



THE INSTITUTE FOR MARKET
TRANSFORMATION
TO SUSTAINABILITY

**MTS is comprised of leading
environmental groups, state &
local governments, & companies**

A nonprofit public charity

MTS Ad

Market Driver

- Clearly links with our message, and with the needs of our customers.
- Advertisement asks the most pertinent question in the mind of our customers.

Is it green or “greenwash”?



The Institute for Market Transformation to Sustainability (MTS) is a public charity comprised of manufacturers actively committed to sound environmental practices, leading environmental groups and key state and local governments.

Vision - to achieve a sustainable world through transformation of the way we design, make, and sell products.

Mission - to foster and accelerate the global free market transformation to sustainability.

Forbo MARMOLEUM®



Philips Lighting ALTO® Lamps



Board Members Forbo Linoleum and Philips Lighting offer excellent examples of products that meet transparent and peer-reviewed life cycle assessment (LCA) based sustainable products standards.



For further information or to support our efforts, please contact MTS@sustainableproducts.com, 202-338-3131. Forbo MARMOLEUM® and Philips ALTO® Lamps LCAs, as well as 11 other Sustainable Products Standards are available upon request.

MTS Board Members



SMART© Sustainable Textile Standard 2.0

Market Driver

- Provides Credit for Disclosure of LCA Impacts/Benefits
- Training is Ongoing
- Defines Sustainable Agricultural Products
- Provides Market Credit for Reuse

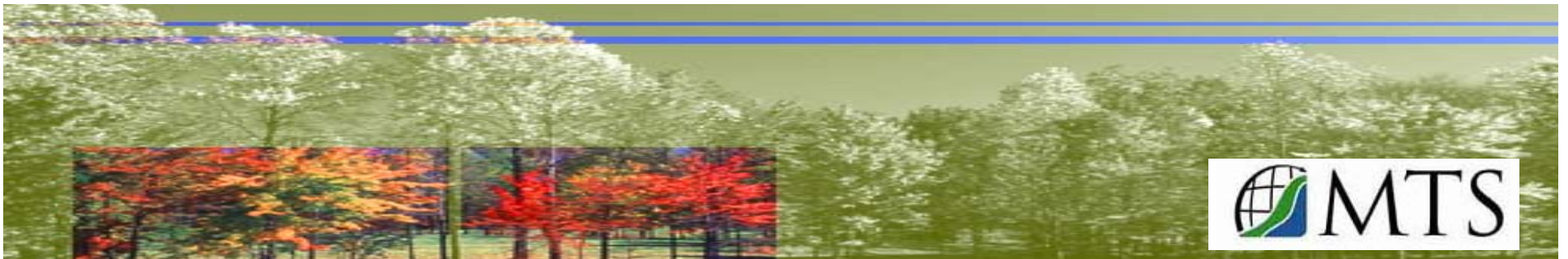


SMART© Sustainable Flooring & Building Product Standards With Dallas & Chicago

Multiple environmental, social & economic benefits over the supply chain

Proposed Maximum Credit for Certified Products With:

- 100% reduction of 1000 pollutants
- 100% *Green-e* power use
- 100% postconsumer recycled content
- 100% biobased organic content w/BMPs
- 100% reuse/reclamation
- Social equity requirements





Market Driver

Online Training with 80 Partners including:

**AIA, NRDC, EPA, California, ASID, IIDA, IFMA,
USGBC, National Wildlife Federation**

- **21 Programs on green buildings & sustainable products.**
- **High quality streaming video & slides**
- **At: <http://mts.sustainableproducts.com/thankyou.html>**



Green Buildings

TRAINING MODULE

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LEED
Build Green. Everyone Profits.



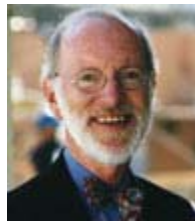
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Experts

Rick Fedrizzi, CEO
USGBC

Steve Johnsen, VP
NWF

Bill Helmuth, Principal
HOK



Moderator

Bob Berkebile, FAIA

SUSTAINABLE
PRODUCTS®
TRAINING MANUAL

Online Training sponsored by:

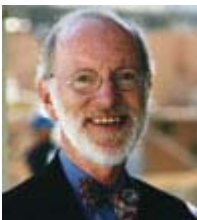
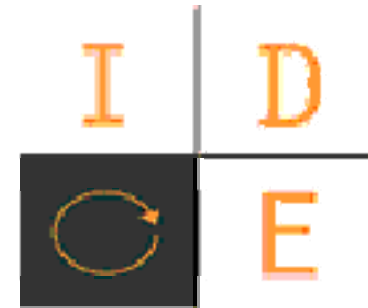


Pollution Prevention & Life Cycle Assessment (LCA)

sponsored by:



Sustainable Design
Committee on the Environment



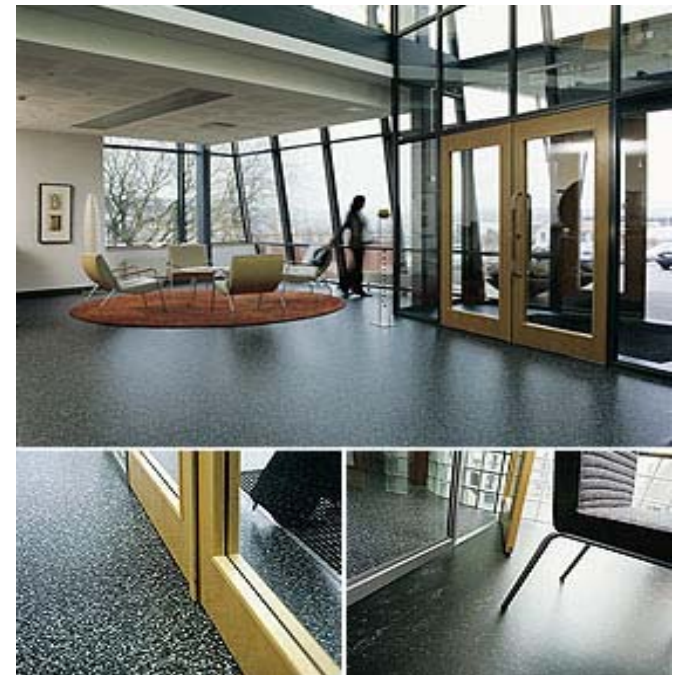
Moderator
Bob Berkebile, FAIA

Life-Cycle Assessment...

the true measurement of environmental performance

**Forbo Linoleum's ISO 14040 compliant
LCA meets MTS' LCA standard**

**Forbo provides a legally binding &
publicly disclosed certification**



GREEN BUILDING FACTS



REVENUE

- Green building rents are in the upper quartile of Class A peer group when compared across different markets and varying time frames
- Lease-up rates significantly exceed pro-forma expectations in numerous case studies
 - At \$30.00 NNN office lease rates, one month of lost revenue due to slower lease-up = (\$2.50/SF)

OPERATING EXPENSES

- 67% of LEED-certified buildings to date received credit for a 30% increase in energy efficiency
 - At \$2.85/SF avg. for utilities, a 30% reduction = \$0.86/SF
- Operations and maintenance costs consistently in lower quartile when compared against BOMA peer group
 - Every **\$1.00/SF** in increased revenue and/or reduced operating expenses equals **\$12.50/SF** in property value at an 8.0% cap rate

OCCUPANCY COSTS

- Green building tenants achieve superior metrics on their total occupancy costs
 - Recruiting, retention, absenteeism / inner-office technological churn / employee personal comfort / general productivity / insurance and medical / risk



Market Driver



State of California has taken a global leadership role by launching the Green Wave Initiative & LEED

CalPERS is stimulating global private markets toward environmentally sound, risk adjusted investment opportunities when considering Real Estate investment allocations

By approving allocations to Green Real Estate Private Equity, CalPERS is the catalyst for far-reaching impacts:

- State of CA continues leadership in environmental stewardship & moves forward the objectives of Executive Order s-20-04
- Higher risk-adjusted rates of return
- Reduction in state-wide energy usage and infrastructure
- Reduction in water use and infrastructure
- Lower raw material usage & landfill construction waste
- Reduction in auto-based transportation & urban sprawl
- Increased investor capital flow to meet residential & commercial consumer demand
- Creates markets for emerging energy technologies / stimulates investment in alternative energy

Green Real Estate Investment Funds

Rating Agencies

- Address environmentally responsible projects
- Assets deemed superior risk-adjusted investments
- **RESULT:** Lower cost of debt / equity capital for Green projects



Evolution Partners

- World-class Green private equity professionals & thought leaders
- Solely focused on acquiring Green buildings in select markets
- EP develops preferred lending relationship with Green-focused banking groups



Wells Fargo

- Develops Green financial instruments
- **Lowens lending rates / creates Green mortgage backed securities (MBS and CMBS)**
- Becomes Green Bank of Choice by addressing the demands of consumers, developers & investors

Socially Responsible Investors

- \$2.2 trillion in US investments *
- Green MBS and Green CMBS become preferred holdings
- **RESULT:** Increasing the demand for Green assets



* Source: Social Investment Forum, 2003





Retail Green Buildings/MBS





Green Mortgage Backed Securities

**Can Cause Certification of Thousands of Green
Buildings, Pool Their Mortgages, Obtain High
Rating & Sell it as a Security**

Everyone makes more \$\$

Successful Precedent: Phase I ESA

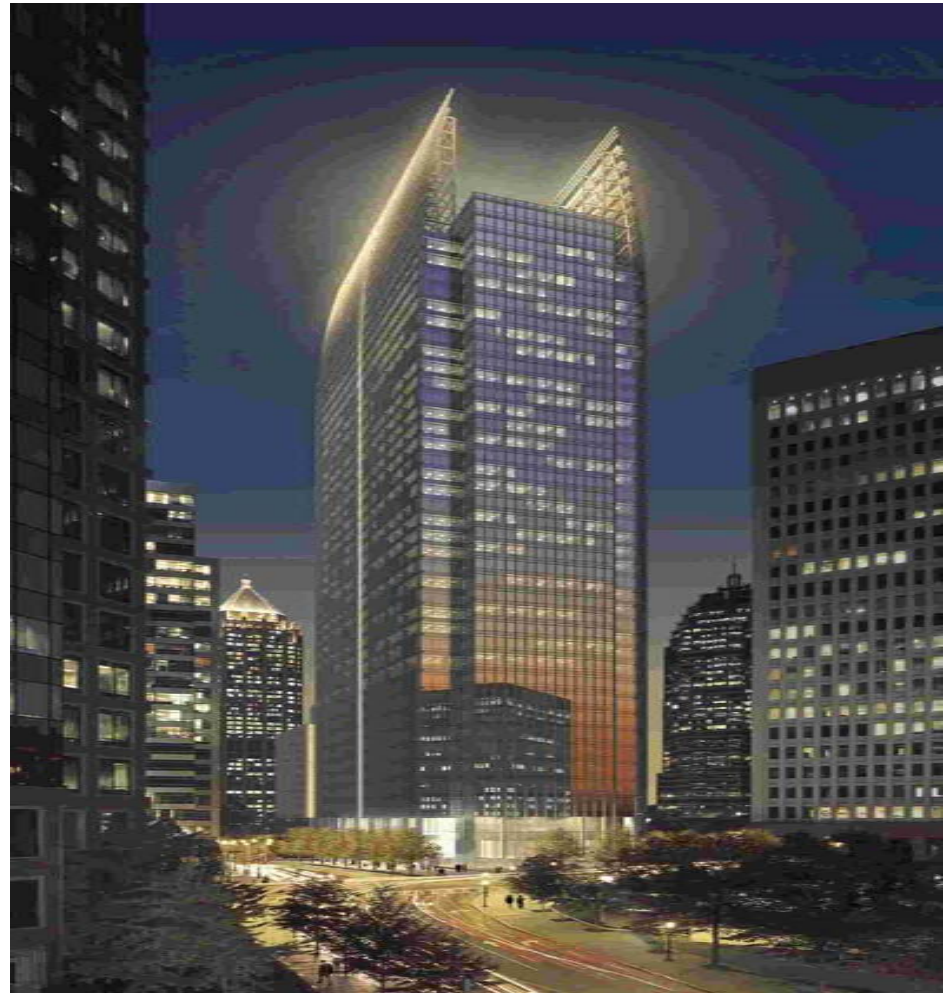
Green MBS Resulted in 90% Market Penetration in 5 Years

Substantial value is created for entire building industry



Hines Peachtree Symphony Center

41 story
Atlanta office
tower
with retail
store,
supermarket
& art gallery;
registered
LEED project



Economic Benefits



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Green Buildings Are Growing at a 70% Rate
Green Buildings Are 4%+ of the Current Market

Turner Construction's July '05 Green Building Construction Survey of 719 building executives shows:



- 93% expect green building workload to rise
- 51% expect substantial increases



Economic Benefits



100,000 ft² LEED™ building saves*

- \$80,000/yr in energy costs
- \$93,000 through 186 tons of waste reduction
- \$44,000/yr for avoided wastewater treatment & water conservation
- \$53,368/yr from energy efficient appliances & lighting



* about 30-50% in operating costs, MTS Economic Benefits Standard

LEED EB CERTIFIED

National Geographic Society Headquarters Washington, DC



National Geographic Society added \$16M in value from this LEED certification from raising tenant rents, lower operating costs, a higher appraised value, increased credit rating from Moodys, & lower interest rates on large loans secured to the building.

*Presentation at 2003 Congressional
Green Building Luncheon*

Chris Liedel, CFO – National Geographic



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Economic Benefits

Increase building valuation

- **Using the income-capitalization method: asset value = net operating income (NOI) divided by the capitalization rate. If the cap rate is 7%, divide the reduction in annual operating costs by 7% to calculate the increase in the building's asset value.**
- **Green building cost/investment is 20 year net benefit of \$50 to \$66/ft² based on 33 green buildings (USGBC/Capital-E 2003), and 10% net dollar savings for the total investment from 300 Johnson Controls**



Green Buildings (Leonardo Academy 2001)



Economic Benefits

Projected 70% US Commercial Green Building Market Penetration*

Energy Savings & Daylighting:	\$ 36.0 Billion/yr
Construction Waste Reduction:	\$ 6.7 B/yr
Water Pollution Savings from Water Conservation:	\$ 20.0 B/yr
Energy Savings from appliances & Lighting:	\$ 24.0 B/yr
Added Value from Increased Occupant Productivity, IAQ & Reduced Absenteeism:	\$632.0 B/yr
Emission Reductions' Market Value:	<u>\$ 1.1 B/yr</u>
Total Value Added Per Year	\$720 Billion

NOTE: Green Retail Buildings Will Also Accrue Increased Retail Sales



* Leonardo Academy & MTS Projections 2003



Green MBS Value Chain

Value is created in the following ways:

Buildings owners achieve lower life-cycle cost, higher asset value, more productive work environments and possibly a lower cost of capital.

Investment bankers achieve value through profit and differentiation surrounding structure and distribution of Green MBS pool.

Ratings agencies assess credit quality of Green MBS pool & receive commission.

Investors purchase Green MBS backed by assets that are worth more, viewed as less risky, and more closely aligned with investor goals of purchasing *sustainable* assets.

Developers generate revenue from designing, constructing, operating, maintaining & LEED certifying higher value green buildings.



Tom Owens, Sr VP

Hines Development Company

from October 2003 BOM Special Report to MTS "Green Economics"

- *“If a building costs less to operate, then there is less risk in owning that building”... “Tenants will be attracted to that. The buildings are easier to keep leased in down times and can draw a premium rent in up times.”*
- *“If the owner has lower financing costs, you’re effectively giving the owner money for less,” “As a result the developer could borrow more money — money that can be applied to making the building even greener.”*
- *Owens says Hines has recognized the value of energy efficiency and green buildings. “It’s time the agencies recognized this.”*



Scott Muldavin

The Muldavin Company

from October 2004 BOM Special Report for MTS "Green MBS"

A leading real estate finance expert who set up the risk-rating system for Standard and Poor's that launched the \$400 billion commercial mortgage-backed securities industry:

"When commercial lenders recognize that green buildings are excellent collateral, green mortgage-backed securities will be viable. There's a tangible, quantifiable benefit in green buildings. But right now there is a knowledge gap among lenders."



*from December 2005 BOM Special Report for MTS
"Assigning Green Building Value"*

Rick Fedrizzi, CEO, US Green Building Council:

"Development of a Valuation Methodology will help speed the market's adoption of LEED and Green Buildings."

John Saclarides, Sr.VP, Bank of America:

"You're going to have a facility [Bank of America Tower] that's cheaper to operate and that's easier to lease because it's a more pleasant workplace. That combination enhances the net operating income. If you're a lender, your environmental commitment is not even the issue – it's just common sense."

Stephanie Rico, Wells Fargo:

"We're definitely talking about and considering Green Mortgage Backed Securities. In fact, we have already originated several LEED construction loans and are actively seeking to include more green permanent loans in our CMBS pools."



Cheaper Cost of Capital Program

The MTS Economic Benefits Committee is advising The Muldavin Company's development of the Value Measurement Methodology for cheaper cost of capital for Green & ENERGY STAR Buildings:

- **Green MBS**
- **Whole green building loan product**
- **Institutional financing** for green buildings - debt & equity
- **Improved credit ratings** for investors
- **Higher appraised value for real estate**



Cheaper Cost of Capital Program

Accelerating Valuation & Mainstreaming of Green Real Estate Finance:

- **Communication:** *Mainstreaming Green Real Estate Investment*
- **Recruiting Real Estate Investment Leaders:**
 - Early Adopters
 - Investors
 - Developers
 - Financial Institutions



Cheaper Cost of Capital Program

Committee Members:

Rob Watson, *Senior Scientist, NRDC. Cofounder of LEED and USGBC Director*

Matt Petersen, *CEO, Global Green, MTS Board Member & Partner in Enterprise Foundation \$550m green building fund*

Dan Winters, *LEED AP, Principal, Evolution Partners, Green Building Finance Consortium*

Leanne Tobias, *Founder & Principal, Malachite LLC, Real Estate Investment Advisors*

Erik Bouts, *CEO, Philips*, **Eric Marsh**, *Vice President, Philips, MTS Vice Chairman. Initiator & funder of MTS Green MBS Activity*

Don Reed, *CFA, Partner, Ecos Corporation, MTS Economic Benefits Committee Chairman*

Sandy Wiggins, *Chairman, DVGBC, Vice Chairman, USGBC, CEO, Consilience Development*

Mary Wenzel, *Vice President, Wells Fargo*