

Foster a Healthy Community through Active Design & Biophilia Design

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AECOM



Organisers:



International Co-owners:



Biophilia Design



Organisers:




International Co-owners:



Sustainable Buildings and Climate Initiative
Promoting Policies and Practices for Sustainability

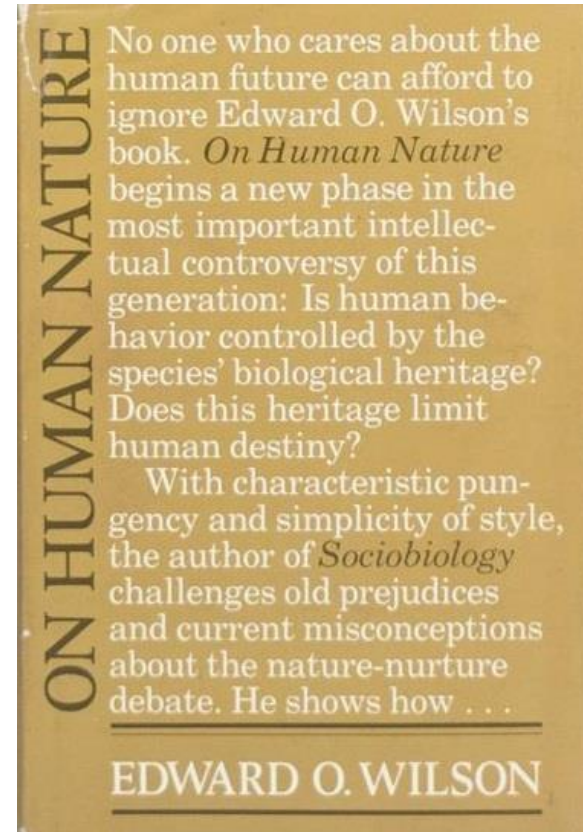




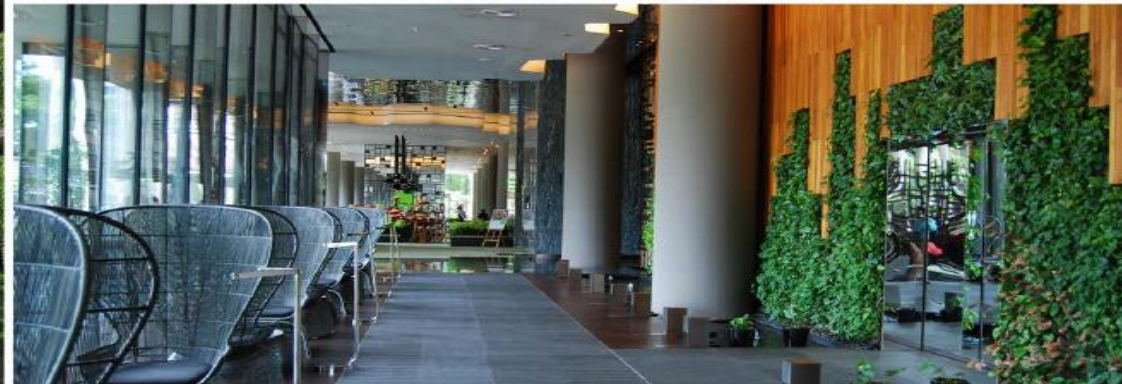
Humans are inherently interested in connecting with the natural environment. With the increasing urban constructions, they not only induced severely environmental impact, but also separated us from the nature. Despite the adoption of conventional green building technology can mitigate some of the adverse environmental impact, seldom can it help to **Re-establish the Human-Nature Connection**. To regain the missing link, **Biophilia Design** has become one of the strategic developments for **Human Sustainability** in the recent years, and particularly formed one of the core elements for **WELL Building Standard**.

The “Biophilia Hypothesis” of Human Being

Wilson argues that evolution has left its traces on characteristics such as generosity, self-sacrifice, worship. He attempts to complete the Darwinian revolution by bringing biological thought into social sciences and humanities.



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Nature in the spaces emphasizes on the direct, physical and ephemeral presence of nature in a space or place. Natural elements like the presence and diversity of plant lives, natural light and water features can be included within the built environment to strengthen the nature-human connection.



Hospital Main Entry Lobby
AECOM PROJECT

Natural analogues focus more on evoking the indirection connection with the natural environment. The ultimate intention is to imitate the natural environment and articulate connections between aspects of the built and natural environments.



K11
Shanghai, China

Nature of the space pinpoints to the innate desire of human to see beyond our immediate surroundings. The degree of perception of human in this aspect is greatly influenced by the spatial configurations of the space.



Minneapolis Children's Hospital
Minneapolis, MN AECOM PROJECT

Biophilia design principles



Natural in the space Direct Experience of Nature

- 自然光 Natural Light
- 空气 Air
- 水 Water
- 植物 Plants
- 自然感受 Natural Sense
- 声音 Natural Sound



Natural analogues Indirect Experience of Nature

- 自然的图案 Images of Nature
- 天然的材料 Natural Materials
- 自然的颜色 Natural Colors
- 模拟自然光线 Simulating Natural Light
- 仿生学 Biomimicry
- 有秩序的复杂 Organized Complexity
- 时间的更替 The Panina of Time
- 自然的地形 Natural Geometrics

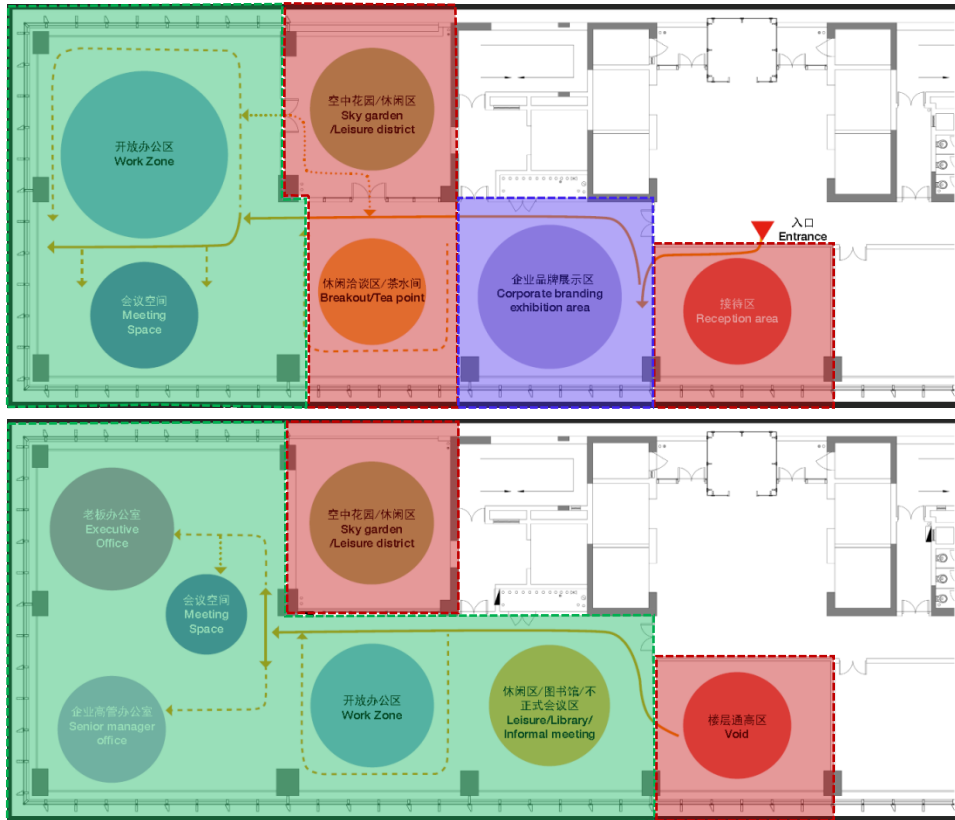


Natural of the space Experience of Space and Place

- 可控的风险 Fear and Risk
- 安全空间 Refuge
- 神秘感 Curiosity and Enticement
- 化零为整 Integration of Parts to Whole
- 过渡空间 Transitional Spaces
- 移动性和指示标识 Mobility and Wayfinding
- 文化和生态 Cultural and Ecological
- 场所感 Sense of Place
- 远景 Perspective

Case Study | China

Functional space biophilia mapping: Show room scenario – **Visitors' perspective**



从**参观者**的角度出发，提出各功能空间关注点：

提高认知表现（注意力、感受力）+愉悦的心情

Improve cognition (attention | sensation) + Maintain Happy Mindset

开放办公区、会议空间、老板办公室、高管办公室等空间，主要功能用于向参观者展示办公模块的形式。这些空间在设计时，应将关注点放在提升认知表现中的注意力和感受力上，令参观者更好地感知空间的设计，同时提升参观者的愉悦感。

提高认知表现（理解力、记忆力）+愉悦的心情

Improve cognition (recognition | memory) + Maintain Happy Mindset

企业品牌展示区，主要功能用于对参观者展示整体设计思路 and 理念。这个空间应使参观者拥有愉悦的心情，同时提升其认知表现中的理解力和记忆力，令参观者更好地接收和理解展示的内容，加深设计理念在参观者脑中的印象。

愉悦的心情

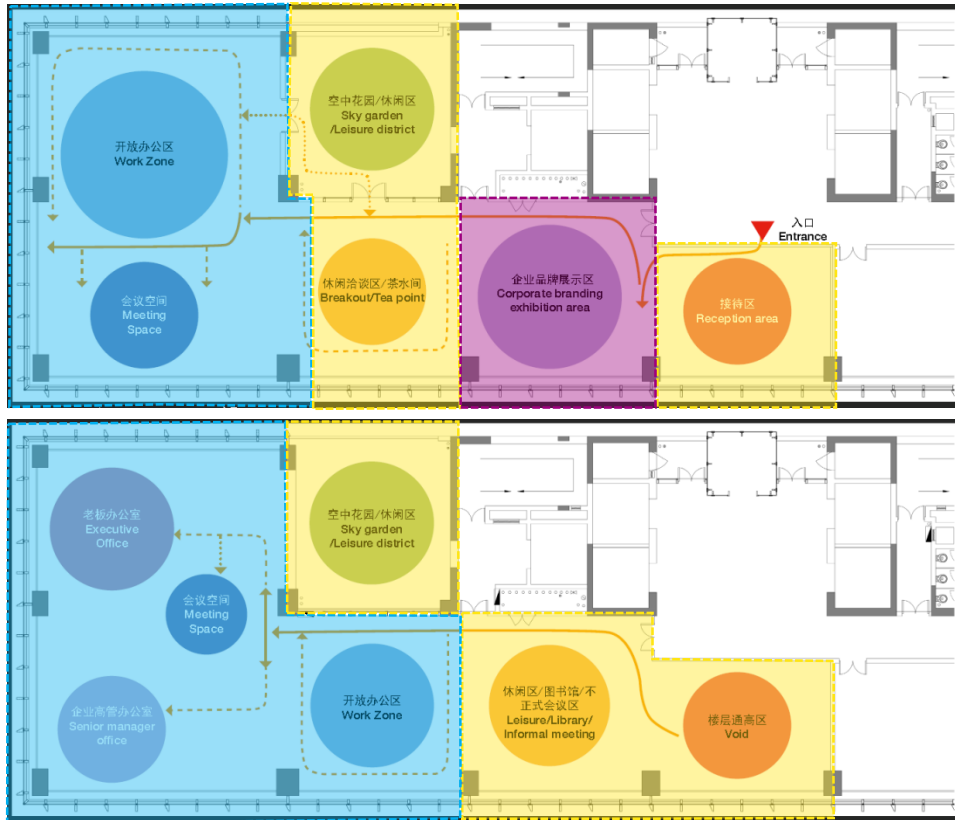
Maintain Happy Mindset

接待区、休闲区、空中花园、茶水间等空间，主要功能用于参观者在参观的间隙获得很好地休憩。这些空间应将关注点放在提升参观者愉悦心情上。

Case Study | China

Functional space biophilia mapping: Office scenario

– Users' perspective



从**使用者**的角度出发，提出各功能空间关注点：

降低工作压力+提高认知表现

Reduce Stress + Improve cognition

开放办公区、会议空间、老板办公室、高管办公室等空间，主要功能用于工作办公和会议讨论。这些空间相对其他空间容易形成较大的工作压力，且对认知能力的要求较高，应将关注点放在降低工作压力、提高认知表现上。

降低工作压力+愉悦的心情

Reduce Stress + Maintain Happy Mindset

接待区、休闲区、空中花园、茶水间等空间，主要功能用于接待访客和员工在工作间隙的休憩。这些空间应打造轻松、舒适的环境，将关注点放在降低工作压力、提升愉悦心情上。

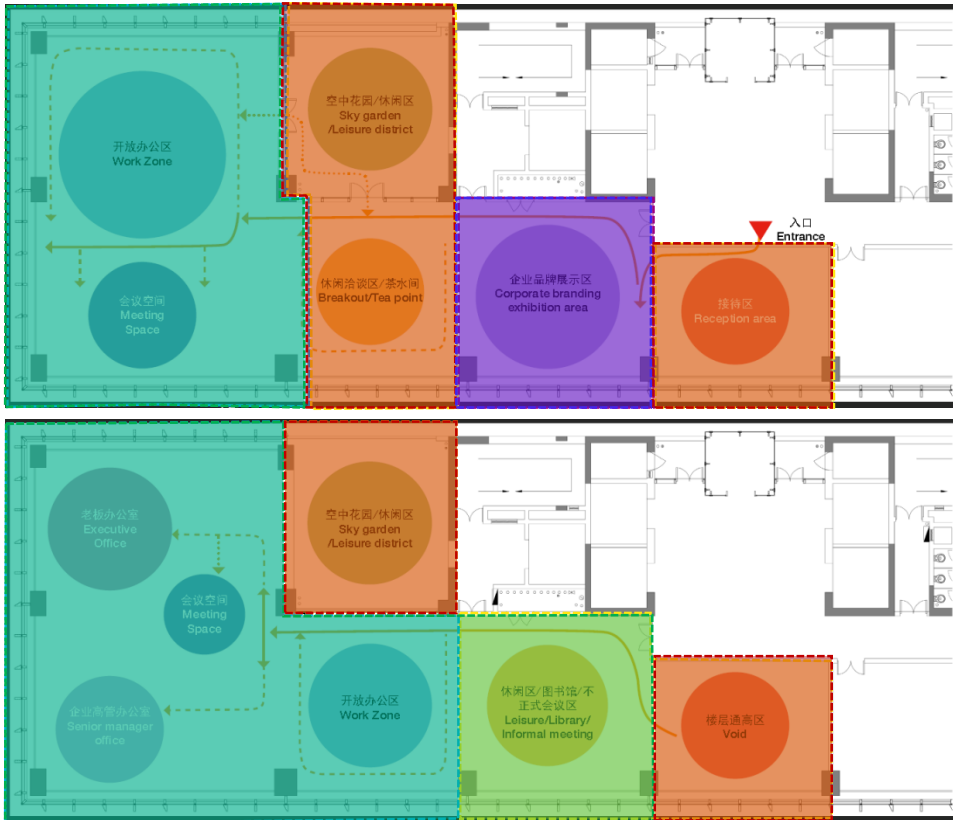
提高认知表现+愉悦的心情

Improve cognition + Maintain Happy Mindset

企业品牌展示区，主要功能用于对访客展示企业的理念和成果，竖立品牌形象，增加企业认同感。这个空间应使访客拥有愉悦的心情，同时提高其认知能力，令访客更好地接收和理解展示的内容。

Case Study - Project in China

Combined biophilia map



参观者：提高认知表现（注意力、感受力）+愉悦的心情

使用者：降低工作压力+提高认知表现

参观者：愉悦的心情

使用者：降低工作压力+愉悦的心情

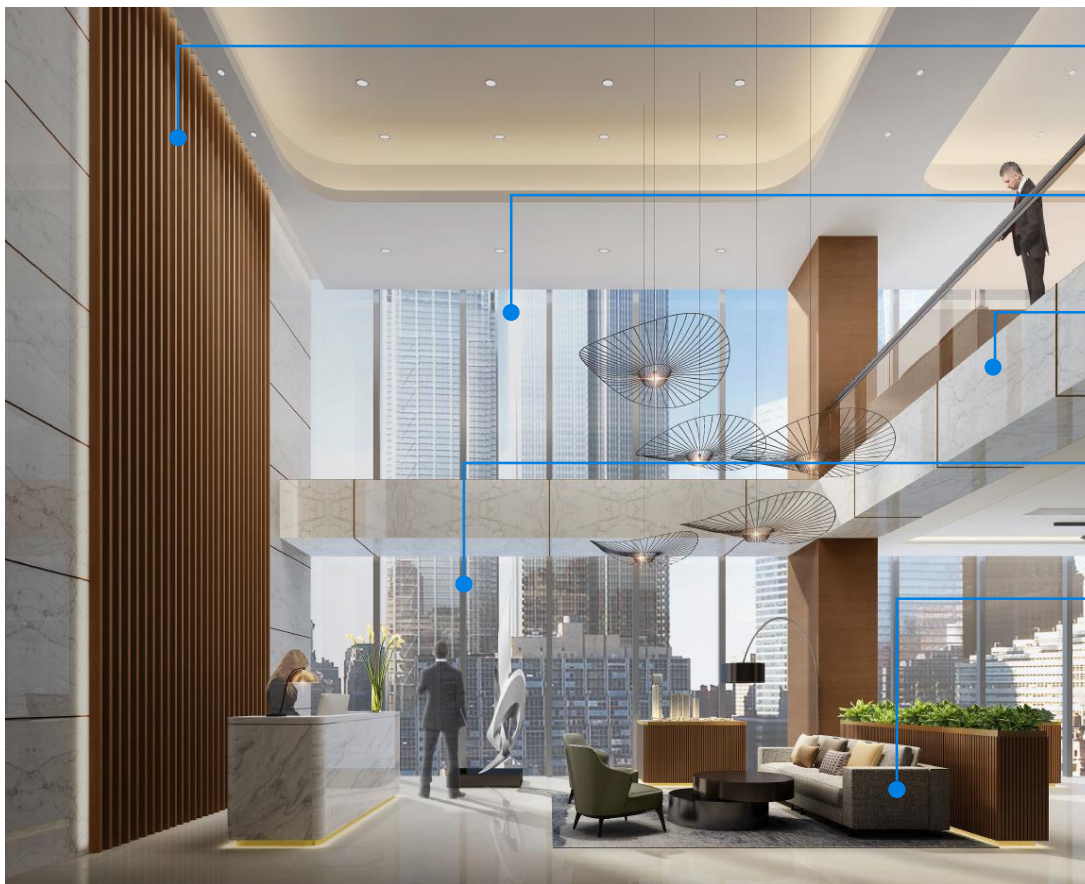
参观者：提高认知表现（注意力、感受力）+愉悦的心情

使用者：降低工作压力+愉悦的心情

参观者：提高认知表现（理解力、记忆力）+愉悦的心情

使用者：提高认知表现+愉悦的心情

Biophilia elements applied



E8天然的材料 natural material

大量的木饰面、大理石台面和饰面，给访客以自然的直接感受，引导人们产生积极的态度和愉悦的心情。

E1自然光 daylighting

玻璃幕墙引入温暖的自然光照，使访客感受到温暖与舒适，能够很好地提升舒适度，放松身心。

E15可控的风险 controlled risk

挑层设计的入口前台，能增加整个空间视线的宽阔感，唤起访客的好奇心和关注度，激发想象力。

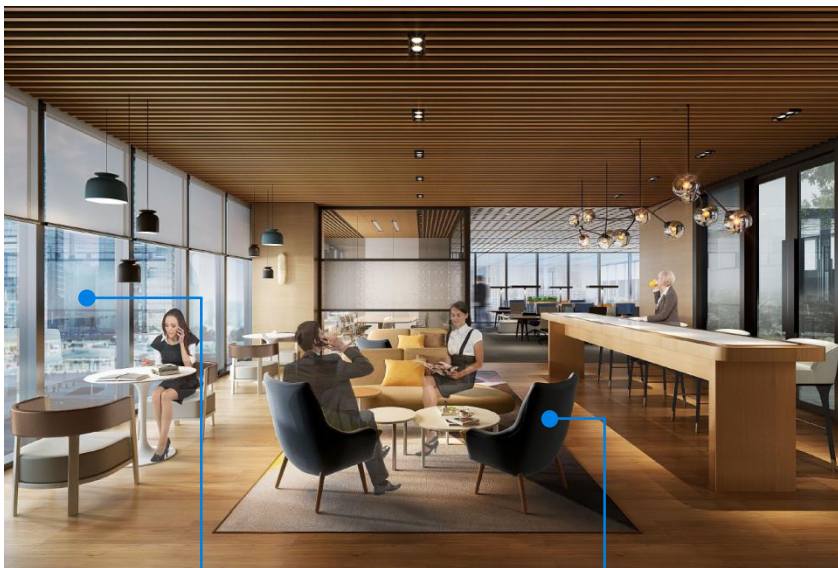
E6远景 perspective

通透的玻璃幕墙可以看到室外远景，增加了前台空间室内与室外的自然联系，让访客拥有轻松的心情，唤醒脑部活力。

E5自然感受 natural material

胡桃木的家具，以及织物的沙发和座椅，带给访客自然的触感，能够加快人们心理和生理压力下降的速度，获得更好的精神状态。

Biophilia elements applied

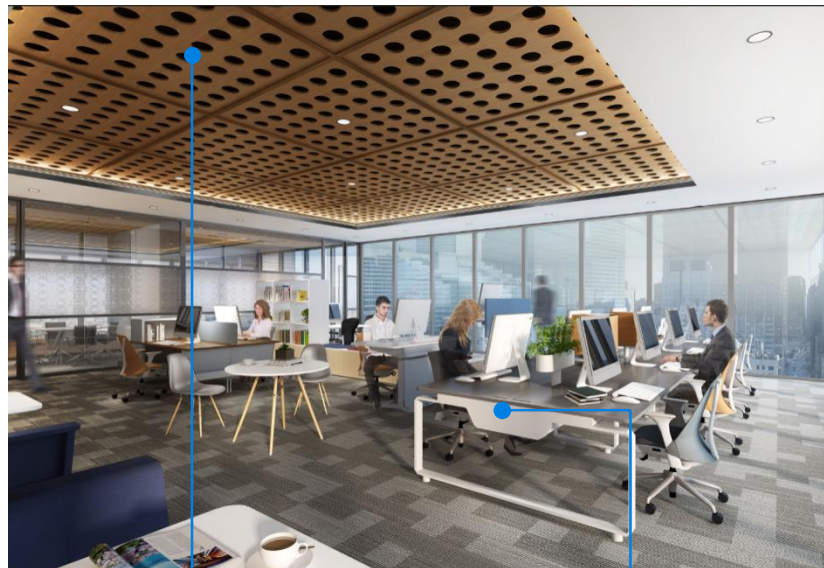


E6远景 perspective

茶水间靠近外区设计，没有阻隔视野的隔断，给员工远眺远景的机会，使其更有效地降低工作压力，恢复工作的热情和认知能力。

E5自然感受 natural material

白色大理石的桌面，以及织物的家具，使员工休息时获得自然的触感，获得轻松愉悦的心情，有利于员工的身心健康。



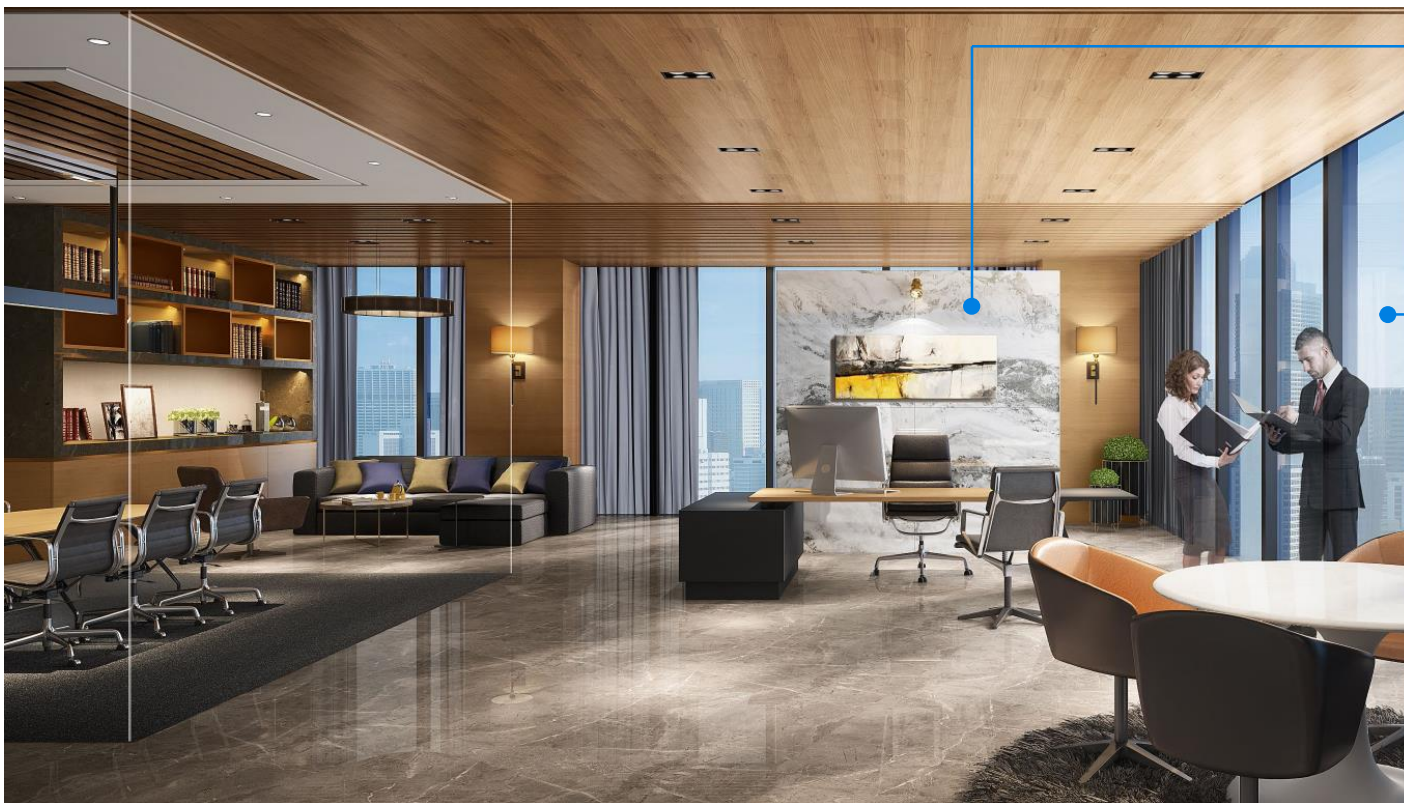
E8天然的材料 natural material

员工工区大量使用木板吊顶，给员工可视直观的自然感受，获得眼部的舒适，同时提升员工工作时的认知表现能力。

E22场所感 sense of place

员工工区配置的可调节高度的工位桌，使员工感受到工作环境的人性化，产生对空间的依赖和情感，有利于提升企业认同感。

Biophilia elements applied



E8天然的材料 natural analogus

山水画石材的背景墙、胡桃木的桌面，以及大理石地板其天然材料的自然、生态的视觉效果，将整个空间环境柔和，使董事长更能获得精神的平静。

E6远景 perspective

大面积的玻璃幕墙，以及会议室采用玻璃隔断的设计，能够使董事长在室内各个角度都拥有远景的视野，有效降低董事长的压力，恢复精神活力。

Active Design



Organisers:

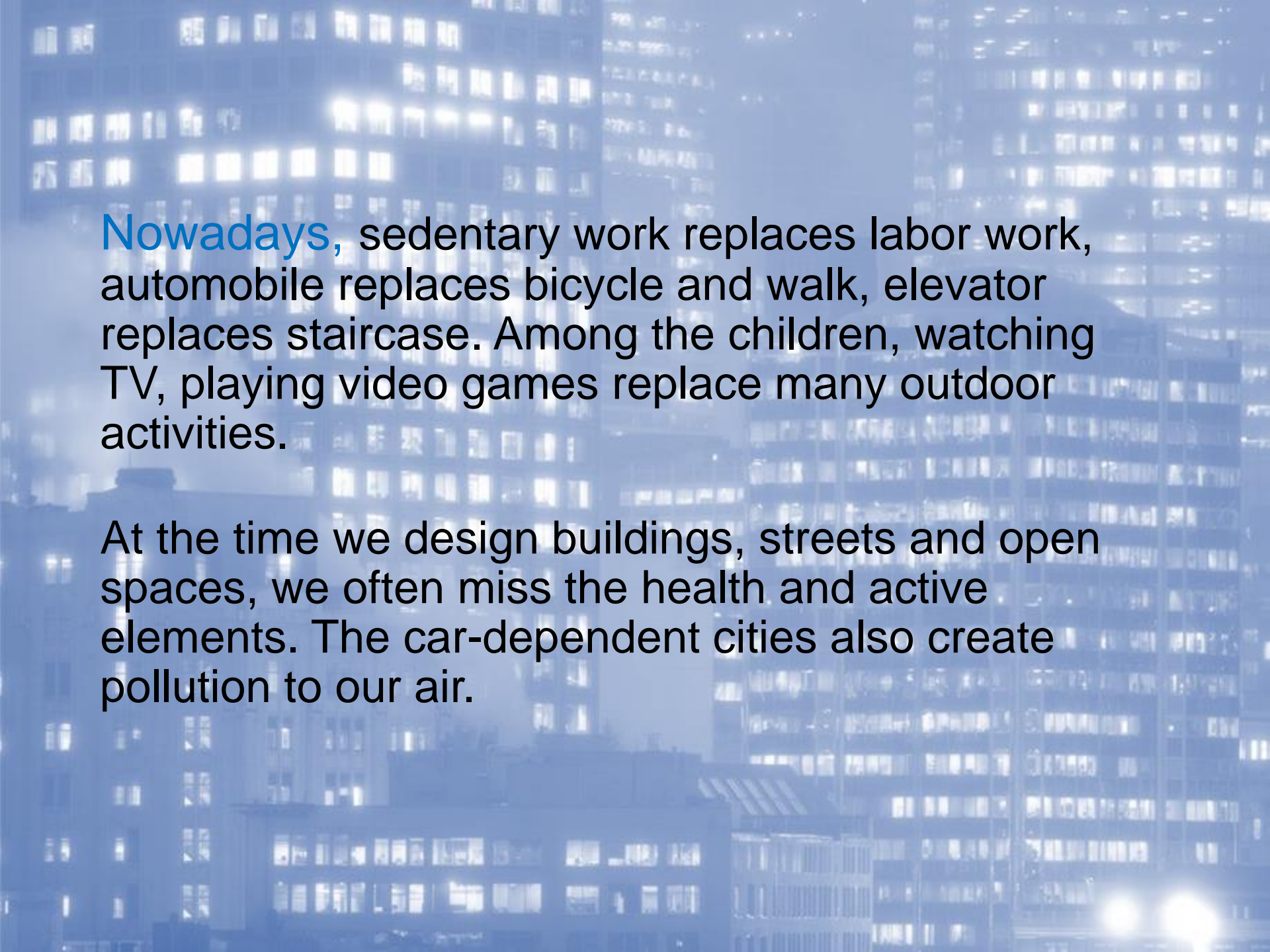


International Co-owners:



Sustainable Buildings and Climate Initiative
Promoting Policies and Practices for Sustainability





Nowadays, sedentary work replaces labor work, automobile replaces bicycle and walk, elevator replaces staircase. Among the children, watching TV, playing video games replace many outdoor activities.

At the time we design buildings, streets and open spaces, we often miss the health and active elements. The car-dependent cities also create pollution to our air.



Unilever 总部
曼谷



Unilever 总部
上海



Kaiser Permanente Westside Medical Center,
Hillsboro, OR



Timberwolves and Lynx Practice Facility and Corporate Headquarters
- BLOCK E, Mpls, MN

活力生活 自在人生

Health

Active

Communication

Inclusion

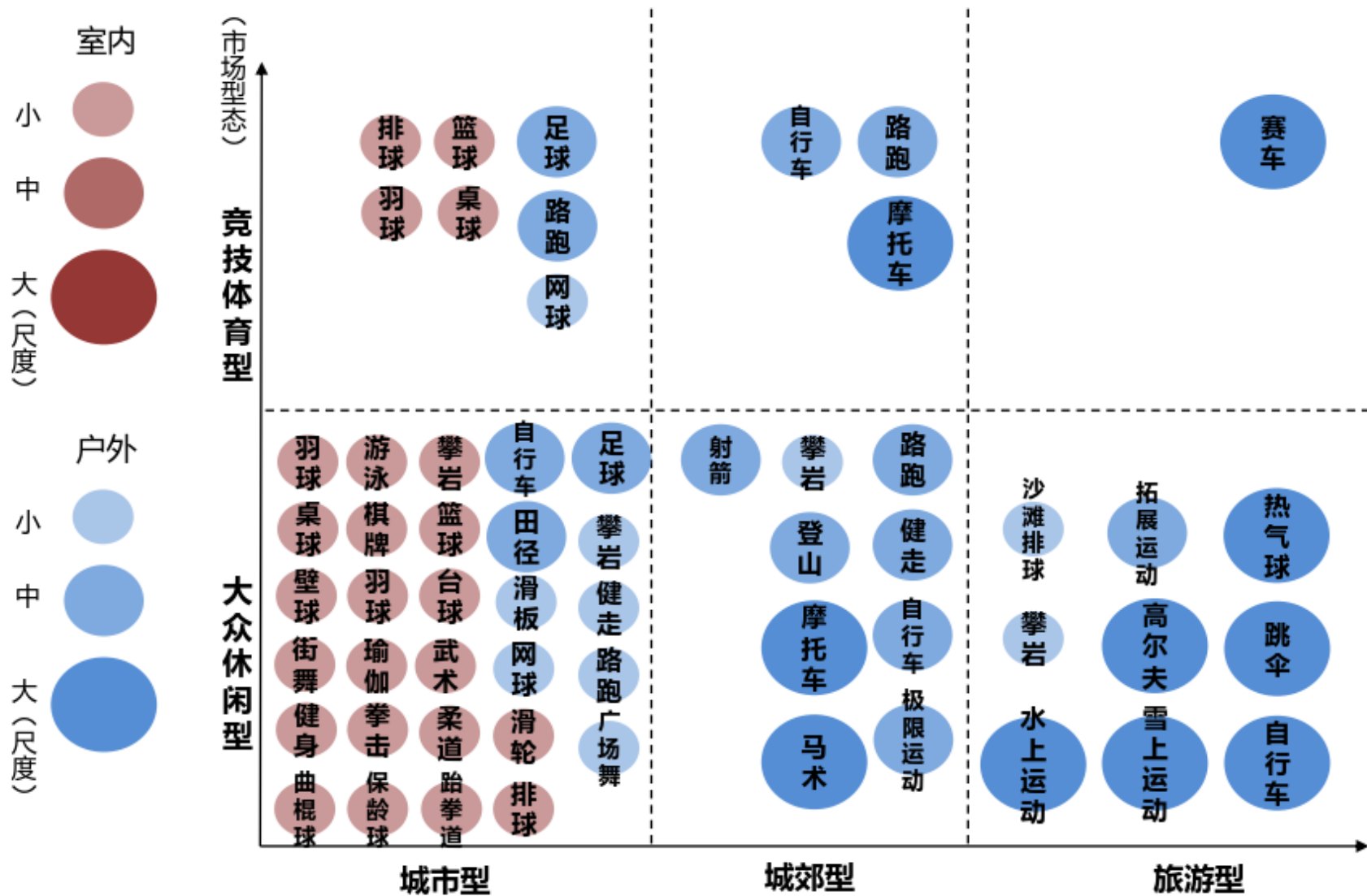
Activity preference in China cities

2013国际运动城市统计中主要城市大众喜爱的竞技体育与休闲体育运动项目排行

- 新加坡：慢跑(11%)、游泳(8%)、散步(7%)、羽毛球(4%)、足球(4%)、健身(3%)、篮球(3%)、自行车、健美体操、网球、瑜伽、高尔夫
- 台湾：散步(42.6%)、慢跑(25.7%)、自行车(16.5%)、篮球、爬山、游泳、羽球、伸展操、瑜伽、乒乓球、有氧舞蹈、排球、健身房、棒球、民俗武术、体操、高尔夫、钓鱼、足球、田径、台球
- 韩国：慢跑/散步(26.6%)、登山(13.4%)、健美运动、空手体操、跳绳、游泳、足球、溜冰、自行车
- 广州：散步(69.3%)、羽毛球(26.7%)、游泳(23.9%)、做操(22.4%)、篮球(17.5%)、乒乓球(17.0%)、跑步(16.5%)、棋类(7.6%)、登楼梯(7.3%)、足球(6.5%)、自行车
- 上海：前10位依次是羽毛球、游泳、乒乓球、自行车、篮球、田径、台球、网球、足球、体操
- 北京：散步(45.5%)、球类(32.8%)、跑步(30.8%)



Activity matrix



Residents activity preference



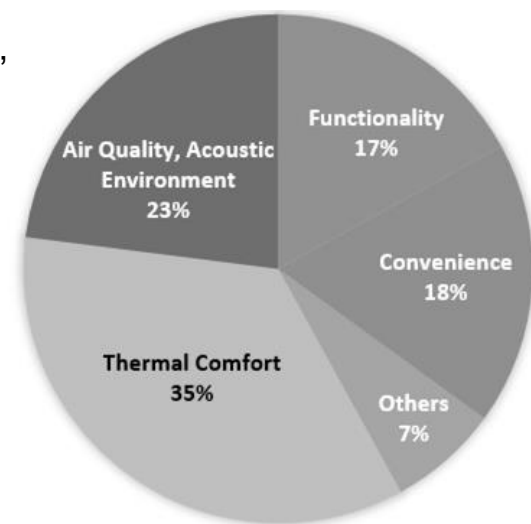
人群组合	活动需求	活动空间设置
 祖孙2 (4—8岁)	老人陪伴, 邻里交流 儿童益智娱乐	与廊架和休息座椅、座椅结合的聚会交流场地 儿童益智游乐设施 (运动力、认知性和社交情感能力的开发) 如迷你苗圃、平衡木等
 祖父母	老人运动 (太极、舞蹈) 老人休息 (看报纸、听广播) 邻里交流 宠物遛弯	开敞铺装小广场 适合老人的器械活动区 与廊架、座椅结合的聚会交流场地 宠物设施
 祖孙1 (0—3岁)	晒太阳与遮荫结合 幼儿启蒙教育	带廊架、与幼儿活动结合的活动区域 幼儿启蒙设施 (感官与智力启蒙) 如积木、彩色拼图等
 母婴 (0—3岁)	晒太阳与遮荫结合 抗育科普 幼儿启蒙教育	带廊架和休息座椅、与幼儿活动结合的活动区域 幼儿启蒙设施 (感官与智力启蒙)
 母子 (4—8岁)	家长停留陪伴 儿童益智娱乐	儿童益智拓展活动器械 儿童益智游乐设施 (运动力、认知性和社交情感能力的开发) 如迷你苗圃、平衡木等
 少年 (2-9岁)	活力运动 (篮球、乒乓球) 安静看书 少年科普	综合活动区 (不同年龄的儿童活动) 读书休闲区 科普展板
 父母	健身康体运动 (器械健身、羽毛球、慢跑) 宠物遛弯 休息, 邻里交流	成年人活动器械、羽毛球场、慢跑道 宠物设施 与廊架、座椅结合的聚会交流场地

Residential circulation in the neighborhood

Children play ground and high-rise mezzanine floor have the most residential circulation.

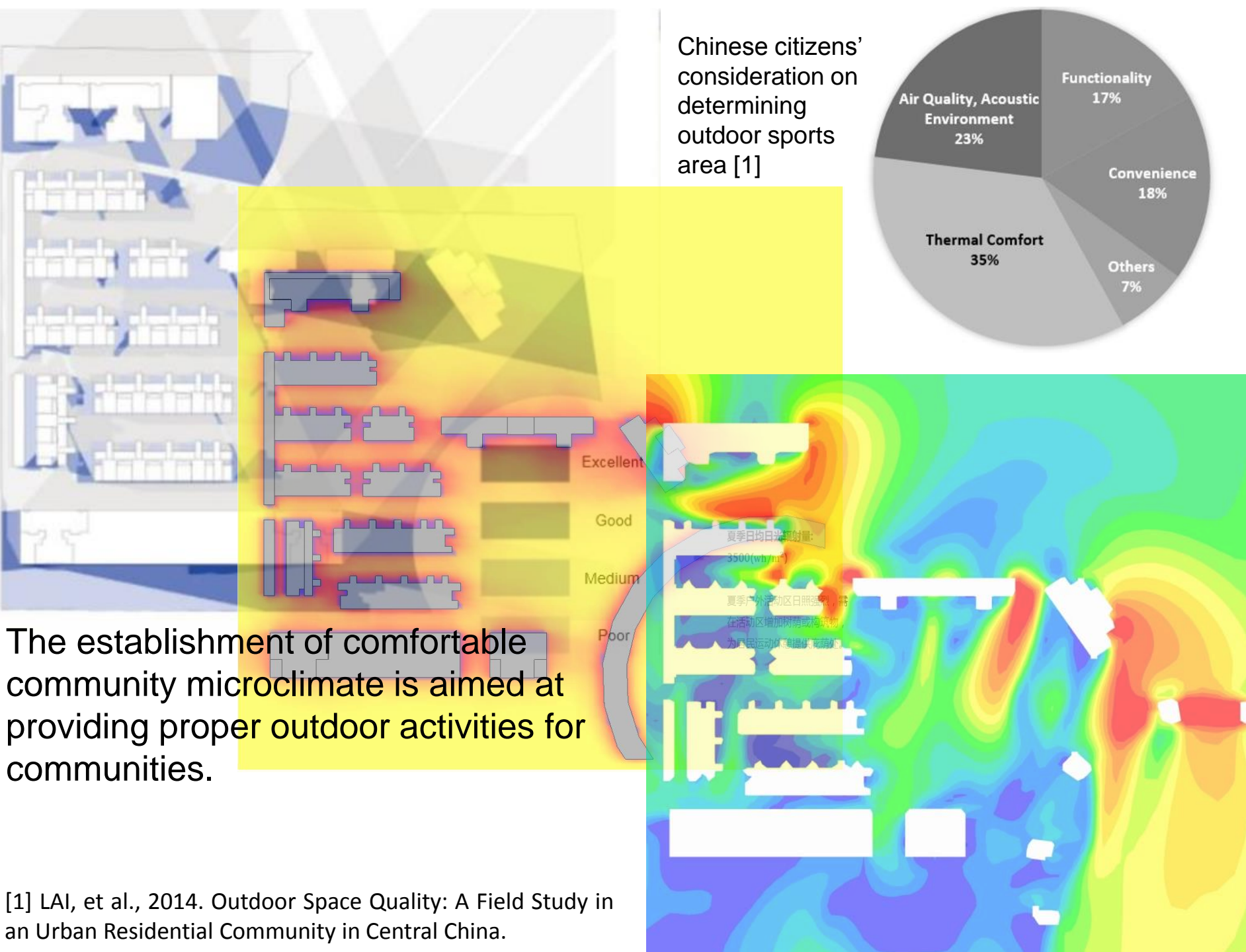


Chinese citizens' consideration on determining outdoor sports area [1]



The establishment of comfortable community microclimate is aimed at providing proper outdoor activities for communities.

[1] LAI, et al., 2014. Outdoor Space Quality: A Field Study in an Urban Residential Community in Central China.





SITE PLAN OF ACTIVE COMMUNITY

- 1 Fitness Facilities for Seniors
- 2 Integrated Recreation Units for Children
- 3 Moveable Fitness Units for Adults
- 4 Indoor Active Staircase
- 5 Maternal Infantile Ward
- 6 Public Toilet
- 7 Signage
- 8 Monitor Camera
- 9 Bicycle Parking
- 10 Benches for Relaxation
- 11 Community Open-air Swimming Pool
- 12 Exercise Lanes

Large, re-grouped and concentrated open spaces were reserved for outdoor activities, and particularly providing exclusive exercise areas for all age groups.

Thank you



Organisers:



International Co-owners:

