HKIA 55th Anniversary Conference Megalopolis and Architecture Synopsis

Megalopolis is a densely populated urban region embracing one or more very large cities or metropolises. Megalopolis evokes daunting size, a vast scale of infrastructure, organization and governance of an unprecedented order. Academics, architects, planners, city developers and governance designers have explored the concept and the way in which accepted ideas of the city and urban hierarchy needs to be re-conceptualised for a well-balanced living environment in the future.

In today's context, with economic considerations to the fore, Megalopolis becomes manifest with the joining of a number of independent cities through fast transport and electronic systems. The successful linking and merging of such systems has sparked current concerns with the need to house an increasing proportion of the population who will be moving from the country side to the city to take advantage of employment and the convenience of urban living.

Were the concept of 'Megalopolis' to be considered in ancient times it would then be applicable to the ancient small townships that retained their identities as sub-centres within the larger town or city area. Each of these centres retained ancient landmarks and social institutions which helped to give the larger city points of reference and character. The definition of architecture was once the description of a piece of well considered building which, through its cultural context, gained a higher meaning. In the modern city and even more in the formation of Megalopolis, can we any longer separate out the idea of architecture from urbanism or from city planning? Is it not necessary to realize that the hierarchy in the city, from housing unit to building block, to neighbourhood, to city, to mega city forms a continuum: however to see these as separate challenges in design and organization is to start the process of alienation?

In Hong Kong we are fortunate that the development of our transport system and the introduction of transport nodes has helped us to understand the city's geography and varied character. We have increasingly come to recognize, that as urban regeneration takes place it becomes very important to strengthen local identity through improving the public realm and emphasis of local institutions. However large the city may be these principles must always apply. The challenge is always to focus upon the individual and his or her needs in the wider community.

Under the 12th Five-year Plan for China, Hong Kong will play a significant role in the development of the Pearl River Delta region. With the recent development of cross-boundary facilities and infra-structure, Hong Kong would be better connected with the Pearl River Delta and with the development of the Guangdong-Hong Kong-Macau Quality Lioing Area. The Hong Kong-Pearl River Delta region will surely develop into a Megalopolis in the 21st century.

Dominie Lam, *FHKIA*
President

Franky Choi
Chair, HKIA 55th Anniversary Organizing Committee

深圳華為公司總部
Hua Wei Technologies Headquarters, Shenzhen, China

Dennis Lau & Ng Chun Man Architects & Engineers (HK) Ltd. (DLN)

The Project

The headquarters complex is the centrepiece of the Hua Wei technologies factory and office park at Buji Bantian in Shenzhen, Guangdong province. The factory base also includes Hua Wei's International Training Centre designed by DLN and various manufacturing facilities.

Approach to the Design

The disposition, massing and style of the buildings is deliberately restrained and understated; the aim of both the client and the architect was to create above all a pleasant working environment.

DLN's design places great emphasis upon the relationship of the different parts of the complex to the landscape: the open space is utilised not just as a cordon sanitaire but is actively utilised as an amenity to be overlooked and enjoyed by as many building users as practicable. The disposition of the blocks, which are conceived as a series of pavilions, offers considerable perimeter working space relative to the overall floor area.

There are clear parallels between Hua Wei's establishment of a semi-rural headquarters and analogous developments in North America ever since the 1950's.

The building complex is emblematic of Hua Wei's, and China's, maturity as an advanced industrial economy. In contrast to many counterparts in the USA the design of the headquarters is

notable for its relative self effacement and the rejection by the architects of the notion of an assertive 'mega form' that could well offer a strong image, but at the expense of quality of working environment.

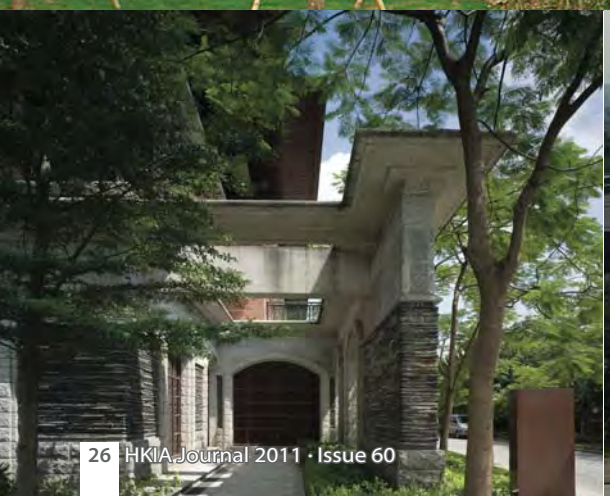
Further back in history, the boom in large scale picturesque landscape gardens in the United Kingdom in the 18th and 19th century also offers relevant analogies and precedents.

Concurrently, the complex, like any corporate headquarters, does have a representational function. The unusually traditional and durable character of the buildings points to an effort to create a distinctive working environment that will be unique to the Hua Wei headquarters. The headquarters will be a tranquil setting in a region dominated by density and hyper-activity.

The language, planning and atmosphere of the headquarters speaks of an intellectual maturity that transcends the frequently wasteful ostentation of much currently fashionable avant garde architecture.

Planning

A total gross floor area of 111,440m² is disposed on the 15 hectare site. The accommodation comprises offices for the accounting and marketing departments, suites of offices and meeting rooms for the top level management of the company and special conference, office and catering facilities for the reception of very important visitors and other extraordinary events.



The different functions are housed in three distinct building groups situated around the ornamental lake that is the central landscaping feature of the site. The most privileged and immediate relationship to the lake is reserved for the special reception facilities that are situated in the middle of the site.

The larger accountancy and marketing wing and the separate VIP wing are served by independent entrances. The buildings are set out so as to achieve, within the discipline of efficient office design, maximum visual penetration of the outside landscape to working area of the interior.

The main staff cafeteria overlooks the central ornamental lake. A multi-purpose column-free hall with a capacity of up to 1500 persons is situated above the canteen.

The VIP wing is a self-contained cluster of the offices, meeting rooms, restaurant and other supporting facilities required by the most senior officers of the company. The most private rooms address a second ornamental lake.

Each of the clusters is organic insofar as the logical accretion and orientation of the different functional elements has been the prime determinant of the building form.

Landscaping

Tree planting at the perimeter of the site screens the nearby trunk road whilst at the same time allowing clear views of the distant mountains to the west. Fill generated by landscaping and site formation was re-used on site.

The remainder of the landscape, or park, is conceived on picturesque lines so as to create a variety of vistas and 'outdoor rooms'.

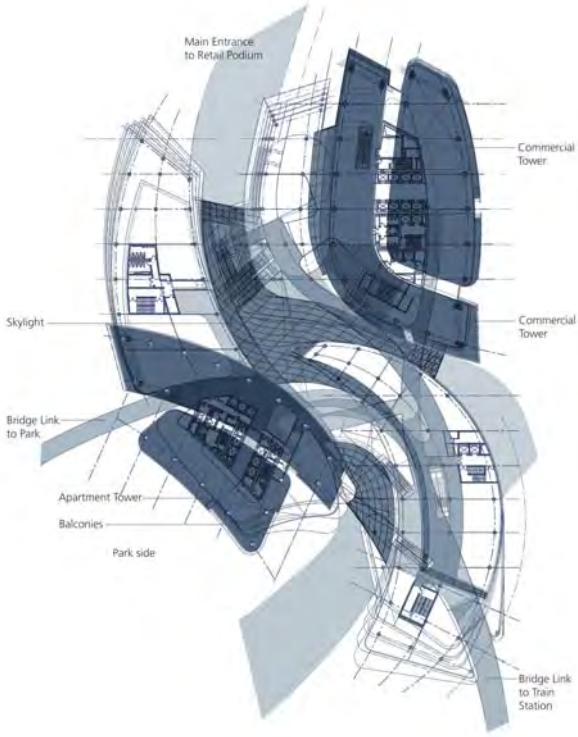
Although the site is large, it is not indefinite, and the design seeks to maximise the spatial variety and interest of the exterior.

Construction Language

The buildings traditional appearance belies the intricate and in-depth advance consideration of topical issues such as embodied energy, life cycle costing, recurring maintenance costs, capital construction costs, durability and adaptability.

Besides imparting the pastoral atmosphere sought, pitched roofs are eminently practical in the periodically very wet semi-tropical climate of Shenzhen. The deep overhanging eaves offer effective sun shading and glare reduction.

External finishes are natural granites originating from nearby Shantou and locally manufactured ceramic tiles. The rusticated stone finishes testify to avoidance of refinement where it does not contribute to the functionality or ambience of the headquarters.



North Star Mixed-use Development, Beijing, PRC

Aedas Talks Green

Aedas Ltd.

Aedas Sustainability

Sustainable design is an integral part to Aedas' practice and design ethos. For many years, Aedas has responded to the reality of climate change by addressing environmental, social and economic challenges at the outset of our design process and throughout our global practice.

I.D.E.A.S. Box

Aedas has developed in-house analytical tools to provide our designers with unique and innovative environmental design strategies able to make significant contributions to the design projects. The Integrated Design Environment by Aedas Sustainability (I.D.E.A.S. Box) is an analytical tool developed by Aedas to support our environmental specialists in their design process by providing performance metrics from the beginning of the design to construction and operation.

Our Green Agenda and Implementation Strategies in China

We have a clear focus on pursuing a holistic approach towards low-carbon sustainable design. Climate analysis and material selection; urban wind environment analysis; natural daylight and lighting design; and solar heat gain control, are the four key areas that form our fundamental approach on low carbon sustainable design. Throughout the practice, these four key factors have been integrated in our entire design process for design optimization.

Dynasty on the Bund, Shanghai, PRC

To achieve our above prime objective, the following three strategies have been developed:

Climate Responsive Design Strategy. As we know, the continent of China covers more than 9,600,000 sq.km; to respond to the large deviation on the meteorological conditions across the territory, a performance matrix of passive and active design strategies is required to maximize climate benefits. Therefore, we have implemented focused analysis to understand the conditions of local climates from the conceptual stage to ensure an appropriate design proposal can be formulated.

Sustainability Work Group. We believe that relentless exploration and innovation are vital to achieve the best solutions in sustainable design. Aedas has set up an in-house Sustainability Group of certified LEED Architects and industry specialists to carry out R&D works and provide consultancy to all our design teams, working closely with our architects throughout the whole design development process to implement sustainable design ideas.

In addition, our Sustainability Group has initiated a simulation-based system to evaluate the performance of green buildings. The system can perform analysis on building ventilation, energy consumption, solar heat gain on building envelope, and daylight provision studies. This is an important process for us to assess our design quality on sustainability as well as estimate the energy efficiency of the proposed design scheme.

Green Building Certification. We consider green building certification is one of the major driving forces on promoting sustainable design. Aedas projects such the Centre 66 in Wuxi, Olympia 66 in Dalian, and AIA Financial Center in Foshan have all achieved a high level USGBC LEED Accreditation. The Cade Fashion residential development in Chengdu has been awarded the Green Mark Gold certification from Singapore's Building and Construction Authority. In addition, several of our Hong Kong projects, including York House, Hong Kong Central, AIG Centre and UCB Building in Central have been accredited HK-BEAM's Platinum awards.

Renhe Spring Plaza, Chengdu, PRC

Sustainable Design Project Experience

Positioned within a larger masterplan, **North Star Mixed-use Development** in Beijing engages the natural forces of the site and celebrates their potential. Both the commercial and residential towers have been oriented towards the park to capture the southern light. Daylight pours through skylights between the towers towards the ground, utilizing the daylight provision and highlighting the central atrium.

Situated on the Puxi side of the Shanghai 2010 Expo site, **Dynasty on the Bund** is a mixed-used development by New World. The concept is based on a fusion of horizontal lines that give the tower its dynamic look. The careful use of architectural fins and LED lights creates an energy saving solution on external lightings as well as a dynamic movement of the facade. The development has a direct access to a metro station, maximizing its connectivity to the public transportation routes.

Renhe Spring Plaza features a 6-storey retail podium, an office building, a hotel tower, and a boutique-style residence. The development has a contemporary oriental entrance plaza located at the junction of Guanghua Crossroad. The development has considered the effect of inter-block shading and reducing the solar heat gain on the facade. The central atrium is naturally lit. The facade design is to be consistent with the image of Renhe: simple, elegant, high quality and modern, echoing to the rest of the development with the use of natural stone and glass curtain wall.

The design of the **Hangzhou Xiaoshan International Airport Phase 2** aims for a memorable architectural interior that can express Hangzhou to the world. The aerodynamic roof canopy design provides an excellent opportunity to reduce the wind effect. The continuous skylight on the rooftop brings natural daylight to the interior space with full spectrum. The project was conceived with the intent of making the airport sensitive to its cultural context, unique to Hangzhou, and one that can be easily identified as a modern interpretation of the richness of Hangzhou culture.

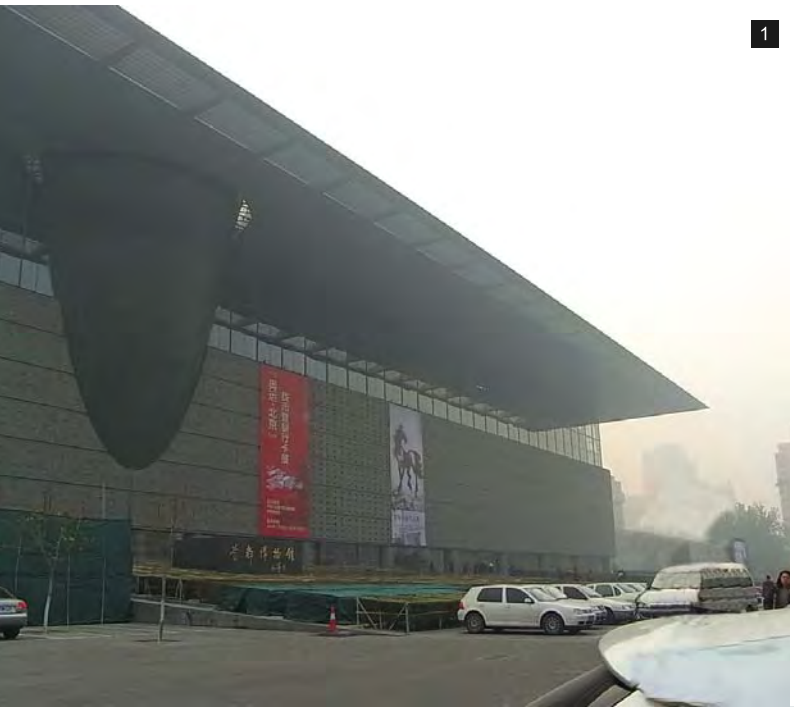
Hangzhou Xiaoshan International Airport Phase 2, Hangzhon, PRC

The Art and Architecture of Three Art Galleries in Beijing

Edward Leung

Introduction

Architectures and Visual Artworks, whether that of the past or of the modern era, are the most visible forms of cultural expressions of a society. In our Capital, Beijing, where cultural ideas in China had been exchanging for centuries, we see how Architecture and Art express such ideals. Three Art Galleries in Beijing were designed in very different architectural forms and spaces to appropriately reflect the unique characteristics of the very different themes and subjects of their respective art collections. This article focuses on how the innovative architectoral solutions meet the artworks.



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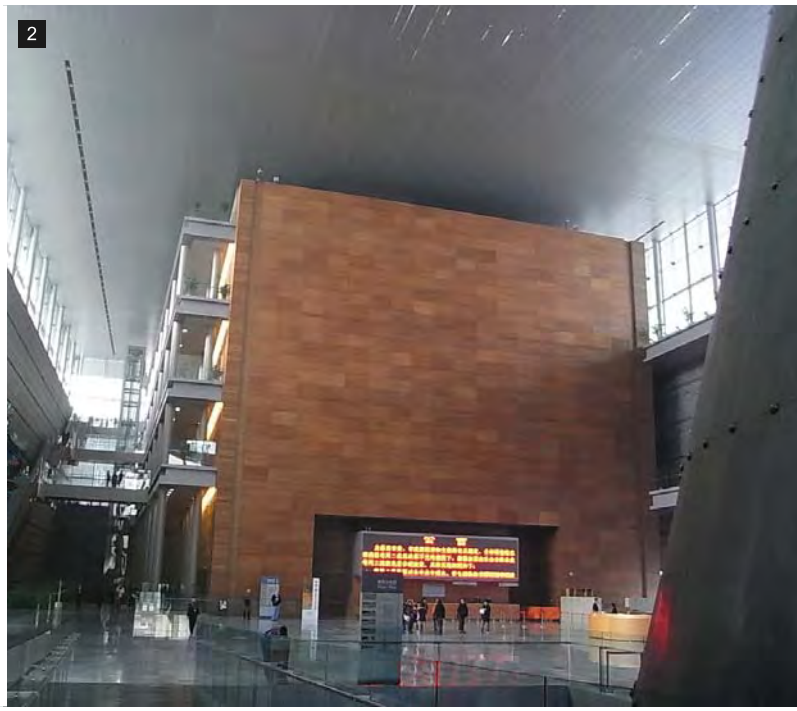

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Capital Museum
首都博物館

The huge collection of artworks and artifacts had long outgrown their original venue of the ancient Confucius Temple in Beijing. The delicate historic building fabric also hampered much needed enhanced environmental controls or visitor facilities. In 1999, Beijing embarked on building a world class museum to re-house the exhibitions in a premise to meet modern technical and logistical demands.

Within the external glass box volume of the new Capital Museum building, a well day-lit vast central open space is embraced by three gigantic distinct forms, made of three different types of fabric, representing the three major materials that make up the historic culture of Beijing. Directly facing the visitors at the far end is a very tall and wide grey-brick wall, which is the main building material for traditional Beijing Quadrangle Courtyard Houses 四合院. Behind this wall are seven storeys of exhibits of traditional living environments of China including historic architecture. Another side is a vast vertical rectangular volume faced with red wood strips, representing Beijing's traditional woodland landscape. This wing houses mainly exhibitions on China's history and culture including traditional crafts and festival objects. But the most striking scene is un-mistakenly the gigantic cone faced with patterned green cladding to imitate an oversized bronze apparatus from the glorious archaeological bronze-age collection. This conical block houses the brilliant treasure of Chinese artworks ranging from stunningly crafted imperial ceremonial objects to authentic priceless paintings by historical masters.

Since its opening in 2006, this new Museum has now received nearly hundred of million visitors, who are amazed by both its architecture and artworks. The innovative merging of Architectural forms and space into respective art themes is rightfully worthy of the traditional artistic talents of the peoples of China and Beijing.