

SIMONE GIOSTRA & PARTNERS | GREENPIX - ZERO ENERGY MEDIA WALL, BEIJING

### 西蒙·季奥斯尔塔及合伙人

季奥斯尔塔先生1994年毕业于意大利米兰的建筑专修学院，获建筑学硕士学位。在Alvaro Siza, Raphael Vinoly, Raimund Abraham, Steven Holl and Richard Meier 等著名建筑师建造他们在美国和欧洲的项目时，他担任了项目建筑师。

西蒙·季奥斯尔塔从业已超过十二年。他的专业经验和知识促使他开创了致力于研究和探索建筑功能和新媒介的公司。公司认识到视觉效果在建筑项目的设计和实施过程中的影响力。因此，为了将现有条件发挥到极致，公司结合了建筑领域已有和新生的手段，并借助跨学科的合作。

目前，他设计并负责建设一些在中国项目。这些项目极具创新性，北京的西翠娱乐中心就是其中之一。该项目采用可自生能量、近2万平方英尺的媒体幕墙。

同时，季奥斯尔塔先生还活跃在学术界，将自己的专业实践经验与研究相结合。他目前在新泽西工程学院建筑系研究生院和纽约PRATT任教。

### 奥雅纳

奥雅纳是一家集设计师、工程师、规划和业务咨询顾问为一体、为全球客户提供多样化专业服务的全球性企业。我们的工作强调可持续发展。公司为全球人类楼宇建筑、交通运输及其他基建项目提供最富有创意和可持续发展的方案，是杰出创新的推动力。

奥雅纳有三个全球业务范畴 - 楼宇、基建与咨询。我们为客户提供多元化服务，集合不同部门甚至不同地域的员工参与同一项目，旨在汇集全球最佳专业人才，尽善尽美地满足客户需求。

奥雅纳于1946年成立，在全球超过35个国家开设了90多个分支机构，共有员工9000余人。无论任何时间，公司都有一万个以上的项目在全球不同地区进行中。奥雅纳已在中国经营了超过30年，全公司有近四分之一的员工长驻香港和中国内地。

在中国我们曾先后参与500多个项目，包括体育场馆、摩天大楼、机场、桥梁，高速公路和铁路等。除了北京首都国际机场3号航站楼，我们在北京的其他工程项目还有国家体育场、国家游泳中心、北京央视总部大楼，中国国际贸易中心三期（北京的最高建筑），北京南站（铁路），还有作为奥运会国际广播中心和主新闻中心的国家会议中心

## P06 | GreenPix - Zero Energy Media Wall

项目

GreenPix—零耗能多媒体幕墙

地点

中国北京西翠路

投资方

净雅集团

建筑师

西蒙·季奥斯尔塔工作室 (Simone Giostra) & Partners

照明设计和幕墙工程设计

奥雅纳工程顾问 (ARUP)

太阳能技术研发

Schüco International, Sunways

太阳能板制造商

无锡尚德太阳能电力有限公司

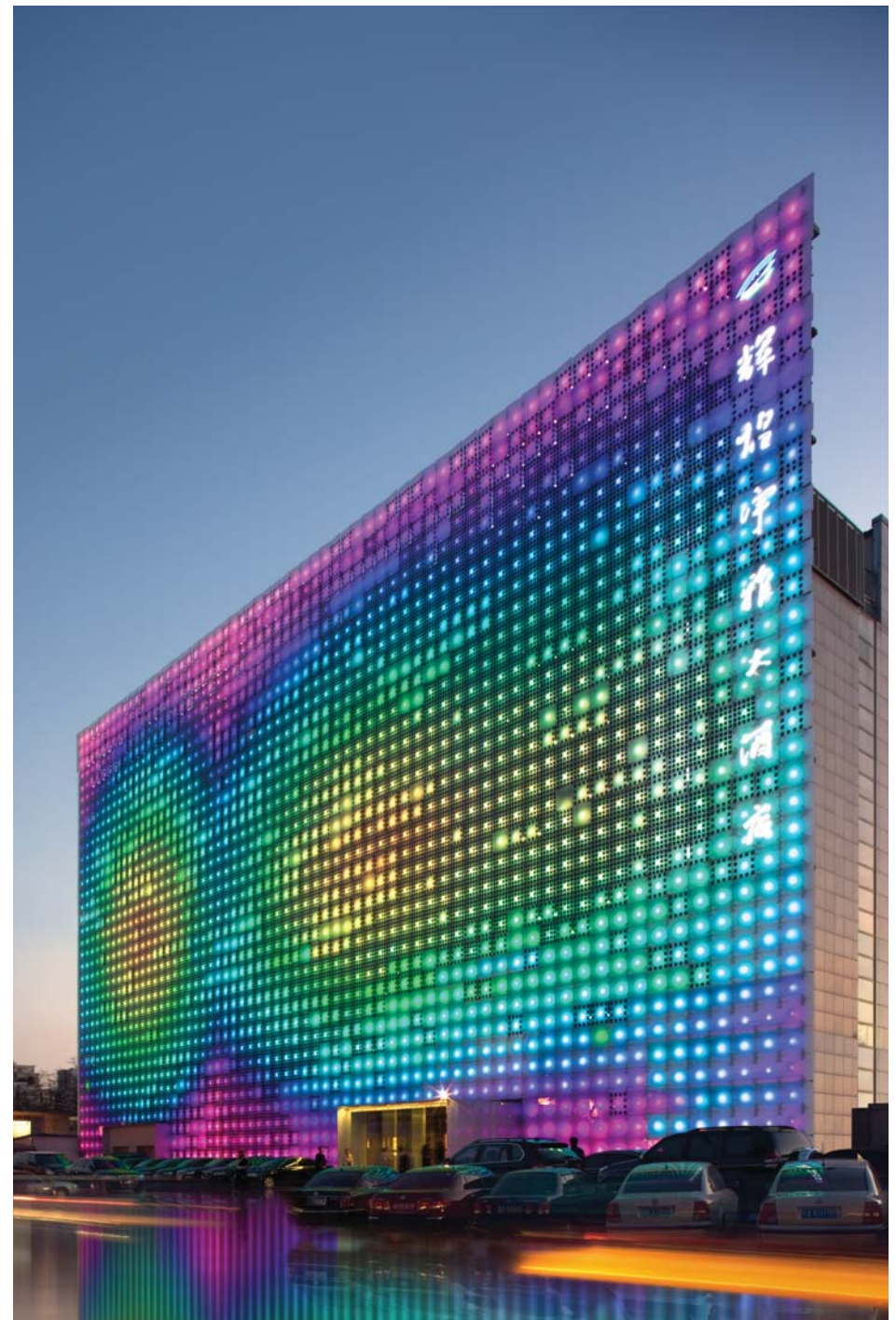
液晶屏制造商

索恩 (Thorn) 照明集团中国分公司

网址 <http://www.greenpix.org>

GreenPix—零耗能多媒体幕墙，是一项可持续能源和数字媒体技术的创新性项目，是为了位于2008奥运主办场地附近的北京西翠娱乐中心而设计。这一项目拥有着世界上最大的彩色液晶显示屏和中国第一套集成到玻璃幕墙的光电系统。整个建筑通过白天吸收太阳能、晚上用它来照亮屏幕，反映出一天的天气循环，从而以自给自足的能源组织系统来运作。

通过为整幢建筑的表面提供迄今为止最先进的可持续能源技术，这一媒体墙将为北京市提供第一个专注于数字媒体艺术的集结地。这一建筑将于2008年3月22日开始对公众开放，届时将会有特别授权的视频节目和来自中国、欧洲和美国艺术家们的现场表演。整个项目由纽约的Simone Giostra & Partners (在欧洲和美国以其创新性幕墙而享有盛誉) 设计和实施，照明设计和玻璃幕墙工程设计由伦敦和北京的奥雅纳 (ARUP) 公司提供。项目主管Luisa Gui将与软件开发者美国媒体艺术家 Jeremy Rotsztain 协调开幕式程序。



The Media Wall Projecting Media Art Content



| Glass Solar Panels

**P06** | GreenPix - Zero Energy Media Wall



| The Media Wall During Construction

**P06** | GreenPix - Zero Energy Media Wall



The Media Wall at Sunset



The Media Wall at Night

借助德国顶级制造商Schueco and SunWays 公司的支持，建筑师 Simone Giostra 及 Arup 公司开发了一项将光电单元层压到玻璃幕墙的新技术，并由中国制造商尚德太阳能电力有限公司检查了第一批玻璃太阳能面板产品。

多晶光电单元层压到幕墙玻璃当中，并于整个建筑的表面上通过变化的密度进行放置。密度设计允许在内部程序需要时获得自然光，从而降低热能获取和太阳能向幕墙所需电能的过多转化，增强了整个建筑的表现力。

## P06 | GreenPix - Zero Energy Media Wall



The Media Wall Generating Energy During the Day

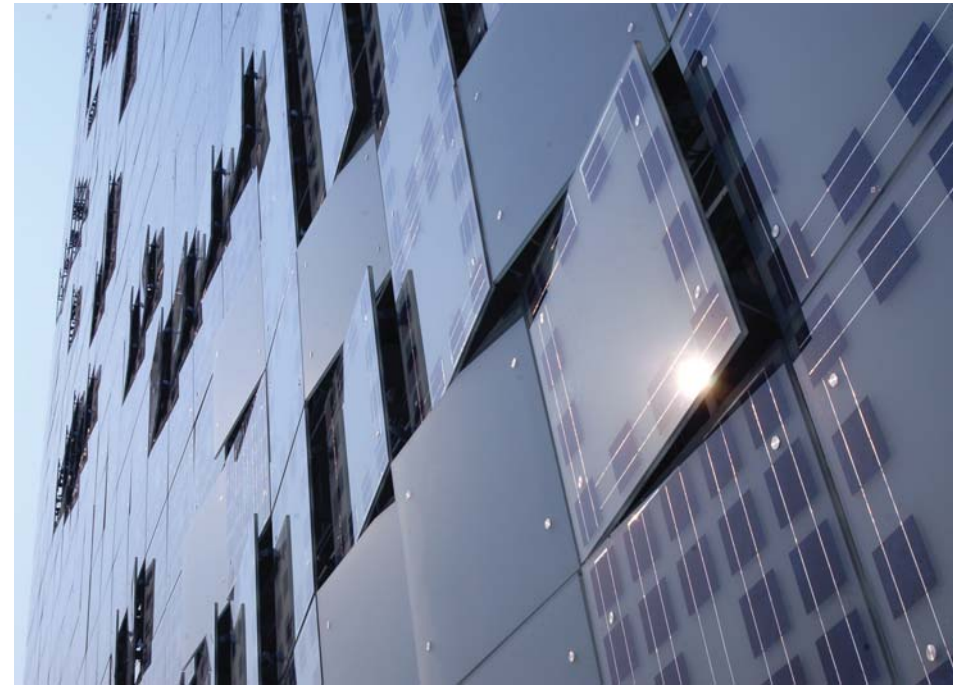
通过这一新型数字图案，西翠这一箱型不透明商业建筑获得了其与城市环境进行交流的能力。通过内置的用户定制软件，其“智能皮肤”使建筑内部与外部公共空间进行互动，将建筑物的玻璃幕墙转变为一种互动娱乐和公众活动环境。

P06 | GreenPix - Zero Energy Media Wall



The Media Wall Main Entrance

**P06** | GreenPix - Zero Energy Media Wall



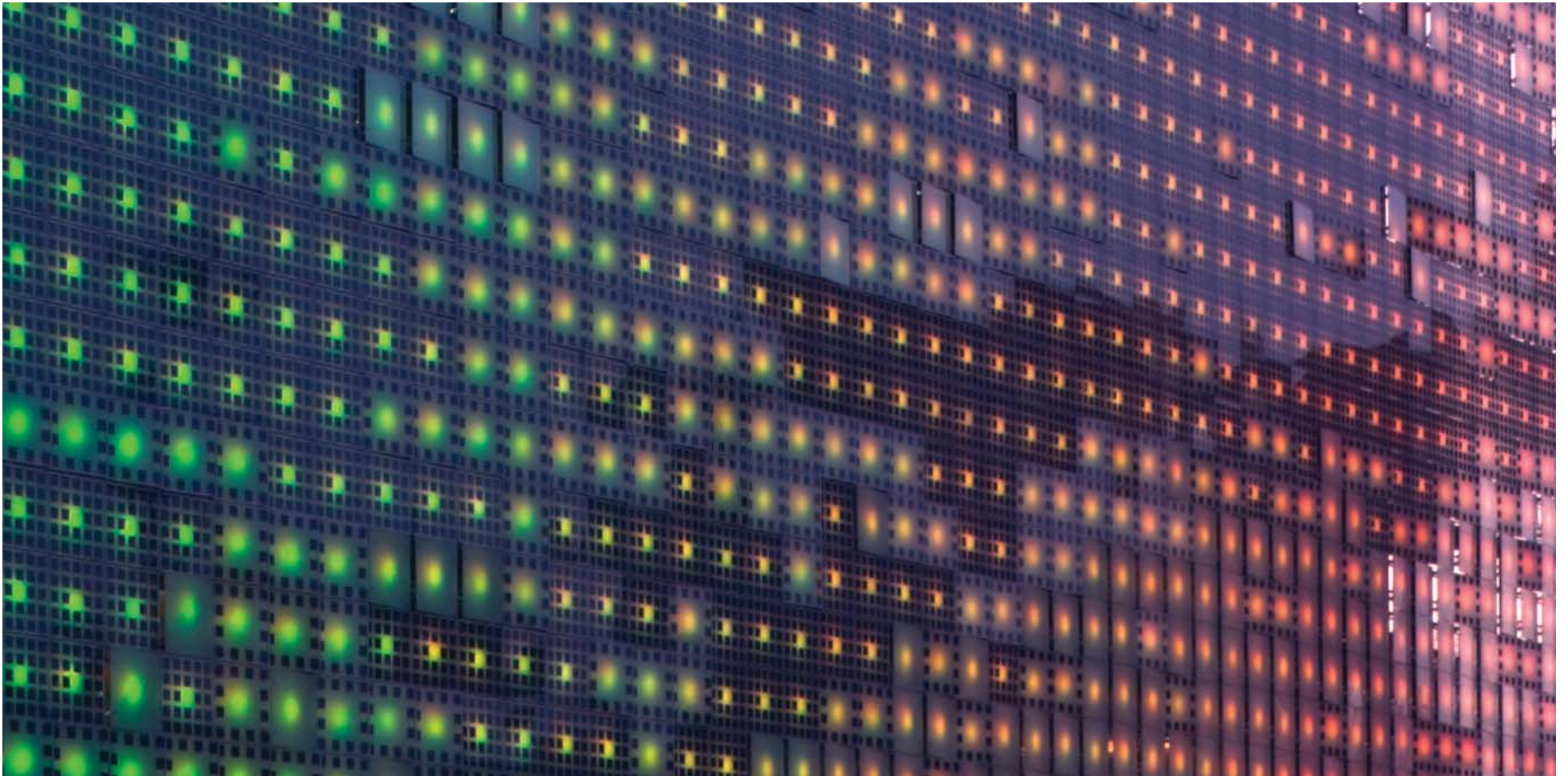
Media Wall Reflecting Different Lighth Conditions



通过该屏幕向更广的范围传递行为和活动的信息、在北京市范围内获得大量的观众，这是在市区建筑物上将媒体/信息技术与建筑学充分地综合，代表着一种致力于创新艺术表现形式的交流平台。

数字技术与建筑的结合提升了全球影响、巩固了北京作为改革和城市复兴中心的声誉，技术的创新使用、交流的试验性方式和社会的互动定义了城市在全球化进程中的新标准。

## P06 | GreenPix - Zero Energy Media Wall



Close-up of the Media Wall at Dusk



Workers on Site

**P06** | GreenPix - Zero Energy Media Wall



Installation of the Media Wall

GreenPix是一面由**2292**个彩色（RGB）LED发光点组成、面积相当于24000平方英尺（2200平米）的超大动态内容显示屏幕。超大的屏幕和特有的低分辨率增强了媒体的抽象视觉效果，相较传统媒体正立面领域的高分辨率屏幕的商业应用，GreenPix提供了一种具艺术特色的交流形式。

## P06 | GreenPix - Zero Energy Media Wall



Lighting Test Using the Prototype



**P06** | GreenPix - Zero Energy Media Wall



| The Prototype Was Used for Extensive Testing of the System

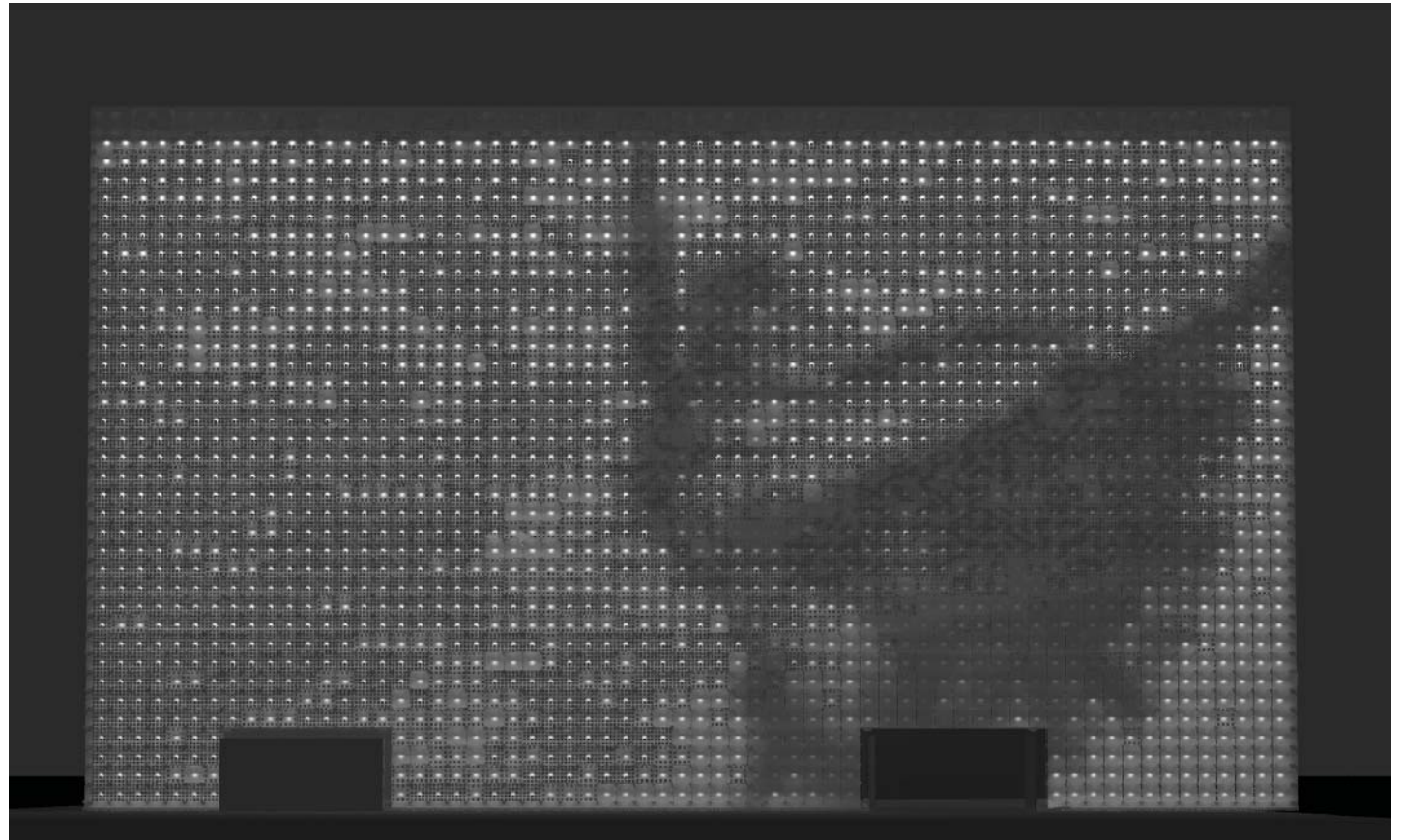


Model View



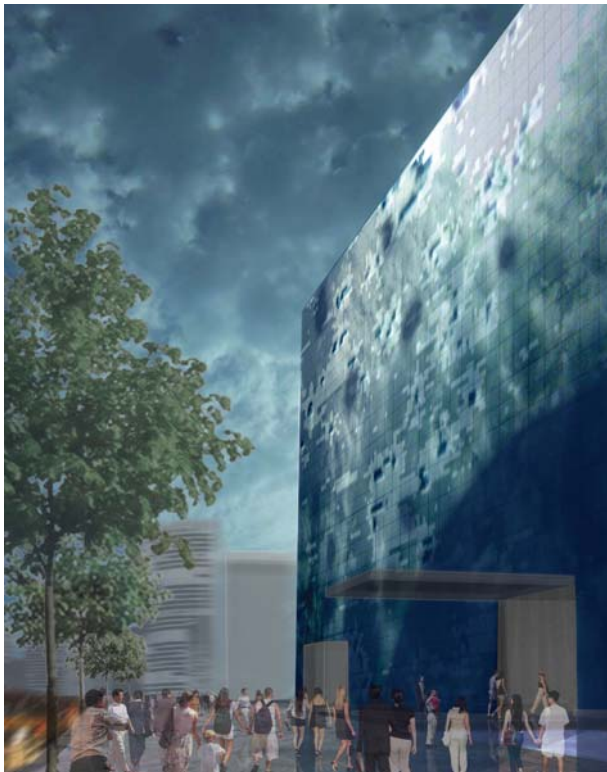
Model View - Detail

**P06** | GreenPix - Zero Energy Media Wall



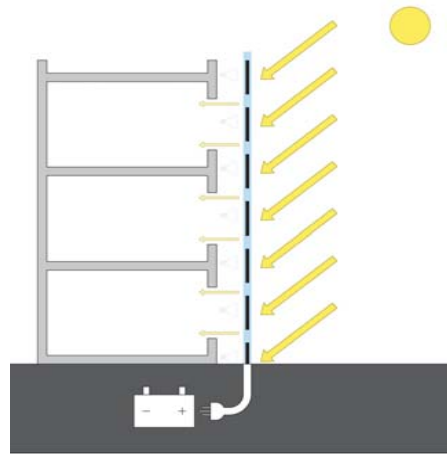
The Media Façade: Still Frame from the Concept Animation

**P06** | GreenPix - Zero Energy Media Wall

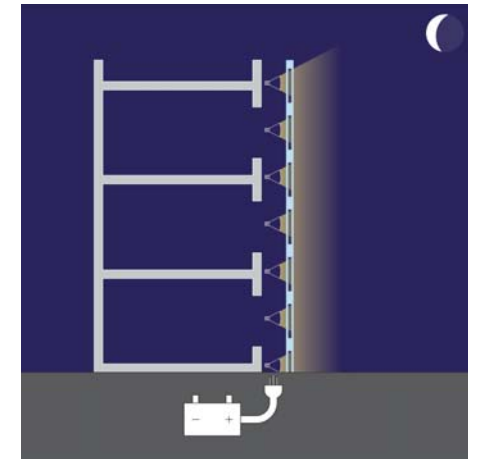


The Building Transforming Through the Day

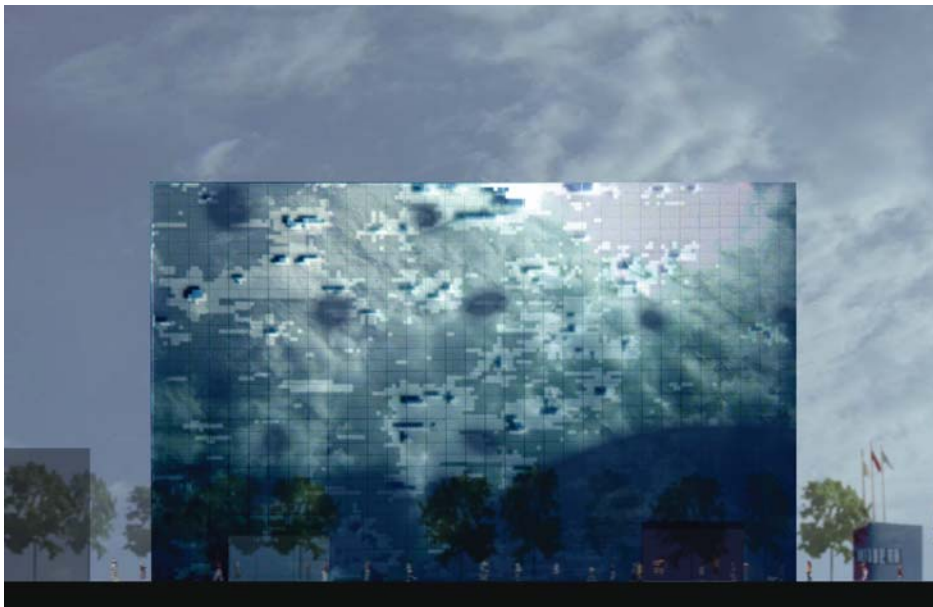
P06 | GreenPix - Zero Energy Media Wall



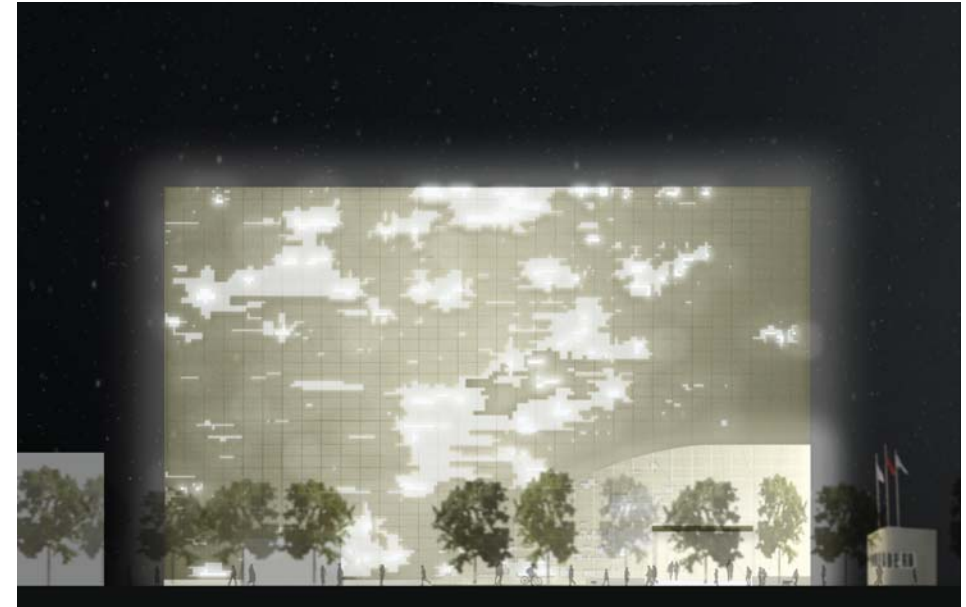
日间的轮回：生成能量：日间，光电太阳能元件在遮阳，防止楼宇温度过高的同时，集聚剩余的太阳能。



夜间的轮回：消耗能量：夜间，日间集聚的能量转换成光线，外墙变成炫目的灯罩，楼宇即刻成为北京夜景中震撼人心的视觉盛宴。

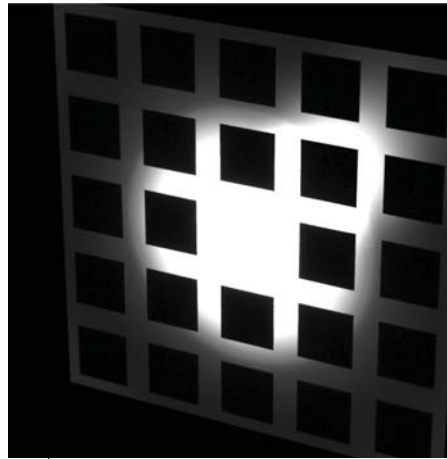


The New Façade: Midday

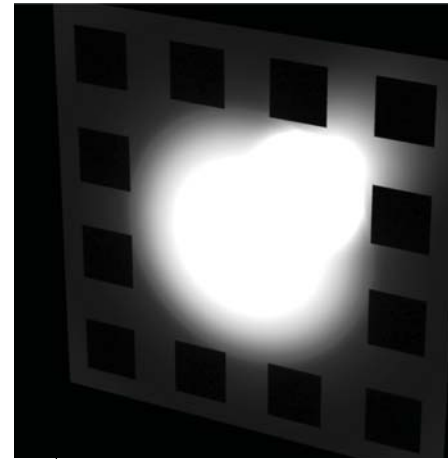


The New Façade: Midnight

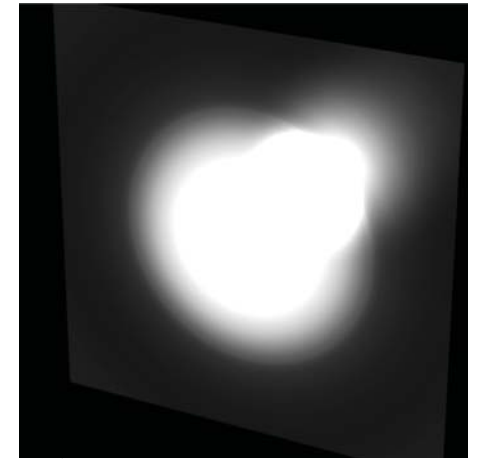
**P06** | GreenPix - Zero Energy Media Wall



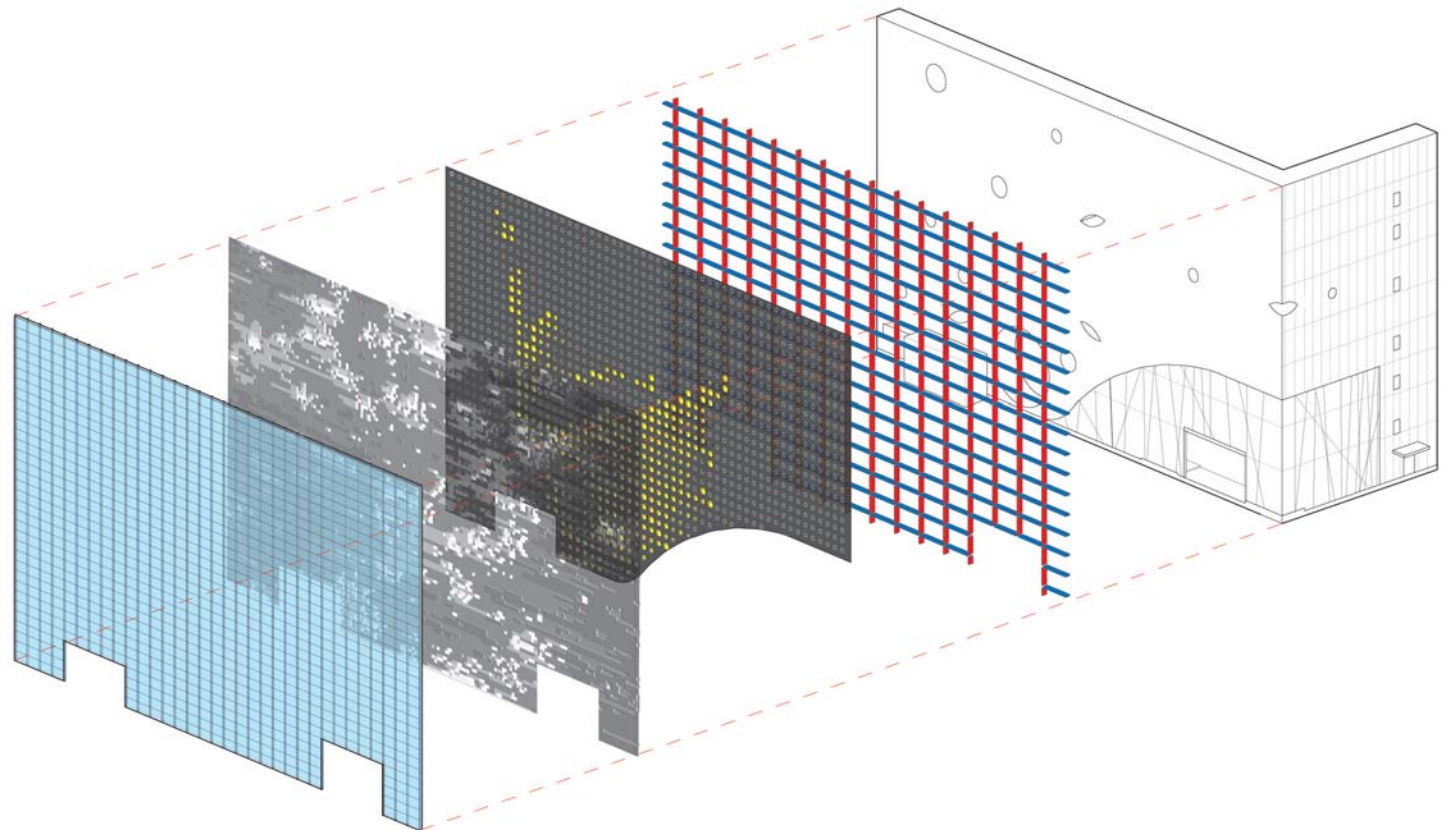
| Low Transparency Lighting Simulation by Arup



| Medium Transparency Lighting Simulation by Arup



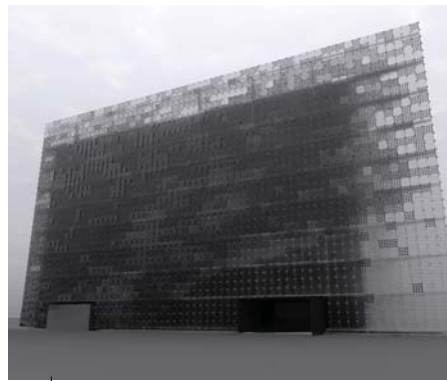
| High Transparency Lighting Simulation by Arup



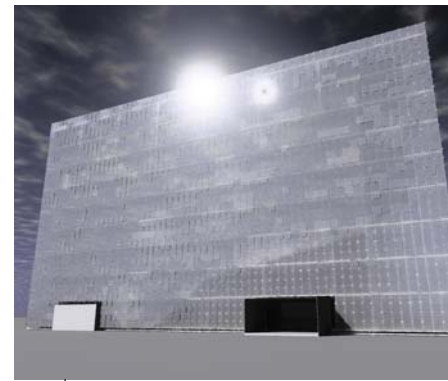
| Layering of the Façade



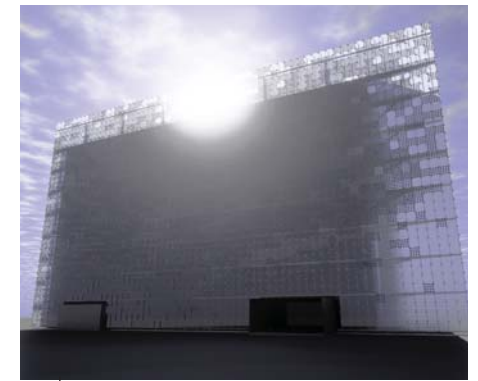
**P06** | GreenPix - Zero Energy Media Wall



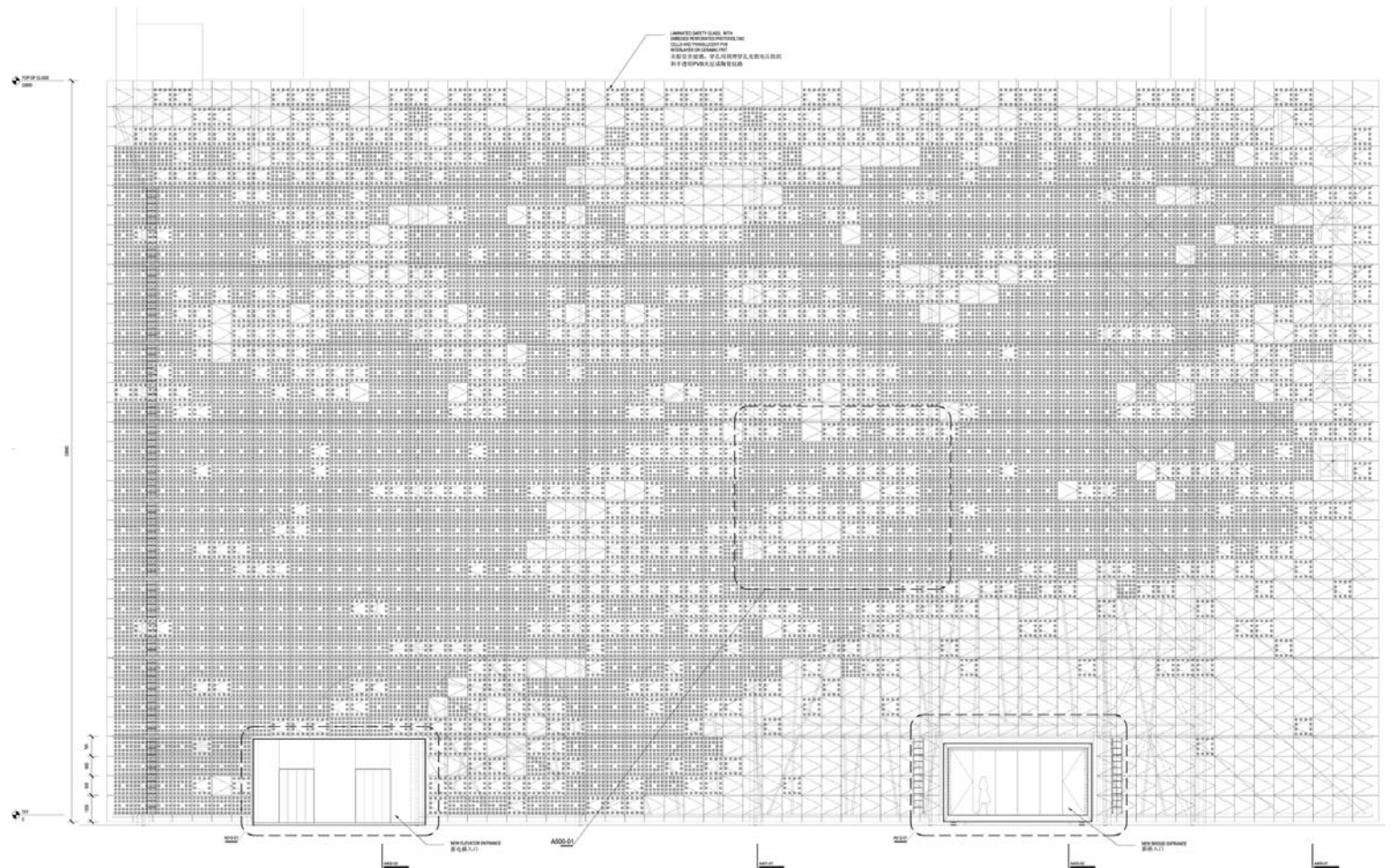
Overcast Afternoon Rendering by Arup



Clear Morning Rendering by Arup

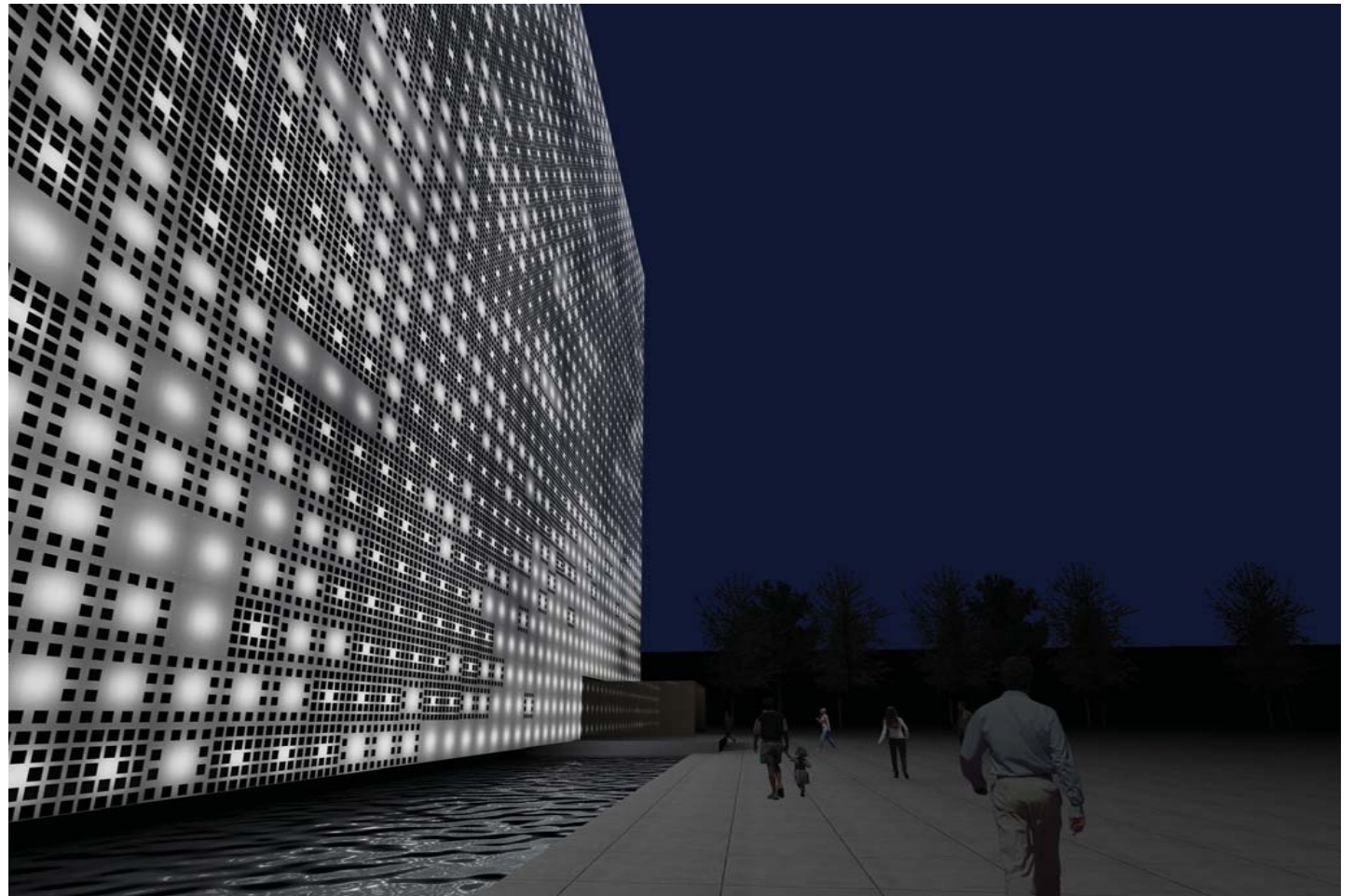


Clear Afternoon Rendering by Arup



Elevation from the Construction Documents Set

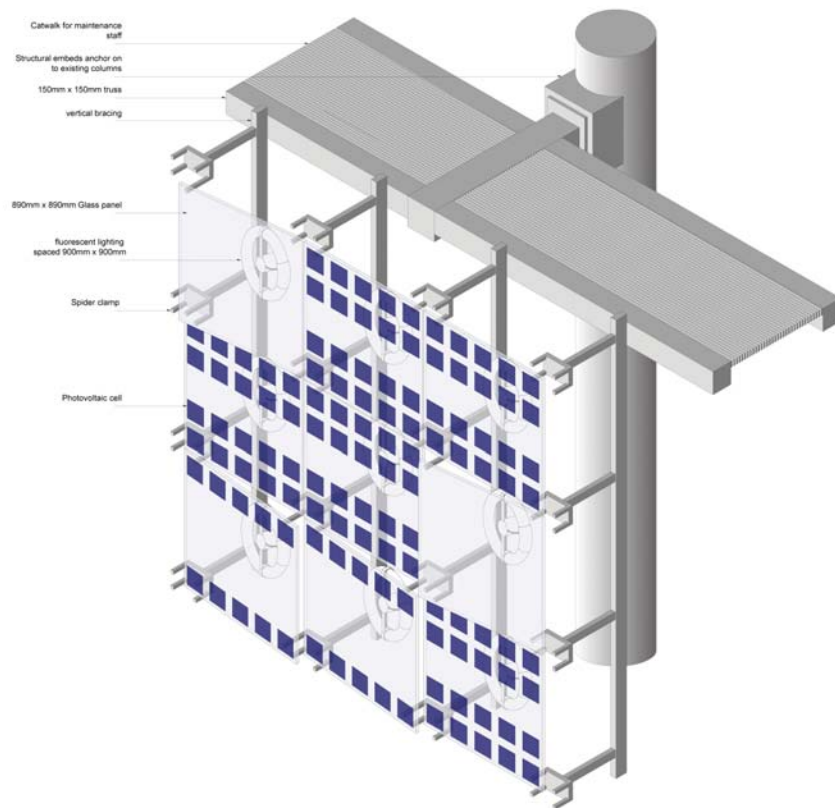
**P06** | GreenPix - Zero Energy Media Wall



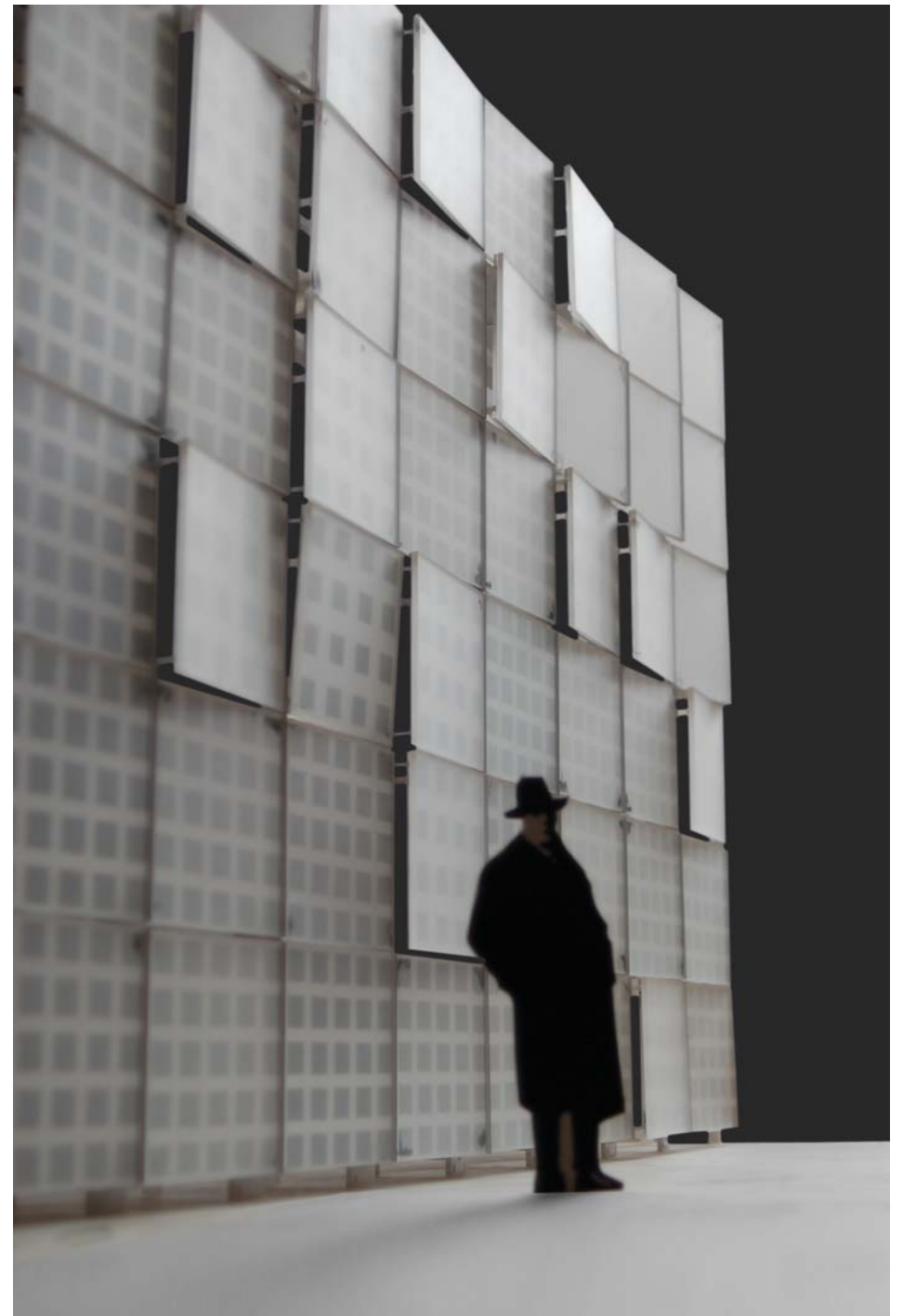
| Perspective Rendering



## P06 | GreenPix - Zero Energy Media Wall

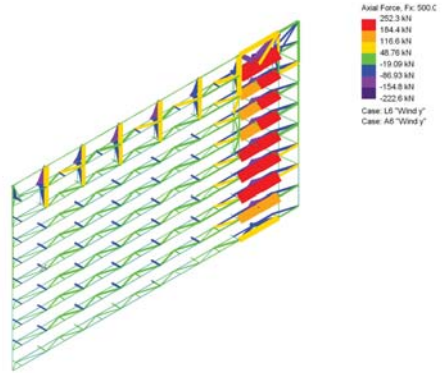


Axonometric Detail

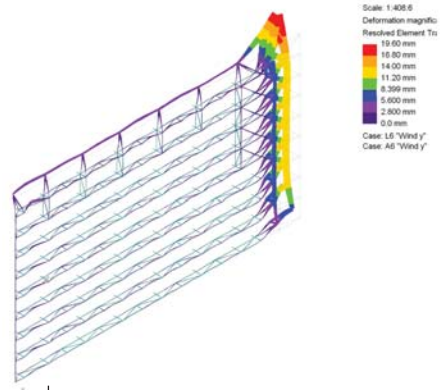


View of the Model

P06 | GreenPix - Zero Energy Media Wall



Axial Forces Simulation by Arup

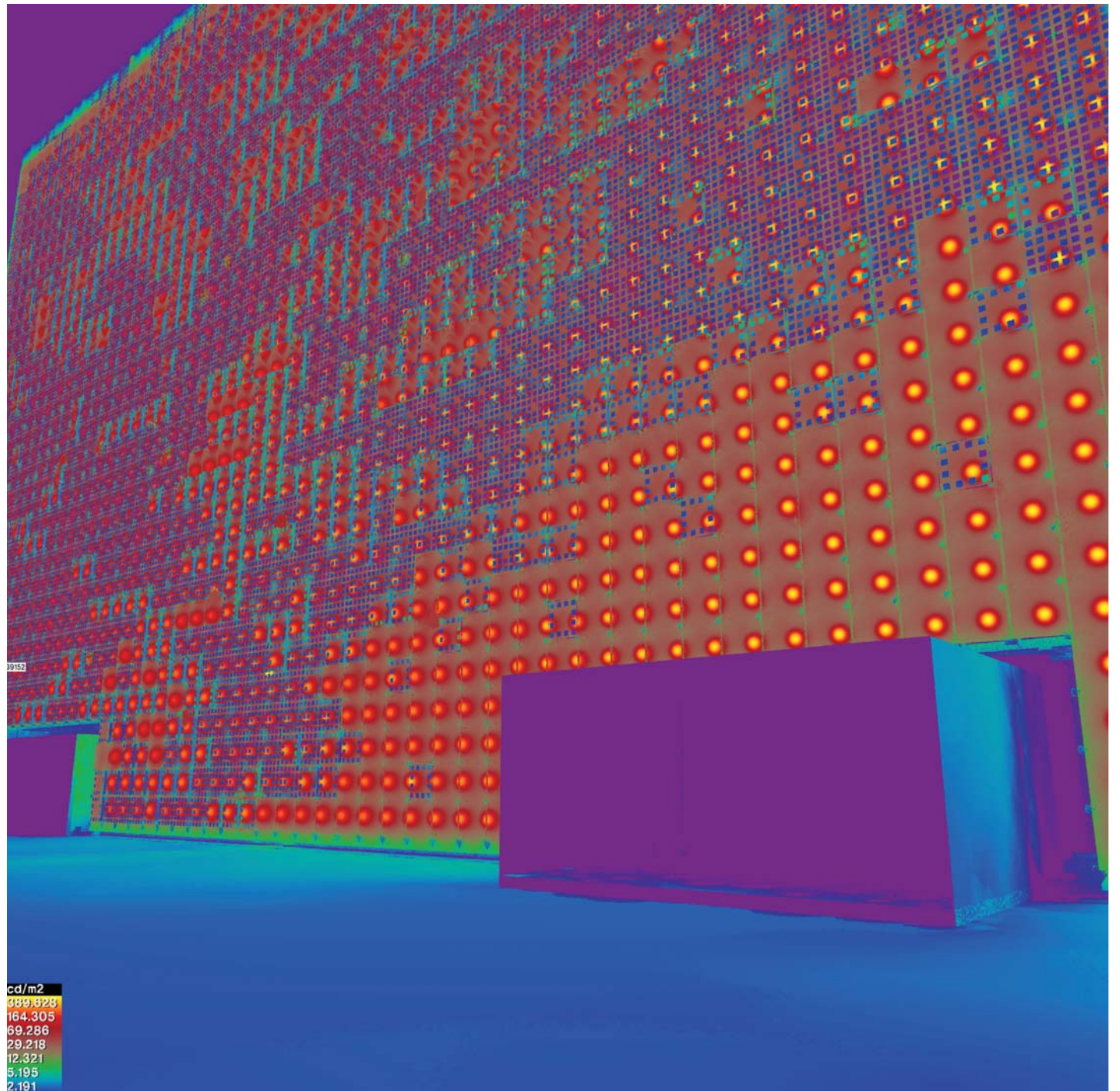


Deformation Simulation by Arup



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**

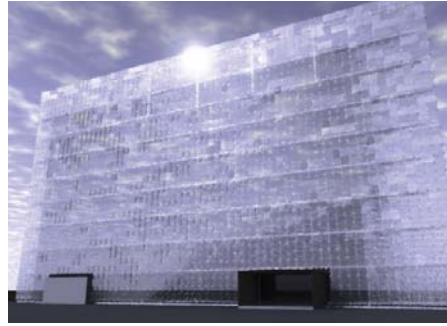
5,000 sf

**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

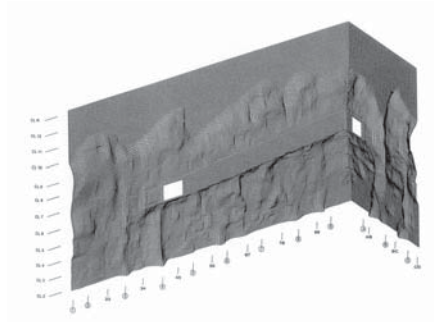
**Scope of Services**  
Specifications Consultant

**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**

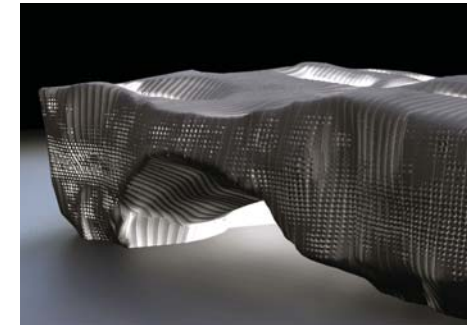
Confidential

**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**

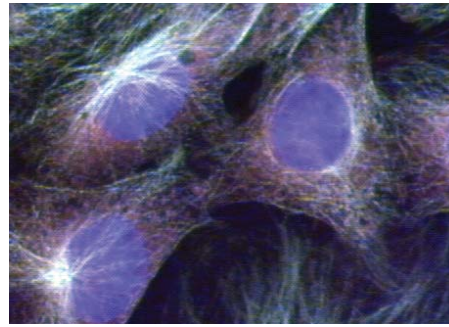
Ove Arup & Partners, Beijing

**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

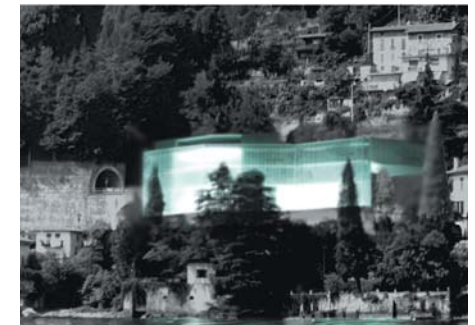
US\$ 180,000,000

### 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**

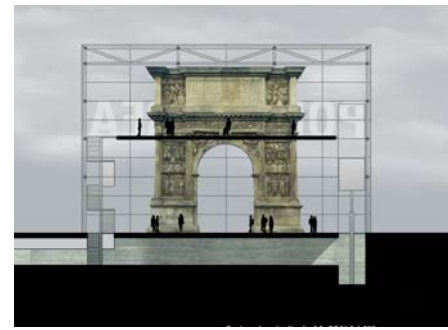
Honourable Mention

**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**

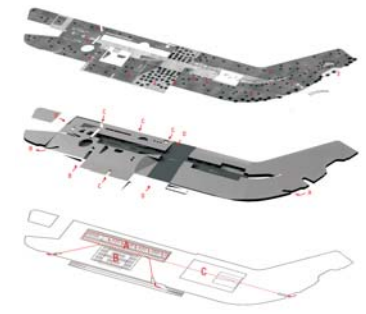
Protection of the Roman Arch, new Archeological Museum and Park

**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**

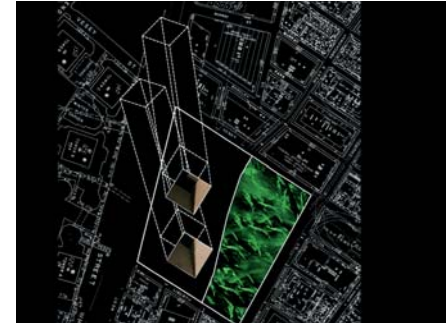
US\$ 4,000,000

**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**

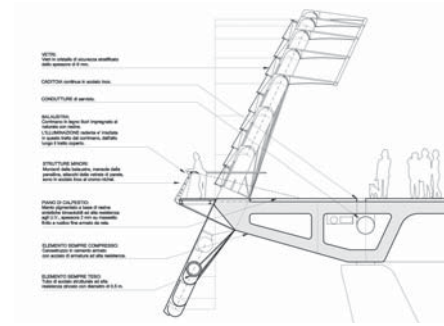
Leipzig Academy of Visual Arts

**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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