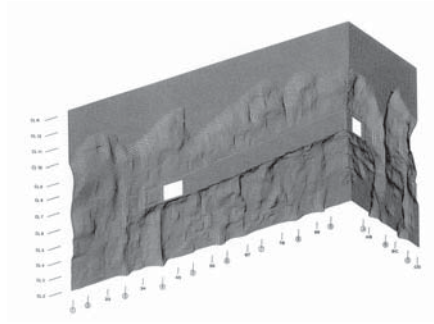
Client
Faithful + Gould

Scope of Services
Specifications Consultant

Gross Floor Area
45,000 sf

Construction Cost
Confidential

Program
Luxury Hotel and Spa



P03 | Jingya Ocean Entertainment Center

Location

Beijing, China

Project

2003

Completion

2005

Client and Architect

Atelier Raimund Abraham

Scope of Services

Curtain Wall Design

Structural Engineer

Ove Arup and Partners, New York

Gross Floor Area

120,000 sf

Construction Cost

Confidential

Program

Entertainment center, restaurants, commercial space, meeting spaces, theater, exhibition space

Note

The firm is engaged in the coordination of the Jingya Ocean Entertainment Center in Beijing, China, for Atelier Raimund Abraham. The firm is overseeing the implementation of a groundbreaking curtain wall technology, coordinating its structural design with Ove Arup and Partners in New York and supervising the production and installation of all components by China's local manufacturers.



P02 | Pierce House

Location

Cape Cod, Massachusetts, USA

Project

2004

Completion

2005

Client

Benita Pierce

Scope of Services

Architecture Design
Contract Documents
Construction Administration

Gross Floor Area

2,100 sf

Construction Cost

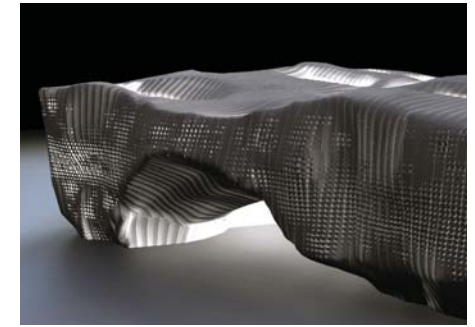
Confidential

Program

House extension

Note

The building, comprised of a gym and steam room and a ground level for car parking, plant and storage, fuses state-of-the-art digital design tools and traditional, indigenous building techniques to create an environmentally-sensitive building.



S13 | MOCAPÉ Shenzhen

Location

Shenzhen, China

Competition

2007

In Partnership with

Marchi Architects, Ove Arup & Partners, CCDI Shenzhen

Structural Engineer

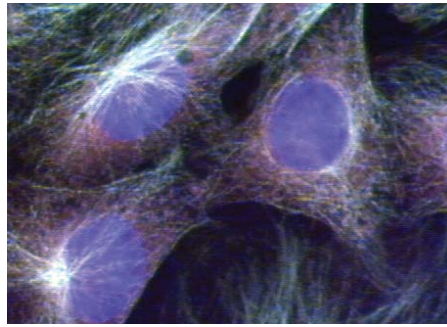
Ove Arup & Partners, Beijing

Gross Floor Area

850,000 sf

Program

Museum of Contemporary Art, Theater, Commercial Program, Sculpture Garden



S12 | Seoul Performing Art Complex

Location

Seoul, Korea

Competition

2005

Client

City of Seoul

Gross Floor Area

250,000 sf

Construction Cost

Confidential

Program

Theaters, performing spaces, library, restaurants, meeting spaces, park



S11 | New Seat for the Lombardy Regional Government

Location

Milan, Italy

Competition

2004

Ranking

Short-listed

Client

Lombardy Regional Government

In Partnership with

Steven Holl, Guy Nordenson, Remo Dorigati

Structural Engineer

Guy Nordenson

MEP Engineer

Mahadev Raman, Ove Arup & Partners

Gross Floor Area

900,000 sf

Construction Cost

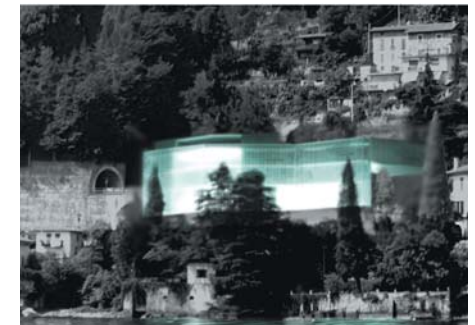
US\$ 180,000,000

Program

Offices, commercial space, meeting spaces, theater, exhibition

Note

In 2004, the firm, in partnership with Steven Holl and Guy Nordenson, was chosen among 10 international offices, including Frank Gehry and Norman Foster, to submit a proposal for the 160-million dollar project of the new Regional Government Headquarters in Milan.



S10 | The New City-Gate for Brienno

Location

Brienno, Italy

Competition

2004

Client

City of Brienno

Gross Floor Area

25,000 sf

Construction Cost

US\$ 1,000,000

Program

Parking, community facilities

Note

The new structure is a distinctly twenty-first century interpretation of the traditional typology of the parking garage. The horizontal and vertical pedestrian circulation is organized within a multi-level, open "double-wall" overlooking the lake that exposes users to striking views while moving through the building, making the parking area a destination in its own right.



S09 | New Façade
for the Art Interactive Gallery

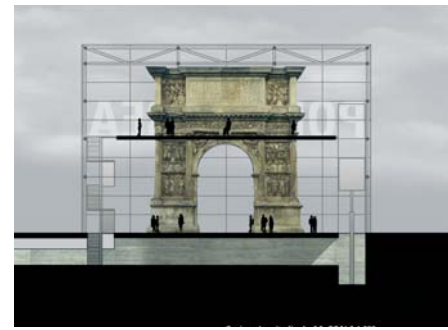
Location
Cambridge, USA

Competition
2003

Ranking
Honourable Mention

Client
Art Interactive Gallery

Note
The Art Interactive Gallery sought a new façade to announce its presence and mission to the city community, with a cost for materials not to exceed US\$2000. A new skin wrapping the whole gallery was proposed, using the nylon fabric employed in construction scaffolding.



S08 | "Porta Aurea" Archeological Park

Location
Benevento, Italy

Competition
2003

Client
City of Benevento

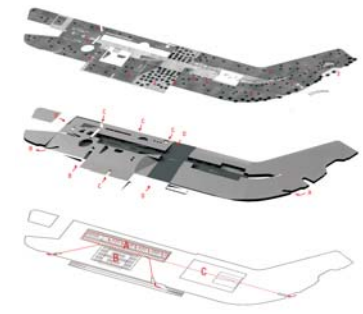
Gross Floor Area
27,000 sf

Construction Cost
US\$ 3,000,000

Program
Protection of the Roman Arch, new Archeological Museum and Park

Bibliography
Il progetto a Port'Aurea a Benevento, in "Architetture di ieri nei Musei di Oggi", Cattolica University Press, Milan, 2003

Note
In 2003, the City of Benevento launched an international competition to create a new Archeological Park, where the underlying challenge was to connect fragments of the city's historic heritage, including a prominent Roman Arch perfectly preserved, by creating an identity not based on architectural typology. The true significance of the Arch is as the "Gate" of a new cultural path; the iconic point of departure for an authentic understanding of the city's history and heritage.



S07 | The New Headquarters
for the Regional Government

Location
Pisa, Italy

Competition
2003

Client
Pisa Regional Government

Gross Floor Area
85,000 sf

Construction Cost
US\$ 17,500,000

Program
Administration offices, meeting rooms and auditoriums, retail spaces, community facilities

Note
The New Seat provides the Tuscany Region with a major administrative center to respond to its growing political and financial power and allows it to become an iconic presence in the much-celebrated, and yet increasingly-corrupted, Tuscany landscape. This design proposal suggests a possible reconciliation between the traditional landscape and the ruthless urban sprawl that surrounds the site by combining a traditional hillside, re-invented within the given site, and the building program which is placed in the new topography.



S06 | Savona Waterfront
Feasibility Study

Location

Savona, Italy

Competition

2002

Ranking

Honourable Mention

Client

City of Savona

Construction Cost

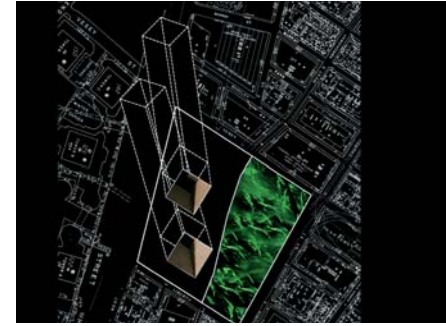
US\$ 4,000,000

Program

Urban design for a new pedestrian and commercial area at the city waterfront

Note

The firm's Savona Waterfront Master Plan consists of a duplication of the existing site along the water in response to the progressive and menacing occupation of public soil by unlawful parking. The new space will contain a "virgin" site dedicated solely to leisure and sport activities. The "high walk" unfolds a double-deck supported by a band of new programs and functions related to the waterfront activities that guide and attract visitors.



S05 | World Trade Center Memorial
Site Study

Location

New York City, USA

Study

2001

Gross Floor Area

6,000,000 sf

Program

Memorial, Downtown Park, commercial offices, retail spaces

Note

Responding to a call for design proposals by a renowned Art Gallery in Manhattan, the firm contributed a visionary proposal for the future of the World Trade Center site. The design begins with the acknowledgment that the entire WTC site is a sacred precinct that should be dedicated to renewing the spirit and the quality of life in Lower Manhattan. The final shadows cast by the two towers, based on the angles of the sun at the last moments before each fell, cuts two oblique voids through the bedrock, forming the memorial. These voids and the resulting light employ the synergy of the different programs to create a new identity, determining the overall character of the WTC site and defining its attraction.



S04 | New Square and Civic Center

Location

Arezzo, Italy

Competition

2001

Client

City of Arezzo

Gross Floor Area

75,000 sf

Construction Cost

US\$ 12,000,000

Program

New Square, Public Library, 1,500-seat Auditorium, Hotel, Civic Center

Note

The site appears as the undeveloped rear elevation of a fragmented urban block within the city wall of Arezzo. Our proposal uses the 75,000 sf programmatic injection to redefine the notion of open public space: an urban "room" for the city generated by a 24-hour library and theater and amplified by commercial and cultural programs. Rather than creating a conventional plaza defined by a continuous curtain of public and commercial buildings, the program is placed on the entire extension of the plaza and unified by a large roof acting as an urban deck, thus creating an extraordinary new kind of public space.



S03 | Audiovisual Lab
Leipzig Academy of Visual Arts

Location

Leipzig, Germany

Competition

2001

Ranking

Short-listed

Client

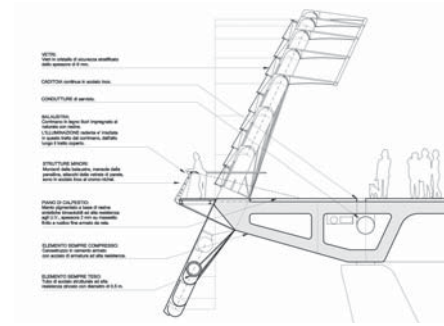
Leipzig Academy of Visual Arts

Program

Exhibition space, administrative offices, multimedia room, research lab

Note

This award-winning design proposal combines the mandatory connection of the new volume to the street via fire stair and elevator with the formulation of a "narrative façade". The activities within the building are broadcast on the projection plane of the building envelope, much like the front of medieval churches would represent the story of mankind, acting as the interface between the "enlightened" inner users and the outer local community.



S02 | "Ponte della Scienza"
Pedestrian bridge

Location

Rome, Italy

Competition

2000

Ranking

Selected Project

Client

City of Rome

Structural Engineer

Ove Arup & Partners, New York

Construction Cost

US\$ 1,500,000

Bibliography

"Icarus Wing" in: "Due ponti pedonali sul Tevere", Alinea, Rome, 1999

Note

The "Icarus wing" bridge is the result of a creative collaboration between the firm and engineers at Ove Arup and Partners in response to one of the most popular international competitions held in Italy in recent years. This is an uncompromised, adventurous declination of the suspended bridge, resulting in a profile that is both structurally clear and formally mysterious.



S01 | Center for Medieval Art
Site Proposal

Location

Assisi, Italy

Project

1995

Client

City of Assisi

Gross Floor Area

42,000 sf

Program

The Research Institute is comprised of offices, classrooms, conference room and library. The Museum includes exhibition space, auditorium, cafeteria and storage

Note

The Center's footprint blends into the uninterrupted fabric of the city by adopting the scale of the adjacent buildings, interconnecting with neighboring sites and ensuring a seamless urban integration. The complex of museum, auditorium and research facilities appears solid and fortified, reinforcing the image of dignity and sobriety. Like all successful civic architecture, these buildings suggest permanence.

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