

Title:	<b>Property Management: Moving Towards Sustainable Vertical Urbanism</b>
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Subjects:	Building Case Study Property Ownership/Management Sustainability/Green/Energy
Keywords:	Building Management Public Space
Publication Date:	2014
Original Publication:	Shanghai Tower: In Detail
Paper Type:	1. Book chapter/Part chapter 2. Journal paper 3. <b>Conference proceeding</b> 4. Unpublished conference paper 5. Magazine article 6. Unpublished

# Property Management: Moving Towards Sustainable Vertical Urbanism

## 物业管理: 迈向可持续发展的垂直城市主义

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As the highest tower in Shanghai, and at the forefront of a new generation of supertall towers nationwide, Shanghai Tower will anchor the city's Lujiazui district, which has emerged as one of East Asia's leading financial centers. The following chapter will present Shanghai Tower's property management structure, in addition to the applied concepts of supertall high-rise property management. The focus will be placed on how to integrate, to the greatest extent, our best property management services, and even our specific operation modes. The chapter will also explore the property management structure in regards to its synergistic active participation and support of various public welfare and environmental protection activities. Therefore, corporate responsibility and the ultimate goals of creating a comfortable and harmonious commercial, working and living atmosphere are achieved. In that regard, keeping up with the pace of city development as a whole is simultaneously maintained.

上海中心大厦坐落在陆家嘴核心地区，该区域已经成为东亚首屈一指的金融中心之一。本文详细介绍了将应用于上海中心大厦这一超高层建筑的物业管理理念，着重阐述如何将物业管理服务同参与及支持各类公益及环保活动融合起来，做到相辅相成，为实现缔造和谐舒适的商业、办公、生活环境及城市发展作出贡献。

As the highest tower in Shanghai, and at the forefront of a new generation of supertall high-rise towers in China (see Figure 5.18), Shanghai Tower will be overseen by a professional property management service team. They will be committed to maintaining and improving the already high standards of enterprise operations. Specifically, they will be aiming at shaping the highest-quality Shanghai-style property culture, providing attentive and considerate customer service while creating a celebrated and excellent brand. This brand is fully expected to emerge as one of the best enterprises in Shanghai, or even the whole nation, depending on its strong and abundant market strength.

### Intelligent Building Management

#### Control Room

The establishment of a control room will certainly transform and promote the traditional monitoring center into a mass command center, thereby, necessitating the monitoring and control of information and dispatch systems for the tower as a whole. As information will be centralized and monitored in a timely fashion, emergency events can be handled appropriately, ensuring safety and accessibility within the tower. The transformation of decentralized control into a concentrated one produces a breakthrough in traditional work specifications. The control room will be upgraded through centralized cooperation and additional support, coinciding with the national initiative. Already fully applied and integrated into the building's critical systems, like illumination, heating, cooling, ventilation and power generators, various intelligent building control technologies, which are already highly intensive, can enormously reduce energy consumption. The reduction is achievable merely by monitoring and commissioning a truly orderly, controllable and effective management system.

Standard work inspection instructions have been prepared for active itemized video inspection work done by the security team on duty in the control room. Instructions have also been made for the operation of all equipment and facilities in the tower, in addition to daily safety and maintenance checks. The goal is to fundamentally change old behaviors and concepts

上海中心大厦作为上海第一、全国领先的新一代超高层建筑（见图5.18），将凭借出色而优秀管理层级别的服务团队，致力维持高水平的企业管理。凭借领先市场的雄厚实力，以及高瞻远瞩的创见，致力打造最高质素的“海派”物业文化，以及提供最周全的客户服务，建立强大优质品牌，有望成为上海乃至全国最出色的企业之一。

### 智能建筑管理

#### 中央控制室

形成将传统监控中心向集群指挥中心的转变和提升，监控指挥整个大厦的信息和调度系统。充分发挥集中监控的作用，及时采集、处理突发事件，保障大厦安全畅通。形成了对传统行业工作行为规范的突破，将分散管控转变为集中管控，提升了监控指挥中心的核心理地位，使之可以得到更多方支持和配合，并着力成为国内首创。各种智能化楼宇控制技术的高度集约化，甚至可以通过监控和调试来有效降低大厦的能量消耗，这些技术已充分运用渗透到大厦的照明、采暖、制冷、通风和发电等主要心脏系统，使大厦真正可以做到有序有控有效管理。

创建中央控制室值班长规范作业指导书，由管理者每天主动定时按作业书要求对大厦各项设备设施的操作进行逐项动态检

like “no event, no danger.” As a result, site management will be changed from a passive management model to an active management model.

### Realize Highly Intelligent Building Management and Further Promote BIM System Development

The achievement of positive development results using BIM will in consequence accelerate the application and integration of BIM into property management services. The submission of the concept “Property Asset Operation Platform = BIM + FM + IBMS” and the formation of 3D visible space (i.e. an innovative integration of three-dimensional animation, dynamic operation, plane management, instant dynamic video and effective operation management interface) will consequently improve management effectiveness and accuracy while ultimately enriching the overall management model. Utilizing BIM will, in a true sense, meet the targets of energy conservation and environmental protection. Ultimately, we perform BIM application-based information management to promote management efficiency, improve management quality, shorten different kinds of construction terms, reduce management costs, analyze and realize minimum energy consumption, and directly consider the user’s feelings through external ventilation, lighting, air distribution and visibility.

Other benefits of BIM are: 3D renderings and a promotional demonstration; quick calculations and upgraded accuracy; precise scheduling and less extravagance; synchronized comparisons and effective control; virtual construction and effectual coordination; round inspection and reduced reworking; trouble extracting and decision supporting.

### Safety Management

#### Operation Management

A realized three-dimensional intelligent building and a comprehensive stereoscopic communication setup is composed of: wired and wireless communications networks;



Figure 5.18. Rendering of the Shanghai Tower at night (Source: Gensler)  
图5.18. 上海中心大厦夜景效果图 (来源: Gensler)

查，以期从根本上改变以往“没有情况报告就是正常和安全”的固定行为观念和模式，将现场管理从被动管理方式向主动管理方式进行转变。

#### 高度智能化建筑管理，深化BIM系统的研究发展

在取得BIM建设方面成果后，及时开展将BIM应用和结合于物业管理服务中，创建“物业资产运行平台=BIM+FM+IBMS”的概念，形成生动的3D观感空间(立体动画、动态操作、平面管理，以及即时的动态视频，高效的运行管理界面相结合的创新手段)，提升了管理的有效性和准确性，也丰富了管理者的管理模式和手段，充分建立以BIM应用为载体的管理信息化，提升管理效率、提高管理质量、缩短各类施工周期、有效降低管理成本，分析、实现最低最佳的能耗，借助通风、采光、气流组织以及视觉对使用者心理感受的控制等，实现真正意义上的节能环保，并确保使BIM系统在以下方面得到全面完善的体现。

三维渲染，宣传展示;快速算量，精度提升;精确计划，减少浪费;多算对比，有效管控;虚拟施工，有效协同;往返检查，减少返工;疑问调用，决策支持。

### 安全管理

#### 操作管理

实现智能建筑立体化，构筑全方位立体通讯架构(有线与无线相结合，公共公用频率与专用频率相结合，专用通讯设备与通用通讯设备相结合，普通功能与专用功能相结合)。物业人员仅需利用便携式电脑于物业管理日常工作，即可进行图像、视频、图纸、报表、文字等信息的即时快速交换，全面提高工作质量和效率，同时有效起到工作操作过程中的人身安全保护。

建设对设备运行的视频控制系统，确保对重点设备可实施重点观测和保护，利用高速网络通道可进行双向交流和电话会议、图纸传送。

#### 消防安全管理

上海中心的消防设计管理系统包括:规划用地红线以内的室内外消火栓灭火系统、自动喷水灭火系统、水喷雾灭火系统、IG-541气体灭火系统、大空间智能灭火系统、干粉自





Figure 5.19. Intelligent curtain wall. (Source: Gensler)  
图5.19. 智能窗帘及照明 (来源: Gensler)

public and dedicated frequencies; exclusive and common communication equipment; as well as ordinary and special functions that are all respectively mixed with each other. Additionally, all the property management staff require the ability to transmit images, videos, drawings, statements, and other types of information related to daily work activities. These capabilities will be achieved merely by using portable computers, with the aim of improving work quality and efficiency, while also protecting the personal safety of staff during operation.

Construction of media video control systems for equipment operation is fundamental in guaranteeing the protection and observation of critical facilities. Dually important is the utilization of a high-speed network channel to perform mutual communications, telephone conferences and the transmissions of drawings.

### Fire Fighting Management

Fire fighting management systems in Shanghai Tower, consist of indoor and outdoor fire hydrant extinguishing systems, automatic sprinkler and water fog sprinkler systems, a IG-541 gas fire control system, an intelligent fire fighting system for large spaces, automatic dry powder extinguishing systems and other building fire extinguishers within the planned project boundary. In the event of a fire, the system detection component will send fire alarm signals to a fire alarm control unit in the fire control center. It will then initiate an audible alarming device while reporting the specific location of the fire. The solenoid valve of the relevant sprinkler pipe network will be opened in the mean time, so as to rapidly and effectively extinguish hazardous fires and using the same system to cope with any reignitions. Additionally, the fire fighting system is endowed with such functions as manual operation, automatic control and emergency operation.

The total flooding IG-541 clean gas extinguishing system will be separately fixed in a conventional high and low voltage power distribution room, transformer room, switch cabinet, communications room, backup power grid room and lift machine room.

The main control room, dimmer room, lift generator room, UPS machine room and other communication rooms located in the basement will all be installed with high-pressure water mist fire suppressing systems, which represents cutting-edge technology in water-based fire

动灭火装置和建筑灭火器的配置等。一旦发生火灾,系统探测组件向消防控制中心的火灾报警控制器发出火警信号,启动声光报警装置报警,报告发生火灾的位置;打开相应洒水器管网的电磁阀,迅速有效的扑灭火灾,火灭停止,复燃则重新启动。系统同时具有手动控制、自动控制和应急操作功能。

在常用的高低压配电房、变压器房、开关柜、通讯机房、后备电源间、电梯机房等均设置全淹没IG-541洁净气体灭火系统。

在重要的地下一层总控中心、调光室、电梯机房、UPS机房以及各类通信机房均采用高压细水喷雾系统。高压细水雾灭火是水灭火系统的一种新科技,具有压力高、水雾微粒超细的特点,大大提高了水灭火的效能,从而第一时间有效保证重要机房及大厦核心的安全。

### 疏散管理(火灾或者非火灾的紧急、危机处理)

上海中心大厦作为100层以上的超高层建筑,内部拥有一个“加长型并扭转”疏散楼梯,大规模的人员快速疏散会使很多人精力精疲力竭,尤其对于老人、行动不便者也许更加不可能。因此上海中心在满足现行国际安全标准设计的同时,结合自身特殊情况及需求,突破创新,形成“上海中心大厦的疏散方案”。

- 分阶段疏散(办公区域):所有区域都有设置电梯以及疏散楼梯以及整体区域的避难层。在建筑顶端,每12层设置独立两层高的设备层并结合避难层设计,独立分成10段,当有紧急情况,每段可独立控制增压排风。该疏散方式并不考虑彻底将楼内人员疏散出去,它的主要策略是将人员安置到楼内的避难层。基于紧急情况类型以及处理该紧急情况的应急响应方法,管理者配合消防部门分阶段将人员从避难区移离或者将人员妥善安置在这些安全区域。
- 部分疏散(酒店、观光区域):使用高区消防电梯将酒店、观光(均在高区位置)较为集中的人员直接疏散至楼外或者疏散至一个安全区域。
- 改造部分转换层客用电梯,紧急时

protection. It is peculiarly characterized by its high pressure and ultrafine water mist for the main purposes of enormously improving water-based fire suppression efficiency, while guaranteeing the critical safety of the generator room and whole tower.

### Evacuation Management (Fire or Non-Fire Emergency Management)

As a supertall high-rise building with more than 100 floors, Shanghai Tower features a “stretched and torsional” evacuation staircase in consideration of extreme events which require a large scale evacuation. This is especially troublesome for the elderly and those with limited physical mobility. Therefore, Shanghai Tower attentively consolidates its own exceptional circumstances and demands, with the satisfaction of prevailing international design safety standards, to actively seek breakthroughs and innovations and ultimately complete the “Shanghai Tower Evacuation Plan.”

- Evacuation by Zone (Office Region): Lifts and evacuation staircases on each floor and a refuge floor for each entire office zone are all arranged across the office region. Every 12 floors are equipped with an independent two-story mechanical layer with one refuge floor therein. The whole tower is divided into 10 separate zones technically endowed with independent control of increasing pressure and extracting air-flow in case of emergency. The said evacuation method primarily focuses on the arrangement of those displaced on the refuge floor, while not taking into account evacuating all the people from the tower.
- Evacuation by Section (Hotel and Observation Area): Utilize high zone fire lifts to evacuate the people in such comparatively densely populated areas, such as hotel and observation areas (both located in high zones) out from the building or to a safe region therein.
- Retrofit several passenger lifts arriving at the transfer layer as evacuation lifts for emergency use. On account of the several zones between the refuge areas in Shanghai Tower, in which the hotel covers the largest area (including 15 layers), a comparatively prudent way of evacuation in case of a fire or emergency is to assemble the people using a staircase in the refuge area of the same zone. The evacuees would then be taken from the refuge layer where they would be assembled by specific lifts by zone. The lifts arriving at the designated layers with specific functions in the tower shall be retrofitted and equipped with protective settings for special use (i.e. retrofitting 13 office expresses into emergency evacuation lifts) in order to provide solid and substantial supporting hardware measured for rapidly evacuating a large staff by swiftly shuttling up and down between different zones throughout Shanghai Tower.

### Energy Conservation Management

Green energy conservation concepts will be integrated into the architectural design and management operations, for example:

- Use of green plants on each floor as air filters (i.e., plants in sky lobby – see Figure 5.19)
- Intelligent external façade with an adjustable shading coefficient (i.e., External façade with 120-degree rotation)
- Providing enough sun shade in the summer while still fully utilizing daylight (intelligent curtain)
- Harvest and reuse rainwater (water reclamation system)

### External Curtain Wall Design

刻作为疏散电梯使用。由于上海中心大厦避难区域之间的空间又细分成了几个区，其中最大的区为酒店区(含15层)，遇到火宅或者危机时刻，比较谨慎的做法为：先采用楼梯将每个区人员疏散至最近的避难区，然后(根据区位)采取具体的电梯只从避难层疏散人员。因此，我们对到塔楼内的特殊区和特殊使用楼层部分电梯设置成带保护措施的电梯(改造13部办公区域穿梭电梯为紧急疏散电梯)，贯穿整个上海中心不同业态区域，为迅速疏散大量人员提供可靠的硬件配套。

### 节能管理

我们将绿色节能的概念带入设计和管理中，如：

- 用楼层的绿色植物做空气过滤(空中大堂植被)(见图5.19)
- 智能化的可调节遮阳系数的外墙(120°扭转外幕墙)
- 在夏季充分遮阳、充分利用自然光(智能窗帘)
- 雨水收集重新利用(中水系统)

### 外层幕墙设计

建筑中庭处设计为双层玻璃幕墙围护系统。从本质上讲，空中中庭为主体结构第二层可呼吸的围护层。双层表皮结构之间形成的中庭结构犹如一层隔热毯一样将建筑包裹起来，减少能量消耗。双层围护结构主要利用两层玻璃作为围护结构，玻璃之间留有一定宽度的通风道，通过对温度的调节达到节能的效果。在冬季，双层玻璃之间形成一个阳光温室，增加室外到室内流通空气的温度。在夏季，可将室内温度较高的空气排出室外。通过这样的室内空气循环，中庭空间可以帮助抵御夏季的酷暑和冬季的严寒。

### 智能窗帘、照明系统

对于超高层建筑的外部采光、内部照明的可再生资源利用，上海中心大厦着手于：

- 考虑冬季利用日照，夏季利用自然通风。根据一年四季太阳光的照射角度自动控制整栋大楼不同朝向和



A central aspect of the atrium design is the double transparent façade which wraps the entire building. Essentially, the atrium serves as a respirable second skin for the major structure, like an insulating blanket which muffles the tower, and diminishes energy consumption as a result. The buffer between the inside and outside warms up the cool air outside during winter, and dissipates the heat from the building's interior during the summer. Such round-the-clock indoor airflow circulation indeed contributes to coping with the intense heat of summer and freezing cold in the winter.

### Intelligent Curtain and Illumination Systems

As for the use of renewable resources in external and internal illumination of a supertall high-rise, Shanghai Tower concentrates on:

- Taking advantage of sunlight during the winter and ventilating the atria during summer. Orienting the building automatically and adjusting roller blinds for each floor to the proper position, as per the angle of the sunlight all year round. This ensures the maximum balance between sun shading, lighting and transparency.
- The main orientation of the transparent façade of the tower is southeast, which is the best approximate orientation that allows for adaptable transparency and controllable privacy. Proper orientation design enables adjustable transparency for customization of the interior environment in diverse climatic change whenever necessary, or even for indoor privacy and freedom through certain adjustments.
- A spectrally selective low-E coating applied on the curtain shall be considered for sun shading in virtue of the spiraling form of the tower. Some intolerable sunlight or harsh noise will inevitably exert adverse impacts on a work environment, in terms of comfort and health as too much exposure to ultraviolet radiation may otherwise cause physical discomfort. At the same time, programmable illumination systems shall be applied to control illumination in public areas as well as in large tenant areas. Other illumination will be controlled by photoelectric sensors and a local switch.

Effective solutions for various resource issues will not only be beneficial to global environmental protection, but in current society as well, since enthusiastically pursuing it has become popular. However, it will also inject a more fashionable brightness into the work and lifestyle of the Shanghai Tower tenants.

### Wind Energy

The use of renewable resources in Shanghai Tower, such as wind energy, is characterized by aerodynamics which is specifically designed for various urban wind environments. This offers cost savings and the convenience of installation on urban buildings and structures, making it possible to efficiently operate in gusty and turbulent winds. A total of 270 grid combined wind turbines will be installed at the top of Shanghai Tower (see Figures 5.20). They will primarily be powering the building's exterior lighting and some of the parking areas. The turbines will produce an estimated 54,000 kWh/year in renewable energy.

### Cogeneration

Two internal gas combustion engines are installed as the prime movers for a cogeneration system, whose generating capacity will be connected to the internal grid of the tower. High-temperature gas and water jackets are jointly produced during generation. The internal combustion engines will respectively go through a heat exchange while the second side of hot water and waste heat will be recovered afterwards. The secondary side of hot water will be used as a heat source in hot-water LiBr absorption refrigerants for air-conditioner cooling in the summer and winter. It may also be used for heating after a heat exchange in cold weather.

Combined Cooling, Heating and Power (CCHP), a kind of energy distribution, and one of the essential measures taken to cope with atmospheric pollution. It also increases multiple energy resource rates, which is typically characterized by saving energy, ensuring an improved environment, supplying more electricity and improving other extensive achievements. With its comprehensive efficiency rate of over 90% on one side, a cogeneration system will utilize the heat energy from natural gas to the full extent. On the other side, a part of the heating cost can be generally reduced and apportioned into electricity fees, thus relieving the burden on operation costs. This will completely utilize heating energy and profoundly increase the overall energy efficiency. In light of the exceptional advantages of cogeneration for energy conversion efficiency, Shanghai Tower will take into account the implementation of this technology for energy conservation measures.

### Ice Storage

不同楼层的每一幅卷帘调整到合适的位置，以实时保证遮阳、采光和通透性的最佳平衡。

- 高层建筑透明部分的主朝向为东南面，接近最佳朝向，使之真正实现可调节的透光度和可调节的隐秘度。合理的朝向设计可提供随时可调节的透光度去适应不同天气下的室内环境，在一些特定的时间，通过调节，最大化保障室内隐私和自由度。
- 考虑到扭转螺旋形体特性，考虑彩釉玻璃作为遮阳方案。有些过大的太阳或是过大的声响，总会对高效的工作产生影响，不能给予舒适的办公环境，而且健康也是现代办公人员所关注的焦点，过多紫外线照射会引起身体状态的不适。同时，公共场所和大面积租户的照明控制采用可编程照明控制系统，所有其他照明将由光电感应和本地开关控制。

在当前环保时尚流行的社会，有效的解决各类资源浪费问题，也是为整个地球环保工作尽一份绵薄之力，为所有在上海中心办公的用户融入更多环保时尚的办公生活情趣。

### 风力发电

大厦可再生资源的利用包括对风能的利用，采用了专门应用于多种城市风环境的空气动力学，节省成本，便于安装在城市建筑物及构筑物上，能够在突变城市环境和湍急的风流中有效运转。上海中心大厦将在塔顶安装270台并网组合式风力发电机(见图5.20)。他们将主要为建筑的外墙照明及一些停车空间提供能源。这些发电机每年预计可以产生约5万4千千瓦时的可再生能源。

### 三联供

采用两台燃气内燃机作为三联供系统的原动机，所发电量并入大厦内部电网。燃气内燃机发电时产生的高温烟气和高温缸套水分别经过换热器与二次侧的热水进行热交换，回收余热，二次侧的热水夏季作为热水型溴化锂吸收式制冷剂的热源，用于空调供冷；冬季作为热水型溴化锂吸收式制冷剂的热水，用于空调供冷，或通过热交换后用于空调供暖。

冷热电三联供是分布式能源的一种，具有节约能源、改善环境，增加电力供应等综合效益，是城市治理大气污染和提高能源综合利用率的必要手段之一，符合国家可持续发展战略。三联供系统能充分利用天然气的热能，综合用能效率可达90%以上。同时可降低供热成本，把一部分成本摊到电费上，减轻运营成本负担，并使热能被充分利用，大大提高了能源的综合利用功效。由于三联供在能源转换效率方面



Figure 5.20. The building's crown will house wind turbines to generate energy for the exterior lighting of the building. (Source: Gensler)

图5.20. 建造顶冠 将安装风力发电机来为建筑的外墙照明提供能源。(来源: Gensler)



An ice storage system is equipped with three centrifugal electric refrigerators with two working conditions and ice coils with a total ice storage capacity of 26400 TRh, which, through its heat plate exchanger, supplies freezing water at 6 °C to the lower zones of the building with a return water temperature of 13.5 °C. A heat plate exchanger combined with conventional centrifugal electric refrigerators supplies cooling to the lower building zones. An ice storage system can be operated under any of the four work conditions below:

1. Single ice making and storage
2. Single ice melting and cooling
3. Single cooling by the machine
4. Combined cooling between a machine and an ice storage tank.

In addition to the above statements, an ice storage system is also endowed with the following favorable attributes:

- Meets electrical demand during peak-shifts so as to transfer huge electrical loads while balancing electricity supply
- Reduces emissions of CFC and inflamer from the building
- Cuts down total electrical load demand to relieve external demand stress
- Upgrades building infrastructure
- Saves on investments, retrofitting, maintenance and other air-conditioning system costs to reduce operation expenses

#### Plants for Air Filtration

One-third of the building area in Shanghai Tower will be designated as green space in the future, largely interspersed with indoor landscaping. When considering the fact that employees will spend several hours of their time working indoors where air circulation is considerably lower, and where toxic material concentrations are an alarmingly 5 to 10 times higher than it is outdoors, it is easy to understand the importance of using air filters to improve the indoor environment. Green plants will be brought into play for its natural air filtering capabilities.

所具有突出优势，所以上海中心也极力参与到此项高效节能措施的应用中来。

#### 冰蓄冷

冰蓄冷系统配置了三台双工况离心式电制冷机及蓄冰总容量26400TRh的冰盘管，冰蓄冷系统通过板式换热器向大厦低区提供6°C的冷冻水，冷冻水回水温度为13.5°C。板式换热器与常规离心式电制冷机，共同向大厦低区供冷。

1. 冰蓄冷系统可在单制冰蓄冷
2. 单融冰供冷
3. 主机单供冷
4. 主机与冰槽联合供冷四 种工况中的任何一种工况下运行

同时也真正达到了以下有利方面:

- 实现电力“削峰填谷”，转移电力高峰负荷，平衡电力供应;
- 减少建筑物侧氟氯烃和燃烧物的排放;
- 降低总电力负荷，减少电力需求，缓解对外需电的压力;
- 提高大厦基础设施的档次;
- 节省对空调系统的投资、改造、运行维护等费用，降低空调系统的运行费用。

#### 植物空气过滤

今后，上海中心三分之一面积将为绿化所

Through reasonable distribution and planning, the large amounts of landscaping will dramatically reduce the adverse impacts imposed by the heat island effect, while effectively absorbing and filtering air impurities. The high-efficiency irrigation systems, as well as low-maintenance plants which require less watering and care, will further reduce the consumption of water resources.

## Service Management

### Zone and Outsource Management

At present, those enterprises leading in the domestic property management field have gradually completed the transformation from “service provider” to “service integrator.” During which time, property management has specially segregated itself from property services for the limitless purposes of refining professional quality service. Achieving the desired effects of increasing efficiency by downsizing staff has also been implemented.

The property management company that was specifically set up for Shanghai Tower shall forge and promote our own unique core business model, developing it far beyond other imitators. As for those non-core businesses, a tailored outsourcing strategy shall be applied in order to refine our competitive advantage and allow us to continuously develop within the company.

During the initial two to three years after opening, the business will use a 1/3 mode where employees will be composed of: 1/3 self-recruitment (key staffs) + 1/3 outsourcing or labor export + 1/3 (self-cultivation).

### Transform from a Simple Service Provider to an All-In-One Property Manager for the Schematization, Promotion and Implementation of Four Innovations:

1. Innovation in Efficiency: based in operation and system interfaces. We shall take efforts to provide our services more quickly and efficiently. As the saying goes, “time is money.” Innovation in efficiency is rooted in providing quicker and more efficient services that save time for our customers and ourselves.
2. Innovation in Quality: based in service and procedure interfaces. What we shall take into account is to provide a better service. The integration of concepts and direction of our 3Q Customer Service, is especially dedicated to cater to the goals of high-quality international policies:
  - Quality: meaning, improving customer service quality
  - Quickly: meaning, satisfying a customer’s demands as soon as possible
  - Emotional Quotient: meaning, providing considerate and thoughtful servicePromote comprehensive [ISO 9001: 2000 Quality Management System Certification] in practice, standardize procedures of customer service and fully improve service quality, as service is all about customers. What our customers really need is immediate solutions for their troubles.
3. Innovation in System: based in information and technology interfaces. What we shall pay great attention to is to make our service less complicated and more convenient.
  - Procedure Guidance: design operation proceedings for work procedures and data information.
  - Meticulous Service: present service language standards for work procedures.
  - Dynamic Display: accurately display detailed data information.
  - Task Reminder: reminders for important issues and special notes within 2 days.

覆盖，包括室内植被绿化的大面积散布。在室内工作，由于空气流通性远比室外环境要相对差，所以平均计算，室内的有毒气体含量将可能是室外的5倍到10倍之多，因此很有必要在对室内空气进行过滤。我们充分利用了植物的天然过滤机功能，大量绿色植物的合理分布和种植将大大减少热岛效应对建筑的影响，并对有害空气进行吸收、过滤和再释放，而且高效的浇灌系统加上低耗水量的植被还将有效减少水资源的消耗。

## 服务管理

### 分区、外包管理

当前全国物业领先企业都逐渐完成了从“服务供应商”到“服务集成商”的转变过程，在转型中，将物业管理和物业服务分离，达到细化专业品质服务和减员增效的结果。

上海中心未来的物业公司要塑造和发挥自己独特的、难以被其他企业模仿或替代的核心业务，非核心业务则采用外包策略，构筑竞争优势，获得使企业持续发展的能力。

开业初期2-3年内，采用1/3模式：1/3自主招聘（骨干人员、重点岗位员工）+1/3外包服务商或者劳务输入+1/3实习生（自主培养）。

**由单纯的服务供应方向全方位资产运营管理方的角色进行转变，规划、推动及落实四大创新：**

1. 效率创新：作业面与系统面之课题内容，我们将思考如何服务得更快。“时间就是金钱”，效率创新就是思考如何服务得更快速，以节省客户与我们自己的时间。
2. 质量创新：服务面与流程面之课题内容，我们将思考如何服务得更好。我们为整合统一客户服务的理念与方向，以“3Q服务”做为质量政策与质量国际化之目标：
  - 第1Q（高质量Quality），提升客服专业之素质；
  - 第2Q（高效率Quickly），快速满足客户之需求；
  - 第3Q（高EQ，Emotional Quotient），提供亲切周到的服



- Core Data: utilize core data for access for targeted daily work.
  - Common Service: familiarly deal with common service items (consultation or acceptance of specific issues).
  - Marketing Assistance: take advantage of effective information involving customers for marketing and follow-up functions.
  - Effect Summary: summarize work from data for the real and direct effects.
4. Innovation in Operation: based in marketing and operation interfaces. What we need to think deeply about is how to save and make money simultaneously. Promotion and transformation in each stage will always be accompanied by innovations in efficiency, quality, systems and operation. Only the enhancement of efficiency and quality in the service phase could enable man power and practical experiences to get access into the marketing phase. The operation stage is otherwise premised by the improvement of efficiency and quality in the marketing stage. So only by acting on the core roles in innovation and then orienting ourselves from the perspectives of our customers can we consistently make innovations and achievements in efficiency, quality, systems and operation. This will gradually lift our overall competitiveness and ultimately satisfy the needs of our customers.

Future challenges will otherwise give a boost to the overall brand advancement and opportunity expansion for the actual purposes of creating a harmonious and comfortable commercial workplace and living atmosphere while making our contributions to the city's development.



Figure 5.28. Rendered view of the interior entry lobby. (Source: Gensler)  
图5.28. 入口大堂室内渲染效果图 (来源: Gensler)

务。

在实务上则全面推动“ISO 9001: 2000质量管理体系认证 (Quality Management System Certification)”，将客服作业流程标准化，以及服务质量高质量化。“服务就是在乎客户在乎的事!”其真正的需求是要我们以最快的速度并且一次就把他的问题解决，这就是服务质量。

3. 系统创新: 信息面与技术面之课题内容，我们将思考如何服务得更轻松。
- 流程导向: 依作业流程及数据内容来设计操作步骤。
  - 服务精细: 依作业流程规范服务之语言标准。
  - 动态显示: 精准显示数据之详细内容。
  - 工作提醒: 提醒两日内重要内容与特殊笔记等。
  - 核心数据: 利用核心数据进入日常针对性作业。
  - 常用服务: 常用服务项目 (咨询/受理) 熟练操作。
  - 助力营销: 利用客户有效信息进行伴随营销内容与后续功能。
  - 效果总结: 以数据总结工作，真实直观。
4. 营运创新: 营销面与运营面之课题内容，我们将思考如何省钱和赚钱。每个阶段之提升与转型，都必须持续进行效率、质量、系统与营运之创新，在服务阶段能将效率与质量提升了，方能有人力与时间进行营销阶段，在营销阶段能将效率、质量与系统再提升了，方能有人力与经验进行经营阶段。而我们在企业里应该扮演创新的核心角色! 只要我们“站在顾客的立场来思考”，不断创新效率、质量、系统与营运，便能逐步提升企业整体的竞争力，而达到客户的需求。

面对未来挑战，发挥品牌效应，拓新机，为缔造和谐舒适的商业、办公、生活环境，为城市发展作出贡献。