The Value of Green

Tri-City Speaker Series

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September 10, 2009

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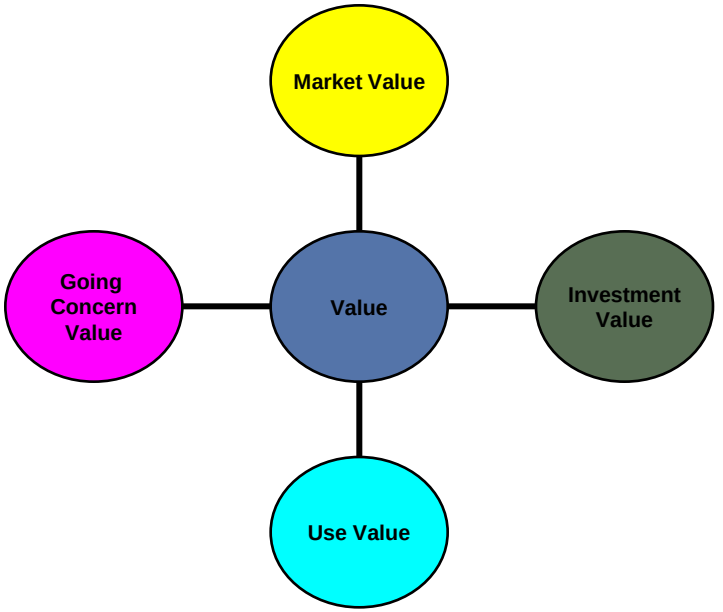
It's All about Value(s)

- Personal values
- Ethical values
- Cultural values
- Economic values
  - Business values
- Property values
  - ***Market Value***



What the "Market" Values =

Market Value

Premise on which most investments are made

Business Perspective

- Leading corporations are competing to be “green”
  - USGBC now has more than 20,000 member companies
    - Boston Properties
    - General Electric Corporation
    - Wells Fargo
  - Number of major banks announcing commitments to “green”
    - Wachovia had announced plans to build 300 new green branches
- Rationale:
  - Increased focus on corporate accountability (CSR)
  - Client/customer demand & business pressure to green supply chain
  - Existing/impending legislation
  - Reputation
  - Attraction, retention and motivation of staff

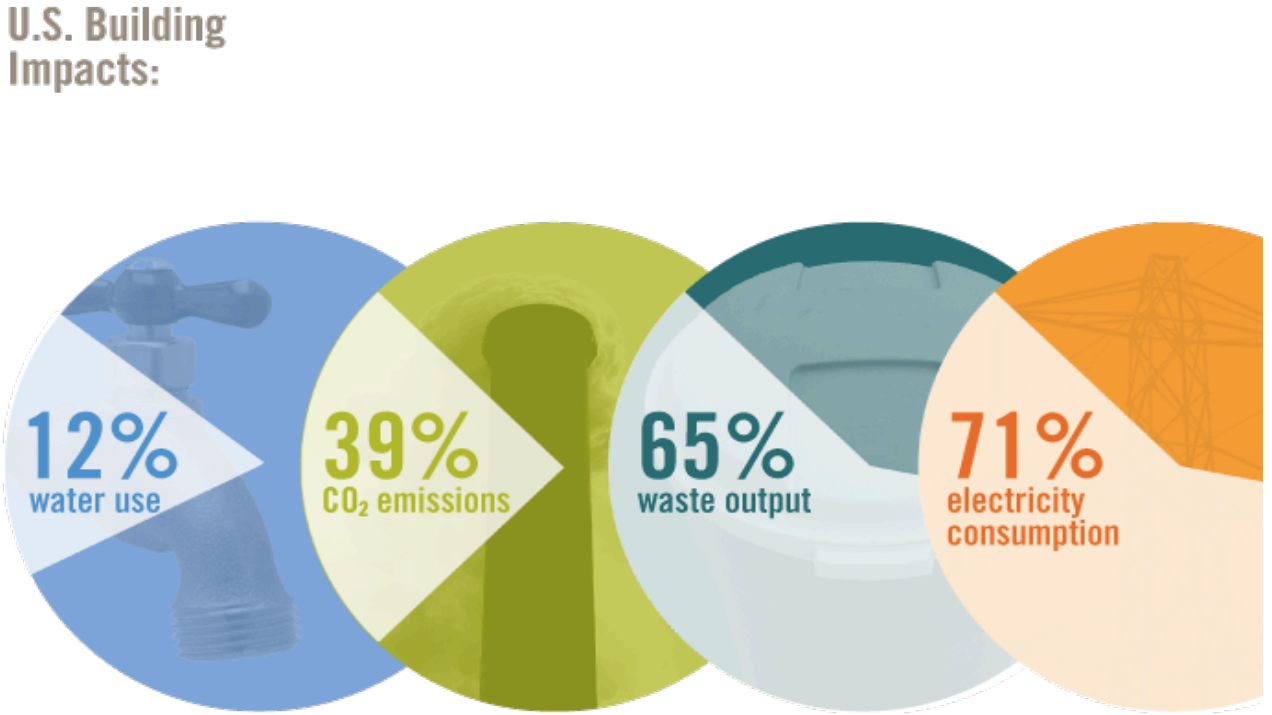
Investment Real Estate Perspective

- Shift in market
  - Preference for “green” investments in response to shareholder concerns and future carbon-related risks
  - Incorporation of climate risk into lending policies
- Socially Responsible Investors now considering RPI
- Principles for Responsible Investment (PRI)
  - RREEF
  - MEPT
  - Kennedy
  - Lend Lease
  - PruPrim

- Government standards/investment requirements

Focus on Commercial Real Estate

- Significant environmental impact resulting from property development and building operations



Source: USGBC

LEED Impact to Date

- Green Building Impact Report 2008
  - Independent organization – Greener World Media, Inc.
  - Study sponsored by Johnson Controls and Autodesk
- Identified impacts of building ‘green’ via LEED standards
  - Market trends
  - Environmental impacts
  - Land use
  - Water
  - Energy
  - Materials and resources
  - Indoor environmental quality

Findings Indicate Progress Has Been Made

- But a lot of work still remains to be done
- LEED certified projects now account for 6% of new commercial construction
  - Registrations up 40% in last year
  - Certification time frame roughly 2 years, with attrition rate of 25% to 30%
- LEED NC continues to lead the way
  - Accounts for 5.8% of new construction starts
- LEED EBOM still lagging, but seen as major area of opportunity going forward

Commercial Construction - Findings

- Land Use
  - Via efficient location and transportation alternatives supported by LEED:
    - Nearly 400 million VMTs have been avoided
    - By 2020, this is expected to increase to 4 billion VMTs
- Water
  - 2008 savings = 9.5 billion gallons due to LEED strategies
    - Savings would fill equivalent of 38 million qt. bottles – enough to circle the earth 300 times
  - If practices continue, as number of LEED buildings grow, the savings are expected to increase to 245.5 billion gallons by 2020

Commercial Construction - Findings

- Energy
  - Overall LEED buildings consume an average of 25% LESS energy than comparable commercial buildings
    - By 2020 these savings are expected to amount to almost 49 million tone of coal equivalent annually
    - Avoiding the emission of 78 million tons of CO2
- Materials & Resources
  - A green “economic stimulus” source
    - To date, certified projects have specified use of more than $10 billion of green materials
    - This market is expected to grow to more than $100 billion by 2020
- Indoor Environmental Quality
  - Productivity gains currently estimated at $170 million

Productivity/Labor

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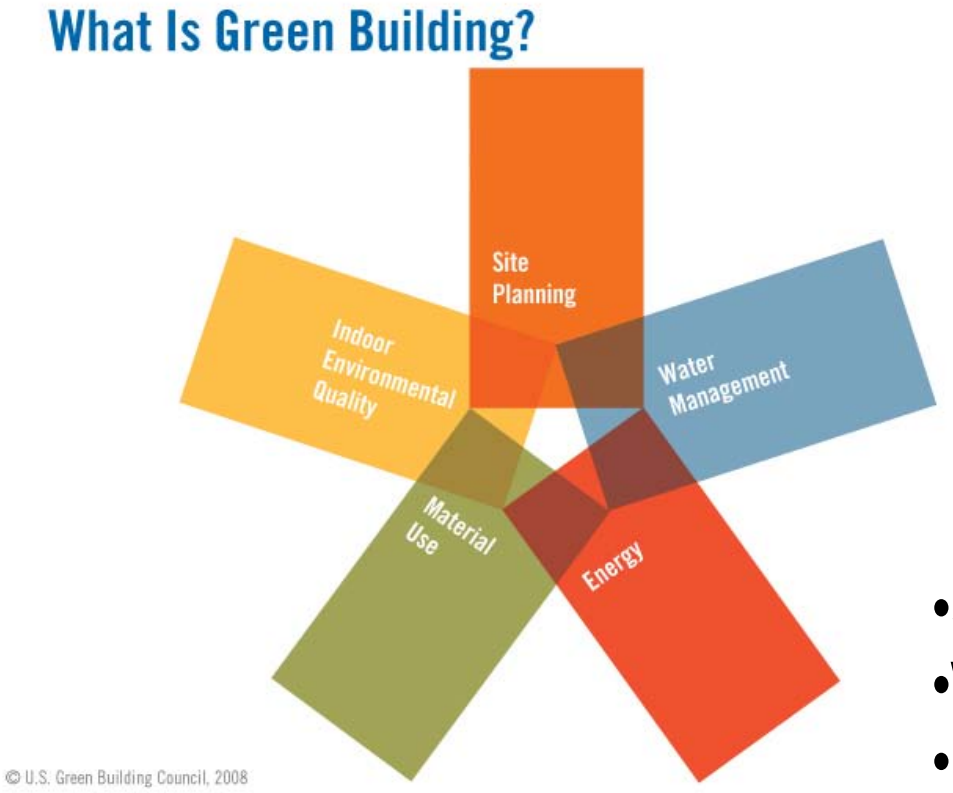
Green Buildings



Source: USGBC

- Sustainable Sites
- Water Efficiency
- Energy & Atmosphere
- Material & Resources
- Indoor Environmental Quality

Green Building Rating Systems

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Valuers Facing New Challenges

- Vernacular and principles previously not considered, particularly in the US
- This is about Best Practices
  - High performance
  - Best possible product for consumer and environment
- Need to know the vocabulary, the relevance and application of sustainable principles and practices:
  - Right-sizing
  - Commissioning
  - Trade-off Analysis
    - Versus Value Engineering
  - Life Cycle Cost Analysis

“High Performance” equals Main Goal

- Though environmental factors a primary consideration, maximizing building performance is ultimate goal
- Historical perspective has not been that how a building “goes together” has potential to:
  - Improve NOI
  - Reduce maintenance costs and reserves
  - Mitigate risk (early obsolescence or marketability)
  - Establish market positioning
  - Redefine Class A quality

Regulatory Issues

- Carrots/Incentives
  - Entitlement Related
    - Density bonuses
    - Waiver or reduction in fees
  - Permitting Process
    - San Francisco
    - Chicago and others
- Sticks
  - Growth Restrictions
    - Arizona – water requirement
  - Building Code Changes
    - Washington DC – LEED
    - Portland DJC

California Leads the Way

- SB 375 - takes on environmental issues via planning strategies
  - California Air Resources Board (CARB) will set regional ghg reduction targets which will be incorporated into each region's Regional Transportation Plan (RTP)
  - Pushes communities toward a "preferred growth scenario"
  - Creates incentives for regions to reduce pollution from cars and trucks by calculating how emissions would vary with different development scenarios
- Funding approval will be tied to implementation
- California Energy Commission
  - Proposes regional and statewide planning strategies
  - Suggests state and local tax policies "affect and guide" land use practices and revise policies inconsistent with efficiency goals

What if You Do? Know the Differences

Number of Potential Benefits:

- Different "Capital Stack"
  - Could include incentives
- Preferred financing
- Lower costs
  - Maintenance and Operating
  - Capital Reserves
- Recognition of value may take different forms
  - Quicker absorption
  - Better tenant retention
  - Less down time between leases
  - Lower TI's

What If You Don't…..

- How Will the Market View Your Decision?
- Early Obsolescence
- Reputational Risk
- Environmental Risk
- Regulatory Risk
  - Building codes
  - Taxation/penalties
- Diminished Capital Investment
  - Bruce Kahn, ecological economist, Citicorp Global Markets
- What happens if you don't build a high performance building? Or retro-fit existing assets?

What about Other Risks?

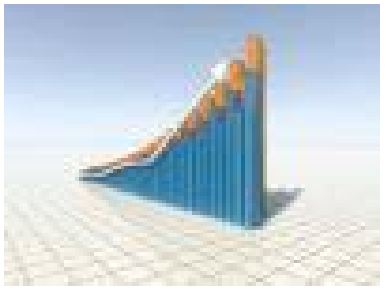
- Lenders and Institutional Investors
  - Just as interested in what could go wrong
  - No existing standards
- Lack of empirical data
  - No IREM, BOMA, or other “industry” stats
  - Developer projections
    - Commissioning
- Availability of Qualified Professionals
  - Contractors, Service Providers
  - Property Management
  - Appraisers

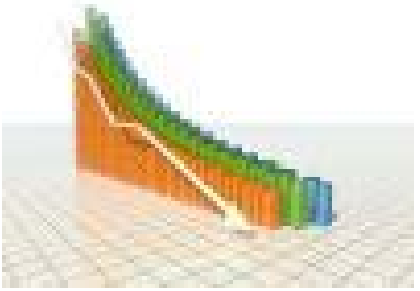
How About the Really Big Questions…..

- Is it worth more? Am I going to get more rent?
  - *IT'S UP TO THE MARKET!*
  - Currently limited sales data/cap rate info
  - Need to know your market
    - If your clients aren't asking you – you should be asking them
  - Geographically specific
    - Does your market recognize these practices?
    - Is there demand – or greater demand?
  - Simple payback analysis won't provide accurate assessment of long term benefits/value

How Does This Translate?

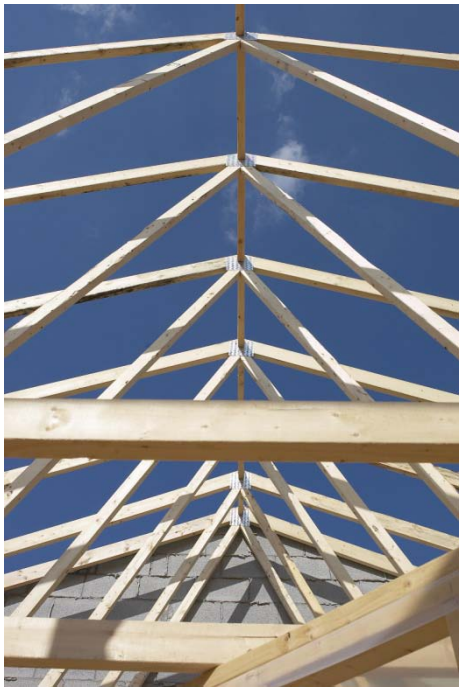
- Report templates and cash flow assumptions:
- Tenants – types and quality
  - Lease terms
  - Length of lease (tenant retention)
  - Recoveries
- Rental Rates
- Absorption
- Renewal probability
- Downtime between leases
- Tenant improvement costs





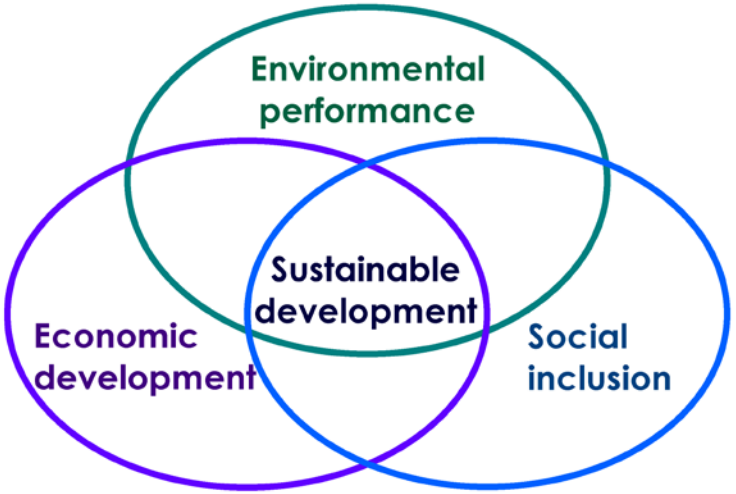
Expenses & Offsets

- Energy costs
  - Potential for reduced consumption
- Maintenance costs
  - Daytime cleaning
  - Products
  - Low maintenance surfaces and components
- Provision for incentives
  - Local
  - State
  - Federal
  - Expedited permitting
  - Accelerated depreciation



Green Value – How does the TCRD Get There?

- Layer on top of all the other previous considerations the Triple Bottom Line



- Challenge is to identify and quantify the full range of benefits of the assets being analyzed

RPI Metrics – Economic (Re)Vitalization

- Metrics for Performance
  - Geographic targeting
  - Jobs
  - Diversity
  - Affordable and Workforce Housing
  - Stakeholder engagement
- Environmental Metrics
  - Energy efficiency
  - Resource Use
  - Transit-orientation
  - Brownfield redevelopment
  - Third party standards
- Business Case for Market Rate Investments
  - Opportunity for growth
  - Underutilized resources
  - Upzoning potential
  - Public incentives
  - Investor relationships
- Business Case
  - Reduced operating costs
  - Reduced regulatory risk
  - Upzoning potent
  - Investor relationships

- Metrics Courtesy of David Wood, Director
  Responsible Property Investing Center - Boston College

Real Life Examples: Banner Bank Building

- Number of tenants were pulled from competing Class A buildings as a direct result of BB's sustainable approach, particularly of better air quality and working conditions
- Significant savings through innovative integrated design strategies
  - Savings in steel costs and applications
  - Under floor, low flow air created more comfortable space and reduced energy costs by more than 50%
  - Demountable walls and carpet tiles save time and fit-out costs
  - Lack of columns increases tenant floor space & plan flexibility
  - Reduced building envelope size, floor heights
  - Significant tax benefits as a result of design implementation

Operational Cost Savings: LEED EB

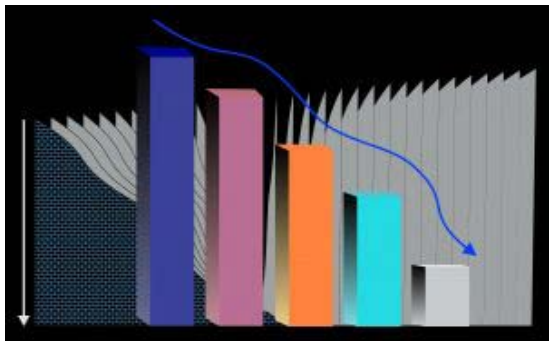
Adobe Systems HQ

- Project: Head quarter campus, San Jose, CA
- Number of buildings: 3 (989,358 SF)
- Rating System: LEED EB
- Certification level: Platinum

Operational Cost Savings: LEED EB

Adobe Headquarters

- Resource reductions:
  - Electricity: 35% reduction (per occupant)
  - Natural gas: 41% (per occupant)
  - Domestic water: 22%
  - Landscape irrigation: 76%



- Pollution reduction:
  - All sources: 26%
  - CO2 emissions: 16%
  - Solid waste reduction: 95% (through composting and recycling)
  - Use of public transportation: 20% (of employees, compared to county-wide average of 4%)

Operational Cost Savings: LEED EB

Adobe Systems HQ

Return on Investment	
Capital Costs	$1.4 million
Rebates	$389,000
Cost Savings	$1.2 million
Average Simple Payback	9.5 months
ROI	121%

- Awards:
  - BOMA International Earth
  - CoreNet Global Sustainability Leadership
  - California GEELA

GSA Post Occupancy Evaluations

- Assessing Green Building Performance
  - POE's performed on 12 GSA properties
- Findings support LEED Impact 2008 report
  - Energy compared to CBECS (Commercial Buildings Energy Consumption Survey) baseline
    - LEED buildings performed 29% better than CBECS averages
    - Top performers (LEED Gold) cost 43% less than other properties in study
  - Water results less consistent, more variance geographically
  - Maintenance costs reduced
    - Averaged 13% less than other buildings in portfolio
  - Tenant satisfaction higher based on Center for Built Environment study
    - GSA's LEED buildings scored 22% higher than other properties
    - Tenant satisfaction for LEED Gold buildings is 34% higher
- Other studies on sustainable properties available on GSA website
  - *Sustainability Matters* series

Other Examples – Limited but Growing

- OHSU – River Building One
  - LEED Platinum
  - $3.5M Savings in MEP
  - Natural ventilation
  - Water treatment

- The Henry
  - Fast absorption
  - Higher price points
  - Highest re-sales

- The Louisa
  - Quicker absorption than competition
  - Higher rental rates and occupancy
  - Better tenant retention

Thank You!

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