Green Value: The Profitable Environment

Value Can Make Green Buildings Irresistible

GreenBuild, Atlanta Georgia
9th Novermber 2005

Chris Corps MRICS
Asset Strategics Ltd.
Director, RICS Canada 2003-5
RICS Americas Environmental Faculty
Chairman, RICS Canada 2003-4

About RICS

- World's largest real estate profession
  - Over 117,000 members in 123 countries
  - Formed in 1886
    - Traces routes to 1086
  - Qualifications
    - FRICS, MRICS, TechRICS, Probationers, Students
- Multi-disciplinary
  - 16 "Faculties" & 187 "Specialisms"
  - Includes Environmental & Valuation Faculties
- Resources
  - Over 400 research papers published annually
  - http://www.rics.org/

Why This Study?

- Gap
  - Commercial green buildings must meet financial review
    - BUT: financial & real estate sectors sceptical
  - Focus & misunderstanding
    - Cost savings wrongly described as "value"
    - Misunderstanding of how green affects asset value
- Opportunity
  - Value not well covered in rating systems
  - Accounting & valuation standards not green
  - Value could substantially exceed cost savings

Green Value Focus: The Null Hypothesis

- Null Hypothesis:

  "There is no relationship between the market value of a real estate asset and its green features and related performance."

- Reason for Null Hypothesis
  - Analytical neutrality, expected lack of data & ease of assessment
- Trigger
  - Canadian Bankers' Association; VITP experience

Green Value Summary

- Sponsors:
  - RICS
  - BC Hydro
  - Canada Green Building Council
  - English Partnerships (UK)
  - Greater Vancouver Regional District
  - Green Buildings BC
  - Natural Resources Canada
  - RealPac
- Others:
  - Canada Mortgage & Housing Corp., City of Vancouver
  - Team: Cushman Wakefield LePage, Busby Perkins+Will, BuildGreen, DTZ (UK)

- Best practices & literature review
- 18 project reviews in:
  - San Francisco, California
  - Minneapolis, Minnesota
  - Oberlin, Ohio
  - New York City, New York
  - New Westminster, Vancouver, Victoria, BC
  - Kitchener, Ottawa & Toronto, Ontario
  - Montreal, Quebec
  - 6 UK projects

Why Value is Important

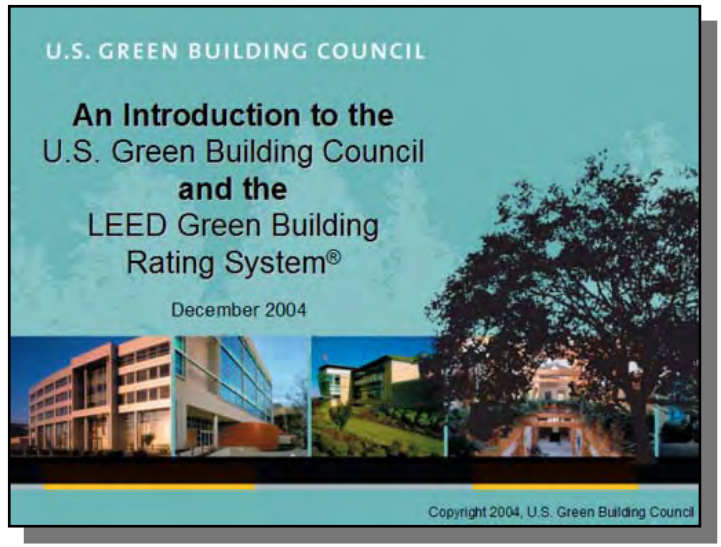
- Private sector seeks profit, value
  - Required for business, funding & shareholders
- Governments seek value for money
  - Business cases generally required
  - Value has a wider definition including "public good"
- *Value* not *cost*
  - Environmental "value" is not just "cost savings"
  - Cost approaches may harm the business case
    - Often used for accounting
    - Tend to ignore life cycle and consumption savings
  - Value may be incorrectly assessed

Value: Not Always Understood

- Example 1: USGBC

  "Using the income-capitalization method: asset value = net operating income (NOI) divided by the capitalization rate (return). 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*"

- But: Cost savings are uncertain to affect value
  - Gross leases can *increase* energy consumption
  - Net leases separate capital investment from the benefit
  - *Work is needed on green leases*



Source: Introduction to the US Green Buildings Council, USGBC

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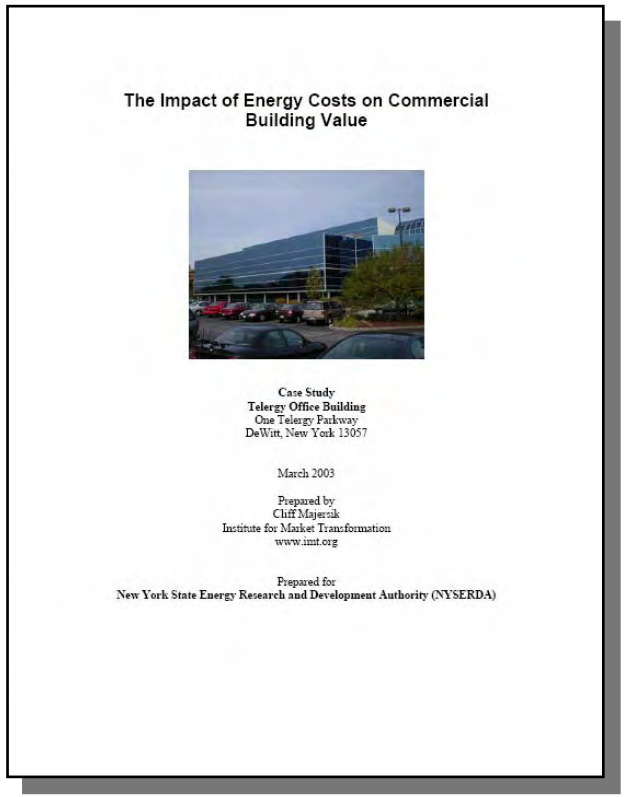
Value: Not Always Understood

- Example 2: Institute for Transformational Change

  "According to the National Research Council, 60 to 85 percent of a building's real costs are related to operations; the initial construction cost is 10 percent or less."

  "As the largest single operating expense in typical commercial buildings, energy costs are typically an important factor in building value."

- The largest cost is not energy
  - Is your energy bill larger than rent or mortgage?
  - Wrongly criticised appraisal
- Context…



The Impact of Energy Costs on Commercial Building Value

Case Study
Telergy Office Building
One Telergy Parkway
DeWitt, New York 13057

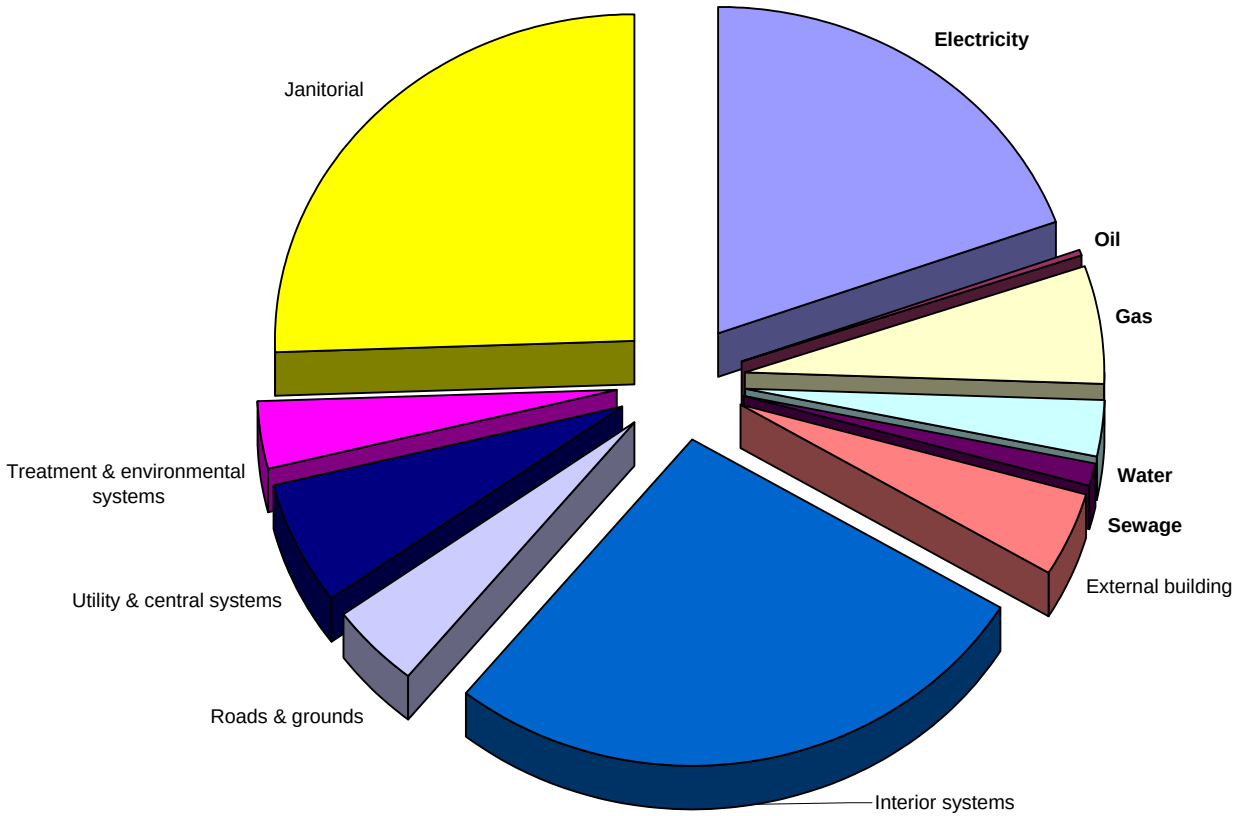
March 2003

Prepared by
Cliff Majersik
Institute for Market Transformation
www.imt.org

Prepared for
New York State Energy Research and Development Authority (NYSERDA)

Source: Business Case for Green Design, FacilitiesNet.com
The Impact of Energy Costs on Commercial Building Value p.9, Institute for Transformational Change

Green Priorities: What's in Operating Costs



Energy: 30%

	%
Electricity	19.5%
Oil	0.3%
Gas	5.9%
Water	2.8%
Sewage	1.0%
External building	4.2%
Interior systems	27.3%
Roads & grounds	4.1%
Utility & central systems	6.2%
Treatment & environmental systems	3.3%
Janitorial	25.5%

Data courtesy of:

CBRE
CB RICHARD ELLIS

International Facilities Management Institute

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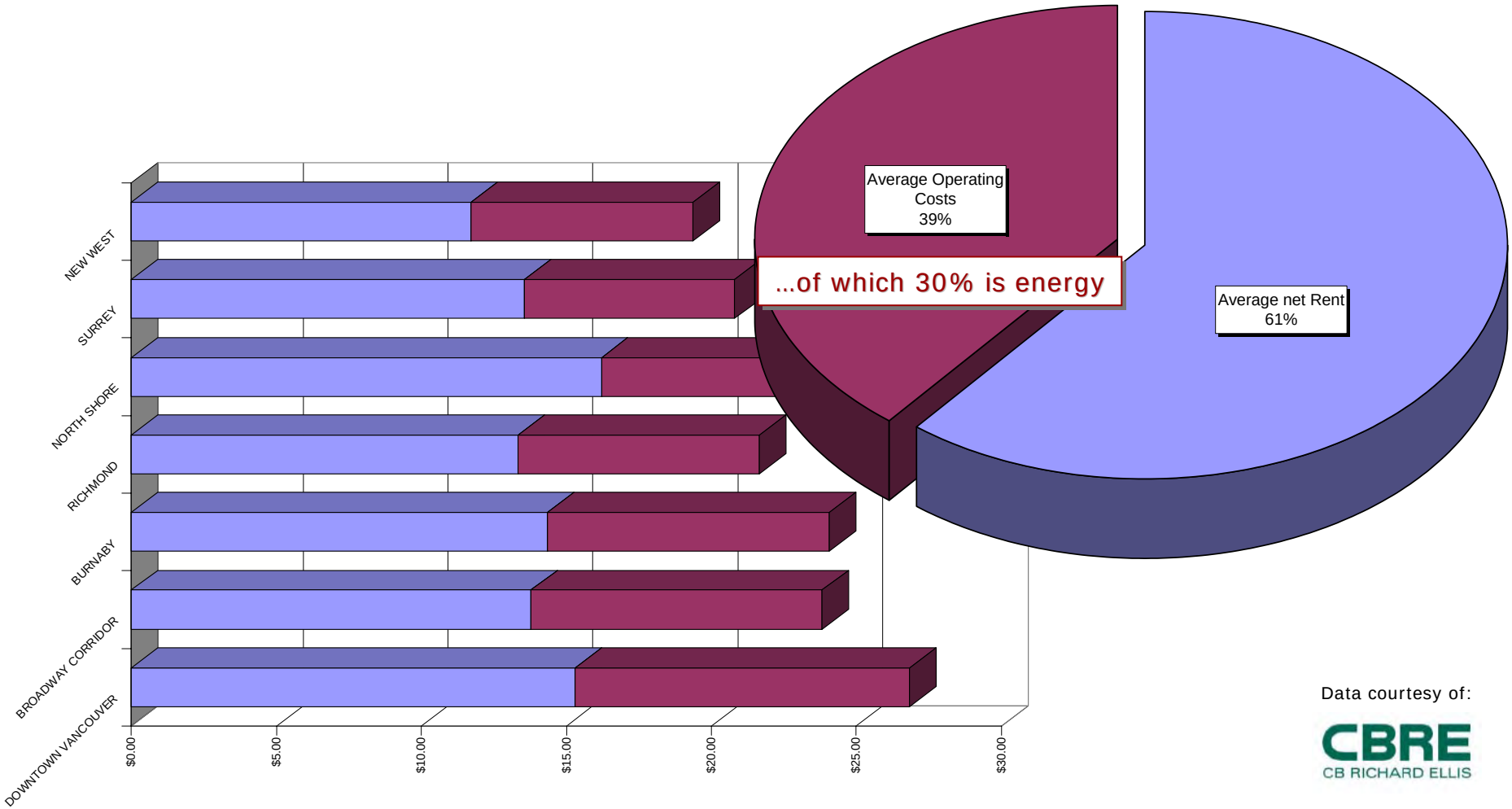
Green Priorities: How Big are Operating Costs



Data courtesy of:

CBRE
CB RICHARD ELLIS

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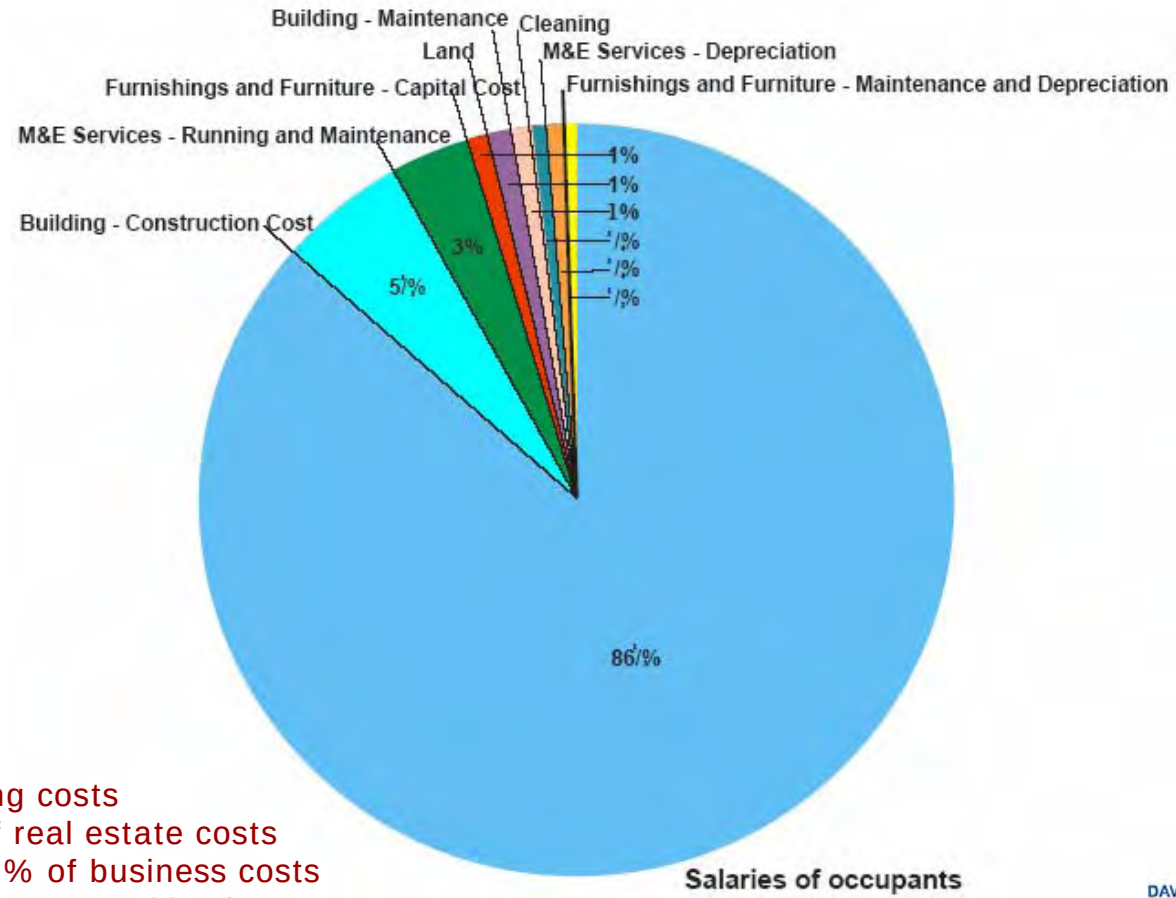
Green Priorities: The Total Costs of Business



CONTEXT

Energy = 30% of operating costs
Operating costs = 39% of real estate costs
Real estate costs = 10-15% of business costs
20% energy savings = 0.2-0.6% of business costs
Figures are typical, & vary depending on location and other factors

Data courtesy of:

DAVIS LANGDON

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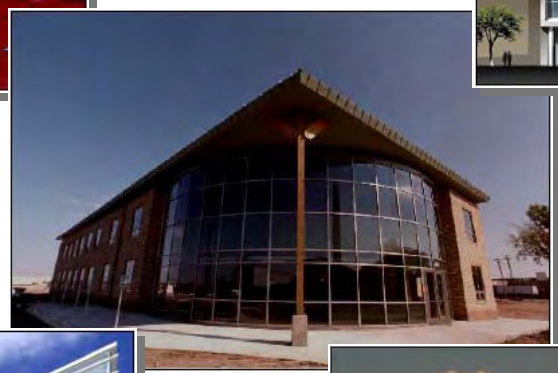
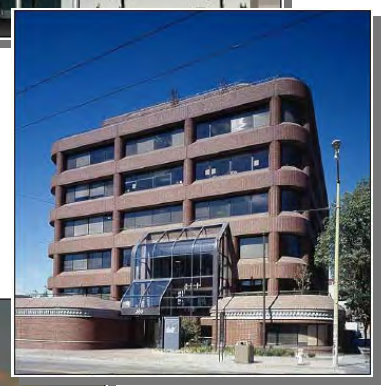
Green Value Projects





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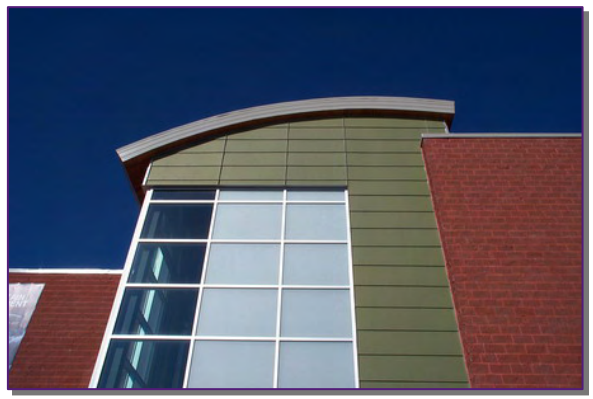
The Benefit to Asset Value

- Main green building benefits affecting value
  - Attract tenants more quickly (i.e. absorption)
  - Higher rents and prices
  - Reduced tenant turnover (i.e. vacancy)
  - Cost less to operate and maintain
  - Reduced fitting-out costs (i.e. TI's)
  - Lower internal move costs (i.e. churn)
  - Increased productivity

Vancouver Island Technology Park, BC

Examples of Green Value I

- Pennsylvania Power and Light conversion's power savings:
  - Traditional: 4.1 yrs payback, 24% ROI
  - Green Value: 69 days payback, 540% ROI
  - Difference: Absenteeism and productivity benefits
- Reno Post Office upgrade:
  - Improved productivity gains paid for the $500,000 renovation in under a year
  - Annual energy savings a 'free bonus'



Mountain Equipment Co-op, Montreal

Examples of Green Value II

The Solaire, New York

- Hyde Tools' new lighting improves quality control
  - $1 savings = $10 in improved sales
  - Retrofit worth $250,000 extra sales annually
  - Value far exceeding fuel savings
- VITP LEED® Gold benefits
  - Analysis shows 30% productivity increase
  - Leases when competing development does not
- City of Victoria Police
  - RCMP headquarters close: VOCs infiltrate from adjacent development

The Green Value Business Case

"A study by Sheffield University for NHS Estates compared patient outcomes in a newly refurbished orthopaedic unit at Poole hospital with those in a 1960s conventional ward.

*The study found that patients treated on the refurbished ward required less analgesic medication than those on the older ward. **Patients** not undergoing operations were **discharged** significantly more quickly from the newer ward – after 6.4 days compared with 8.1 days."*

The Value of Good Design – CABE 2002

Math

8.1 days ÷ 6.4 days = 79%
79% = 21% cost equivalent reduction
BC Ministry of Health = $11bn/year
$11bn x 21% = $2.31bn savings/year!
...potentially.

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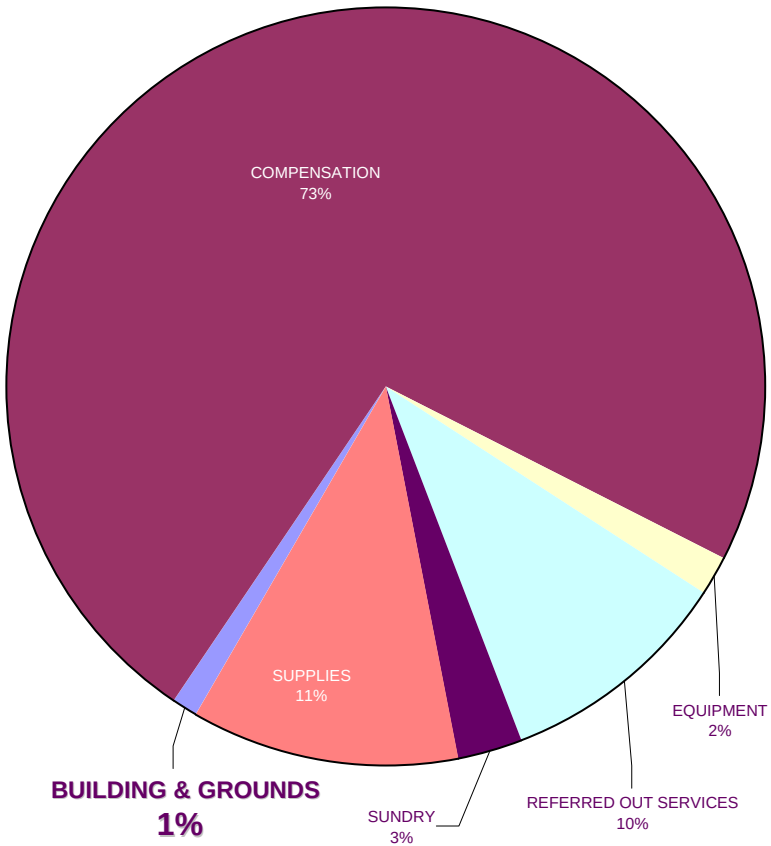
Green Value: The Priority



Typical BC Health Authority, 2001-2

- What's the priority?
  - The environment?
  - Society?
  - Energy, life cycle or costs?
- Productivity
  - Benefit is to the *occupier*
    - There *is* added value
    - Added value *can even exceed the value of the asset*
  - Competitive advantage
- The focus has to change

Green Value Barriers

- Assumption that it costs more to build green
- Outreach awareness & education
- Knowledge, research and resources not widespread
- Green strategies are not widely understood
- Steep learning curve
- Construction companies lack experience
- Perception of risk amongst developers, lenders
- Not seen as a business benefit & paradigm shift
- Shortage of engineers with suitable experience
- Lack of incentives for owner-investors
- Savings/benefits unlinked from the investor/landlord
- Leases don’t take account of green issues
- Insufficient understanding of value & appraisal
- Outdated regulations

Green Value Recommendations

- 21 recommendations including…
  - Reconsider priorities for communicating Green Value
  - Strengthen the Third Bottom Line: Economics. It is more than just cost savings
  - Review how financial aspects can be enhanced, evaluated & communicated
  - Collect better evidence, make it widely available and target communicating the advantages in *financial* terms to the public and businesses
  - Involve lenders, appraisers, realtors & developers more cohesively. Use value in Integrated Design *prior* to audit
  - Improve and integrate green rating systems/standards, with improved accounting and valuation standards

Green Value Conclusions

- Plenty of contradiction, myth & fact
- Financial & real estate sector conclusions
  - Real estate value benefits from building green
  - The sector is not yet engaged … but is pivotal to success
- The green buildings sector may:
  - Want to reconsider priorities
    - Focus on productivity, businesses, occupiers
  - Focus on Green Value: the green business case

Cranberry Commons, BC

Green Value

- Resources available online
  - Summary Findings
  - Report
  - Detailed Case Studies

www.rics.org/greenvalue

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Ideas + buildings
that honor the
broader
goals of society

Green Value: Design Industry Perspective

Peter Busby, Busby Perkins+Will

November 9, 2005

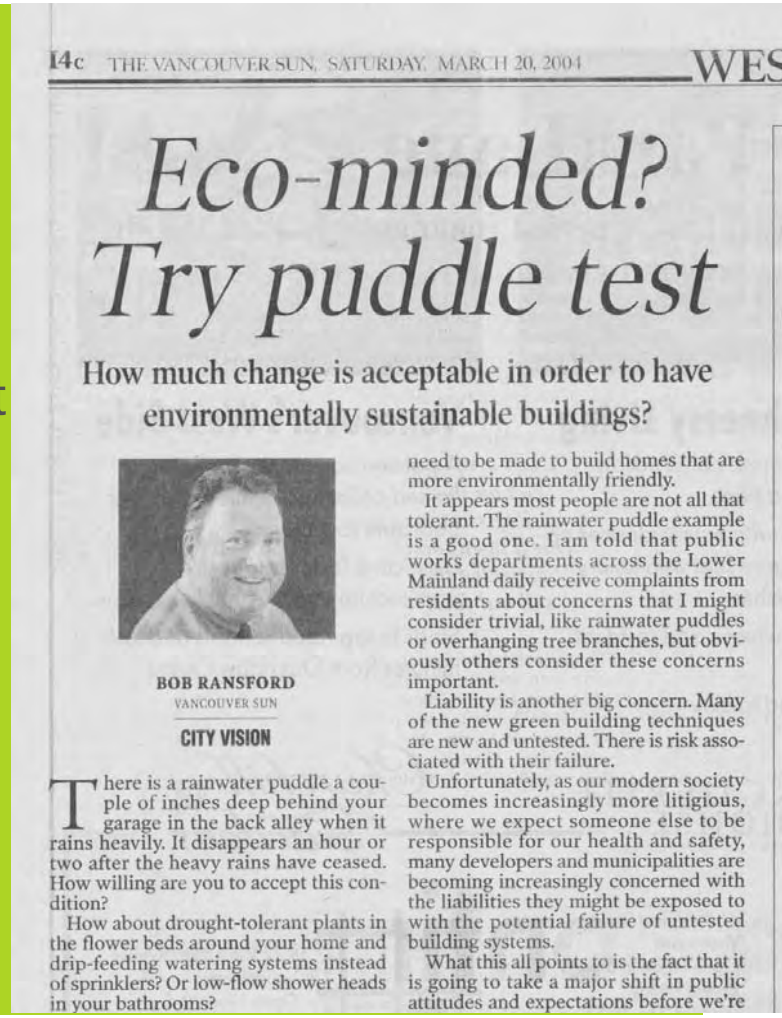
Presentation Outline

- Exploration of theoretical linkages
- Literature review themes
- Conclusion of literature review
- Design industry perspective

Theoretical Linkages

Theoretical linkages with green buildings:

- Quicker to secure tenants
- Command higher rents or prices
- Lower tenant turnover
- Cost less to operate & maintain in most cases
- Attract grants, subsidies and other inducements
- Improved business productivity for occupants
- Benefits occupants to an extent may even exceed the underlying asset's value



14c THE VANCOUVER SUN, SATURDAY, MARCH 20, 2004 WES

Eco-minded? Try puddle test

How much change is acceptable in order to have environmentally sustainable buildings?

BOB RANSFORD
VANCOUVER SUN

CITY VISION

There is a rainwater puddle a couple of inches deep behind your garage in the back alley when it rains heavily. It disappears an hour or two after the heavy rains have ceased. How willing are you to accept this condition?

How about drought-tolerant plants in the flower beds around your home and drip-feeding watering systems instead of sprinklers? Or low-flow shower heads in your bathrooms?

need to be made to build homes that are more environmentally friendly.

It appears most people are not all that tolerant. The rainwater puddle example is a good one. I am told that public works departments across the Lower Mainland daily receive complaints from residents about concerns that I might consider trivial, like rainwater puddles or overhanging tree branches, but obviously others consider these concerns important.

Liability is another big concern. Many of the new green building techniques are new and untested. There is risk associated with their failure.

Unfortunately, as our modern society becomes increasingly more litigious, where we expect someone else to be responsible for our health and safety, many developers and municipalities are becoming increasingly concerned with the liabilities they might be exposed to with the potential failure of untested building systems.

What this all points to is the fact that it is going to take a major shift in public attitudes and expectations before we're

Literature Review

Analysis:

- Reviewed over 300 technical papers, books, and articles on green building design
- Extracted key themes
- Analysis presented based on a triple bottom line approach
- Full bibliography is available www.rics.org/greenvalue

Approach: Triple Bottom Line

Environmental Value

- unlikely to show up on a balance sheet or income statement
- hard to quantify in the short run
- need for government agencies:
  - remove regulatory and legal barriers
  - coordinate federal and local cleanup and redevelopment efforts
  - understand potential environmental & economic benefits for their constituents

C.K. CHOI BUILDING, UBC, VANCOUVER, B.C., CANADA

- Property Type: Educational Building
- Owner/ Occupier: UBC (Institute of Asian Research)
- Completion: October 1996
- Area: 29,321 sq. ft. (gross)

- Project successes:
  - same original construction budget as a conventional building
  - 69% reduction in electricity usage compared to ASHRAE standards, high recycled content in building materials
  - positive impact on enrollment and University's reputation

THE LIU CENTRE, UBC, VANCOUVER, B.C., CANADA

- Property Type: Educational Building
- Owner/ Occupier: UBC (The Liu Centre for the Study of Global Issues)
- Completion: September 2000
- Area: 18,800 sq. ft. (gross)

- Project successes:
  - significant recycled content in building materials (92% reused)
  - operating costs are lower than for conventional construction
  - less constrained capital budget as benefits of Green Building already demonstrated by CK Choi Building

Economic Value

- Literature focussed on cost not value
- First costs (large range) (capital costs or premium) is first hurdle
  - 0%
  - 1-7%
  - 5-10%
  - up to 14% (as estimated by experienced green building executives)
  - 20% (as estimated by inexperienced green building executives)
  - Comprehensive Kats report: average 2% premium
  - Davis Langdon: no difference in first cost premium between green buildings and non-green buildings; depends on program
- Payback: Time period differs according to features
- Rapid payback due to decreased personnel and O&M costs

VANCOUVER ISLAND TECHNOLOGY PARK, VICTORIA, B.C., CANADA

- **Property Type:** Office Building (multi-tenant)
- **Owner/ Developer:** BC Buildings Corporation (recently sold to University of Victoria)
- **Tenants:** Various (approx. 95% leased)
- **Completion:** 2001 (redevelopment)
- **Area:** 184,000 sq. ft. (gross) on 35 acres

- Project successes :
  - One tenant experienced 30% increase in worker productivity
  - Marketing success, turnover of space (vacancy) and reduction in internal fit-out costs (churn) all exceeded expectations
  - Savings in water and energy consumption resulted in lower operating costs compared to other conventional properties

CRANBERRY COMMONS, NORTH BURNABY, B.C., CANADA

- Property Type: Residential co-housing
- Owners: Cranberry Commons Co-housing Development Corporation
- Tenants: Individuals
- Completion: October 2001
- Area/ Units: 26,662 sq. ft. (gross), 22 units

- Project successes:
  - Marketing success, level of absorption of space ongoing maintenance & turnover of space exceed expectations by 11-20%
  - Yield (rate of return), operating and ongoing maintenance costs have all exceeded expectations by 6-10%
  - Sale price, ongoing operating and maintenance costs and turnover of space (rate of resale) were all felt to be the most important items contributing to the financial performance

Social Value

Social Value ("soft" benefits): more data required

- Increased productivity (yields economic benefit)
  - Daylighting
- Enhanced health, well-being
  - IAQ
- Higher academic achievement
- Higher morale
- Reduced absenteeism
- Image
  - Embody a company's ethos; symbolic appeal
- Need tracking, documentation

A.J. LEWIS CENTRE FOR ENVIRONMENTAL STUDIES, OBERLIN COLLEGE, OHIO, USA

- Property Type: Educational Building
- Owner/ Occupier: Oberlin College (Environmental Studies Program)
- Completion: 1998
- Area: 13,600 sq. ft. (gross)

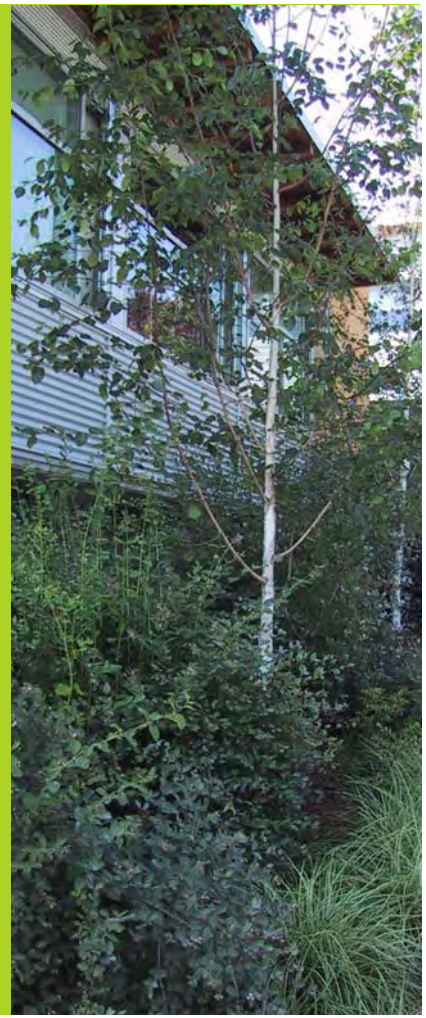
- Project successes:
  - Only uses 33% of the electricity of other buildings on the campus
  - Operating costs exceeded expectations, positively, with greater savings than anticipated
  - Enrollment has increased and significant positive publicity was achieved for the College

Literature Review Conclusions

- Literature has not moved beyond identifying financial and environmental benefits
- Life-cycle cost analysis is required to make the linkage between asset value and green building features
- Integrated design approach / whole systems approach recommended to reduce first costs
- More data is required on how green buildings operate in the market place
- Need adequate documentation and tracking, especially for soft benefits

Literature Review Conclusions

- Financial indicators are incomplete and need to address social and environmental implications
- Real estate industry must become more sustainable
- Valuation of green buildings must be driven by clients or the industry
- Relationship between asset value and green building features is nascent and inconsistently assessed
- Greater value exists than is being claimed



Design Industry Perspective

Challenges

Challenge

Opportunity

Design Industry Perspective

Opportunities

Challenge

Opportunity

Case Study:
Dockside Lands Development
Victoria, BC

Dockside Lands Development

- Size: 1m sf multi use
- LEED Goal: Platinum
- Client: Windmill Development and Vancity Enterprise

Triple Bottom Line Approach

Environmental	Economic	Social
▪ GHG neutral ▪ Brownfield remediation ▪ Noise, air pollution mitigation ▪ On-site wastewater, stormwater management ▪ Potable water use reduction ▪ Green roofs, landscaping ▪ Alternative transportation ▪ Education program	▪ Responsibility for remediation ▪ New jobs ▪ Local business ▪ Bio-diesel, waste wood facilities ▪ Infrastructure costs ▪ Open space, reduced municipal costs	▪ New urbanism ▪ Mixed-use ▪ Affordable ▪ Streetscape ▪ Public space ▪ Public art ▪ 2-1 density



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Ideas + buildings
that honor the
broader
goals of society

Green Value – Literature Review Findings

Peter Busby, Busby Perkins+Will

November 9, 2005

Green Value Study
Presentation to Green Build

Philip Smith, Vice President
Cushman & Wakefield LePage

November 9, 2005

CUSHMAN & WAKEFIELD®

Presentation Outline

- Why another study?
- Study objectives
- Work plan completed
- Work plan challenges
- Case study examples
- Cost vs. Value
- Value to who?
- Valuation methodologies
- Assessment of financial benefits
- Assessment of non-financial benefits
- Conclusions and recommendations
- Questions

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Work Plan Completed

- Multi-disciplinary team – led by valuation experts and real estate analysts (Cushman & Wakefield LePage, formerly Royal LePage Advisors), green building architects (Busby, Perkins + Will) and green building consultants/developers (Build Green Consulting)
- Literature and best practices review (over 300 texts reviewed)
- Detailed survey of key stakeholders (owners and occupiers) involved in 12 green building developments or renovations across North America, representing a range of locations and property types
- Parallel study completed by DTZ in the United Kingdom, comparing residential properties (3 green and 3 conventional)
- Summarized key conclusions and recommendations

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Work Plan Challenges

- Small sample size
- Limited financial data
- Confidentiality of data
- Relatively short green building history
- Difficulty of locating “non-green” comparables

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Case Study Examples - Locations

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Green On The Grand, Kitchener, Ontario, Canada

Property Type:	Office Building (multi-tenant)
Owner/ Developer:	Ian Cook Construction
Major Tenant:	Enermodal Engineering
Completion:	March 1996
Area:	23,573 sq. ft. (gross)
Awards:	Canadian C2000 Design Competition

- Rent, yield (rate of return), marketing success and level of absorption of space all exceeded expectations
- Overall construction costs were less than typical office building
- Operating costs and ongoing maintenance costs were much higher than expected

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SAS Building, Toronto, Ontario, Canada

Property Type:	Office Building (Multi-Tenant)
Owner/ Developer:	SAS Institute (Canada) Inc.
Major Tenant:	SAS Institute (Canada) Inc.
Completion:	Late 2005 (under construction)
Area:	115,000 sq. ft. (gross)
Designations:	LEED Certified (proposed)

- Projected energy consumption of 30-50% less than a comparable building of typical design
- Development of the property based on a comparison of occupancy costs over a 10 yr time frame
- Green building is consistent with SAS Institute's core corporate values

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2465 Don Reid Drive, Ottawa, Ontario, Canada

Property Type:	Office Building (single tenant)
Owner/ Developer:	The City of Ottawa (Land Owner) Forum Leasehold Partners Inc. (Land Lessee and Developer)
Major Tenant:	City of Ottawa (Ottawa Paramedics Services)
Completion:	December 2005 (under construction)
Area:	100,000 sq. ft. (gross)
Awards:	LEED Certified (anticipated on completion)

- Targeting energy use reduction of 25-30%
- Public-private partnership with 30 year leaseback to City of Ottawa
- 3-5% premium in construction costs, including 1% for LEED certification, partially offset by $60,000 grant but all reflected in rent

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260 Townsend Street, San Francisco, California, USA

Property Type:	Office Building (single tenant)
Owner/ Developer:	Swinerton Family of Companies / Swinerton Builders
Major Tenant:	Swinerton Family of Companies
Completion:	1986, renovated and upgraded with Green features in 2002.
Area:	66,947 sq. ft.
Awards:	LEED-EB Gold, CORY Award – 1st Place for Occupant Recycling, Transportation award from City of San Francisco

- 4 year payback on initial incremental capital cost of green features, based on operating cost savings
- Operating costs, ongoing maintenance costs and reduction in internal fit out costs all exceeded expectations (i.e. lower than expected)

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Mountain Equipment Co-op Building, Montreal, Quebec, Canada

Property Type:	Retail Building (single tenant)
Owner:	BCIMC (recently acquired the property from Fiducie immobiliere MCM)
Developer:	Mountain Equipment Co-Op.
Major Tenant:	Mountain Equipment Co-Op.
Completion:	May 2003
Area:	48,438 sq. ft. (gross). (Marche Central complex is 1 million square feet with 50 retail units on 98 acres)
Awards:	Natural Resources Canada C-2000 designation. No LEED designation, but used LEED as a guide

- Operating costs and ongoing maintenance costs met expectations (although too early to tell)
- Building green driven by corporate ethic/ organizational importance, not the financial aspects
- Self development mitigated capital costs

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Phillips Eco-Enterprise Centre, Minneapolis, Minnesota, USA

- Construction costs approximately 3% higher than conventional, but rents also 5-10% higher
- Payback achieved on incremental capital costs through lower operating costs & higher productivity
- Lease-up achieved in two years rather than the three originally projected

Property Type: Industrial/Office Building

Owner/ Developer: The Green Institute (Owner), Corey Brinkema (Developer)

Major Tenant: Various (18 tenants)

Completion: August 1999

Area: 64,000 sq. ft. (gross)

Awards: Top 10 in Environmentally Responsible Design (2000), Energy Star Award (2000); the Minnesota Environmental Initiative Award (2001), Grand Award (2001), Best in Real Estate (1998), the National Award for Environmental Sustainability (1998); and the Bremen Partnership Award (2001)

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The Solaire, New York City, New York, USA

Property Type:	Residential Apartment Building
Owners:	Albanese Organization Inc. and Northwestern Mutual Life Corporation
Tenants:	Individuals (578 people)
Completion:	August 2003
Area/ Units:	357,000 sq. ft. (gross), 293 units
Awards:	USGBC LEED-NC Gold, Green Building Challenge – Level: 2.0

- Achieved rents that were 5% higher than market, largely as a result of better air quality
- Project leased up in only 6 months, lower operating costs than conventional buildings
- Rent, marketing success, yield (rate of return), level of absorption, construction costs and operating costs all exceeded expectations. Positive publicity was also a major benefit

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Cost vs. Value

- Cost does not equal value
- Higher initial capital costs do not necessarily mean lower capital values
- Lower operating costs do not necessarily mean higher capital values
- Distribution of costs and benefits of green building varies significantly
- Green Value has to take a broader perspective

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Value to Who?

- ***Developers –*** take initial development risk and finance construction costs, short term objective to maximize returns on equity, benefit from faster lease-up and higher rents

- ***Owner/Investors –*** seeking long-term stable returns, higher rents, lower operating costs (especially gross leases), higher tenant retention and lower ongoing capital all contribute to higher values

- ***Owner/Occupiers –*** seeking healthier work/living environment, higher employee retention, higher productivity, lower operating costs and lower ongoing capital costs

- ***Tenants –*** seeking healthy and productive work environment, higher employee retention, lower operating costs (especially net leases), lower rents

- ***Financiers –*** take long term risks with their capital, long term objective is greater security of collateral, stability of income/debt service, long term value increases and mitigation of re-financing rate

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Valuation Methodologies

- ***Direct Comparison Approach –*** assesses value of the building based on an analysis of recent comparable sales
- ***Income Approach –*** Direct Capitalization and Discounted Cash Flow, capitalizes the income from a building, after deducting the expenses
- ***Cost Approach –*** typically adds depreciated construction costs of the building to market value of the land
- ***Alternate Approaches –*** Triple Bottom Line, Full Cost Accounting, takes a more holistic approach which considers indirect benefits over the full life cycle

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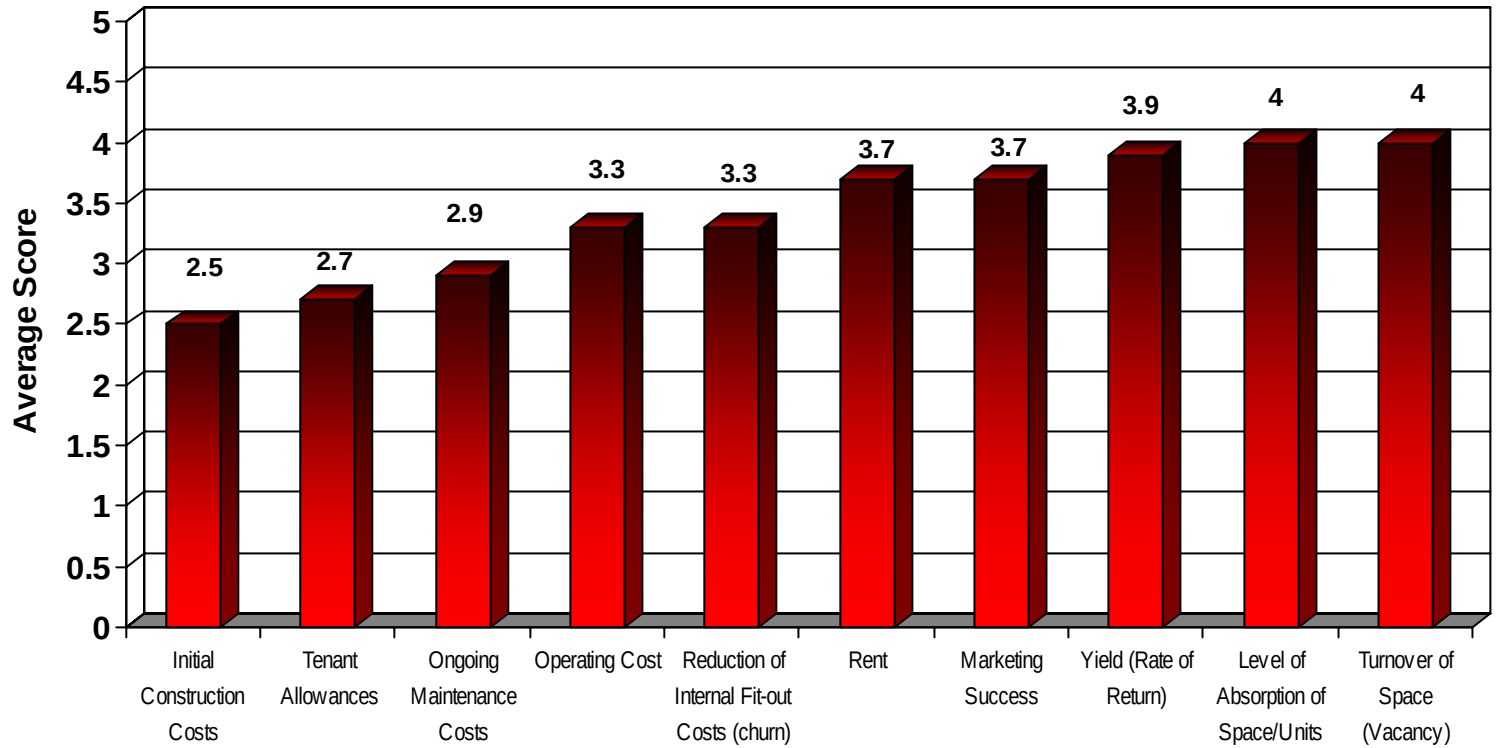
Assessment of Financial Benefits – Survey Results

Question: Do you think the following items have fallen below, met or exceeded your expectations by going green?

1 – Not Met, 2 – Partially Met, 3 – Met, 4 – Partially Exceeded, 5 - Exceeded



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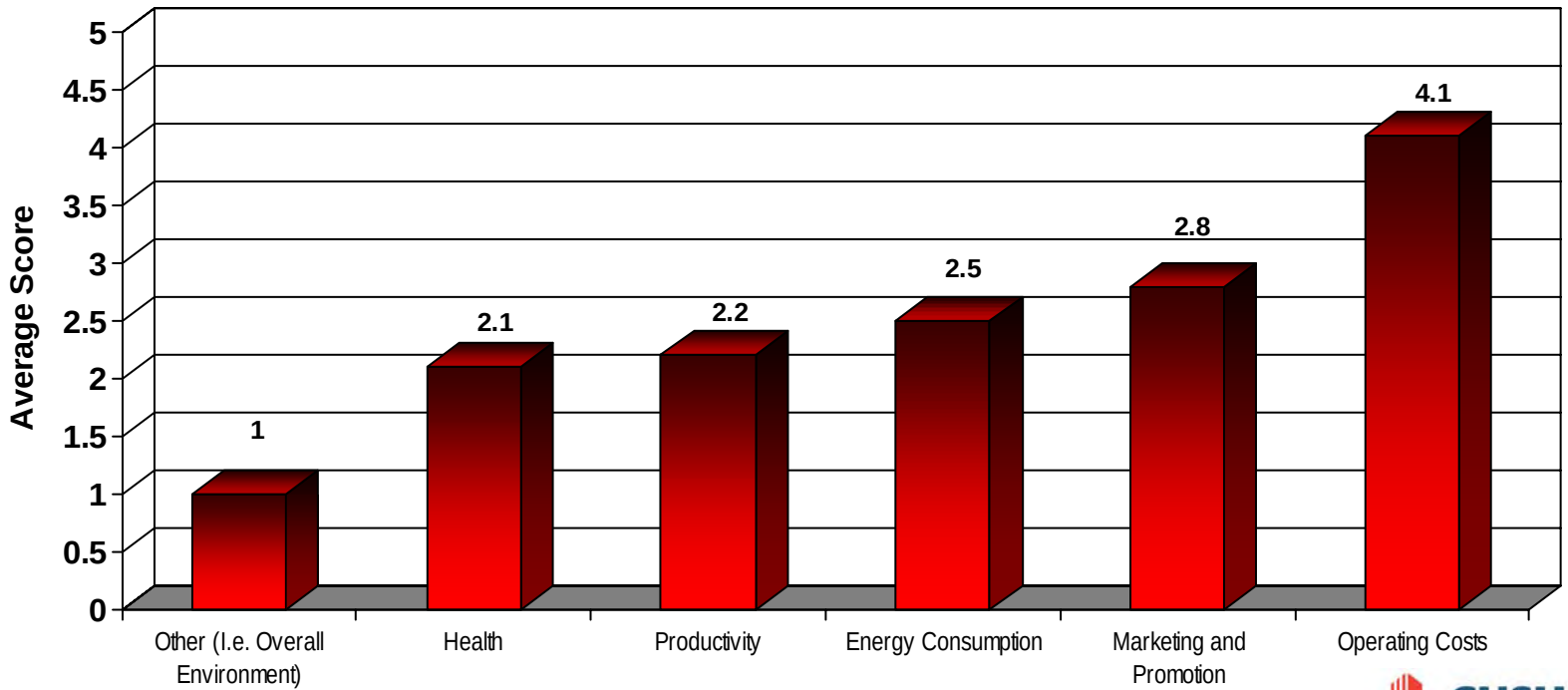
Assessment of Non-financial Benefits – Survey Results

Question: In terms of occupants/tenants, what is your assessment of the net relative direct and indirect financial benefits of the project (i.e. energy consumption, operating costs, health, productivity, marketing and promotion etc.)? Please rank these in order.

1 – Top Ranked, 2 – Second Ranked, 3 – Third Ranked, 4 – Fourth Ranked, 5 – Fifth Ranked



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Overall Conclusions

- "Null Hypothesis" that there is "*no relationship between the market value of a real estate asset and its features and related performance*" has been disproved

- There is still a significant gap in knowledge and understanding between the green buildings industry and the financial industry (valuation sector)

- While the case has clearly been made that green buildings benefit occupiers, the benefit to landlords and investors is less conclusive, Green buildings will be hindered in acceptance by the financial services sector unless the link can be made

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Overall Conclusions (cont.)

- It is imperative that the financial industry and the green building industry work together in order that the financial and non-financial benefits of green buildings can be fully understood and quantified

- Greater investment in research, better education of the key industry stakeholders and more detailed analysis of the financial and non-financial performance of green buildings is all required

- Economic and financial performance is part of the increasingly-used Triple Bottom Line approach and it will benefit if financial inclusion is strengthened

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General Conclusions and Recommendations

- There needs to be greater communication of the financial benefits of green buildings to the financial industry
- Time and labour challenges in collecting data need to be addressed
- Lack of non-green market comparables is an impediment to growth
- There are significant untapped opportunities in the existing building market

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Financial Conclusions and Recommendations

- Mechanisms need to be created to gather financial information on green building performance
- Consistent valuation measures required for green buildings
- Revision of accounting practices
- Better understanding of distribution of costs and benefits is required
- Appropriate valuation of green buildings is required

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Other Non-Financial Conclusions

- Appropriate valuation of social and environmental benefits is required
- Limited post-occupancy feedback is available on green buildings
- Strong ties exist between green buildings and marketing profile
- Regulatory barriers still persist
- Cost and time associated with LEED Documentation and Certification is a disincentive
- There is a relatively small (but growing) market of experienced green design leaders or experts
- Importance of an Integrated Design Process
- Positive impact on communities of green buildings

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Study Details

For additional information on the Green Value Study please visit:

www.rics.org/greenvalue