Green Building

market transformation to benefit people and the environment
A three part story

1. A quick history
2. Essential observations
3. Fundamental questions
A spectrum of gray
A spectrum of green
History

We are here, now.
A (quick) story

...about cars
Inform drivers
Real time fuel economy and performance
Inform buyers on model features and performance.
Inform regulators & investors
Fleet-wide performance
Our story
...about buildings
Projects
Define green and measure performance
Fundamentals
✓ A language to define green and describe best practices
✓ Specific measures of achievement and performance
✓ A framework for verification
LEED Dynamic Plaque
Buildings
Tools to score, compare, and connect

CREATE YOUR PROFILE
Establish your identity on GBIG so others can find you.

ADD YOUR ROLES
Associate yourself with high performance buildings and share your contributions.

GET UPDATES
Follow the buildings and places that matter most to you and your business.
Fundamentals

✓ Describe buildings based on data from many sources
✓ Integrate activities, including certifications, awards, disclosures, more
✓ Celebrate individuals and organizations contributing to great green buildings
Building Profiles

One of hundreds of thousands around the world

Empire State Building

350 5th Avenue, Manhattan (Midtown South), NY, USA
LinkedIn Corp NYC Office, LF USA: Fl 7- Empire State Building, LF USA: Fls 8-9- Empire State Building + 7 more

Overview

OVERVIEW
An Office building with **2.769 Million square feet**. First green activity in **2007**.

Why It's Green

This building is green because it has 25 green activities that achieved outcomes of energy efficient design, water use reduction, sustainable site selection and development + 4 more

25

Green Projects
See all
Creating transparency in the sustainability performance of the global real estate sector.

Portfolios
Assess and benchmark

Investor Members: 32 in 2013, 46 in 2014
Survey Participants: 443 in 2012, 543 in 2013, 637 in 2014
Total Property Value: $5.5 Trillion, $2.1 Trillion
Fundamentals

✓ Create actionable transparency for investors
✓ Assess portfolio-level ESG attributes and performance
✓ Provide tools for comparative analysis and communications
GRESB Quadrant Model

2013 results and development of the global average
A global platform
to accelerate market transformation

- Define green building based on achievements and performance
- Celebrate individuals and organizations contributing to great buildings
- Leverage data for communication and analysis
Observations
achievements and limitations
Observations: Theory

✓ Green building addresses pervasive market failure
✓ Certification provides transparency and competitive differentiation
✓ Green building creates a new, superior “asset class”
Nutrition Facts

Serving Size: 6 crackers (23g)
Serving Per Container: 27 crackers

Amount Per Serving
Calories 120
Calories From Fat 30

Total Fat 3.5g (5% Daily Value)
Saturated Fat 1g (5% Daily Value)
Trans Fat 0g
Cholesterol 0mg (0% Daily Value)

Polyunsaturated Fat 1.5g
Monounsaturated Fat 0.5g

Sodium 140mg (6% Daily Value)

Total Carbohydrate 7g (2% Daily Value)
Dietary Fiber Less than 1g
Sugars 7g

Protein 2g

Vitamin A 0%
Vitamin C 0%
Calcium 19%
Iron 4%

Percent Daily Values are based on a 2,000 calorie diet.
Dozens of space types

Hundreds of dimensions

Thousands of markets
Observations: Practice

✓ Green building works
✓ Green buildings are better people and environment
✓ Green building evolves to drive improvement over time
For our LEED Certification there is NO SMOKING on the winery premises.
Theory of Change

INNOVATION
NECESSITATES
REPORTING

REPORTING
ENABLES
EVALUATION

EVALUATION
ENABLES
PREFERENTIAL
SELECTION

PREFERENTIAL
SELECTION
GUIDES
INNOVATION
HISTORY OF MATERIALS & LEED

SINGLE ATTRIBUTES, LIMITED PART OF LIFE CYCLE

Single attribute proxies
MARKET TRANSFORMATION

INNOVATION NECESSITATES REPORTING

REPORTING ENABLES EVALUATION

EVALUATION ENABLES PREFERENTIAL SELECTION

PREFERENTIAL SELECTION GUIDES INNOVATION

Interventions to address pervasive market failure
No single material shows up as the best across all the human health and environmental impact categories, nor as the worst.
Product Introductions with Green Claims, 2002-2010

- LEED EB v1 launched with green cleaning credit.
- LEED EB v2008 launched, makes green cleaning a prerequisite to certification.

Source: Mintel's Global New Product Database.

Green claims include products labeled as "environmentally friendly packaging," "environmentally friendly product," and/or "carbon neutral." Household cleaners includes hard surface care (such as kitchen and bathroom cleaning products) and toilet care.
Green cleaning policy LEED EB 2009 EQp3

Overview Activities (2,157)

INTENT:
To reduce the exposure of building occupants and maintenance personnel to potentially hazardous chemical, biological and particulate contaminants, which adversely affect air quality, human health, building finishes, building systems and the environment.

Chart: Achievement Rate of EQp3 in LEED EB 2009
Green cleaning - indoor chemical and pollutant source control
LEED EB 2009 EQc3.5

Overview
Activities (1,262)

INTENT:
To reduce the exposure of building occupants and maintenance personnel to potentially hazardous chemical, biological and particulate contaminants, that adversely affect air quality, human health, building finishes, building systems and the environment.

Chart: Achievement Rate of EQc3.5 in LEED EB 2009
MATERIALS HEALTH IN LEED v4

TRANSPARENCY + HEALTH & ENVIRONMENTAL ATTRIBUTES ACROSS ENTIRE LIFE CYCLE

Ways to recognize “better” products
Next?

essential questions for the next generation of tools
5 Fundamental Considerations

- Assessment
- Event
- Ecolabel
- Rules
- Process

Tension ↔ Trend → Leadership
Tension ↔ Trend → Status
Tension ↔ Trend → Score
Tension ↔ Trend → Benchmark
Tension ↔ Trend → Performance
Aspiration

1. Support assessment and encourage leadership
2. Recognize milestones and celebrate real-time results
3. Provide simple labels and rich scores
4. Apply predictable rules and market context
5. Embrace process and performance