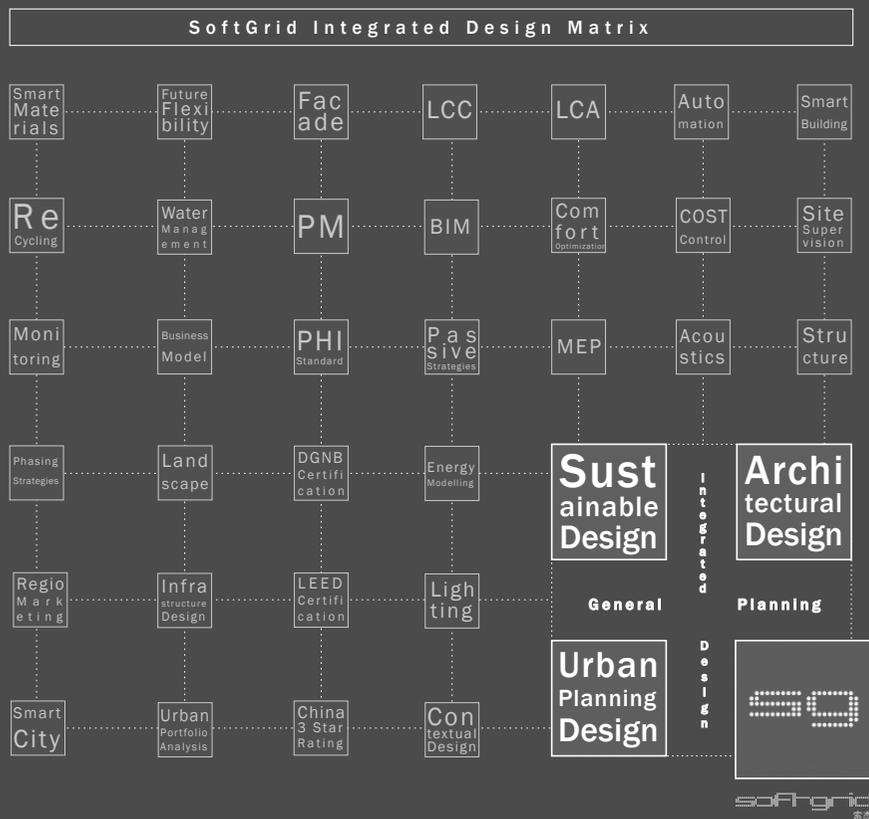


Company Profile

ARCHITECTURE





German Studio Business Philosophy in International Corporate Context

About SoftGrid

SoftGrid is a Shanghai-based design and consulting firm founded in 2008. Our reputation is built on Integrated Design – a holistic approach to high quality design and project management from concept to completed construction. Our services include four key areas of expertise:

Architectural Design

Projects include mixed-use, office, residential, cultural and educational, sports and hospitality facilities - both as new construction and retro-fit projects.

Urban Design

Projects include new city district developments, strategic and regulatory planning and urban retro-fitting on various scales.

Sustainability Consulting

Offers comfort, durability and quality optimization in any construction project - from cost-neutral performance optimization to formal certification by German DGNB and PHI Passive House standards.

General Planning

Combines our long technical and project management expertise and offers clients a start-to-finish one-stop consulting solution.

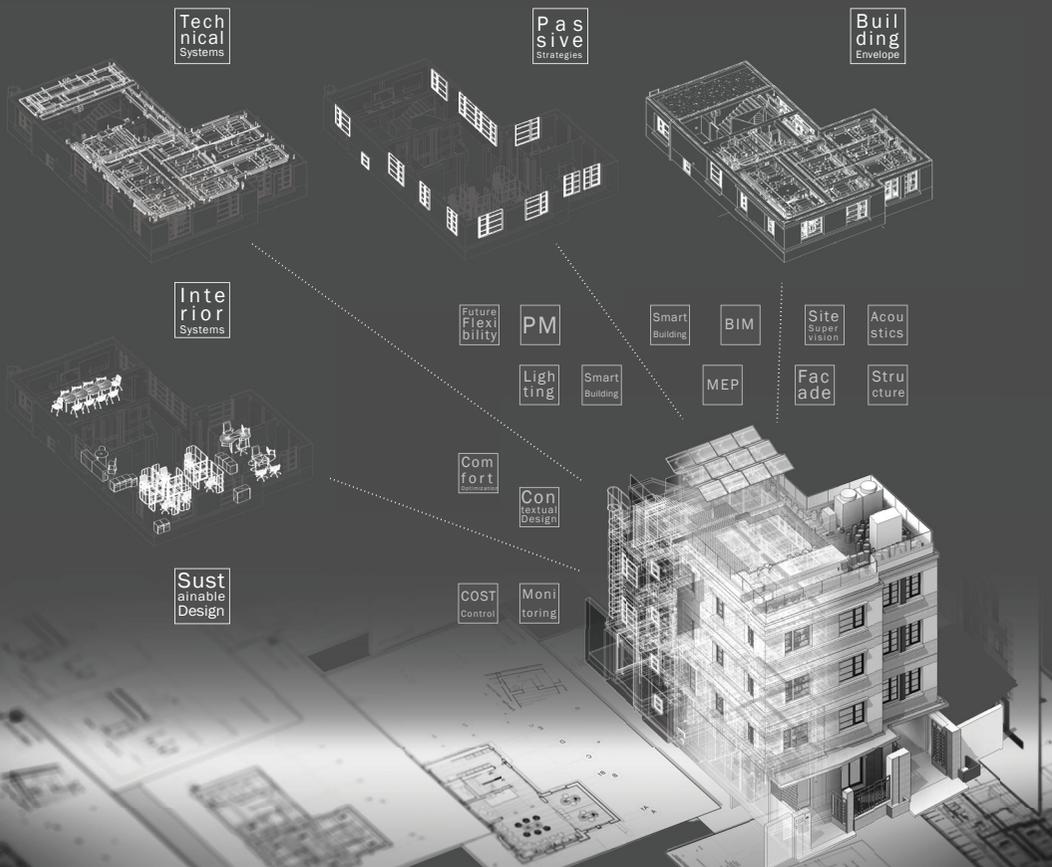
Reflecting a European background, consulting philosophy and design methodology paired with more than 15 years of experience in the Chinese construction market, SoftGrid is a trusted consultant by global companies like BASF, Disney and VW as well as a large array of mainland China property developers and communal governments.

SoftGrid provides Integrated Design within a highly professional consulting setup: All aspects of Architecture, Urban Design and Sustainability Consulting are provided in-house while we have a series of Chinese and overseas expert network partners to cover additional specialized disciplines.

Our success story is based on combining the professional passion, innovation and flexibility of studio businesses (a long-standing German tradition in the construction market) with our extensive knowledge of how corporate companies operate. This approach provides our clients with much faster, more efficient and comprehensive consulting expertise tailored around highly adaptable design, construction and management processes - developed, tested and successfully applied in various projects across China.

ABOUT SOFTGRID

SoftGrid's Architectural Design



Defining the Architectural Vision through Integrated Design

Architecture

SoftGrid provides Architectural Design consulting services for mixed-use, office, residential, cultural, educational, sports and hospitality facilities - both as new construction and retro-fit projects, spanning all design phases from target definition to executed construction.

Each and every design follows our Integrated Design process: projects start with the joint definition of a clear brief involving all project participants and relevant stakeholders, laying the base for success. Our design proposal will be a direct result of reconciling, synergizing and materializing these targets into articulating a unique functional, spatial and aesthetic vision.

As our company name suggests, this requires a highly adaptable and flexible way of thinking. Every project is approached from a project-specific set of targets and planning parameters. This guarantees that each individual project is equipped with an unmistakable identity - a classic example of the "result being more than the sum of its parts":

We deliberately seek to develop all essential aesthetic, technical and spatial elements in parallel and interdependently. The design then emerges as a harmonious synergy of Building Envelope (facade design to incorporate thermal, acoustic and visual properties), Technical Systems (HVAC, ventilation etc.) and Interior Systems (surfaces, functional zoning and furniture) - all contributing towards a shared architectural vision.

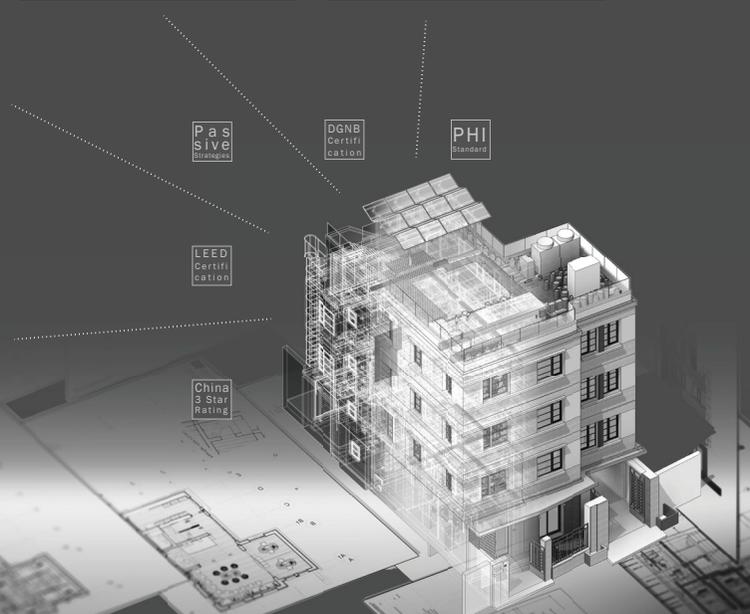
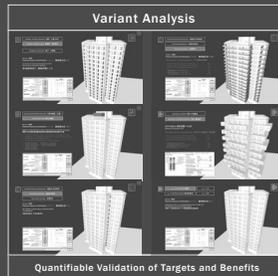
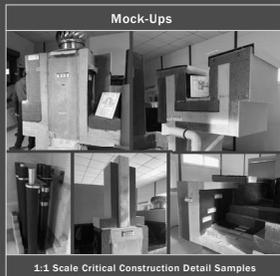
As part of our Integrated Design philosophy, we always include Sustainable Design and Passive Strategies (orientation, geometry, shading etc.) aspects in our concepts in order to keep the interior well lit, temperate and comfortable - simply by a well-balanced, synergetic, Integrated Design.

We always work with an integrated, 3D planning model including BIM processes in order to efficiently progress the design from concept to construction. SoftGrid has further developed various protocols for on-site quality control - implemented and continuously improved in numerous high profile projects. This is to make sure that targets and qualities are met as designed and the realized building looks, feels and performs as intended.

We regard a holistic, Integrated Design approach to be the key to successful projects, providing highest design quality and maximized return on investment while making the design and construction process considerably quicker, cheaper and more reliable.

ARCHITECTURE

SoftGrid's Sustainable Design Processes



Sustainable Design Quality Control Processes

Sustainability Consulting

Our team members are qualified as DGNB Auditors and Consultants, certified PHI Passive House Designers and LEED APs having realized numerous successful buildings in China to date. SoftGrid is in constant exchange with DGNB, USGBC and the Passive House institute (PHI).

However, our basic philosophy and approach to sustainable construction does not depend on formal certification, but simply aims at optimizing every project and any building to last longer, perform better and provide higher comfort.

We constantly adapt knowledge, tools and processes developed in our high-standard DGNB / PHI projects. Our resulting "Passive Design Strategies" provide cost-neutral or low-cost optimization in relation to comfort, durability, flexibility and resource-efficiency for any less ambitious construction project in China. SoftGrid is fundamentally rooted in architectural design. This implicit "big picture" perspective sets us apart when it comes to understanding sustainable design not as a set of discrete engineering problems, but an integral contribution to the overall architectural vision.

In order to implement this holistic approach reliably, we established an integrated quality control workflow which applies to all our sustainability projects independent of whether formal certification or simpler "Passive |Design Strategy" optimization is the goal.

First, we conduct a Variant Analysis to quantify benefits and added value throughout the design and construction process. Second, we consolidate all relevant aspects (plans, specifications, simulations, calculations) in a comprehensive "Design Book" - serving as planning document, on-site construction quality reporting and project management tool simultaneously. In parallel to the design process, workshops for all stakeholders and relevant project participants are held as training events, guaranteeing a common base for efficient, pro-active communication and a solution-driven project environment.

During construction, sign-off protocols and original scale and material mock-ups are easy and fool proof ways to verify construction quality meets the standards put forward in the "Design Book". Lastly, we supervise relevant on-site tests (and mock-up tests) if required for certification and assist in the final definitions of marketing strategies and replication guidelines to guarantee continued added value to our client's follow-up projects.

Our combined experience in sustainable architectural design, quality assurance and project management guarantees pre-defined quality targets are met and intended value adding benefits or even formal certification are realized in the executed building and subsequent operation.

SoftGrid was the first international design firm worldwide to join the "Phase Sustainability" initiative by German Sustainable Building Council DGNB and German Board of Architects - intending to promote highest design quality over the entire building life-cycle by creatively balancing social, economic and environmental design aspects.

SUSTAINABILITY CONSULTING

SoftGrid's General Planning: Integrated One-Stop-Solution

- | | | | |
|-----------------------------|--------------------------|---------------------------|--------------------------|
| Lower Operation Costs | Fewer Change Orders | Lower Construction Costs | Integrated Design |
| Integrated BMS | Fast Check-Ups / Reports | Faster Construction | Fast, Efficient Planning |
| Comfortable + User-friendly | Clear Responsibilities | Clear Responsibilities | Single Point of Contact |
| "Ready-to-use" | Fewer Mistakes | Fewer Construction Errors | Fast Communication |

Finished Project ← Quality Control ← Construction ← Planning



Benefit Matrix of Integrated General Planning over entire Project

General Planning

As General Planners, we combine our expertise in Architecture, Urban Design and Sustainability Consulting of offering clients a start-to-finish, one-stop consulting solution. SoftGrid takes the technical lead and overall responsibility for the entirety of the design and construction supervision process – and for the entirety of consulting disciplines, including architecture, sustainable design and energy modelling as well as civil engineering (structure, MEP). Other specialized consulting services can be added depending on individual project requirements.

Within the last decade, China's construction market started to mature. We noticed a continuous shift in local culture from an (overly) simplistic "fast profit" attitude towards an increasingly complex approach. This was caused on the one hand by the Central Government's additional sustainability requirements and on the other by tighter competition between developers. The result is an increasing diversification of business models and investment philosophies.

While Integrated Design covers all necessary expertise to convert our client's individual business models into successful real estate, General Planning facilitates and accelerates planning, construction and decision-making processes dramatically.

We understand General Planning practice as an open network. While we have a large pool of engineering consultants and specialized LDI (Local Design Institutes) departments with which we have successfully co-operated in the past, we always welcome new local players suggested by our clients into the consulting team. Through our sound experience of implementing holistic, integral planning processes in China, we can efficiently moderate and communicate between consultants, external stakeholders and the client. More importantly, we know how to bridge existing gaps in expertise within the Chinese market and use our successful training and workshop processes to get LDIs and GCs to confidently participate in this workflow quickly and reliably. For every project, we set up a tailor-made, truly inclusive and multidisciplinary design and construction supervision teams with SoftGrid as our client's single point of contact,

Our precisely condensed, clearly quantified and qualified executive summaries make it easy for our clients to focus on strategic decisions in implementing their vision - unobstructed by having to micro-manage complex technical discussions between various individual consultants.

In General Planning, essentially, the benefits of a systematic Integrated Design philosophy – saving time, lowering cost, minimizing mistakes, dramatically improving overall performance, design quality and user comfort – extend beyond architectural design, covering all consulting and engineering aspects at once along the entire value chain from planning to construction and operation.

GENERAL PLANNING

SoftGrid's Urban Design

Water
Management

Com
fort
Optimization

Future
Flexi
bility

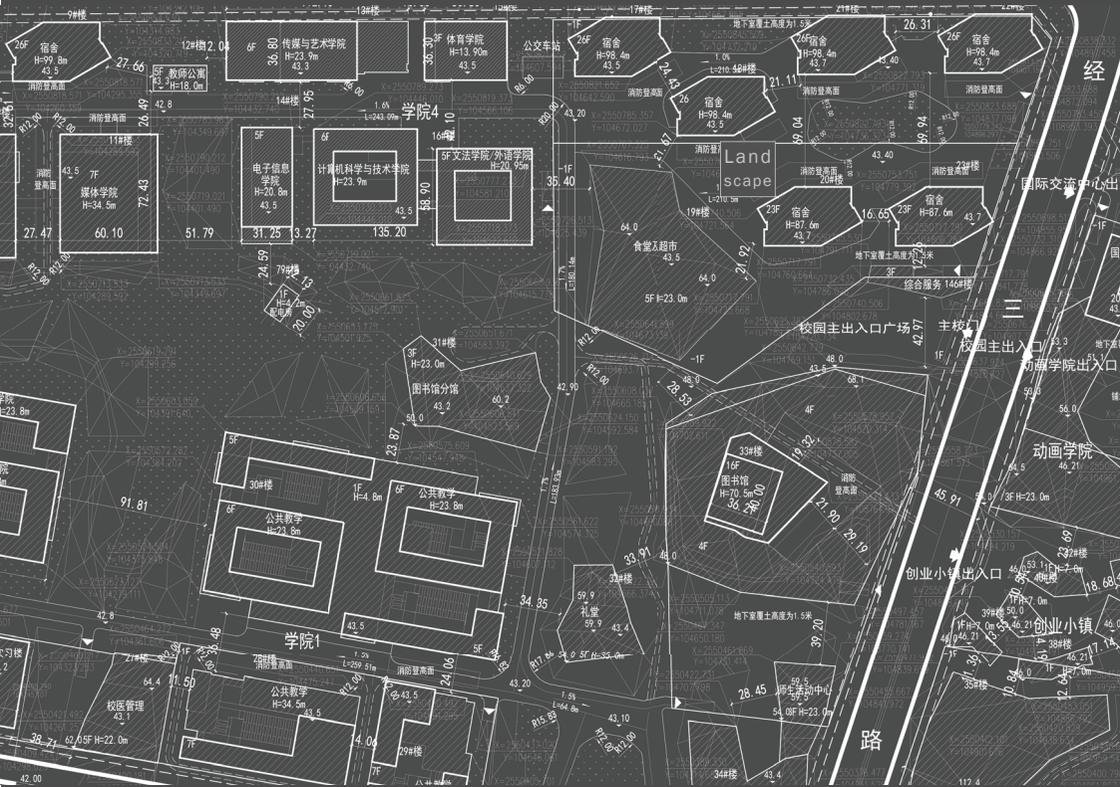
Regio
Mark
eting

Infra
structure
Design

Urban
Portfolio
Analysis

Con
textual
Design

Pa
sive
Strategies



Urban Design

We regard cities, districts and neighbourhoods to be the human realm of daily life for social, economic and cultural exchange. Any urban design strategy we develop is measured on how it negotiates past, present and future, global and local in its specific contextual environment.

SoftGrid's Urban Design services include master plans for new city or district developments, strategic and regulatory planning as well as urban retro-fitting on various scales in private, communal or PPP (Public-Private-Partnership) project set-ups.

China has one of the largest urbanization rates in the world. And while in the 90s the strategic emphasis was primarily on providing enough living space, urban planning became increasingly complex ever since. Today, a sustainability strategy is a necessity for any communal development in China.

At SoftGrid, we lay out a very clear path of implementing urban design strategies which has proven highly successful with our communal clients: each city, each district has their distinctive topography and (natural) resources, but also their distinctive configurations of urban life, cultural habits, social communities and economic networks. Our designs derive from this vast social, ecological as well as economical potential by including, innovating and expanding existing structures, rather than simply imposing new ones.

Our Integrated Design approach to urban design means that sustainable strategies, building typologies, spatial networks and all other systematic components always inform and enhance each other, creating not just a highly efficient and functional system but a sense of home and belonging, a sense of place and character and a truly unique spatial identity.

Integrated Urban Design

URBAN DESIGN



SoftGrid's Mainland China Major Project Locations



Clients and Collaborators

SoftGrid's client and project collaborator base consists of corporate global players, educational institutions as well as local developers with projects located all across mainland China. Additionally, SoftGrid consults a large number of Chinese communal governments and urban planning departments nationwide.

CLIENTS AND COLLABORATORS



Rolf Demmler

Director SoftGrid (Shanghai) Co., Ltd.

Dipl. Ing. Architect and Urban Planner, M.Arch.
DGNB Auditor / PHI Certified Passive House Designer / LEED® Green Associate

Personals:

Date of Birth: 08.02.1974
Place of Birth: Mannheim, Germany
Nationality: German

Professional Education

| | |
|-------------------|--------------------------------------------------------------------------------------------|
| 10/1994 - 07/2002 | Architectural Studies Technische Universität Darmstadt Germany |
| 09/1998 - 10/1999 | Studies in Advanced Architectural Design University of Strathclyde Glasgow Scotland |

Professional Experience

| | |
|-------------------|----------------------------------------------------------------------------------------|
| since 12/2009 | SoftGrid Hongkong Limited Hongkong China Founding director |
| since 09/2007 | SoftGrid (Shanghai) Co., Ltd. Shanghai China Founding director |
| 01/2005 - 09/2007 | Ben Wood Studio Shanghai Shanghai China Senior architect and urban planner |
| 02/2004 - 11/2004 | Leman Architects Shanghai China Project managing architect and urban planner |
| 01/2000 - 02/2004 | Fuchs Planungs-AG Weinheim Germany Project managing architect and urban planner |
| 03/2003 - 04/2003 | Metron Architektur AG Brugg Switzerland Project-based architect |

Professional Memberships

| | |
|---------------|---------------------------------------------------------------------------------------------------------------------------------------------------------|
| since 05/2016 | PHI certified Passive House Designer accredited by Passive House Institute Germany |
| since 01/2014 | DGNB Auditor accredited by Deutsche Gesellschaft für nachhaltiges Bauen Germany |
| since 07/2006 | Registered Member of the Architektenkammer BW Germany fully licensed and registered urban planner and architect with German board of architects |

Expert Appointments (Excerpt)

| | |
|------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| 2019 | Greenbuild China Peer Review Work Group Appointed by U.S. Green Building Council as member of the peer review committee for evaluation of Greenbuild China 2019 con- ference contributions. |
| 2015 | Member of DGNB Steering Board - China Community elected member of steering board by DGNB in China |
| 2011 | "Chinas Urban Planning Future" 6-people Round Table Discussion Shanghai China held by EU, headed by Ambassador to China Dr. Markus Ederer |

Professional Presentations (Excerpt)

Keynotes:

| | |
|-----------|----------------------------------------------------------------------------------|
| 09 / 2016 | German-Taiwanese Green Design Building Forum Keynote Speech Taipei Taiwan |
|-----------|----------------------------------------------------------------------------------|

Member of EU Delegation

| | |
|-----------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| 10 / 2011 | EU-China High Level Cultural Forum "Notes on Context: Negotiating the City between Technology and Urban Life" Official Speaker and Member of the EU Delegation Beijing China |
|-----------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|

Invited and Contributed Presentations (Excerpt)

| | |
|-------------|--------------------------------------------------------------------------------------------------------------------------------------------------------|
| 10 / 2019 | "Learning from the Passive House - Successful holistic design in China" Greenbuild China Shanghai China |
| 10 / 2019 | "Tianjin Eco-City high-rise Passive House" 23rd International Passive House Conference Gaobeidian China |
| 09 / 2018 | "Holistic Design: Strategies, Experiences and User Benefits" Sino-German reSOURCE workshop Finnish Center Tongji University Shanghai China |
| 11 / 2017 | "Passive Houses and related holistic Strategies" Sustainable Construction Form German Center GEEC Shanghai China |
| 07 / 2016 | "BASF R&D Center II: First DGNB R&D Project certified in China" BAU Congress China National Conv. Center Beijing China |
| 2014 - 2016 | China Passive House Alliance Various presentations at different occasions and venues |
| 08 / 2013 | "Holistic Building Approach: From Pilot Project to Economic Model" Heat Management Workshop Kerry Center Shanghai China |

Teaching (Excerpt)

| | |
|------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------|
| 2017 / 2018 + 2016 / 2017 | Urban Design Studio: "Vertical City" and "Symbolic City" Guest Teacher for full semester design studio CAUP, Tongji University China |
| 2013 + 2016 | "International Design Summer School" Guest Teacher for 2 week international student workshop CAUP, Tongji University China |
| 06 / 2011 + 10 / 2010 | "Yangshuo Tourism Development" Guest Lecture and Critic to Bachelor and Master Thesis Burg Giebichenstein Halle College of Art & Design Germany |
| 04 / 2008 | "Sky Above China" Workshop for Social Entrepreneurship Tokyo Japan |

Passive Design Strategies

DGNB Certification

- 2018** **VW Industrial Plant | Shanghai | China**
Pre-Assessment for DGNB Certification.
ca. 410,000m² Site Area, ca. 560,000m² GFA.
- 2017** **Ardex DGNB Office and Training Center | Shanghai | China (completed)**
Project management, Design Revisions, On-site Quality Control for DGNB certification.
ca. 3,500m² Site Area, ca. 2,500m² GFA.
- 2016** **Sanxiang Headquarter Interior Retro-Fit | Shanghai | China (completed)**
Project management, Design Revisions, On-site Quality Control for DGNB certification.
ca. 500m² GFA.
- 2015** **BASF R&D Campus 2 | Shanghai | China (completed)**
Project management, Design Revisions, On-site Quality Control for DGNB certification.
ca. 30,000m² Site Area, ca. 30,000m² GFA.

PHI Passive House Standard

- 2020** **Hongqiao EnerPHit Villa | Shanghai | China**
Pre-Study for EnerPHit Passive House (PHI) certification.
ca. 500m² GFA.
- 2019** **Eco-City Residential Passive Houses | Tianjin | China (completed)**
Project management, Design Reviews, On-Site Quality Control and Training for Passive House (PHI) certification.
ca. 15,000m² GFA.
- 2017** **Guilin Passive House Villas | Guilin | China**
Project management, Design Reviews, On-Site Quality Control and Training for Passive House (PHI) certification.
ca. 5,600m² GFA.
- 2016** **Jining Passive House Primary School | Jining | China**
Design Reviews for Passive House (PHI) certification.
ca. 12,000m² GFA.

- 2020** **5-Star Conference Hotel | Guigang | China**
Overheating protection and comfort optimization with reduced investment and operation costs.
ca. 30,000m² Site Area, ca. 75,000m² GFA.
- 2019** **Guangxi Institute of Technology | Guigang | China**
Comfort and functional usability, building envelope performance optimization with reduced energy consumption and lowered operation cost.
ca. 500,000m² Site Area, ca. 450,000m² GFA.
- 2018** **Guilin 2 Villas | Guilin | China**
Optimization of comfort and energy consumption based on the building envelope and shading strategies developed for "Guilin Passive House Villa".
ca. 3,200m² GFA.
- 2017** **Urban Retro-Fit Towns | Nanning | China**
Urban retro-fitting of traditional shop houses providing new outdoor spaces in combination with strategic shading for higher user comfort and operational energy savings at no added investment costs.
Generic strategy, ca. 5,000,000m² Site Area..
- 2016** **Gold Trading Square | Shenzhen | China**
Daylight, thermal comfort, energy consumption optimization. Strategies for lower investment and operational costs.
ca. 6,000m² Site Area, ca. 25,000m² GFA.
- 2015** **Experimental Elementary School | Suqian | China**
Healthy Interior Air Quality, comfort and building geometry optimization.
ca. 40,000m² Site Area, ca. 42,00m² GFA.

Others

- 2015** **Disney Integrated Infrastructure R&D Lab | Shanghai | China (completed)**
Retro-Fit Architectural and Interior Design, Schematic Design, Construction supervision for conversion of French Concession building into office and showroom.
ca. 600m² GFA.
- 2014** **Semizentral | Qingdao | China (completed)**
Project management and construction quality supervision for seminar area and showroom of first-in-the-world semi-central wastewater treatment plant.
ca. 600m² GFA.

Hospitality

- 2021 **5-Star RailCity Hotel | Nanning | China**
Architectural Concept Design for business hotel.
ca. 10,000m² Site Area, ca. 65,000m² GFA.
- 2020 **5-Star Conference Hotel | Guigang | China**
Architectural Concept Design for business hotel.
ca. 30,000m² Site Area, ca. 75,000m² GFA.
- 2018 **Beihai Marriott Seaside Hotel | Beihai | China**
Architectural Concept Design and SD for high-end five star beach hotel.
ca. 60,000m² Site Area, ca. 50,000m² GFA.
- 2011 **Boutique Hotel | Zhuhai | China**
Master Plan, Architectural Design.
Panorama Apartments, Public Retail.
ca. 30,000m² Site Area, ca. 30,000m² GFA.
- 2010 **Bai Se Hotel | Bai Se | China**
Architectural Design.
High Profile Conference Hotel, Preservation and Design Adjustment of existing
"No. 8" Head-of-State Guest house, Staff Residences, Retail and Offices.
ca. 20,000m² Site Area, ca. 50,000m² GFA.
- 2007 **Hotel Tianjin | Tianjin | China**
Urban Planning, Architectural Design.
Luxury Golf, Spa and Business Hotel with Conference Facilities and Resort Villas on
lake near Tianjin.
In collaboration with IBO GmbH, Shanghai.
ca. 80,000m² Land Area, ca. 65,000m² GFA.

Office

- 2016 **Gold Trading Square | Shenzhen | China**
Architectural Concept Design for Office, Trading and public space.
ca. 6,000m² Site Area, ca. 25,000m² GFA.
- 2015 **Integrated Infrastructure R&D Lab | Shanghai | China (completed)**
Retro-Fit Architectural and Interior Design, Schematic Design, Reconstruction super-
vision for conversion of French Concession building into office and showroom.
ca. 600m² GFA.
- 2012 **XiangShan Business Club | Beijing | China [completed]**
Master Plan, Architectural Design, Schematic Design, Design Development
Refurbishment of existing Structures embedded in Park.
ca. 10,000m² Site Area, ca. 12,000m² GFA.

Education, Sports and Exhibition Venues

- 2019 **Guangxi Institute of Technology | Guigang | China (in construction)**
Architectural Concept Design and SD for new canteen, sports venue and student
accommodation. CD retro-fitting for teaching buildings.
ca. 500,000m² Site Area, ca. 450,000m² GFA.
- 2015 **Experimental Elementary School | Suqian | China**
Architectural Concept Design for upgrade of existing school compound.
ca. 40,000m² Site Area, ca. 42,00m² GFA.
- 2013 **Guilin Football Park | Guilin | China**
Master Plan, Architectural Design, Schematic Design for a 50,000 seat Football
Stadium, 8,000 seat Indoor Stadium and adjacent Retail and Leisure Facilities.
ca. 170,000m² Site Area, ca. 90,000m² GFA.
- 2012 **1st Prize:
Primary School and Kindergarten | Guangzhou | China**
Winning Competition Entry for architectural design for educational buildings for a
primary school and kindergarten on two separate waterfront sites.
ca. 20,000m² Total Site Area, ca. 7,500m² GFA
- 2008 **1st Prize:
Jiang Nan EXPO 2010 Pavilion | Shanghai | China**
Winning Competition Entry for architecture, urban concept and exhibition design
ca. 30,000m² Old Shipbuilding Workshop, ca. 6,000m² GFA for EXPO Pavilion
- 2007 **Olympics 2016 | Chicago | USA**
Architectural Concept.
Olympic Stadium, Aquatic Centre and further temporary Venues.
Subcontracted by Ben Wood Studio Shanghai, Shanghai.

Mixed-Use and Commercial Developments

- 2014 **1st Prize:
Yongkai Landmark Tower | Nanning | China**
Winning Competition Entry for architectural design of mixed-use retail and residential
project including 380m super-highrise hotel / office landmark tower.
ca. 30,000m² Total Site Area, ca. 275,000m² GFA
- 2013 **One Huai Hai Road | Shanghai | China**
Master Plan, Architectural Design, Schematic Design and downstream Supervision
for a conversion of interior and facade of existing shopping mall.
ca. 6,000m² GFA.

Mixed-Use and Commercial Developments (continued)

- 2011** **Yangpu Riverside District | Shanghai | China**
Master Plan and Architectural Design.
Adaptive Reuse of Warehouses, Boutique Hotel, Office Park, SoHo Residential, Retail.
ca. 110,000m² Site Area, ca. 190,000m² GFA.
- 2011** **Jiangyin 530 Creative Park | Jiangyin | China**
Architectural Design.
Office and Residential High-rise, Creative Studios, Retail and F&B.
ca. 23,500m² Site Area, ca. 100,000m² GFA.
- 2010** **Nanmen District Master Plan | Jiangyin | China**
Urban Planning, Architecture Concept Design.
Revitalisation of historic Nanmen District, featuring 200m Landmark Office and Hotel Tower, preserved area, shopping district, shopping mall and office / lofts.
ca. 60,000m² Site Area, ca. 200,000m² GFA.
- 2010** **ASEAN Mayor's Offices Tower | Nanning | China**
Architectural Concept Design.
35 Floor Landmark Tower of ASEAN District with Hotel, Office Space, Conference Center and Restaurants / F&B.
FAR 10.0, ca. 5,750m² Site Area, ca. 60,000m² GFA.
- 2009** **Guangxi World Finance Centre | Nanning | China**
Architectural Design.
88 Floor Signature Tower with adjacent Soho Office Tower and Podium, including Re-use concept for surrounding, river adjacent Brown field Area.
FAR 12.0, ca. 13,000m² Site Area, ca. 250,000m² GFA.
- 2009** **Xi'an Yahe Center | Xi'an | China**
Architectural Design.
150m Signature Tower, Shopping Mall Podium with Indoor / Outdoor Theatre, Residential High-rise and Lofts.
FAR 6.0, ca. 45,000m² Site Area, ca. 250,000m² GFA.
- 2009** **Kunming Landmark Tower | Kunming | China**
Architectural Concept Design.
150m Signature Tower, 5* Hotel, Conference Centre, Financial Tower, Soho Tower, Financial Street and Culture Plaza in City Centre near Cui Lake.
FAR 8.0, ca. 30,000m² Site Area, ca. 240,000m² GFA.
- 2007** **Generic Sales Office Study | Generic Site | China**
Architectural Design.
Modular Sales Office for generic Locations all over China.
In collaboration with XIGO Design Shanghai.
Prototypes of various sizes.

Residential

- 2018** **Guilin 2 Villas | Guilin | China**
Architectural Design SD for additional two clusters of existing masterplan.
ca. 3,200m² GFA.
- 2017** **Residential Apartments | Beihai | China**
Architectural Concept Design and SD for residential medium / high-rise apartments.
ca. 13,500m² Site Area, ca. 72,000m² GFA.
- 2017** **Guilin Passive House Villas | Guilin | China**
Architectural Design SD, DD, CD and Construction Supervision for two 4-Villa Clusters within existing masterplan.
ca. 5,600m² GFA.
- 2014** **He Dong Residences | Liuzhou | China**
Master Plan and Architectural Concept Design for high-rise residential towers on retail podium
ca. 14,000m² Site Area, ca. 52,00m² GFA.
- 2012** **Li Jiang Villa Resort | LiJiang | China [completed]**
Master Plan, Architectural Design, Schematic Design.
Villas, Townhouses, Resort Center with Boutique Hotel.
ca. 40,000m² Site Area, ca. 50,000m² GFA.
- 2012** **Dongxin Villa Resort | Dongxin | China**
Master Plan, Architectural Design, Schematic Design, Design Development.
Seaside Villas with park and Public Facilities.
ca. 75,000m² Site Area, ca. 20,000m² GFA.
- 2008** **Flat Extension | Worms | Germany**
Architectural Design, Schematic Design, Construction Design.
Terrace Extension to existing flat.
ca. 10m² Construction Area
- 2008** **Lian Ping Resort | Guangdong | China**
Urban Planning, Architectural Concept Design, Landscape Concept Design.
5* Resort in scenic mountainside, Hotel, Villas, Spa, Golf Club, partly refurbished Farmhouses and Village.
ca. 1,100,000m² Land Area.
- 2007** **1st Prize:
Golden Bridge Villas | Shanghai | China**
Winning Competition Entry by expert jury for urban planning and architectural design of green Villa Park in Shanghai, China
ca. 160,000m² Site Area , ca. 55,000m² GFA

Interior Design:

- | | |
|------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| 2015 | Integrated Infrastructure R&D Lab Shanghai China (completed) Retro-Fit Architectural and Interior Design, Schematic Design, Construction supervision for conversion of French Concession building into office and showroom. ca. 600m ² GFA. |
| 2014 | Semizentral Qingdao China (completed) Project management and construction quality supervision for seminar area and showroom of first-in-the-world semi-central wastewater treatment plant. ca. 600m ² GFA. |
| 2012 | Hongqiao Townhouse Shanghai China [completed] Interior Fit-out, Exterior Extensions, Technical Installation, Furnishing and Landscaping ca. 350m ² GFA |
| 2008 | SoftGrid Office Shanghai China [completed] Interior Remodelling, Zoning and Furnishing, ca. 140m ² GFA |

Director Design and Project Management

Rolf Demmler | Germany
Architect, Urban Planner
DGNB Auditor, Certified Passive-House Designer

Director Business Development

Liu Dong | China
MBA

Project-Managing Senior Architects

Galina Vasileva | Germany
Architect, Urban Planner
Certified Passive-House Designer, DGNB Consultant

Zhu Yi | China
Architect, Urban Planner
Certified Passive-House Designer, DGNB Consultant

Selected Projects

S U S T A I N A B I L I T Y
C O N S U L T I N G

Sustainable Integrated Design

S U S T A I N A B I L I T Y
C O N S U L T I N G

R & D LIVING LAB

Project Data:

| | |
|----------------|--------------------------------------------------------------------------------------------------------------------------------------------------|
| Total GFA: | 600m ² |
| Location: | Shanghai, China |
| Land Use: | Office |
| Features: | Complete Retrofit showcasing state-of-the-art design and technical systems |
| Scope of Work: | Architectural and Interior Design, integration with energetic remodelling All phases from concept to construction supervision in BIM workflow |

Project Overview:

DRC's research and development office is situated within the traditional French Concession - a historic art deco neighbourhood - in the heart of Shanghai and a result of an in-depth retrofit of a 4-floor 1970's building.

The new office was conceived of as a showcase of a "living lab", a highly automated, flexible and creative work environment, which also acts to showcase sustainable design and technology acting simultaneously as workspace, showroom and seminar space. Key features include:

- Sensitive architectural design integration with historic art deco environment
- Structural changes to building, including new 4-floor internal void and accessible panorama roof terrace
- Use of BIM in design process allowed to pack entire ventilation, heating / cooling, fire suppression, data, water and electricity systems as well as acoustic absorption boards into just 27cm high installation, enlarging actual and visual clear floor height dramatically
- Technical installation as "showcase" visible throughout entire building
- IBMS integrating floor heating / cooling, VRF and ventilation systems, lighting, PV and battery storage
- Constant measurement and verification monitoring VOC, CO2 content, temperature and humidity on multiple points inside and outside the building, occupancy of flexible work spaces and detailed energy consumption
- Smart Building automations including daylight, occupancy and thermal sensors integrated with IBMS

1



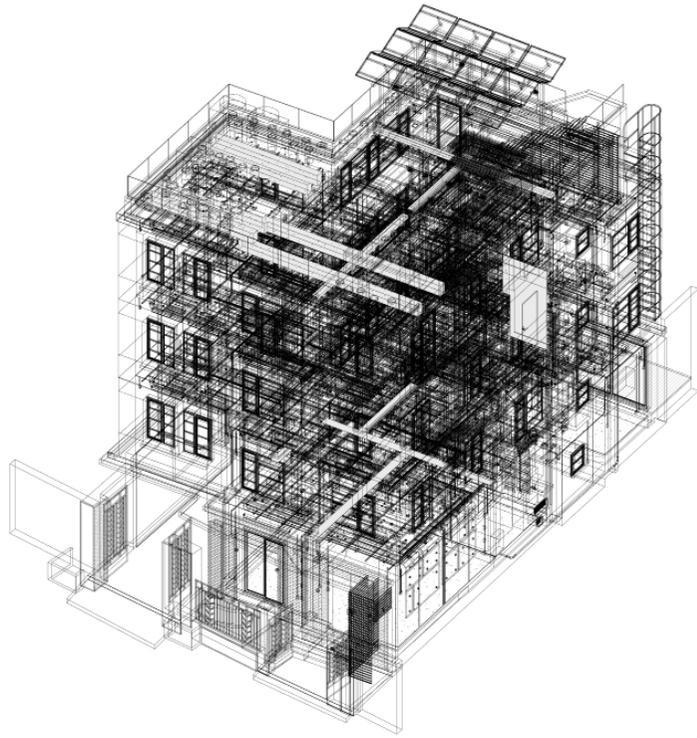
2



Facade Details:

1 Graphic city maps as ornaments between windows **2** Brickwork detail at main entrance





BIM Model:
Complete model of architectural and mechanical systems.

BIM Model Details:
The REVIT model used for design was based on a 3D laser scan and included absolutely all construction details, right down to the support hangers for technical fit-out.





Social Area and Conference Space:

Open plan top floor used for seminars, breaks, special events and functions.

WiFi Furniture Sensor

Auto HVAC / Ventilation

Manual Overrides

Daylight Sensor

Occupancy Sensor

TVOC Sensor

Humidity Sensor

Auto Shading / Glare Control

Temperature Sensor

Auto Lighting / Ambient and Task

Auto Floor Heating / Cooling



1



2



3



Individual Office Doors:

Doors to individual offices are themed by overlapping graphics.

1 Closed sliding doors with separated graphic layers **2** Partly opened doors with overlapping graphics

3 Opened doors with revealed graphics



Courtyard Lounge:

Flexible space for recreation and informal encounters.

YONGKAI MALL AND LANDMARK TOWER

Project Data:

| | |
|----------------|--------------------------------------------------------------------------------------|
| Total GFA: | ca. 375.000m ² |
| Location: | Nanning, China |
| Land Use: | Office Landmark Tower with Commercial Podium and Residential |
| Features: | Courtyard Mall, Rooftop Garden, Panorama Bar and Panoramic Residential |
| Scope of Work: | Winning Competition Entry, Master Plan, Architectural Concept and Design Development |

Project Overview:

This development - most notably the office landmark tower - is functionally directly related to the ASEAN group of collaborating nations. As such the carrying aesthetic theme was that of flower petals - a feature found in all ASEAN countries as part of their cultural identity or even their national flags. Simultaneously, this represents the city of Nanning itself, a location known for its lush green vegetation and surroundings. This motive is applied in various ways: as main iconic design for the landmark towers facade, as a more subtle texture to the mall screen facade and as a guiding principle for the organically shaped shading balconies of the residential towers.

The functional program has been arranged by integrating office tower and podium mall with a shared conference center and locating the residential towers at strategic locations to maximize their panoramic views towards - but not obstructed by - the landmark tower.

By offering a secluded courtyard as the central area for the retail podium, a large public roof garden on its top, an open panorama bar at the top of the landmark tower and residential apartments with large outdoor panorama balconies, the project sets is highly attractive to buying residents, as prime office location and for shoppers all over and beyond Nanning city.



Street view of Landmark Tower:
facade as an eye-catching landmark with high identity for the entire district.

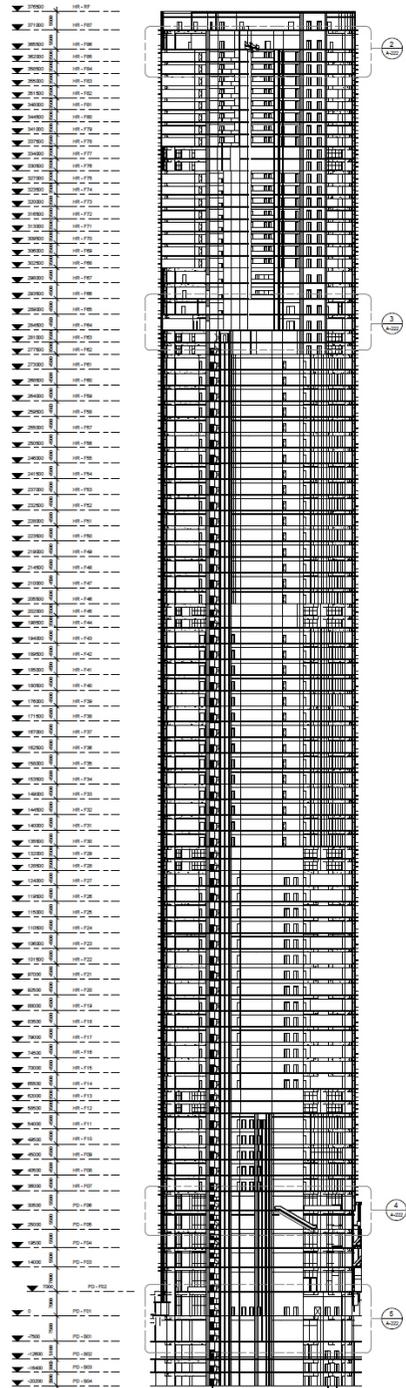


Facade Detail (Main):
Derived from patterned variations of flower petals.

Aesthetic Motive (Below):
Different flowers representing different ASEAN countries

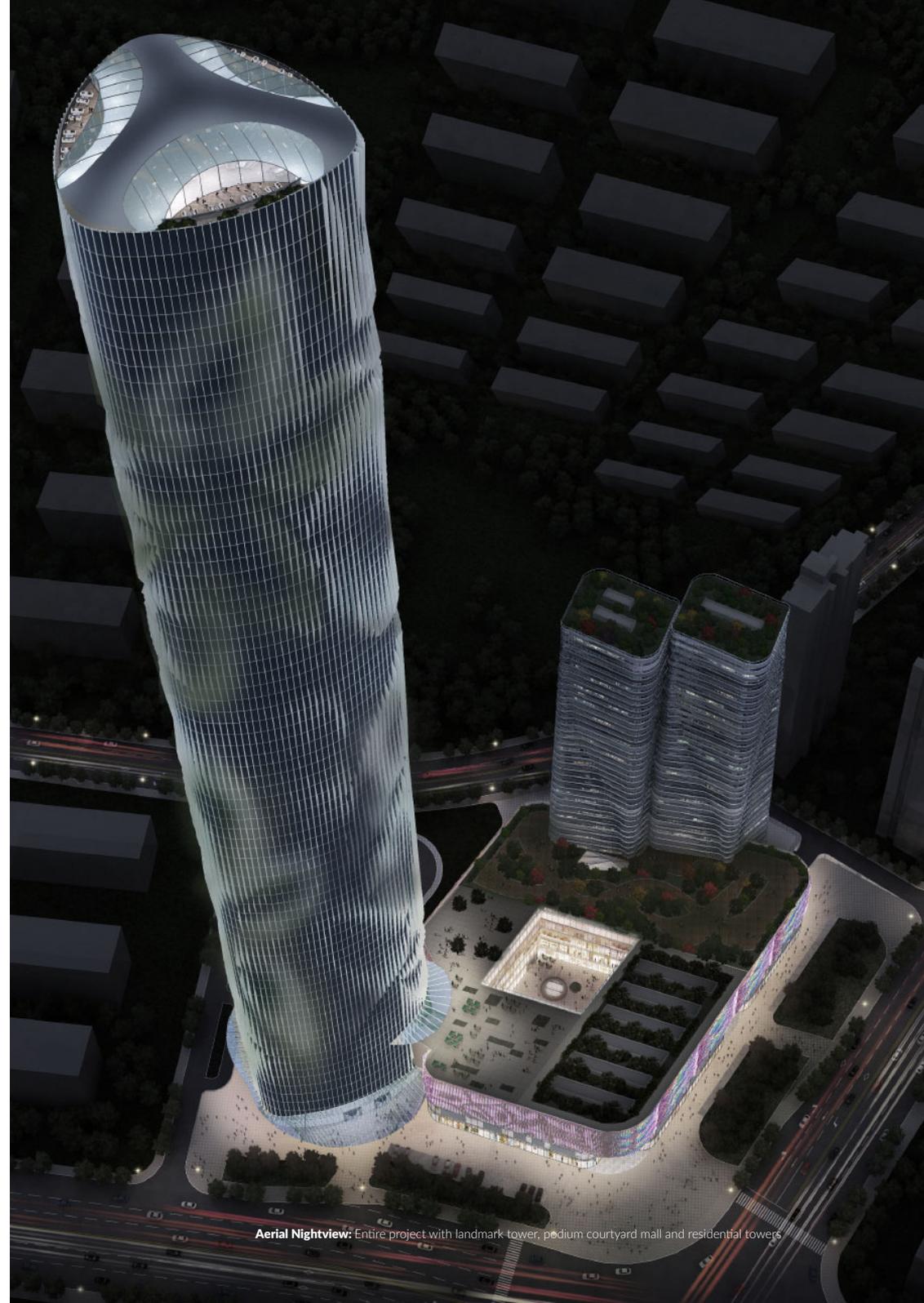
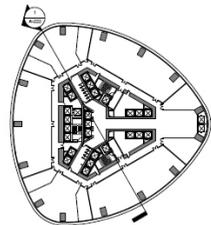
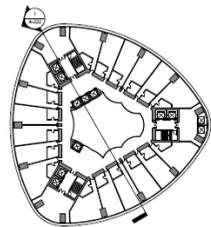
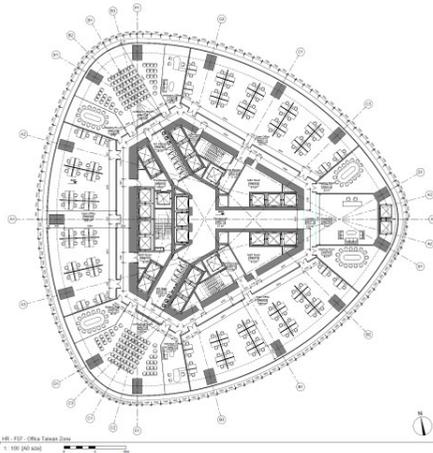


Hibiscus (Thailand) | Orchid (Indonesia) | Lily (Vietnam) | Gladiolus (Singapore) | Daisy (Philippines) | Frangipani (Malaysia)



Landmark Tower DD Section (left):
Connection and integration on various layers

Landmark Tower DD Plans (below):
Regular office floor plan



Aerial Nightview: Entire project with landmark tower, podium courtyard mall and residential towers



Street view of Shopping Mall:
Generous, partly open ground floor and patterned facade.

SEMIZENTRAL SEMINAR AREA AND SHOWROOM

Project Data:

| | |
|----------------|-------------------------------------------------------------------------------------------------------|
| Total GFA: | ca. 600m ² |
| Location: | Qingdao, China |
| Land Use: | World Horticultural Exhibition / Water Treatment |
| Features: | Multi-purpose showroom, representation, teaching and discussion area within Water Treatment facility. |
| Scope of Work: | Project Management for Construction Quality Supervision |

Project Overview:

The Semizentral water treatment facility is a central part of the Sino-German collaboration projects present in many areas of Qingdao. Situated within the zone of the 2014 World Horticultural Exhibition, the water treatment plant features a first-in-the-world application of semi-decentralized technologies developed by the Technical University of Darmstadt.

Within this high-profile technical application pioneer project, a dedicated area has been set aside for press events, seminars and other functions. Main features of this area are a series of art installations as well as a permanent exhibition of multi-media panels explaining the technology, benefit and future impact of the water treatment facility.

Facility and showroom were officially opened by a high-level delegation of state secretaries, industry and academic representatives from China and Germany in April 2014.

Image Copyright Information:

- (A) © Susanna Neunast
- (B) © Cosalux, Susanna Neunast
- (C) © Cosalux



Showroom:

1. permanent Exhibition 2. Detail ceiling elements 3. multi-media wall

Semizentral:

bird's eye view of entire treatment plant. seminar building access features water-inspired art work as printed sheets on glazing.



DGNB Standard and Certification

S U S T A I N A B I L I T Y
C O N S U L T I N G

B A S F D G N B R & D C E N T E R C A M P U S I I

Project Data:

| | |
|----------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Total GFA: | 23,000m ² |
| Location: | Shanghai, China |
| Land Use: | Industrial Campus |
| Features: | First ever R&D Project in China to receive DGNB certification. |
| Scope of Work: | Project Management and architectural consulting for DGNB auditing and certification. Provide data and benchmarks for DGNB in pilot project phase for future requirement catalogue. |

Project Overview:

BASF global management set a guideline that ALL new internal construction should be DGNB certified. In order to follow these new, international corporate guidelines the Campus II R&D Building in Shanghai Pudong was the first ever R&D building in China to receive DGNB qualification.

In order to prepare the building for certification, additional optimization measures were closely linked with the overall project management. Besides rigorous expectations on documentation and the integration of all consultants and stakeholders - both within the corporation and external - a series of improvements have been suggested and implemented, such as:

- increased efficiency / lower energy consumption of HVAC system
- increased efficiency / lower energy consumption of Lighting System
- restriction of civil materials to non-harmful, VOC-free and related standards regarding chemical composition
- improvements to guarantee barrier-free access throughout the building
- increased acoustical performance in all relevant areas
- reduction of construction waste impact to surrounding area with and outside campus
- additional usability of related outdoor spaces

All measures were targeted to trigger a measurable and obvious improvement to comfort, ease and general user friendliness. Since the project started before the DGNB certification was a decided aim, cost impacts were minimized (and sometimes even overcompensated by considerable lifetime operation savings) and scheduling impacts categorically avoided.



DGNB

Sustainable Building
DGNB Silver Certificate



Main Entrance View:
The project is the first R&D Center to ever be DGNB-certified in China.
© BASF



Model View:
Open space offices with lobby lounge



Office Space Details:
A Coffee Lounge amenities B Coffee Lounge seating C Kitchenette



Offices:
Typical office floor with large open plan work spaces

SAN XIANG DGNB HEADQUARTER OFFICE

Project Data:

| | |
|----------------|--------------------------------------------------------------------------|
| Total GFA: | approx. 500m ² |
| Location: | Shanghai, China |
| Land Use: | Office |
| Features: | First DGNB application in China for Interior Office Spaces |
| Scope of Work: | Sustainability Consulting / On-Site Quality Control / DGNB Certification |

Project Overview:

Property developer Sanxiang projected a refurbishment retro-fit of their headquarter's executive floor. The new design was evaluated and optimized in order to comply with DGNB standards for the "New Office Interior Fit-out" scheme. This new DGNB system was just being launched in September 2016 and this project is the first to apply it in China.

The project features the chairman's office, executive board conference room, meeting and greeting lounge, reception and social areas like an open pantry and seating area.

Special attention was being paid to the use of sustainable materials, free of VOCs and other harmful substances, optimizing the interior fit-out for easy disassembly and re-use as well as setting standards in social aspects and flexibility of the layout for different functions as well as for possible later conversion.



1



2



3

Details of built-in furniture systems:
1 Shelving lounge area 2 Cupboards and archive 3 Pantry

Chairman's Office:
Shelving acts as screen wall towards windows, glass partitions with integrated curtains offer privacy or complete visibility towards greeting lounge

Greeting Lounge:
Partitioning system is component based with generous floor-to-ceiling door elements. Secretary office can be screened by electrochromatic glazing.



ARDEX DGNB OFFICE AND TRAINING CENTER

Project Data:

| | |
|----------------|----------------------------------------------------------------------|
| Total GFA: | approx. 2.500m ² |
| Location: | Pinghu, China |
| Land Use: | Industrial |
| Features: | Pilot project for DGNB Office and Administration system in China |
| Scope of Work: | Pre-Assessment / Sustainability Consulting / On-Site Quality Control |

Project Overview:

Ardex has projected a new industrial facility just outside Shanghai, including a production area and an office and training center.

This project has successfully received the DGNB SLIVER CERTIFICATE from German Sustainable Building Council in August 2019. It is one of only three buildings ever to be certified by DGNB in China!

The office and training center is currently being evaluated in regards to DGNB performance. The conducted pre-assessment of all relevant DGNB criteria will then act as a decision matrix for the client to decide weather or not to seek DGNB certification and which suggested improvements to implement.

Optimization suggestions reach from the social use of outdoor areas and safety layout to barrier-free design of the entire ground floor, optimization for comfort and energy efficiency by adding targeted shading and glare protection, flexibility of the structure system and interior partitioning detailing as well as flexibility for later retro-fit and subdivision of rentable units.



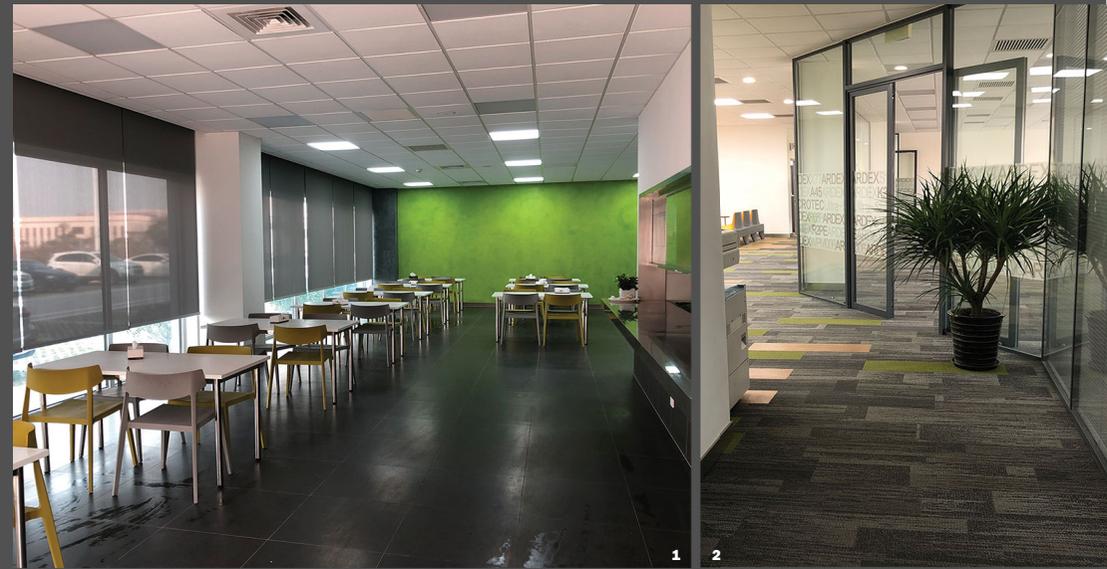
Sustainable Building
DGNB Silver Certificate

ARDEX

Administration and Office Building:
Main site entrance and connected Production Building



1 2



1 2



3 4



3 4

Lobby and Training Center:

1 Multi-purpose / Small Training Room 2 Entrance to Large Training Rooms 3 Gallery 4 Main Lobby / Showroom

Social Spaces and Flexible Offices:

1 Canteen 2 2F Office Corridor 3 Glass Partitions with privacy screen 4 Social lounge / Informal meeting and break-out area

VW INDUSTRIAL PLANT DGNB

Project Data:

| | |
|----------------|-------------------------------------------------------------------------------------------|
| Total GFA: | approx. 560.000m ² |
| Site Area: | approx. 410.000m ² |
| Location: | Shanghai, China |
| Land Use: | Industrial |
| Features: | Potentially first combination of DGNB Industrial Site and Building Certification in China |
| Scope of Work: | Pre-Assessment for DGNB Certification |

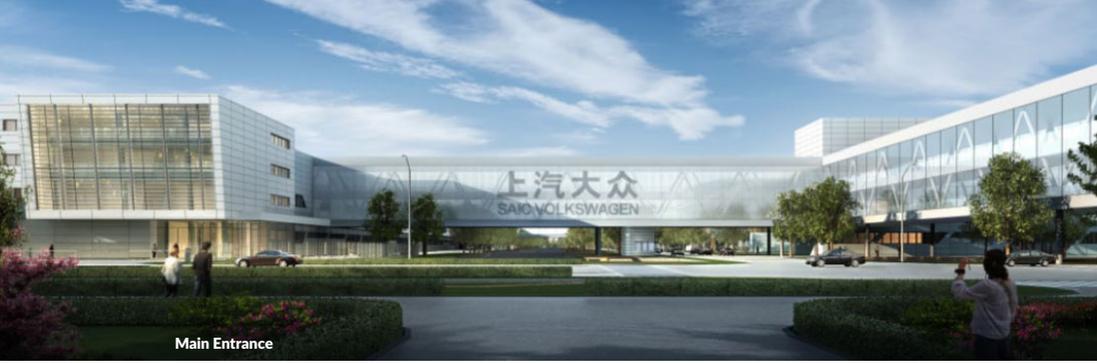
Project Overview:

VW's new state-of-the-art MEB Plant for production of electric mobility in Shanghai is currently on the threshold from planning to construction stage for the majority of buildings.

In order to assess the measures needed to achieve DGNB Certification for this project, a complex Pre-Check was conducted. This included a total of 7 individual buildings / building groups as well as the evaluation of the entire site, according to the relevant DGNB certification schemes for Production, Warehouse, Office, Parking and Industrial Site.

The final report includes:

- Introduction of DGNB System
- Comprehensive indicator-by-indicator assessment of current construction drawings for each building / scheme
- Comprehensive overview of current DGNB scoring for each building / scheme
- Optimization table with comprehensive list of suggested improvements for each building / scheme according to different certification targets: Silver / Gold / Platinum
- Indication of scheduling and cost impact as well as user benefits beyond DGNB scoring for each optimization measure
- Proposed strategy for certification as executive summary



Main Entrance



MEB Plant Aerial View

| | | | |
|--|--|--|--|
| | | | |
| | | | |
| | | | |
| | | | |

Example Pages from Management Summary:
Comprehensive evaluation of different possible certification strategies and related benefits, risks and detailed cost and timeline implications.

PHI Passive House Certification

S U S T A I N A B I L I T Y
C O N S U L T I N G

TIANJIN ECOCITY RESIDENTIAL PASSIVE HOUSE

Project Data:

| | |
|----------------|-------------------------------------------------------------------------------------------------------------------------------|
| Total GFA: | approx. 15,000m ² |
| Location: | Tianjin, China |
| Land Use: | Residential |
| Features: | One of the tallest PHI certified Passive House projects in Asia to date "Design Book" as efficient quality management tool |
| Scope of Work: | Sustainability Consulting / On-Site Quality Control / PHI Passive House Certification |

Project Overview:

Two residential high-rise buildings of 16-18 floors within a larger master plan development in Tianjin's Sino-Singapore Eco-City have been certified by PHI (Passive House Institute) to German Passive House standard in September 2019.

To date, this is one of the largest Passive House Projects ever certified in Asia!

In order to make sure that the building complies with relevant passive house standards - namely low energy consumption, high air-tightness, well-developed thermal envelope - various measures have been implemented during design and construction process and summed up in the "Design Book":

- Educational Training for all relevant project stakeholders (Client, LDI, Contractor) with emphasis on passive house related principles, risks and best practices
- Technical Review of Design including thermal performance of construction details, guidelines and concepts for building envelope and HVAC system
- Calculations and definition of necessary specifications for envelope and HVAC system
- Regular reporting and alignment with PHI
- Assistance with relevant specifications during tender phase
- On-site control and reporting during construction phase
- On-site testing (Blower-Door-Test)
- Submission of all relevant documents to PHI for certification

"Eco-City" Apartment Buildings:
Completed passive-house buildings with shared showroom.



Passive House Certification:
Project has been officially certified as PHI Passive House in September 2019.



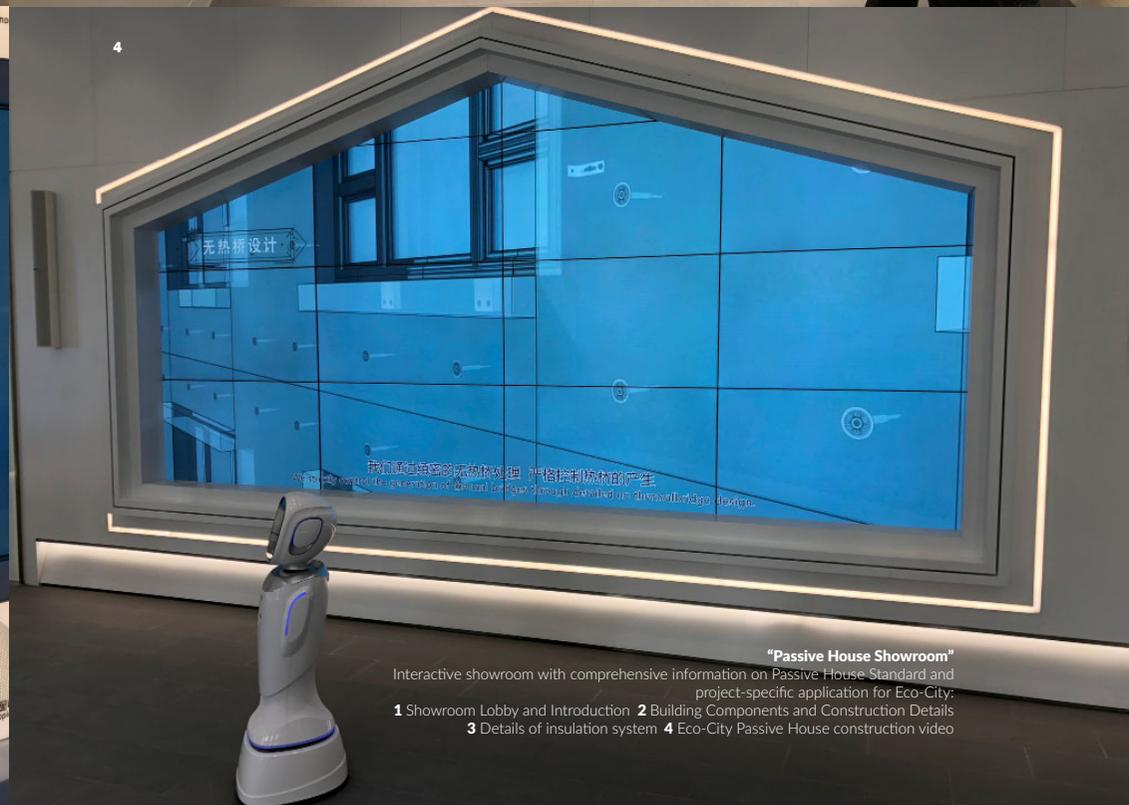
1



2



3



4

"Passive House Showroom"
Interactive showroom with comprehensive information on Passive House Standard and project-specific application for Eco-City.
1 Showroom Lobby and Introduction 2 Building Components and Construction Details
3 Details of insulation system 4 Eco-City Passive House construction video

De-Centralized HVAC (As built) 分散暖通 (已建)

Centralized HVAC 集中暖通

Result 结果:
Passive House Certification PASSED 被动房认证 通过

Higher overall efficiency offers alternatives to simplify envelope:
 提高中央空调系统的整体效率简化建筑围护结构的替代方案:

- > Possibility to reduce Insulation Thickness / use higher λ-Value
- > Possibility to use Windows with higher U-Value / higher g-Value
- > Possibility to reduce ERV Efficiency
- > Less restrictive management of Thermal Bridges
- > 可能减少保温厚度 / 可能更高的λ保温材料
- > 可能使用更高的U值 / 可能使用高g值的玻璃
- > 可能减少ERV效率
- > 较宽松的热桥管理

| Specific Building Requirements with reference to the Passive House | Requirement | Value | Criteria | Min. | Max. | Passive House |
|--------------------------------------------------------------------|--------------------------------------------------------|--------|----------|-------|-------|---------------|
| Space heating | Heat transfer area A _{SH} | 11.74 | A | 10 | 10 | yes |
| | Heat pump COP | 3.97 | A | 3 | 3 | yes |
| | Controlled ventilation | 1.72 | A | 1 | 1 | yes |
| | Frequency of controlled ventilation (h ⁻¹) | 0.35 | A | 0.2 | 0.2 | yes |
| Air-tightness | Permeability at 50 Pa | 0.14 | A | 0.1 | 0.1 | yes |
| | Permeability at 1 Pa | 0.0014 | A | 0.001 | 0.001 | yes |
| Primary Energy Demand (PED) | Primary energy demand (kWh/m ² ·a) | 104.42 | A | 100 | 100 | yes |
| | CO ₂ emissions (kg/m ² ·a) | 12.24 | A | 10 | 10 | yes |
| Thermal Bridge | Thermal bridge coefficient (ψ) | 0.01 | A | 0 | 0 | yes |
| | Thermal bridge coefficient (ψ) | 0.01 | A | 0 | 0 | yes |

Shading: As Built (Shutters) 遮阳: 已建 (百叶)

Shading: Sliding Screens 遮阳: 滑动屏风

Windows: Panorama 窗户: 全景窗

Result 结果:
Passive House Certification Passed 被动房认证 通过

Increase of Cooling Demand by 6.5%
 Due to less efficient shading

因为遮阳效率低下, 增加制冷需求: 6.5%

| Specific Building Requirements with reference to the Passive House | Requirement | Value | Criteria | Min. | Max. | Passive House |
|--------------------------------------------------------------------|--------------------------------------------------------|--------|----------|-------|-------|---------------|
| Space heating | Heat transfer area A _{SH} | 11.74 | A | 10 | 10 | yes |
| | Heat pump COP | 3.97 | A | 3 | 3 | yes |
| | Controlled ventilation | 1.72 | A | 1 | 1 | yes |
| | Frequency of controlled ventilation (h ⁻¹) | 0.35 | A | 0.2 | 0.2 | yes |
| Air-tightness | Permeability at 50 Pa | 0.14 | A | 0.1 | 0.1 | yes |
| | Permeability at 1 Pa | 0.0014 | A | 0.001 | 0.001 | yes |
| Primary Energy Demand (PED) | Primary energy demand (kWh/m ² ·a) | 104.42 | A | 100 | 100 | yes |
| | CO ₂ emissions (kg/m ² ·a) | 12.24 | A | 10 | 10 | yes |
| Thermal Bridge | Thermal bridge coefficient (ψ) | 0.01 | A | 0 | 0 | yes |
| | Thermal bridge coefficient (ψ) | 0.01 | A | 0 | 0 | yes |

As Built (Technical Balconies) 建造 (技术阳台)

Functional Balconies 功能技术阳台

Panorama Terraces 全景阳台

Result 结果:
Passive House Certification FAILED 被动房认证 失败

12% Increase of Heating Demand 12% 增加加热需求

- > Increase insulation from 240 to 300mm: -15%
- > Increase ERV Efficiency from 85% to 90%: -5%
- > Reduce U-Value Glazing from 0.67 to 0.55: -10%
- > 增加保温从 240 到 300mm: -15%
- > 增加ERV效率从 85% 到 90%: -5%
- > 减少玻璃的U值从 0.67 到 0.55: -10%

| Specific Building Requirements with reference to the Passive House | Requirement | Value | Criteria | Min. | Max. | Passive House |
|--------------------------------------------------------------------|--------------------------------------------------------|--------|----------|-------|-------|---------------|
| Space heating | Heat transfer area A _{SH} | 11.74 | A | 10 | 10 | yes |
| | Heat pump COP | 3.97 | A | 3 | 3 | yes |
| | Controlled ventilation | 1.72 | A | 1 | 1 | yes |
| | Frequency of controlled ventilation (h ⁻¹) | 0.35 | A | 0.2 | 0.2 | yes |
| Air-tightness | Permeability at 50 Pa | 0.14 | A | 0.1 | 0.1 | yes |
| | Permeability at 1 Pa | 0.0014 | A | 0.001 | 0.001 | yes |
| Primary Energy Demand (PED) | Primary energy demand (kWh/m ² ·a) | 106.73 | A | 100 | 100 | no |
| | CO ₂ emissions (kg/m ² ·a) | 14.10 | A | 10 | 10 | no |
| Thermal Bridge | Thermal bridge coefficient (ψ) | 0.01 | A | 0 | 0 | yes |
| | Thermal bridge coefficient (ψ) | 0.01 | A | 0 | 0 | yes |

Geometry: As Built 形态: 计划建造

Geometry: Cantilevered Boxes 形态: 悬挑盒子

A/V Ratio 体形系数*: 0.62
 Based on PH-specific TFA

30% Higher Heating / Cooling Demand 高于30% 加热需求/ 制冷需求

- > Increase insulation from 240 to 300mm: -15%
- > Increase ERV Efficiency from 85% to 90%: -5%
- > Reduce U-Value Glazing from 0.67 to 0.55: -10%
- > 增加保温从 240mm 到 300mm: -15%
- > 增加ERV效率从 85% 到 90%: -5%
- > 减少玻璃U值从 0.67 到 0.55: -10%

| Specific Building Requirements with reference to the Passive House | Requirement | Value | Criteria | Min. | Max. | Passive House |
|--------------------------------------------------------------------|--------------------------------------------------------|--------|----------|-------|-------|---------------|
| Space heating | Heat transfer area A _{SH} | 11.74 | A | 10 | 10 | yes |
| | Heat pump COP | 3.97 | A | 3 | 3 | yes |
| | Controlled ventilation | 1.72 | A | 1 | 1 | yes |
| | Frequency of controlled ventilation (h ⁻¹) | 0.35 | A | 0.2 | 0.2 | yes |
| Air-tightness | Permeability at 50 Pa | 0.14 | A | 0.1 | 0.1 | yes |
| | Permeability at 1 Pa | 0.0014 | A | 0.001 | 0.001 | yes |
| Primary Energy Demand (PED) | Primary energy demand (kWh/m ² ·a) | 138.53 | A | 100 | 100 | no |
| | CO ₂ emissions (kg/m ² ·a) | 17.53 | A | 10 | 10 | no |
| Thermal Bridge | Thermal bridge coefficient (ψ) | 0.01 | A | 0 | 0 | yes |
| | Thermal bridge coefficient (ψ) | 0.01 | A | 0 | 0 | yes |

Geometry: Cantilevered Boxes 形态: 出挑盒子

Windows: Panorama 窗户: 全景

Shading: Roller Shutters 遮阳: 卷帘

Shading: Sliding Screens 遮阳: 滑动屏风

Technical Balconies 技术阳台

Functional Balconies 功能阳台

Panorama Terraces 全景阳台

Centralized HVAC 集中暖通设备

De-Centralized HVAC 分散暖通设备

Geometry: Cantilevered Boxes 形态: 出挑盒子

Windows: Panorama 窗户: 全景

Shading: Roller Shutters 遮阳: 卷帘

Shading: Sliding Screens 遮阳: 滑动屏风

Technical Balconies 技术阳台

Functional Balconies 功能阳台

Panorama Terraces 全景阳台

Centralized HVAC 集中暖通设备

De-Centralized HVAC 分散暖通设备

Variant Analysis

A study of alternative design and construction approaches and their precisely quantified impact on Passive House performance. Where impacts are adverse, potential remediant measures have been evaluated and quantified.

GUILIN PASSIVE HOUSE VILLAS

Project Data:

| | |
|----------------|-------------------------------------------------------------------------------------------------------------------------|
| Total GFA: | ca. 5.600m ² |
| Location: | Guilin, China |
| Land Use: | Tourism |
| Features: | First residential villas built to PHI Passive House standard in Southern China |
| Scope of Work: | Architecture Design SD to DD, Sustainability Consulting / On-site quality supervision / PHI Passive House Certification |

Project Overview:

As part of a larger resort master plan in Guilin's prime high-profile development area - surrounded by the unique local caster mountains directly beyond the site's boundary - two clusters of 4 villas each have been designated to be designed and constructed to PHI Passive House standard.

In order to optimize the design possibilities, a two-phase approach has been chosen, with the first step completing the main part of the thermal envelope and the second phase seeing primarily exterior additions like terraces and balconies as well as secondary, non-thermal garden pavilions.

From the start of the design, the following targets have been followed:

- Maximize panorama views to unique nature and floor-to-ceiling glazing
- Create an integrated relation between building and nature with courtyards, terraces and other outdoor spaces
- Optimize window placement to maximize views while guaranteeing privacy
- Use balconies, terraces and other exterior areas as shading devices minimizing heat gains in summer
- Adopt an MEP concept including regenerative energy sources like geothermal heat pump and PV
- Use technical systems like PV to double up as shading structure providing comfort on the roof deck
- Generous, modern open plan design



Master Plan

Overall Aerial View



Garden View:
Villa C

Passive Design Strategies

S U S T A I N A B I L I T Y
C O N S U L T I N G

G O L D T R A D I N G S Q U A R E

Project Data:

| | |
|----------------|-----------------------------------------------------------------------------------------------------|
| Total GFA: | Site Area ca. 6,000m ² / GFA ca. 25,000m ² (15,000m ² below grade) |
| Land Use: | Office |
| Features: | Integration of Trading Office and Public Plaza |
| Scope of Work: | Architectural Concept for Competition Entry |

Project Overview:

This scheme expanded the use and reach of the required gold trading center into a public urban landmark in the new financial business center. In order to provide a high quality office environment and also establish the Gold Trading Square as a destination, a complex integration of functional zones activates interior, exterior and landscaped spaces:

- Extremely flexible office floors with natural light covering all work areas
- Below-grade Jewellery Market connected to park and Food Courtyard
- F&B Courtyard as central meeting space of surrounding finance district
- Urban Park as new central district recreation area

In the design a series of passive measures were implemented which raise user comfort and improve energy efficiency, such as:

- Reducing need for artificial light by providing plenty of daylight in all work zones
- Reducing summer overheating (and cooling demand) by a facade structure that works as shading system
- Using building's upper floors as natural shading for exterior F&B Courtyard



Aerial View:
Gold Trading Square with office building and adjacent urban park and Jewellery Mall



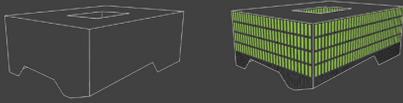
Interior View:

Typical interior layout with exterior and courtyard daylight glazing, covering 100% of work areas with natural light.



Park View

Depth of facade shading texture generates a playful nighttime effect

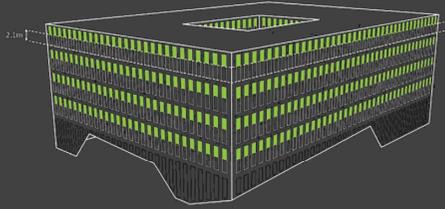


日光玻璃比:

40%

优点:

- 最大化工作区域自然光可达性
- 减少人工灯光运行及其消耗



日光优化

当我们关注建筑的立面, WELL标准给了我们启示日光舒适和节能的关系

为了平衡最大化日光及最小化得热, 特别是在深圳这种需要大量制冷的城市, 目标的窗墙比在20-60%.

根据以上, 在我们的设计中我们确立窗墙比为42%

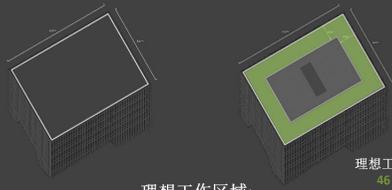
WELL标准中确立光玻璃-这是为工作空间提供好的日光的主要材料-而且只有2.1米以上才是有效的。

目标是提供40%-60%比例的日光玻璃

我们的设计提供40%的日光玻璃, 最大化日光, 这样才可以减少人工光的使用从而节省运行能源。

Daylight Optimization 1:

Providing glazing elements that extend upwards beyond 2.1m contributes substantially to natural daylight penetrating deep into the floor.

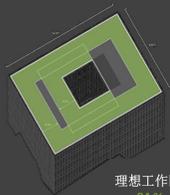


理想工作区域:

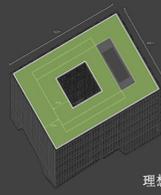
100%

优点:

- 任何开放/独立或混合式的办公布局都是可行的
- 很容易适应未来改造, 空间设计, 对外出租等要求



理想工作区:
84%



理想工作区:
100%

办公布局灵活

优化日光不仅仅是对能耗节省, 舒适以及花费有影响, 它同时也可以让建筑布局更加灵活以适应未来根据业态, 功能, 承租等要求进行改变。

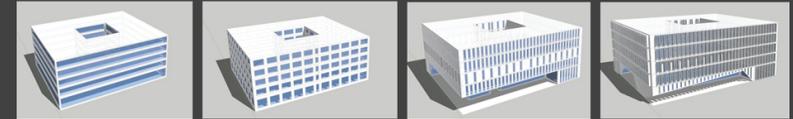
WELL标准中表明, 当办公区域范围在9.5米以内的时候, 日光可达的理想工作区域会达到50%。

当我们在设计中加入了中庭后, 更的自然光经过优化可以达到工作区, 此时的理想工作区域比例达到了84%。

而在我们进一步调整了核心筒, 中庭的位置优化了布局后, 最终可达到理想工作区域比例达到了100%。

Daylight Optimization 2:

By optimizing exact floor plate geometry and position of courtyard and cores, 100% of work areas are equipped with natural light and views to the outside, providing an excellent workplace environment.



Comparison A: Curtain Wall

Comparison with typical curtain wall system

144%
144%

Reference B: Stone Facade

Standard punch-hole facade. Glass: $U_{GLASS}=1.2 / U_{FRAME}=1.5$ Envelope: $U=0.5$

Cooling Demand: 100%
Cooling Load: 100%

Design Iteration C1: Stone Facade

With optimized window design and layout.

85%
85%

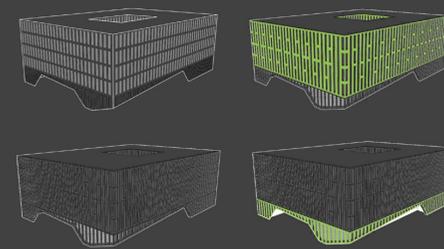
Design Iteration C2: Stone Facade

With optimized window design and layout + integrated shading design (with external blinds)

72% (166%)
67% (156%)

Passive Shading Optimization 1:

By optimizing window ratio and shading systems a substantial reduction in heat gains and resulting cooling demand and load can be achieved simply by appropriate facade design.

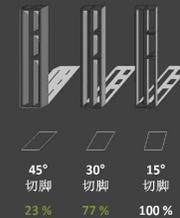


立面设计 - 建筑外围护结构提高能源效率

在优化窗户比例后, 最重要的节能存世就是优化遮阳。

整个立面采用有角度的构造, 角度避免了太阳直射, 特别是东东南南以及西南至西这些缺少周边遮阳建筑的情况。

结合外遮阳避免太阳直射, 外围护最大化了能源高效性。



45° 切脚 23%
30° 切脚 77%
15° 切脚 100%



74%
52%
结果建筑的制冷和除湿要求减少至74%以及负荷降至52%



26%
减少年运行电力账单



48%
减少暖通设备用量

Passive Shading Optimization 2:

Overall nearly 1/4 of capacity for the cooling system can be reduced, saving initial investment by reduced construction costs. In subsequent operation, the annual energy demand for cooling is nearly cut to half.

5 - STAR CONFERENCE HOTEL

Project Data:

| | |
|----------------|---------------------------------------------------------------------------------------------------------------------------------------------------|
| Total GFA: | ca. 75.0000m ² |
| Location: | Guigang, China |
| Land Use: | Hospitality |
| Features: | Passive Design Strategies combines shading and balcony system to form a modern facade aesthetic based on traditional local elements and materials |
| Scope of Work: | Architectural Concept with Passive Strategy Optimization |

Project Overview:

Since the site is located directly opposite the Guigang Garden EXPO, the design optimizes attractive views into the landscape by a two-volume configuration grouped around a shared courtyard.

This spatial system also acts as a natural division of conference facilities, guest routes and entertainment areas, each one embedded in natural scenery of the courtyard and / or garden. An additional roof terrace provides a unique event, social and function area. Conference facilities reach from small meeting rooms to a grand ballroom and include highly flexible areas that can support a large variety of professional and corporate events.

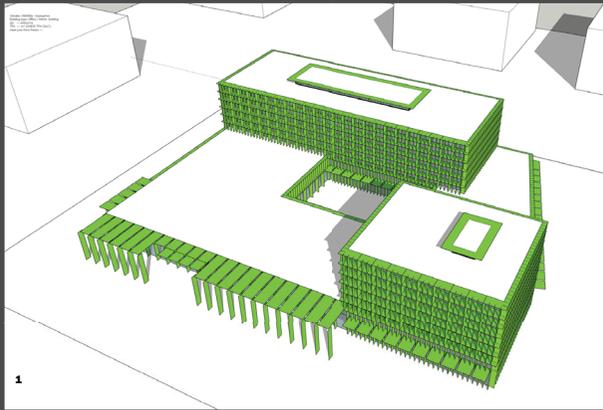
The facade design is inspired by references to the local mangrove trees and combines usable balconies with a fixed shading system as passive measures to reduce overheating and provide comfortable interior thermal quality with low operation costs. A 45% reduction of cooling demand is achieved by the facade design alone - a huge economic factor for hospitality projects with their inherently high ratio of operational expenses.

In addition, the smart facade design practically avoids any relevant thermal bridges - a key factor in avoiding high risk setbacks to the initial investment like interior mould growth and damages to the building envelope. Both of which would result in very costly maintenance procedures.

The hotel design combines local context, comfort, energy reduction, visual connection to nature and highly adaptive, representative interior spaces into a new place-to-be for professionals visiting Guigang.



Rear View overlooking EXPO Garden and Roof Terrace



Shading is the key parameter to keep the building from overheating and related negative effects. The entire facade is designed to be aesthetically engaging as well as contributing to comfort and energy efficiency by developing a 360 degree shading system.

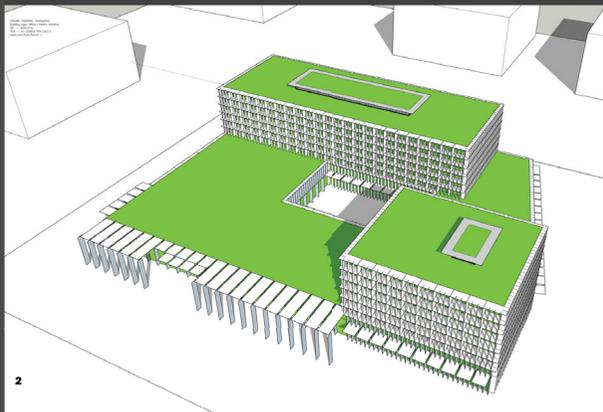
The depth of the shading system is optimized according to orientation, with a deeper structure towards south (where the sun is highest) and the shallowest depth in the north.

This saves energy and promotes thermal comfort for building users dramatically.

Resulting benefits of current design:

 **Low additional Cost**
Façade Design is performance optimized

 **Energy Savings + Comfort**
30% Reduction in Cooling Demand / Cooling Load



Air-Tightness can be optimized by systematic attention to construction detailing. This involves technical details of the door and window joints as well as choice of materials of the building envelope.

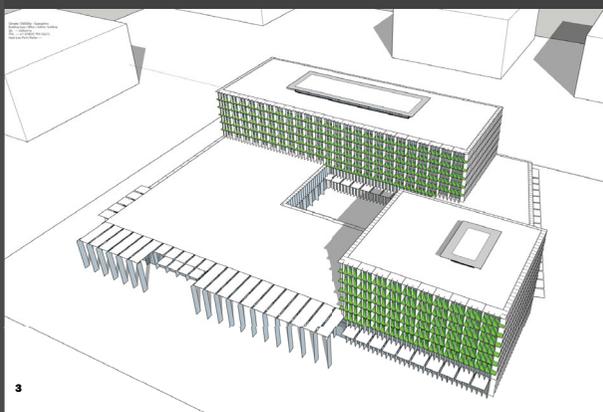
In southern China, a dramatically improved air-tightness can be achieved with comparatively low effort.

Higher air-tightness improves thermal comfort and interior air quality control.

Resulting benefits of current design:

 **Low additional Cost**
Window quality and technical detailing easy to realize

 **Energy Savings + Comfort**
15% Reduction in Cooling Demand / Cooling Load



Badly designed Thermal Bridges are a primary source for moisture on interior surfaces, mold growth and a health hazard to Interior Air Quality (IAQ). They also are a major source for damages to building envelope components due to condensation and water intrusion.

In this design, the entire shading system can be constructed without relevant thermal bridges and cantilevering balconies can be designed with much safer and better performing point thermal bridges rather than linear thermal bridges.

Resulting benefits of current design:

 **No additional Cost**
Thermal bridges already resolved in volumetric design

 **Durability + Health**
Components last longer and better IAQ

Building Envelope and Façade Optimization:

1 Shading strategy and related benefits **2** Air-Tightness strategy and related benefits **3** Thermal Bridge management and related benefits

-  Thermal Comfort (Temp.)
-  Draft-free Environment
-  Reduced Operation Costs

-  Interior Air Quality
-  Thermal Comfort (Hum.)
-  Reduced Operation Costs

Shading and Reduction of Solar Gains



Thermal Insulation



Comfort Ventilation with High Heat Recovery



Thermal Comfort (Hum.)

Reduced Operation Costs

Continuous Airtightness



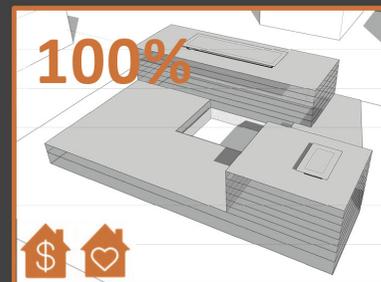
Thermal-Bridge-Free Details



Healthy Interior

Reduced Investment Risk

1

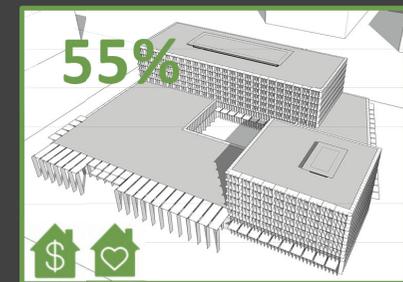


Baseline (Standard Design)

100% Cooling Demand

100% Cooling Load

2



Current Design (Optimized)

45% Reduction in Cooling Demand:

✓ Much Lower Operation Cost

35% Reduction in Cooling Load:

✓ Much Lower Construction Cost for HVAC System

Resulting Comfort / Health Benefits:

- ✓ Very high thermal comfort
- ✓ No drafts and quick response of HVAC
- ✓ Very good Interior Air Quality
- ✓ No mold and health issues

Resulting Durability Benefits:

- ✓ Much lower investment risk for damages
- ✓ Much slower maintenance cycles

Summary of Benefits

1 Strategy summary based on 5 Passive House principles **2** Quantitative and qualitative performance summary

GUANGXI INSTITUTE OF TECHNOLOGY

Project Data:

| | |
|------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Total Site Area: | ca. 1.5km ² / ca. 1.750.000m ² GFA |
| Location: | GuiGang, China |
| Land Use: | Education / University |
| Features: | Landscape-integrated Public Buildings, iconic Library, functional, aesthetic and energy retro-fit of the College Buildings already in construction for increased usability, comfort and a lower ecological footprint. |
| Scope of Work: | Master Plan Concept and Detailed Design Submission Retro-Fitting Construction Design (CD) for College Buildings with Passive Strategy Design Architectural Schematic Design (SD) for new canteen and sports park. |

Project Overview:

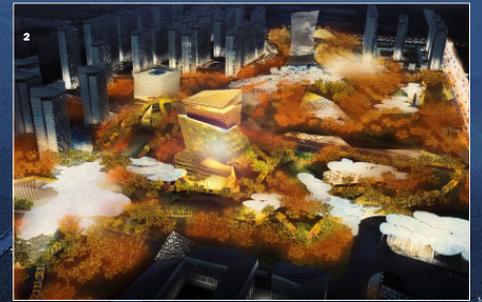
The Master Plan aims at creating a convenient, unique and experimental environment to attract experts, professors and students to the new 25,000 student capacity Guigang Institute of Technology. Strategically, the development aims at deriving its contemporary, modern identity from references to the traditional culture and stunning rural surroundings.

In the resulting concept, therefore, the central campus landscape plays the decisive element as a space for professional interaction, public encounter and social exchange. All multi-functional and public buildings are integrated into a sponge-city-driven park which comes to live like an animated Chinese landscape painting as a city-wide attraction - with the top of the iconic Library Building as a public observation deck.

All sustainability aspects of the master plan development - water management, operation costs (especially for cooling), energy consumption and interior thermal comfort, later adaptability and change of use, exterior usage and comfort - have all been considered as integral parts of the design.

College Buildings have been retro-fitted with interior circulation (as opposed to deck access), resulting in a much more efficient building envelope, much higher comfort within classrooms and the inherent possibility to use conditioned circulation areas as active elements of the functional programming as informal collaboration spaces, social and break areas.

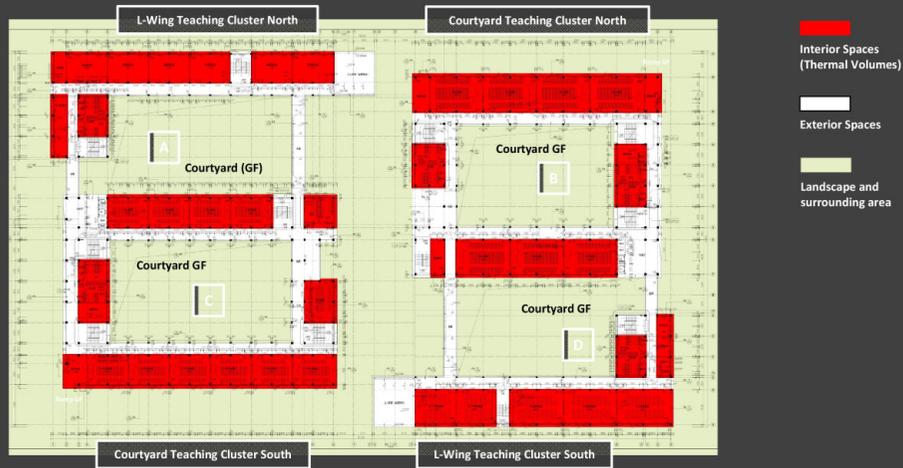
Functional Campus Landscape: Regular Night View



Campus Landscape Detail: Library Building, F&B and Hi-Tech Hub
1 Regular Mode 2 Lightshow / Event Mode

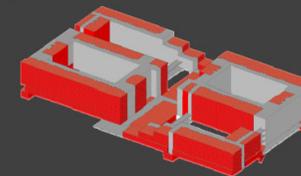


Functional Campus Landscape: Lightshow / Event Mode



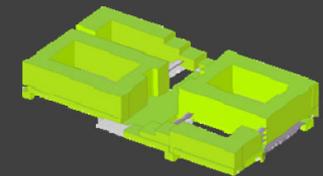
ORIGINAL – 100%
Based on 342 exterior doors: $n50 = 12.0$

| | | |
|-----------------|----------------------|------|
| Heating Demand: | 26 W/m ² | 100% |
| Cooling Demand: | 121 W/m ² | 100% |
| Heating Load: | 39 W/m ² | 100% |
| Cooling Load: | 21 W/m ² | 100% |



OPTIMIZED – approx. 45%
Based on 46 high quality exterior doors: $n50 = 3.0$

| | | |
|-----------------|---------------------|-----|
| Heating Demand: | 7 W/m ² | 27% |
| Cooling Demand: | 56 W/m ² | 46% |
| Heating Load: | 12 W/m ² | 31% |
| Cooling Load: | 10 W/m ² | 49% |



Retro-Fit Strategy for College Buildings already in construction:

Floor plans have been optimized to reduce A/V ratio and number of external doors by including circulation areas within the thermal envelope. No structural changes are necessary.

1 Original Floor Plan 2 Optimized Floor Plan

Performance Summary of Original and Optimized Designs:

The necessary Cooling Demand - a major factor in Guangxi climate - could be reduced to less than 50% of original value - purely by changes to the Building Envelope design.



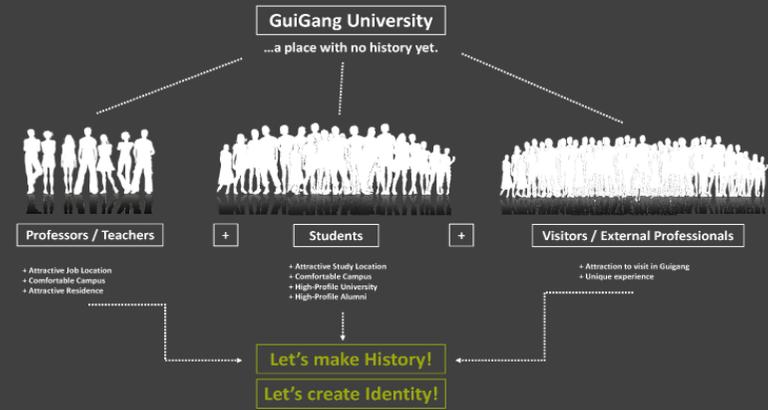
College Cluster 3:
Construction of load-bearing structure (Autumn 2019)



College Cluster 2:
Construction of load-bearing structure and subdivisions for retro-fitted facade system (Autumn 2019)



Development Concept:
1 Master Plan 2 Business Model



College Cluster 1:
Construction progress with courtyards and main volumes in place (Summer 2019)

EXPERIMENTAL ELEMENTARY SCHOOL

Project Data:

| | |
|----------------|-------------------------------------------------------------------|
| Total GFA: | Site Area ca. 40,000m ² / GFA ca. 42,000m ² |
| Location: | Suqian, China |
| Land Use: | Educational |
| Features: | School Design following strict comfort and health targets |
| Scope of Work: | Architectural Concept for Competition Entry |

Project Overview:

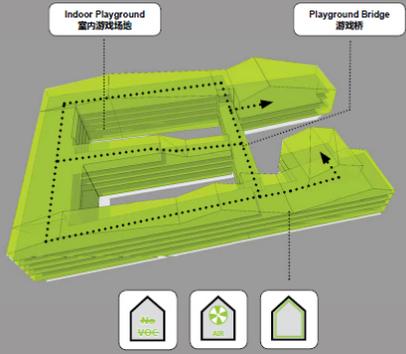
The school will be a new construction project on an existing lot. Given the typology of the current compound layout (individualized buildings) and the state of existing construction (basic concrete structure, no HVAC system), it has been decided to start construction from scratch after demolition of existing campus.

A new typology and volume will be able to answer to comfort and health concerns while offering economic scalability to reach sustainability goals. Key concepts of the design were:

- Integration of nature inside and outside the building (including large learning roof farm)
- Synergies of functional zones (e.g. canteen / playground, sports ground / park, roof / farm, bridge / outdoor playground)
- Single volume with internal playground and gathering spaces to be able to operate independent of external air quality
- Optimization of envelope to volume ratio to minimize energy consumption independent of HVAC system
- Economic Scalability in HVAC system and envelope specifications (air-tightness and insulation thickness)



Street Facade:
Streetfront with entrance, drop-off and bicycle parking area

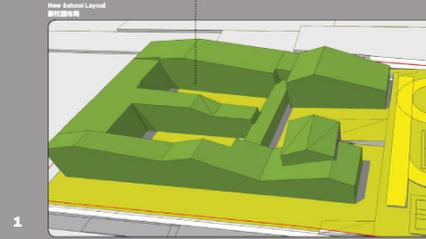


Basic Concept:

Design volume, envelope and technical systems so that school can operate autonomously



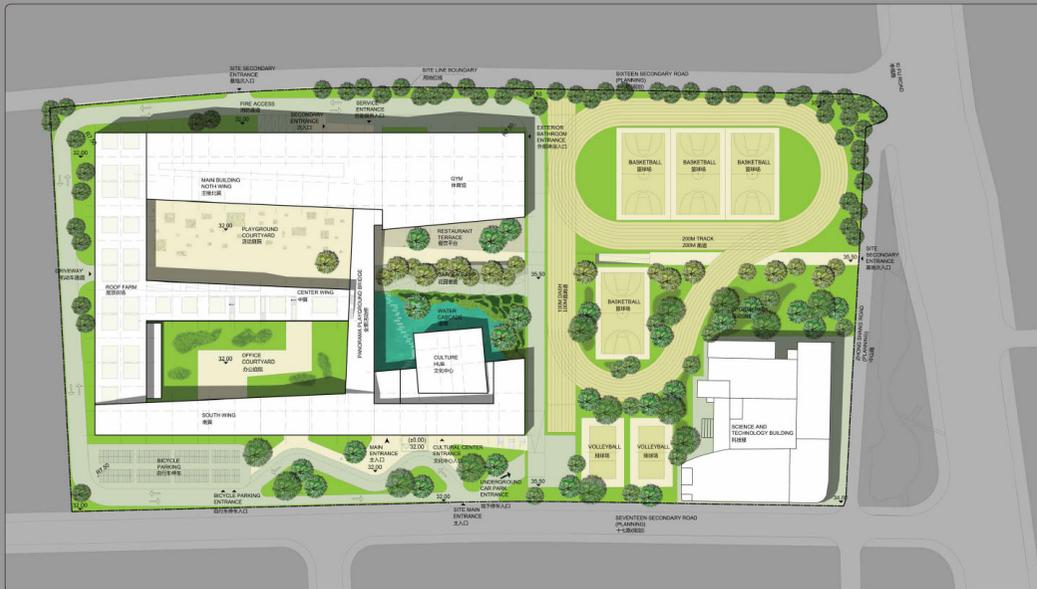
30%
Saving in Energy, Operational Cost, Construction Cost
节能、省费、降低工程造价



1



2



Master Plan:

optimized layout for energy efficiency, sheltered generous outdoor spaces and synergies of sports ground and recreational park



3



- Barrier-free Entrance
无障碍入口
- Barrier-free Corridor
无障碍走廊
- Tactile Paving
触觉铺装
- Barrier-free Restroom
无障碍卫生间
- Barrier-free Corridor and Door
无障碍走廊和门
- Barrier-free Stair
无障碍楼梯

Design Targets:

- 1 Integrated volume saves up to 30% of exterior surface compared to existing campus layout, translating directly into energy savings
- 2 Envelope specifications and technical systems comparison of retrofit and new construction options
- 3 Internal and External features integrating nature into learning environment
- 4 Considerations of high-quality barrier-free design solutions for an inclusive building even for sick / handicapped pupils



1



2



2



Close-up Views (Top):

- 1 roof-farm, courtyards and playground bridge
- 2 culture hub courtyard

Aerial View:
with main building and sports park

Selected Projects

ARCHITECTURE

Mixed-Use, Office + Retail

ARCHITECTURE

YANGPU RIVERSIDE DISTRICT

Project Data:

| | |
|------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Total Site Area: | ca. 110.000m ² |
| Total GFA: | ca. 190.000m ² |
| Location: | Shanghai Yang Pu District, China |
| Land Use: | Commercial, Office, Retail |
| Features: | Conversion of existing Warehouses into Riverside Community with public park. Architectural studies based on variety of business models and marketing strategies. |
| Scope of Work: | Master Plan Design, Architectural Concept Design |

Project Overview:

The project consists of a riverside site with industrial heritage and the adjacent, now already vacant lot. Located in perfect visibility from Yangpu Bridge and forming the northern end of the North Bund Development, the retained warehouse structures are re-used to give the project a unique sense of place and establish it as a new Yangpu centre and city-wide destination.

At the core of the business concept is a Wine Market within a 120m long warehouse structure. In the present state, the warehouse's city side facade has been largely demolished, revealing its steel structure beneath, while the riverside facade still stands as a patchwork of original brickwork and decorative elements, later fillings, re-fittings and multiple alterations. Using these impressionist patterns in order to break down the scale of the warehouse, the seemingly random current openings in the facade were envisaged to be filled with shining copper panels and frames creating an assemblage of contrasting old and new textures, equipping each riverside shop unit with a unique geometric expression within the entire warehouse facade. The city side is nearly entirely clad with small, square copper panels creating a stunning super-size billboard right in the sight line of arrival, opening up on ground floor to an open plan wine market. On second floor, the Wine Academy and Grand Ballroom complete the experience and allow for a larger variety of events, promotions and performances attracting a wider range of customers.

The adjacent city-side lots were developed as Gateway Towers, an iconic set of office buildings in a park, prominently visible from nearby Yangpu Bridge.



Aerial Views Landmark Towers: view from yangpu bridge over riverbank, wine market and business park.

KUNMING LANDMARK TOWER

Project Data:

| | |
|----------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Site Area: | 30,000 m ² |
| Total GFA: | 240,000 m ² |
| Location: | Kunming, China |
| Land Use: | Mixed-Use |
| Features: | Office Landmark Tower, 5* Golf-Hotel, Soho Building, Office High-rise, Financial Services Street, Conference Centre and Retail Landmark Tower would be Kunming's highest building to date. |
| Scope of Work: | Urban Planning Concept |

Project Overview:

Situated in central Kunming in close proximity to Cui Hu this project features the tallest building in Kunming to date.

The Landmark Tower will be the 160m tall icon of a multifunctional but closely integrated inner urban development. While the Landmark Tower will provide spaces for offices and a hotel, surrounding high-rise complements the program and spatial composition: a 5* Golf-Hotel, A-grade Office and a Soho Loft Building each around 100m tall.

The Tower's main feature is its cantilevered Sky-Gardens with western light and panoramic views towards Cui Hu lake and Xi Shan (West Mountain). By rotating the floor plate Sky-Gardens are generated on one side while a overhead glazed Lobby is generated on the opposite building side, providing stunning views up along the façade towards the sky.

Kunming's fame for nice weather and reputation of Flower City further have been driving the landscaping and public space design. The Podium, holding financial services, retail and a large conference centre features a large green roof composed of three distinct, separated areas: a roof golf practice area run by the hotel with adjacent pro-shops and training facilities, an outdoor conference garden served by a roof cafeteria, and a public roof garden with steps leading down into the all-year-blooming flower plaza creating an open amphitheatre for temporary performances and dramatic main entrance to the Landmark Tower.

Aerial View:
Main tower, SoHo building, retail podium, conference center



Street Level View:
Plaza, retail podium with roof garden



XI'AN YAHE CENTER

Project Data:

| | |
|----------------|------------------------------------------------------------------------------------------------------------------------|
| Total GFA: | ca. 250,000m ² |
| Location: | Xi'An, China |
| Land Use: | Office Landmark Tower, Commercial Area, Residential |
| Features: | 2 Alternative Designs of Landmark Tower and associated Podium Scheme A: Inverted Skyline Scheme B: Dragon Garden |
| Scope of Work: | Master Plan and Architectural Concept |

Project Overview:

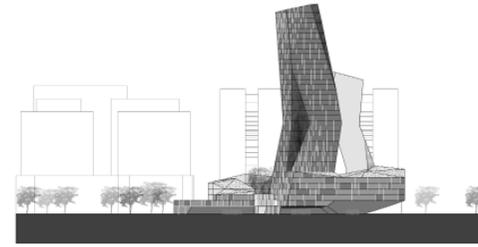
Scheme A: Inverted Skyline

Designed as an "inverse Skyline" the scheme generates a simple strong identity for a series of high-rise to form a skyline. Landmark Tower and adjacent high-rise fold and create a dramatic, sculptural podium full of natural light away from the noise of the street. The angled plan reacts directly to surrounding existing walkways and maximizes connectivity.

Scheme B: Dragon Garden

Like two Dragons or the petals of a Lotus Flower, the Landmark Tower is composed of two intersecting elements, creating a unique, vivid skyline. The Podium is a continuation of this design strategy and generates a pedestrian flowing loop that takes visitors deep into the site providing a lush internal garden sequence.

Scheme B:
Aerial Perspective



Scheme B: Working Model Views and Principal Elevation

Scheme B: Perspective of Main Entrance



GUANGXI WORLD FINANCIAL LANDMARK TOWER

Project Data:

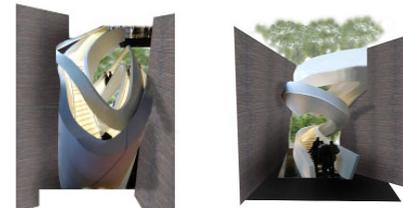
| | |
|----------------|-------------------------------------------------------------------------------|
| Total GFA: | ca. 250,000m ² |
| Location: | Nanning, China |
| Land Use: | Office / Hotel Landmark Tower with Commercial Podium and Soho Offices |
| Features: | Simple, Cost-efficient Construction of 400m Tower with high cultural Identity |
| Scope of Work: | Master Plan and Architectural Concept |

Project Overview:

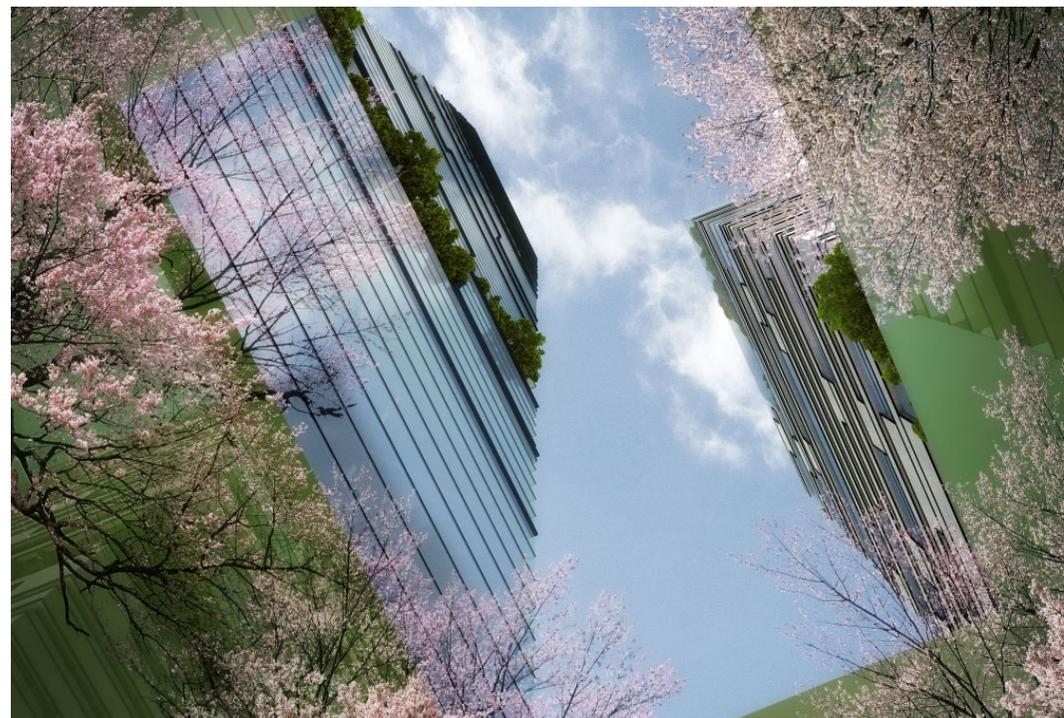
As a new Nanning landmark, the Guangxi World Finance Center should also act as an icon representing Nanning's ASEAN conference series. It is thus imperative for the landmark tower to make best possible use of the sightlines from motorway and exhibition centre in order to create a strong and positive image for the city, China and South East Asia.

The concept reflects this challenge in a series of themes and motives relating to the physical and imaginative context of the site's potential, city's character and building's function:

- 1 The Gate to South East Asia
is reflected in the general volumetric distribution. Landmark Tower, Soho Tower and raised Podium act as gate.
- 2 The Chinese Skyscraper
is reflected in the Pagoda-like facade. Gardens and Lightlines get denser towards the top like folds of a pagoda.
- 3 Green Nanning
is reflected in the concept of open gardens, winter gardens and green balconies. A tower in the park.
- 4 Nanning's Signature Tree and Flower
is reflected in the podium features: almond tree courtyard and the artificial access "flowers" of stairs and lifts.
- 5 Multicultural Nanning
is reflecting in the total of 52 cut-outs in the project matching the number of Nanning Minorities.



Collage of sculptural Access Points: Interwoven stairs, escalators and elevators reminiscent of "Flower Petals"



View from Almond Tree Plaza towards Sky: Landmark Tower and Soho Tower

View from Park: Landmark Tower Silhouette and Almond Tree Boulevard leading towards Podium (left)

View from Shaded Podium Plaza towards Park: Main elements are the sculptural access points and the Almond Tree Plaza





Elevation: North View from main approach road

Night View from Main Road: pagoda principle as light sculpture



NANMEN DISTRICT MASTERPLAN

Project Data:

| | |
|------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Total Site Area: | ca. 60,000m ² |
| Total GFA: | ca. 200,000m ² |
| Location: | Jiang Yin, China |
| Land Use: | Office, Retail |
| Features: | New Gateway to Nan Men District with 200m Landmark Tower, Integration of indoor Shopping Mall and outdoor high-end Boutique Retail by "Shaded Lane" of freestanding canopies, Link of entire retail area to existing heritage of Nan Men Village |
| Scope of Work: | Urban Master Plan and Landmark Tower Architectural Concept Design |

Project Overview:

The Site itself lies to the immediate south of the historic Old City which continues to be Jiang Yin's commercial and civic centre today. However, the project has a much larger potential than being simply a southern extension to the city centre. It will become the Gateway allowing to revitalize the historic Nan Men District, an area famous for trade and deeply connected to the city's past and present prosperity.

The urban design follows three distinct historical motives: firstly, the motive of Gates, Plazas and Lanes. Secondly, the motive of the Woven Silk. Gates and Plazas are prime historic elements of the Chinese city, which also goes for Jiang Yin. Nan Men district carries this tradition even in its very name and the historic lane in the remaining riverside village is already marked with a gate and has more gates leading off into smaller lanes.

The motive of the woven textures of locally produced products was taken as an organizing principle for built volumes and circulation. Larger Buildings all stretch in an east-west direction maximizing impact by the southern sun and giving a clear directional pattern to the development.

The tower's load bearing structure is a vertically oriented organic pattern with a random quality to it. It is combined with the façade pattern defining the enclosure of the actual usable space with a clearly horizontal subdivision. Both these elements behave in a fluid, 3-dimensional way which creates a series of unique spaces in the offset or weave between structure and façade. This geometric irregularity is deliberately placed and corresponds directly to special functional zones such as main entrances, conference centres, hotel lobby and spa areas.

Signature Tower:
Street level view and close-up facade detail.



ONE HUAIHAI ROAD

Project Data:

| | |
|----------------|--------------------------------------------------------------------------------------------------------------------------------------------------|
| Total GFA: | ca. 6,500m ² |
| Location: | Shanghai, China |
| Land Use: | Retail |
| Features: | Complete make-over of existing shopping mall with new interactive wood-panel facade, new circulation and shopfronts. Kinetic, performing facade. |
| Scope of Work: | Architectural Concept Design, Schematic Design, ongoing Supervision |

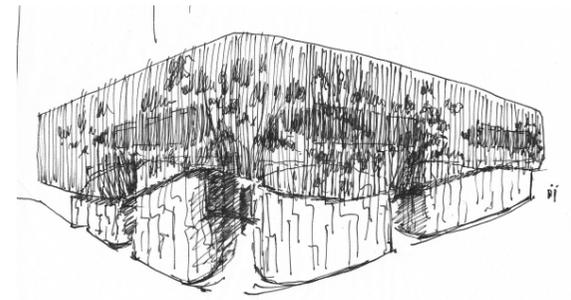
Project Overview:

Huai Hai Road is - alongside Nanjing Road - Shanghai's most prestigious retail location, developing fast into a Chinese Fifth Avenue, Aoyama or Oxford Street. The building is situated at Number One, Hui Hai Road - an iconic address and entrance to this evolving metropolitan shopping street. The previous low-standard electronics mall has closed for good leaving behind an uninspiring facade and bad interior layout.

A series of parameters had to be balanced: creating a new interior circulation layout while keeping as much of the structural integrity and owner's requirements, creating a brand-new facade worthy of the location while keeping planning submissions (and as a result volumetric and floor area alterations) to a minimum, creating a real entrance to Hui Hai Road retail environment although the building itself is much smaller than most other malls on Huai Hai Road. As a result, the currently haphazard exterior geometry of the podium building was largely retained and covered with a smooth 2F / 3F to 4F wooden facade acting as a gigantic welcome screen towards the busy Huaihai Road / Xizang Road crossing. On GF to 2F a new curtain wall facade - simpler in geometry yet more transparent and spatially evocative - compliments the tree lined Huai Hai Road shopping sidewalk.

It was one of the project's primary targets to define a contemporary retail elegance beyond screaming, visually polluting LED screens. Instead of a loud, advertisement driven facade (most of which look dead and blank when the LEDs are off during daytime), the screen was designed around warm and elegant wood panels with an extra kinetic quality: areas of the facade display different textures and geometries like an obscure treasure map.

Parts of the facade are made up of wind chimes and wind mills, swaying and chiming in the wind, creating a serene day-time counterpoint to the busy city life. At night, kinetic elements come to life in combination with music and light displaying a celebration of urban space - free of advertisement, a modern version of European market square clockworks that have been attracting people for centuries.



Sketch: original concept sketch



View along Huaihai Lu: nighttime view of main pedestrian corner

Residential, Hospitality + Tourism

ARCHITECTURE

CAMPUS HOTEL

Project Data:

| | |
|----------------|-------------------------------------------------------------------|
| Total GFA: | Site Area ca. 30,000m ² / GFA ca. 75,000m ² |
| Land Use: | Hospitality, Commercial |
| Features: | Five star hotel with dedicated riverside business courtyards |
| Scope of Work: | Master Plan and Architectural Concept |

Project Overview:

Business Hotel located strategically in close proximity to university and High-Tech Park. Landmark tower with extensive podium use as R&D and Co-Working space integrated with conference and convention center. Parkside Business Courtyards allow for themed corporate bookings and other business-tailored events in a relaxed green garden setting.

Podium provides various relaxation facilities including a roof garden panorama deck, numerous restaurants and formal and informal meeting areas.



Aerial View:
Landmark tower, podium, riverside courtyards and business hub.



Aerial View:
Landmark tower, podium, riverside courtyards and business hub.



Entrance Lobby:
Reverse view of podium garden drop-off overhang.

Street View:
Main street retail facade and drop-off plaza.

ZHUHAI BOUTIQUE HOTEL

Project Data:

| | |
|------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Total Site Area: | ca. 30.000m ² |
| Total GFA: | ca. 30.000m ² |
| Location: | Zhuhai, China |
| Land Use: | Commercial on stand-alone lot, Renovation of adjacent Factory Site |
| Features: | Integration with existing mountains, forest and ocean-views, local village facade colours and materials as well as providing a first high-end holiday location within the area. Low-cost facade upgrade of adjacent factory buildings. |
| Scope of Work: | Master Plan and Architectural Concept Design, Schematic Design |

Project Overview:

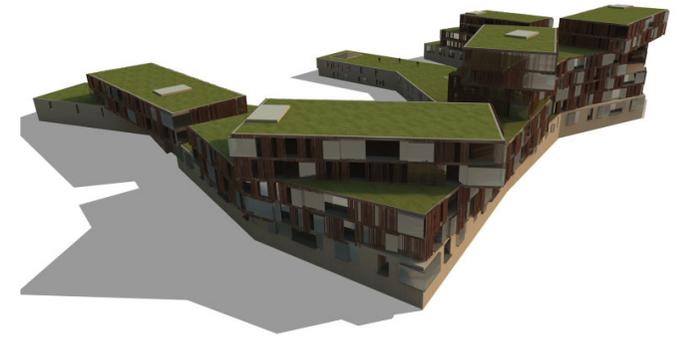
The project has been developed following 2 schemes in parallel. Both are based on a similar functional zoning with a large ground floor parking area (the swamp ground makes below grade parking not a feasible option), most public usage on second floor and rooms / apartments above. Both schemes also directly address the street front with an engaging silhouette and develop a geometry that maximizes views towards the open waters of the South China Sea.

Scheme A

This design achieves stunning views for a majority of units by gently twisting and shifting the building geometry every two floors. Thereby, deck access and roof gardens are generated in a variety of sizes and shapes. The entire centre of the site can be left largely open as a generous courtyard flanked by a uniquely engaging facade. A combination of wood screens, glass and concrete lends the building a rural, yet contemporary appearance, provides shade and a distinct inside and outside facade vocabulary.

Scheme B

While less ambitious structurally, this design achieves similar benefits with a more conventional grid layout based on a generic perimeter block building with a double courtyard. The silhouette is terraced to provide a maximum of units with individual roof terraces and views. The courtyards open up not only by the changing roof contour lines but also provide panoramic glimpses through large, double-height public loggias inserted at strategic locations within the perimeter volume.



Scheme A Volumetric Model (above): meandering volumes shifting every alternate floors
Aerial View (below): geometry adjusted to maximize views to ocean and wetland reserve





Scheme A Streetfront View: uniquely engaging contour along valley road side

BEIHAI MARRIOTT SEASIDE HOTEL

Project Data:

| | |
|----------------|------------------------------------------------------------------------------|
| Total GFA: | Site Area ca. 60,000m ² / GFA ca. 50,000m ² |
| Land Use: | Hospitality |
| Features: | Five star hotel with dedicated conference and recreation facilities |
| Scope of Work: | Architectural Concept, Schematic Design and Construction Drawing Supervision |

Project Overview:

Located at a prestigious new beach location in Beihai, the "Treasure Box" concept of the layout stresses the transition from urban cityscape to natural seaside. Additionally, all facilities and amenities are grouped around and accessed from a central Garden Courtyard - such as lobby, conference facilities, restaurants and fine dining, spa and pool as well as the luxury shopping arcade. Further key concepts include:

- Unobstructed panoramic seaview for every single room
- Provision of VIP Suites with private roof gardens and spa / pool
- Panoramic Pool raised to 2F overlooking park and sea
- Seaside locations and views for all restaurant and F&B facilities
- Wedding Lawn for private and corporate functions with Waterfall backdrop



Recreation Areas:
Main Hotel Building with terraces, seaview VIP Suites,
Cortyard Garden, Spa and Pool, Panorama Bar, Palm Garden with Wedding Lawn.



Seaside Garden:
Family Suite Terraces, Courtyard Garden with Lobby Bar and Seaside Palm Garden stretching to beach

5 - STAR RAILCITY HOTEL

Project Data:

| | |
|----------------|-------------------------------------------------------------------|
| Total GFA: | Site Area ca. 10,000m ² / GFA ca. 60,000m ² |
| Land Use: | Hospitality, Commercial |
| Features: | Five star hotel as new CBD landmark |
| Scope of Work: | Master Plan and Architectural Concept |

Project Overview:

The business hotel is situated along the Nanning city motorway and acts as a gateway to the newly developed RailCity CBD in front of the long-distance train station.

As the site is literally surrounded by city infrastructure, which makes it easily accessible by train and plane from anywhere in China, the design positions the project as a "tranquile island" of calm within the bustling urban environment. This includes:

- Garden Courtyard as relaxing public social meeting space with various al fresco F&B facilities
- Attractive SPA and gym facilities with full views into sunken Garden Courtyard
- Panorama Bar with open-air terrace
- Podium roof-garden restaurants naturally sheltered from surrounding city noise



Night View:
New landmark for RailCity CBD



Aerial View:

Creating a pedestrian emphasis within an infrastructure focused environment

Close-up View:

Island of Calm with panorama bar, podium roof garden and garden courtyard

XIANGSHAN BUSINESS CLUB

Project Data:

| | |
|------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Total Site Area: | ca. 10.000m ² |
| Total GFA: | ca. 12.000m ² |
| Location: | Beijing, China |
| Land Use: | Protected architectural Ensemble, Business Club with individual Club Villas and shared Facilities |
| Features: | Maximal usable area, daylight supply and panoramic views by sunken gardens and roof terraces. Traditional material and colour concept with contemporary design. |
| Scope of Work: | Master Plan and Architectural Concept Design, Schematic Design, Design Development, On-Site Supervision |

Project Overview:

The new Master Plan has been designed closely around the existing buildings scattered on site, preserving the urban character and intimate atmosphere rather than the building's exterior, in most places currently of poor quality. Equally, the majority of trees on site could be retained by minimizing the vehicular access to a single lane circular landscape path, doubling as a landscape feature.

Spatially, the strategy is to create villas that feel individual and rich in character, with sunken courtyards, terraces, balconies, panoramic roofs and intimate nooks and niches, resembling the aesthetic and spatial abundance of the traditional Chinese village while preserving exquisite layout and privacy. Villa's front gardens extend over the landscape path, adding a sense of generosity and openness to each individual club villa as well as the project in its entirety. Divided by a series of unique golden landscape feature walls, the circular access acquires a sense of gateway procession leading from one villa to the next, from one garden into the other.

The rich spatial set up is reflected in the villa's various functional elements: pools, cigar lounges, tea ceremony lounges, meeting and social areas, bedrooms and studies all feature a unique character in each villa, some secluded and secretive, some openly generous, some with stunning panoramas of Beijing city or the directly adjacent Xiang Shan park.



Master Plan Development: view towards XiangShan park



Site: view from XiangShan park summit

Villas E4-E6 and D: most exclusive location on boarder to Xiangshan Park





1



Construction Detail: building B courtyard



2

Construction Detail:
1 recessed punch hole windows
2 frameless windows in facade plane
stone wall, slightly mirrored glass and surrounding nature change appearance in harmony



Construction Detail: building B frameless glass



Villa D: night time view of villa entrance, landscape and xiangshan mountain

LIJIANG VILLA RESORT

Project Data:

| | |
|------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Total Site Area: | ca. 40,000m ² |
| Total GFA: | ca. 50,000m ² |
| Location: | Li Jiang (near Yang Shuo), China |
| Land Use: | Villas, Townhouses, Apartments, Resort Centre with Boutique Hotel |
| Features: | Three separate lots linked by footpaths and landscape features, village character of small lanes typical for the area, materials derived from traditional local architecture |
| Scope of Work: | Urban Master Plan Design, Architectural Concept Design, Architectural Schematic (SD) Design |

Project Overview:

Li Jiang Resort consists of three different sites nestled within the lower slopes of a riverside mountain range near Yang Shuo in Guangxi province. The project's starting point was to preserve and enhance the natural beauty of the sites with its abundant nature, large trees, gently dropping rice terraces and, of course the panoramic views across the Li Jiang River.

In a first concept, a system of courtyard, townhouse and villa-cluster typologies have been designed in order to maximize private outdoor space and providing various intimate relationships of inhabitants with the natural surroundings within and beyond their own property. This strategy also lead to a grid layout of the villas generating small, sharply winding lanes reminiscent of the beautiful traditional mountain villages in the area. Another inspiration derived from the vernacular architecture was the predominant use of stone and wood, however in a modern adaptation with applied geometries and typologies allowing for a much more three-dimensional configuration of terraces, loggias, courtyards and gardens, all intersecting and flowing one into the other.

The final design for SD took a turn towards a more conventional single villa layout. Although the original typology changed to a much more straightforward volume, the layering of stone base and light-weight wooden volumes with their balconies and roof terraces remains a distinct feature of local culture. Products vary from single free standing villas to double-villas, duplex villas and townhouses, all following similar aesthetic principles. Since the master plan has been laid out from the start as a series of slightly stepped volumes, all villas feature panoramic views and large private gardens.

Completing the resort program are a series of apartment buildings and a boutique hotel situated at the highest and smallest of the three sites.

Conceptual Aerial View: various typologies clustered to form contemporary interpretation of local mountain village



Conceptual Detail View: villages as a maze of small lanes, courtyards, terraces, roof gardens and surrounding scenery



GOLDEN BRIDGE VILLAS

Project Data:

| | |
|-------------------|------------------------------------------------------------------------------------------------------------------|
| Site Area: | 16 ha |
| Total GFA: | 55,000 m ² |
| Number of Villas: | 143 |
| Location: | Shanghai, China |
| Land Use: | Residential Villa Development with Commercial Facilities. |
| Features: | Central Wetland Garden, Playground-Streets, 4 different Villa Types, Commercial Zone with Zen-Garden Courtyards. |
| Scope of Work: | 1st Prize Competition Entry for Design Urban Planning, Architectural Concept, Landscape Concept |

Project Overview:

The residential master plan is developed along the idea of "public activity streets": all streets except the ring street have different character and act as public activity surfaces for relaxation, exercise, children's play. The pathway network extends into further distinct zones with different character and atmospheres: the northern Zen-Garden is a shared calm space providing retreat for the residents and green garden views for the public commercial area. A dense forest adds yet another experience for jogging and playing as well as buffering against noise from the southern main street.

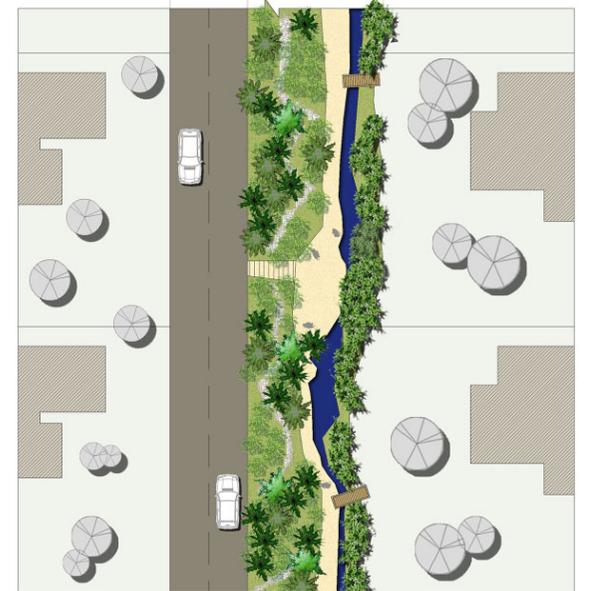
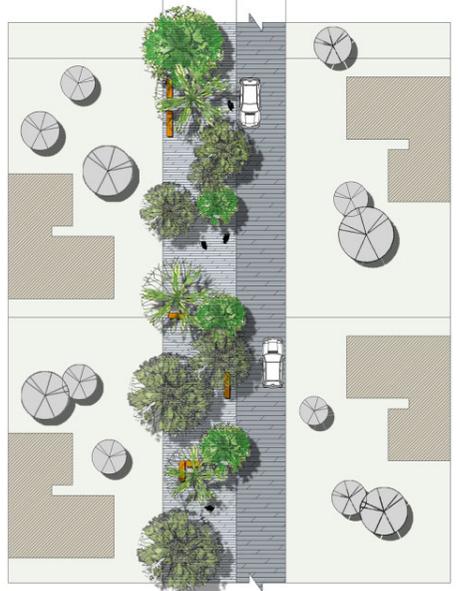
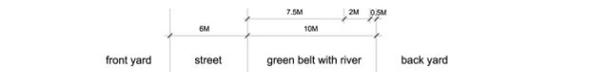
Canal system and Wetland Park form a closed controlled integrated water management system including on-site storm water treatment, natural filtration and ground water aquifer recharge as well as providing the vegetation for wildlife habitat and a really natural feeling in the heart of the development.

The Villa architecture was developed borrowing from traditional Chinese elements – such as screen walls, courtyards and gardens – and finding a contemporary articulation that allows for intimacy, natural light and a feeling of the surrounding vegetation being present even within the building. Doing so not only blends inside and outside via a series of courtyards, half-courtyards, loggias, decks and terraces but also maximizes sunlight and solar energy gains while preventing overheating through flexible shading devices. Individual lots are not fenced and hedges are not allowed in order to generate a visually and spatially integrated community. Canals and small naturally winding creeks, screens included into the architecture and orientation of buildings guarantee the privacy and integrity of each lot.



Master Plan: connected waterways and greenspaces around central wetland garden

Street Scapes: street scapes become usable public spaces for playing, each street has a different identity.



Perspective Wetland Garden
Perspective Villa Type 1



Typical Villa Interior with screened Glass Wall interior Garden



FANGCHENGGANG RESIDENTIAL

Project Data:

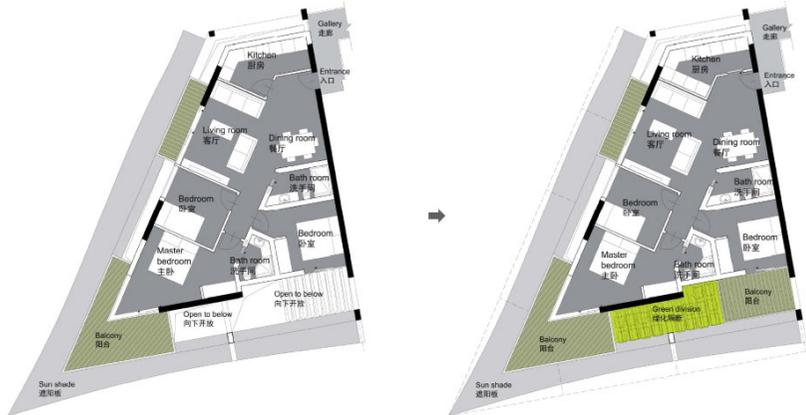
| | |
|------------------|----------------------------------------------------------------------------------------------------|
| Total Site Area: | ca. 10.000m ² |
| Total GFA: | ca. 52.000m ² |
| Location: | FangChengGang, China |
| Land Use: | Residential / Commercial |
| Features: | Residential high-rise with optimized panoramic sea views, deck access and ground floor retail area |
| Scope of Work: | Master Plan and Architectural Concept Design, Schematic Design, Design Development |

Project Overview:

The site's most prominent feature is its location directly along the sea shore. However, the site's long axis stretches perpendicular to the shore line and surrounding lots will be built-up with high-rise. The project's challenge was therefore to provide highly attractive apartments making best use of the panoramic views and integrating them with an attractive 2-floor commercial podium and 3F office floor.

All apartments - sized from 80m² to over 160m² duplex units - are served by an open deck access from the less attractive north side and open towards the south-west with room high windows and generous balconies. The geometrically tilted shape optimizes views towards the open sea and also provides structural stability for the entire development.

A commercial podium provides local retail and spaces for F&B making use of roof gardens and decks overlooking the sea. An array of office units is provided in the 3F separation of podium and residential volume.

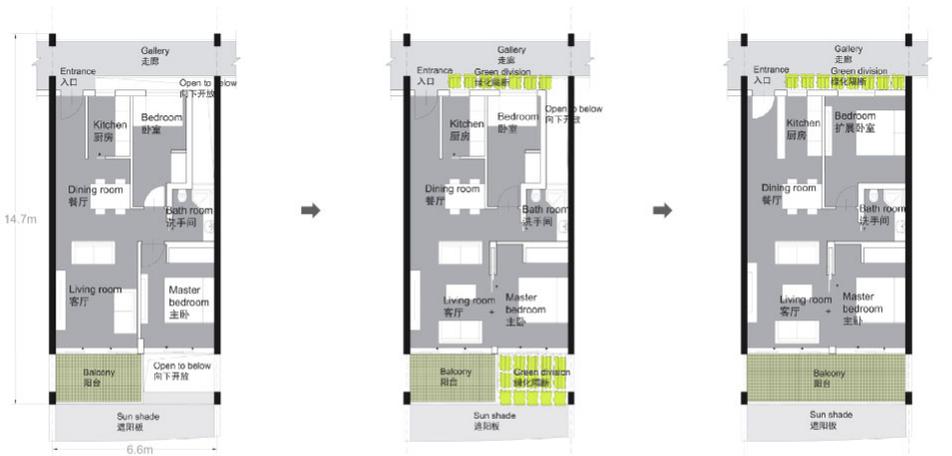


Type C1 户型 C1: 114.3 sqm

3 bedrooms, 2 bathrooms,
living room, kitchen, dining room
3 卧室, 2 卫生间, 客厅,
厨房, 餐厅
89 sqm indoor
套型面积: 114.3 平米
套内面积: 89 平米

Layout Option 1

策略1
Sky garden, expand
balcony
增设入户花园、绿化隔断、扩展阳台



Type A 户型 A: 83.8/85.8 sqm

2 bedrooms, 1 bathroom, living room,
kitchen, dining room
2 卧室, 1 卫生间, 客厅, 厨房, 餐厅
65.6 sqm indoor
套型面积: 83.8/85.8 平米
套内面积: 65.6 平米

Layout Option 1

策略1
Sky garden, combined living
room and master bedroom
增设空中花园、绿化隔断
客厅主卧二合一

Layout Option 2

策略2
Sky garden, expand bedroom,
Combine living room and master
bedroom, expand balcony
增设绿化隔断、扩大次卧, 扩大阳台
客厅主卧二合一

Typical Apartment Typology Plans:

Different typologies within residential floors, all with deck access and sea view panorama terraces.



Street View: Liquid facade texture and commercrail podium

BEIHAI RESIDENTIAL APARTMENTS

Project Data:

| | |
|------------------|---------------------------------------------------------------------------------------------------------------------|
| Total Site Area: | ca. 13,500m ² |
| Total GFA: | ca. 71,000m ² |
| Location: | Beihai, China |
| Land Use: | Residential and Commercial |
| Features: | 6 Apartment Towers situated and arranged to maximize panoramic views and group around a central activity courtyard. |
| Scope of Work: | Master Plan and Architectural Concept Design, Schematic Design |

Project Overview:

The project's master plan layout aims at combining best views and sunlight direction for the apartments with a comfortable and easy-to-access commercial area as well as providing a vehicle-free, pedestrian only central activity courtyard.

Street-side podium floors host a variety of commercial and F&B units which also serve to activate the central courtyard as a social space within the residential neighbourhood. This landscaped area features decks and greenspaces as well as play-ground areas above the below-grade parking area.

Facades of the retail area feature large glazing areas while facades of the residential apartments are optimized for views and light while also providing shelter from overheating. Apartment layout and windows are positioned to provide a comfortable, natural ventilation through the apartments.



Master Plan Aerial View:

All Apartments are oriented towards the sea and clustered around a central activity garden. Lower floors along the street feature F&B and smaller commercial units.

Sports + Exhibition Venues

ARCHITECTURE

CHICAGO OLYMPICS 2016

Project Data:

| | |
|----------------|-------------------------------------------------------------|
| Site Area: | Various Sites for Chicago 2016 Olympic Games |
| Location: | Chicago, USA |
| Land Use: | Olympic Stadium, Olympic Aquatics Centre and further Venues |
| Features: | Venues are designed as temporary structures. |
| Scope of Work: | Architectural Concept |

Project Overview:

The Chicago 2016 Summer Olympic Bid is focused around a sustainable master plan and green, mostly temporary venues as originally developed by Ben Wood Studio Shanghai in 2006/2007. Temporary venues include the Olympic Stadium situated in one of Chicago's oldest parks and further major facilities like the Olympic Aquatic Centre as well as the Water Polo and Cycling venues.

Complementing the Stadium, the Aquatic Centre occupies the north-western corner of Washington Park. The design focuses on modular components and recyclability of the lightweight structure as well as membrane materials. The overall impression of the swimming hall is open, sunlit and provides views for all visitors towards the old tall trees of the park. Developing a general "look and feel" strategy for the Olympic Venues, the Aquatic Centre – as well as the Water Polo and Cycling venue – is based on the theme of the typical American porch. The "front porch" for the Aquatics Centre is an enormous 200m long, wide deck facing the Olympic Stadium and Washington Park's main open lawn. This is where people can come together, eat and meet during the Games in a uniquely American way, making the best of Chicago's legendary summers.



Aerial Perspective: addition of Aquatic Centre

Aerial Perspective: Olympic Stadium in Washington Park (original scheme)



GUILIN FOOTBALL PARK

Project Data:

| | |
|------------------|----------------------------------------------------------------------------------------------------------------------------------|
| Total Site Area: | ca. 175.000m ² |
| Total GFA: | ca. 50.000m ² |
| Location: | Guilin, China |
| Land Use: | Sport Facilities, Leisure Greenspace, Retail |
| Features: | Re-sizable Stadium (30.000 - 40.000 spectators) with multifunctional usage embedded into multi-programmed Sports Park landscape. |
| Scope of Work: | Urban Design, Architectural Concept Design |

Project Overview:

Guilin Football Park is a new development on the outskirts of the city comprising a football academy, football museum and interactive experience, practice facilities and so on. This project targets the design of the Football Park's main area including the stadium, indoor stadium and adjacent Sports Park.

It has been a primary target of the design to utilize Guilin's reputation as a top touristic destination to link in with the football experience. Flexibility of the stadium use - a first of its kind - and the deliberate integration of wellness, retail and F&B in the adjacent Sports Park both play a vital part in generating a destination attracting football enthusiasts, hobby players and their families and friends alike.

The Stadium can be re-sized offering 30.000 permanent seats including a VIP tier and VVIP Boxes. The concourse is designed and laid out to accommodate an additional 10.000 seats as temporary bleachers. If this full capacity is not needed, the concourse can be used as a 360 degree sheltered and shaded outdoor exhibition space, the inside LED screen providing an extra unique advertisement opportunity. The stadium's skin is derived from local motives (the colour and topography of rice fields as well as the stacked layered roofs of local Zhuang temples), making it a local icon and contemporary landmark, both at daytime and at night.

The Sports Park subtly negotiates the scale of the stadium with restaurants, cafes and wellness facilities (dotted in the park like villages) and a state-of-the-art sports world shopping boulevard bisecting the park on a lower level (not counting GFA).



Master Plan Aerial View:

Iconic stadium, sports park with village-like pavilions and embedded 5-sided pitches.

Sports Park Aerial View:

Negotiated scales between stadium as backdrop and human-scale village plazas and lanes in the park.



EXPO PAVILION SHANGHAI

Project Data:

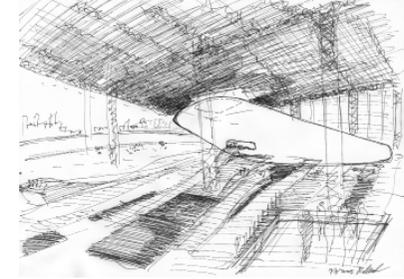
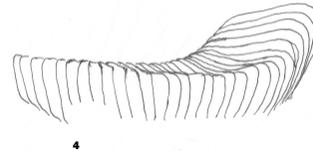
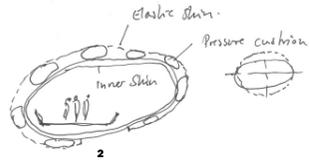
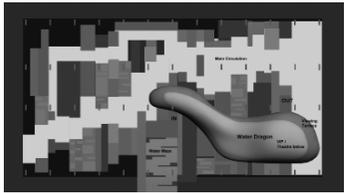
| | |
|----------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Site Area: | EXPO 2010 Shanghai |
| Total GFA: | ca. 4,500 m ² |
| Location: | Shanghai, China |
| Land Use: | Temporary Exhibition Pavilion inside existing Shipyard Workshop |
| Features: | Urban Reuse concept for Shipyard, Workshop and Dry-Dock EXPO Pavilion as kinetic sculpture with interactive, movable membrane skin Competition included Museum Concept for post-EXPO use |
| Scope of Work: | 1st Prize Competition Design for Urban Concept, Commission for Architectural Concept Design, Technical Feasibility Study |

Project Overview:

The Plaza was conceived of like a sculpture garden featuring real parts of freight ships and oil tankers: tanks, machine parts, turbines and other artifacts that impress by sheer size. We wanted no ship, no cross section of a ship – but parts of them that are at first sight not easily identifiable in order to create a mystic feeling of history and scale, driven by the visitor's curiosity. We suggested an entire fleet of disused Su Zhou Creek barges. In our re-use plan, they would find their final destination in the dry-dock, loaded with fertile soil instead of bricks and sand, turned into lush green floating gardens along with sculpted glass panorama platforms cafes and service facilities.

Functionally, the "Water Dragon" Pavilion is a light-weight skin structure housing an open plan exhibition area, a panoramic VIP Lounge and Viewing Deck looking out towards Huang Pu River. Technically, it is a double membrane textile skin on a metal supporting structure. The space between both flexible membranes is occupied by a series of interconnected cushions which can be de- and inflated by air pressure. This causes the entire skin to move constantly. The exact movement is interactively generated by the visitors. The skin is translucent, so that viewers from outside get a sense of people moving inside and visitors inside still get a faint sense of the gigantic workshop structure they are in.

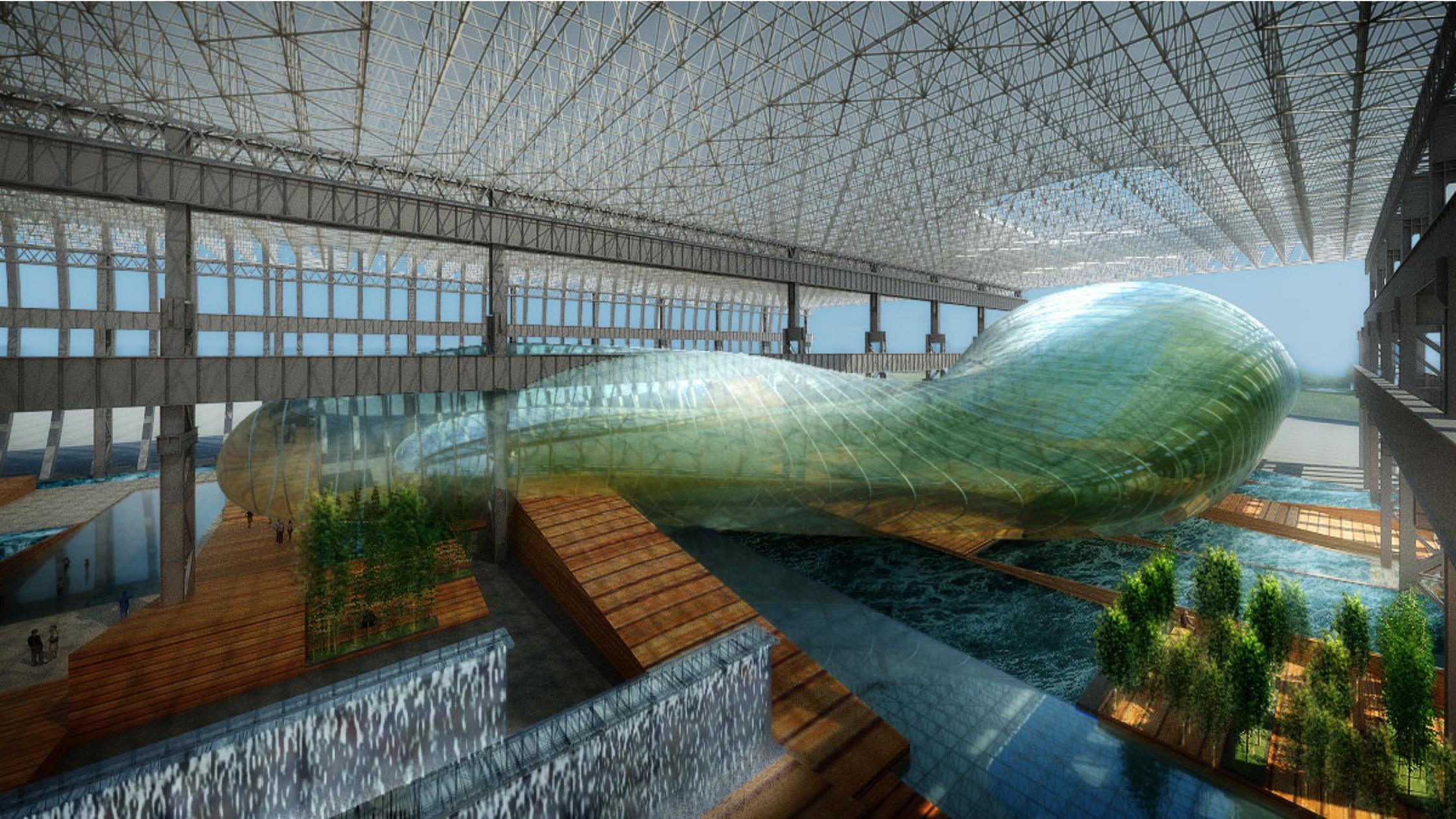
Parts of the workshop interior were to feature large (approx. 20-35m wide) suspended super-high-resolution photographic prints of shipbuilding scenes. Some of the elevated parts of the frozen wave landscape would feature telescopes for people to view these prints and discover the beauty of the detail, right down to the sweat and blood of the shipbuilder, hidden in this gigantic industrial scale scenario.



Technical Concept: 1 plan view 2 inflatable air-cushions sections 3 air-cushion pattern 4 membrane seam pattern

View of "Water Dragon" Concept Study: principle concept of inflatable air-cushions below elastic outer skin membrane (below)

Concept Sketch: floating water dragon on frozen wave scape



CHANGSHA EXHIBITION CENTER

Project Data:

| | |
|------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Total Site Area: | ca. 300,000m ² |
| Total GFA: | ca. 80,000 m ² |
| Location: | Chang Sha, China |
| Land Use: | Exhibition, Retail, Tourism |
| Features: | Flexible Indoor / Outdoor Exhibition Hall with Signature Roof, Grand Exhibition Terrace, All-Ground-Floor Shopping Mall with lakeside F&B Food Harbour, Convention Centre and Festival Island. |
| Scope of Work: | Urban Master Plan and Architectural Concept Design for Exhibition Halls |

Project Overview:

Chang Sha's unique past, present and future are translated into architectural motives, which form the canvass for green building technology, efficient operations and a highly iconic aesthetic! These historical or contemporary motives are taken as a framework from which specific technological aspects, functional and aesthetic qualities are developed as an integrated system.

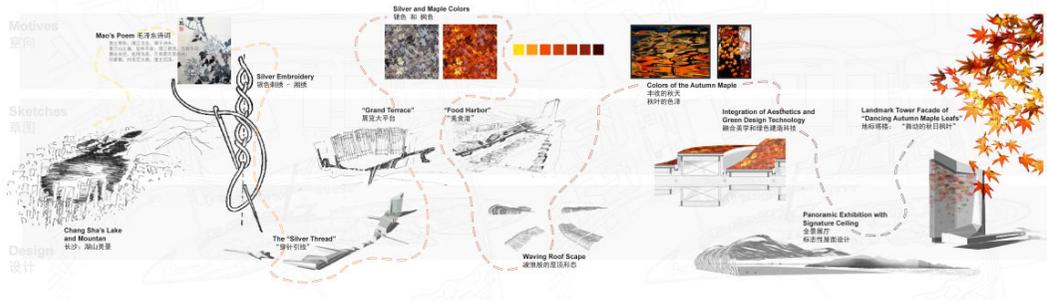
Exhibition Halls: Roofscape, ceiling geometry, connecting voids and cores are all integral parts of a tailor-made green climate control and energy efficiency concept.

Silver Stitching: Chang Sha has a great tradition of craftsmanship. The "silver thread" is architecturally expressed by silver metal surfaces, a winding geometry connecting all functional areas along the lakefront.

Food Harbour: Similar to the Grand Terrace, the Food Harbour draws its attraction more from immediate sensation rather than interpreted symbolism.

Lakeside Mall: Notably, the layout generates a unique one level shopping mall, without elevators and b-rate retail spaces: it is a "all-ground-floor" retail mall with hundreds of metres of lakeside frontage.

Hotel and Offices Landmark Tower: If the exhibition area is the largest, most important landmark of the project, the Hotel and Office Tower is the highest. The waving exhibition roof scape is a repeated motive on the hotel tower's facade.



Patterns and Motives: interconnected themes, functions and technologies

Exhibition Area: all halls are arranged alongside a grand panoramic outdoor exhibition terrace with its silver stitch food pavilions

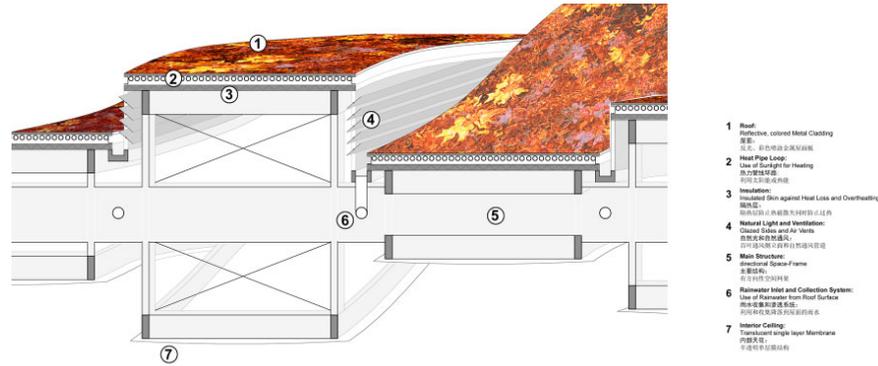


Conference Centre: lakeside conference centre with marina



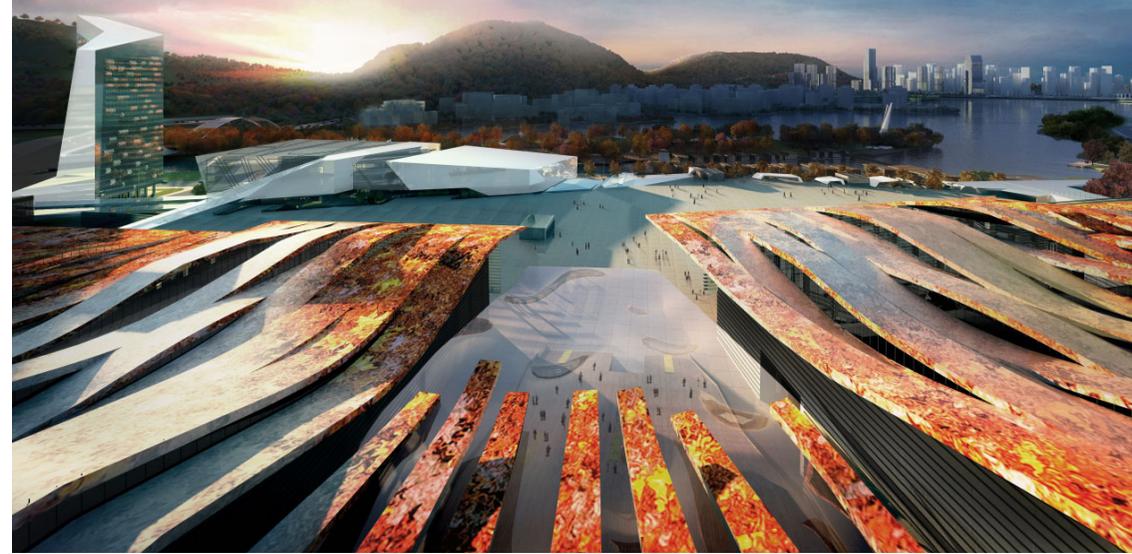


3D Section: two-level exhibition halls with roof scape and scenic relations



Roof Scape: main technological components of woven roof scape

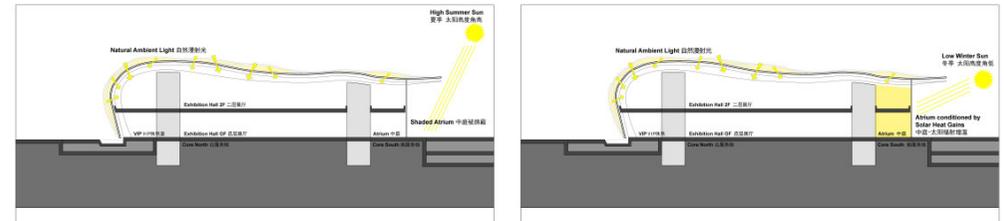
Exhibition Halls Roof Scape: seen from city highway side



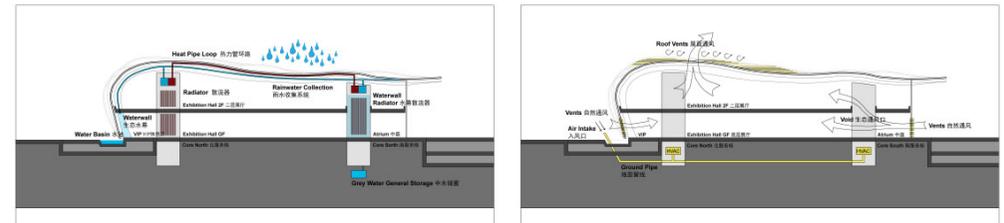
Roof Scale Detail: covered exhibition plaza and view across panoramic outdoor exhibition terrace



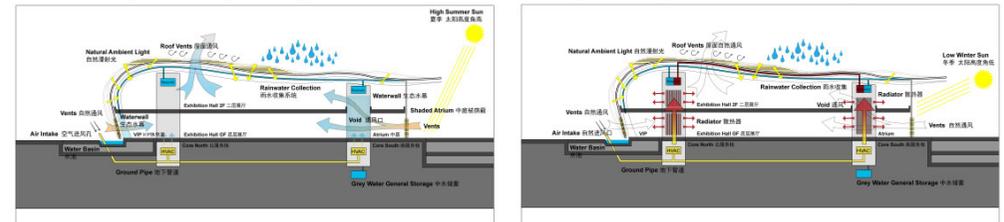
Solar gains and natural Light: scenarios of natural ambient light, shading and passive solar gains through roof and facade geometry



Rainwater Usage and natural Ventilation: combined energy saving water and ventilation management



Integrated Building Technology: summer / winter scenarios of interacting water management, ventilation and solar power



Interior Fit-Outs

ARCHITECTURE

HONGQIAO TOWNHOUSE

Project Data:

| | |
|----------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Total GFA: | ca. 350m ² |
| Location: | Shanghai, China |
| Land Use: | Residential |
| Features: | Entire integrated fit-out including materials, surfaces, structural changes, furniture, building technology, lighting design and acoustic optimization to create a comfortable and elegant home. Extensive use of reclaimed materials, environmentally friendly products and energy-efficient technical building systems. |
| Scope of Work: | Architectural Changes Concept, Design Development and Site Supervision Interior Design Concept, Schematic Design, Design Development, Site Supervision Building Technology Concept and Implementation |

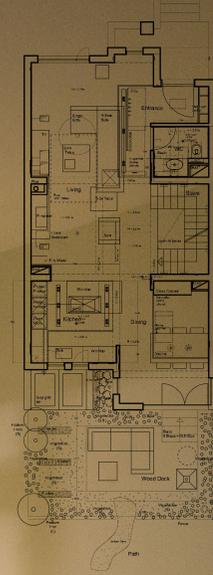
Project Overview:

The townhouse re-design and fit-out was targeted as a holistic approach around the key terms of spatial comfort, uniqueness and efficiency. A further integral aspect was to save and re-use resources, such as the wooden floor made out of reclaimed ship deck planks, re-used original glass door for dining room extension and energy saving LED lighting throughout.

Architectural changes were kept to a minimum of taking out unnecessary walls; the exception being two new extensions on GF (dining area) and 3F (master bathroom), both enlarging the available area considerably and creating a close relationship with outside garden and roof terrace.

All interior items - from surfaces to colours, furniture and lighting - have been designed to complement each other and synergize spatially as well as technically. Design has been controlled to the 1:1 detail with a range of tailor-made yet inexpensive solutions, such as the LED stair light fixtures, the recessed bathroom shelf lights, living room cantilevered concrete sideboard, floor-to-ceiling bamboo glass panels, frameless glass balustrade and double-glazing glass extension.

Floor-Heating and cooling, alongside peak-time water based fan coils, is provided by a 100m deep geothermal heat pump. Dehumidification is supplied by a central AHU. This approach provides a comfortable and flexibly controllable room climate as well as keeping facade and garden completely free of technical appliances and related piping. Additionally, the HiFi acoustics in the living room have been calculated and improved with simple features tailor-made to the room layout for best musical performance.



Ground Floor: overview plan

Open Plan Ground Floor: living room lounge area with real wood fireplace



Open Plan Ground Floor: fireplace lounge, kitchen, dining area and staircase



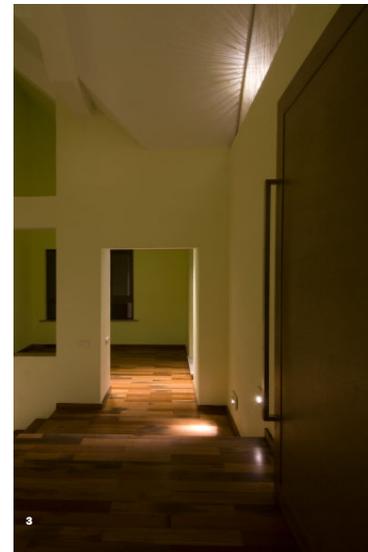
Master Bedroom: 1.10m frameless pivot door and two bamboo-glass "lanterns" above master bathroom and dresser



1



2



3

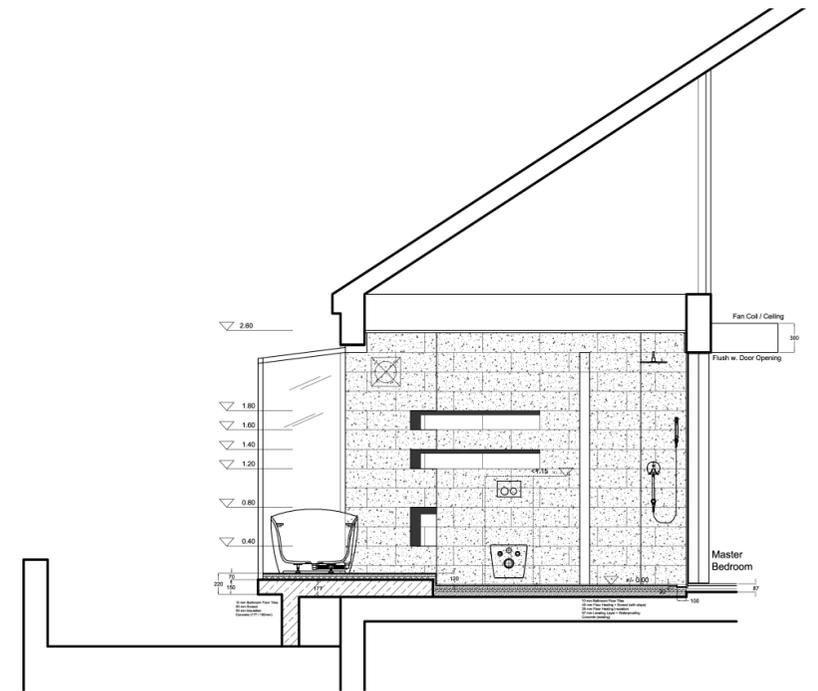


4

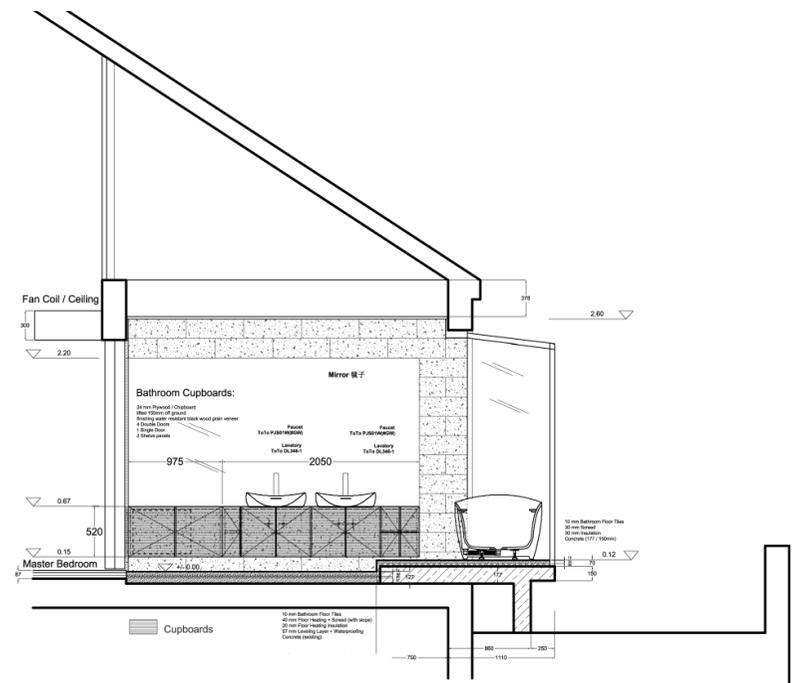
Master Bedroom Gallery: typical material details:
1 detail bamboo glass and wooden floor 2 entrance to master bedroom
3 open study 4 ceiling detail of bamboo-glass "lanterns"



Glass Addition: bathtub with panorama and sky view in frameless double-glazing glass addition



Master Bathroom: east elevation with stone tile wall and shower



Master Bathroom: west elevation with one piece mirror and cupboards



Staircase: view from 3F with LED down lights and spiralling frameless glass balustrade

Previous Work

ARCHITECTURE

SACRISTY WALLDORF

Project Data:

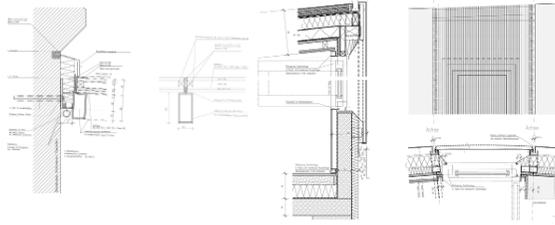
| | |
|----------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Total GFA: | ca. 65m ² |
| Location: | Waldorf, Germany |
| Land Use: | Culture / Religion |
| Features: | Extension Building to listed 19th century neo-gothic Church in town centre. Clear geometry is derived from the church's features and activates the town plaza. Integration of lighting design in and outside building, collaboration with artist on design of curtain glass windows. |
| Scope of Work: | Architectural Design (all Phases from Concept to Construction Supervision) |
| Client: | Stadt Waldorf / Evangelische Kirchengemeinde Waldorf |
| Employer: | Fuchs Planungs AG, Weinheim (Germany) |

Project Overview:

Situated in Waldorf's town center, the neo-gothic 19th century protestant church was in need for a sacristy addition. The newly designed extension – although only 64m² in size - had to address a multitude of interrelated issues:

Composed of a stainless steel shell and a fully transparent structural glazing roof between the shell and the church façade, impacts to the existing building are literally minimized to a few bolts and one horizontal waterproofing line within the existing brick work's geometry. The former exterior wall becomes tangible as the interior of the sacristy and from within stunning views open overhead to the top of the church. Internally, the sacristy is divided into three zones, entrance / toilets, community room and minister's room. The dividing non-load bearing closet-walls correspond with the geometry of the church's pillars and provide ample storage space.

In order to give the interior privacy from and yet views towards the public plaza a double layered window was developed of a standard internal element and an open gap outer layer made of four panels per window designed by a Munich artist. The 3 dimensional etchings depict architectural details of the church and are colored beige and blue to correspond with the church's historic windows. Continuing inside the sacristy, the floor up-lights illuminating the façade, glass and color scheme tie old and new together in a vivid harmonious dialogue.



Technical Details:
overhead glazing connection to existing church, structural glazing, window section and elevation, real 3D coloured artist's etching.



Overhead Glazing



View at Christmas Eve: colour scheme of screen windows match traditional painted church windows. outdoor landscape spotlights continue in interior of sacristy.





Dusk Views: spotlights inside building light up church facade

View of Plaza: church garden in back, community hall to right.



SoftGrid (Shanghai) Co., Ltd.
Architecture, Urban Design + Sustainability Consulting

Unit 401, Building 1,
200 Taikang Lu, Luwan District
Shanghai 200025

索杰建筑设计咨询（上海）有限公司
中国上海泰康路200号1号楼401室. 邮编200025

Phone (+86) 21 5465 9792
Mobile (+86) 136 8185 2647 (English)
Mobile (+86) 159 2199 6780 (中文)

Email r.demmler@soft-grid.com (English)
Email d.liu@soft-grid.com (中文)

Web www.soft-grid.com

The content of this brochure is the intellectual property of SoftGrid (Shanghai) Co., Ltd. and might also be protected by copyrights held by SoftGrid (Shanghai) Co., Ltd. or third parties. No part of this brochure may be reproduced, stored in a retrieval system, or transmitted, in any form or by any means without the prior written permission of SoftGrid (Shanghai) Co., Ltd.



索杰

