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The Impact of Tech Companies in Rethinking the High-Rise Workplace | 腾讯公司总部：高科技公司的新型高层建筑模型

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As a Design Partner at NBBJ, Jonathan Ward champions the continual advancement of the relationship between program, space, and human experience. Over the past 18 years, he has led the design and delivery of a variety of progressive buildings for innovative global clients in the Americas, Europe, and Asia. His experience includes some of NBBJ's most notable, award-winning buildings, such as the Telenor World Headquarters in Oslo, Norway; the Wellcome Trust in Cambridge, UK; Samsung Device Solutions in San Jose, USA; and Tencent Corporate Headquarters in Shenzhen, China.

作为NBBJ的设计合伙人，Jonathan为设施、空间以及人类体验之间关系的不断发展而努力奋斗。在过去的18年里，Jonathan已经为美洲、欧洲和亚洲的全球创新客户提供了各式各样先进建筑的设计和交付，这种经验的广度也帮助他为任意建筑类型带来新的思维。他的经验包括一些NBBJ最引人注目的获奖建筑，如在挪威奥斯陆的挪威电信全球总部；英国剑桥的维康信托基金会；加利福尼亚州圣何塞的三星设备解决方案；以及中国深圳的腾讯公司总部。

Chao (Ivan) Wan | 万超
Executive Manager, Planning & Design Department | 规划与设计部门执行经理

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Chao Wan is a Class 1 Registered Structural Engineer. In 2010, he joined Tencent and now serves as Executive Manager of the company's Planning and Design Department. Prior to joining Tencent, Wan was the principle leader of a large design firm, giving him more than 30 years of rich management experience in the field of architectural design. At present, he is the promoter and practitioner in the field of Internet + Architecture in Tencent.

万超，国家一级注册结构师、高级工程师。2010年加入腾讯，现担任腾讯集团规划设计部总经理，全面负责腾讯集团规划设计部的管理工作。加入腾讯集团之前，曾担任大型设计公司的主要领导人，在建筑设计领域有超过三十年的丰富的管理经验。目前是腾讯集团互联网+建筑领域的推动者和实践人。

Abstract | 摘要

While tech companies have traditionally located in suburbia due to lower property costs and the perceived security of intellectual property, they are now increasingly investing in cities to boost recruitment and stimulate innovation. As people and companies increasingly make the move to cities, workplace design must too adapt to new, inherent constraints; most notably as companies are frequently limited to occupying spaces in high-rise developments.

Tencent, one of the world's largest internet companies, is creating a high-rise headquarters in Shenzhen, China that overcomes the challenges of the traditional tall building. To do this, Tencent and the Corporate Headquarters design team abandoned the idea of a single high-rise or multiple low-rise buildings in favor of one that combines the best of both – two towers connected by elevated bridges with vibrant spaces devoted to gathering. The resulting vertical campus offers the value of an urban high-rise with the community of a low-rise Silicon Valley headquarters.

Keywords: Connectivity, Headquarters, High-rise, Human Experience, Vertical Campus, Workplace

虽然因较低的物业成本和出于对知识产业的保护，科技公司历来都设立于郊区，但是现在也越来越多地在城市进行投资，以促进人才招聘和激励创新。 但随着个人和公司越来越多地转移到城市，工作场所设计就必须适应固有的限制，因为公司常常受限于高楼楼盘的空间使用。

腾讯，世界上最大的互联网公司之一，克服了传统高层建筑的挑战，在中国深圳正在建立一个高层总部。要做到这一点，腾讯和腾讯公司总部设计团队放弃了独栋高层或多栋低层的想法，而采用了结合两者优势的设计 – 通过高架桥（旨在方便人们汇聚的活力空间）将两座大楼连接起来。由此产生的垂直园区具有城市高楼加低层硅谷总部社区的价值。

关键词：连通性、总部、高层建筑、人类的经验、纵向园区、办公场所

Introduction

Cities around the world are urbanizing and densifying. While urbanization can stimulate corporate innovation, it requires high-rises to be designed to adapt to the constraints of dense cities and the needs of today's workplace, especially the rapidly-evolving tech workplace.

Supported by a host of research on the benefits of connectivity and well-being, an evolving design paradigm seeks to directly enable and encourage workplace community, innovation, and productivity. These principles are being applied to conquer the challenges facing typical high-rise headquarters. In the case of Tencent Corporate Headquarters in Shenzhen, China, a vertical campus combines the form and efficiency of an urban high-rise with the opportunities for gathering and engagement prized within a low-rise campus.

引言

当前，世界各地的城市正在日趋城市化和高密度化。虽然城市化可以有效激发公司的创新能力，但也意味着高层建筑应该要有和以往的与众不同的设计，在紧凑的市区面积条件和当今的工作场所需求之间，特别是高科技被大量使用、并被植入办公场所设计的今天有所回应和应对。

大量科学研究证明， 促进员工之间的沟通和联系，舒适度和健康都十分有助于公司的业绩提升， 而一个充分介入沉浸化的设计将以更为直接的方式鼓励更多的社群沟通联系，鼓舞创新以促进生产力的提升。这些基本原则目前正被充分认识并被应用，以克服传统超高层所面临的挑战。深圳腾讯公司大厦此案的落成，意味着一个垂直方向的超高层企业集团总部既具有城市高层的形象和高效性，又有着多层企业总部园区所拥有的鼓励员工集会和促进沟通的功能效用。

Urbanization Trends Worldwide

Cities around the world are increasingly urbanizing and densifying, with more than 54 percent of the world's population already living in cities. The UN predicts that the world could add another 2.5 billion people to cities by 2050, which would bring the global urbanization rate to 66 percent. Ninety percent of this increase will be concentrated in Africa and Asia, and particularly China, India, and Nigeria.

China has seen a particularly steep increase in urbanization, with the percentage of people living in cities having risen from 26 percent in 1990 to 56 percent in 2015. China is shifting from a rural to an urban country faster than any other nation, with the exception of those in Africa. By 2030 China will be home to an estimated 1.4 billion people, comprising 16.5 percent of the global population.

Urban life in Shenzhen – the location of Tencent's headquarters – is notably strong. For example, last year the World Bank reclassified the Pearl River Delta, of which Shenzhen is a part, as the world's largest urban area with 63 million people.

Trends of Suburban Flight and Downtown Headquarters in the US

While urbanization is taking place less quickly in the United States than China, significant evidence suggests that big companies are gravitating toward major cities and looking to locate in downtown headquarters developments. Nearly 200 of Fortune 500 companies are currently located in the US's top 50 cities. Several companies in Boston, Chicago, and the Bay Area, among other cities, have moved from the suburbs to urban locations to appeal to younger employees and convey dynamism and innovation; recent examples include Time Warner, Amazon, and Comcast. Other companies stay in the suburbs but open high-profile satellite offices in downtown locations: Microsoft's respective offices in Bellevue and Seattle, Washington, for instance.

This shift towards urban locales is also reflected in central business district (CBD) vacancy rates, which are dropping more quickly than those in suburban markets.

At the same time, downtown headquarters are shrinking, as companies like Verizon, JP Morgan Chase, Archer Daniels Midland, and GE Healthcare seek smaller footprints. In many cases, executive core groups remain downtown while secondary functions are relocated to lower-cost locations.

Some companies are adapting to less space with mobile and adaptable workplace design. Examples of nimble, space-efficient workplace design include spaces for hot-desking, as well as diverse zones for various activities, contexts, and work styles.

CBDs and Decentralized Headquarters: Complicated Trends in China

In China, companies are also relocating to cities, but cities of all sizes are growing at a massive pace. By 2025, nearly a quarter of the top 600 cities in the world will be in China. Growth in the coming decade will come predominately from medium-sized metro areas (under 10 million people) rather than the world's top 23 megacities.

Numerous factors are causing this. One is simply the massive investment in urbanization and resulting need to fill new developments. China's government has offered extensive incentives for private companies to relocate to these new urban developments and has, itself, relocated several state-owned enterprises (SOEs) there.

Take Shenzhen, for example: the city was recently named the country's most competitive city by the Chinese Academy of Social Sciences. Companies are being drawn to Shenzhen due to the city's investments in innovation, along with a thriving drone industry and proximity to cheap supply chains and manufacturing spaces.

This urbanization drive has uneven effects however, as Tier 1 cities like Shanghai and Beijing are maintaining relatively low office vacancy rates, while a number of Tier 2 cities are overbuilt. The government is working to transfer some SOEs from overcrowded Beijing to other major cities, which could serve as a foreshadowing of future government plans to redistribute economic growth more evenly.

CBRE reports that, unlike in the US, many Asian companies are seeking decentralized locations due to their lower costs. Government investments in decentralized development are also drawing companies out of CBDs. Therefore, while Chinese companies are drawn to cities for their urbanity and state incentives, they're not always going into CBDs, oftentimes moving out of them in expensive Tier 1 cities.

世界各地的城市化趋势

世界各地的城市正在日趋城市化和高密度化，超过54%的世界人口的已经生活在城市中。联合国预测，到2050年，世界上可能再有25亿人到城市中生活，这将使全球城市化率达到66%。这一增长中的90%将集中在非洲和亚洲，特别是中国、印度和尼日利亚。

中国的城市化发展是尤为惊人的，城市居民的比例从1990年的26%上升到2015年的56%。中国从较为农村化的国家转变为较为城市化的国家的速度比任何一个国家都要快，当然有些非洲国家更甚。到2030年，中国的人口估计达到14亿，占全球人口的16.5%。

其中，腾讯总部所在地--深圳的城市生活化特别强势。例如，去年世界银行对珠江三角洲进行了重新分类，而深圳属于其中的一部分，有6,300万人，已成为世界上最大的城市地区。尽管其人口增长不像其他地区那样快，但这一区域中各个城市区划相互连通，汇聚成一个庞大的城市群。

美国的郊区人口逃亡和闹市区总部趋势

尽管美国的城市化速度较之于中国要慢些，但仍有明显的证据表明，大公司倾向于落户大城市，并在这些城市的市中心寻找总部办公开发的位置。目前，近200家《财富》500强公司都位于美国前50大城市之中。不仅在其他城市之中，若干家位于波士顿、芝加哥和海湾地区的公司已经从郊区搬迁到城市的中心位置，旨在努力吸引年轻员工，和映射出富于活力和创新的形象；最近的例子包括时代华纳、亚马逊和康卡斯特电信。其他公司虽然仍在郊区，但在市中心的位置开设高调的卫星办事处：例如，微软分别位于华盛顿州贝尔维尤和西雅图的办事处。

这种向城市区域的重心转移也体现在中央商务区（CBD）的空置率方面，近年来，这些地方的空置率较之于偏远市场的CBD下降更快。

同时，原市区中心的总部规模反在萎缩，像威瑞森通讯公司、摩根大通、阿彻丹尼尔斯米德兰公司、和通用电气医疗集团等公司均如此。在许多情况下，高管核心办公仍安置在市区中心，但其次级职能部门则被重新转移到较低成本的办公区域。

一些公司正在适应于更少的空间，但更多移动性和适应性的工作场所设计。更为灵活的例子是，高效的工作场所设计包括办公桌轮用制，以及适应于各种各样活动、工作环境和工作方式的不同区域。

Are Companies Inside Cities More Successful Than Those Outside?

The answer to this question largely depends on the company and context, though there is consensus in the US that urban environments are more helpful in recruiting younger employees.

Individual cases suggest that this may be true. When Motorola Mobility announced it was moving from the little-known town of Libertyville, Illinois, to the metropolis of Chicago, employee applications jumped by 28 percent.

Presumably the wave of Fortune 500 relocations from smaller to major cities reflects an underlying belief that larger cities are better for business. Some recent moves which fall under this category are ConAgra, a foods manufacturer which moved from Omaha to Chicago; Kraft Heinz, which left Madison for Chicago; General Electric (GE), which will move its headquarters from Fairfield, Connecticut, to Boston; the automobile manufacturer Cadillac, which relocated to New York City from Detroit; and American restaurant chain Applebee's, which is moving from Kansas City to Los Angeles County.

While these anecdotes don't offer insight into the effects of these relocations, it's rare for a major company to move from a major city into a much smaller one. In fact, when Kashi moved its headquarters from San Diego to Battle Creek in 2013, its sales dropped and it promptly moved back.

Even more than these other industries, though, tech companies thrive off of much of what big cities have to offer: highly educated talent; large numbers of Millennials; high-energy, collaborative environments (heightened in cities by a greater number of people crossing paths with one another); and, of course, the early adoption of technologies. So, what are they looking for in a workplace?

What are Tech Companies Want in a Headquarters?

Tech companies are increasingly expressing interest in architecture that outwardly represents their brand and offers a spate of attractive amenities. This trend is bolstered by press coverage of the new headquarters projects at Apple, Amazon, Google, Samsung, Salesforce, and Facebook. Media buzz serves as an important tool in shaping public perceptions of each company and generating interest in employment there.

A similar dynamic remains at smaller tech companies, whose headquarters are routinely featured on design and tech websites. The quality of design is becoming an important part of brand perception and visibility; contrast this with the secrecy which has traditionally enshrouded design projects at legacy tech companies like Microsoft and HP.

What Features, Amenities, and Locations Do Tech Clients Look For?

Layouts and locations that are:

- Adaptable to a variety of work: The ideal tech workplace has multiple kinds of spaces for different work styles and contexts. This typically includes spaces that are intimate for focused work, that leverage communication technologies, and that support collaboration and innovation.
- Activity-based and with free-address work areas: Most workers spend 60 percent of their time outside their desks, and up to 80 percent is spent working collaboratively, so the amount of space dedicated to individual work areas is shrinking.
- Walkable and offer access to alternate transportation: Transportation choice is becoming increasingly important, which partially explains the increasing desirability of urban locations for tech companies.
- Historic renovations or adaptive reuse: As tech companies move downtown, they're increasingly looking at historic renovations for their authentic feel. Some of these unconventional layouts work for tech companies whose space needs are more fluid. Kickstarter, Yelp, and Lumosity are examples.

Amenity offerings, such as:

- Free or subsidized meals: Morningstar provides free food, while many other companies offer subsidized meals and unlimited snacks and drinks.
- Eateries: Improved dining options may include cafeterias, coffee bars, and eat-in-kitchens of various kinds.
- Gyms and fitness spaces: Twitter has a yoga studio with group exercise classes, while many companies offer intramural sports.

中央商务区和分散化总部：中国呈现复杂化趋势

在中国，一些公司也重新搬迁到城市之中，但各种规模的城市均以巨大的步伐增长着。到2025年，世界上前600个大城市中，近四分之一将位于中国。未来十年的增长也主要源自于中等规模的城市（1000万人口以下的城市），而不是世界前23大的超级城市。

多种原因造成了这一局面。其中之一就是在对城市化的大规模投资，并满足由此产生的需求，填补新的发展空白。因此，中国政府提供了广泛的激励措施，以鼓励私营企业搬迁到这些新的城市开发项目之中，并同时搬迁了一系列国有企业（SOE）。

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然而，这种城市化发展模式是不平衡的。在北京上海等一线城市，写字楼空置率相对较低，而与此同时，很多二线城市出现了写字楼供过于求的现象。政府正在做工作将一些国有企业从过于拥挤的北京转移到其他大城市，这可能预示着在未来政府计划更均匀地重新分配经济增长点。

世邦魏理仕的报告指出，与美国不同的是，亚洲的许多公司实际上是寻求更为分散的位置配置园区，原因在于其较低的成本。政府对分散式开发区和基础设施的投资，也在将公司从CBD中吸引出来。因此，虽然中国企业由于对城市化的向往和国家的激励措施而日益被吸引到城市之中，但他们并不总是进入CBD，事实上常常搬出昂贵的一线城市。

在城市中的公司较之于城市之外的公司更为成功吗？

这个问题的答案似乎在很大程度上取决于公司及其所处环境，不过，在美国形成的一种普遍的共识是，城市环境对年轻员工更具吸引力，从而可以提高招聘率。

有个案表明，这可能是真实的。当摩托罗拉移动公司宣布从名不见经传的伊利诺斯州的利伯蒂维尔小镇搬迁到芝加哥这样的大城市时，员工申请数量上升了28%。

推测来看，《财富》500强公司从小城镇搬迁到大城市的浪潮，反映了一个潜在的信念，即大城市更好做生意。部分最近的属于此类搬迁的公司包括康尼格拉公司，

- Recreation rooms: Dropbox has music studios and game rooms; other common amenities are ping pong tables, arcades, foosball tables, etc.

- Green spaces: Rooftop gardens, pedestrian areas, and bike paths tie into the holistic health and wellness aspects of tech workplace strategies.

- Interactive and social workspaces: Themed conference rooms, libraries, and collaborative spaces, which often feature elaborate installations and environmental graphics, have been proven by research to improve productivity.

- Spiritual spaces: Prayer and meditation rooms may offer a respite from job-related stress.

These types of amenities appear in major Chinese tech headquarters. A new office for Alibaba offers a post office, hair salon, convenience store, green spaces, and a basketball court. Huawei's headquarters boasts basketball courts, swimming pools, and cafeterias. Of course, in cities, floor area is very expensive, but clever design solutions can offer a combination of amenities within multi-purpose spaces.

Leasing and Buying High-Rise Headquarters: Trends Across Modern Tech Companies

Numerous Bay Area tech companies occupy space in a range of downtown mid- and high-rises in San Francisco, while a few have also built or renovated entire high-rises to serve as their downtown headquarters. Yelp opened a new headquarters in a renovated downtown San Francisco high-rise in 2014, occupying 13 of the 26 floors in the building.

Salesforce occupies multiple buildings in downtown San Francisco, and will soon move into the Salesforce tower as their headquarters. They are also creating high-rise headquarters in London and Tokyo.

Dropbox has leased space in downtown San Francisco for its headquarters, but is now seeking to occupy three different mid-rise buildings in the area, perhaps indicating their high-rise building was not particularly successful. LinkedIn leases an entire 26-story building in downtown San Francisco, covering 450,000 square feet (42,000 square meters).

In Seattle, Amazon is building its new headquarters downtown: with three custom-

一家食品制造商从奥马哈搬到了芝加哥；卡夫亨氏公司也从麦迪逊搬迁到芝加哥；通用电气（GE）也即将把总部从康涅狄格州的费尔菲尔德搬迁到波士顿；汽车制造商凯迪拉克已从底特律搬迁到纽约市；美国连锁餐厅苹果蜜蜂已从安静的堪萨斯市搬迁到洛杉矶郡。

尽管通过这些轶事，我们依然不能确定这种向大城市的转移会给企业造成怎样的影响，但值得注意的是，大公司从大城市搬迁到更小的城市目前实为罕见。事实上，例外情况可能有助于确认趋势：当 Kashi 公司在2013年将其总部从圣迭戈搬迁到巴特尔克里克后，其销售额下降，因此他们很快搬回了圣地亚哥。

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科技公司在总部中寻求什么呢?

科技公司日益对标志性建筑感兴趣，因为这种建筑在外观上能代表他们的品牌，并希望结合一系列具有吸引力的便利设施。这种兴趣因为对苹果、亚马逊、谷歌、三星、Salesforce和face book等新总部项目的新闻报道而更加浓厚，并发酵。而这些总部项目的传播效应及其所提供的便利设施，在塑造公众对每家公司的看法、形成的轰动效应中，以及招聘上，可以说是一种重要工具。

类似的态势在较小型的科技公司中也颇为常见，这些公司的总部现在经常是以设计和科技网站为特色。显然对此类公司而言，设计品质和室内装饰的美感正对于其品牌和曝光度和接受度有着重要的影响。这与一些成熟型科技公司如微软和惠普这类采用传统上包裹起来的颇具神秘感的设计，形成鲜明对照。

科技公司客户到底寻求何种功能、便利设施和办公选址?

布局和区位

- 适应多种工作：理想的技术工作场所应具有多种多样的空间，以利于不同的工作风格和工作环境。这通常包括重点工作所需的隐私空间、有高科技支持的办公空间，和支持团队合作及创新工作的办公空间。

- 基于活动的和非固定位的办公工作区：大多数员工每天花费60%的时间在办公桌之外，而这其中高达80%的时间是花在协同工作上，所以独处及在自己办公桌前单独工作的时间实际在减少。

- 步行易达性和交通便捷性：交通选择变得越来越重要，这部分解释了科技公司对市区选址日益增加的意愿。

- 历史性改造/适应性再利用：随着高科技企业搬到市中心，基于美感等因素，他们倾向于找寻历史建筑进行改造来使用。这些在当前看来非传统的面布局，似乎有着契合于科技公司需求的流畅性和灵活性。Kickstarter、Yelp和Lumosity皆为实例。

便利设施

- 免费或补贴用餐：晨星公司提供免费食品，而其他许多公司提供餐补和没有限制的零食和饮料。

- 食堂：改进的餐饮选择包括自助餐厅、咖啡酒吧、和各种各样的带餐厅厨房。

- 体育馆和健身空间：Twitter有一个带群体练习课堂的瑜伽馆，而许多公司提供内部体育运动。

- 娱乐室：Dropbox拥有音乐工作室和游戏室；其他常见的便利设施有乒乓球桌、游戏走廊、足球等。

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- 互动和社交工作区：主题化会议室、图书馆和协作空间，往往是装饰以一些特色的艺术装置和环境图形设计，这些经研究证明均有助于提高生产力。

- 精神空间：祈祷室和冥想室可缓解工作相关的压力。

在中国主要的高科技公司总部也可以看到很多类似种类的便利设施。例如，阿里巴巴集团一处新的办公设施就设有邮局、美发沙龙、便利店、花园空间和篮球场。华为的一处总部设有篮球场、游泳池、餐厅。当然，在城市中，建筑面积非常昂贵；但是聪明的设计解决方案则可以将若干此类设施功能与多功能空间结合在一起。

built towers (a first for them) and a number of amenities, it's designed to function more like a neighborhood than a campus. (In order to achieve a headquarters of this form and scale in a dense downtown, the design team had to persuade the city to vacate alleyways, thus creating three larger city blocks for development.)

While many tech companies lease floors in high-rises, it is relatively unusual for a major company to occupy the entire building or use it as its headquarters; with Amazon, Salesforce, and others though, it seems to be an emerging phenomenon. A general concern around such a move is that employees on separate floors will become isolated more easily than those who are freer to circulate across a horizontal campus.

Re-Thinking the Traditional High-Rise Headquarters

Whether for a company leasing space or owning a building, the current high-rise headquarters model doesn't allow companies and organizations to optimally interact and network people to achieve innovation. They have yet to find a way to bring the experience of a landscape into a high-rise and integrate the socially-enriching amenities found in urban centers.

Companies are moving downtown because they want to be connected to a community and a neighborhood; but, for companies moving downtown into dense spaces which only allow for high-rise developments, having a workplace operate over a stack of concrete floorplates only perpetuates the problem of limited connectivity between employees.

Driven by density and economics, the tall tower is an endless stack of connected floorplates, and this model hasn't changed much since the mid-20th century. While they may have minimal atriums that allow for some connectivity, most tall buildings are not solving the problems that have continually plagued tall towers.

The limitations of a tall building are especially evident in the contexts of changing communication technologies. The typical high-rise tower stratifies interaction and communication into strict horizontal layers with shared functions at the base, isolating occupants.

As evidenced by the problem of Tier 2 cities in China, sprawl is not an option. Workplace

租赁和购买高层总部：现代高科技公司的普遍潮流

许多湾区的科技公司坐落在在旧金山的一些中高层办公楼中，一些自己出资新建或改建了整栋的市区高楼用作他们的总部。2014年，Yelp在旧金山市区一座改造的高楼开设了新总部，占据该26层大楼中的13层。

Salesforce进驻了旧金山市区的多栋大楼，并很快就将搬入自己的Salesforce塔，这将是他们的总部。他们还将在伦敦和东京的高层建筑中设立总部。

Dropbox已在旧金山市区租赁了空间作为总部，但现在正试图进驻该地区的三栋中层大楼中，这可能表明他们的高层建筑计划并不是特别成功。LinkedIn则租赁了旧金山地区的一整栋26层大楼，建筑面积450，000平方英尺。

在西雅图，亚马逊正在建造市区新总部，和三栋定制大楼（首例）和一些生活福利设施，这样的设计是为了使其更像社区而不是常规园区。（为了在人口密集的市区建成这一高层建筑形式的和规模的总部，设计团队不得不说服市里腾出小巷，从而有了这个占了三个城市街区的开发。）

虽然许多高科技公司都租赁高层楼层，但是对于大公司来说，真正占据整栋楼或将其用作总部还是比较少见。亚马逊、Salesforce和其他项目的诞生，似乎是一个新兴现象。另一方面，人们似乎普遍担心，在不同楼层工作的员工与那些在园区自由走动的员工相比，似乎更容易变得孤立。

重新思考传统高层总部

无论是公司租赁的商用楼办公空间或自持有的楼宇，目前高层总部模式始终不尽人意，具体表现在楼宇之于公司或组织内部人员的互动方面和促进员工沟通方面，而限制了公司的创新能力。这是因为他们尚未找到一种方法，来将景观体验带入高楼，以及需要整合在城中心的一些便捷设施。

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受人口密度和经济驱使，高楼成为一堆无尽相连的建筑。且高层建筑自20世纪中期以来没有太大的改变。虽然它们中有些可能配有小小的中庭，允许使用者可以有一定程度的相互沟通，但是大部分高楼都没有解决那些萦绕在高层建筑之上挥之不去的问题。

高层建筑的局限性在高级科技及通信技术不断发展的背景下尤为明显。传统典型的高层建筑策略是按功能严格地分层设置，将沟通等共享的功能互动通常在较低的楼层，在这种情况下，实际上是一种人与楼，以及人与人相隔离的设计。

而中国2级城市的一些问题证明了，城市无计划扩张不是一个好的选择。办公楼建筑师也在积极寻找方法来改造这种结构类型，目前的建筑形式显然不能有效利用资源。

当前的设计挑战在于要重新思考，将高楼的重点放在创建一种清晰的人类使用体验上，即提供各种各样的工作方式以及员工间的连系与沟通方式。这意味着要从建筑体本身到垂直运输系统再到服务类设施的分布，寻找一些可能改变提升组织机构效率的一切事物。

三星设在美国加利福尼亚州圣何塞的北美总部，解构了传统的高层建筑，创建了具有连通“组织”的城市广场。这种策略背后的主要原则之一是有证据表明通过给员工提供一种意想不到的过路方式，有助于促进产生创意和促进协同工作效率。

在鼓励生产力、促进连系以及创造灵感机会等的首要原则驱使下，三星和腾讯率先告别了传统办公设施类型。这种新时代的工作场所设计，试图解构单一的高层办公建筑，使之仿佛具有一系列小尺度的城市街道和广场。这种新模式提供了更大的透明度，有可能使用更少的能源，并且让人们之间的互动更甚从前。

突破纵向园区：腾讯

位于中国深圳的270,000平方米新腾讯公司总部，大厦计划于2016年落成，将有容纳10,000名员工，并为公众提供的一些生活福利设施。

腾讯总部的建筑设计实现了在水平和垂直方向上均能最大限度地进行视线和物理交流。对于腾讯而言，此方案的第一步是将建筑物一分为二，使这栋楼的人们可看到另一栋楼，还可看到外面的世界。大楼虽然分开，但在后面又通过桥梁（称为链接桥梁）连接到一起，这样设计的明确目标是鼓励员工之间的互动、集会和庆祝（图1）。

所有这些桥梁的作用类似于城市或园区的公民聚集中心 – 并带有腾讯精神和价值观

architects are also looking for ways to transform the structural typology, which in its current form is an inefficient use of materials.

The challenge now is to rethink the tall tower with a focus on creating a distinct human experience that offers multiple ways to work and connect. This means looking at everything that can possibly change the effectiveness of an organization, from the form itself, to vertical transportation systems, to the distribution of amenities.

Samsung's North American headquarters in San Jose, US, deconstructs the traditional tall building to create urban plazas with connective "tissue." One of the main principles behind this move is for employees to cross paths in unexpected ways, which is demonstrated to aid with both idea generation and collaborative productivity.

Driven by the overarching principles of enabling productivity, fostering connectivity, and creating opportunities for inspiration, Samsung and Tencent represent more radical departures from the traditional typology of tall office buildings. This new era of workplace design seeks to deconstruct the single office building and make it more like a series of small buildings with urban streets and plazas. The new paradigm offers greater transparency, presents opportunities to use less energy, and enables people to interact together better than before.

Figure 1. An architectural rendering of the Tencent Corporate Headquarters in Shenzhen, China, currently under construction. (Source: NBBJ)
图1. 位于中国深圳的腾讯公司总部的建筑渲染目前正在施工中。（来源：NBBJ）

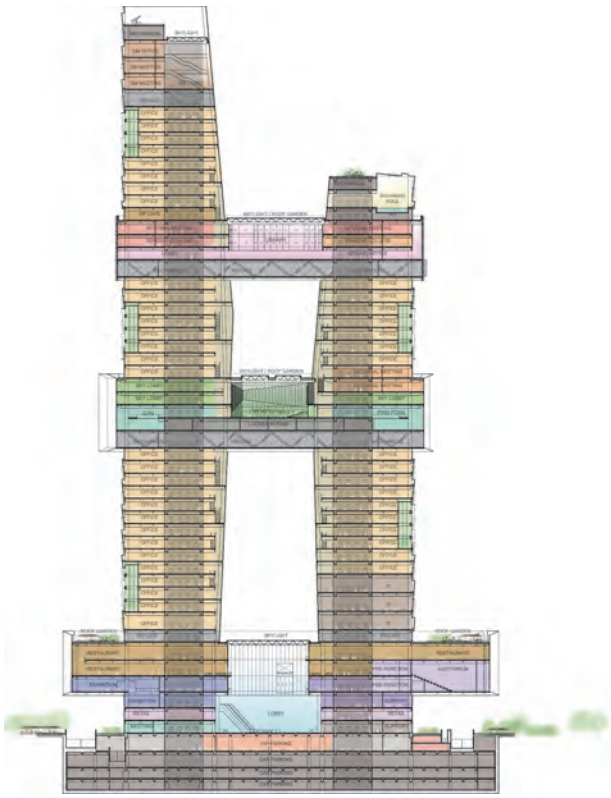

Figure 2. As seen in this section, the Tencent bridges, dubbed "Links," serve as significant nodes for connectivity. The towers are 250 and 192 meters tall, respectively, while the tallest of the three Link Bridges stands at 178 meters tall. From top to bottom, the Link Bridges are identified by their symbolic functions: Knowledge, Health, and Culture. (Source: NBBJ)
图2. 正如本节所见，腾讯桥梁（称为链接）是连通性的重要节点。两座大楼分别高250米和192米，共有三座链接桥，最高的一座位于178米高处。从上到下，链接桥以其象征功能命名：知识、健康和文化。（来源：NBBJ）

The Breakthrough Vertical Campus: Tencent

Following its scheduled completion in 2016, the new 270,000-square-meter Tencent Corporate Headquarters in Shenzhen, China, will contain workspaces for 10,000 employees and a number of amenities for employees and the public.

The Tencent headquarters is organized to maximize visual and physical communication, both horizontally and vertically. For Tencent, the first step of the solution was to split the building into two, allowing people in these towers to look to one another and also to the outside world. Once the tower was split, it was then linked back together with bridges, called Link Bridges, with the explicit goal to encourage movement, congregation, and celebration (Figure 1).

Each of these bridges function similar to centers of civic engagement in a city or a campus, and are branded with Tencent's spirit and values. In addition, each bridge has specific amenities and functions, devoted respectively to the broad themes of knowledge, culture, and health (Figure 2).

的印记。此外，每座桥都有特定的生活福利设施和功能，分别致力于传播知识、文化、卫生等主题（图2）。

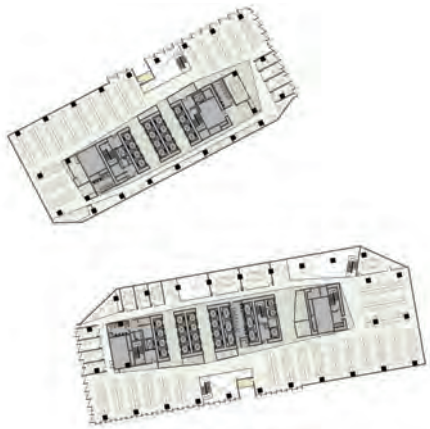

Figure 3. A typical office floor plan: the south tower floor plate is 100 meters wide, remarkably broader than the industry average of 37. (Source: NBBJ)
图3. 典型的办公层平面图：南大楼楼板宽100米，明显宽于37米的行业平均水平。（来源：NBBJ）

A Uniquely Wide Floor Plate Design to Spur Connectivity, Efficiency, and Iconicity

A thorough workplace strategy process was instrumental in developing the guiding design principles: connecting the employee to the customer, connecting the employee to the brand experience, and connecting employees to one another.

The workplace is designed for connectivity, efficiency, and flexibility with a large, open floor plate. The client and project team envisioned a space that can quickly shift in response to changing needs. Floor plates are thus remarkably wide; the south tower is 100 meters wide, as compared to the industry average of 37 meters (Figure 3).

Using Design Computation to Promote Innovation

The towers of the Tecent headquarters are designed with ultra-clear glass to maximize visual connectivity. In addition, the meeting and conference functions in each of the buildings face toward one another. An additional strategy was to shift the cores off-center in each building (Figure 3). This creates wider zones of conferencing and flexible areas, which produces a variety of experiences on each floor.

There are equally clear and recognizable personal-scale elements for learning, innovation, collaboration, and creative work in the dedicated workplace areas which reflect the character of Tencent's product offerings, brand identity, and employees (Figure 4).

In order to achieve desired outcomes and experiences, the design team utilized advanced computation tools to optimize employee movement (Figure 5). These technologies allowed the team to enhance the bridge and elevator systems by thoroughly vetting, testing, and validating the whole system before finalizing it. Through multiple iterations during the schematic design and design delivery (DD) phases, the elevator system was intended to encourage chance encounters by working in concert with the Link Bridges to create quad spaces across the vertical campus.

独特的大平层设计，增强连通、效率和标志性

设计应用了一个全面而彻底的工作场所战略，发展并指导生成了设计原则：将员工和客户联系到一起，将员工与品牌体验连接到一起，以及让员工互相联系。

大楼采用大平层的开放性设计，大幅提高了建筑的连接性、效率和灵活性。客户和项目团队设想的这种可迅速转变的空间将灵活应对不断变化的需求。楼板因此非常宽；南楼宽100米，而行业平均水平仅37米（图3）。

使用设计计算，促进创新

腾讯总部大楼为超白玻璃设计，以便最大限度地提升视觉连接。此外，各栋建筑物的集会功能区和会议功能都面向彼此。另一个重要的战略是改变每栋建筑的核心筒位置，设在非塔楼中心设置（图3）。由此创造了更广阔的会议和灵活使用的区域，继而这些区域本身又变得更有体验感。

同样在专用工作区还有用于学习、创新、协作和创造工作等清楚明确的面对人的元素，这些元素反映了腾讯产品线、品牌形象和员工生活等（图4）。

为了达到预期的结果和体验，设计团队利用了先进的计算工具来优化员工日常的行动路线（图5）。在最终完成之前，通过

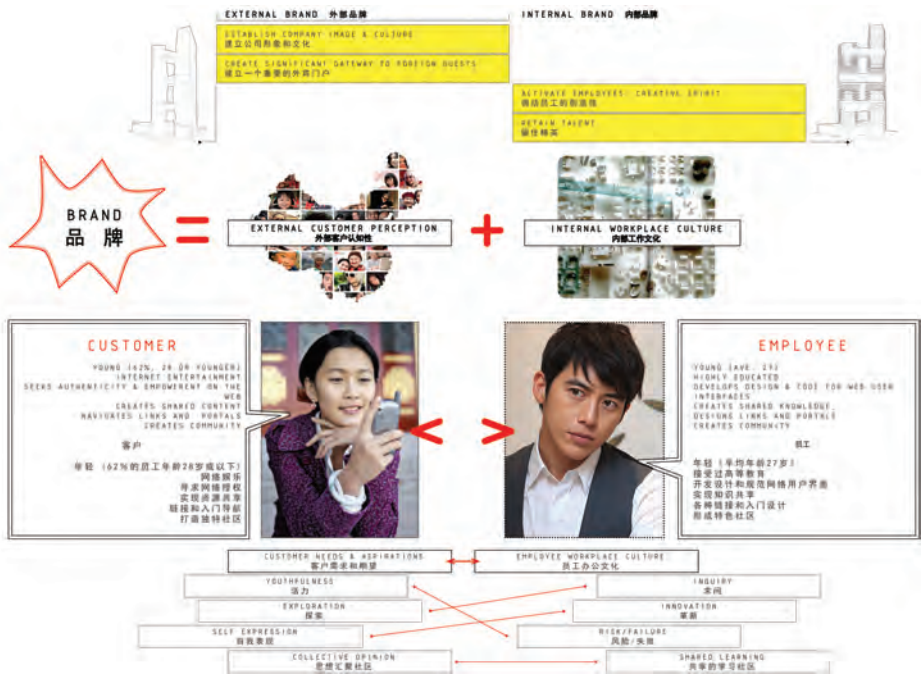

Figure 4. Tencent employees are relatively young: the design of the company's headquarters was driven by the needs and values of this particular demographic. The design team created hypothetical employee personas, from which emerged the guiding design principle to create spaces that connect Tencent's employees, culture, and brand in meaningful ways. (Source: NBBJ)
图4. 腾讯员工都比较年轻。公司总部的设计是由这一人群的特殊需求和价值所驱动。设计团队创造了假想的员工模型，从中涌现的指导设计原理以极具意义的方式创建了连接腾讯员工、文化和品牌的空间。（来源：NBBJ）

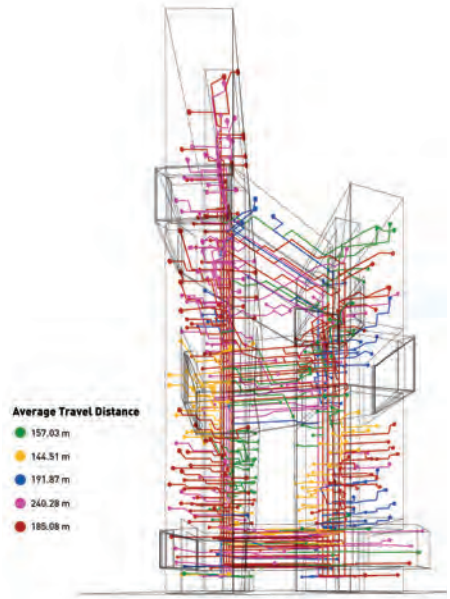

Figure 5. The project team used advanced design computation tools to enhance a sense of community and optimize travel time to amenities. Distributed amenities encourage people to move around between tasks, which research indicates boosts both well-being and productivity. (Source: NBBJ)
图5. 项目团队使用了先进的设计计算工具来提高社区感，并优化了设施之间的交通时间。分布式公共福利设施鼓励人们在任务区之间走动，研究也表明这既提高幸福感，也能提高生产力。（来源：NBBJ）

Figure 6. The gymnasium, located in the Health Link. (Source: NBBJ)
图6. 位于健康链接桥的健身中心。(来源：NBBJ)

Synergizing Form and Function

The primary driver for the project's design was to heighten a sense of community and social well-being, and to encourage serendipitous interactions. The critical solution for these desires is the Link Bridges, which encourage people to traverse between the two towers and cultivate synergy within Tencent.

Shared programs are traditionally located at the ground level of high-rise buildings. Redistributing these shared amenities upward allows them to serve as magnets, drawing people out of offices to interact more, which research shows leads to greater innovation and productivity.

The idea behind Tencent's Link Bridges was to utilize symbolic form as well as function to serve each individual program. Conference facilities (including Tencent University, the company's training department) are located on the top bridge, dubbed the Knowledge Link Bridge (Figure 2).

The middle bridge is the Health Link Bridge, as it contains the fitness center with full-scale basketball court, a running track that crosses the towers, a game room, workout spaces, a café and juice bar, and conference facilities (Figure 6).

The third bridge, dubbed the Culture Link Bridge, offers elements and spaces that are more public and connected to the city. This includes a huge auditorium cantilevered out to the side. Called Tencent Expo, the multi-media space encourages employees to stay connected with company-wide activities and updates (Figure 7).

对整个系统彻底审查、测试和验证，团队通过这些技术可加强桥梁和电梯系统。通过在方案设计和扩初设计阶段（DD）阶段的多次推敲，电梯系统设计旨在通过与链接桥协同工作，在整个垂直场所内创建四维空间，从而创造接触机会。

同步大楼形式与功能

该项目设计的主要驱动是意图提高社区感和社交体验，以及激发各种偶遇与互动。实现这些愿望的关键就是链接桥，它鼓励人们在两座大楼之间往来，并在腾讯内部合作和协同工作。

共享设施通常安置在高层建筑的底层。往上层来重新配置这些共享设施会使它们像磁铁一样吸引人们走出办公室，产生更多互动 – 研究显示能引导出更好的创新力和更高的生产率。

腾讯链接桥背后的想法是，利用独特的标识性的外形和功能来服务每个独立功能设施。会议设施（包括腾讯大学、公司的培训部）置于桥的顶层，称为知识链接桥（图2）。

桥的中间是健康链接桥，因为它是健身中心：全尺寸篮球场、穿越塔楼楼的跑道、游戏室、健身所、咖啡厅、果汁吧和会议设施（图6）。

第三座桥，称为文化链接桥，提供着更加公开且与城市相连的元素和空间。这包括一个悬挑到侧面的大礼堂。称为腾讯博览中心，此多媒体空间将鼓励员工更新并参与公司内的活动（图7）。

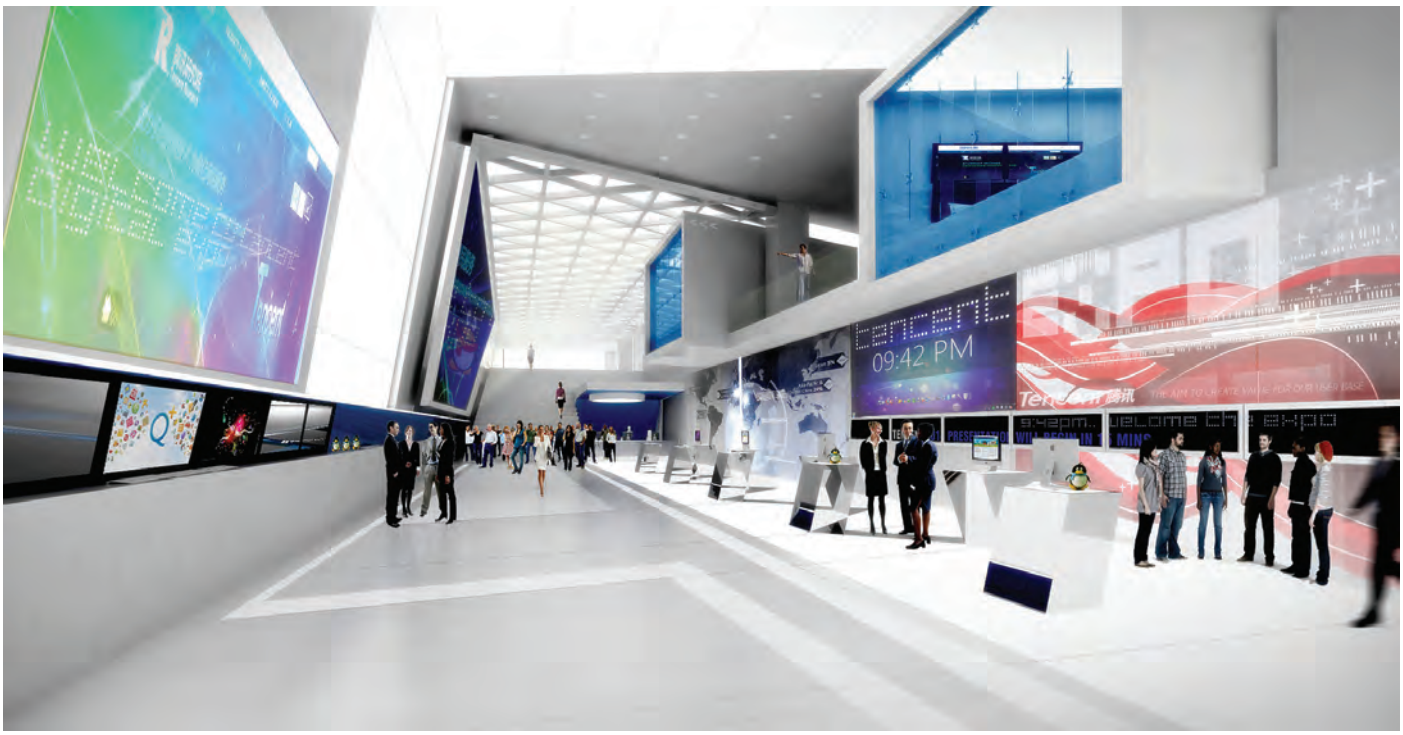

Figure 7. Tencent Expo, located inside the Culture Link, encourages gathering and engagement between the towers with cutting-edge media technologies. (Source: NBBJ)
图7. 腾讯博览中心，位于文化链接桥，使用先进的媒体技术促进这两栋楼之间的交汇和互动。(来源：NBBJ)

Figure 8. A level 26 plan, with a landscaped Health Link bridge to encourage connections with nature. (Source: NBBJ)
图8. 26层平面图，利用风景如画的健康链接桥促进与大自然的联系。(来源：NBBJ)

Figure 9. A first level floor plan, illustrating how activity at the ground level is promoted by a unified lobby experience. (Source: NBBJ)
图9. 1层平面图，显示统一大厅如何促进底层活动。(来源：NBBJ)

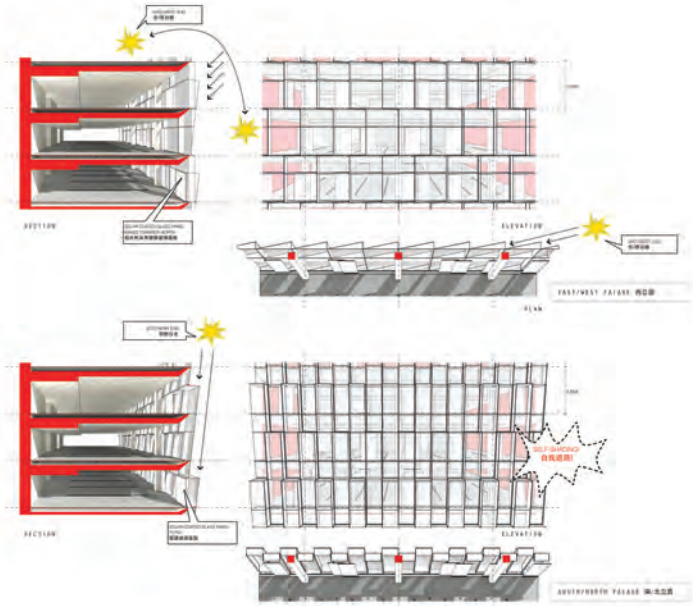

Figure 10. A geometrically-angled curtain wall design provides aesthetic appeal as well as shading functions and improved building energy performance. (Source: NBBJ)
图10. 几何直角幕墙设计提供了审美情趣以及遮阳功能，并提高了建筑能效。(来源：NBBJ)

Link Bridges also serve as major transport points for the elevator system. People can transfer up or down into the tower and then horizontally change towers, in addition to using the bridges as public plazas. On the top of each Link Bridge is an outdoor roof garden, offering another shared place for social interaction and community building (Figure 8). Along with the unified lobby experience on the ground floor (Figure 9), Tencent's Link Bridges are key design solutions in fostering an inclusive, synergistic, and stimulating vertical campus.

Reducing Energy Consumption and Carbon Emissions

Tencent's design employs passive energy strategies which reduce energy consumption and carbon emissions. The slight rotation of the towers and their offset heights capture the site's prevailing winds, ventilating the atria while minimizing exposure to direct sun.

To control glare and heat gain, the curtain wall incorporates a modular shading system that varies according to the degree of sun exposure. Solar and energy modeling were utilized to minimize solar heat gain during intense sun periods.

The project team also designed the building skin to double as a means for the building to self-shade without any louvers. The façade shifts and angles outward to block the sun from the south. A computational model was utilized for the façade, calculating the effects of leaning out versus leaning in. Designers then tuned the angle to negotiate between cost and energy consumption until the optimal angle was achieved (Figures 10 & 11).

链接桥同时也是电梯系统的主要交通换乘点。除了将链接桥用作公共广场，人们借由此链接桥往上、往下，然后水平方向移动到其他大楼。每个链接桥的顶部都有一个室外屋顶花园，为社交互动和团队建设提供了额外的共享空间（图8）。与底层的统一大厅体验（图9）一起，腾讯链接桥也是设计方案的重点之一，提升参与感、鼓励协同工作和激发垂直园区的活力。

减少能源消耗和碳排放量

腾讯的设计采用被动式能源战略，以减少能源消耗和碳排放。大楼的轻微扭转以及错开的一高一低的楼高设计，顺应了所在地点的盛行风向，并让天井得到通风，同时最大程度地减少阳光直射。

为了控制眩光及热量吸收，幕墙包括了一个可根据光照角度而变化的模块化遮阳系统。利用了太阳能和能源模型，以减少在光照强烈时段的太阳热量吸收。

项目团队还设计了建筑表皮，以使大楼不需任何遮光栅格就能达到双倍的自遮阳目的。立面的向外偏移和外角偏转，遮挡了来自南面的阳光。针对外立面使用了一个计算模型，计算出了外倾与内倾的影响。设计师再根据成本和能耗两者之间所达成的平衡，做出角度调整，直到得出最佳角度（图10、11）。

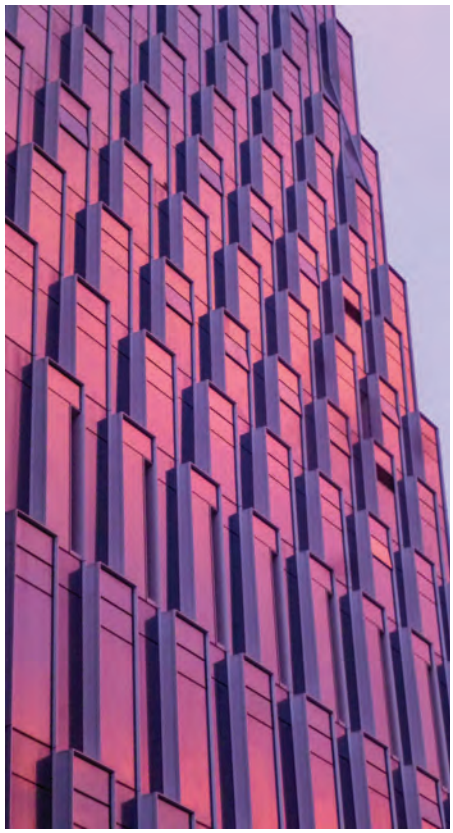

Figure 11. A photo of the completed façade. (Source: NBBJ)
图11. 几何直角幕墙设计提供了审美情趣以及遮阳功能，并提高了建筑能效。(来源：NBBJ)

An External Expression of the Brand Experience

Tencent's façade was one of the most complex that the design team had ever accomplished. The design concept sought to have the building skin resemble a cloud, an abstracted representation of the internet cloud. This façade seeks to symbolically connect Tencent employees to their work and culture, which revolves around the internet experience. The architects envisioned a unique skin that is soft and cloud-like in appearance. The end result, true to the original vision, was achieved with glass and metal, leaning and tilting to create a cloud-like "blur" effect.

Continued Engagement for Unprecedented Quality

Typically an architect would be involved in the curtain wall design and consulting until the end of DD, or even 50 percent DD, in China. In this case, however, the project team remained influential in the design and detail of the curtain wall and façade right up into the final tendering process, which led to significantly improved outcomes. The project team was aided by a China-based consultant and was directly involved in the selection of a contractor, which allowed their experts to lead the client in the development of these technologies.

Conclusion

The traditional model for corporate design places companies in a singular high-rise or in multiple low-rise buildings. The design of the Tencent Corporate Headquarters merges these typologies by bringing the best of both together. The vertical, linked high-rise campus brings the energy created by spontaneous encounters and dense urban settings into the interior of the tower, such that people experience the building as an extension of its vibrant, highly-interactive, technologically-advanced culture.

The new high-rise of tomorrow will be one that creates landscapes within its form and promotes connectivity within and across offices; this model of fostering connective amenities across towers can also be adapted to rental office spaces occupied by scores of tenants and managed by building owners or third party companies.

Regardless of how it's achieved, the high-rise workplace of today's global tech industry can and should encourage employees to be curious, learn daily, play and collaborate with their colleagues, and connect their work to the products and brand identity that engage their end-users.

品牌体验的外在表现

腾讯的外立面是设计团队曾完成过的最复杂任务之一。设计理念寻求一种类似云、或网络云抽象表示的建筑表皮。这种外观力求象征性地将互联网环境之于腾讯员工与其工作和文化的连接。建筑师设想出了一个独特的表皮，即柔软且云状的外观。最终的结果与初始预期无异，由玻璃和金属倾斜交错地创造出一个云状“模糊”的效果。

持续参与，保证无与伦比的质量

通常在中国，一个建筑师参与幕墙设计及咨询直到初步设计尾声，甚至在50%的初步设计时就不再参与。然而，在这个案子中，项目团队坚持参与从幕墙到外立面的设计和细节，直到最后的招标过程，由此最终带来了显著的成果。该项目团队由一家中国顾问公司协助，并直接参与到承包商招标中，这让他们的专家带领客户一起参与这些技术的开发。

结论

传统的企业大楼设计往往将公司置于独栋高楼或多个低层建筑中。腾讯公司总部的设计则将两者的优势结合在一起。垂直链接的高层园区将自发交互以及高密城市环境激发的能量带入大楼内部，使得人们的大楼体验成为一种充满活力、高度交互、技术先进的文化延伸。

明天的新型高楼建筑设计将是外形带景观的，内部高度连接可达的，楼宇间便捷穿梭的；同时也是适用于商业办公租赁、大楼业主及第三方公司需求使用及管理的设计。

无论使用何种实现方式，当今全球高科技产业的高层办公场所可以且应该鼓励员工具有好奇心、每日进行学习、娱乐，与同事紧密合作，并将他们的工作连接到产品和品牌识别上，以激发终端用户。