Health, Wellbeing and Productivity: Statistics

**COST TO EMPLOYERS**

**£30 billion**
Poor mental health costs UK employers £30 billion a year¹

**AIR QUALITY**

**8-11%**
Better air quality can improve employee productivity by 8-11%²

**THERMAL COMFORT**

**4 and 6%**
Employees experience 4% reduction in performance at cooler temperatures & 6% at warmer temperatures³

**LIGHTING**

**46 minutes**
Office workers with windows sleep an average of 46 minutes more per night¹

**NOISE**

**66%**
Office workers’ performances drops by 66% when exposed to distracting noise³

**INTERIOR LAYOUT**

**69%**
Over two thirds of Generation Y workers report an increase in productivity from “funky” office fit-outs⁴
2019 ULI ASIA PACIFIC SUMMIT
2019年城市土地学会亚太区峰会
Connect with the World of Real Estate
与全球地产界链接
APACSUMMIT.ULI.ORG
The Business Case for Healthy Buildings

Billy Grayson, ULI
February 2018
Healthy Buildings – Not in the Eye of the Beholder

Healthy Buildings – 健康建筑的客观分析

Raymond Rufino
The Net Group

比利·格雷森
Billy Grayson

贾琳
Lin Jia

Bob Pratt
Tishman Speyer

Raefer Wallis
GIGA
INVEST IN PEOPLE FOR RETURN ON INVESTMENT

Source: Knoll Workplace Research "What's Good for People, Moving from Wellness to Well Being". Kate Lister 2004 Studies include those conducted by organizations including Harvard Business Review and World Economic Forum and the American Journal of Health Promotion. Image courtesy of World Green Building Counsel Report "Health, Wellbeing & Productivity in Offices"
“101% improvement in cognitive scores in a low VOC, well-ventilated office”

“Occupants of green-certified, high-performing buildings saw **26 percent higher cognitive function scores**, slept better and reported fewer health symptoms compared to those in similarly high-performing buildings that were not green-certified.”

Harvard, The impact of working in a green certified building on cognitive function and health, 2017
“7-12% increase in call center productivity for employees with a view of nature”

“97% increase in sales-generated leads and 101% increase in leads per call in new green, healthy office.”
**Tenants**: attract talent, reduce absenteeism, reduce turnover, increase productivity.

**Designers**: more interesting projects, more revenue, market differentiation.

**Service providers**: a new standard to certify to, provide technology for, and help clients navigate.

**Society**: healthier workers reduce the social cost of health care, and indirectly lead to more tax revenue (live longer, work longer, act as productive members of society.)
OK, so where is the business case for developers?

More rent? Lower vacancy rates?
Higher development yield?
Economic incentives for a certified building? (density, tax abatement, faster permitting?)

Can I even achieve the certification?
How much will it cost?
Will the market reward me for my investment?

• Right now, the answer to all of these questions is “maybe”, “not sure”, and “we hope so”…
• Market differentiation
• Avoid future obsolescence
• Attract tenants (who pay more rent and are more likely to renew)
• New sources of capital?
TISHMAN SPEYER

WELLNESS
Invest in People for Return on Investment

- Productive Salaries & Benefits: 86.3%
- Energy: 0.8%
- Rent: 8.9%
- Absenteeism: 2.7%
- Presenteeism: 1.3%
- Unproductive Salaries & Benefits

Sources: US Department of Labor 2010, BLS 2011; BDMA 2010
• Effective wellness programs result in an average of: 28% reduction in sick days, 26% reduction in health care costs and 30% reduction in workers’ compensation and disability management claims
  o 2012 ALFAC WorkForces Report

• The output of a Fortune 150 Company increases by $2,000 for every $1,000 reduction in healthcare costs
EIGHT FEATURES THAT MAKE HEALTHIER AND GREENER OFFICES

1. INDOOR AIR QUALITY & VENTILATION
Healthy offices have low concentrations of CO₂, VOCs, and other compounds and other pollutants, as well as high ventilation rates.

2. THERMAL COMFORT
Healthy offices have comfortable temperatures and adequate humidity.

3. DAYLIGHTING & LIGHTING
Healthy offices have access to daylight and use of natural lighting.

4. NOISE & ACoustics
Healthy offices are quieter and have less noise pollution.

5. INTERIOR LAYOUT & ACTIVE DESIGN
Healthy offices have a variety of workspaces, including central work areas, quiet areas, and outdoor spaces, promoting active movement within the office.

6. BIOPHILIA & VIEWS
Healthy offices have a variety of plants, artwork, and views that are welcoming, calming, and natural.

7. LOOK & FEEL
Healthy offices have a high level of visual appeal, comfort, and productivity.

8. LOCATION & ACCESS TO AMENITIES
Healthy offices have access to public transport, bike storage, parking, and amenities, as well as a range of healthful food choices.

EMPLOYEE ENGAGEMENT
Healthy offices have features that are objectively better and that result in a higher level of engagement.

66% of staff report being very satisfied with their office environment.

46 minutes more sleep for employees in offices near windows.

101% occupancy when offices are designed with light.

7-12% improvement in productivity at one point in time at one workplace who staff have a sense of nature.
Indoor Air Quality and Ventilation – Healthy offices have low concentrations of CO₂, VOCs and higher ventilation rates

- 8-11% gains in productivity, as a result of increased outside air rates, dedicated delivery of fresh air and reduced levels of pollutants.

- People working in well-ventilated offices with low level of pollutants have 101% increase in cognitive function compared to those in offices with average levels of the exact same pollutants.

- In the US, poor air quality results in an estimated $150B of illness-related costs¹. Of that, $93B represents lost productivity from headaches, fatigue and irritation associated with sick building syndrome².

- Poor indoor air quality is associated with a 35% increase in absenteeism, and an average productivity loss of 100 hours per worker per year.
  - RESET AP Training v1.2
Tishman Speyer Supports Healthy Buildings

IAQ

- MERV Filtration
- Standard IAQ testing
- Comprehensive LEED IAQ testing
- IAQ sensor

Smoke Free

- TS should implement a smoke free building and site policy

Support Physical Activity

- Bike rooms and showers
- On site fitness centers
- Local walking amenity maps

Fitwel

- TS buildings certification ready
- Ability to collaborate/streamline tenant certification efforts

Healthy Foods

- Healthy catering guidelines for tenant events
- Healthy vending machines
- Farmers markets on site or highlighted nearby
Design is an art of thinking ahead and predicting possible futures.

设计之为艺术，便是超越眼下思维，窥测未来可能。

- Ellen Lupton, 鲁普顿著: Design is Storytelling, 设计即叙事
THE GENSLER ADVANTAGE

Gensler优势

Global Design Platform
全球设计平台

Creating a better world through the Power of Design
设计，创造美好的未来

Powerful Design & Creativity
强大的设计和创造力

Enriching the Human Experience
丰富人类体验

SHAPE THE FUTURE OF CITIES
LOCAL EXPERTISE WITH GLOBAL PERSPECTIVE

46 Locations

6,000+ Professionals Firm-wide

8 Offices in Asia

114 Countries We’ve Worked in

Abu Dhabi
Atlanta
Austin
Baltimore
Bangalore
Bangkok
Beijing
Birmingham
Bogotá
Boston
Charlotte
Chicago

Dallas
Denver
Detroit
Dubai
Hong Kong
Houston
La Crosse
Las Vegas
London
Los Angeles
Mexico City
Miami
Minneapolis
Morristown
Munich
New York
Newport
Beach
Oakland
Philadelphia
Phoenix
Portland
Raleigh
San Antonio
San Diego
San Francisco
San Jose
San José, CR
São Paulo
Seattle
Shanghai
Singapore
Sydney
Tampa
Tokyo
Toronto
Washington DC
30+
Research Grants Awarded Each Year
每年超过30多项研究成果

18%
of Annual Profits, Invested in Research
年利润18%用于科研
INCREASING RETURNS THROUGH SUSTAINABILITY

Gensler is a signatory to the Paris Pledge for Action. Gensler 签署了巴黎行动誓言。

83 million sq m of sustainable work
8千3百万平方米可持续项目

18 million sq m registered for LEED certification
1千8百万平方米已注册LEED认证

14 million sq m of LEED certified projects
1千4百万平方米已获得LEED认证

1.3 million tons of waste diverted from landfills
130万吨废物利用

1.2 billion gallons of water saved annually
节约用水12亿加仑

800+ USGBC certified projects
超过800个USGBC认证项目

1200+ USGBC accredited professionals
超过1200位USGBC认证专家
CASE IN POINT:

JOHNSON CONTROLS ASIA PACIFIC CORPORATE HQ

江森自控亚太总部
Does a healthy workplace improve the bottom line?

3.5x
Employees who reported that the air in their offices “always feels fresh” were 3.5 times more likely to report that their work environment is energizing.

89%
Employees who reported a company’s health benefits as significant to their choice of employer.

36%
Employees who reported having the necessary information to make actionable decisions about an employee health strategy.

AN ESTIMATED 65% OF A COMPANY’S HEALTH-RELATED COSTS CAN BE ATTRIBUTED TO ABSENTEEISM AND “PRESENTEEISM”—WELLNESS-FOCUSED WORKPLACE DESIGN CAN REDUCE BOTH.
The first building in China to receive all three top global energy efficiency awards.

JOHNSON CONTROLS
BUILDING WELLNESS
Daylight and Views
Access to Usable Outdoor Space
Socially Connected Spaces
BUILDING WELL-BEING - Daylight and Views
Unitized Curtain Wall Components

- 1500mm tall vented 3mm thick plate aluminum panel with 90mm thick aluminum insulated back pan
- 208mm deep X 90mm wide thermally broken aluminum window mullions
- 700mm tall code required electronically controlled smoke exhaust window with vision glass IGU, air space and insulated shadow box
- 2200mm tall low iron glass vision unit with grey silicone sealant and gaskets

Unitized Curtain Wall Design

- 2200mm tall vision unit is located vertically to achieve daylighting goals
- double insulated glass units are top and bottom captured, structural silicone glazing (SSG) connections at the vertical panel to panel joints
- white plate aluminum metal panel with insulation at the spandrel condition achieves high levels of thermal performance
- aluminum panel reduces Window to Wall Ratio (WWR) to 47%
- aluminum edge profiles at vertical panel to panel joints provide sharp, clean terminations
- smoke exhaust window glass is fritted with a white high opacity dot pattern which serves as a gradual visual transition from the white metal panel above to the non-fritted vision unit below
BUILDING WELL-BEING - Socially Connected Spaces

WORKPLACE NEIGHBORHOODS
Stacking Diagram Around Atrium
The World's Standard for Data Quality in Real-Estate

Measurably Healthy Buildings™
The World’s Standard for Data Quality in Real-Estate
Can buildings become filters for the air we breathe?

Gensler Firm wide Research Project FY2016
Research Partners: Pureliving, Qlear, RESET
The right air at the right time and place.
Belt fans vs. an IoT based fan wall:

Allowing for:
- greater control of air speed and delivery
- increase in filtration
- increase in air flow
- reduction in energy
- reduction of noise.
- more data to the BMS
- VOC over-limit alert.
- Occupant ‘walk-out’.
- Building Owner: Seconds to identify source
- Building Owner: <20 Minute resolution time
- Result: Increase in trust