HEALTHY ENVIRONMENT AND GREENBUILD STANDARDS FORUM

健康绿色建筑标准峰会

2019年11月22日 | 成都
NOVEMBER 22,2019 | Chengdu

健康人居万里行
WELL JOURNEY

主办单位：国际 WELL 建筑研究院、美国贸易发展署、美国国家标准化机构
美国驻华使馆商务处、成都市楼宇经济促进会

Organized by :International WELL Building Institute (IWBI) ,U.S. Trade and Development Agency (USTDA) , American National Standards Institute (ANSI) , U.S. Commercial Service (USFCS) , Chengdu Association of Building Economy Promotion

支持单位：戴森贸易（上海）有限公司
Sponsored by:Dyson Technology(shanghai)Limited

U.S. COMMERCIAL SERVICE
USTDA U.S. TRADE AND DEVELOPMENT AGENCY
INTERNATIONAL WELL BUILDING INSTITUTE
ANSI American National Standards Institute
CABEP 成都市楼宇经济促进会
dyson

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Agenda

会议议程

Healthy Environment and Greenbuild Standard Forum

WELL JOURNEY

Agenda

November 22, 2019 / Chengdu

Location ： Grand Ballroom III, 5F, Chengdu Marriott Hotel Financial Centre

Address: No 999 TianFu Avenue North, High-Tech Zone Chengdu, Sichuan

Organized by: International WELL Building Institute (IWBI)

U.S. Trade and Development Agency (USTDA)

American National Standards Institute (ANSI)

U.S. Commercial Service (USFCS)

Chengdu Association of Building Economy Promotion (CABEP)

Sponsored by: Dyson

13:30-14:00	Registration	
14:00-14:05	Opening Remark	***Francis Peters*** Commercial Consul of the US Consulate General in Chengdu
14:05-14:10	Opening Remark	***Steven Winkates*** Director of Program Management, East Asia, US Trade and Development Agency
14:10-14:20	Welcome Remark	***Zhang Ping*** Secretary General of CABEP
14:20-14:30	Welcome Remark & WELL Building Standard	***Song Yi*** Vice president of IWBI Asia
14:30-14:45	Healthy living and healthy China	***Yao Hongyan*** Director, Chinese Center for Disease Control and Prevention
14:45-15:00	Standard and Practice of Health Building in China	***Meng Chong*** Director of CSUS-GBRC

15:00-15:15		***Zhang Wei*** Manager of the west China, COOC
15:15-15:20	Chengdu TFC WELL registration signing ceremony The first registered WELL C&S office building in Chengdu	
15:20-15:25	MOU signing ceremony of CSCEC & CABEP	
15:25-15:40	Science and Technology Promote Human Welfare	***Simon She*** Managing director, Greater China，Dyson
15:40-15:55	Kelly Moore Zero VOC support the Heathy Building	***He Wantao*** Kelly Moore Print China Agent
15:55-16:10	Lighting Control's Contribution to Create A Sustainable & Healthy Building Environment	***Gary Chen*** Direct of China Market, Lutron
16:10-16:25	Consulting for Healthy Building	***Zhao Yunyang*** Mater, LEED AP, WELL AP, EMSI
16:25-17:00	Roundtable Discussion	● ***Feng Dan***, Vice General Manager of Chengdu MIXC, The west China, CR-Land ● ***Yao Cheng***, Shimao Group ● ***Zhou Li***, The founder of Dao Pureland ● ***Zhou Xu***, President of Building Economy Tianfu School (Moderator) ● ***Li Zhiwei***, General Assistant of Sichuan development Land / Design Director of Chuanfa Land

健康绿色建筑标准峰会暨健康人居万里行

会议日程

2019 年 11 月 22 日 / 成都

地点： 成都首座万豪酒店，5 楼，成都厅 III

地址： 成都武侯区高新区府大道北段 999 号

主办方： 国际 WELL 建筑研究院

美国贸易发展署

美国国家标准化机构

美国驻华使馆商务处

成都市楼宇经济促进会

支持单位： 戴森贸易（中国）有限公司

13:30-14:00	嘉宾签到	
14:00-14:05	致辞	**范思杰** 美国驻成都总领事馆商务领事
14:05-14:10	致辞	**温凯时** 美国贸易发展署东亚区项目管理主任
14:10-14:20	致辞	**张萍** 成都楼促会秘书长
14:20-14:30	致辞及 WELL 标准现状介绍	**宋怡** IWIB 亚洲区副总裁
14:30-14:45	健康人居，助力健康中国	**么鸿雁** 中国疾控中心主任
14:45-15:00	我国健康建筑的标准与实践	**孟冲** 中国城科会绿建中心主任
15:00-15:15		**张炜** 中海商业西区总经理

15:15-15:20	天府汇 WELL 项目注册签约 成都首个 WELL CS 办公注册项目	
15:20-15:25	中建科技与成都楼宇经济战略合作签约仪式	
15:25-15:40	科技提升人类福祉	**佘克飙** 戴森商业大中华区董事总经理
15:40-15:55	Kelly Moore 零 VOC 鼎立健康建筑	**何宛桃** Kelly Moore Print 中国代理 成都杰盛堂建材有限责任公司
15:55-16:10	照明控制在可持续及健康建筑环境中的实践	**陈刚** 路川金中国市场总监
16:10-16:25	健康建筑所需要的咨询服务	**赵韵扬** EMSI 公司
16:25-17:00	圆桌讨论	● 华润置地商业华西大区成都万象城副总经理 **冯丹** ● 世茂商业与主题娱乐西部公司总经办 项目总经理 **姚晨** ● 陆道原乡创始人/总裁 **周莉** ● 楼宇经济天府学院院长 **周旭（圆桌主持人）** ● 四川发展土地公司总助、川发置地设计总监 **李志伟**

Hosts and Supporting Agencies Overview

主办单位介绍

U. S. Trade and Development Agency (USTDA)

The U.S. Trade and Development Agency (USTDA) has the mutually beneficial mission of linking U.S. businesses to export opportunities by funding project preparation and partnership building activities which develop sustainable infrastructure and foster economic growth in partner countries.

USTDA promotes economic growth in emerging economies by facilitating the participation of U.S. businesses in the planning and execution of priority development projects in host countries. The Agency's objectives are to help build the infrastructure for trade, match U.S. technological expertise with host country development needs, and help create lasting business partnerships between the United States and emerging economies.

USTDA's Program Activities

Project Development

Project identification and investment analysis generally involves technical assistance, feasibility studies and pilot projects which support large investments in infrastructure contributing to host country development. USTDA's program in China includes the transportation, energy, agriculture, and healthcare sectors.

Trade Capacity Building and Sector Development

Trade capacity building and sector development assistance supports the establishment of industry standards, rules and regulations, market liberalization and other policy reform. In China, USTDA has supported activities to enhance the protection of intellectual property rights, fair and transparent government procurement practices, science-based agricultural biotechnology regulations, and standards across a range of sectors.

Cooperation Programs

USTDA's success in China is due in large part to the public-private cooperation programs that the Agency supports in country. These programs provide a forum for government agencies and private companies from both countries to share technical, policy, and commercial knowledge to advance shared goals. USTDA has successfully established programs based on this model in the aviation, energy, healthcare, and agriculture and food sectors.

By adapting to the evolving needs of China's market and closely coordinating with decision-makers in both countries, these public-private partnerships have achieved long-term success, providing continued trade opportunities.

Reverse Trade Missions

Through the Agency's reverse trade missions (RTMs), USTDA has increased its support for programs designed to bring procurement officials to the United States to witness U.S. technologies, equipment, and ingenuity firsthand. These visits also facilitate new partnerships with U.S. companies needed to spur commercial cooperation. Related, USTDA also supports technology demonstrations, training, and specialized sector-specific workshops and conferences.

美国贸易发展署 (USTDA)

美国贸易发展署(USTDA) 致力于在新兴经济体推动经济发展和美国的商业利益。美国贸易发展署通过对项目前期，试点项目以及反向代表团赴美考察等形式的资金资助，达到在合作伙伴国家推动可持续性基础设施和经济增长的同时帮助美国企业寻找出口机会。

美国贸易发展署鼓励美国公司积极参与新兴经济体项目所在国重点发展领域里的项目规划和实施过程中的机会。目的是帮助美国有技术优势的公司配合项目所在国的发展寻求契机，并建立长期持久合作关系。

美国贸易发展署的项目活动

项目开发

美国贸易发展署支持的项目确认和投资分析通常为了支持项目所在国大型基础设施项目投资决策前以所需要的技术援助，可行性研究分析和试点项目等。在中国的项目集中在交通，能源和医疗卫生领域。

能力建设和行业发展

能力建设和行业发展是为了帮助推动建立行业标准，法规等相关政策需求的活动。在中国，美国贸易发展署支持过的项目内容涉及知识产权，公平透明政府采购，以科学为基础的农业生物技术规范，以及涉及其他更宽泛领域涉及行业标准的内容。

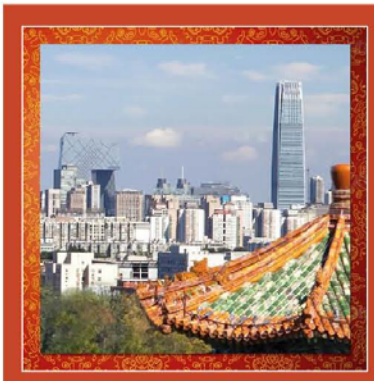
国际商业伙伴关系项目

通过国际商业伙伴关系项目，美国贸易发展署加大资金投入力度，组织更多灵活多样的赴美考察团，技术交流/研讨会和培训等，选择特定的一些行业，帮助中方人员了解美国技术，掌握第一手资料，加深对美国企业的了解并能推动潜在的商务合作。

政府企业合作平台

美国贸易发展署在中国取得成功的部分原因是与其他相关机构共同支持了政府企业合作项目的平台。在这个平台上，美国和中国的政府机构和私营企业均可以共享在特定领域的技术、政策和商业知识。美国贸易发展署已经成功地在航空、标准合格评定、能源和医疗保健等行业推动了该模式。

通过适应中国市场变化的需求，和中国决策者的密切配合，这些公私伙伴关系企业积累了一些长期合作的成功经验，提供持续的贸易机会，并推动中国支柱产业的发展。



U.S.-China Standards and Conformity Assessment Cooperation Program

Sponsored by the U.S. Trade Development Agency (USTDA) and coordinated by the American National Standards Institute (ANSI), the U.S.-China Standards and Conformity Assessment Cooperation Program (SCCP) provides a forum through which U.S. and Chinese industry and government representatives can:

- Cooperate on issues relating to standards, conformity assessment, and technical regulations;
- Foster the relationships necessary to facilitate U.S.-China technical exchange on standards, conformity assessment, and technical regulations; and
- Exchange up-to-date information on the latest issues and developments relating to standards, conformity assessment, and technical regulations.

In 2018, ANSI will coordinate 20 workshops over a 3-year period in China under Phase V of the SCCP. The workshops will cover a wide range of sectors, as proposed by interested U.S. private-sector organizations. Workshop topics will be chosen in coordination with relevant industry associations, ANSI, and USTDA.

To learn more about the U.S.-China SCCP or to express interest in sponsoring or participating in a workshop, please visit our website at:

www.standardsportal.org/us-chinasccp

FOR MORE INFORMATION
Mr. Henry Yuan
Program Manager
American National Standards Institute (ANSI)
1899 L St. NW – Eleventh Floor
Washington, DC 20036

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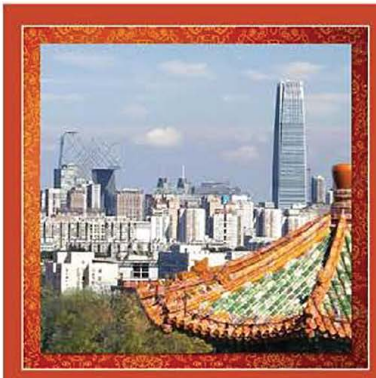
F: 202.293.9287
E: us-chinasccp@ansi.org



欲了解其他信息，请联系

Mr. Henry Yuan

项目经 理

美国国家标准化机构 (ANSI)

1899 L St. NW – Eleventh Floor

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U.S. TRADE AND DEVELOPMENT AGENCY

中美标准与合格评定合作项目

由美国贸易发展署 (USTDA) 提供资助、美国国家标准化机构 (ANSI) 负责协调的中美标准与合格评定合作项目(SCCP) 在以下几个方面 为中国和美国的相关行业和政府代表提供了一个论坛:

- 标准、合格评定以及技术法规等领域的合作;
- 为促进中美在标准、合格评定以及技术法规等领域的技术交流建立必要的联系;
- 及时交流关于标准、合格评定以及技术法规等领域的最新议题和发展情况的相关信息

未来三年，ANSI 将在中国协调举办 20 场研讨会。根据美国民间业界相关机构组织的建议，研讨会内容将覆盖不同的行业和领域。研讨会的主题将由相关行业组织、 ANSI 以及 USTDA 协调选定。 欲了解该项目的更多情况或有意赞助或参与该项目，请访问下列网站:

www.standardsportal.org/us_chinasccp

American National Standards Institute (ANSI)

As the voice of the U.S. standards and conformity assessment system, the American National Standards Institute (ANSI) empowers its members and constituents to strengthen the U.S. marketplace position in the global economy while helping to assure the safety and health of consumers and the protection of the environment.

The Institute oversees the creation, promulgation and use of thousands of norms and guidelines that directly impact businesses in nearly every sector: from acoustical devices to construction equipment, from dairy and livestock production to energy distribution, and many more. ANSI is also actively engaged in accrediting programs that assess conformance to standards – including globally-recognized cross-sector programs such as the ISO 9000 (quality) and ISO 14000 (environmental) management systems.

ANSI has served in its capacity as administrator and coordinator of the United States private sector voluntary standardization system for the past hundred years. Founded in 1918 by five engineering societies and three government agencies, the Institute remains a private, nonprofit membership organization supported by a diverse constituency of private and public sector organizations.

Throughout its history, ANSI has maintained as its primary goal the enhancement of global competitiveness of U.S. business and the American quality of life by promoting and facilitating voluntary consensus standards and conformity assessment systems and promoting their integrity. The Institute represents the interests of more than 270,000 companies and organizations and 30 million professionals worldwide through its office in New York City, and its headquarters in Washington, D.C.

美国国家标准协化机构（ANSI）

作为美国标准和合格评定体系的发言人，美国国家标准化机构授权其会员强化美国市场在全球经济中的地位，同时协助保障消费者的安全和健康以及环境保护事宜。

机构对数以千计的标准和指导方针的制定、颁布、实施进行监督，而这些标准和指导方针几乎直接影响商业的每个领域：从声呐设备到建筑设备，从乳制品及家禽产品到能源分配等等。美国国家标准化机构也积极参与评估合格到标准的委托项目——包括诸如 ISO9000（质量）和 ISO14000（环境的）管理系统等全球认可的跨领域项目。

在过去的一个世纪中，美国国家标准化机构担任美国私营部门自愿性标准化体系的管理者及协调者。自 1918 年由五家工程师协会和三个政府部门成立以来，本机构一直是一个民间、非营利性质的会员制组织，得到来自私营和公共部门的多元化支持。

纵观历史，美国国家标准化机构的首要目标一直是强化美国商业的全球竞争力，通过推进自愿性标准及合格评定体系并对它们进行完善从而提高美国人民的生活质量。机构总部设在华盛顿特区，并在纽约设有办公地点，代表全球超过 27 万家公司及组织和三千万专家的利益。

The International WELL Building Institute™ (IWBI™) is leading the global movement to transform our buildings and communities in ways that help people thrive.

IWBI delivers the cutting-edge WELL Building Standard™, the leading global rating system and the first to be focused exclusively on the ways that buildings, and everything in them, can improve our comfort, drive better choices, and generally enhance, not compromise, our health and wellness.

The WELL v2™ pilot is a recently launched version of its popular WELL Building Standard, and the WELL Community Standard™ pilot is a district scale rating system that sets a new global benchmark for healthy communities.

IWBI mobilizes the global wellness community through management of the WELL AP™ credential, convenes a global network of organizations through IWBI membership, pursues applicable research, develops educational resources, and advocates for policies that promote health and wellness everywhere.

Featured on Fast Company's World's Most Innovative Companies list - 2019.

国际 WELL 建筑研究院™（IWBI™）正在全球引导推动一场通过变革建筑及社区来促进人们身心健康的运动。

IWBI 制定并推广以科学研究及先进的建筑行业实践为基础的 WELL 健康建筑标准™。这是全球首部专门针对建筑、以及建筑空间内的一切措施如何提升我们的舒适性、推动我们做更健康的选择、整体上促进（而非影响）健康为目标而制定的建筑认证标准。

WELL v2™ 试行版是近期发布的备受瞩目的 WELL 健康建筑标准™的升级版标准，连同 WELL 健康社区标准™试行版一起，为全球健康社区提供了杰出的评估与衡量工具。

IWBI 同时也管理 WELL 专业人士（WELL AP）的资格认证、IWBI 会员机制、推动健康建筑相关的应用研究、传播教育资源并倡导有助于提升健康与福祉的政策，依此凝聚、带动全球 WELL 人群以及广泛的健康房地产业人士。

IWBI 入选 “快公司” 杂志 2019 年评选的 “全球最具创新力企业排行榜“。

WELL™

Launched in October 2014 after six years of research and development, the WELL Building Standard is the premier standard for buildings, interior spaces and communities seeking to implement, validate and measure features that support and advance human health and wellness.

WELL was developed by integrating scientific and medical research and literature on environmental health, behavioral factors, health outcomes and demographic risk factors that affect health with leading practices in building design, construction and management.

The WELL Building Standard underwent a comprehensive expert peer review process, which included three phases - scientific, practitioner and medical review.

WELL Certification and the WELL AP credentialing program are third-party administered through IWBI's collaboration with Green Business Certification Inc. (GBCI).

经过六年的研发，WELL 健康建筑标准于 2014 年 10 月推出，为建筑、室内空间和社区提供一套重要的健康标准，通过实施、验证和检测各种健康建筑条款，支持和提升人们的健康与福祉。

WELL 是将有关环境健康、行为因素、健康结果和影响人体健康的人口风险因素的科学与医学研究以及相关文献，与领先的建筑设计和管理实践相结合而开发出来的。WELL 也参考了由政府和专业机构设立的既有标准和最佳实践指南。

WELL 建筑标准通过了全面的专家同行评审过程，这个过程包括三个阶段：科学评审、行业评审和医学评审。

WELL 认证和 WELL AP 证书项目由与 IWBI 合作的第三方绿色事业认证公司（Green Business Certification Inc.，简称 GBCI）管理。

Project Brief

Six elegant towers form TFC, with a total construction area of 520,000 square meters. Incorporating luxury residential buildings, internationally renowned five-star hotel, Grade-A office buildings and a premium shopping mall, TFC forms a contemporary, fashion-forward development designed to meet the lifestyle and work standards of a new generation, and becoming the city's newest destination.

Architect

Internationally renowned architecture firm KPF is the creative force behind TFC. Inspired by the design of ancient Chinese lacquerware, the TFC community contemporary in style and quality with a classic flavour

Location

TFC is well situated in the prime Wuhou district; perched on the city's central boulevard, the People's Road South, and straddling the Jinjiang River, it is the confluence of both an ancient city's storied charm and the benefits of a modern metropolis.

About Us

Since its founding in 1995, USI Group has expanded across China, Hong Kong and beyond. The Group's activities cover a wide range of fields including, Real Estate Development, Property Investment, Infrastructure, Logistics, Food and Beverage, Finance and Memorial Parks.

USI Group's first investment in Southwest China was made in 2004, in an impressive 420,000 kW hydroelectric power plant. Since then the group has gone on to participate in investments in a number of premium development schemes, including the 2005 Union Sun Yangkuo Plaza, now home to USI Group companies.

2006 saw the acquisition of a prime site for redevelopment, Zongshu Village located nearby the South Railway Station in Chengdu. Followed in 2009 with the acquisition of a prime 60,000 square meter plot on the People's Road South, and has been created with an investment in excess of RMB 6 billion. Both sites are currently under construction with the later being the highly anticipated, TFC, a high-end mixed-use project. In addition to projects in Sichuan, the group is active across a range of industries in Guangdong, Shanghai, Hainan, Nanjing and Yinchuan.

USI group will continue to seek out and explore new business opportunities in the future, particularly those brought about by the Belt and Road initiative in South West China.

项目简介

天府汇由 6 座弧形塔楼环抱之状形成，塔楼 端坐于商业裙楼之上。项目占地约 60 亩，总建筑面积共约 52 万平方米，包括高端住 宅、国际知名五星级酒店、甲级写字楼 和国际高端购物中心。天府汇项目旨在打 造“潮流时尚综合体”，以满足人们居住、社交、办公、购物、休闲等品质生活的需求，成为新的目的地。

建筑团队

由国际知名建筑师事务所 KPF 倾力打造。以古代漆器为设计灵感，天府汇项目群落的造型韵古典于现代，将格调与品质完美融合。

项目区位

坐落于成都中轴线——人民南路，滨锦江而立，天府汇地处商务及生活气息浓厚的老城区——武侯区，生活资源便利丰富。

开发商简介

汇日集团成立于 1995 年，是一家多元化企业。其业务范围覆盖香港及中国大陆等地，经营范围则包括：房地产开发、物业投资、基建、物流、餐饮、金融、墓园康养等。

自 2004 年以来，汇日集团开始扎根四川，曾参与总装机容量 420,000 千瓦水电站投资开发、土地一级开发等。2005 年参与汇日央扩国际广场的开发投资；2006 年竞得武侯区火车南站棕树村八组地块，用以开发高端住宅项目；2009 年，通过公开拍卖竞得武侯区人民南路三段 3 号约 60,000 平方米地块，现正在有关宗地开发大型高端城市综合体天府汇项目，总投资超过人民币 60 亿元，是集团在成都市的另一重点项目。

除四川以外，集团深耕中国，在广东、上海、海南岛、南京及银川等地参与不同产业发展。未来，汇日集团除将会继续强化其核心业务之外，亦会对 “一带一路”带来的商机进行探索，利用中国西南部在 “一带一路”的重要战略地位，努力寻找其他投资机会。

Dyson is a global technology company with engineering and testing operations in Malaysia, Singapore, the Philippines and the UK. Dyson employs over 12,000 people globally including 5,853 engineers and scientists – with an increasing proportion in South East Asia where production and operations also take place.
Dyson is realising ambitious plans to develop new technologies with global teams focused solid state battery cells, high-speed electric motors, vision systems, machine learning technologies, and AI.
Dyson launched in China in November 2012 with James Dyson attending a press conference in Shanghai. The categories cover cordless vacuum, purifying fan, hair dryer, robotic vacuum, hand dryer etc. They help enhance the efficiency and experience of home cleaning and personal care of Chinese consumers and Dyson commercial clients.

戴森是一家全球科技公司，由创始人、发明家及总工程师詹姆斯•戴森（James Dyson）领导的家族企业。詹姆斯•戴森致力于利用科学技术，用以解决他人忽视的问题。目前在马来西亚、新加坡、菲律宾和英国皆设有研发和测试中心。全球超过一万两千名员工，包括 5853 名工程师和科学家。戴森全球各地的研发团队致力于持续研发固态电池，高速数码马达，视觉系统，机器学习技术及人工智能方面的创新技术。

•

公司致力于将戴森科技带入商业场所和个人空间，提升空间舒适度和个人福祉体验， 主要涉产品商业干手器，吊灯及家居清洁及个人护理产品。

Speaker Biographies
演讲人介绍

Steven Winkates
Director of Program Management, East Asia Region
U.S. Trade and Development Agency (USTDA)

Steven Winkates is the Director of Program Management for the East Asia Region at USTDA, based at the U.S. Embassy in Beijing, China. He is responsible for managing USTDA's activities in China and Mongolia, directing business development efforts, coordinating with relevant stakeholders in both the region and the United States, and marketing USTDA services to potential partners in both countries.
Prior to this position, Mr. Winkates worked in Beijing for a consulting firm which specializes in developing transportation infrastructure projects. He also previously served as a Country Manager at USTDA, covering China and Southeast Asia during his tenure, and as a Policy Analyst at the U.S. Department of Commerce.
Mr. Winkates holds a Master of Public Policy from Georgetown University and a Bachelor of Arts from Rhodes College.

温凯时
美国贸易发展署东亚区项目主任

Steven Winkates 是美国贸易发展署东亚地区项目管理主任，常设办公地在美国驻中国大使馆。他负责管理美国贸易发展署在中国和蒙古区域的项目，包括指导业务发展工作、协调该地区和美国利益相关方的关系、并向两国的潜在合作伙伴推广美国贸易发展署的活动及相关服务。
在此之前，Winkates 先生曾任职于一家专门从事交通基础设施项目开发的咨询公司。他曾担任美国贸易发展署中国和东南亚地区发展负责人和美国商务部政策分析师等相关职位。
Winkates 先生先后获得罗德学院的文学学士学位和乔治城大学的公共政策硕士学位。

ZHANG Ping

The member of Global Chinese Real Estate Congress
International Business Engineer
Deputy secretary-general of the National Shopping Center Manager's Club
Secretary General of the National (Southwestern China) Shopping Center Manager's Club
Executive director of the Chengdu New Social
Member of the Executive Committee of Chengdu Women's Federation
Secretary General of Chengdu Association of Building Economy Promotion Association
Chengdu Municipal Building Economy Expert

张萍

世界华人不动产学会理事
国际商务师
全国购物中心经理人俱乐部副秘书长
全国购物中心经理人俱乐部（西南）秘书长
成都市新阶联常务理事
成都市妇联执委
成都市楼宇经济促进会秘书长
成都市楼宇经济专家

SONG Yi
Vice President, IWBA Asia

Yi Song is a Vice President of Business Development at IWBI ASIA. International WELL Building Institute™ (IWBI) is a public benefit corporation with a mission to improve human health and well-being through the built environment. IWBI administers the WELL Building Standard® (WELL), the world's first building standard focused exclusively on human health and wellness. The WELL building certification program is an evidence-based system for measuring, certifying, and monitoring the performance of building features and other aspects of the built environments that impact the health and well-being of the people in the spaces we create.

Yi Song joined IWBI in 2017 with broad experience in sustainability development, education, and business development. Previously, he worked at EMSI starting in 2006 where he was in charge of the analysis of energy use and energy saving of building systems, such as the thermal and economic performance analysis of building envelope, HVAC system and the indoor air quality. He was also involved with LEED certification with M&V、IPMVP.
He has more than 11 years of experience in building science and technologies, specializing in areas of commissioning of energy use system in buildings, energy audits for building efficiency improvement, building energy simulation, green building design support and consultancy, and innovative techniques in green building design.

Yi Song served as a green building consultant to many prestigious projects in China. His engineer experience covers both new and existing facilities. His project experience ranges from high-end office towers, corporate headquarters to industrial campuses, including GE Campus, OTIS TJ office+factory, China Development Bank, Financial Street E10, etc. Yi Song also has rich experience in energy simulation modelling.

Besides his technical skills, Yi Song has established a solid foundation in business development, business management, and building strategic partnerships. Some of his former key clients include SOHO China (more than 8 projects in china) Financial Street Holding (over 10 projects), Vantone Real Estate (over 10 projects), Taikang Life Insurance (Taikang Community-LEED-Health Care), Wanda Group, China Fortune Land Development, ANBANG Insurance, Excellence Group (over 8 projects), China Resources Land and so on.
He not only helps EMSI hit annual financial booking target with fast increasing each year.
He is an active member of the China's sustainability and commercial communities including MOHURD, AMCHAM China and US Embassy Commercial Office in china.

Yi Song has a graduate degree in engineering from Loughborough University with a focus on natural ventilation application. He earned a Bachelor degree from Construction Environment & Equipment Engineering Department at Beijing Industry University in 2003, and a Research Diploma focusing on Building Services & Engineering.

宋怡
IWBI 亚洲区副总裁

宋怡先生在国际 WELL 建筑研究院™（IWBI™）出任亚洲区业务发展部副总裁 。IWBI 是一家公益企业，正在全球推动这场在建筑与社 区中提升人们健康与福祉的运动。IWBI 提供国际地位领先的 WELL 建筑标准™（WELL）。WELL 是全球第一个专注于人类健康与福祉的建筑标准。WELL 建筑认证是一套基于建筑的实际表现而对建筑的健康属性进行衡量、检验及监控的建筑认证体系，以此来评估室内环境对人体健康与福祉的影响。

他于 2006 年加入美国联合技术公司旗下的 EMSI 环境管理咨询有限公司，负责全国项目的建筑物理模拟、项目管理、市场推广等工作，在中国参与或完成了上百个绿色、健康建筑的项目，如国家开发银行、北京第一高楼中国尊、北京第一个中国绿标项目融华世家、泰康之家燕园和粤园、卓越深圳前海 1 号、可口可乐研发中心、上海西门子心、陶氏化学、卡特皮勒天津工厂等项目。另外，他也参与主导了一些项目的节能改造、建筑调试，如北京万通中心 D 座改造并获得朝阳政府节能补贴、SOHO 望京整体调试等。宋怡还是美国绿色建筑委员会的授课讲师和 CEM 工程师。加入国际 WELL 健康建筑研究院之前，他作为 EMSI 华北区总经理，负责公司的运营和管理。

宋怡毕业于英国拉夫堡大学建筑服务工程专业，主要研究方向为自然通风，建筑物理及建筑节能等方面。

YAO Hongyan
Director, Chinese Center for Disease Control and Prevention
President of standardization and Evaluation Branch of China Health Management Association
Former Medical Officer of the Western Pacific Headquarters of WHO

Since 1989 I have been engaging in the work of epidemiological study, application and teaching, with rich experience and strong ability in technical guidance. The main research area is the application of the epidemiological methods in the disease prevention and control. And the main research areas contain infectious diseases epidemiology, injury epidemiology and policy evaluation of disease control and prevention.

么鸿雁
中国疾病预防控制中心流行病学办公室（爱国卫生工作技术指导处）主任
中国健康管理协会标准化与评价分会会长
曾任世界卫生组织西太区总部医学官员

多年来一直从事流行病学研究、应用及教学工作，主要研究领域为流行病学方法在疾病预防控制实践中的应用，主要方向包括人群健康测量与评价、结核病预防与控制、农业作业人群健康和疾病预防控制政策评价等。

Simon She

Greater China Managing director of Dyson professional,

Simon She, Greater China Managing director of Dyson professional, is responsible for professional business and aim to develop the business based on company's target.

Dyson is a global technology company with engineering and testing operations in Malaysia, Singapore, the Philippines and the UK. Dyson employs over 12,000 people globally including 5,853 engineers and scientists – with an increasing proportion in South East Asia where production and operations also take place.

Dyson is realizing ambitious plans to develop new technologies with global teams focused solid-state battery cells, high-speed electric motors, vision systems, machine learning technologies, and AI. The growing team composed by engineers and scientists are the core pioneers that drive Dyson forward. Dyson has a wide product range from vacuum cleaner, hand dryer、pure hot+cool, hair dryer and lighting products. Revolutionary technology is the key to the development of Dyson globally.

Simon has a keen insight of the industry trends. Plan to bring Dyson technology to more professional customers, especially to promote fast and hygienic Dyson AirbladeTM hand drying technology in WELL projects. Under his leadership, greater China professional team is developing steadily and anticipating more achievements in the broader fields.

佘克飚

戴森专业部大中华区董事总经理

佘克飚先生，戴森专业部大中华区董事总经理，负责戴森产品在商业应用领域的推广和发展。其任职的戴森公司是一家致力于科技创新的公司，其对于科技进步总是孜孜不倦地追求着，目前在新加坡、菲律宾和英国皆设有研发和测试中心。全球超过一万两千名员工，包括 5853 名工程师和科学家。戴森全球各地的研发团队致力于持续研发固态电池，高速数码马达，视觉系统，机器学习技术及人工智能方面的创新技术。日益壮大的工程师与科学家团队是助推戴森前进的核心动力，其旗下拥有真空吸尘器、干手器、空气净化风扇、吹风机和照明灯具等多种高科技产品，颠覆性的前沿技术是戴森在全球市场发展壮大的关键因素。

佘克飚先生拥有良好的科技发展前瞻性和敏锐的行业洞察力。致力于将英国戴森科技带给更多的商业客户，并将快速、卫生的 Dyson AirbladeTM 干手科技推广到健康建筑中，致力更好地解决手卫生的问题。大中华区的戴森商业团队在其带领下也正稳步发展，期待拓展到更宽的领域再创佳绩。

Greg Chen
Lutron Electronics, China Commercial

Greg Chen, in his role of Sales Director of Lutron Electronics Shanghai, is responsible for business development, client relationships, project execution and overall leadership of Lutron's Commercial Business in China.
With his 15+ years of experience in the lighting industry, Greg has been working for various Sports Lighting projects, involved in Olympic Games, National Sports Games, and professional Games at all levels. Also, very experienced in building lighting control. Greg holds an MBA degree of change management by Norwegian Business School, his academic understanding of management and solid working experience made him a very successful professional manager.

陈刚
销售总监，路川金域电子贸易（上海）有限公司

陈刚以路川金域电子贸易（上海）有限公司销售总监的身份，负责业务发展、客户关系、项目执行以及路通在中国商业业务的全面领导。
陈刚在照明行业有超过 15 年的经验，他一直在为各种体育照明项目工作，参与奥运会、全国运动会和各级专业运动会。在建筑照明控制方面也非常有经验。陈刚拥有挪威商学院的变革管理工商管理硕士学位，他对管理的学术理解和扎实的工作经验使他成为一名非常成功的职业经理。

ZHAO Yunyang
Senior Engineer, EMSI

As a senior engineer in EMSI, Ms. Zhao specializes in areas of building energy and daylighting analysis as well as IAQ analysis. She has accomplished over 20 LEED/CGBL/WELL projects and lots of energy simulation analysis and daylighting simulation analysis. Meanwhile, she takes part in building sustainable design, utilizing modeling to deliver energy-efficient and sustainable building design. In addition, she oversees IAQ management services, including IAQ solutions and analysis as well as research on different IAQ standards.

赵韵扬
高级技术工程师，EMSI

作为 EMSI 的高级技术工程师，赵韵扬女士擅长建筑能耗和采光分析，以及室内空气质量(IAQ)分析。她在绿色和健康建筑认证领域具有丰富的经验，目前已完成 20 余个 LEED/CGBL/WELL 项目。同时，她参与建筑可持续设计，通过模拟分析提供节能和可持续设计方案。此外，她负责的 IAQ 服务，基于对不同 IAQ 标准的研究和项目经验，为客户提供 IAQ 分析和解决方案。

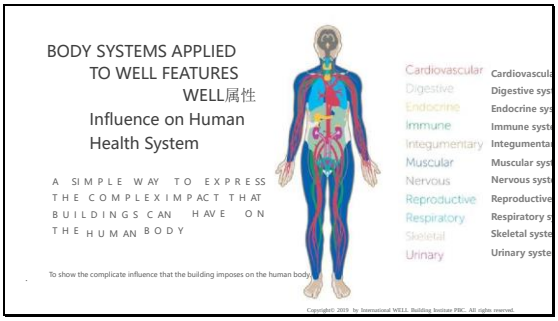
Presentations

演讲材料

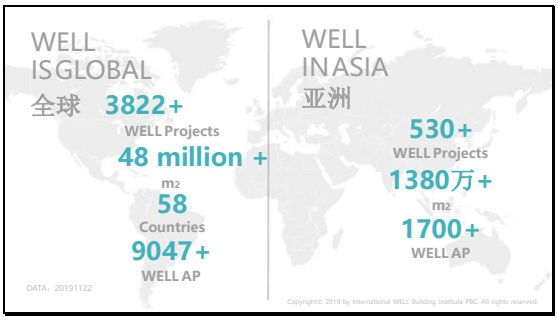

WELLMake efforts to Create a Healthy Human Se
International WELL Building Institute (Asia)


Commitment to the environment
绿色
Commitment to People
健康
从专注环境，关注建筑的节能与环保，到回归人本、关注人居环境中人的健康和福祉，
是建筑历史的范式转换。

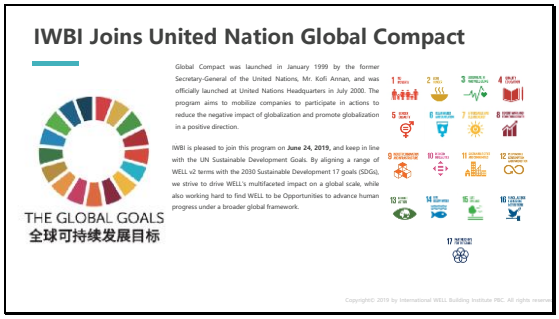

WELL
IS FOR PEOPLE
WELL以人为本


BODY SYSTEMS APPLIED
TO WELL FEATURES
WELL属性
Influence on Human
Health System
A SIMPLE WAY TO EXPRESS THE COMPLEX IMPACT THAT BUILDINGS CAN HAVE ON THE HUMAN BODY
To show the complicate influence that the building imposes on the human body
Cardiovascular
Digestive
Endocrine
Immune
Integumentary
Muscular
Nervous
Reproductive
Respiratory
Skeletal
Urinary


DEVELOPMENT OF WELL
Developmental Course of WELL building standard
2006
Seven years of research
七年广泛研究
2014
V1.0 pilot Launched
克林顿全球倡议宣言
2017
WELL Community
Standardtw pilot
WELL community standard
2018
V2 Launched
定制化得分卡全球发布


WELL
IS GLOBAL
全球 3822+
WELL Projects
48 million +
m2
58
Countries
9047+
WELL AP
WELL
IN ASIA
亚洲
530+
WELL Projects
1380万+
m2
1700+
WELL AP
DATA：20191122


IWBI international influence is recognized
2019
The World's Most Innovative Companies
Honorees by Sector
International WELL Building Institute


IWBI Joins United Nation Global Compact
THE GLOBAL GOALS
全球可持续发展目标

Comprehensive Methods to Realize Healthy Built Environment

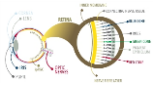
Ten Concepts involved in WELL building standard

Light

Intent: To promote human exposure to light, aiming to create a light environment that is most conducive to people’ s visual, psychological and physical health.

Light	WELLv2
Precondition	2
Optimization condition	6

OUR EYES DO MORE THAN JUST SEE.
我们的眼睛不只是看。



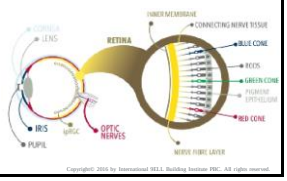
HOW OUR EYES SEE

Visual Principle

RODS – DARK VISION
杆状细胞——黑暗中的视力

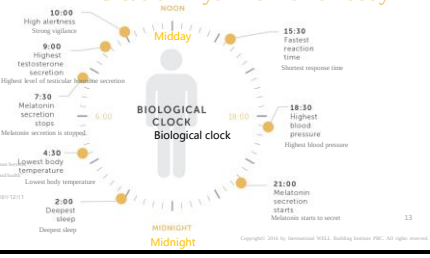
CONES – NORMAL VISION
锥状细胞——普通视力

INTRINSICALLY PHOTOSENSITIVE RETINAL GANGLION CELLS (IPRGCS) – CIRCADIAN EFFECT
内在光敏视网膜神经节细胞（IPRGCS）——昼夜效果



HUMAN CIRCADIAN RHYTHMS

Crcadian rhythm of human body

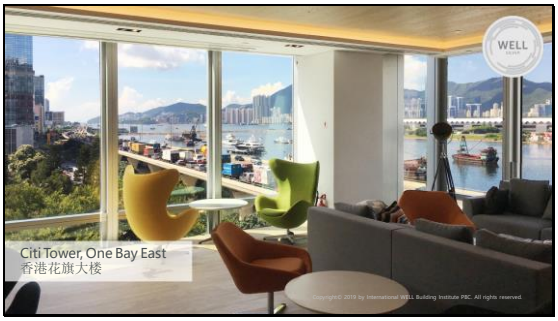


13

Clause L03

Day and night lighting design

Purpose: to support circadian rhythm health through artificial lighting.



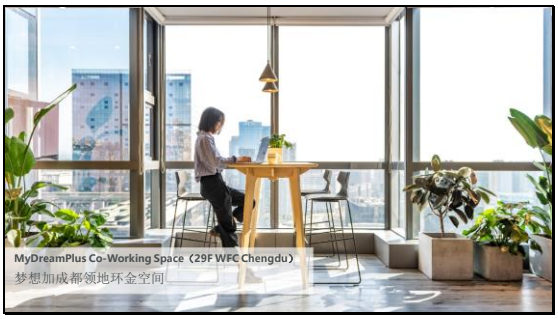
Citi Tower, One Bay East
香港花旗大楼

Daimler Greater China Headquarter
戴姆勒大中华区总部


Microsoft: Greater China HQ
微软大中华区总部


Sino-Ocean HQ
远洋集团总部办公室


TFC Office Tower 1, Tower 2
天府汇中心写字楼一座、二座


MyDreamPlus Co-Working Space《29F WFC Chengdu》
梦想加成都领地环金空间

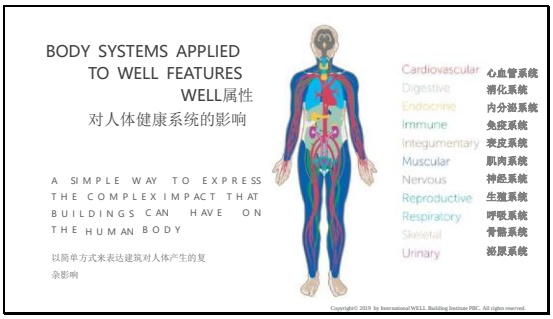

Light in Lake
保利·和光屿湖


健筑幸福
WELL 力行
WELLCERTIFIED.COM

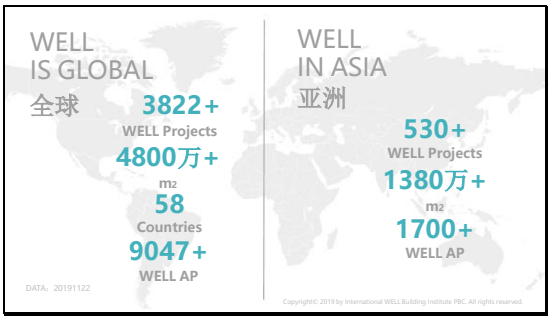

WELL 共创健康人居
国际WELL建筑研究院 亚洲区


对环境的承诺
绿色
对人的承诺
健康
从专注环境、关注建筑的节能与环保，到回归人本、关注人居环境中人的健康和福祉，
是建筑历史的范式转换。


WELL
IS FOR PEOPLE
WELL以人为本


BODY SYSTEMS APPLIED TO WELL FEATURES
WELL属性
对人体健康系统的影响
A SIMPLE WAY TO EXPRESS THE COMPLEX IMPACT THAT BUILDINGS CAN HAVE ON THE HUMAN BODY
以简单方式来表达建筑对人体产生的复杂影响
Cardiovascular 心血管系统
Digestive 消化系统
Endocrine 内分泌系统
Immune 免疫系统
Integumentary 表皮系统
Muscular 肌肉系统
Nervous 神经系统
Reproductive 生殖系统
Respiratory 呼吸系统
Skeletal 骨骼系统
Urinary 泌尿系统


DEVELOPMENT OF WELL
WELL建筑标准的发展过程
2006
Seven years of research
七年广泛研究
2014
V1.0 pilot Launched
克林顿全球倡议宣言
2017
WELL Community Standard™ pilot
WELL社区标准
2018
V2 Launched
定制化得分卡全球发布


WELL IS GLOBAL
全球
3822+
WELL Projects
4800万+
m2
58
Countries
9047+
WELL AP
WELL IN ASIA
亚洲
530+
WELL Projects
1380万+
m2
1700+
WELL AP
DATA：20191122


IWBI国际影响力获认可
美国最具影响力的商业媒体之一《快公司》（Fast Company）于2019年2月20日发布《全球最佳创新公司榜单》，IWBI荣获健康产业领域第六名。《全球最佳创新公司榜单》在每年在全球评选最具创新力的产品及服务的企业，表彰其变革产业、重塑社会观念的影响力。让我们更加期待健康人居运动光明的未来。
International WELL Building Institute
2019
The World's Most Innovative Companies
Honorees by Sector

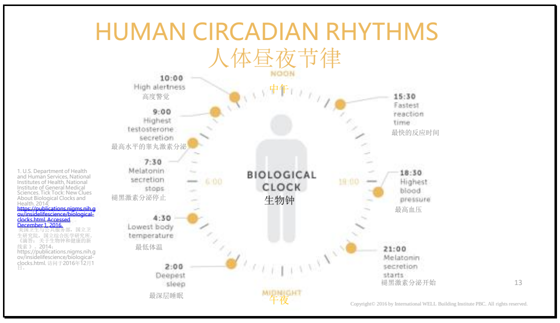

IWBI加入联合国全球契约计划
THE GLOBAL GOALS
全球可持续发展目标
“全球契约”计划是前任联合国秘书长科菲.安南先生于1999年1月提出，并于2000年7月在联合国总部正式启动的全球计划，旨在动员企业参与减少全球化负面影响的行动，推进全球化朝积极的方向发展。
IWBI很高兴于2019年6月24日加入此一行列，与联合国可持续发展目标保持一致。通过将WELL v2的很多条款与2030联合国可持续发展的17个目标（SDGs）相对接，我们努力推动WELL在全球范围内的多方面影响，同时也更具努力地寻找将WELL演变为能在全球更广泛的框架下推动人类进步的机会。


实现建筑环境健康的综合方法
WELL建筑标准的十大概念
空气
水
营养
光
运动
热舒适
声环境
材料
精神
社区

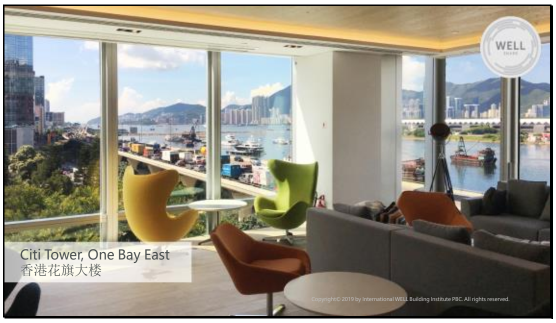

光
意图：提倡人接触光，旨在营造最利于视觉、心理和生理健康的光环境
光 | WELLv2
先决条件 | 2
优化条件 | 6


OUR EYES DO MORE
THAN JUST SEE.
我们的眼睛不只是看。


HOW OUR EYES
SEE
视觉原理
RODS – DARK VISION
CONES – NORMAL VISION
INTRINSICALLY PHOTOSENSITIVE RETINAL GANGLION CELLS (IPRGCS) – CIRCADIAN EFFECT
RETINA
OPTIC NERVES
IRIS
PUPIL


HUMAN CIRCADIAN RHYTHMS
人体昼夜节律
NOON
10:00
High alertness
9:00
Highest testosterone secretion
7:30
Melatonin secretion stops
4:30
Lowest body temperature
2:00
Deepest sleep
MIDNIGHT
BIOLOGICAL CLOCK
生物钟
15:30
Fastest reaction time
18:30
Highest blood pressure
21:00
Melatonin secretion starts

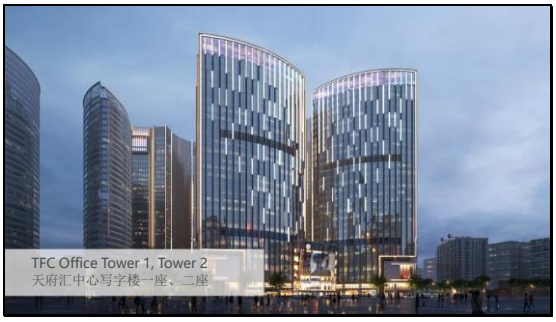

条款 L03
昼夜照明设计
意图：使用人工照明来支持昼夜节律健康。


WELL
Citi Tower, One Bay East
香港花旗大楼


WELL
Daimler Greater China Headquarter
戴姆勒大中华区总部


Microsoft: Greater China HQ
微软大中华区总部


Sino-Ocean HQ
远洋集团总部办公室


TFC Office Tower 1, Tower 2
天府汇中心写字楼一座、二座


MyDreamPlus Co-Working Space（29F WFC Chengdu）
梦想加成都领地环金空间


Light in Lake
保利·和光屿湖


健筑幸福
WELL 力行
WELLCERTIFIED.COM

Make efforts to create healthy human settlement, promote Chinese People's health status and realize harmonious development of people, building and environment.

Yao Hongyan
November 22, 2019

"Health is a state of complete physical, mental and social well-being and not merely the absence of disease or infirmity."

"Constitution of the World Health Organization"

Health is a state of complete physical,mental and social well-being and not merely the absence of disease or infirmity.

"Promote public health by co-construction and sharing"

The core of Healthy China initiative is to have the health integrated into all the policies and Health & Wellness work policy of co-construction and sharing by people with people's health as the center, grassroots as work priority and reform and innovation as a driving force by taking the prevention first and putting emphasis on traditional Chinese and western medicine. Targeting at health affecting factors such as living and behavioral characteristics, producing and living environments and medical and health services etc., we should insist on combining the government-dominance with the mobilization of the initiatives of the society and individuals to encourage everyone to participate, to make efforts and share, and we should take prevention in the first place, promote healthy life style, reduce disease incidence and advocate early diagnosis, treatment and curing so as to realize public health.

Give Priority to Health

It is necessary to assign strategic status to the development of health, and have the health ideas integrated into the entire process of formulation and implementation of public policy, accelerate the creation of a model that helps realize healthy life style, ecological environment and economic society development and realize positive and harmonious development of health and economic society.

We should take the construction of healthy city and healthy village and town as an important driving force for the promotion of construction of Healthy China

It is necessary to meet land demand of health-related public facilities, perfect relevant system, layout and standards for public facilities, and have the health integrated into the entire process of town and country planning, construction and governance and promote the harmonious development of city and people's health. Development plans for healthy cities, healthy villages and towns should be formulated and implemented based on the main health problems facing the local residents. Constructions of healthy community, healthy village and town, health unit and healthy family should be carried out in a wider range to promote social participation.

It is necessary to strengthen comprehensive improvement of urban and rural environmental health.

It is necessary to constantly promote the activities of cleaning and tidying urban and rural environments, perfect the urban and rural environmental health infrastructure and long-term mechanism, coordinate the governance of urban and rural environmental health issues. It is necessary to intensify control over the human settlement in the rural area, strengthen the waste treatment in the rural area, implement projects for treatment of rural domestic sewage and vigorously promote clean energy. By 2030, we should turn the rural areas into a beautiful home where there are clean and tidy human settlements and a livable place where people can lead a better life and live out their life in retirement, and our aim is to realize harmonious development of man and nature.

On September 26, 2018, the Central Committee of the Communist Party of China and the State Council printed and distributed **"Rural Revitalization Plan (2018 to 2022)."**

Article 6 to Build an Eco-friendly and Livable Beautiful Village
>>Chapter 19 promote the development of green agriculture
>>Section 3 to make central management of prominent problems of agricultural environment
Chapter 9 Guarantee and Improve people's livelihood in the rural area
>>Chapter 13 Improve the public service supply in the rural area
>>Section 2 promote healthy village construction
>>Section 3 strengthen the construction of social security system in the rural area
>>Section 4 Improve the capability of providing for the aged in the rural area
>>Section 5 strengthen the capability of preventing and reducing natural disasters as well as helping the people tide over a natural disaster in the rural area.

Healthy Environment Promotion Action of "Action of Healthy China"

The actions are taken to tackle problems that affect people's health, such as air, water and soil and other natural environment problems, to control home environment risks such as indoor pollution etc., and eliminate social environment hazards such as road traffic injury etc., and health protections and suggestions for better response will be proposed, and the main measures that the government and the society should take will be suggested.

Healthy human settlement - Health of Human Settlement - Health Chinese people

"Health Status Indicators of Chinese People
（T/CHAA 006—2019）

·Standard plays a prominent role in achieving national health

In November 2019, Chinese Health Association released a group standard, and Chinese Center for Disease Control and Prevention was the major drafting unit.

Make efforts to create healthy human settlement, promote Chinese people's health status and realize harmonious development of people, building and environment.

Thanks

健康人居，助力健康中国

么鸿雁

2019年11月22日

健康不仅为疾病或羸弱之消除，而系体格、精神与社会之完全健康状态"

《世界卫生组织组织法》

Health is a state of complete physical,mental and social well-being and not merely the absence of disease or infirmity.

"共建共享、全民健康"是建设健康中国的战略主题

健康中国战略核心是以人民健康为中心，坚持以基层为重点，以改革创新为动力，预防为主，中西医并重，把健康融入所有政策，人民共建共享的卫生与健康工作方针，针对生活行为方式、生产生活环境以及医疗卫生服务等健康影响因素，坚持政府主导与调动社会、个人的积极性相结合，推动人人参与、人人尽力、人人享有，落实预防为主，推行健康生活方式，减少疾病发生，强化早诊断、早治疗、早康复，实现全民健康。

健康优先

把健康摆在优先发展的战略地位，立足国情，将促进健康的理念融入公共政策制定实施的全过程，加快形成有利于健康的生活方式、生态环境和经济社会发展模式，实现健康与经济社会良性协调发展。

把健康城市和健康村镇建设作为推进健康中国建设的重要抓手！

保障与健康相关的公共设施用地需求，完善相关公共设施体系、布局和标准，把健康融入城乡规划、建设、治理的全过程，促进城市与人民健康协调发展。针对当地居民主要健康问题，编制实施健康城市、健康村镇发展规划。广泛开展健康社区、健康村镇、健康单位、健康家庭等建设，提高社会参与度。

加强城乡环境卫生综合整治

持续推进城乡环境卫生整洁行动，完善城乡环境卫生基础设施和长效机制，统筹治理城乡环境卫生问题。加大农村人居环境治理力度，全面加强农村垃圾治理，实施农村生活污水治理工程，大力推广清洁能源。到2030年，努力把我国农村建设成为人居环境干净整洁、适合居民生活养老的美丽家园，实现人与自然和谐发展。

2018年9月26日，中共中央 国务院印发《乡村振兴战略规划（2018 - 2022年）》

第六篇　建设生态宜居的美丽乡村

>>第十九章　推进农业绿色发展

>>第三节　集中治理农业环境突出问题

第九篇　保障和改善农村民生

>>第三十章　增加农村公共服务供给

>>第二节　推进健康乡村建设

>>第三节　加强农村社会保障体系建设

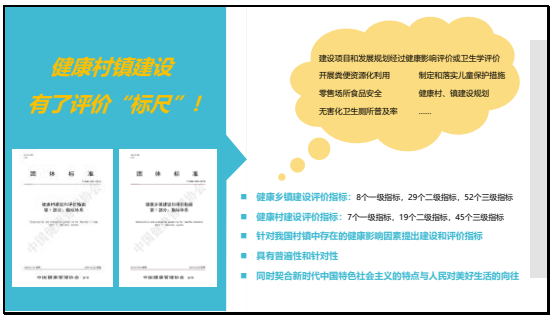
>>第四节　提升农村养老服务能力

>>第五节　加强农村防灾减灾救灾能力建设

"健康中国行动"之健康环境促进行动

本行动主要针对影响健康的空气、水、土壤等自然环境问题，室内污染等家居环境风险，道路交通伤害等社会环境危险因素，分别给出健康防护和应对建议，并提出政府和社会应采取的主要举措。

-健康人居-人居健康-健康国民



·国民健康　标准先行

《中国国民健康状况指标》（T/CHAA 006—2019）

2019年11月，由中国健康管理协会发布的团体标准，中国疾控中心为第一起草单位。

聚力健康人居，助力健康中国，人、建筑、环境和谐发展！

谢　谢

HEALTHY BUILDING

Standards and Practices of Healthy Building in China

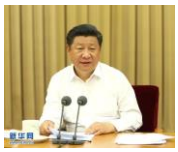
Meng Chong
Nov. 2019

ategic background

★"Currently, due to industrialization, urbanization, aging population and changes in disease spectrum, ecological environment, and lifestyle, China are still faced with complicated situation in which multiple disease threats coexist and multiple factors influencing health are intertwined……

If these problems cannot be effectively resolved, they will inevitably cause serious influence on the health of the people, restrict economic development, and affect social harmony and stability. ". "

——In August 2016, Xi Jinping delivered a speech at the National Health and Wellness Conference



Strategic background

——Health opportunities that China has

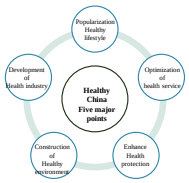
- ★ 2015 — It is proposed to promote the construction of healthy China at the 5th Plenary Session of the 18th CPC Central Committee.
- ★ 2016 — "Plan Outline of Healthy China 2030" is printed, issued and implemented
- ★ 2017 — **It is proposed to implement the strategy of Healthy China at the 19th National Congress of the Communist Party of China."**
- ★ 2019 — The Health China Promotion Committee was established and "Actions Taken to build a Healthy China (2019-2030)" is printed and issued.
- ★ 2019 — "Executive Summary of Promotion of High-quality Development (2019 to 2022)" is printed and issued.

Strategic background

Positioning	Strategy	Main body
Centering around the "**disease**"	Transitioning from the "**treating existing diseases**"	Transitioning from **relying on health and wellness systems**
Transitioning towards **health-centered** strategy	To "**preventing possible diseases**"	to the **overall social transformation**

Demand for development

- **Healthy architecture and community are important methods of implementing the "Healthy China" strategy in the construction field.**



Healthy architecture provides an **excellent carrier** for the implementation of the strategy –

- Create healthy indoor and outdoor living environments
- Provide systematic and constant health services
- Promote a healthy lifestyle
- Develop healthy industrial chain
- Improve health protection

Demand for development

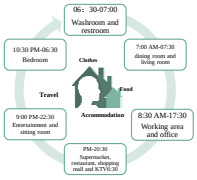
- **Healthy buildings and communities are the basic guarantee for the people to pursue a better life.**

★The principal contradiction facing Chinese society has evolved. What we now face is the contradiction between unbalanced and inadequate development and the people's ever-growing needs for a better life."

➢ **What is the good life pursued by the masses?**

★ The masses are most concerned about education, employment, income, social security, medical care, old-age care, housing, and the environment.

— New Year address by Chairman Xi in 2018



Demand for development

It is necessary to build Healthy architecture and community to realize high-quality development of construction industry in the new era.
Functional standard → resource constraints → people-oriented

Studies on Healthy architecture and community represent the inevitable trends of construction science.
Traditional architectural field → interdisciplinary and cross-domain integration

To upgrade the construction consumer industry, it is necessary to develop healthy architecture and community industry.
Health Industry (fastest) & Construction Industry (biggest) & Fitness Industry (Most Potential)

The necessity of development

The development needs are satisfied **from top to bottom**

- **Healthy China** — Plan Outline of Healthy China 2030, "Actions Taken to build a Healthy China (2019-2030)"
- **Healthy city, town and village** — "Guiding Opinions on Building Healthy Cities, Towns and Villages" and "Opinions on Promoting the Implementation of Construction of Healthy Cities, Towns and Villages"
- **Healthy community and residential area** — The healthy "cell" projects (communities, units and families) are proposed in "Opinions on Promoting the Implementation of Construction of Healthy Cities, Towns and Villages"
- **Healthy architecture**

The development support is provided **from bottom to top**

Definition and connotation

➢ **Evaluation Standard for Healthy Building", national standard for engineering construction, defines healthy architecture as----**

In addition to satisfying the performance requirements of green building, Healthy architecture should provide users with a healthier environment, facilities and services, promote physical and mental health of the users and improve the health performance.

Base points—— Physical, psychological, and social health of people

Indicators----- Media-based, perception-based and measure-based

Indicators of health performance improvement

Carriers—— Architectural space, facilities, equipment and services

Approaches—— Eliminate harmful factors, encourage beneficial factors, and guide elasticity factors

The WHO definition of health—

"Health is a state of complete physical, mental and social well-being and not merely the absence of disease or infirmity. "

Primary Standard - Evaluation Standard for Healthy Build

T

T/ASC 02—2016

健康建筑评价标准

Assessment standard for healthy building

——Evaluation Standard for Healthy Building, T/ASC 02-2016

Release and implementation of standards

√ **Published and implemented in Jan. 2017**

As a national industry standard, it is submit to the higher authority for approval

——Evaluation Standard for Healthy Building

Submitted in July 2018 for approval

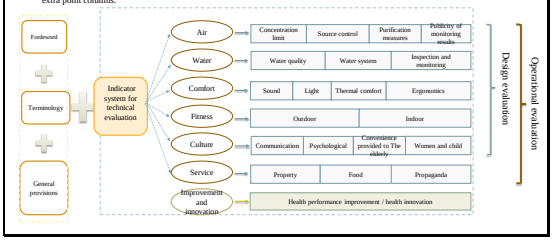
The pre-publication draft has been completed to be reviewed finally.

The systematic, innovative and scientific performance of evaluation system is improved.

- Innovative ideas is introduced: soundscape design
- Complementary biological pollution control (mold and dust mites), facilities designed to protect women and children
- Adjust the limits of PM2.5 concentration, etc.

Standard framework

➢ Evaluation Standard for Healthy Building contains six core indicators, 20 sub-sections, 34 control items, 85 rating items, and 8 extra point columns.



Standard system construction

Evaluation Standard for Healthy Building

Coverage is more extensive

Evaluation Criteria for Healthy Community
Evaluation Criteria for Healthy Town
Evaluation Criteria for Healthy Village

CECS, submit to the authority for approval
CECS, soliciting opinions
CECS, being drafted

Building function Detailing

Evaluation Criteria for Healthy Hotel
Evaluation Criteria for Healthy Hospital
Evaluation Criteria for Healthy Provisions for the Aged
Evaluation Criteria for Healthy Campus
Evaluation Criteria for Healthy Sports

CECS, being drafted
CECS, being drafted
CECS, being drafted
CECS, being drafted
CECS, being drafted

More construction stages are involved

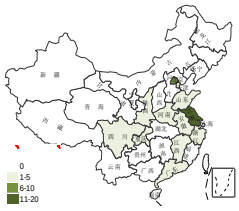
"Regulations on Detecting Techniques of Healthy Architecture
"Regulations on Technologies involved in Healthy Renewal of Existing Residential Areas"
"Evaluation Criteria for Technologies involved in Healthy Renewal of Existing Residential Areas"

CECS, being drafted
CSUS, being drafted
CSUS, being drafted

Development status

✓ From March 2017 to August 2019, a total of 54 projects are applied for a healthy building label. Among them, there are 49 projects that have been awarded labels, including 313 buildings, with total construction area of about 4.5 million m2, which benefits more than **200,000 users.**

✓ The projects are launched in 12 Provinces/Municipality directly under the central government such as Beijing, Shanghai, Jiangsu, Guangdong, Tianjin, Zhejiang, Anhui, Chongqing, Sichuan, Jiangxi and Shaanxi.



Development status

✓ Analysis of results

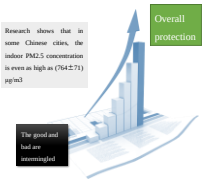
✓ The average annual concentration of indoor PM2.5 is 14.8μg/m3, which ranges from 4 to 28μg/m3.

✓ The average annual concentration of indoor PM2.5 is 14.8μg/m3, which ranges from 6 to 28μg/m3.

✓ The average indoor formaldehyde concentration is 43μg/m3, which is 1/7* of the average of the survey results in Beijing and Tianjin.

✓ The indoor TVOC concentration average is 228μg/m3, which is about 1/3 of the limit prescribed by the current national standard "Indoor Air Quality Standard" GB/T 18883.

Research shows that in some Chinese cities, the indoor PM2.5 concentration is even as high as (764±71) μg/m3



*Data sources: Li Meng, Zhang Yongyong and Hao Liran. The current situation of indoor pollution of airborne fine particulate matters and relate prevention and control measures. Journal of Environmental Engineering Technology, 2018, 8(2): 117-128

Development status

✓ Analysis of results

✓ The average value of room noise level perceptible in the main function room is 32dB (A);

✓ The total bacterial count of 83.3% of domestic drinking water in the project (excluding the direct drinking water)<10 CFU/mL; general hardness of 68.8% of project domestic drinking water <150 mg/L (based on CaCO3);

✓ In 85.4% of projects, the artificial thermal comfort degree of main function rooms meet the requirements of Grade I as stated in GB/T 50785-2012 "Evaluation Standard for Indoor Thermal Environment in Civil Buildings"

✓ Outdoor area of exchange site occupies 1.03% of the total floor area of project.

✓ The floor space of venues for cultural activities such as dance room and music room etc. account for 0.5% of total site area.

✓ Total area of free community supportive facilities for fitness accounts for 2% of the total floor area of project.

✓ Free fitness facilities (such as treadmill and elliptical machine etc.) account for 1.5% of total construction numbers.

HEALTHY BUILDING

Thanks

HEALTHY BUILDING

我国健康建筑的标准与实践

孟冲

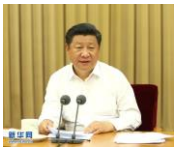
2019.11

战略背景

★“当前，由于工业化、城镇化、人口老龄化，由于疾病谱、生态环境、生活方式不断变化，我国仍然面临多重疾病威胁并存、多种健康影响因素交织的复杂局面……

如果这些问题不能得到有效解决，必然会严重影响人民健康，制约经济发展，影响社会和谐稳定。”

——2016年8月，习近平在全国卫生与健康大会的讲话



战略背景 —— 我国所面临的健康机遇

★ 2015年	党第十八届五中全会提出“**推进健康中国建设**”
★ 2016年	《**“健康中国2030”规划纲要**》印发并实施
★ 2017年	十九次全国代表大会提出“**实施健康中国战略**”
★ 2019年	健康中国行动推进委员会成立，印发《**健康中国行动（2019-2030年）**》
★ 2019年	《**促进健康产业高质量发展行动纲要（2019-2022年）**》印发

战略背景

定位	策略	主体
从以“**疾病**”为中心	从注重“**治已病**”	从依靠**卫生健康系统**
向以“**健康**”为中心转变	向注重“**治未病**”转变	向**社会整体联动**转变

发展的需求

□ **健康建筑、社区是“健康中国”战略在建筑领域落实的重要途径**

健康建筑为战略实施提供**绝佳的载体**——

- 建设健康的室内外生活环境
- 提供系统连贯的健康服务
- 普及健康的生活方式
- 发展健康产业链
- 完善全面的健康保障

发展的需求

□ **健康建筑、社区是人民群众追求美好生活的基本保障**

★“我国社会**主要矛盾**已经转化为人民日益增长的**美好生活需要**和**不平衡不充分的发展**之间的矛盾”

➢ **什么是人民群众追求的美好生活？**

★ 人民群众**最关心**的就是教育、就业、收入、社保、**医疗、养老、居住、环境**等方面的事情。

—习主席2018新年贺词

发展的需求

健康建筑、社区是新时代建筑业高质量发展的必然需求

功能本位→资源约束→以人为本

健康建筑、社区研究是建筑科学问题升级的必然趋势

传统建筑领域→跨学科、跨领域融合

健康建筑、社区产业是建筑消费产业升级的必然趋势

健康产业（最快）&建筑产业（最大）&健身产业（最具潜力）

发展的必要性

发展需求自上而下

健康中国

《“健康中国2030”规划纲要》，《健康中国行动（2019-2030年）》

健康城市、健康村镇

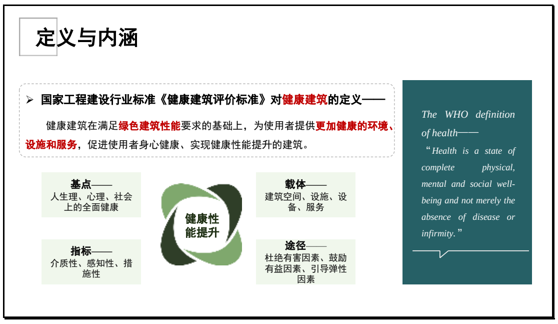
《关于开展健康城市健康村镇建设的指导意见》、《关于推进健康城市健康村镇建设的实施意见》

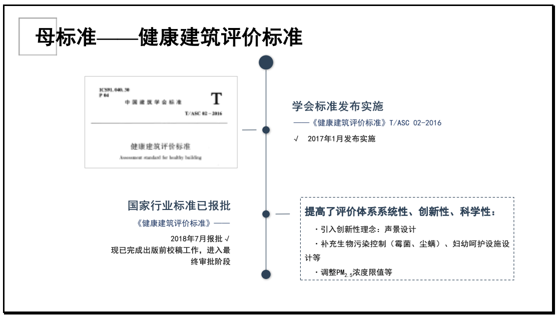
健康社区、住区

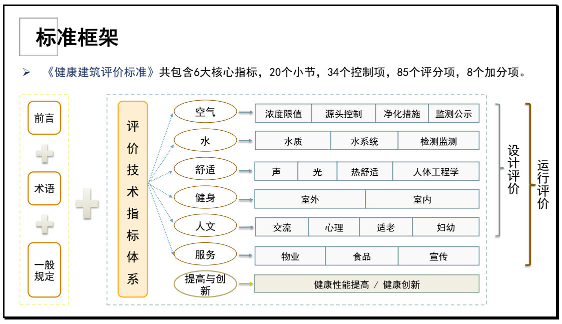
《关于推进健康城市健康村镇建设的实施意见》提出健康“细胞”工程（社区、单位、家庭）

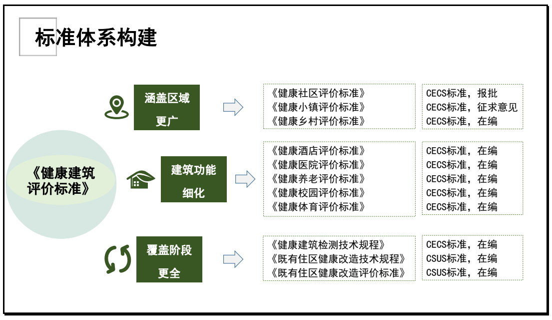
健康建筑

发展支撑自下而上

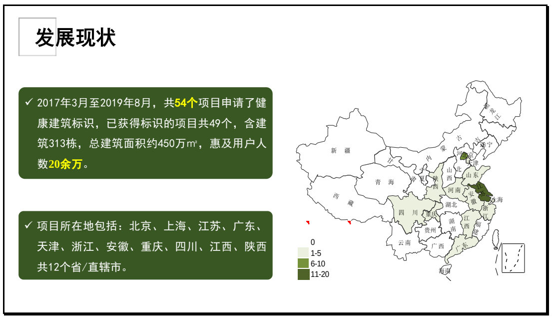

定义与内涵
国家工程建设行业标准《健康建筑评价标准》对健康建筑的定义——
健康建筑在满足绿色建筑性能要求的基础上，为使用者提供更加健康的环境、设施和服务，促进使用者身心健康、实现健康性能提升的建筑。
基点——
人生理、心理、社会上的全面健康
载体——
建筑空间、设施、设备、服务
健康性能提升
指标——
介质性、感知性、措施性
途径——
杜绝有害因素、鼓励有益因素、引导弹性因素
The WHO definition of health——
"Health is a state of complete physical, mental and social well-being and not merely the absence of disease or infirmity."

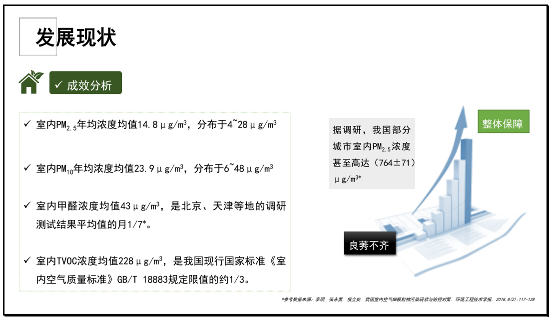

母标准——健康建筑评价标准
学会标准发布实施
——《健康建筑评价标准》T/ASC 02-2016
√ 2017年1月发布实施
国家行业标准已报批
《健康建筑评价标准》——
2018年7月报批 √
现已完成出版前校稿工作，进入最终审批阶段
提高了评价体系系统性、创新性、科学性：
· 引入创新性理念：声景设计
· 补充生物污染控制（霉菌、尘螨）、妇幼呵护设施设计等
· 调整PM2.5浓度限值等


标准框架
《健康建筑评价标准》共包含6大核心指标，20个小节，34个控制项，85个评分项，8个加分项。
前言
术语
一般规定
评价技术指标体系
空气
浓度限值
源头控制
净化措施
监测公示
水
水质
水系统
检测监测
舒适
声
光
热舒适
人体工程学
健身
室外
室内
人文
交流
心理
适老
妇幼
服务
物业
食品
宣传
提高与创新
健康性能提高 / 健康创新
设计评价
运行评价


标准体系构建
《健康建筑评价标准》
涵盖区域更广
《健康社区评价标准》 CECS标准，报批
《健康小镇评价标准》 CECS标准，征求意见
《健康乡村评价标准》 CECS标准，在编
建筑功能细化
《健康酒店评价标准》 CECS标准，在编
《健康医院评价标准》 CECS标准，在编
《健康养老评价标准》 CECS标准，在编
《健康校园评价标准》 CECS标准，在编
《健康体育评价标准》 CECS标准，在编
覆盖阶段更全
《健康建筑检测技术规程》 CECS标准，在编
《既有住区健康改造技术规程》 CSUS标准，在编
《既有住区健康改造评价标准》 CSUS标准，在编


CONTENTS
01 发展背景
02 评价标准
03 项目实践


发展现状
2017年3月至2019年8月，共54个项目申请了健康建筑标识，已获得标识的项目共49个，含建筑313栋，总建筑面积约450万㎡，惠及用户人数20余万。
项目所在地包括：北京、上海、江苏、广东、天津、浙江、安徽、重庆、四川、江西、陕西共12个省/直辖市。
0
1-5
6-10
11-20


发展现状
成效分析
室内PM2.5年均浓度均值14.8μg/m³，分布于4~28μg/m³
室内PM10年均浓度均值23.9μg/m³，分布于6~48μg/m³
室内甲醛浓度均值43μg/m³，是北京、天津等地的调研测试结果平均值的月1/7*。
室内TVOC浓度均值228μg/m³，是我国现行国家标准《室内空气质量标准》GB/T 18883规定限值的约1/3。
据调研，我国部分城市室内PM2.5浓度甚至高达（764±71）μg/m³*
整体保障
良莠不齐


发展现状
成效分析
主要功能房间可感知的室内噪声级均值为32dB（A）；
83.3%项目生活饮用水（不含直饮水）菌落总数<10 CFU/mL；68.8%项目生活饮用水总硬度<150 mg/L（以CaCO3计）；
85.4%的项目主要功能房间人工热舒适度等级可达到《民用建筑室内热湿环境评价标准》GB/T 50785-2012中的I级要求。
室外交流场地面积占全部项目总占地面积的1.03%；
图书馆、音乐舞蹈室等文化活动场地面积占总用地面积的0.5%
社区配套免费健身场地总面积占全部项目总占地面积的2%；
免费健身设施（跑步机、椭圆机等）占建筑总人数的1.5%


HEALTHY BUILDING
谢谢！

Dialogue with Standard to Create a Brighter Future

——Innovative exploration of COOC in the era of sustainable development

COOC CHENGDU

Typical representative of brand new commercial real estate development and operation mode featuring large size, high quality, ownership to the entire stree and comprehensive operation.

It consists of 10 large first-class office clusters with an area of nearly 800,000 square meters and high-end commercial facilities. The project stretches 1.5 kilometers along Jiaozi Avenue and currently can accommodate 15,000 people. This project is aiming to create a world-leading leasing central business avenue.

40 YEARS	Development course
301.2 BILLION	Sales scale
725.3 BILLION	Total assets
283.5 BILLION	Net assets
44.9 BILLION	Net profit

Group Company profile

China Overseas Office Capital

The company is affiliated to CSCEC (ranked 2nd in the Fortune Global 500) and was founded in 1979 in Hong Kong. At present, the company has created three major industrial clusters, that is, "residential development", "urban operations" and "creative design and modern services". It operates business in more than 70 economically active cities such New York, London, Sydney, Hong Kong, Macau and Mainland China and so on. In 2018, the company's total assets amounted to HK $ 752.3 billion and its net assets amounted to HK $ 283.5 billion. It is a comprehensive investment-development service group which is quite advantageous: industrial linkage capabilities, urban operation capabilities, and capital and talent.

Commercial Brand Structure of China Overseas Office Capital

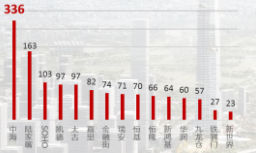
Make Joint Effort to Share and Win

Currently, commercial real estate of COOC provides products such as first-class office, Shopping center, long-term rental apartment, starred hotel and exhibition halls and so on.
It create a stage for urban culture and international business center for customers, cities, partners, and society.

Flagship brand of international commercial asset management covering wide products

The largest single-ownership office developer and operator in Mainland China

As of July 2019, there are a total of 54 projects in operation and a total of more than 80 projects planned and developed, and the size of projects ranks first in the industry.



First-class office of COOC

▲Operating area reached 3,360,000 square meters
> Second -tuijuana
> Third-SOHO China Total Operating Area

▲ The planned development area and the area in operation exceed 6,600,000 square meters
= first-class office+back to Shanghai's new business district (OTZOYBOX)

▲ Annual transaction area reached 540,000 square meters
The daily turnover reaches 1400 square meters = 1 Hong Kong IFC
Apple Store
Weekly turnover reaches 16,385 square meters = 1.5 standard football field
Monthly turnover reaches 65,000 square meters = 1 first-class office

Settled in the Business Center | Fortune 500 enterprises and leading companies at home and abroad

Neighbour Fortune Global 500 at the place Where Leading Enterprises Gather

Since the launch of the project in 2012, all the projects that COOC CHENGDU has provided to the market have basically been rented out. There are more than 500 companies settled in total, including 30 Fortune 500 companies engaging a wide range of domains such as real estate, automotive, trade, finance, FMCG, consulting services, Internet information technology, new economy, etc. and the project also attracted other Fortune 500 companies or industry leaders such as Microsoft, BMW, HSBC, Oracle, York, Nissan, FedEx, BASF, China Construction, Deloitte, Jaguar Land Rover, Harman, Duravit, Migu Music, Today's Headline, Sichuan Development, Huaxia Fund, JICTrust and so on.

Microsoft Famous IT company	FedEx Express Famous logistics	BASF World- Leading
SPIC China's leading	HSBC 汇丰 World-renowned	FOXCONN Famous
中国建筑 World Leading	Johnson Controls Well-known	NISSAN Famous automobile
AVNET World-renowned	ORACLE World-renowned	BMW Famous high-end

Some of them have settled Fortune Global 500 enterprises

Moving forward with good reputation | Main awards

Name of award	Time of obtaining award	Award conferror
Landmark Award for Commercial Buildings in China	2019	Association of Building Economy Promotion in Chengdu
BOMA COE certification	2018	Building Owners and Managers Association
The earliest super-A building approved in Chengdu	2016	Chengdu
Professional and Characteristic Buildings in High-tech Zone	2016	High-tech Zone
2015 The Most Influential Project of Commercial Real Estate in Western China	2015	The Western Real Estate Union
Key buildings in Chengdu High-tech Zone	2014	High-tech Zone
2013 China City Landmark Awards - Office Building	2013	China Real Estate Media Alliance
China Quality Engineering Award	2012-2013	China Association of Construction Enterprise Management
Gold Award for Tianfu Quality Engineering in Sichuan Province	2012	Department of Housing and Urban-Rural of Sichuan Province

COOC and BOMA China jointly released the Chinese version of "INTERNATIONAL OFFICE BUILDING CLASSIFICATION GUIDE" , and as the major drafter and releaser of this Guide, COOC gave a keynote speech on "The Way to Solve the Problems facing Commercial Asset Management in the Era of Stock" and proposed to create a "Four-in-one Commercial Asset Management Empowerment Platform " in the meeting.

COOC×IWBI

In 2018, COOC entered into a Strategic Cooperation Agreement with WELL Health Building Research Institute ™

COOC × WELL Strategic Cooperation

COOC has further practiced the concept of international commercial asset management, and has continued to advance in the building of quality, healthy and ecological buildings. It has become a leader in the domain of international commercial asset operation and management.

Work hand in hand to Succeed under Common Concept

This concept of IWBI (paying more attention to the people in the building, health and innovation, and thinking ability) is in line with the cooperation concept proposed by COOC, that is, "Demand, Standard, Innovation".

In July 11, 2019, OFFICEZIP, a subsidiary of COOC, and International WELL Building Research Institute ™ made exchanges over the industry.

COOC × WELL In-depth Communication

The company continues to fulfill its responsibility as an industry leader, and encourage the industry to disseminate the concept of international green building management to build a new ecology for the building economy at home.

Discuss the Values and Disseminate the Concepts

By adhering to the concept of "Emphasis on the building, while paying more attention to the people in the building, health and innovation, and thinking ability", we will jointly discuss the commercial market, international health standards for the shared space, and implementation of standrds in the local cultural context.

PAGE 11

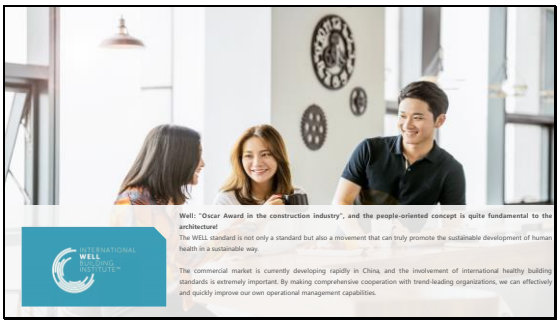
Recently, OFFICEZIP, a subsidiary of COOC is applying for WELL WELL Platinum Certification.

COOC × WELL Certification Platinum

OFFICEZIP, as the innovation experimenter and pilot of COOC, has become the pioneer of WELL health standard certification.

Lead the Industry
under the Guidance of Standards

As a pioneer and leader in the domain of health space in the industry, OFFICEZIP located in Beijing Finance Street , successfully passed WELL certification, and the project has meet the WELL health standard in many aspects including air, water, nutrition, light, and materials, and the company is going to build WELL health community.



Well: "Oscar Award in the construction industry", and the people-oriented concept is quite fundamental to the architecture!

The WELL standard is not only a standard but also a movement that can truly promote the sustainable development of human health in a sustainable way.

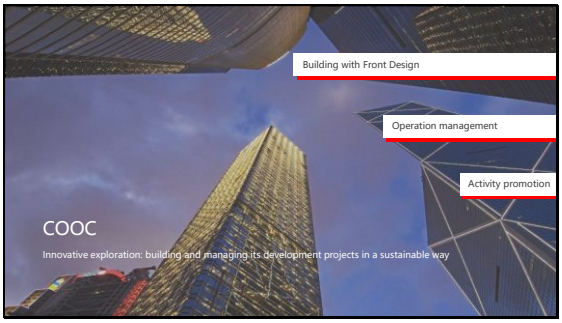
The commercial market is currently developing rapidly in China, and the involvement of international healthy building standards is extremely important. By making comprehensive cooperation with trend-leading organizations, we can effectively and quickly improve our own operational management capabilities.

It is a correct measure taken to follow the international development trend, respond to the government's calls, and understand corporate responsibility by giving priority to the green building.

Green building certification is an effective way to encourage more institutions, enterprises and individuals in the society to pay attention to green buildings and form a scale effect.

The healthy development of green buildings requires our entire industry to work together to strengthen communication, share best practices, and conduct professional training. By promoting the scientific and sustainable development concept, we can enhance the support of the entire industry for green development.

Development of Green City is Driven by Green Building



Building with Front Design

Operation management

Activity promotion

COOC

Innovative exploration: building and managing its development projects in a sustainable way

Design & Construction | Lighting, Air, Environm

PAGE 15

Daylighting: There are no pillars at the four corners with two-way daylighting, and project makes full use of natural light, in addition to energy saving and environmental protection, the project provides a more natural and friendly environment to the users.

Air: Equipped with a high-voltage electrostatic (plasma) air filtration system to efficiently filter haze and create green oxygen bars, providing users with comfortable and healthy ecological office space.

Environmental impact: we make good use of existing natural resources to minimize the environmental impact of the project. We choose to cooperate with high-quality suppliers, adopt innovative environmental protection technology, make reasonable use of building materials, and truly achieve environmental friendliness.

Design & Construction | Garden In The Air

PAGE 16

Two-floor Tall Balcony is adopted to build a Garden in The Air

Operation Management | Green Lease Management

PAGE 17

We always put it into practice [green lease management]

Based on WELL certification and BOMA system, we manage energy efficiently.

Through the big data, it intelligently analyzes the energy use channels and results, manages energy more efficiently, save energy and reduces emissions, and all the work should start from the office.

Operation Management | Green Business Trip

PAGE 18

Work with BMW Electric Vehicle

Promote green travel

COOC Chengdu actively cooperates with BMW ReachNow Powered By EVCARD, through platform equipped with BMW i3 new energy pure electric vehicles for periodic lease, it provides building tenants with greener and lower-carbon business travel services and advocates "greener" transportation travel concepts.

Operation Management | Green Safety Management

PAGE 19

Establish a shared security system for building

OffiCARE Thoughtful Service Plan

COOC Volunteer Rescue Team

COOC arranges a first aid training for its employees, property management workers, and corporate tenant representatives and establishes a COOC Volunteer First Aid Team.

First Aid Equipment

Some buildings of COOC are equipped with first aid system, and in the case of any emergency in any floor, you can send SOS in the first time.

AED First Aid Equipment

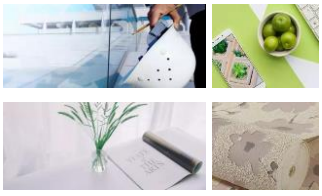
The lobby of each building of COOS project is equipped with AED. AED in vitro Defibrillation equipment in accordance with international standards and the equipment is available to the whole society through public platforms such as Baidu Map.

Operation Management | Green second interior decoration guidance

PAGE 20

Control on second interior decoration by tenants

In the review of the second interior decoration of the settled clients, under the premise of meeting the user's differentiated decoration needs, COOC encourages the user to reduce wastes of material and energy as much as possible; keep a close monitoring of pollutions such as odor, dust and noise, maintain a green, healthy and comfortable office environment at all times, and eliminate secondary pollution thoroughly.



Activity promotion | Green Earth

Keep an Green Appointment

Wear green clothes
Leave green footprints
Advocate environmental ideas

Activity Promotion | Turn off the lights for one hour

Before lights are turned off

After lights are turned off

For six consecutive years, *we have actively responded to the "One Hour of the Earth" initiative proposed by the World Wide Fund for Nature (WWF), which encourages projects across the country to turn off their lights for one hour and practice low-carbon office concepts.*

Activity Promotion | Caring for White Collar's Health

Spinal treatment

Dental examination

Theme Activities & Communication Idea

Focus On Health

Working with Dental Specialists in Western China

Focus on women's breast health

The concept of green and health leaves an imprint on the minds of COOC throughout its development

Work with international professional institutions to improve international management

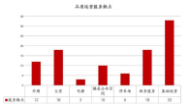
The company implements energy governance and understakes social responsibility

Innovative exploration that we make is far more than that...

Innovative exploration | Standard Routine Operations

"Operation 100"-standardization, data-based, visualization

With the process of customer experience as the starting point, we sorted out and formulated the COOC "Operation 100" operating guidelines, **which cover 7 sensing areas and 100 service points**. Every operation interface in the building has been planned in an integrated and standard way, and the space stressing on user-friendly experience is highlighted.



Innovative exploration | Community-based customer operation

The First Community Operation Classification System in the Industry

Community operation activities
-to meet the common needs of different tenants through stratification

High Level-Focus on Resources (industrial giants)
Middle Level-Focused on Learning (Paid learning activity)
Grassroots-Focus on entertainment (entertainments for white collar workers)

On-line communities are divided into different tiers × promote brands of offline activities

Theme Operation Activities - -Taking different seasons as the theme to shape the unique character of the building
Discovery season-promote the culture of high-end office buildings
LOHAS Season - find the Beauty of Life
Decompression season-pay attention to the physical and mental health of white-collar workers
Thanksgiving season - practicing corporate social responsibility

Activity of Earth Day - Turn off the lights for one hour, which belongs to public wellness activities

High Level - club for senior management
Middle Level - DAY DAY UP sharing sessions
Grassroots - theme party in the middle of

BOMA COE certification

The level of project operation and management reaches international standards, and its services can meet the needs of international tenants.

On behalf of the building

Such as Empire State Building in New York , Chrysler Building, Commonwealth Bank Building in Los Angeles, CITIC Tower, Shanghai Center, etc.

First project passing BOMA COE in Middle and Western China

中海商務

Practice social responsibility of central enterprises

We actively promote the development of the urban economy. On the premise of promoting social progress, we continue to deepen high-quality operations and fulfill our social responsibilities. In addition, we aim to realize sustainable urban development and promote social progress.

In the era of sustainable development

Innovative exploration
Intensive cultivation
Work with authorities
Internationally compatible

中海商務

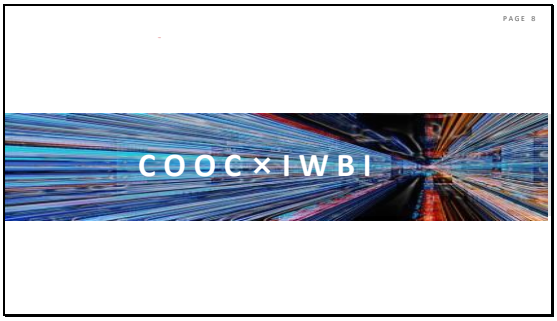
Create a New Ecology for Building Economy in China!

COOC, the pioneer of WELL health standard certification.

Actively disseminate the concept of international green building management
Strive to promote the green and sustainable development of cities and society

THANKS

奖项名	获奖时间	授予单位
中国商务楼宇地标奖	2019	成都市楼宇经济促进会
BOMA COE认证	2018	国际建筑业主与管理者协会
成都首批官方超甲	2016	成都市
高新区专业特色楼宇	2016	高新区
2015中国西部商业地产最具影响力项目	2015	西部商业地产联盟
成都高新区重点培育楼宇	2014	高新区
2013中国城市地标大奖 写字楼	2013	中国房地产权媒体联盟
国家优质工程奖	2012-2013	中国施工企业管理协会
四川省优质工程天府杯金奖	2012	四川省住房和城乡建设厅



PAGE 11

近日，COOC旗下北京金融街中海财富中心OFFICEZIP项目正在申请WELL的铂金级认证

COOC × WELL 铂金认证

OFFICEZIP作为COOC中海商务的创新阵地和创新触角，已成为WELL健康标准认证的先行者。

标准先行 行业引领

北京金融街中海财富中心OFFICEZIP作为行业健康空间领域的先行者和引领者，成功进行WELL注册。在空气、水、营养、光、材料等范围在内的多个维度均达到了WELL健康标准，正在致力于打造WELL健康社区的路上。

Well：“建筑界的Oscar”，以人为本，人才是建筑的根本！

WELL标准不仅是一个标准，它也是一项运动，能够真正的，可持续地，推动人类健康持续发展。

国内商办市场目前发展迅速，国际化健康建筑标准介入异常重要，与有趋势推动能力的组织进行全方位合作，能够高效、快速的提升自身的运营管理能力。

绿色建筑先行，是紧随国际发展趋势、顺随国家政府倡导、践行企业责任的正确步伐。

绿色建筑认证，更是激励社会更多的机构、企业和个人关注绿色建筑，形成规模效应的有效途径。

绿色建筑的健康发展，需要我们整个行业的携手努力，加强沟通交流，分享最佳实践，进行专业培训，在渐进科学可持续的发展理念中提升整个行业市场对绿色发展的支持度。

绿色楼宇带动绿色城市发展

前端设计建筑

运营管理

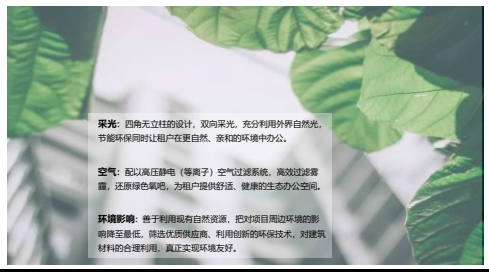
活动传播

COOC中海商务

创新探索：以可持续的方式建设及管理旗下发展项目

PAGE 15

设计建造 | 采光 空气 环境影响



采光：四角无立柱的设计，双向采光，充分利用外界自然光，节能环保同时让租户在更自然、亲和的环境中办公。

空气：配以高压静电（等离子）空气过滤系统，高效过滤雾霾，还原绿色氧吧，为租户提供舒适、健康的生态办公空间。

环境影响：善于利用现有自然资源，把对项目周边环境的影响降至最低，筛选优质供应商，利用创新的环保技术，对建筑材料的合理利用，真正实现环境友好。

PAGE 16

设计建造 | 空中花园

采用双层挑高巧思设计 创新打造了“空中花园”

PAGE 17

运营管理 | 绿色租约管理

始终践行【绿色租约管理】

结合WELL认证和BOMA体系，高效率的管理能源。

从大数据入手，智能分析能源使用途径与结果，更高效率管理能源，节能减排，从每一间办公室做起。

PAGE 18

运营管理 | 绿色商务出行

联合宝马电动汽车

倡导绿色出行

成都中海国际中心积极携与宝马ReachNow Powered By EVCARD进行深度合作，通过这个全系配备宝马i3新能源纯电动汽车的分时租赁平台，为楼宇租户提供更绿色低碳的商务出行服务，倡导“更环保”的交通出行理念。

PAGE 19

运营管理 | 绿色安全管理

建立楼宇共享安全体系

OffiCARE暖心服务计划

中海志愿者急救队

中海国际中心组织员工、物业工作人员、企业租户代表共同**参与急救培训**，组建中海志愿者急救队。

一键呼救设备

中海国际中心部分楼宇配备**一键呼救系统**，无论在任何楼层遇到紧急情况，均可第一时间发出求救信息。

AED急救设备

中海国际中心项目各楼栋大堂均按照国际标准，配备AED心脏体外经颗设备，并通过百度地图等公共平台，向全社会共享。

PAGE 20

运营管理 | 绿色二装引导

楼宇租户二装管控

在入驻客户的二装审核中，在保证客户差异化装修需求的前提下，COOC中海商务尽可能引导客户，在材料、能源方面减少浪费；严格监控异味、粉尘和噪音等污染，随时保持绿色健康舒适的办公环境，也从根源杜绝二次污染。


活动传播 | 绿色盎然地球
PAGE 21
共赴绿色之约
穿着绿色单品
留下绿色印迹
表达环保主张


活动传播 | 熄灯一小时
PAGE 22
熄灯前
熄灯后
连续六年
积极响应世界自然基金会（WWF）“地球一小时”倡议，全国各项目熄灯一小时，践行低碳办公理念


活动传播 | 关爱白领健康
PAGE 23
关爱白领健康
主题活动&传播理念
Focus On Health
脊柱治疗
结构检查
携手华西口腔专家
关注白领职场情绪
聚焦女性乳腺健康


绿色健康理念
已印刻在cooc中海商务的成长基因中
携手国际专业机构 提升国际化管理水平
公司能源治理 社会责任承担
创新探索 不止于此.....


创新探索 | 日常操作规范化
PAGE 25
《运营100》—— 标准化、数据化、可视化
以客户体验流程为出发点而梳理形成的COOC中海商务《运营100》运营准则，覆盖 7 个感知区域，梳理100 个服务触点，楼宇内每一处运营界面均形成了完善、标准的综合规划，人性化体验的办公空间形态凸显。


创新探索 | 客户运营社群化
PAGE 26
业内首创社群运营分级体系
社群运营活动 - - 分层满足差异化租户的共性需求
高层 - 聚焦资源（大咖云集）
中层 - 聚焦学习（带薪充电）
基层 - 聚焦玩乐（白领放松）
线上社群圈层化 × 线下活动品牌化
主题运营活动 - - 季度主题类塑造楼宇性格
探索季-塑造高端写字楼文化
乐活季-发掘生活之美
减压季-关注白领身心健康
感恩季-践行企业社会责任
地球日活动-熄灯一小时，公益活动
高层 高管俱乐部
中层 DAY DAY UP 分享会
基层 月中主题趴


BOMA COE认证
项目运营管理水平达到国际标准，其服务可以满足国际租户需求。
代表楼宇
纽约帝国大厦、克莱斯勒大厦、洛杉矶联邦银行大厦、中国尊、上海中心等。
中西部首个通过 BOMA COE 认证的项目！


PAGE 28
中海商务
践行央企社会责任
主动推动城市经济发展，以促进社会进步为前提，持续深化品质经营，践行社会职责，实现城市的可持续发展，促进未来经济发展，践行社会进步。
可持续发展时代
创新探索
精耕细作
携手权威
接轨国际


中海商务
构建国内楼宇经济新生态！
COOC中海商务 —— WELL健康标准认证的先行者
积极 传播国际化绿色建筑管理理念
竭力 推动城市社会的绿色可持续发展


THANKS

Health	Well-being	Efficiency
Technology Promotes healthy life	By solving the often-ignored problems, We aim to improve user's comfort.	The maximized efficiency is embodied by every product

实现建筑环境健康的综合方法

WELL健康建筑标准的十大概念

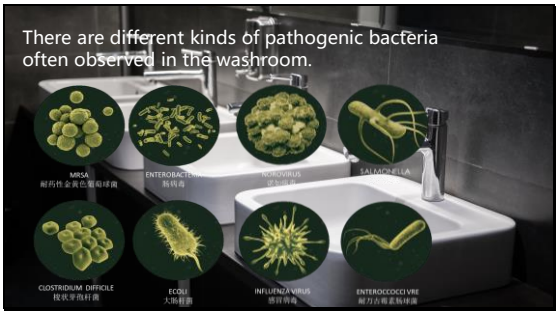
空气 水 营养 光 运动

热舒适 声环境 材料 精神 社区

Water

V2-W08 hand washing | optimized condition (maximum: 2 points)

It reduces pathogens which might be transmitted during hand washing and drying.
It helps reduce transmission of infectious diseases by encouraging hand washing and drying and controlling germination of bacterium.



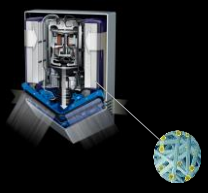
2019 Q1 WELL AAP update

WELL Healthy Building StandardTM (Concept of Nutribution - Feature 41 Part 1 Cleaning) AAP mentions that,

"Hand dryers equipped with HEPA-compliant filters may be used in lieu of paper towels for hand drying in non-healthcare WELL projects to meet Feature 41 Part 1 Cleaning, maintenance and filter replacement should be scheduled as set by manufacturer's recommendations. Documentation of such activities must be maintained."

HEPA filters - ensures that the hands are dried with clean air.

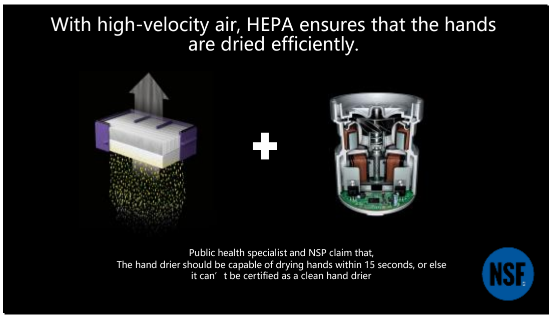
- HEPA filter is an internationally recognized high efficiency filter, and in the beginning, HEPA is applied as a means of protection in the nuclear energy research, and now it is widely adopted in sites which require high cleanliness such as precision laboratory, pharmaceutical production, atomic research and surgical operation and so on.
- Every Dyson Airblade™ Hand drier contains a HEPA filter 4.8 meters in length, and it effectively filters 99.95 % of bacteria and particulate matter which measure 0.1 micron in size in the washroom.



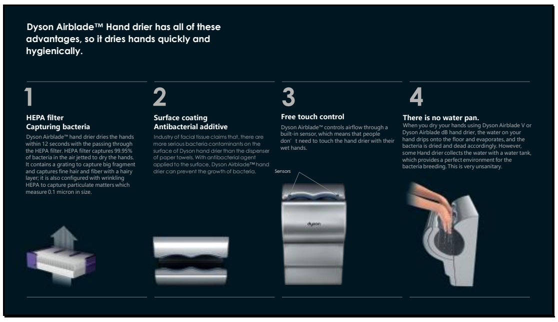
Traditional Hand Drier

Warm air hand drier
Warm air hand drier works quite slowly, and the heating elements of warm air hand drier generates high energy consumption and the time it takes to get the hands dried exceeds 30 seconds. For this reason, the users would quit drying their hands before their hands are completely dried, so the risk of bacterial transmission is increased.

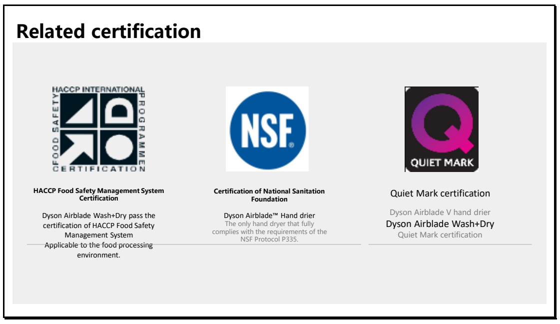
Air injection hand drier
Other air injection hand drier might look similar to Dyson Airblade™ hand drier, but, due to the insufficient dynamics, most of other air injection hand driers can't guarantee the jet stream required by the quick hand drying.
They also lack the necessary energy to suck the air and make it pass through HEPA filter.

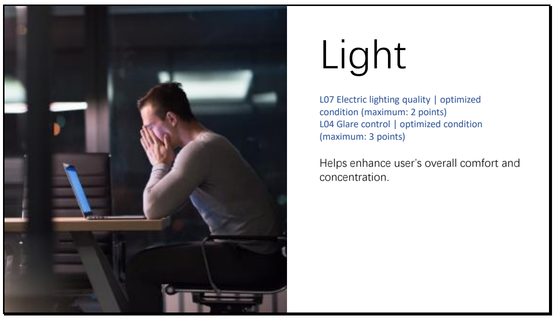

With high-velocity air, HEPA ensures that the hands are dried efficiently.
Public health specialist and NSP claim that,
The hand drier should be capable of drying hands within 15 seconds, or else it can' t be certified as a clean hand drier
NSF


Why is Dyson Airblade™ efficienct?
Drived by Dyson digital motor V4
Traditional motors are bulky, slow and inefficient, and they depend on the carbon brush which wears as the time goes by.
Dyson digital motor V4 is a small integrated motor, and it uses digital pulse technology, with revolving speed three times of traditional motors.
It sucks 35 liters of air every second, and make it pass through HEPA filter. The filtered air jets at a high speed of 690 km per hour to remove the water from the hand and dry hands quickly and hygienically.

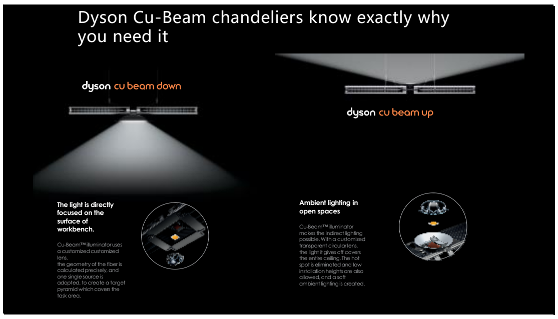

Dyson Airblade™ Hand drier has all of these advantages, so it dries hands quickly and hygienically.
1
HEPA filter
Capturing bacteria
Dyson Airblade™ hand drier dries the hands within 12 seconds with the passing through the HEPA filter. HEPA filter captures 99.95% of bacteria in the air jetted to dry the hands. It contains a grating to capture big fragment and captures fine hair and fiber with a hairy layer; it is also configured with wrinkling HEPA to capture particulate matters which measure 0.1 micron in size.
2
Surface coating
Antibacterial additive
Industry of facial tissue claims that, there are more serious bacteria contaminants on the surface of Dyson hand drier than the dispenser of paper towels. With antibacterial agent applied to the surface, Dyson Airblade™ hand drier can prevent the growth of bacteria.
3
Free touch control
Dyson Airblade™ controls airflow through a built-in sensor, which means that people don' t need to touch the hand drier with their wet hands.
Sensors
4
There is no water pan.
When you dry your hands using Dyson Airblade V or Dyson Airblade dB hand drier, the water on your hand drips onto the floor and evaporates, and the bacteria is dried and dead accordingly. However, some Hand drier collects the water with a water tank, which provides a perfect environment for the bacteria breeding. This is very unsanitary.

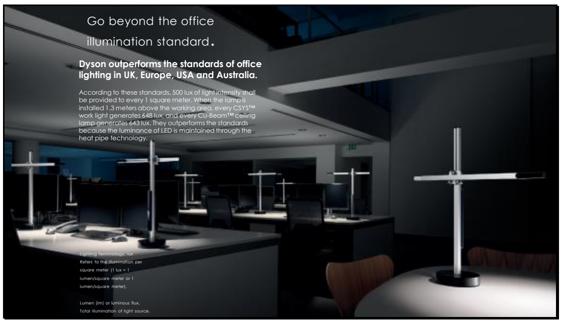

Automatic Tap
Bacteria grows on the equipment which doesn' t have an automatic tap.
In some business places, it is possible that the faucets are left unused for a few weeks. For example, in the school or the office during the holidays. The water in the system will stagnate, causing the growth of bacteria.
Automatic Tap
The Dyson Airblade Wash+Dry is featured by Auto-Flusher, and it is activated for 60 seconds every 24 hours after the last use. It helps reduce water stagnation and the spread of bacteria in the machine.
Operating principle
If the water flow isn' t triggered in 24 hours, then the water solenoid valves open automatically. The device will be flushed with water for 60 seconds to drain the water from the system. This built-in feature provides a more hygienic water system in a commercial environment.

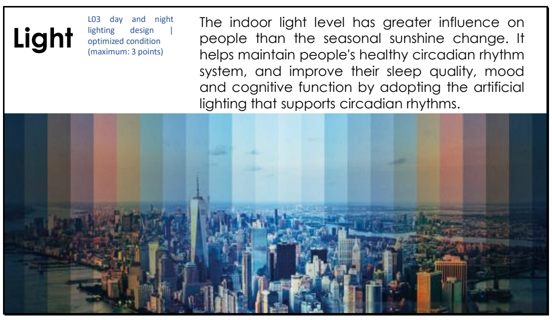

Related certification
HACCP INTERNATIONAL
FOOD SAFETY
PROGRAMME
CERTIFICATION
HACCP Food Safety Management System Certification
Dyson Airblade Wash+Dry pass the certification of HACCP Food Safety Management System
Applicable to the food processing environment.
NSF
Certification of National Sanitation Foundation
Dyson Airblade™ Hand drier
The only hand dryer that fully complies with the requirements of the NSF Protocol P335.
QUIET MARK
Quiet Mark certification
Dyson Airblade V hand drier
Dyson Airblade Wash+Dry
Quiet Mark certification


Light
L07 Electric lighting quality | optimized condition (maximum: 2 points)
L04 Glare control | optimized condition (maximum: 3 points)
Helps enhance user's overall comfort and concentration.


山姆 · 伯纳德
全球照明总监


Dyson Cu-Beam chandeliers know exactly why you need it
dyson cu beam down
dyson cu beam up
The light is directly focused on the surface of workbench.
Cu-Beam™ illuminator uses a customized customized lens.
the geometry of the fiber is calculated precisely, and one single source is adopted, to create a target pyramid which covers the task area.
Ambient lighting in open spaces
Cu-Beam™ illuminator makes the indirect lighting possible. With a customized transparent circular lens, the light it gives off covers the entire ceiling. The hot spot is eliminated and low installation heights are also allowed, and a soft ambient lighting is created.


Go beyond the office
illumination standard.
Dyson outperforms the standards of office lighting in UK, Europe, USA and Australia.
According to these standards, 500 lux of light intensity shall be provided to every 1 square meter. When the lamp is installed 1.3 meters above the working area, every CSYS™ work light generates 648 lux, and every Cu-Beam™ ceiling lamp generates 643 lux. They outperforms the standards because the luminance of LED is maintained through the heat pipe technology.


Light
L03 day and night lighting design | optimized condition (maximum: 3 points)
The indoor light level has greater influence on people than the seasonal sunshine change. It helps maintain people's healthy circadian rhythm system, and improve their sleep quality, mood and cognitive function by adopting the artificial lighting that supports circadian rhythms.

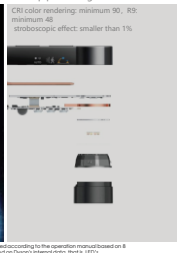
Intelligent daylight tracking technology

智能日光追踪技术

Dyson Lightcycle™ table lamp

dyson

Intelligently track on-the-spot daylight. The illuminating quality can be guaranteed for 60 years by adopting the heat pipe cooling.



1. L70 is measured in accordance with IEC62717, which is calculated according to the operation manual based on 8 hours of normal use per day. L70 is calculated by the supplier based on Dyson's internal data, that is, LED's

How does Dyson technology support WELL V2?

dyson

Main items of scoring

1. W08 hand washing | optimized condition (maximum: 2 points)
2. L07 electric lighting quality | optimized condition (maximum: 2 points)
3. L03 day and night lighting design | optimized condition (maximum: 3 points)
4. L04 glare control | optimized condition (maximum: 3 points)

Case Study

dyson

Beijing Office of Delos - project of WELL Gold Certification

Project name:Beijing Office of Delos

Project Location, Chaoyang District, Beijing
Area: 358 square meters;

The first WELL Gold Certification in Beijing, China

To improve the health and office experience of employees, based on the indoor function division and activity needs, rhythmic lighting system is designed by simulating the diurnal changes of natural light so as to realize balanced somatic function of people and create a delightful combination of nature and health for the employees.

Case Study

dyson

Element Plus office- WELL Gold Certification

Project name: exhibition hall of Element Plus in the Bund

Project address: 2nd Floor, Building N1 of Financial Center, The Bund, Shanghai
Area: 2100 square meters;

The designers are very concerned about the design of the space, and they attach even more importance to the relationship between people and space, and the concept of WELL coincide with the original intention of the project. This is a complicated space environment, as the entire space contains two functions, that is, office and exhibition hall. The designers are focused on solving the problem of how to make two areas of different functions interact with each other and support each other through the connection of WELL。

The designer has selected Dyson Airblade™ V Hand drier and faucet hand drier for the hand washing area in the exhibition hall.

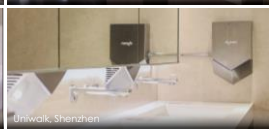
The designer has selected Dyson Cubeam Duo ceiling lamp for the office, with one ceiling lamp serving 6 stations。

Case share - Office of Sotheby's International Realty

dyson

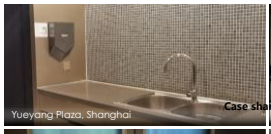
Case share - Shopping center

dyson



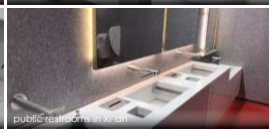
Project Case - Office

dyson



Project Case - crowded places

dyson



dyson

Experiece Dyson

Dyson Airblade™ Hand drier is available within limited hours.

Collection of application scenarios

You can take part in the activity by scanning QR code to fill in your information.

Only specially honored guests are invited to WELL activity on the day of event.

健康	福祉	效率
科技 助力健康生活	通过解决他人 所忽视的问题 提升舒适感	每一个产品 都将提升效率 发挥到极致

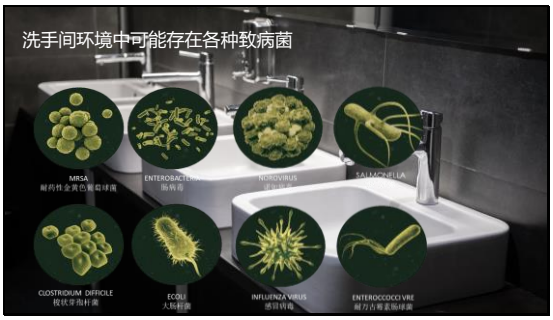
实现建筑环境健康的综合方法

WELL健康建筑标准的十大概念

水

V2-W08 洗手 | 优化条件 (最高: 2 分)

减少与洗手和干手相关的病原体传播。
通过鼓励洗手和干手，并控制滋生细菌的地方，有助于项目内减少传染病的传播。



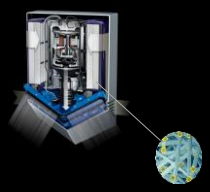
2019 Q1 WELL AAP替代遵循途径更新

WELL健康建筑标准™（营养概念-条款41第一部分手部清洁）替代遵循途径更新中提到：

“为满足特性表条款41第1部分(V2-W08)的要求，**配备符合HEPA高效过滤网的干手器，可代替擦手纸用于非医疗项目的干手方案**。清洁、维护和更换过滤网应按照制造商的建议进行安排，且更换任务需存档。”

HEPA高效过滤网—确保用卫生的空气吹干双手

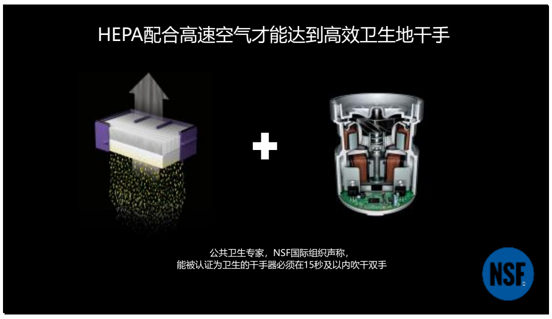
- HEPA滤网是一种国际公认最好的高效滤材，最初HEPA应用于核能研究防护，现在大量应用于精密实验室、医药生产、原子研究和外科手术等需要高洁净度的场所。
- 每个Dyson Airblade™干手器里都有4.8米的HEPA滤网，能有效过滤洗手间空气中99.95%²小至0.1微米的细菌和颗粒物。



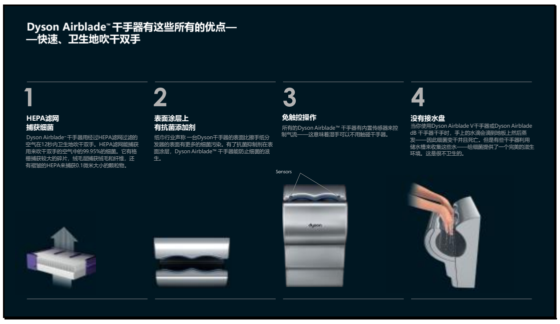
传统干手器

暖气流干手器
暖气流干手器运作缓慢，暖气流干手器的加热元器件对能源消耗大，干手时间能超过30秒，因此使用者在双手被吹干之前就放弃了使用——增加了细菌传播的风险。

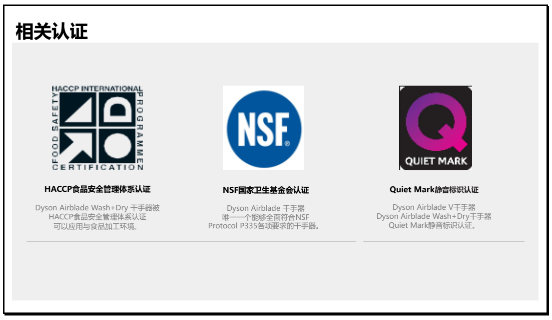
喷气式干手器
其他的喷气式干手器可能看起来像Dyson Airblade™干手器，但是由于动力不足够，大多数其他的喷气式干手器不能保证能迅速吹干双手所需的高速气流。
它们也缺少能将空气吸进HEPA滤网所需的能量。


HEPA配合高速空气才能达到高效卫生地干手
公共卫生专家，NSF国际组织声称，
能被认证为卫生的干手器必须在15秒及以内吹干双手
NSF


为什么Dyson Airblade™是快速的?
由戴森V4数码马达驱动
• 传统马达体积大、速度慢、效率低，并且依赖炭刷——会随时间的推移而磨损。
• 戴森V4数码马达是一款小型、集成式的马达，使用数字脉冲技术，转速是传统马达的三倍。
• 每秒吸入35升的空气，使其通过HEPA滤网，过滤后的空气以每小时690公里高速输出，刮除手部的水，确保快速、卫生地干手。


Dyson Airblade™ 干手器有这些所有的优点——快速、卫生地吹干双手
1
HEPA滤网
捕获细菌
Dyson Airblade™ 干手器用经过HEPA滤网过滤的空气在12秒内卫生地吹干双手。HEPA滤网能捕获用来吹干双手的空气中的99.95%的细菌。它有格栅捕获较大的碎片，绒毛层捕获绒毛和纤维，还有褶皱的HEPA来捕获0.1微米大小的颗粒物。
2
表面涂层上
有抗菌添加剂
纸巾行业声称 一台Dyson干手器的表面比擦手纸分发器的表面有更多的细菌污染。有了抗菌抑制剂在表面涂层，Dyson Airblade™ 干手器能防止细菌的滋生。
3
免触控操作
所有的Dyson Airblade™ 干手器有内置传感器来控制气流——这意味着湿手可以不用触碰干手器。
Sensors
4
没有接水盘
当你使用Dyson Airblade V干手器或Dyson Airblade dB 干手器干手时，手上的水滴会滴到地板上然后蒸发——因此细菌变干并且死亡。但是有些干手器利用储水槽来收集这些水——给细菌提供了一个完美的滋生环境。这是很不卫生的。


自动出水
细菌会在非自动出水设备上生长。
在一些商业场所，水龙头可以在几周内不使用。例如，学校放假期间，或在节假日期间的办公室。系统内的水会停滞，导致细菌的生长。
自动出水
Dyson Airblade Wash+Dry干手器配有自动冲水功能，在上一次使用后的每24小时激活60秒。有助于减少水的停滞和机器内细菌的传播。
工作原理
如果水流24小时不启动，水电磁阀会自动打开。设备将被水冲过60秒，排出系统中的积水。这种内置功能可以在商业环境中提供更卫生的水系统。


相关认证
HACCP INTERNATIONAL
FOOD SAFETY
PROGRAMME
CERTIFICATION
HACCP食品安全管理体系认证
Dyson Airblade Wash+Dry 干手器被HACCP食品安全管理体系认证可以应用与食品加工环境。
NSF
NSF国家卫生基金会认证
Dyson Airblade 干手器唯一一个能够全面符合NSF Protocol P335各项要求的干手器。
QUIET MARK
Quiet Mark静音标识认证
Dyson Airblade V干手器
Dyson Airblade Wash+Dry干手器
Quiet Mark静音标识认证。


光线
L07 电气照明质量 | 优化条件 (最高: 2 分)
L04 眩光控制 | 优化条件 (最高: 3 分)
使用有助于用户的整体舒适度和专注力的灯光


山姆 · 伯纳德
全球照明总监


Dyson Cu-Beam吊灯能准确的知道你需要它的地方
dyson cu beam down
dyson cu beam up
直接集中照明工作台表面
Cu-Beam™下照灯使用定制的透镜。
精确地计算光纤的几何形状，采用一个单一的光源，并创造一个覆盖任务区域的目标金字塔。
开放空间的环境照明
Cu-Beam™上照灯使间接照明成为可能。运用定制的透明圆形透镜，其投射的光横跨天花板。这消除了热点，并允许低的安装高度，营造柔和的环境照明。


超越办公室照明标准
Dyson照明超越了英国，欧洲，美国和澳大利亚的办公室照明的标准。
这些标准规定，每1平方米应提供500勒克斯的光量。当灯安装在工作区上方1.3米时，每个CSYS™工作灯产生648勒克斯的光量，每个Cu-Beam™吊灯产生643勒克斯光量。他们超过标准是由于热管技术保持LED的亮度。
照明术语：勒克斯
一个区域（1勒克斯=1流明/平方米或1流明/平方米）的照明单位。
流明（lm）或光通量
从光源发出的光量总和，单位流明(lm)。


光线
L03 昼夜照明设计 | 优化条件 (最高: 3 分)
室内光照水平对人的影响比季节性日照变化更大。通过支持昼夜节律的人工照明的介入可以帮助维持健康的昼夜节律系统，改善睡眠质量、情绪和认知功能

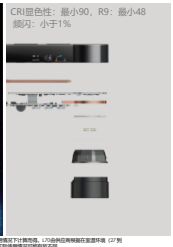
智能日光追踪技术

智能日光追踪技术

Dyson Lightcycle™ 台灯

dyson

智能追踪本地日光。热管冷却技术，保证照明质量60年[1]



Dyson技术如何支持WELL V2标准

dyson

得分项目汇总

1. W08 洗手 | 优化条件 (最高: 2 分)
2. L07 电气照明质量 | 优化条件 (最高: 2 分)
3. L03 昼夜照明设计 | 优化条件 (最高: 3 分)
4. L04 眩光控制 | 优化条件 (最高: 3 分)

案例分享

dyson

Delos北京办公室 - WELL金级认证项目

项目名称：**Delos 北京办公室**
项目地点：北京市朝阳区
面积：358平方米

中国北京首个WELL金级认证项目

为了提升员工的健康水平和办公感受，根据室内功能划分及活动需求，模拟自然光的昼夜变化设计节律灯光系统，平衡身体机能，让员工体会自然和健康相结合的喜悦。

Delos北京办公室在茶水间和工位分别配置了Dyson Lightcycle 台灯和Cubeam Duo吊灯。

案例分享

dyson

Element Plus office-WELL金级认证

项目名称：**Element Plus 上海外滩展厅**
项目地点：上海外滩金融中心N1栋2层
面积：2100平方米

设计师非常关注空间的设计，更注重人和空间的关系，WELL的理念与这次项目的初衷不谋而合。这是一个复杂的空间环境，整个空间包含了办公和展示二者的形态，如何让两大区域在WELL的链接下很好的相互影响相互提升一直是设计师重点思考的地方。

设计师在展厅洗手区域选择了Dyson Airblade V型干手器及龙头干手器。

设计师在办公室区域选择了Dyson Cubeam Duo吊灯，一盏吊灯服务于6个工位。

案例分享-香港苏富比国际地产办公室

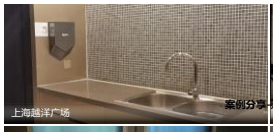
dyson

案例分享-购物中心

dyson

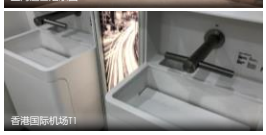
项目案例-办公室

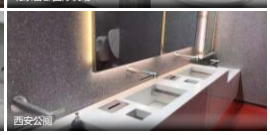
dyson



项目案例-高人流场所

dyson





dyson

体验戴森

戴森限时开放Dyson Airblade干手器应用场景征集

扫描二维码填写资料，即可参与！

《WELL活动当日嘉宾限定》

KELLY-MOORE PAINTS

Zero VOC Helps Create Healthy Construction

Presented by :He Wantao, Chengdu Jieshengtang Building Materials Co., Ltd.

公司简介 Company Profil

◆ Founded in 1946, **Kelly-Moore** Coatings enjoys a long history of more than 70 years and it is a world-leading coating manufacturer specialized in coatings for civil, commercial and industrial applications.

◆ The company has set production bases and large warehouses in San Carlo, California, Seattle, Hearst, Texas, Tenby, Arizona and it owns more than 171 self-run stores in America.

◆ With more than 120 independent dealers, it possesses points of sales all over the country. Headquartered in San Carlo, California (San Francisco South Bay), it is largest employee-owned coating manufacturer in US.

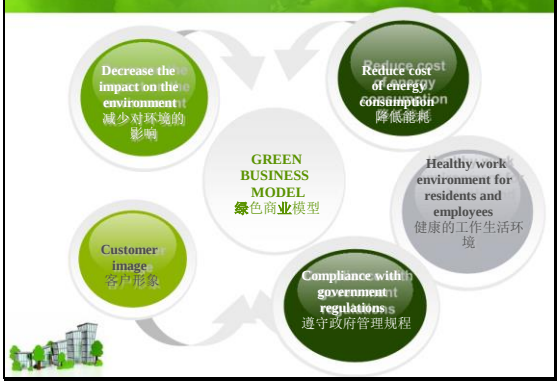
◆ So far, it has developed 13 international agents in 10 countries and regions.

Production - Made in USA Since 1946

- （Recently, it has launched the most advan
- paints production base so far in Hearst,
- Texas (at the outskirts of Dallas),
- which has been put into use.

- **8** complete paint production lines
- capable of providing big individual packages or delivering goods by tank car
- Zero **VOC** color paste

KELLY-MOORE PAINTS



High-quality raw material and green technology

Kelly-Moore insists on adopting the world's best resins and latex as the raw material, and It uses environmental manufacturing technique and technologies to ensure that the raw material matches the coating formulations perfectly. With more than 70 years of experience in professional production and formulas that have been withstood rigorous tests, it is quite natural that the company produces high quality coating. Kelly-Moore products are highly environmentally friendly, as they are non-toxic, harmless, low odor and zero VOC.

,In 2008, the company was honored with the title of "Large Green Business".

Green Business Certificate
The Board of Supervisors, County of San Mateo, State of California recognizes
Kelly-Moore Paint Company
for successfully meeting the criteria for certification by the San Mateo County Green Business Program. Therefore this certificate is issued this 25th day of November 2008 for outstanding efforts to reduce pollution and solid waste and conserve water, energy and other natural resources.

Expert of colors produces highly environmentally friendly products

Kelly-Moore passed SCS (Scientific Certification Systems) certification as early as 2000, and it was awarded GREENGUARD, the highest honor of the system in 2007. Kelly-Moore provides a wide range of colors, and more than 3,300 colors can be created by mixing available colors. The color saturation is quite high and the coating is bright in color, neasy to fade and highly washable.

Certificate of Achievement
Kelly-Moore Paints
Enviro-Cote and Acry-Pac Paints and Primers
SCS Indoor Advantage™ Gold
Indoor Air Quality Certified
SCS

Good/high quality

Kelly-Moore owns independent laboratory in North America and with the efforts of scientific and technical personnel engaging in different domains, the products are innovated constantly with perfect quality. Kelly-Moore sees its task to provide green and environmental friendly products and strives to meet the highest standard in the industry and it is honored with the title of "Large-scale Green Enterprise of the Year" in 2010 by Assembly, a California-based certification body.,

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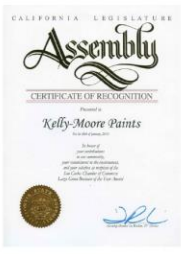


CALIFORNIA LEGISLATURE
Assembly
CERTIFICATE OF RECOGNITION
Kelly-Moore Paints

Throughout its history, Kelly-Moore sees its task to provide green and environmental friendly products and strives to meet the highest standard in the industry.

- As early as 1993, Kelly-Moore has passed ISO9001 quality management certification, and only a few manufacturers have received this honor in the coating industry of US.
- In 1990s, Kelly-Moore has become the first and only coating company which sets a coating recycling and reprocessing system to recycle its products for the production of "E-Coat".
- In 2016, Kelly-Moore has passed "carbon footprint" certification of SCS, which is a good evidence that it sticks to the principle of "environmental protection", and its environmental practices are not limited to the products; rather, the idea of environmental protection is embodied in all aspects of production and sales with an aim to take care of the Earth, our home.

VERIFIED CARBON FOOTPRINT

SCS SCIENTIFIC CERTIFICATION SYSTEMS
Setting the standard for sustainability™

KELLY-MOORE产品符合 complies with

- Low VOC / 低VOC
- Meet LEEDv4 Low emitting materials credit
  符合LEEDv4低排放材料标准
- Certified for Indoor Advantage Gold
  GREENGUARD
- Meet VOC limits for CARB
  加州空气资源委员会VOC限量标准
- National AIM 美国国家强制标准
- SCAQMD the most rigorously regional VOC limiting laws in US
  (Standards by South Coast Air Quality Management District)
- Green Seal GS 11 非盈利环境标志组织 “绿标签”GS11标准
  GS 11 Standards of “Green Seal”, a nonprofit environmental labeling organization.

室内空气质量金牌认证 GREENGUARD

SCS is a world-leading independent certification and verification system, and a trusted entity which is globally recognized and one of the international certification organizations.

GREENGUARD, meet the following standards:

- USGBC (United States Green Building Council) LEED standard
  EQ4.2 (Coating and Coat)
- Collaborative for High Performance Schools (CHPS)
- 01350 special environmental requirements of California

SCAQMDSouth Coast Air Quality Management District, California, US

- Founded in 1946, it is headquartered in California.
- The most rigorous VOC limiting standards in US
- By studying more than 75,000 industrial products and detecting the emission of chemical substances, more than 12000 volatile organic compounds released to the atmosphere are confirmed.
  by studying more than 75,000 industrial products
  and detecting the emission of chemical substances, more than 12000 volatile organic compounds released to the atmo
- Detection method: in accordance with the monitoring standards of USEPA (United States Environmental Protection
  but the limiting value is lower than the prescribed value of USEPA, TVOC content <50g/L （100g/L by USEPA）
- Evaluation methods:
  1) all the chemical compounds involved in the Photochemical Reaction in Atmosphere
  2) 7 days after the coating is applied to dynamic environmental chamber,
  the air is collected from the dynamic chamber for the detection of specific indicators.

部分底漆 ----室内空气质量金牌认证
Some of Primers ----Golden Certification for Indoor Air Quality

AcryPlexPVA	971	HighHide遮盖性佳 UniformsSurface表面一致性好 MinimizesJointBanding接缝效果佳 ExcellentEnamelHoldout面漆效果更佳 <2g/LVOC
AcryPlex Enamel Undercoater	973	HighHide遮盖性佳 ResistsTanninBleed抑制单宁析出 EasyToSand易打磨 ExcellentEnamelHoldout面漆效果更佳 <2g/LVOC
Kel-Bond Universal	295	100%Acrylic StainBlocking耐沾污 GreatOnNewandPreviouslyPaintedSurfaces新旧均可 PrimeMultipleSubstratesAtOneTime通用性佳
DTMAcrylic Primer/Finish	5725	WaterborneAcrylic水性丙烯酸 PrimerandFinishinOne底面合一 FlashRustResistant耐锈蚀 CorrosionResistant耐腐蚀

部分面漆 ----室内产品金牌认证

Kel-ProInterior LowVOC	705–Flat 710–Lowsheen 715–Eggshell 720–Satin 750–Semi-Gloss	StandardUseforWalls,Trim,andAccents GoodTouchUp易修补 LowOdor低气味 <2g/LVOC
Premium Professional	1005–Flat 1007–LowSheen 1010–Eggshell 1040–Satin 1050–Semi-Gloss	StandardUseforWalls,Trim,andAccents ExcellentCoverage涂布率高 GreatTouchUp易修补 EasyApplication易施工 LowOdor低气味 <2g/LVOC
Acry-Plex	1602–Flat 1610–Eggshell 1640–Satin 1650–Semi-Gloss	StandardUseforWalls,Trim,andAccents 100%Acrylic Self-Priming自成底漆 LowOdor低气味 <2g/LVOC

Thank You!

He Wanhao, Chengdu Jieshengtang Building Materials Co., Ltd.
Email：396311466@qq.com
Cell number: 136 8905 1305

KELLY-MOORE PAINTS

零VOC鼎立健康建筑

Presented by:[illegible]何 宛 桃,成都杰盛堂建材有限责任公司

公 司 简 介

- 美国**Kelly-Moore**涂料公司成立于1946年，有着70年多的悠久历史，是一家全球领先的民用、商用和工业用的涂料生产商。
- 在美国加州圣凯罗、西雅图、德州赫斯特、亚利桑那滕比均设有生产基地和大型仓库，在美国拥有171多个自营专卖店。
- 120多家独立经销商，其销售点遍布全美。总部位于加州圣凯罗（旧金山南湾），是美国最大的独立拥有（雇员所有制）的涂料公司。
- 到目前为止，已在10个国家及地区发展了13个国际代理商。

生产 - Made in USA Since 1946

- 最近在德克萨斯州的赫斯特（达拉斯外围）投入使用了当前最先进的涂料生产基地

- **8** 条完整的涂料生产线
- 可以独立大包装或者槽罐车交货
- 零**VOC**色浆配色

KELLY-MOORE PAINTS

原料讲究 绿色工艺

Kelly-Moore一直坚持选用全球最好的树脂及乳胶作为原材料，并采用环保的生产工艺及技术，保证原材料与涂料配方达成完美的匹配，70多年的专业生产经验和严格测试的配方，自然能够生产出优质的涂料。Kelly-Moore产品高度环保，产品无毒、无害、低气味，零VOC。2008年即被评为“大型绿色商业”企业。

Green Business Certificate
The Board of Supervisors, County of San Mateo, State of California recognizes
Kelly-Moore Paint Company

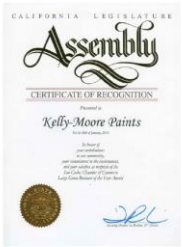
高度环保，色彩专家

Kelly-Moore涂料早于2000年就已通过了美国科学认证体系SCS的认证，并于2007取得了该体系最高认证——”室内空气质量金牌认证“，Kelly-Moore涂料色彩丰富齐全，可调配超过3300种颜色，颜色饱和度高，色泽鲜活，不易褪色、耐擦洗性强。

Certificate of Achievement
Kelly-Moore Paints
Enviro-Cote and Acry-Plex Paints and Primers
SCS Indoor Advantage™ Gold
Indoor Air Quality Certified
SCS

质量上乘，服务高效

Kelly-Moore在北美拥有独立的实验室，不同领域的科技人员确保产品不断创新并拥有完美品质。公司始终以绿色环保为己任、以行业最高标准来要求自己，2010年被加州司法Assembly认证机构评定为“年度大型绿色企业”。



CALIFORNIA LEGISLATURE
Assembly
CERTIFICATE OF RECOGNITION
Kelly-Moore Paints

Kelly-Moore涂料发展至今，公司始终以绿色环保为己任、以行业高标准来要求自己，

- 早在1993年就已经通过ISO9001质量管理认证，在当时美国涂料生产行业中，只有为数不多的生产商能获此殊荣。
- 在90年代，Kelly-Moore就已经成为第一个也是唯一一个涂料公司，设立涂料回收再加工体系，回收其产品，制造“E-Coat”涂料产品。
- 2016年公司通过SCS的“碳足迹”认证，体现出自始至终的坚持产品环保理念，不光于产品本身，更是在生产、销售各个环节精心呵护地球家园环境。

VERIFIED CARBON FOOTPRINT

SCS SCIENTIFIC CERTIFICATION SYSTEMS
Setting the standard for sustainability™

KELLY-MOORE产品符合

- Low VOC / 低VOC
- Meet LEEDv4 Low emitting materials credit
  符合LEEDv4低排放材料标准
- Certified for Indoor Advantage Gold
  室内空气质量金牌认证
- Meet VOC limits for CARB
  加州空气资源委员会VOC限量标准
- National AIM 美国国家强制标准
- SCAQMD 美国国内最严格的地区性VOC限定法规（南海岸空气品质管理局的标准）
- Green Seal GS 11　非盈利环境标志组织 “绿标签”GS11标准

室内空气质量金牌认证

SCS科学认证体系是全球领先的独立认证和验证体系及最早获得认可的国际认证机构，是全球认可的标准制定的可信实体。

室内空气质量金牌认证符合以下标准:

- USGBC（美国绿色建筑委员会） LEED标准EQ4.2(涂料和涂层)
- 高能效学校协作联盟(CHPS)
- 加州01350特殊环境要求

SCAQMD 美国加州南海岸空气管理局

- 成立于1976年，总部位于加利福尼亚
- 为美国最严格的VOC限定标准
- 通过对75000多种不同行业的产品进行化学物质排放检测研究，能够确认释放到空气中的12000多种挥发性有机化合物
- 检测方式：参照美国环境保护署USEPA监测标准，但限值低于USEPA规定，TVOC含量<50g/L （环境保护署为100g/L）
- 评测方法：
  1）所有参与大气光化学反应的化合物
  2）在动态环境舱涂刷涂料7天后，取动态舱内空气，进行规定指标检测

部分底漆 ----室内空气质量金牌认证

AcryPlexPVA	971	HighHide遮盖性佳 UniformsSurface表面一致性好 MinimizesJointBanding接缝效果佳 ExcellentEnamelHoldout面漆效果更佳 <2g/LVOC
AcryPlex Enamel Undercoater	973	HighHide遮盖性佳 ResistsTanninBleed抑制单宁析出 EasyToSand易打磨 ExcellentEnamelHoldout面漆效果更佳 <2g/LVOC
Kel-Bond Universal	295	100%Acrylic StainBlocking耐沾污 GreatOnNewandPreviouslyPaintedSurfaces新旧均可 PrimeMultipleSubstratesAtOneTime通用性佳
DTMAcrylic Primer/Finish	5725	WaterborneAcrylic水性丙烯酸 PrimerandFinishinOne底面合一 FlashRustResistant耐锈蚀 CorrosionResistant耐腐蚀

部分面漆 ----室内产品金牌认证

Kel-ProInterior LowVOC	705–Flat 710–Lowsheen 715–Eggshell 720–Satin 750–Semi-Gloss	StandardUseforWalls,Trim,andAccents GoodTouchUp易修补 LowOdor低气味 <2g/LVOC
Premium Professional	1005–Flat 1007–LowSheen 1010–Eggshell 1040–Satin 1050–Semi-Gloss	StandardUseforWalls,Trim,andAccents ExcellentCoverage涂布率高 GreatTouchUp易修补 EasyApplication易施工 LowOdor低气味 <2g/LVOC
Acry-Plex	1602–Flat 1610–Eggshell 1640–Satin 1650–Semi-Gloss	StandardUseforWalls,Trim,andAccents 100%Acrylic Self-Priming自成底漆 LowOdor低气味 <2g/LVOC

照明控制在可持续及健康建筑环境中的实践
Lighting Control’s Contribution to Create A Sustainable & Healthy Building Environment

Lutron GL Electronics (Shanghai) Co. Ltd.

About Lutron - 50 years of experience in innovation

1961
Joe Spira, founder of the company, invented the first commercial solid-state dimmer in the world.

Today
- Consentrate on smart light control and comprehensive light control system for automatic curtain.
- Provide more than 17000 products to the whole world.
- Sold and promoted in more than 80 nations in the world
- Its products and applications are adopted in residence, hotels, office buildings, retail stores, public facilities and other commercial and civil domains.

Lutron (Greater China)
- Founded in 1998,
- Lutron devotes itself to promotion and application of smart and ecological advanced light control products in China
- Successful cases: Shanghai Tower, Capital Museum, China's banking sector, Park Hyatt Shanghai and so on.

Global Headquarters of Lutron Electronics Coopersburg, Pennsylvania

Standards for Building Energy Consumption, Sustainability and Healthy Environment in US

- Energy Standard for Buildings
  - ANSI/ASHRAE/IES Standard 90.1-2019 - Energy Standard for Buildings Except Low-Rise Residential Buildings (by ASHRAE)
  - International Energy Conservation Code 2018 (IECC by ICC)
  - California Title 24 - Building Energy Efficiency Standards for Residential and Nonresidential Buildings – 2016 (by CEC)
- Sustainability Standard for Building
  - Leadership in Energy and Environmental Design (LEED V4 by USGBC)
  - ASHRAE 189.1-2017, IgCC 2018 (by ASHRAE, ICC)
- Standards on Healthy Building Environment
  - WELL V1 (by WELL)
  - FITWEL V2.1 (by CfAD)

Construction - great energy consumer

The building consumes large amount of resources throughout its full life circle

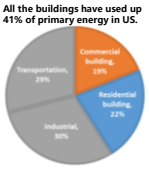
Steel	Cement	Urban construction land	Municipal water	Energy
1/3	60%~70%	1/3	1/3	40%~50%

In 2015, the energy consumed by buildings accounted for 20% of national energy consumption

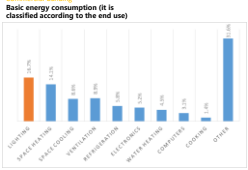
Data Sources:
"Research Report on Building Energy Consumption in China (2017)" by China Association of Building Energy Efficiency

Building lighting - the easiest way to consume energy - reducing target

All the buildings have used up 41% of primary energy in US.



Commercial building
Basic energy consumption (it is classified according to the end use)



Data Sources:
美国能源部EIA Annual Energy Outlook 2015

LEED Rating System

LEED v4 Rating Catalogue

8 major rating categories
- 选址与交通（Location & Transportation，LT）
- 可持续场址（Sustainable Sites，SS）
- 用水效率（Water Efficiency，WE）
- 能源与大气（Energy & Atmosphere，EA）
- 材料与资源（Materials & Resources，MR）
- 室内环境质量（Indoor Environmental Quality，EQ）
- 创新（Innovation，IN）
- 地域优先（Regional Priority，RP）

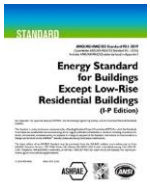
2 types of rating items
- 必须项（Prerequisties）
- 得分（Credits）

LEED V4 BD+C:NC – 照明相关内容

Credit	Description	Points	Illumination control	Lighting (electric curtain)
IP c1	综合过程 Integrative Process	1	√	√
能源与大气 Energy & Atmosphere				
EA p1	基本调试和电能监测 Fundamental Commissioning & Verification		√	√
EA p2	最低能源绩效 Minimum Energy Performance		√	√
EA c1	增强调试 Enhanced Commissioning	6	√	√
EA c2	优化能源绩效 Optimize Energy Performance	18	√	√
EA c3	高级电能计量 Advanced Energy Metering	1	√	√
EA c4	需求响应 Demand Response	2	√	
材料与资源 Materials & Resources				
MR c3	Publication and optimization of analysis on construction products - Sourcing of Raw Materials	2		
MR c4	Publication and optimization of analysis on construction products - Material Ingredients	2		
室内环境质量 Indoor Environmental Quality				
EQ c2	低逸散材料 Low-Emitting Materials	3		√
EQ c4	室内空气质量评估 Indoor Air Quality Assessment	2		√
EQ c6	室内照明 Interior Lighting	2	√	
EQ c7	自然采光 Daylight	3		√
EQ c8	优质视野 Quality View	1		√
创新 Innovation				
IN c1	创新 Innovation	5	√	√
IN c2	LEED AP	1	√	√
RP c1	地域优先 Regional Priority(not applicable to China)	4	√	√

ASHRAE90.1-2016 compulsory requirement on light control

- Auto Off (Vacancy Sensor, time table)
- Space control (dimmer, switch and Vacancy Sensor connected to a timetable)
- Outdoor light control (daylight sensor, timetable)
- Stairwell light control (Vacancy Sensor, adjustable photorectifier)
- Light control in the parking lot (Vacancy Sensor, daylight sensor, timetable and adjustable photorectifier)
- Automatic control in the daylight area (daylight sensor, adjustable photorectifier)
- Dimming control (dimmer, preset scene control and Binary Switch)
- Functional tests for controls
- Socket control



LEED Summary

Light control technology helps the project to pass LEED v4 building design and construction: get 53 points (US) or 49 points (China) in the generating construction rating, and the total points is 110.

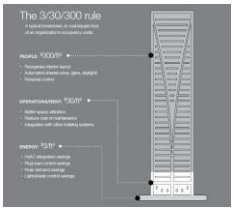
- EA p1 basic debugging (compulsory)
- EA p2 minimum energy performance (compulsory)
- EA c1 enhanced debugging (6 points)
- EA c2 energy efficiency optimization (18 points)
- EA c3 high rank energy measurement (1)
- EA c4 demand response (2 points)
- MR c3 – source of raw material (2 points)
- MR c4 – material composition (2 points)
- EQ c2 material with low release (3 points)
- EQ c4 evaluation of indoor air quality (2 points)
- EQ c6 indoor lighting (2 points)
- EQ c7 daylight (3 points)
- EQ c8 good vision (1 point)
- IN c1 innovation (5 points)
- IN c2 LEED AP (1 point)
- RP regional priority (4 points)(not applicable to China)
- IP c1 integration process (1 point)

WELL Healthy architecture

- The WELL Building Standard is a performance based standard that focuses exclusively on human health and wellness as it relates to the built environment.
- It provides a model of architectural design and construction, and integrate health features into the building environment.
- WELL building standard is based on the authoritative results in the industry, and has been reviewed by medical experts, designers and peopel engaging in the building industry.

Why WELL? People is the most important element.

- Since we spend about 90% of our time indoors, the buildings where we live, work, learn and relax have a profound effect on our well-being.
- According to a rough data, the energy consumption per square foot is usually about $3, the rent is about $30, and the manpower cost is $300
- Labor constitutes the highest cost, and obviously labor is the most likely way to reduce costs.
- WELL building standards is concerned about labor, and it brings employee health, wellbeing and productivity added value that can be quantified
- effective lighting, daylight and light control make contribution to employee health, wellbeing and productivity.



WELL building standard-related institution

DELOS
INNOVATE WELL
https://delos.com

INTERNATIONAL WELL BUILDING INSTITUTE™
http://www.wellcertified.com

GREEN BUILDING CERTIFICATION INSTITUTE
http://www.gbci.org

WELL Project Type


Newly built and existing buildings


Newly built and existing rooms


Core and shell

Composition of WELL Building Standard

WELL V1 seven major concepts


Air


Light


Nutrition


Mood


Fitness


Water


Comfort

- Precondition:
  Basics for a healthy building environment. It is necessary to satisfy all the conditions to get the certification.
- Optimization condition:
  It is necessary to get Certification Gold and Platinum, including available technology, strategy, scheme and design.

Standard version	Certification level	Precondition	Optimization condition
WELL v1.0	Silver	All	-
	Gold	All	40%
	Platinum	All	80%

Construction Type	Precondition	Optimization condition	Total
Newly built and existing buildings	41	59	100
Newly built and existing rooms	36	62	98
Core and shell	26	28	54

Concept of Light in WELL building standard

Goal:

- Provide a lighting guidance, which is designed to reduce interference of lighting to people' s physical circadian rhythm, improve work efficiency and create corresponding visual acuity. The building is required to provide special lighting system which improves acuity, enhance user experience and promote sleep.

Strategy:

- Design of circadian rhythm
- Daylight
- Glare Control
- Color quality
- Task-based lighting range
- Visual lighting design


LIGHT

Features of Light Concepts in WELL building standard

Feature	precondition(P)/optimization condition(O)
53: Visual lighting design	Precondition(P)
54: Day and night lighting design	Precondition(P)
55: Lamp Glare Control	Precondition(P)
56: Daylight Glare Control	Precondition(P)
57: Low-Glare Workstation	Optimization condition(O)
58: Color quality	optimization condition(O)
59: Surface design	Optimization condition(O)
60: Automatic sunshade and dimming control	Optimization condition(O)
61: Easement of light	Optimization condition(O)
62: Daylight Modeling	Optimization condition(O)
63: Windows for natural lighting	Optimization condition(O)

Features of Light Concepts in WELL building standard

Light characteristic	Newly built and existing buildings	Newly built and existing rooms	Core and shell
53 Visual lighting design			
1. Visual Acuity for focus	P	P	-
2. luminance management strategy	P	P	-
54 Day and night lighting design			
1. light intensity	P	P	-
55 Lamp Glare Control			
1. Luminaire Shielding	P	P	-
2. Glare Minimization	P	P	P
56 Solar Glare Control			
1. View Window Shading	P	P	O
2. daylight management	P	P	O
57 Low glare station design			
1. Glare Avoidance	O	O	-
58 Color quality			
1. color rendering index	O	O	-

Light characteristic	Newly built and existing buildings	Newly built and existing rooms	Core and shell
59 Surface design			
1. Working & Learning Area Surface Reflectivity	O	O	-
60 Automated Shading and Dimming			
1. Automated Sunlight Controls	O	O	-
2. Responsive Light Controls	O	O	-
61 Right to Light			
1. Lease depth	O	O	O
2. Window Access	O	O	-
62 Daylight Modeling			
1. Healthy Sunlight Exposure	O	O	O
63 Daylight Fenestration			
1. Window Sizes for Working and Learning Spaces	O	O	O
2. Window Transmittance in Working and Learning Areas	O	O	O
3. Uniform Color Transmittance	O	O	O

Other WELL features that light control products can contribute

Concept domains	Feature	Purpose	Requirements	Light control
Air	4.Reduce VOC (precondition)	Maximally reduces the influence of organic compounds in Material on the indoor air quality.	Satisfy VOC emission regulation	GREENGUARD Gold curtain material
Comfort	74. Outdoor noise invasion (precondition)	Reduce noise interference by limiting outdoor noise invasion	Average Sound Pressure Level of outdoor noise invasion shall not exceed 50dBA	Manual or automatic curtain
Spirit	88. Biophilia I – its nature can be determined (precondition) 97. Material transparency (optimization condition)	Create the innate connection between human and nature	Provide the occupant with outdoor view and natural impression	The curtain helps preserve the field of vision

Sustainability in built environment LEED and WELL

LEED

- Pioneering in energy and environmental design, it is a green building evaluation system widely adopted in the world.
- LEED focuses on "Environmental Sustainability" –

The Earth

WELL

- An evaluation system for building performance, which is used to assess the influence of built environment on human health and wellness.
- WELL is focused on "Human Sustainability" –

Human

Light control and curtain affect LEED and WELL

LEED
Light control can help a project achieve up to 53 points out of a possible 110 for LEED v4 New construction.

WELL
Light control and curtain can help a project achieve up to 15 features out of a possible 105 for WELL v1 New and Existing Buildings.

Key differences in WELL v2

- WELL v2 pilot
- A General WELLstandard is applicable to all the project types.
- 10 concepts rather than the exsiting 7 concepts.
- Flexible optimization condition
- Based on the points, it is similar with LEED
- More complete preconditions

Lighting features in WELL v2 pilot

Feature	precondition/optimization condition
L01: Lighting and education	Precondition
L02: Visual lighting design	precondition
L03: Day and night lighting design	Optimization condition
L04: Glare Control	Optimization condition
L05: Improve Day light	Optimization condition
L06: visual balance	Optimization condition
L07: Electric light quality	Optimization condition
L08: Occupant Control of the Lighting Environement	Optimization condition

Summary

- WELL building standard provides a design and construction model which integrate health features with design and construction model. WELL V1 building standard is focused on 7 major concept areas, one of which is light.
- Control of lighting and daylight contrite 15 ones among all the 105 features.
  - Automatic window sunshade
  - Dimming
  - Adjustable white
  - Circadian rhythm-based lighting
  - Glare Control
- LEED is more about the planet while WELL is more about the people. These two standards have 15% of overlapped contents.

Questions?

LUTRON

http://www.lutron.com/zh-TW/Pages/default.aspx
Free hotline for customer support
China: 4000-463-600
Hong Kong: 800-908-673
Macao: 0800-401
Taiwan: 00801-137-851

照明控制在可持续及健康建筑环境中的实践
Lighting Control's Contribution to Creat A Sustainable & Healthy Building Environment

路川金域电子贸易（上海）有限公司

关于路创 – 50年的创新历程

1961
公司创始人Joe Spira发明了世界首个商用固态调光器

今天
- 专注于智能照明控制及自动窗帘的全面光管理系统
- 面向全球提供17000多种产品
- 在全世界八十多个国家销售及推广
- 产品，应用涵盖住宅、酒店、办公楼、零售店、公共设施等诸多商用及民用领域

路创大中华区
- 成立于1998年
- 致力于智能、环保型的高级照明控制产品在中国的推广与应用
- 成功案例：上海中心大厦、首都博物馆、中国银行、上海柏悦酒店等

美国路创电子公司全球总部
美国宾夕法尼亚州库珀斯堡市

美国建筑能耗、可持续性及健康环境相关标准

- 建筑能耗相关标准
  - ANSI/ASHRAE/IES Standard 90.1-2019 - Energy Standard for Buildings Except Low-Rise Residential Buildings (by ASHRAE)
  - International Energy Conservation Code 2018 (IECC by ICC)
  - California Title 24 - Building Energy Efficiency Standards for Residential and Nonresidential Buildings – 2016 (by CEC)
- 建筑可持续性标准
  - Leadership in Energy and Environmental Design (LEED V4 by USGBC)
  - ASHRAE 189.1-2017, IgCC 2018 (by ASHRAE, ICC)
- 建筑健康环境标准
  - WELL V1 (by WELL)
  - FITWEL V2.1 (by CfAD)

建筑 – 能耗大户

建筑在其全生命周期中消耗了大量资源

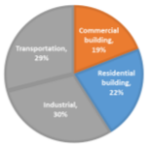
1/3	60%~70%	1/3	1/3	40%~50%
钢材	水泥	城市建设用地	城市用水	能源

2015年全国建筑能耗占全国能源消费总量的20%

数据来源：
中国建筑节能协会《中国建筑能耗研究报告（2017）》

建筑照明 – 最容易实现的降能耗目标

所有建筑消耗了美国41%的一次能源



商业建筑
基本能源消耗（按最终用途分类）

数据来源：
美国能源部EIA Annual Energy Outlook 2015

LEED评级体系

LEED v4评分目录

8大评分类别
- 选址与交通 （Location & Transportation，LT）
- 可持续场址 （Sustainable Sites，SS）
- 用水效率 （Water Efficiency，WE）
- 能源与大气 （Energy & Atmosphere，EA）
- 材料与资源 （Materials & Resources，MR）
- 室内环境质量 （Indoor Environmental Quality，EQ）
- 创新 （Innovation，IN）
- 地域优先 （Regional Priority，RP）

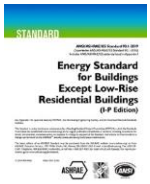
2种评分项
- 必须项 （Prerequisities）
- 得分 （Credits）

LEED V4 BD+C:NC – 照明相关内容

Credit	描述	Points	照明控制	采光（电动照明）
IP c1	整合过程 Integrative Process	1	√	√
能源与大气 Energy & Atmosphere				
EA p1	基本调试和校验 Fundamental Commissioning & Verification		√	√
EA p2	最低能源表现 Minimum Energy Performance		√	√
EA c1	增强调试 Enhanced Commissioning	6	√	√
EA c2	能源效率优化 Optimize Energy Performance	18	√	√
EA c3	高阶能源计量 Advanced Energy Metering	1	√	√
EA c4	需求响应 Demand Response	2	√	
材料与资源 Materials & Resources				
MR c3	建筑产品的分析公示和优化-原材料的来源 Sourcing of Raw Materials	2		
MR c4	建筑产品的分析公示和优化-材料成分 Material Ingredients	2		
室内环境质量 Indoor Environmental Quality				
EQ c2	低逸散材料 Low-Emitting Materials	3		√
EQ c4	室内空气质量评估 Indoor Air Quality Assessment	2		√
EQ c6	室内照明 Interior Lighting	2	√	
EQ c7	自然采光 Daylight	3		√
EQ c8	优良视野 Quality View	1		√
创新 Innovation				
IN c1	创新 Innovation	5	√	√
IN c2	LEED AP	1	√	√
RP c1	地域优先 Regional Priority（	4	√	√
合计		53（北美）/49（中国）		

ASHRAE90.1-2016 照明控制强制要求

- 自动关闭 (占空传感器，时间表)
- 空间控制 (与时间表相连的调光器、开关，占空传感器)
- 室外照明控制 (日光传感器，时间表)
- 楼梯井照明控制 (占空传感器，可调光整流器)
- 停车场照明控制 (占空传感器，日光传感器，时间表，可调光整流器)
- 自动日光区域控制 (日光传感器，可调光整流器)
- 照明减小控制 (调光器，预设置场景控制，二值开关)
- 控制的功能性测试
- 插座控制



LEED总结

照明控制技术可以帮助项目获得LEED v4建筑设计与施工：新建建筑总评分110分中的53分（美国）或49分（中国）

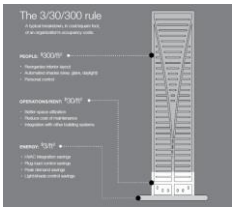
- EA p1 基本调试 (必须项)
- EA p2 最低能源表现 (必须项)
- EA c1 增强调试 (6分)
- EA c2 能源效率优化 (18分)
- EA c3 高阶能源计量 (1分)
- EA c4 需求响应 (2分)
- MR c3 – 原材料的来源 (2分)
- MR c4 – 材料成分 (2分)
- EQ c2 低释放材料 (3分)
- EQ c4 室内空气质量评估 (2分)
- EQ c6 室内照明 (2分)
- EQ c7 日光 (3分)
- EQ c8 优良视野 (1分)
- IN c1 创新 (5分)
- IN c2 LEED AP (1分)
- RP 地域优先评分 (4分)（中国不适用）
- IP c1整合过程 (1分)

WELL健康建筑

- 一个建筑性能的评价体系，它评估建筑环境对人类健康和福祉的影响
- 提供一个建筑设计和施工的模型，将健康特性集成到建筑环境中
- WELL建筑标准遵循了行业的相关权威研究成果，并经过了医学专家、设计师以及建筑行业从业者的专业审查

为什么WELL？人是最重要的

- 我们有90%的时间在室内，我们生活、工作、学习、娱乐在其中的建筑深深地影响到了我们的健康、福祉
- 一个粗略的数据，通常每平方英尺上的能耗大约是$3，租金约$30，人力上的花费则是$300
- 人工是最大的成本支出，显然人工也是最可能降低成本的途径
- WELL建筑标准关注于人，遵循这一标准将很可能带来在员工健康、福祉以及生产力上可量化的附加价值
- 有效的照明、日光以及照明控制解决方案在员工健康、福祉以及生产力这三个方面都有贡献



WELL建筑标准的相关机构

DELOS
INNOVATE WELL
https://delos.com

INTERNATIONAL WELL BUILDING INSTITUTE™
http://www.wellcertified.com

GREEN BUILDING CERTIFICATION INSTITUTE
http://www.gbci.org

WELL项目类型


新建和既有建筑


新建和既有室内


核心与外壳

WELL建筑标准的构成

WELL V1七大概念


空气


光


营养


精神


健身


水


舒适

Well建筑标准的构成

- 先决条件：
  建筑环境中的健康的基础。是获得认证必须满足的全部条件
- 优化条件：
  取得金级和铂金级认证所需，包括可选的技术、策略、方案和设计

标准版本	认证级别	先决条件	优化条件
WELL v1.0	银级	全部	-
	金级	全部	40%
	铂金级	全部	80%

建筑类型	先决条件	优化条件	总计
新建和既有建筑	41	59	100
新建和既有室内	36	62	98
核心与外壳	26	28	54

WELL建筑标准中的光概念

目标：

- 提供照明指南，旨在尽量减少对身体昼夜节律系统的干扰、提高工作效率并提供相应的视敏度。要求配备旨在提高敏锐度、改善住户体验并促进睡眠的特殊照明系统

策略：

- 昼夜节律设计
- 日光
- 眩光控制
- 色彩质量
- 基于任务的照明幅度
- 视觉照明设计


LIGHT

WELL建筑标准中的光概念相关特性

特性	先决条件（P）/优化条件（O）
53: 视觉照明设计	先决条件（P）
54: 昼夜照明设计	先决条件（P）
55: 电灯炫光控制	先决条件（P）
56: 日光眩光控制	先决条件（P）
57: 低眩光工位设计	优化条件（O）
58: 色彩质量	优化条件（O）
59: 表面设计	优化条件（O）
60: 自动化遮阳和调光控制	优化条件（O）
61: 采光权	优化条件（O）
62: 日光建模	优化条件（O）
63: 自然采光开窗	优化条件（O）

WELL建筑标准中的光概念相关特性

光特性	新建和既有建筑	新建和既有室内	核心与外壳
53 视觉照明设计			
1. 焦点视敏度	P	P	-
2. 亮度管理策略	P	P	-
54 昼夜照明设计			
1. 工作区显视素光强度	P	P	-
55 电灯炫光控制			
1. 灯具遮光	P	P	-
2. 眩光最弱化	P	P	P
56 日光眩光控制			
1. 观景窗遮阳	P	P	O
2. 日光管理	P	P	O
57 低眩光工位设计			
1. 眩光规避	O	O	-
58 色彩质量			
1. 显色指数	O	O	-

光特性	新建和既有建筑	新建和既有室内	核心与外壳
59 表面设计			
1. 工作与学习区表面反射率	O	O	-
60 自动化遮阳和调光控制			
1. 阳光自动化控制	O	O	-
2. 回应性灯光控制	O	O	-
61 采光权			
1. 租赁深度	O	O	O
2. 靠近窗户	O	O	-
62 日光建模			
1. 健康阳光洞察	O	O	O
63 自然采光开窗			
1. 工作与学习空间的窗户尺寸	O	O	O
2. 工作与学习区域的窗户透光率	O	O	O
3. 均匀颜色透光率	O	O	O

照明控制产品可以贡献的其他WELL特性

概念领域	特性	目的	要求	照明控制
空气	4. 减少VOC (先决条件)	最大限度减少建筑材料中的有机化合物对室内空气质量的影响	满足VOC排放规定	GREENGUARD Gold窗帘幕布材质
舒适	74. 室外噪音侵入 (先决条件)	通过限制室外噪音侵入，减少噪声干扰	来自室外噪音侵入的平均声压等级不得超过50dBA	手动或自动窗帘
精神	88. 亲生命性 I – 可定性 (先决条件) 97. 材料透明度 (优化条件)	孕育人与自然的先天联系	提供住户外界视野以及自然的印象	窗帘能够保留视野

建筑环境中的可持续性： LEED与WELL

LEED
- 能源与环境设计的先锋，是一个世界上广泛采用的绿色建筑评价体系
- LEED关注“环境可持续性” –

地球

WELL
- 一个考核建筑性能的评价体系，评估建筑环境对人类健康与福祉的影响
- WELL关注“人类可持续性” –

人类

照明控制和窗帘影响LEED以及WELL

LEED
照明控制和窗帘可以帮助项目获得LEED v4新建建筑中总共110得分点中的53点

WELL
照明控制和窗帘可以帮助项目获得WELL v1新建与既有建筑中总共105个特性中的15个

WELL v2中的关键变化点

- WELL v2试点中
- 一个统一的WELL标准针对所有项目类型
- 10个概念，而不是现有的7个
- 灵活的优化条件
- 基于分值，类似于LEED
- 更完善的先决条件

WELL v2试点中的照明特性

特性	先决条件/优化条件
L01: 光照与教育	先决条件
L02: 视觉照明设计	先决条件
L03: 昼夜照明设计	优化条件
L04: 眩光控制	优化条件
L05: 增强日光光照	优化条件
L06: 视觉平衡	优化条件
L07: 电灯光质量	优化条件
L08: 照明环境住户控制	优化条件

总结

- WELL建筑标准提供了一个集成健康特性到建筑环境里的设计与施工模型。WELL v1建筑标准关注7大概念领域，光是其中之一
- 对电灯照明和日光的控制可以贡献105个特性中的15个，例如:
  - 自动窗户遮阳
  - 调光
  - 可调白
  - 昼夜节律照明
  - 眩光控制
- LEED关注地球，WELL关注人类。这两个标准有15%左右的重叠

Questions?

http://www.lutron.com/zh-TW/Pages/default.aspx
客户支持免费热线
中国: 4000-463-600
香港: 800-908-673
澳门: 0800-401
台湾: 00801-137-851

United Technologies
Climate | Controls | Security

Healthy Building Consultation

Nov 13, 2019

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EMSI Company Profile

- Independent third-party consultation
- Wholly-owned subsidiaries of UTC Climate, Controls & Security (CCS)
- The leading company in the trade of green and healthy architecture consulting
- More than 450 undergoing and finished projects.
- Preferred Partners of quality brand and company

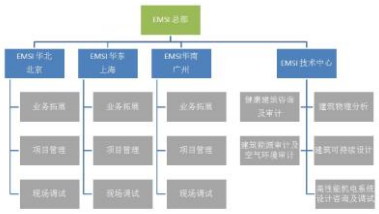
We are the first green building consultancy in China, and we have completed 260 LEED certification projects.

We are one of earliest consultancy which provide WELL healthy architecture consultation and we have completed 20 Well Certifications.

Our services cover the full life circle of construction.

Assist the implementation of healthy building functions

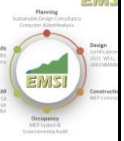
EMSI organizational structure



EMSI Service

Lower cost of investment, higher return on investment and better built environment

- Provide services covering full life circle for greater building performance and sustainability
- Project management, calculation and analysis, on-the-spot engineering test and evaluation, check and acceptance



Habitable — Create a green, comfortable and healthy built environment

Valuable — Lower operating costs and promote sustainable gains

Reliable — Improve brand value

Design stage	Construction stage	Operational stage	Group level
Sustainable design	Green building certification consultation	Energy & Indoor Environmental Audit Service	Group asset analysis
High performance design	Debugging consultation covering all the domains of construction	Re-debugging consultation	Due Diligence
	Environmental impact	Consultation on energy saving reconstruction	Group Standard for Electromechanical Systems
		Consultation on Improvement of Indoor Environment	Sustainability Report

Green building certification

Certification as Recognition, Quality Assurance, & Ensuring Performance Returns

- LEED – *Leading In China*
- WELL – *Leading in China*
- CGBL
- Green Mark
- BREEAM

LEED green building certification system is the most advanced one directing at the design, construction and operation of green building.

WELL construction standard is an evaluation system for measuring and monitoring the building environment and evaluating the influence of building characteristics on the human health.

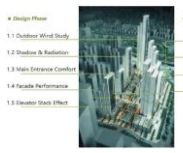
Green building certificate issued by Ministry of Housing and Urban-Rural Development is designed to help the certified project to create an energy-saving, comfortable, healthy and environmentally friendly working environment that reaches the leading level in China.

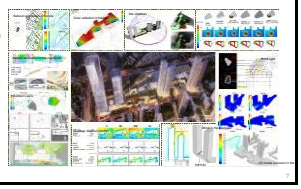
Sustainable design

Develop a sustainable design solution based on the performance

- Evaluation, comparison and optimization
- Performance calibration and verification
- Integrated performance simulation and analysis
- Practical experience in applying technical analysis to green building

- Generalization of performance trends and (re)definition of issues
- Establish a viable target range - performance assessment and verification
- propose possible interventions, optimization and improvement measures
- Ensure the analysis mode of comprehensive performance - professional coordination and systematic matching





High-performance energy-saving reconstruction and design

Consultation on high-performance and performance-guaranteed energy-saving reconstruction

Energy saving transformation design for high efficiency cold site and machine room

System integration

The full year dynamic simulation allowing for all the above factors

- Component efficiency
- Interaction between components
- Control optimization

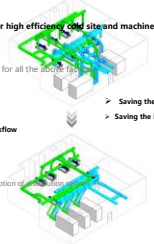
Building Information Modeling & Digital Workflow

Can be implemented accurately and specifically:

- Piping systems
- Selection of distribution system
- Reduction of costs arising from cost consumption of [illegible]

Performance guarantee

Provide measurement and verification

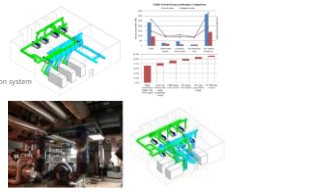


- Saving the energy throughout the system: 56.8%
- Saving the investment throughout the system: 9.3%

Field service

Consultancy Services targeting realization of site performances, and corporate management

- Electromechanical Systems Audit (Design and Operations)
- Inspection and debugging
- ASHRAE Level-2/3 Energy Audit/ASHRAE Level-2/3
- Energy Audit on group asset portfolio
- Due Diligence and audit for electromechanical and fire protection system
- High-performance transformation design
- Sustainability design/improvement consultation
- Indoor environmental quality
- Improvement of group standard



Transformation design for high energy efficiency cold site and machine room

EMSI's contribution to WELL Certification

- Dr. Yi Chun Huang, General Manager of EMSI China, is an advisor to the WELL standard
- Data comes from IWBI website

https://legacy-wellonline.wellcertified.com/users/yi-chun-huang

EMSI's contribution to WELL certification



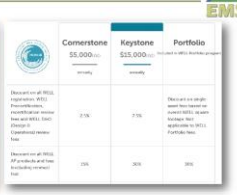
Yi Chun Huang
General Manager, Environmental Market...
Shanghai Shi, China
WELL AP | WELL FACULTY | WELL ADVISORY

Guan Zhang
Technical Engineer, EMSI
Shanghai Shi, China
WELL AP | WELL FACULTY

Xiaolin Wei
General Manager of North China, EMSI
Beijing Shi, China
WELL AP | WELL FACULTY

- EMSI has three WELL lecturers
- Personnel information is available on https://legacy-wellonline.wellcertified.com/people

Earliest members of IWBI



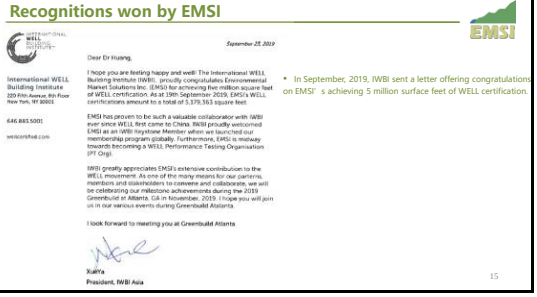
- EMSI is one of the earliest key-stone members of IWBI
- 7.5% discount on registration charges, certification fee and pre-certification audit
- https://www.wellcertified.com/membership

Performance detection institution authorized by IWBI for WELL certification

- EMSI is the first authorized WELL performance detection institution in China
- http://www.emsi-green.com/cn/service/20190313200917524 7

Recognitions won by EMSI

Recognitions won by EMSI



- In September, 2019, IWBI sent a letter offering congratulations on EMSI's achieving 5 million surface feet of WELL certification.

Recognitions won by EMSI IWBI 嘉奖全球推动健康建筑运动杰出专业人士

Tuesday, November 13, 2018

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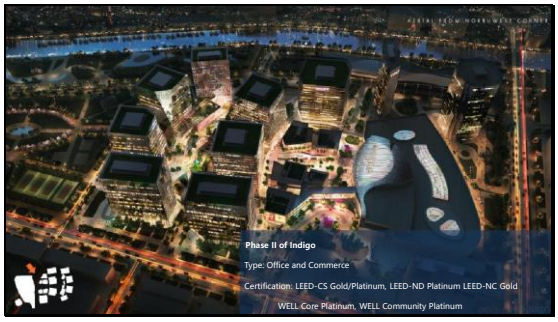
- Brief introduction of EMSI
- Project Case
  - Experience and challenges we are faced to obtain WELL Compliance certification for residence
  - Experience and challenges we are faced to obtain WELL Compliance certification for office with refined decoration
  - Experience and challenges we are faced to obtain WELL Core certification
- Our advantages
- Q&A



Strategy adopted to get higher WELL score – Air

Room for improvement

design

① Adequate fresh air volume (ASHRAE 2013)

② Set up an independent air-exhaust system

Purchase

① High efficiency filtration of fresh air (F8 or higher)

② Ultraviolet germicidal lamp / photohydrogen equipment

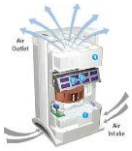
③ Air quality monitoring system (display, sensor)

④ Environmentally friendly cleaning products

Policy

① No smoking

② Control air quality during construction



Strategy adopted to get higher WELL score – water

Room for improvement

Purchase

① Filtration system for drinking water (NSF certification)

② Wash basin of suitable size

Operation

① Advocate drinking water and healthy diet

② Set up a drinking water point every 30 meters

② Perform real-time monitoring of mold and condensate

Policy

① Regular water quality monitoring

Strategy adopted to get higher WELL score – nutrition

Room for improvement

Purchase

① Snacks with complete nutritional information and labels

② Low sugar drinks

Operation

① Encourage people to eat more fruits and vegetables

Strategy adopted to get higher WELL score – illumination

Room for improvement

Design

① Enhance natural lighting in the room

② Ensure visual comfort

Purchase

① Suitable lamps (CRI, Ra, R9)

Operation

① Provide auxiliary lighting to individuals (table lamp)

② Provide lighting-related education materials

Strategy adopted to get higher WELL score – exercise

Room for improvement

Design

① Create more space for sports

Purchase

① Ergonomic furniture

Operation

① Body-building and restorative exercise activity

Policy

① Encourage people to climb stairs

② Free fitness support

③ policies to encourage exercises

Strategy adopted to get higher WELL score – comfort

Room for improvement

Design

① Temperature zone is controllable

② Install a wet film to ensure temperature and humidity in the room

Operation

① Provide blanket / personal fan

② Continuous post-stay survey and improvement measures

Policy

① Thermal comfort and post-check-in survey

② Freedom to dress

Strategy adopted to get higher WELL score – sound

Room for improvement

Design

① Optimize the acoustic treatment of the project

Purchase

① Door and wall materials with excellent sound absorption

Strategy adopted to get higher WELL score – material

Room for improvement

Purchase

① Environmentally friendly building / decoration materials purchased from famous brands

Operation

① Implement plans for waste management

Policy

① Encourage disclosing relevant material and information to the public

Strategy adopted to get higher WELL score – Mood

Room for improvement

Design

① Add restorative space (transform the functions of vacant room/space)

Operation

① Take measures to enhance people' s mental health

② Body-building and restorative exercise

Policy

① Mental Health Consultation

② Encourage people to take a nap

③ Encourage and assist smoking cessation and other related activities

Strategy adopted to get higher WELL score – community

Room for improvement

Design

① Add a maternity room

② Barrier Free Design

③ Integrated design

Operation

① Continuous post-stay survey and improvement measures

② There is at least one washroom on each floor with a baby bed and providing female products

③ First aid plans and facilities

Policy

① Thermal comfort and post-check-in survey

② Encourage people to participate in community/charity activities and volunteer activities

③ enhance flexibility of work schedule

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- Project Case
  - Experience and challenges we are faced to obtain WELL Compliance certification for residence
  - Experience and challenges we are faced to obtain WELL Compliance certification for office with refined decoration
  - Experience and challenges we are faced to obtain WELL Core certification
- Our advantages
- Q&A

Advantages of EMSI certification

- There are only 23 projects which have passed WELL certification for entire building in China
- EMSI completed 19 of them with a certified area of 5,130,463 square feet
- EMSI completed the first office building award WELL certification Gold
- EMSI completed the first building award both LEED and WELL Certification Gold
- EMSI completed the first residential building award WELL certification Gold
- EMSI is handling the largest project with refined decoration applied to the entire building, and the project is awarded Certification Pla
- EMSI have obtained 5 WELL-CS certification, in which two projects award LEED and WELL certification Gold .
- WELL-CS certified area completed by EMSI reaches 2,339,912 surface feet
- WELL-certified area which is completed by EMSI and registered in Beijing is 10,909,656 surface feet.

The data comes from IWBI
https://account.wellcertified.com/directories/projects

Table of Contents

- Brief introduction of EMSI
- Project Case
  - Experience and challenges we are faced to obtain WELL Compliance certification for residence
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  - Experience and challenges we are faced to obtain WELL Core certification
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健康建筑咨询服务

Nov 13, 2019

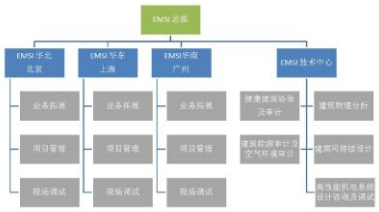
目录

- EMSI简介
- 项目案例
  - WELL住宅认证的经验与挑战
  - WELL精装办公认证的经验与挑战
  - WELL Core认证的经验与挑战
- 服务优势
- Q&A

EMSI 公司介绍

- 独立第三方咨询顾问
- 联合技术气候控制与安防(CCS)全资子公司
- 绿色与健康建筑咨询行业内最为领先
- 超过450个正在进行和已完成的项目
- 优质品牌和公司的首选合作伙伴
- 中国第一家绿色建筑咨询机构，完成超过260个LEED认证项目
- 中国最早进行WELL健康建筑认证的咨询机构，完成20个WELL认证项目
- 服务于建筑全生命周期
- 协助项目健康建筑性能实施

EMSI 组织架构



EMSI 服务

更低的投资成本, 更好的回报收益, 更佳的建筑环境

- 为更好的建筑性能和可持续性提供全生命周期的服务
- 项目管理，计算分析，现场工程测试评估，承接查验

宜居的
营造绿色舒适健康的建筑环境

有价值的
降低运营成本，驱动可持续收益

可靠的
提升品牌价值

设计阶段	施工阶段	运营阶段	集团层面
可持续设计	绿色建筑认证咨询	能源&室内环境审计服务	集团资产分析
高性能设计	建筑全专业调试咨询	再调试咨询	尽职调查
	环境影响	节能改造咨询	机电系统集团标准
		室内环境改善咨询服务	可持续性报告

绿色建筑认证

Certification as Recognition, Quality Assurance, & Ensuring Performance Returns

- LEED – *Leading in China*
- WELL – *Leading in China*
- CGBL
- Green Mark
- BREEAM

LEED 绿色建筑认证体系为指导绿色建筑设计、施工和运行过程最先进的认证体系。

WELL 建筑标准是一个用于计量,监控,楼宇环境,并且考量建筑特性对人体健康影响的评价体系.

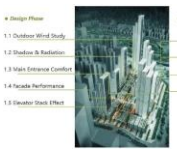
国家城乡建设部颁发的绿色建筑认证旨在帮助认证项目创造达到国内领先级别的节能、舒适、健康、环保的工作环境 。

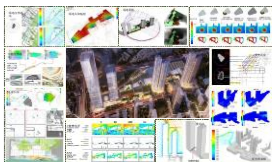
可持续设计

构造出以性能为基础的可持续设计解决方案

- 评估, 比较, 和优化
- 性能表现校准与验证
- 整合的性能模拟与分析
- 技术分析应用绿色建筑实践经验

- 总结性能表现趋势，（再）定义问题
- 建立可行的目标范围 ——性能评定与验证
- 建议可能的干预措施、优化与提升
- 确保综合表现的分析方式——专业的配合、系统的匹配





高性能节能改造设计

高性能以及性能保证的节能改造咨询服务

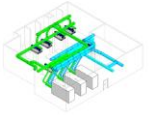
高效冷站机房节能改造设计

系统集成
考虑以下各种因素的全年动态模拟:
- 组件效率
- 组件间的相互影响
- 控制优化

建筑信息建模 & 数字化工作流程
可准确详细的实现:
- 管道系统
- 输配系统选型
- 输配能耗成本降低

性能保证
提供测量与验证

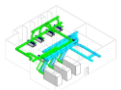
- 节省整个系统能耗: 56.0%
- 节省整个系统投资: 9.3%



现场服务

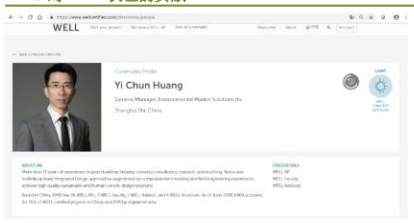
Consultancy Services targeting realization of site performances, and corporate management

- 机电系统审核 (设计和运营)
- 检验与调试
- ASHRAE Level-2/3 能源审计
- 集团资产组合能源审计
- 机电消防系统尽职调查审计
- 高性能改造设计
- 可持续性设计/改善咨询
- 室内环境质量
- 集团标准提升



高能效冷站机房改造设计

EMSI对WELL认证的贡献



- EMSI中国区总经理黄逸钧博士是WELL标准编写的顾问
- 资料来源于IWBI网站
https://legacy-wellonline.wellcertified.com/users/yi-chun-huang

EMSI对WELL认证的贡献

Yi Chun Huang
General Manager, Environmental Market...
Shanghai Shi, China

Guan Zhang
Technical Engineer, EMSI
Shanghai Shi, China

Xiaolin Wei
General Manager of North China, EMSI
Beijing Shi, China

- EMSI有三名WELL讲师
- 人员信息可在IWBI网站查询 https://legacy-wellonline.wellcertified.com/people

IWBI的首批会员

- EMSI是IWBI首批拱心石级会员
- 注册费、认证费、预认证审核费享受7.5%的优惠
- https://www.wellcertified.com/membership

IWBI授权的WELL认证性能检测机构

- EMSI是在中国第一个获得授权的WELL性能检测机构
- http://www.emsi-green.com/cn/service/201903132009175247

EMSI获得的认可

EMSI获得的认可

- 2019年9月，IWBI发来贺信，祝贺EMSI获得的认证面积超过五百万平方英尺

EMSI获得的认可 IWBI 嘉奖全球推动健康建筑运动杰出专业人士

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  - WELL Core认证的经验与挑战
- 服务优势
- Q&A

杭州远洋国际中心、乐堤港
类型：办公、商业
认证：LEED-CS金级
WELL-CS金级

鹏瑞深圳湾1号
类型：办公、酒店、公寓
认证：LEED-CS金级 WELL-CS金级

远洋天骄住宅：
全球首个WELL-MFR金级认证
已全部完成

远洋天骄商业：
WELL-CS 金级
已全部完成

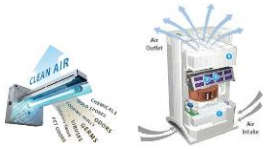
WELL 得分策略 – 空气

提升空间

设计
① 充足的新风量（ASHRAE 2013）
② 设置独立排风系统

采购
① 高效新风过滤（F8以上）
② 紫外线杀菌灯/光氢设备
③ 空气质量监测系统（显示屏、传感器）
④ 环保清洁产品

政策
① 禁烟
② 施工过程空气质量把控



WELL 得分策略 – 水

提升空间

采购
① 饮用水过滤系统（NSF认证）
② 适宜尺寸的洗手盆

运营
① 推广饮用水及健康饮食
② 每30米布置一个饮用水点
③ 实时监测霉菌及冷凝水泄漏

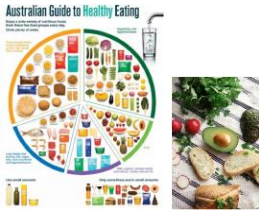
政策
① 定期进行水质监测

WELL 得分策略 – 营养

提升空间

采购
① 具有完整营养信息成分标签的零食
② 少糖饮料

运营
① 鼓励水果及蔬菜的摄取



WELL 得分策略 – 照明

提升空间

设计
① 提升室内自然采光
② 保证视觉平衡

采购
① 适宜的灯具（CRI,Ra,R9）

运营
① 提供个人辅助照明（台灯）
② 提供照明教育材料

WELL 得分策略 – 运动

提升空间

设计
① 增设运动空间

采购
① 符合人体工程学的家具

运营
① 开展健身运动及辅助个人恢复活动

政策
① 鼓励使用楼梯
② 提供免费健身活动支持
③ 激励运动政策

WELL 得分策略 – 热舒适

提升空间

设计
① 温度分区可控
② 增设湿膜，保证室内温湿度

运营
① 提供毛毯/个人风扇
② 持续性入住调查及改善措施

政策
① 热舒适及入住后调查
② 自由着装政策

WELL 得分策略 – 声

提升空间

设计
① 优化项目隔音措施

采购
① 采用吸音效果优良的门、墙材料

WELL 得分策略 – 材料

提升空间

采购
① 品牌、环保的建筑/装修材料

运营
① 实施废弃物管理计划

政策
① 鼓励材料信息透明公开

WELL 得分策略 – 精神

提升空间

设计

① 增设适用于恢复的空间（空置房间/空间进行功能转换）

运营

① 宣扬心理健康及解压措施

② 开展健身运动及辅助个人恢复活动

政策

① 心理健康咨询

② 鼓励小睡政策

③ 提供协助戒烟相关活动

WELL 得分策略 – 社区

提升空间

设计

① 增设母婴室

② 无障碍化设计

③ 整合设计

运营

① 持续性入住调查及改善措施

② 每层至少有一个洗手间放置有婴儿尿布台并提供女性用品

③ 急救计划及设施

政策

① 热舒适及入住后调查

② 鼓励参加社区/慈善志愿活动

③ 提升上班灵活度

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EMSI的认证优势

- 中国获得WELL整栋楼认证的项目共23个
- EMSI完成了其中的**19**个，获得认证面积为**5,130,463**平方英尺
- EMSI完成了全国第一栋**WELL**办公楼金级认证
- EMSI完成了全国第一栋**LEED**和**WELL**双金级认证
- EMSI完成了全球第一栋WELL住宅的金级认证
- EMSI正在进行全国最大的整楼全精装项目白金级认证项目
- EMSI完成**5**个WELL-CS认证，且有两个项目是**LEED**和**WELL**双金级认证
- EMSI完成的WELL CS认证面积为**2,339,912**平方英尺
- EMSI在北京市WELL办公楼的注册面积为**10,909,656**平方英尺

数据来自IWBI网站
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