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# Developing High Profile Branded Commercial Projects in China

## 在中国开发高端商业项目



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Jerry Yin has devoted his career to planning, designing and constructing large, complex, program-driven projects around the world. From 1992 to 2005, Jerry practiced architectural design at NBBJ's Seattle office. As a design principal, Jerry always brought a unique perspective to every project and extended the horizon of design philosophy. Jerry's works received a number of local and national design awards in the U.S. In 2005, Jerry relocated to Shanghai and opened the first design studio in China for NBBJ. His built works include the Microsoft Asia Pacific R&D headquarters in Beijing and the SuNing Electric Headquarters in Nanjing. In 2009, Jerry joined SOHO China as chief architect. In the past three years, with Jerry's new perspective and leadership, SOHO China has advanced its development to another level. Currently, Jerry is serving as Senior Vice President responsible for design and construction of all SOHO China's projects. Jerry is a licensed architect in Washington State in the United States and a member of AIA.

阴杰先生一直致力于国际性大型、复杂、程序驱动项目的规划、设计及建造。自1992年至2005年，他一直在NBBJ西雅图办公室从事建筑设计工作。作为设计负责人，阴杰所做的每一个项目都体现出其独具匠心的一面，而且将设计理念予以延伸。Jerry因此杰出的工作成绩获得了许多美国当地和国家级的设计奖项。2005年，阴杰迁至上海，并为NBBJ在中国开设了第一家设计工作室。他承担的建设项目包括北京微软亚太地区研发总部和南京苏宁电器总部。在2009年，阴杰作为首席建筑师加入SOHO中国。过去三年中，凭借阴杰锐意创新的前瞻性和卓越的领导能力，SOHO中国已经发展到一个更高的层次。目前，阴杰担任高级副总裁，负责SOHO中国所有项目的设计和施工。阴杰是美国华盛顿州注册建筑师和AIA的成员。

### Abstract

As one of the largest developers of commercial projects in China, SOHO China helped pioneer the concept of large-scale master-planned developments in Beijing, each with innovative and creative identities. With a recent expansion in Shanghai, SOHO China is undertaking more than a dozen ambitious projects in two of the most important cities in China. This paper exams SOHO China's process of developing ideas and strategies, and realizing those ideas, from the client's perspective. Market analysis, urban relationship, design parametric, sustainability methodology and construction advancement will be some of the areas for discussion. As a case study, the paper will focus on Wangjing SOHO, an innovative new mixed use development in a rapidly growing commercial area on the outskirts of Beijing.

**Keywords: Development, Master Planning, Wangjing SOHO**

### 摘要

作为最大的中国商业地产开发商之一，SOHO中国在北京曾经帮助了许多在大组团整体规划地产项目方面富有创意的前行者（得以实现他们的梦想）。随着近年来在上海及周边地区的积极拓展，SOHO中国目前有10余项大型地产项目在中国这两个最重要的城市同时展开。本文将从客户的角度出发揭示SOHO中国在地产开发过程的思路、理念以及思路的实现。市场分析、城乡关系、设计元素、可持续发展（技术）手段以及建造（水平）的提高都将是所本文所讨论的内容。本文以案例研究为主线，将重点论述望京SOHO，一个坐落在北京市郊快速成长的商业区域内的创新性多功能地产项目。

**关键词：发展，总体规划，望京SOHO**

### Defining Urban Centers

Founded in 1995, SOHO China focuses on developing high-profile branded commercial properties in China's leading cities like Beijing and Shanghai. Presently the largest real estate developer in Beijing, the company collaborates with internationally-recognized architects, translating their innovative designs into iconic real estate with strong appeal to property investors, local businesses and a variety of customer bases. On October 8, 2007, SOHO China was successfully listed on the Hong Kong Stock Exchange with the largest initial public offering for a commercial real estate developer in Asia.

All SOHO China properties feature prime locations in first tier cities, paired with SOHO China's full range of marketing, leasing and property management services, which target high net worth investors from across China. The company also holds and operates key commercial properties in the most desirable areas of Beijing and Shanghai's city centers.

With the aim of creating unique architecture possessing the aesthetic spirit of a changing, modern China, SOHO China focuses on projects with landmark architecture that enhance urban centers.

### 定义城市中心区

创立于1995年的SOHO中国致力于在诸如北京、上海等中国主要城市开发高端品牌商业地产。作为北京最大的房地产开发商，公司与国际知名的建筑师事务所合作将新颖的设计融合于（各个）标志性地产项目中，这些项目对物业投资者、地方商业机构以及各类客户群体产生了巨大的吸引力。2007年10月8日，SOHO中国作为亚洲最大的商业地产商首次在香港证交会公开募股。

所有SOHO中国的地产都集中在（中国）的一线城市，与SOHO中国全方位的市场、招租及物业管理服务相匹配。我们的目标客户锁定在中国范围内所有高端投资者范围内。公司还持有并开发着在北京、上海城市中心区内多个重要商业地产项目。

以打造变幻、时尚且符合中国审美观的独特建筑风格为目标，SOHO中国将其开发重点放在了那些能够强化城市中心区概念的地标性建筑。

截止到2012年2月，SOHO中国所有的27个项目总建筑面积共计525万平方米，其中竣工的有255万平方米，处于施工中的有270万平方米。SOHO中国在北京有包括望京SOHO、银河SOHO、三里屯SOHO、长城公社、前门大街等16个项目，面积共计350万平方米。2009年8月，SOHO中国宣布获得了SOHO东海广场项目，这标志着SOHO中



Figure 1. Selection of SOHO China's recent works.  
图1. SOHO中国一些近期的项目

As of February 2012, SOHO China's 27 projects have a total GFA of 5.25 million square meters, with 2.55 million square meters completed and 2.7 million square meters under construction. SOHO China has 16 projects in Beijing, including Wangjing SOHO, Galaxy SOHO, Sanlitun SOHO, Commune by the Great Wall, and Qianmen Avenue, with a total GFA reaching 3.5 million square meters. On August 18, 2009, SOHO China announced the acquisition of The Exchange-SOHO in Shanghai, marking SOHO China's entry into the heart of Shanghai's most affluent district. To date, SOHO China has 10 projects in Shanghai, with a total GFA of approximately 1.71 million square meters, including Sky SOHO and Bund SOHO. Bo'ao Canal village, esconced in the tranquil waterfront of China's tropical Hainan province, is also a SOHO China project (see Figure 1).

### Samples from SOHO's portfolio :

**SOHO New Town:** SOHO China's first project identified a key niche in the Chinese commercial market. The project focused on the rapid rise of small and medium-sized companies and their need for combined living and working spaces, SOHO China was the first to put forward the Small Office Home Office concept in providing flexible and multifunctional spaces"

**Galaxy SOHO:** The sister project to Wangjing SOHO is an office, retail and entertainment complex designed by Zaha Hadid Architects, with a total gross floor area of 328,204 square meters. The design was inspired by China's ancient Chinese terraced rice fields, creating multiple flowing plateaus which form a unique urban landscape. A series of

国正式进入了上海富人区的核心地带。迄今为止，SOHO中国在上海已有包括Sky SOHO、Bund SOHO在内总建筑面积共计171万平方米的10个项目。位于中国热带地区海南省、南海之滨的博鳌蓝色海岸也是SOHO中国成功开发的项目之一。（见图1）

### SOHO精选项目：

**SOHO新城：**SOHO中国首个在中国商业地产市场占有一席之地的项目。本项目关注于中小企业的快速增长及其对工作生活混合使用空间的需求，SOHO中国是第一个提出小型办公/家庭办公概念并提供灵活多用空间的开发商。

**银河SOHO：**作为望京SOHO的姐妹项目，银河SOHO项目是集办公、商业及娱乐为一体，总建筑面积328,204平方米的综合建筑。该项目由扎哈·哈迪德建筑事务所设计。其设计灵感源于中国传统的梯田造型，有如多股涓流高原般的城市景观自然泻下。流畅的建筑造型还以现代建筑风格诠释了中国古典庭园的内在意境。这座流动的优美建筑群不但营造了流动和有机的内部空间，同时也在与此毗邻的东二环上形成了引人注目的地标性建筑景观。

**三里屯SOHO：**是坐落于北京最具活力的商业步行街之一的三里屯地区，由5座商城和9个办公及公寓楼所组成的紧凑型城市项目，紧凑设计的目的是为了营造一个亲密、友好、便捷的社区氛围。建筑师使用参数化设计实现了奇妙的建筑景观设计，“仿佛形成一个超现实的大峡谷”。滚轴溜冰场和水榭庭院与商场相连，创造出了“生命之谷”建筑景观。

**长城公社：**由亚洲12名建筑师设计的私人收藏的当代别墅建筑艺术作品。该项目由42栋别墅，190间套房，11间总统套房，4个餐

elevated and enclosed pedestrian pathways bridge the gaps between the structures. Devoid of corners, this fluid configuration reinvents the classical Chinese courtyard, presenting a fluid and continuous internal space while establishing a striking and monumental presence along Beijing's East 2nd Ring Road.

**Sanlitun SOHO:** A compact city with five shopping malls and nine office and apartment buildings, the project is a compact intended to create closeness, community and a pedestrian-friendly atmosphere. The architect used parametric design to create an architectural landscape, "as if forming a futuristic Grand Canyon. A roller-skating rink and water-scaped courtyard connect the malls, creating a "valley of life" with one of the most energetic pedestrian shopping areas in Beijing.

**Commune by the Great Wall:** A private collection of contemporary villas designed by 12 Asian architects. It is comprised of 42 villas with 190 suites and 11 Presidential Suites, four restaurants and a spa. In 2005, Commune by the Great Wall was hailed by Business Week as a "New Architectural Wonder of China."

### Case Study : Wangjing SOHO

Wangjing SOHO, designed by world-renowned architect Zaha Hadid, covers an area of 115,392 square meters with a total construction area of 521,265 square meters, and is comprised of three high-rise mixed-use office and commercial buildings, and three low-rise commercial buildings. The tallest tower reaches a height of 200 meters. Upon completion in 2014, Wangjing SOHO will be the first tall architecture visible en route from the airport into the city, serving as "the capital's first impressive landmark."

#### Location: A Portal In and Out of Beijing

Wangjing SOHO is located in the core of the Wangjing area, a part of Beijing's Chaoyang District, with Futong West Street to the east, Fu'an Road to the south, Wangjing Street to the west and Fu West Road to the north. Surrounded by transportation networks affording convenient accessibility, Subway Line 14 (under construction) and Line 15 line intersect at Wangjing station, and Line 13's Wangjing West Station and Line 10 and the Airport Express' Sanyuan Bridge Station are only a short distance away.

The project is in close proximity to highways, with Capital International Airport, World Trade Center, Asian Games Village and Olympic Village all only 25 minutes away. This is Beijing's most convenient location for transportation, and it is the closest project to the center of a new high-tech industrial development zone (see Figure 2).

#### A Base for Multinational Headquarters in China

Currently, Wangjing is the site for the head offices of many Fortune 500 companies in China including giant manufacturers Daimler Benz, Caterpillar, ABB, electronic communications companies Siemens, Microsoft, Lucent Technologies, Nortel Networks and food biotechnology company Nestle, among others. Along with Lai Shing Hong Machinery, Focus Square and other buildings close by under construction, such as Green Center and the POSCO Center office building, the Wangjing District includes about one million square meters of office space.

#### An Increasingly Mature Diverse International Community

Wangjing District has a population of approximately 30 million people. It is an eclectic international community including many expatriates, many of which are Japanese and Korean. The Wangjing area is adjacent to the fourth planned embassy zone, which will be an area of 16 square

厅和一个SPA组成。2005年被美国《商业周刊》喻为“中国新建筑奇迹”。

### 个案研究：望京SOHO

望京SOHO, 由世界知名建筑大师扎哈·哈迪德设计, 占地115,392 平方米, 总建筑面积521,265 平方米, 由3栋集办公和商业一体的高层建筑和3栋多层商业建筑所组成。最高的高层塔楼高达200米。该项目预计2014年完工, 届时望京SOHO 将成为自机场至市区第一栋引人注目的高层建筑, 成为“首都第一印象建筑”。

#### 地理位置：北京的门户

望京SOHO位于北京朝阳区望京地区的核心区, 东至阜通西大街、南至阜安东路、西至望京街、北至阜安西路。周边轨道交通便利, 地铁14号线(在建)、15号线交汇于望京站, 可快速到达地铁13号线的望京西站、10号线和机场快线的三元桥站。

该项目毗邻机场高速路, 距世界贸易中心、亚运村以及奥运村等均在25分钟车程以内。是距新开发的高新工业园最近的项目。(见图2)

#### 在中国投资的跨国公司的总部基地

近年来, 望京地区成为了众多财富500强企业在中国的总部所在地, 这些企业包括大型生产企业 Daimler Benz、Caterpillar、ABB, 电子通讯企业 Siemens、Microsoft、Lucent Technologies、Nortel Networks, 以及食品生物技术公司: Nestle等等。除Lai Shing Hong 机械公司以外, Focus Square和其他几个邻近建筑如绿地中心和POSCO中心等写字楼项目也都进入了施工阶段。望京地区已有约近百万平方米的写字楼空间。

#### 一个更趋于成熟的多样国际社区

望京地区人口约为3000万, 是一个包括许多外国侨民在内的电子化国际化社区, 侨民中大部分是日本人和韩国人。望京地区与规划中的第四使馆区相邻, 第四使馆区占地16平方公里, 可容纳50万至60万人口居住, 规模相当于一个中型城市。

#### 繁荣的商业架构

望京地区的商业环境十分发达, 拥有如嘉茂购物中心、伊藤洋华堂、宜家家具、沃尔玛超市、华联商厦等多家大型购物商场。距Dali商业区、燕沙商务区以及其他高端消费区也仅区区10分钟车程。作为“十二五规划”的一部分, 2010年北京市政府确定望京国际商务区为北京市第二个CBD区。

#### 强劲的文化氛围

望京地区毗邻798艺术区和中央美院, 邻近芳草地艺术区、中国电影博物馆等文化艺术场所, 是创意型知识分子和前卫艺术家们聚会场所。



Figure 2. Site for the Wangjing SOHO towers in Beijing.

图2. 望京SOHO大厦位于北京的基地

kilometers, and accommodate a large community with a population of 500,000 to 600,000 people, the equivalent of a medium-sized city.

### A Flourishing Commercial Structure

The Wangjing district is commercially developed with large malls such as Capita Retail, Ito Yokado, IKEA, Wal-Mart, Hualian, and it is only 10 minutes away from the Dali commercial district, the Lufthansa business district and other high-end consumer areas. In 2010, the Beijing Municipal Government identified the Wangjing International Business District as Beijing's second strategically planned CBD as a part of the "12th five year plan."

### Strong Cultural Atmosphere

Wangjing is in close proximity to the 798 Art District and the Central Academy of Fine Arts, and is the meeting place for creative intellectualism and avant-garde art, with the Fang Cao Di Art District, China Film Museum and other cultural venues close by.

### Creation of Wangjing SOHO

SOHO China staged a design competition to choose an architect for Wangjing Soho. The proposals were evaluated on several criteria, including innovation. Applicants were asked to demonstrate strong creativity in building a unique icon for the city of Beijing. Particular effort had to address the massing strategy and the design of the façade in order to express a strong sense of identity. The project also needed a large green area open to the public. The creation of an urban space where people can gather, relax and play was a key criteria during evaluation.

The initial specifications called for the first two floors above grade (50,000 square meters) and first floor below grade (30,000 square meters) to be designed for retail, mainly for restaurants. The competition also called for innovative solutions to establish a vibrant retail environment for people and retailers.

In addition, the functionality and the layout of spaces and circulation had to be rational and efficient. Particularly important was the vertical integration of the areas mostly suitable for retails, basement one to floor two. These same areas needed to be visually well connected to the public areas, both indoor and outdoor. Spaces also needed to be flexible and allow multiple possible configurations in order to easily adapt to future changes.

The project would house 350,000 square meters of office space. Efficient and flexible space planning was vital for the financial success of the project. The designers also needed to address the latest environmental technology and achieve a minimal LEED certificate rating. Invited architects were suggested to refer LEED rating system requirements for general background. In particular we suggested the design address: climate sensitivity, water efficiency, natural illumination/ventilation, and use of local materials.

From the start, in the initial proposal, we "warmly recommended" simplicity and practicality in the design of this project, in particular in structural system, façade details, and material selection. Since this project will be completed in two phases, it is very important to plan and design the project to accommodate such phasing. Our goal is to create a vibrant urban icon within SOHO's budget and schedule.

Four firms joined an invited design competitions, Zaha Hadid from U.K., Make from the U.K., SANAA from Japan, and Massimiliano Fuksas from Italy. All four firms addressed the massive site with different approaches. The common goal was to define a new landmark for Wangjing area, as well as the first memorable and visible high rise for people coming out of the capital airport.

### 望京SOHO的创意

SOHO中国举办了一场设计竞赛来选择望京SOHO的建筑设计师。设计方案根据若干标准进行评估,包括创新。参赛者被要求展示他们极强的创造力为北京打造一个独一无二的标志。为了表达强烈的认同感需特别留意对体量策略及外立面设计的处理。同时,此项目还需要一个向公众开放的绿化区。建立一个人们能聚集,休闲和游乐的城市空间在评审过程中是一项重要的标准。

最初的规定要求地面两层(5万平方米)和地下一层(3万平方米)设计为百货零售,主要作为餐厅。竞赛还要求用创新的解决方案为消费者和商家建立一个充满活力的零售环境。

此外,空间和流线组织的功能及布局必须合理且高效。尤为重要的是区域的纵向整合大多数适用于零售、地下一层到二层。这些同样的区域需要在视觉上很好的与公共空间相连,无论是室内还是室外。空间还需有一定的灵活性,并且有多种组合的可能,以易于适应将来的改变。

此项目将提供35万平方米的办公空间。高效且灵活的空间规划对于项目在财政上的成功是至关重要的。设计师同时还需要解决最新的环保技术并实现最低的LEED认证。邀请的建筑师建议参照LEED评分体系作为一般标准。我们特别建议了设计的着重点:气候敏感度、用水效率、自然光照/通风和对当地材料的运用。

从一开始,在最初的方案中,对于此项目我们就“强力推荐”简约且实用的设计。特别是在结构体系、外立面细节和材料选择方面。因为此项目将在两个阶段内完成,所以在设计与规划时适应项目这样的阶段实施是非常重要的。

四家公司参与了邀请的设计比赛,来自英国的扎哈·哈迪德和Make,来自日本的SANAA以及来自意大利的Massimiliano Fuksas。四家公司对大型场地提出了不同的解决方案。但共同的目标都是为望京区树立一个新的地标,同时作为人们出首都机场后见到的第一个难忘且醒目的高层建筑。

从客户的角度来看,我们通过以下标准对竞赛进行评审

- 城市设计- 此项目是否能成为一个地标性建筑
- 空间规划- 此计划是否能基于SOHO的标准
- 结构设计- 此高层或多个高层建筑是否有可实现的结构体系
- 可持续性- 此项目是否有可持续的潜在机会
- 预算- 在我们的预算之内能否实现构思的开发
- 建筑设计- 构思是否创新且发人深思

经过评审团漫长的讨论,最终扎哈·哈迪德建筑事务所的设计拔得头筹。这个获胜的构思由两条鱼形的建筑组成。经过城市规划局审阅之后,此构思得到进一步的深化而变为三条鱼形建筑。这样的修改减少了体量与每个塔楼的成本,并且在其所处环境中建立起了更好的城市关系。

望京SOHO的独特元素如下:

- 是赋予这个小镇独有特性的望京地区第一个地标性建筑。
- 第一个参数化设计的高层塔楼。
- 与通常的高层建筑塔楼相比,对空间的规划独具匠心。
- 建筑流畅的动感与空间。
- 是中国第一个从设计到施工和产业管理都运用建筑信息模型的项目。
- 创造了城市中的一个最大开放式公园。

From a client standpoint, we elevated the competition based the following criteria:

- Urban design – whether this project truly becomes a landmark
- Space planning – whether this plan works based on SOHO's standard
- Structural design – whether this high rise or multiple high rises have an achievable structural system
- Sustainability – whether this project offers potential opportunity to be sustainable
- Budget – whether the concept can be developed within our budget
- Architectural design – whether the concept is innovative and thought provoking

Zaha Hadid Architecture's design won the competition after lengthy debate among juries. The winning concept consists of two fish like buildings. After review with city planning bureau, the concept was further enhanced by creating three fish like buildings. The modification reduces the mass and cost of each tower, and establishes better urban relationship within context.

The unique elements of Wangjing SOHO are as follows:

- First landmark project for Wangjing area, giving this small town its own identity.
- First parametric designed high rise towers.
- Unique space planning, in contrast to the typical high rise tower.
- Fluid movement and spaces through the buildings.
- First project in China implementing BIM from design to construction and property management.
- Creating one of the largest open parks in the city.

## The Design

The Wangjing SOHO Project is designed as three dynamic "mountains" or fish-like forms that come together and bring together the surrounding community. The juxtaposition of the towers' curvilinear form continuously changes views from all directions, always elegant and fluid. The exterior skin of the towers are flowing, shimmering ribbons of aluminum and glass that continuously wrap and embrace the sky. Inspired by the surrounding movement of the city, the sun, the wind, it aims to bring together and create a strong identity that anchors the Wangjing area and creates a gateway-beacon that can be seen going to and from Beijing Capital Airport (see Figure 3).

The composition of the towers also extend into the surrounding landscape with flowing lines that echo the dynamic mountain forms creating paths of movement and exciting activity zones of shopping and leisure for the people. The lines of movement stretch to the perimeter and integrate all the green areas along the north, south, east and west of the site. Between the main building towers a 'canyon' of retail shops and activities and several pavilion-gate buildings create a shopping street at the ground level. There are two sunken garden courtyards in the east and west of the canyon that continue the landscape paths down to the retail concourse below.

The main tower entrance lobbies, facing outwards to the city, welcome the visitors into large dynamic halls that direct one upward into the

## 设计

望京SOHO的设计为三座聚集的动态“山岳”或鱼形形体将周边的社区汇聚到一起。塔楼并置的曲线形态使从每个角度看到的景色都连续不断的变化，始终优美而流畅。塔楼的外表皮是流动的，闪耀的铝条与玻璃连续缠绕围向云端。从周边的城市、太阳与风获得灵感，旨在融汇所有元素并为望京地区创造极强的辨识度，同时打造一个出入北京首都机场可见的门户明灯（见图3）。

塔楼的构成通过流动的线条延伸进入到周边的景观中，与动态山岳形态相呼应，形成活动路径和人们购物休闲的活动区域。活动线条延伸至周界，沿着场地的东、西、南、北边整合了所有的绿化区。在主塔之间，一个涵盖了零售店、活动区域和展馆牌坊建筑的“凹陷”在地面层形成了一条商业街。两个下沉的花园庭院分别在凹陷的东面与西面延续景观路径下至百货广场。

主塔入口大堂，面向城市，将来访者欢迎巨大的动态大厅并引入其上的办公楼层、廊道、二楼的零售层和下沉的花园层。在上面的办公塔楼是简洁开放式的办公空间，提供了充足的自然光与各个方向上连贯的全景（图4）。

Zaha Hadid是这样描述其设计的：“一大一小两个体量组成一个整体，他们互相交织缠绕，形成统一的设计。每个体量都提供办公空间，并相互连接，同时通过商场的裙楼与周围提供的景观相连。这样表达方式的双重性不但在已定的场地范围内使建筑体块更加松散，还能符合项目两阶段完成的进程。两个体量在平面和立面是纤细的弧形，进一步提升了围绕感并创造出非凡的北京景色。室内空间适合灵活使用，并通过核心筒的序列提供良好的竖向交通。连接的商场中庭由三层组成，这涵盖了零售店、餐厅和咖啡馆-其组合形态形成了统一的“步行街”。所有的综合设施建于能提供三层地下停车场的筏板基础体系之上。”

## 参数化设计

参数化设计是设计过程中新兴的概念，其中参数互联形成一个系统。一个参数的改变会影响整个网络并造成总体的影响。参数化设计从城市规模到建筑、室内和家具规模，建立了系统的、自动适应的更改，连续不断的分化以及动态的成形（见图5）。

## 风景园林

5000平方米的大型景观园林拥有百分之三十的绿色覆盖率，创建了一个独特的园林式城市办公环境。为了能反映出季节的变换，望京SOHO建立了四个主题园林，这包括休闲剧场、运动空间、艺术雕塑及海下水景。



Figure 3. The Wangjing SOHO Project is designed as three dynamic "mountains."  
图3. 望京SOHO的设计为三座聚集的动态“山岳”

office tower floors above and to the breezeway and retail levels at the second floor and sunken garden levels below. Up above in the office towers there are simple open-plan office spaces offering natural daylight and continuous panoramic views in all directions (see Figure 4).

Zaha Hadid described the design this way: "The whole comprises a major and minor volume, intertwined to form a unified design. Each volume houses office space, with connections between and to the surrounding landscape provided via a retail podium. This 'duality' of expression both loosens building mass within defined site boundaries and supports a two-phase completion process. Both volumes describe a slender, curved form in plan and elevation, further enhancing the sensation of embrace and generating an extraordinary range of views to Beijing. Interior spaces are suitable for flexible use and well served in terms of vertical transportation through sequences of cores. The connecting retail atrium comprises three levels containing retail outlets, restaurants and cafes – their configuration forming a unifying 'pedestrian street'. The entire complex sits above a raft foundation system housing parking on three basement levels."

### Parametric Design

Parametric design is an emerging concept of design process in which the parameters are interconnected as a system. One parameter's change affects the whole network and causes global influence. Parametric design creates systematic, adaptive variation, continuous differentiation, and dynamic figuration from the scale of urbanism to the scale of architecture, interior and furniture (see Figure 5).

### Landscape Garden

Fifty thousand square meters of large landscaped gardens with a green ratio of 30 percent create a unique garden-style urban office environment. To reflect the change of the seasons, Wangjing SOHO has created four themed landscapes including a recreational theater, sports area, art sculptures and waterscape.

The east side of the development has a unique open-air theater that can accommodate all types of large-scale cultural and business activities; the south side has approximately 30,000 square meters of landscape designed to include a small art gallery, tennis courts and a small soccer field; the west side landscape design is based on the theme of sculpture-- art exhibitions will be held here periodically; The north side features a large scale waterscape, providing a refreshing place to rest in respite of the scorching summer sun; in the winter this area will host Wangjing's only outdoor skating rink.

### LEED Design

The building design and construction organization of Wangjing SOHO among other aspects will be in accordance with the U.S. Green Building LEED certification standards to create energy efficient, water efficient, comfortable and intelligent green buildings.

### Energy Efficiency

The comprehensive energy efficiency of the modular high-performance glass curtain wall system and dual silver glass LOW-E glass is much better than ordinary LOW-E glass. With high visible light transmittance and low solar transmittance, LOW-E glass can effectively block the entry of solar energy.

### Water Efficiency

The rate of water recycling and water use for this project architecture is 40%. At the water supply points on each floor in the office buildings, water is filtered through a multi-level treatment system to achieve healthy drinking water standards to provide office staff with safe and healthy drinking water.



Figure 4. Rendered view of the Wangjing SOHO project.  
图4. 望京SOHO项目效果图



Figure 5. Overall aerial view of the Wangjing SOHO project.  
图5. 望京SOHO空中纵览图

开发项目东面是一座独特露天剧场可供各种类型的大型文化和商业活动使用；南面景观有大约30,000平方米，设计作为小型艺术画廊，网球场和小型足球场；西侧景观的设计则基于雕塑主题——艺术展览在此定期举办；而北侧以大型水景为特色，提供了一个即使是在酷热的夏日也能休闲的清新场所；在冬季此区域则成为望京唯一的室外滑冰场。

### LEED设计

望京SOHO的建筑设计 and 施工组织等方面都会按照美国绿色建筑协会LEED认证标准来建造高效、节水、舒适且智能的绿色建筑。

### 能源效率

模块化高性能玻璃幕墙系统和双银Low-E玻璃的综合能效比普通的Low-E玻璃要好很多。通过高可见光透射率和低太阳能透射率的Low-E玻璃能有效的阻挡太阳能的进入。

### 用水效率

此项目的用水回收与用水比是40%。在办公楼每层的供水点，通过多层处理系统进行过滤，以实现健康饮用水标准，为办公人员提供安全和健康的饮用水。

### 空气净化

新的空气净化系统旨在能持续提供工作人员和访客源源不断的清新空气。新的空气标准比美国LEED的基本标准高出30%，同时系统采用高效静电空气粉尘过滤器，可立刻消除空气中的细菌、病毒和过滤粉尘。

### 智能建筑

智能建筑管理系统（IBMS）使建筑中的生活与工作效率更高、更安全，也更舒适。

## Air Purification

The aim of the new Air purification system is to continuously provide workers and visitors with a steady stream of clean fresh air. New air standards are 30% higher than the U.S. LEED basic standards, and the system employs a high-efficiency electrostatic air dust filter that instantly kills bacteria and viruses, and filters dust in the air.

## Intelligent Building

The Intelligent Building Management System (IBMS) makes life and work in the building are more efficient, safe and comfortable.

## BIM

The Building Information Modeling system (BIM) was introduced in the design and construction phase of Wangjing SOHO. BIM is an information platform focused on the lifecycle of the entire building and will be introduced to all real estate development as a three-dimensional visualization model so that project information to be conveniently and effectively delivered. Based on this platform, developers can avoid ambiguity caused by information asymmetry caused by "never down" waste, to achieve the efficient management off the entire network from design and construction to operations.

## The Showroom

The showroom is located to the west of the project. With a total construction area of 2,000 square meters, it is an eight-meter high two-story building. As one enters the gently-undulating glass entrance one sees the interior and exterior are seamless and continuous offering wonderful views to and from the garden. To the left there is a visitor's lounge display area. In the center there is a natural travertine stone core wall with a double-height, multi-purpose gallery space with oculus skylight window bringing in natural daylight from above. Outside the showroom a distinctive musical fountain and landscape has been designed.

## Project Features

### Office Space

Wangjing SOHO features an open concept office environment of 1,100 to 2,200 square meters. The office space totals 364,169 square meters, of which, tower one, tower two and tower three have respective office spaces areas of 126,903 square meters, 113,694 square meters, and 123,573 square meters. The office building story heights are generally divided into 3.6 meters, 3.8 meters, and 4.2 meters, suiting varying client business requirements. Eighty-eight percent of office spaces can be tailored to suit individual investor and client demands for both small and large spaces.

The office lobbies feature 10-meter-high ceilings and an area of more than 1,000 square meters. There are 81 office elevators, with 16 elevator halls. Elevator halls are equipped with access control systems, allowing that office, commercial and service flows to be separated, ensuring an orderly, clean, safe office environment.

### Retail

Wangjing SOHO has an overall all retail area of 52,793 square meters--40,465 square meters above ground and 12,328 square meters below ground.

Retail distribution is mainly in the basement one, floor one and floor two levels, and the tail areas of towers one and two floor levels. The three high-rise towers are surrounded by three independent small commercial towers. Underground retail areas are connected to the first floor lobby of the three office towers and the basement one level

## 建筑信息模型 (BIM)

在望京SOHO的设计与施工阶段中使用了建筑信息模型 (BIM)。BIM是侧重于整个建筑生命周期的信息平台，并作为三维可视化模型应用到所有的房地产开发中，使项目信息能方便且有效的提交。基于这个平台，开发商能避免因“never down”浪费而造成的信息不对称所致的歧义，实现从设计、施工到运营整个网络的有效管理。

## 展厅

展厅位于项目的西侧。总建筑面积达2000平方米，是一座八米高的两层建筑。进入轻轻波动的玻璃入口就能望见，室内外无缝连贯，提供了园林的优美景致。左侧有访客的休息陈列室。其中心是天然钙石的两层高核心墙，多功能的画廊空间拥有圆孔天窗，从上方引入自然光。展厅之外则设计了独具特色的音乐喷泉和景观。

## 产品特点

### 办公空间

望京SOHO以1100到2200平方米的开放式办公环境为特色。总办公面积达364,169平方米，其中塔一、塔二和塔三分别为126,903平方米、113,694平方米和123,573平方米。办公建筑楼层高度被分为3.6米、3.8米和4.2米，以适应不同客户的商业要求。百分之八十八的办公空间在100到400平方米之间不等，多变的办公空间能做适当调整以适应每个投资商与客户对空间大小的要求。

而办公大堂则以其10米的挑高天花板和超过1000平方米的面积为特点。这里有81台办公电梯和16个电梯大厅。电梯厅都配备有访问控制系统，使办公、商业和服务流线分开，保证了有序、干净和安全的办公环境。

### 百货零售

望京SOHO零售区的总面积达52,793平方米——其中地上40,465平方米，地下12,328平方米。

零售主要分布于地下一层、一层与二层和塔一二楼的塔尾区域。三座高层塔楼被三座独立的小型商业塔楼所围绕。在地下的零售区域能很方便的进入到办公交通。大部分一层与二层的零售空间能通过室内楼梯进入，允许上下层的商业连接。

## 结语

中国飞速变化的人口，对于大型商业项目的设计与施工要求有更新的方法。项目在一方面必须以创新的方式满足客户的需求，而在另一方面也需创造出有效的标志性开发项目使其作为娱乐休闲场所与人们生活工作的社区。着重点必须放在创建一个能吸引人们并为他们提供舒适的生活、工作和休闲环境的空间。

创建望京SOHO的过程展示了主办有明确目标的设计竞赛来设定地标项目的参数所具有的优势。从项目一开始，其构思就是作为一个能与周边环境相呼应并能满足客户群要求的标志。在目标范围内对创新与创造力的鼓励，使其设计最终在美学与商业角度都脱颖而出。

## 数据资料

- 设计方：扎哈·哈迪德建筑设计所 (Zaha Hadid Architects)
- 项目类型：商业/办公
- 项目占地：115,392平方米
- 总建筑面积：392,265平方米（地面以上），129,000平方米（地面以下）



retail area is easily accessible to office traffic. The majority of floor one and floor two level retail space will be accessible by indoor stairways, allowing for the connection of the upper and lower level businesses.

## Conclusion

China's fast-changing demographics require new approaches to the design and construction of large-scale commercial projects. Projects must be innovative to serve the changing needs of the customer base, while creating efficient, iconic developments that entertainment and leisure destinations, as well as communities for people to live and work. Emphasis must always be placed on creating spaces that attract people and provide a comfortable environment for people to live, work and play.

The process of creating Wangjing SOHO demonstrates the advantages of hosting a design competition with clearly defined goals to set the parameters for a landmark project. From the start the project was conceived as an icon that would be responsive to its surroundings and the needs of the customer base. Encouraging innovation and creativity within the confines of the goals led to a design that will stand out from both an aesthetic and commercial perspective.

## Data Resources

- Designer: Zaha Hadid Architects
- Project Type: Commercial / Office
- Project Area: 115,392 square meters
- Total floor area: 392,265 square meters (above ground), 129,000 square meters (below ground)
- Building Height and Floors:
- Building 1: 118 meters, 25 floors;
- Building 2: 127 meters, 26 floors;
- Building 3: 200 meters, 44 floors;
- Ground floor and Use: One floor for basement parking and commercial use as well as three floors for parking, security and equipment use
- Office Area and Floors: 364,169 square meters, F3-F44
- Commercial Area and Floors: 52,793 square meters,
- T1 and T2 B1-F6, T3 of the B1-F2;
- Building 1, Building 2 Commercial F1-F3, Building 3 Commercial F1;
- Property Spaces: B1 and B2, 976
- Completion: 2014

- 楼高及楼层: 1号楼: 118米, 25层;
- 2号楼: 127米, 26层;
- 3号楼: 200米, 44层;
- 地下楼层及用途: 地下共四层, 其中B1主要为商业及停车, 其余面积为停车设备用房
- 办公面积及楼层: 364,169 平方米, F3-F44
- 商业面积及楼层: 52,793 平方米,
- T1 和T2的B1-F6, T3的 B1-F2; 1号2号商业F1-F3, 3号商业F1层;
- 产权车位: B1和B2共976个
- 完工时间: 2014