



Measuring Health & Wellness in Your Building

*John Mlade, Director
Sustainable & Healthy Environments*

As of 2018, 1-in-4 dollars under professional management in the U.S. was devoted to sustainable, responsible or impact investing strategies. **At \$12 trillion, the sustainable investing field has more than tripled since 2012.**

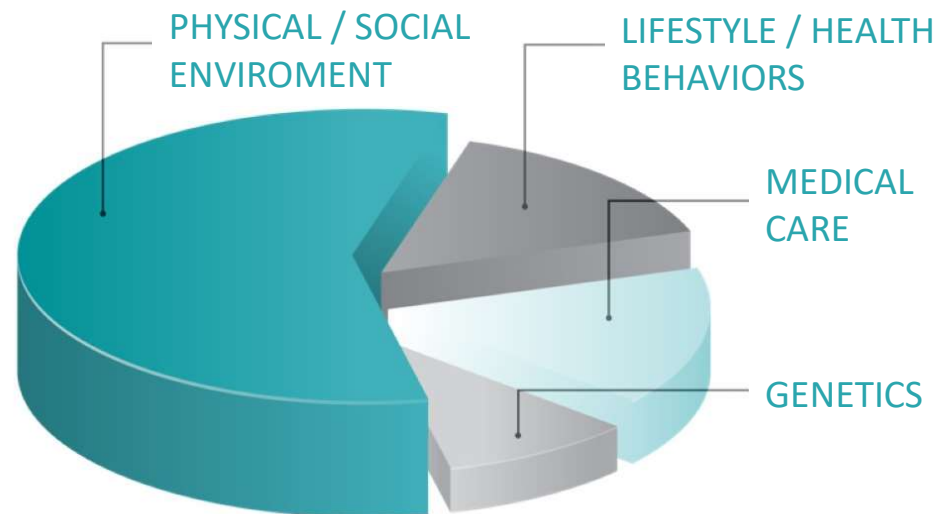
- Morgan Stanley



**WELLNESS:
IS THE NEXT
TRILLION DOLLAR
INDUSTRY**

MCKINSEY & COMPANY

WHAT FACTORS INFLUENCE HEALTH & WELL-BEING?





LAUNCHED IN 2014

**4,835 PROJECTS; 679 MILLION SF
IN 64 COUNTRIES**



COMPLIMENTARY TO LEED

**ADDRESSES BUILDING DESIGN,
CONSTRUCTION, OPERATIONS,
AND ORGANIZATIONAL POLICY**

50,000 T.I. = \$18,000 *

*** INCLUDES ON-SITE
PERFORMANCE VERIFICATION**

Compliance Options	Points Required	Sustainable Strategies Menu																							
		Health	Energy					Stormwater					Landscapes			Green Roofs	Water	Transportation	Solid Waste	Work Force	Wildlife				
Compliance Paths		Starting Points Number of Optional Points Required New Construction / Substantial Rehab / Moderate Rehab	1.1 Achieve WELL Building Standard																						
Options Without Certification			2.7 Designed to earn the Energy Star																						
All Options Available			0	100	50	25	40	30	20	30	40	50	10	20	10	20	40	5	5	5	5	5	5	5	5
Options With Certification			2.2 Exceed Energy Code (5%)																						
LEED Platinum			95	5	0	0	40	NA	NA	NA	NA	NA	NA	10	20	40	5	5	5	5	5	NA	NA	NA	NA
LEED Gold			90	10	0	0	40	NA	NA	NA	NA	50	10	20	10	20	40	5	5	5	5	5	5	NA	5
LEED Silver			80	20	0	0	40	NA	NA	NA	40	50	10	20	10	20	40	5	5	5	5	5	5	5	5
Green Globes 4-Globes			90	10	0	0	40	NA	NA	NA	NA	50	10	20	10	20	40	5	5	5	5	5	5	NA	5
Green Globes 3-Globes			80	20	0	0	40	NA	NA	NA	40	50	10	20	10	20	40	5	5	5	5	5	5	NA	5
Green Globes 2-Globes			70	30	0	0	40	NA	NA	NA	40	50	10	20	10	20	40	5	5	5	5	5	5	NA	5
Living Building Challenge			100	0	0	0	40	NA	NA	NA	NA	NA	NA	10	20	40	5	5	5	5	5	NA	NA	NA	NA
Living Building Challenge Petal			90	10	0	0	40	NA	20	30	40	50	NA	NA	10	20	40	5	5	5	5	5	NA	5	5
Enterprise Green Communities*			80	20	0	0	40	NA	NA	NA	NA	10	20	10	20	40	5	5	5	5	5	5	5	5	5
PassiveHouse			70	30	0	0	40	NA	NA	NA	NA	10	20	10	20	40	5	5	5	5	5	5	5	5	5

Planned Development Projects (PD) - New Construction	100 points required
TIF Funded Development Projects (TIF) - New Construction*	100 points required
DPD Housing, Multi-family (>5 units) Projects (DPD-H MF) - New Construction	100 points required
PD, TIF, DPD-H MF and Class L - Renovation Projects*	
Moderate Renovation Projects	25 points required
Substantial Renovation Projects	50 points required

*Does not apply to TIF assistance of less than \$1M (including but not limited to TIF-NIP, TIF Purchase Rehab, Streamlined TIF and SBIF programs)

Compliance Options	Points Required					
Compliance Paths	Starting Points	Number of Optional Points Required New Construction / Substantial Rehab / Moderate Rehab	1.1 Achieve WELL Building Standard			
Options Without Certification						
All Options Available				0	100 / 50 / 25	40
Options With Certification						
LEED Platinum				95	5 / 0 / 0	40
LEED Gold				90	10 / 0 / 0	40
LEED Silver				80	20 / 0 / 0	40
Green Globes 4-Globes				90	10 / 0 / 0	40
Green Globes 3-Globes				80	20 / 0 / 0	40
Green Globes 2-Globes				70	30 / 0 / 0	40
Living Building Challenge				100	0 / 0 / 0	40
Living Building Challenge Petal				90	10 / 0 / 0	40
Enterprise Green Communities*				80	20 / 0 / 0	40
PassiveHouse				70	30 / 0 / 0	40



PILOT 2014, LAUNCHED IN 2016

1,000+ PROJECTS IN 35
COUNTRIES

DEVELOPED BY CDC AND GSA

ORIGINALLY DESIGNED FOR
EXISTING OFFICE BUILDINGS

EASY TO USE

50,000 T.I. = \$6,000



LAUNCHED IN 2013

BIG MARKET IN CHINA

**FOCUS ON AIR QUALITY
(now also materials)**

**COMPLIMENTRY TO ALL OTHER
SYSTEMS**

ON-GOING DATA COLLECTION

50,000 T.I. = \$5,000

GLOBAL REAL ESTATE SUSTAINABILITY BENCHMARK

LAUNCHED IN 2009

900+ ENTITIES

80,000+ ASSETS

\$5.3 TRILLION

NEW MANDATORY HEALTH &
WELLNESS MODULE



GRESB HEALTH & WELL-BEING INDICATORS

- Provide companies, funds, and investors with a tool to understand and compare health promotion practices and performance.
- Module had robust participation (>71%) and is now part of the GRESB assessment.



G R E S B

Participation





PRODUCTIVE
SALARIES &
BENEFITS
86.3%

ENERGY
0.8%

RENT
8.9%

ABSENTEEISM
2.7%

PRESENTEEISM
1.3%

UNPRODUCTIVE
SALARY AND
BENEFITS



“Globally, we are seeing investors apply environmental and social performance, not only to be a good corporate citizen but as **an indicator of delivering long-term risk adjusted returns.**

“Well-being is one of the driving factors for creating the best precincts where people want to work, and **our tenants see wellness as a way to attract and retain the very best people.**”

Josh McHutchison
Managing Director,
Lendlease Investment Management Australia





**INVEST IN
PEOPLE
FOR A RETURN ON
INVESTMENT**

CASE STUDY I:

RESET CORE AND SHELL

- *VOC over-limit alert from tenant renovation*
- *Occupant 'walk-out'*
- *Building owner: 90 seconds to identify the source*
- *Building owner: < 20 minute resolution time*
- *Result: increase in trust*





CASE STUDY II:

STANDARD BUILDING

- *VOC emissions from tenant renovations (retail)*
- *Contamination of entire office tower*
- *No monitors. No notifications.*
- *Next day occupant 'walk-out' for entire building*
- *Full building flush-out*
- *1-5 days for occupants to return*
- *One year to rebuild trust*

[Home](#) / [Sensors](#)

The best indoor air quality monitors: Identify the pollutants that can compromise your health and comfort

Whether you suffer from allergies or asthma or just want to optimize your indoor environment, these devices will give you insight into the air you're breathing.



CHICAGO ENERGY BENCHMARKING



115 S LaSalle St, Chicago, IL 60603

Neighborhood

Property Type

2015 2016 2017

Property Information

Energy Use

Energy Performance Metrics

ENERGY STAR Score

MORE INFO



1 100

Site Energy Use Intensity

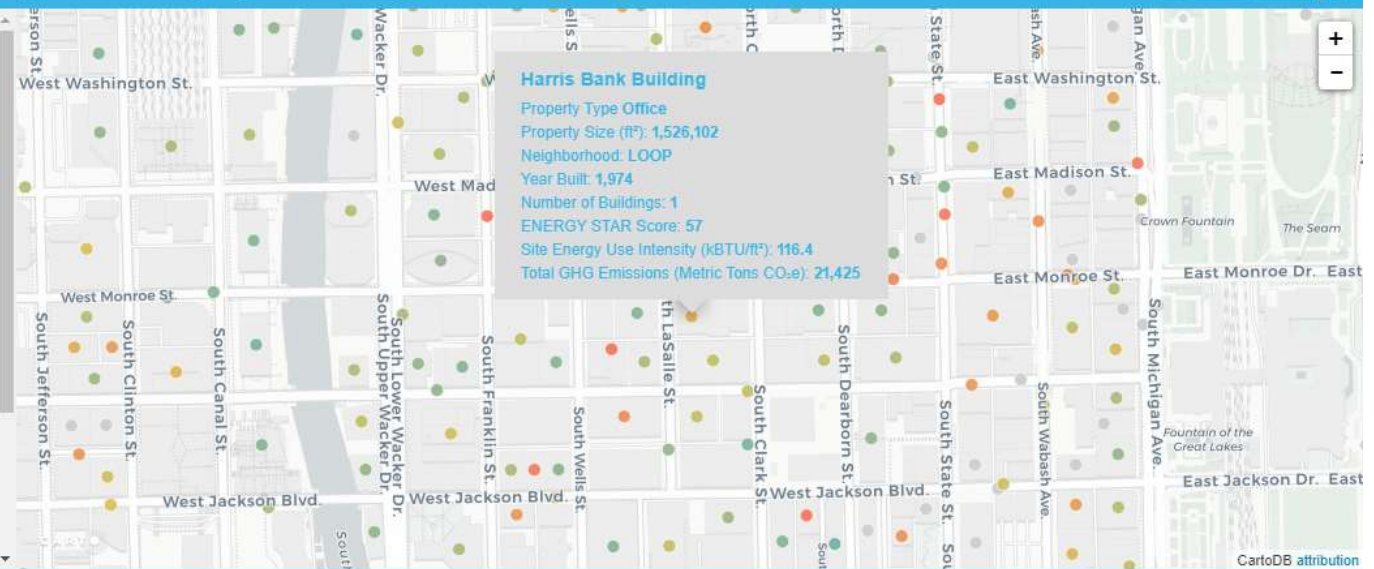
MORE INFO



0.2 5,637.7

Source Energy Use Intensity

MORE INFO



BUILDING COMPARISON

ENERGY ST...

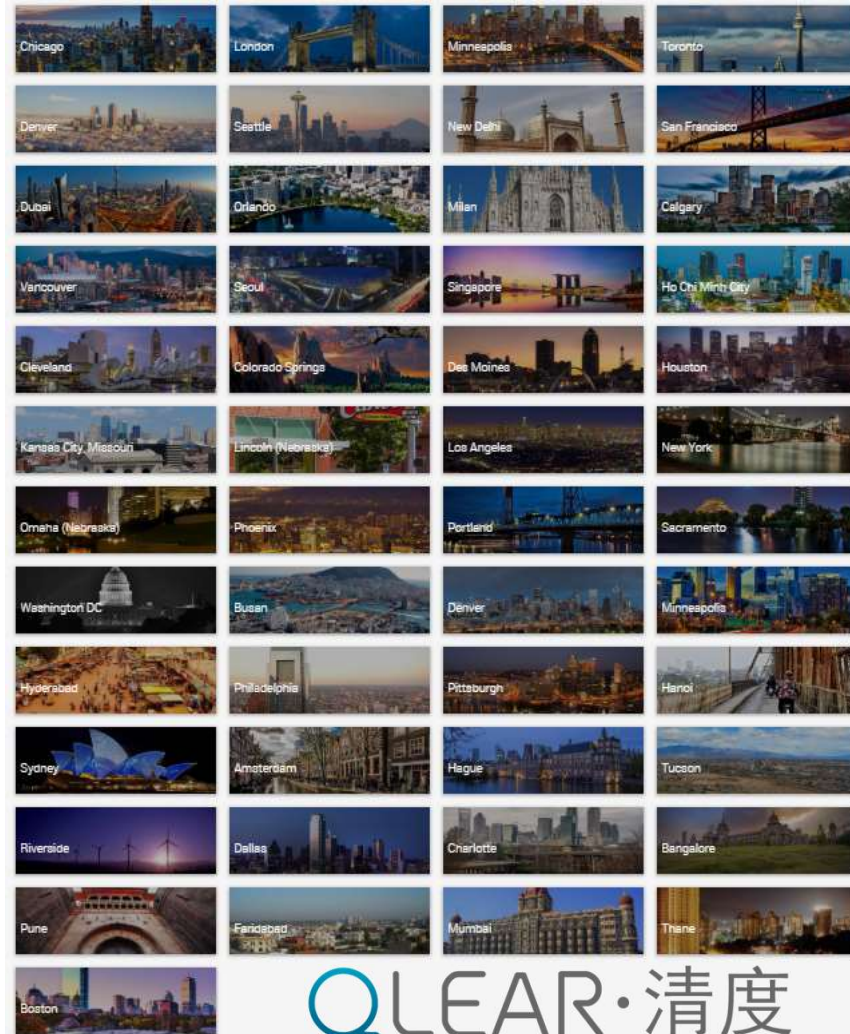
AVERAGES BASED ON RANGES SET IN FILTERS

AVERAGE

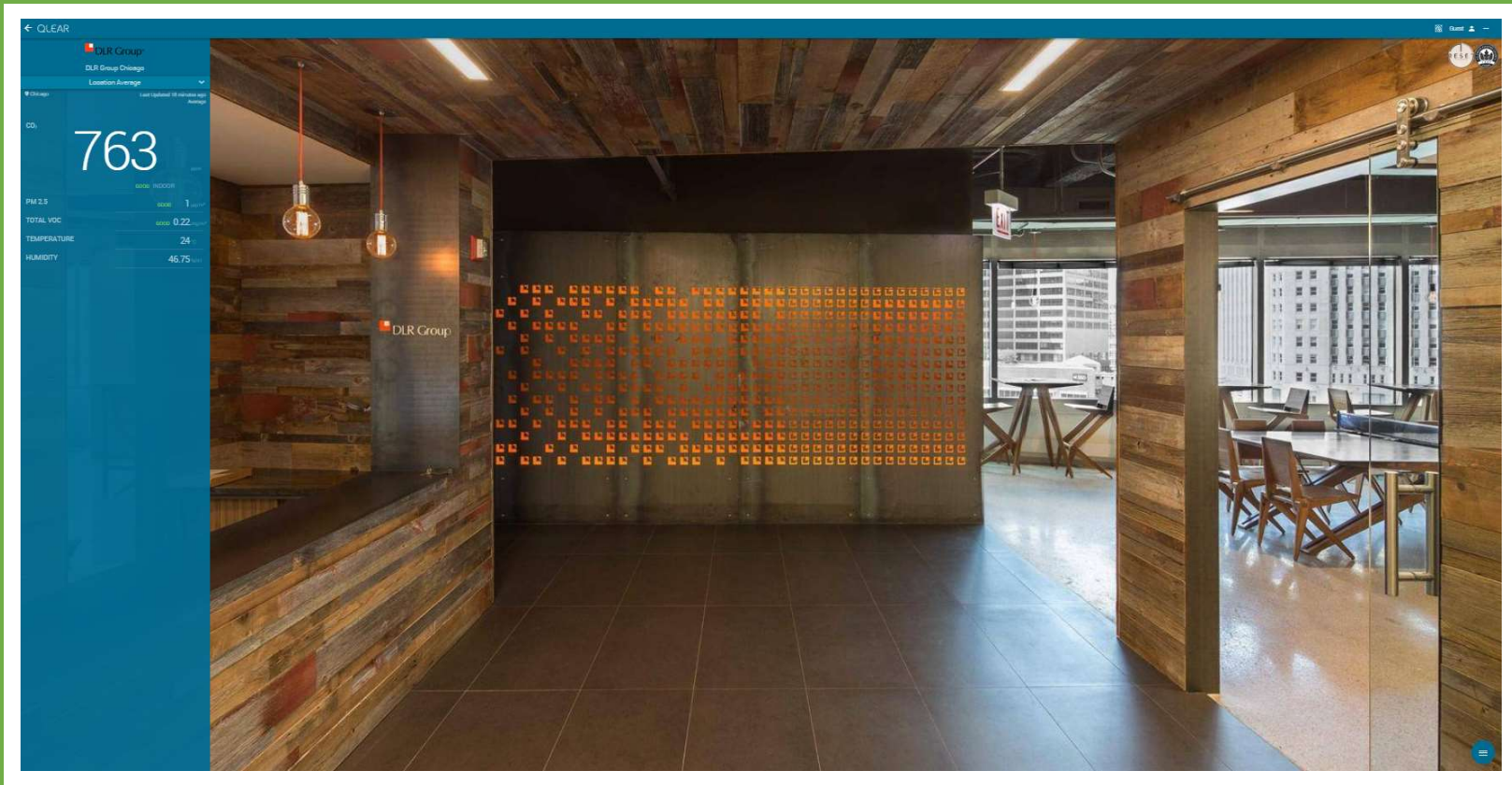
65



Global Cities with Air Quality Reporting Posted on Qlear.



QLEAR·清度



Home > News

July 27, 2018 07:00 AM

Top workplace rooftops

The latest in workplace amenities: Outdoor workspaces, rooftop food trucks and beer gardens in the sky

CHRIS LA MORTE

TWEET SHARE SHARE EMAIL

PRINT



The rooftop at One Prudential Plaza

Tim Benson

Tishman Speyer Launches Global Tenant Health and Wellness Initiative with Fitwel® Certification of its Portfolio



Real Estate Leader To Introduce Center for Active Design's Fitwel Certification To China, Brazil, India, Germany and France

NEWS PROVIDED BY

[Tishman Speyer](#) →

Oct 23, 2017, 12:32 ET

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NEW YORK, Oct. 23, 2017 /PRNewswire/ -- Growing its focus on the importance of healthy workplace environments, Tishman Speyer today announced a partnership with the Center for Active Design's (CfAD) building certification system Fitwel. Fitwel is the leading global health certification system, providing effective design and operational strategies to improve building occupant health and productivity. It was created as a joint initiative by the U.S. Centers for Disease Control and Prevention and the General Services Administration, and it is operated by CfAD.



Transparency for investors

Transparency and open communication with investors are key priorities for Tishman Speyer, and underpin our ethos as an organization. Portfolio managers communicate regularly with investors about major portfolio events and performance updates. Our aim is to set new standards for sustainable practices throughout our global portfolio. To demonstrate our achievements in this regard, we publish detailed case studies on our properties. These can be accessed via our [website](#).

Many of our investors are GRESB (Global Real Estate Sustainability Benchmark) members. Tishman Speyer has submitted all eligible funds for assessment for the past six years. A list of our Green Star funds, GRESB's highest award, can be found in the [Data Annex](#).

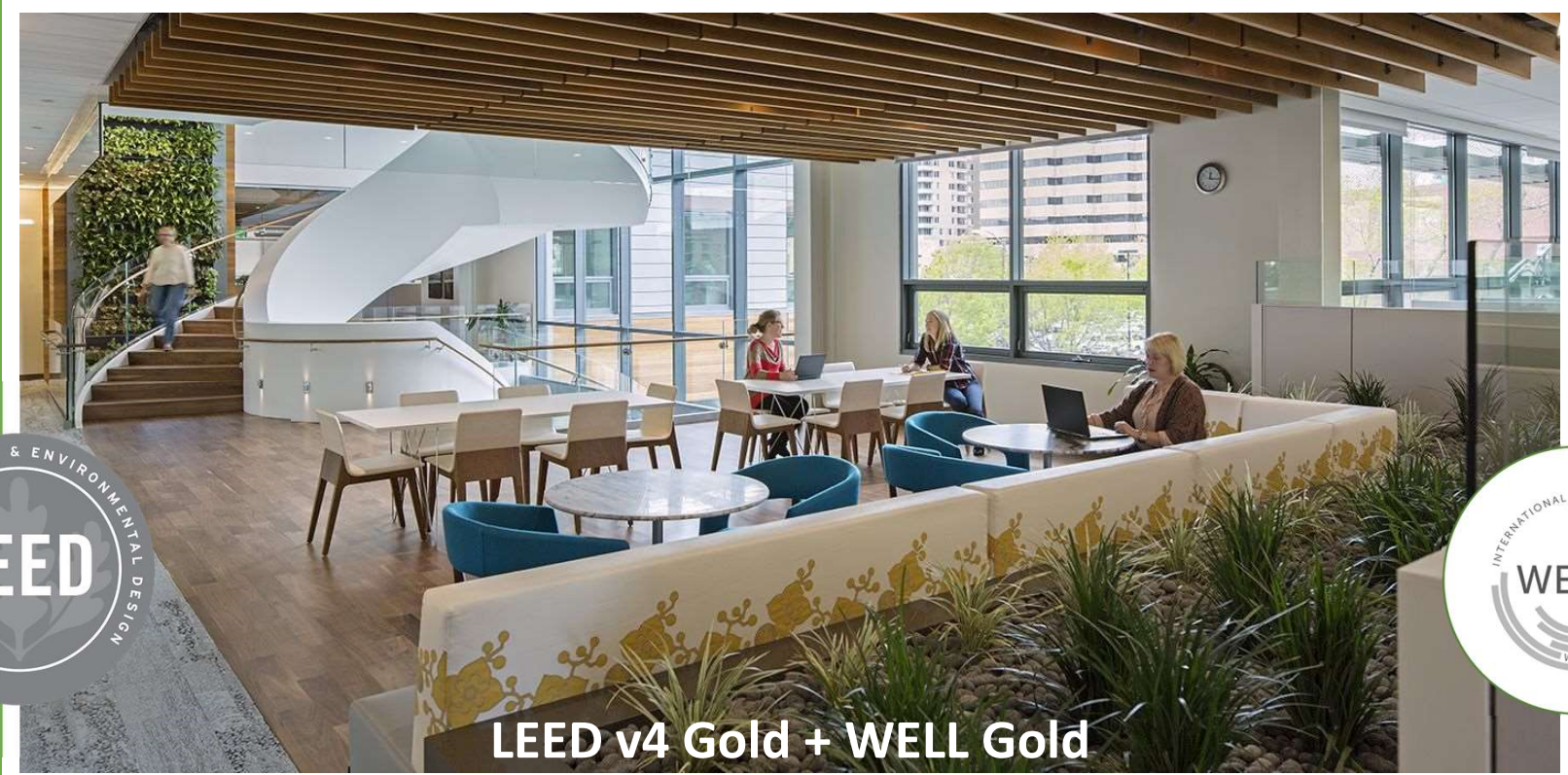


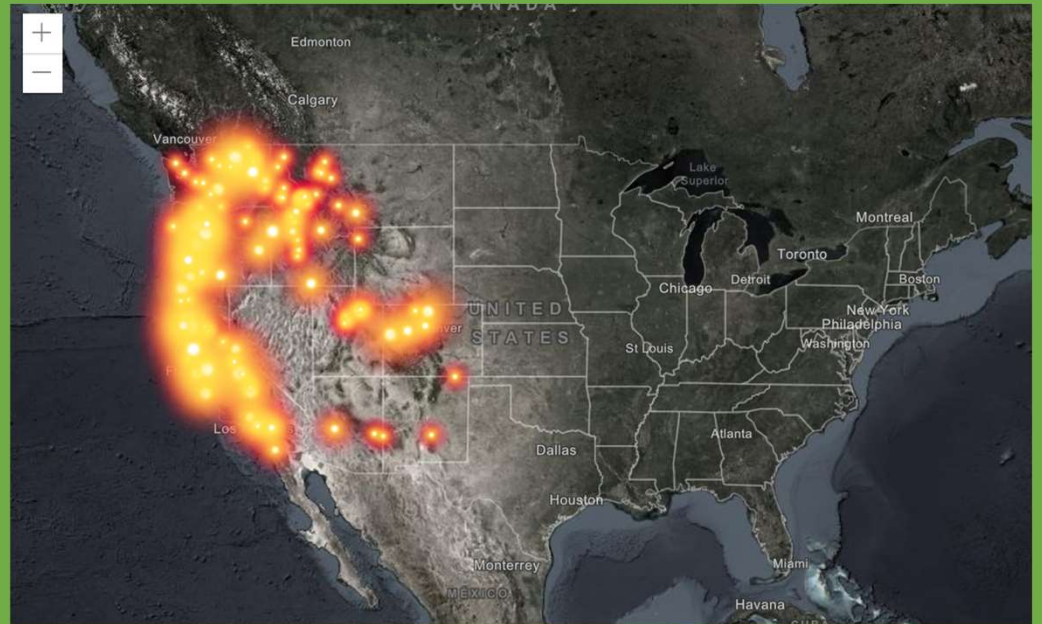
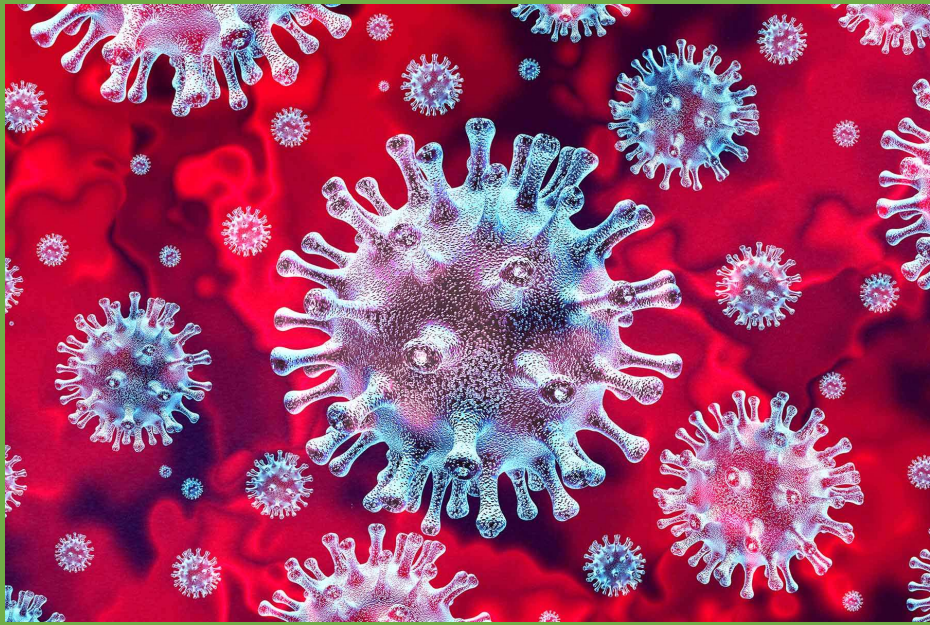
Find out more: Sustainability Case Studies
tishmanspeyer.com/expertise/sustainability/case-studies

**GRESB Real Estate
Investor Members**

The Colorado Health Foundation: The value of **Performance Verification**







Local government regulations

- Confirm guidance from your local government on reopening office buildings to workers.
- Determine whether a new certificate of occupancy is required from your regulatory authorities.



Landlord policies

- Confirm procedures and/or rules for building re-entry and occupation.
- Determine policies regarding building cleanliness and safety.



Business continuity plan (BCP) alignment

- Determine whether your BCP includes a verified list of the essential roles and individuals included in re-entry.
- Confirm that contingency plans/critical response mechanisms are in place in the event that the reopening should fail or the virus reoccurs and forces additional closures.



Supply chain

- Identify and confirm supply chains for personal protection equipment and determine advance ordering requirements for long lead-time items.



Human resources (HR)/legal considerations

- Determine protocols for ensuring employees with high-risk conditions (e.g. lung disease, asthma, heart conditions, immunocompromised, obesity, diabetes, liver disease) do not return to the office.
- Ensure a policy/process exists to report and track infections and compliance with HIPAA rules and to report grievances.



Space/occupancy

- Develop seating/floor plans to meet social distancing guidelines per your local government.
- Establish new workplace etiquette and protocols and communicate them via signage posted throughout the workplace. Be sure to consider ADA implications when making changes.
- Plan how to address impacts on specialty areas (e.g. wellness and mothers rooms, gyms, showers and lockers, mailrooms, breakrooms).
- Determine a policy for employee access to company buildings other than their primary workplace.



Facilities management

- Confirm emergency evacuation procedures in compliance with social distancing requirements, and assign "floor wardens" responsible for managing evacuation.
- Establish elevator social distancing guidelines for multi-story buildings, and calculate and confirm elevator protocols and occupancy levels with your building landlord.
- Create phased and "quick close" procedures to shut down offices in the event the reopening fails or virus reoccurrence forces new closures.



Technology

- Establish enhanced occupancy and employee tracking for building location, space utilization, and potential infection zones.
- Evaluate the room reservation technology and equipment provided at the desk support social distancing and disinfection.



Security

- Determine entry/exit badging protocols for essential employees returning to the building.
- Establish/confirm building shutdown policies in the event the facility needs to be closed again.



Approvals

- Decide who in each region/market/office is responsible for announcing office openings/closures.
- Determine who needs to approve the reopening plan (e.g. regional crisis management team, market/country leadership, enterprise risk & audit teams, business units, IT, security, legal and HR teams).



PREPARE THE BUILDING



SOCIAL DISTANCING PLAN



PREPARE THE WORKFORCE



REDUCE TOUCH POINTS



CONTROL ACCESS



COMMUNICATE FOR CONFIDENCE



Masks!

Please wear a face covering at all times when moving through common spaces in the office.

Reopening CBRE's Workplaces

Updated protocols and best practices used for reopening CBRE's Workplaces

- Planning the Door-to-Desk Employee Journey
- Building Confidence in a Safe Return
- New Cleaning Protocols
- Reservation-only approach
- Post-Reopening Review
- Guideline Vigilance - government mandates and case trajectory

DOWNLOAD



Download Office Signage

- Increased Cleaning Notifications
- New Maximum Capacity Signage
- Social Distancing Reminders

DOWNLOAD



LAUNCHED IN 2020

THIRD PARTY VERIFIED

**ROOTED IN POLICY AND
UNDERSTANDING EXISTING
CONDITIONS**

50,000 T.I. = \$4,200



LAUNCHED IN 2020

PROVIDES A STARTING POINT FOR WELL HEALTH-SAFETY RATING AND LEED v4.1 O+M, AND CAN LEVERAGE RESET

LARGE EXISTING MARKET WITH ARC/EBOM PROJECTS

50,000 T.I. = VARIABLE COST

Acoustics

Air Quality

Energy

Light Levels/Daylight

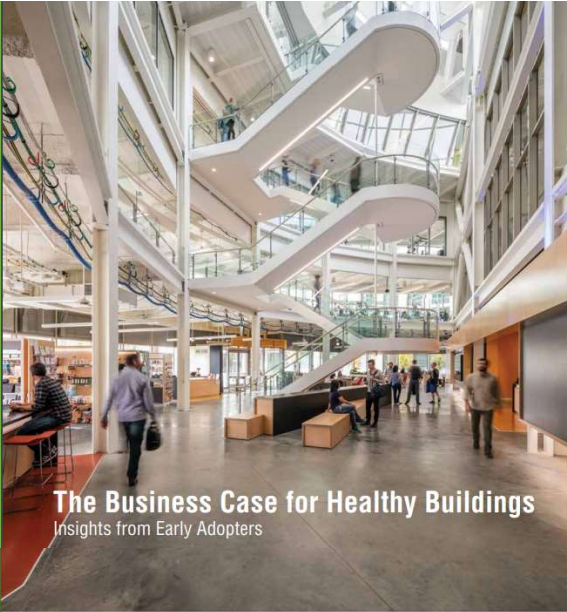
Materials

Nourishment

Thermal Comfort

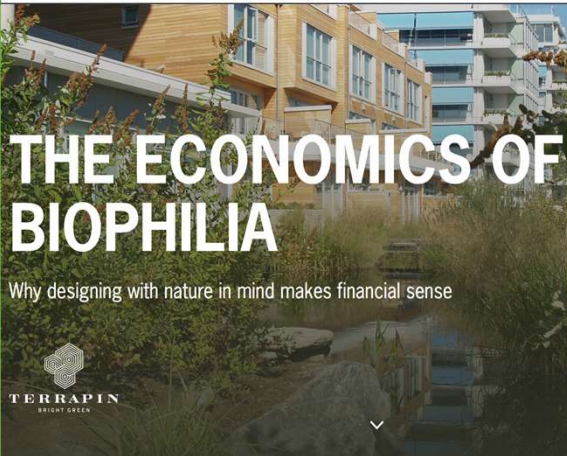
Water Quantity/Quality





The Business Case for Healthy Buildings
Insights from Early Adopters

Urban Land Institute Center for Sustainability and Economic Performance

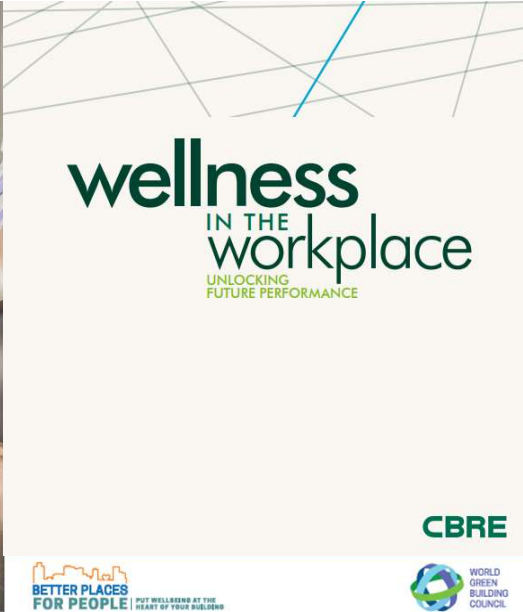


THE ECONOMICS OF BIOPHILIA

Why designing with nature in mind makes financial sense

TERRAPIN
BRIGHT GREEN

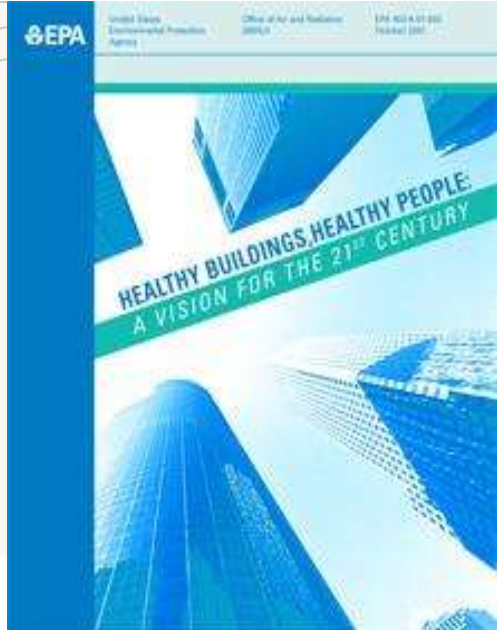
Wight



wellness
IN THE
workplace
UNLOCKING
FUTURE PERFORMANCE

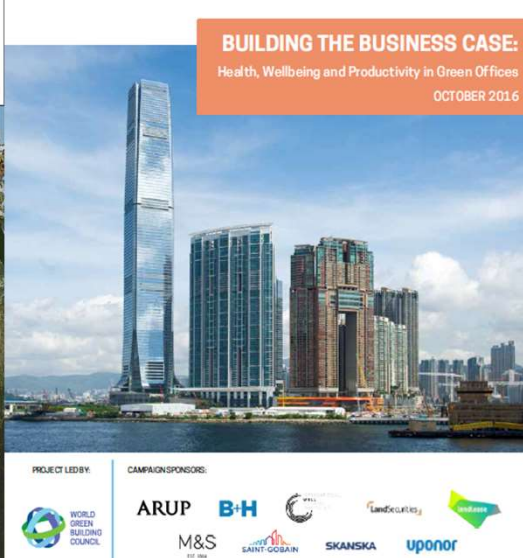
CBRE

BETTER PLACES FOR PEOPLE
PUT WELLBEING AT THE HEART OF YOUR BUILDING



EPA United States Environmental Protection Agency Office of Air and Radiation EPA 600/A-12-001 October 2012

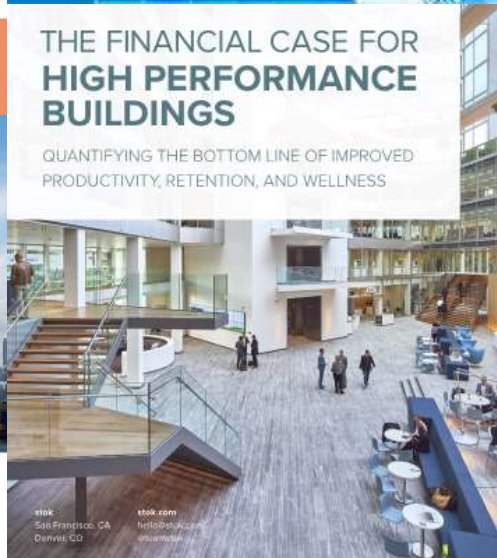
HEALTHY BUILDINGS HEALTHY PEOPLE:
A VISION FOR THE 21ST CENTURY



BUILDING THE BUSINESS CASE:
Health, Wellbeing and Productivity in Green Offices
OCTOBER 2016



PROJECT LED BY: ARUP B+H
CAMPAIGN SPONSORS: M&S SAINT-GOBAIN SKANSKA uponor



THE FINANCIAL CASE FOR HIGH PERFORMANCE BUILDINGS

QUANTIFYING THE BOTTOM LINE OF IMPROVED PRODUCTIVITY, RETENTION, AND WELLNESS

ttob.com
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ttob.com



Wight

Measuring Health & Wellness in Your Building

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