



Greening on a Shoestring

Mary Ann Lazarus, AIA, LEED
Glenda Abney, MBG EarthWays Center

RCGA: St. Louis Climate Prosperity Project

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DO NOW?



HOW START?

WHERE ARE WE GOING?

WHY TIE?

DO NOW?

- Energy
- Water
- Materials
- Indoor
Environment
- Transport
- Tenant
Engagement



ENERGY - TURN OFF THE LIGHTS!





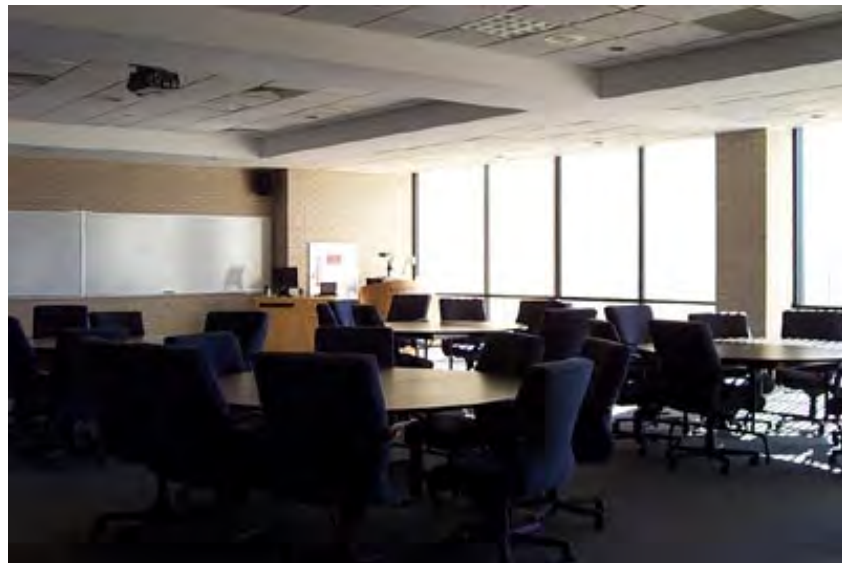
SWITCH TO EFFICIENT ELECTRICAL LIGHTING



Quantity AND Quality



ADD DAYLIGHTING/OCCUPANCY CONTROLS





UPGRADE MEP AND EQUIPMENT

- High performance systems
- Controls
- Zoning
- Energy Star Appliances



Point of Use Water Heater



Direct Digital Control Energy Management

EPA Resource- Quick Tips for Energy Efficiency:
<http://www.epa.gov/cleanrgy/smallbusiness/smallbusiness2.htm>



SAVE WATER



- Low-flow plumbing fixtures
- HVAC equipment and appliances
- Waterless fixtures



MATERIALS: REDUCE, REUSE, RECYCLE, REFUSE



GREEN CLEANING/OPERATIONAL CHANGES





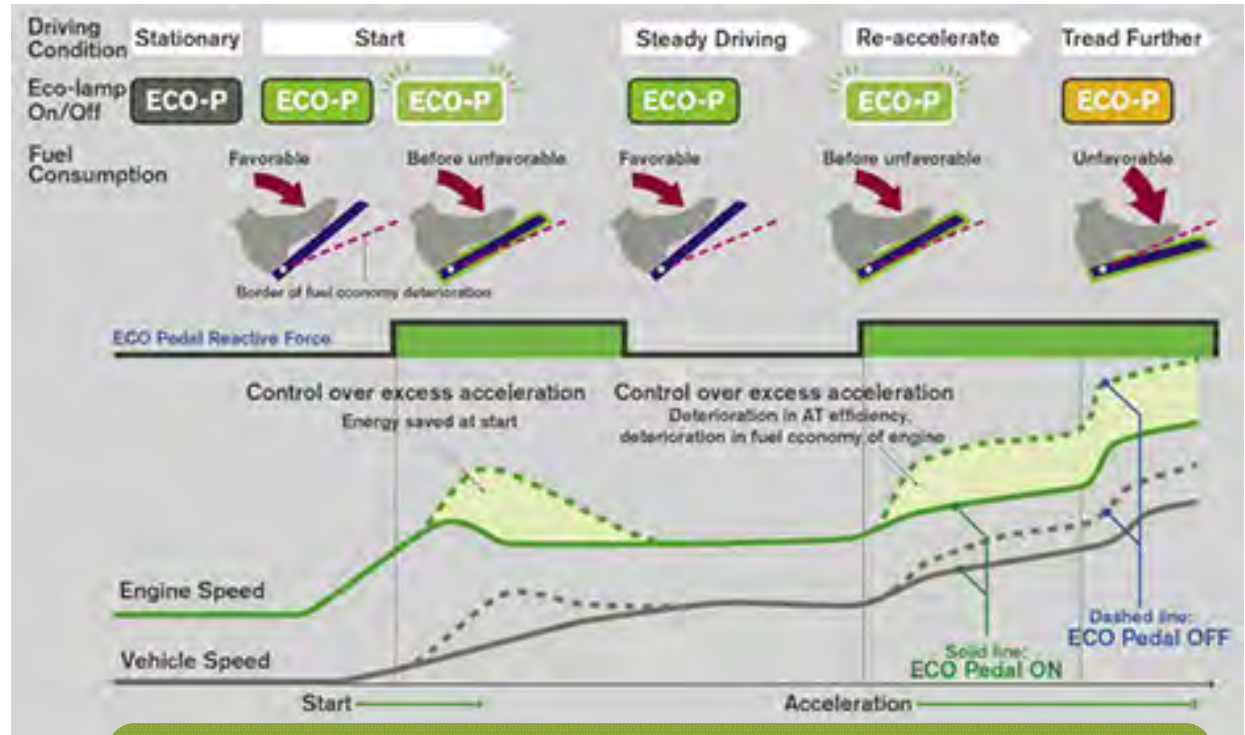
PROMOTE HEALTH AND WELL-BEING



TRANSPORT PROGRAMS



ENGAGE OCCUPANTS!



The impact of **user behavior** can affect energy consumption 20-30%

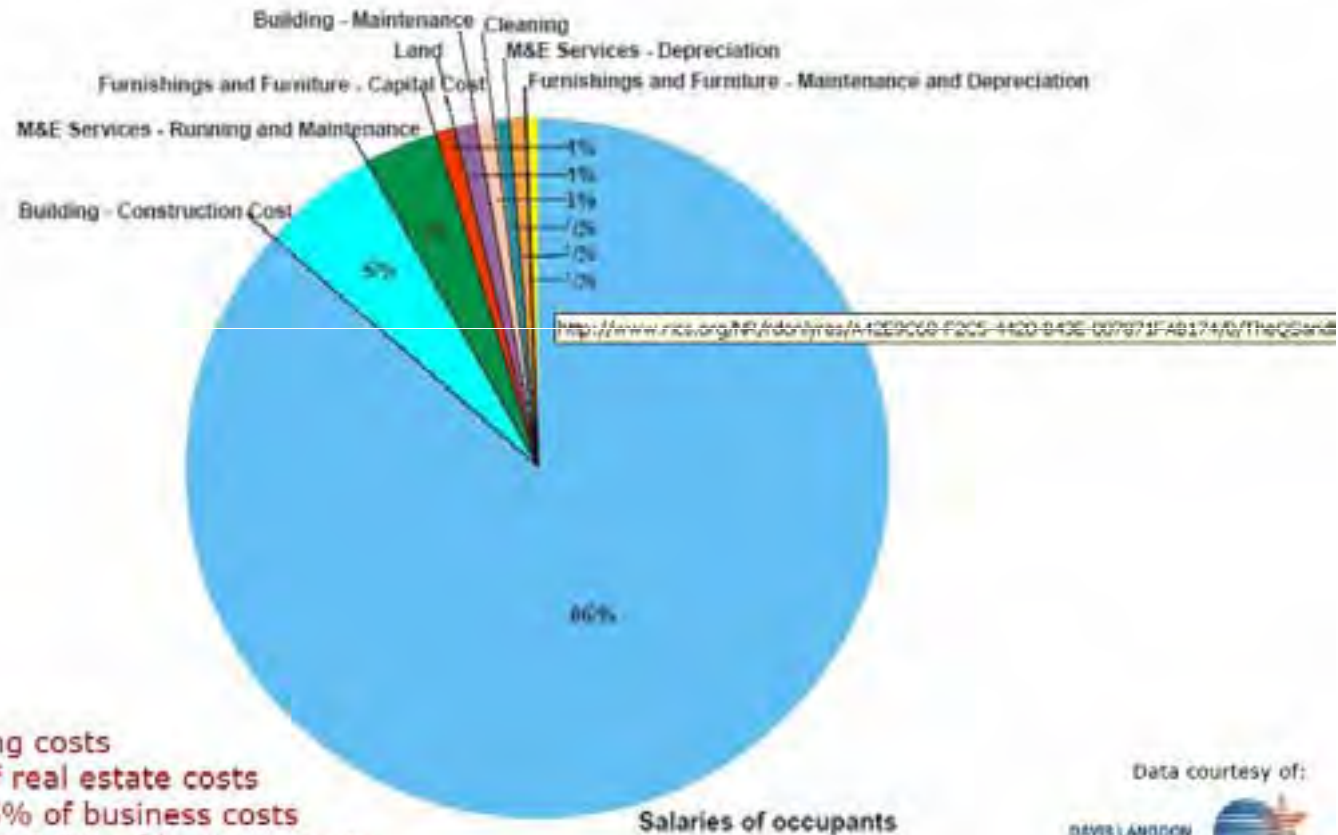
Programs designed to affect user behaviour should incorporate the tools of **social norms, public commitments, prompts** and **communication**

ENGAGE OCCUPANTS!



PRODUCTIVITY MATTERS

Total Building Costs



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

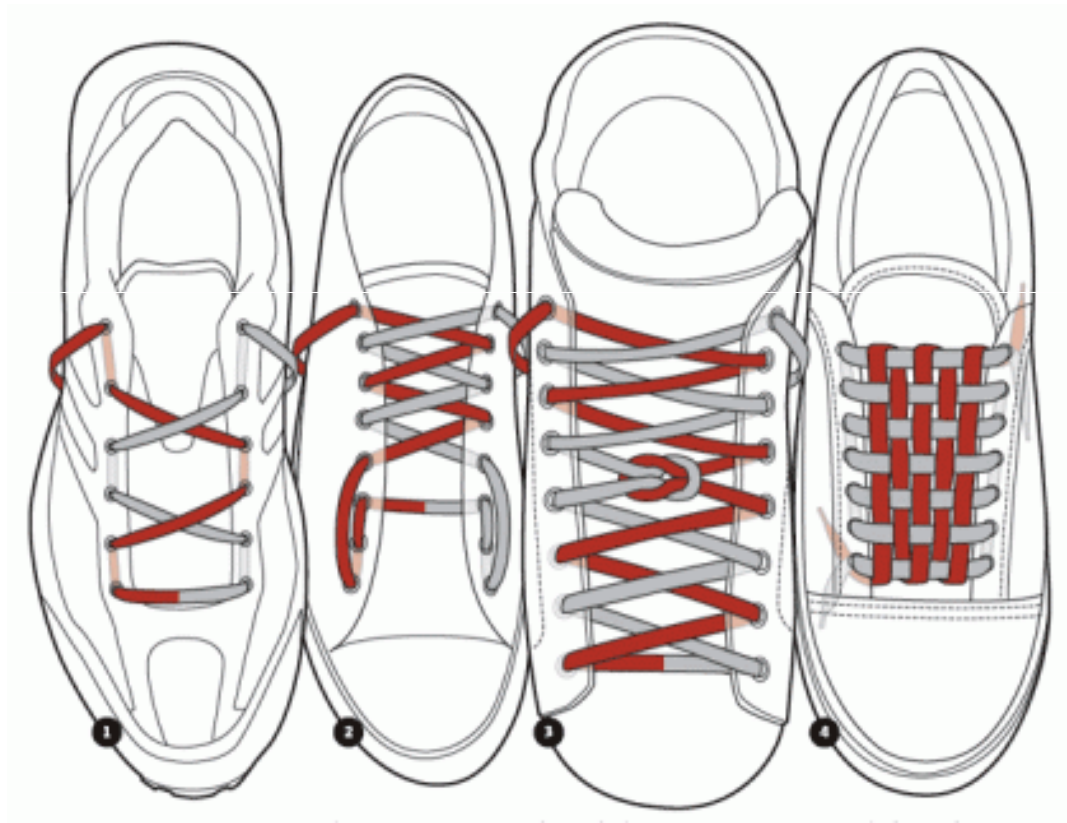
Data courtesy of:
 DAVIS LANGDON







HOW DO I START?





CREATE A SUSTAINABLE BUSINESS ROADMAP



1

Identify Sustainability Commitment. Determine your long term sustainable goals and measurable outcomes. Determine Sustainability Messaging, both internal and external.

2

Establish Green Teams. Commit budget resources, establish recognition system, seek sustainability awards.

3

Assess your current state and the costs/benefits of different approaches in two areas of infrastructure changes and behavior changes (occupant/user engagement program).

4

Develop short term and long term implementation plans, timelines and communications plans. Develop various sustainability policies. Prepare your own Sustainable Business Operations Plan.

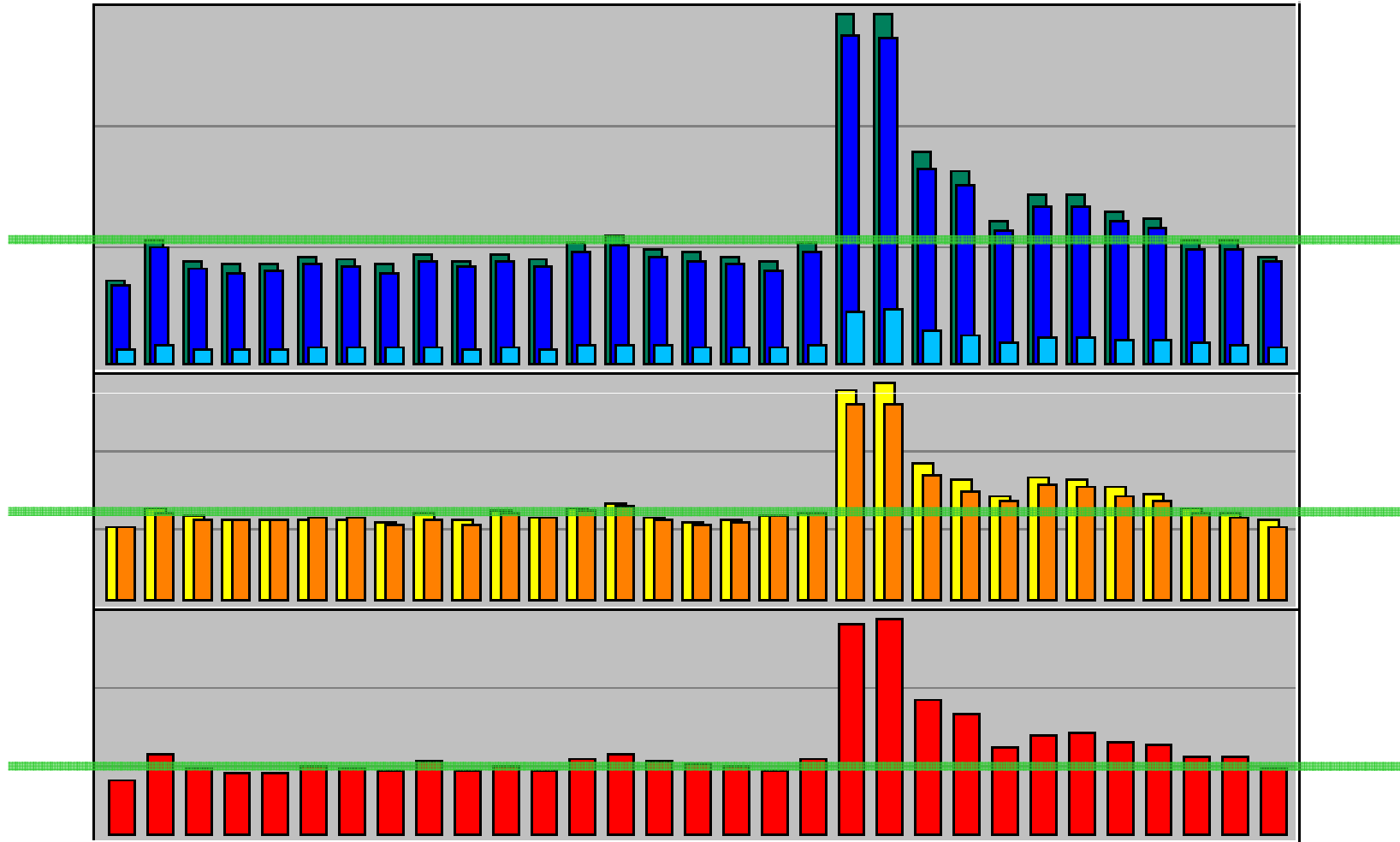
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Implement the plan through pilots and full-scale projects. Evaluate and Measure progress – benchmark + track, make modifications and report results of sustainability strategies. Celebrate sustainability successes.



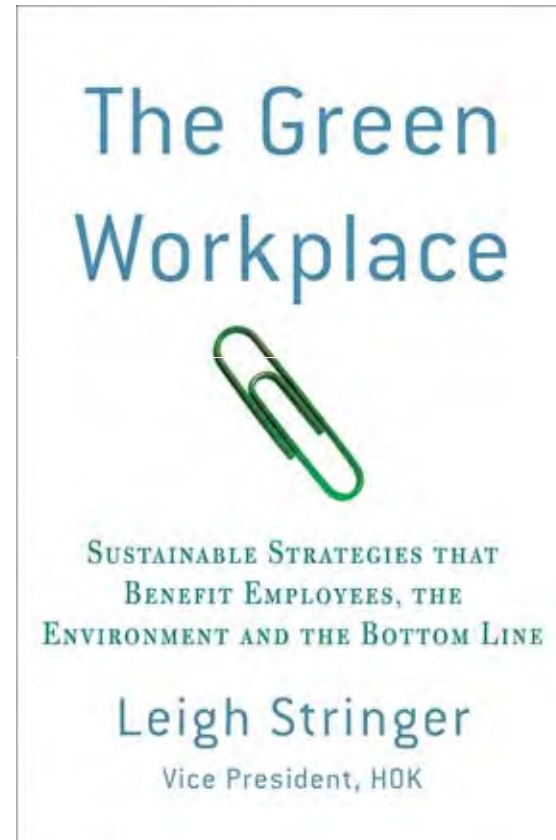


METRICS...





CREATE AN OUTREACH (& INREACH) PROGRAM



SUSTAINABLE OPERATIONS PLAN



Guidelines for:

- Renovations
- Energy
- Water
- Procurement
- Waste Management
- IAQ
- Travel and Commute
- Product Libraries
- Community Outreach
- Innovation

OCCUPANT ENGAGEMENT



for engaging occupants, driving green practices and inspiring enhanced sustainable initiatives among all groups through participation, education and outreach programs

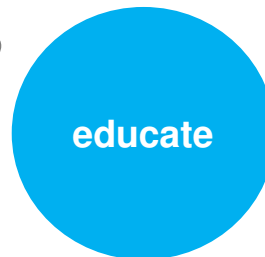
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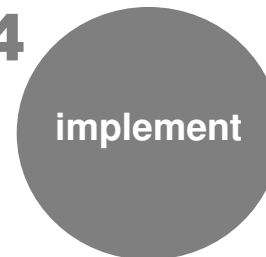
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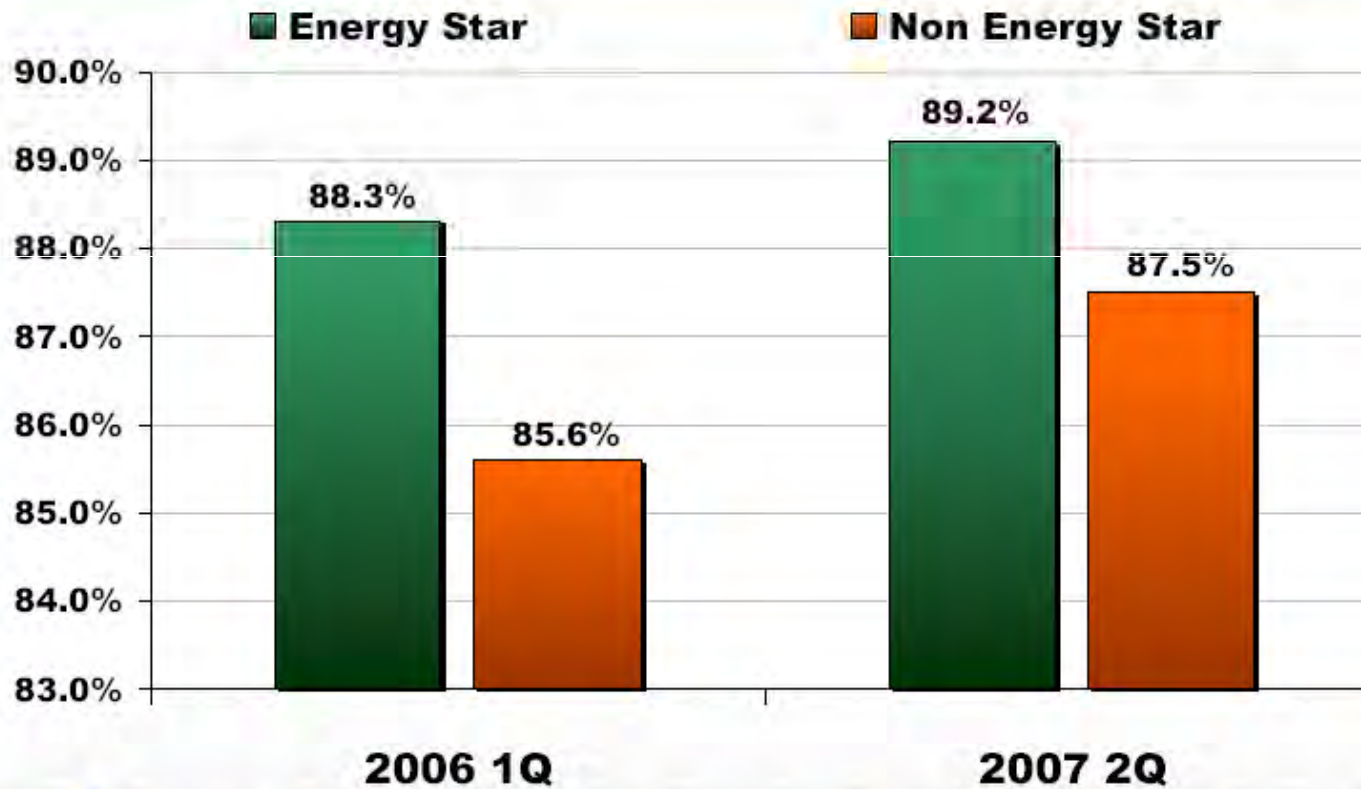


WHY TIE?



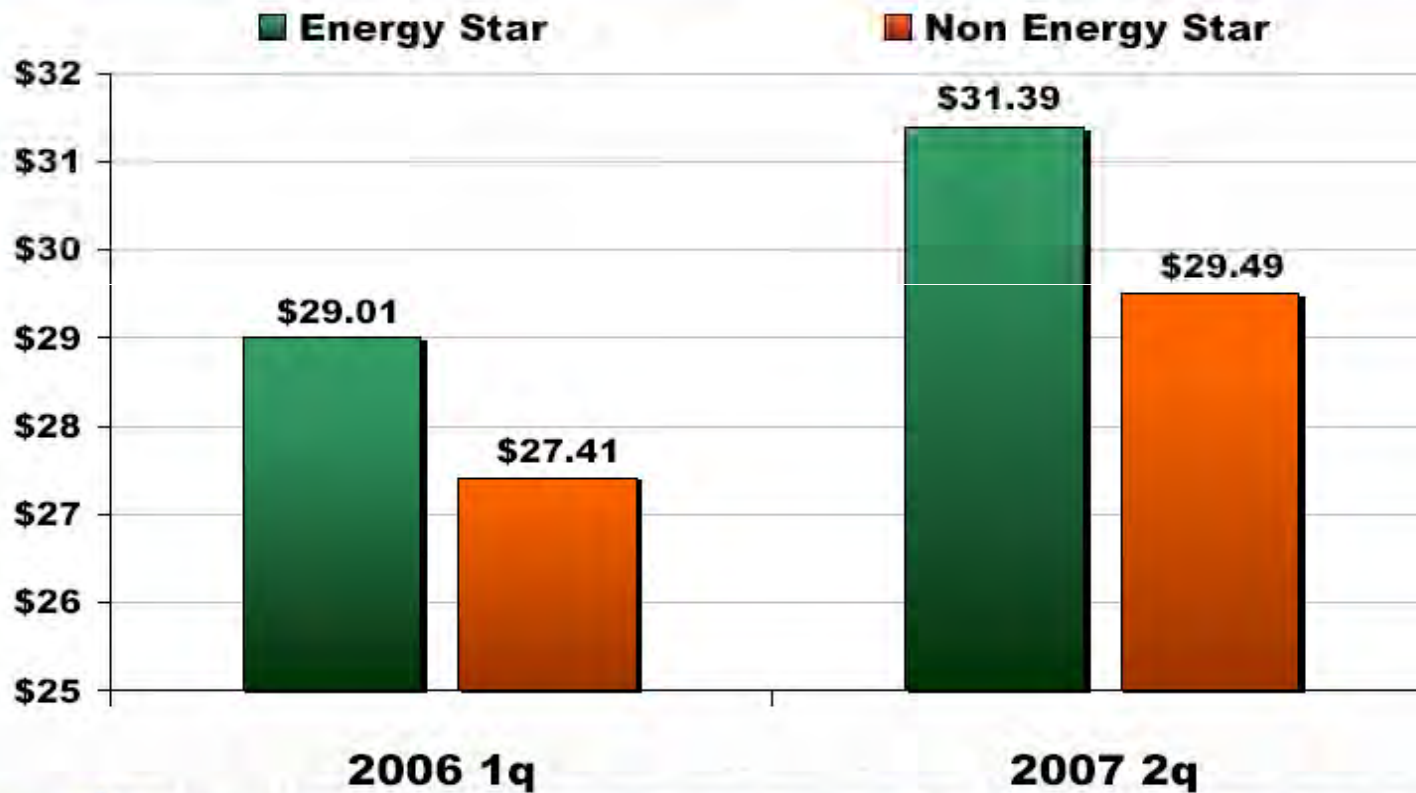
COMMERCIAL REAL ESTATE

What We Found – Occupancy Rates



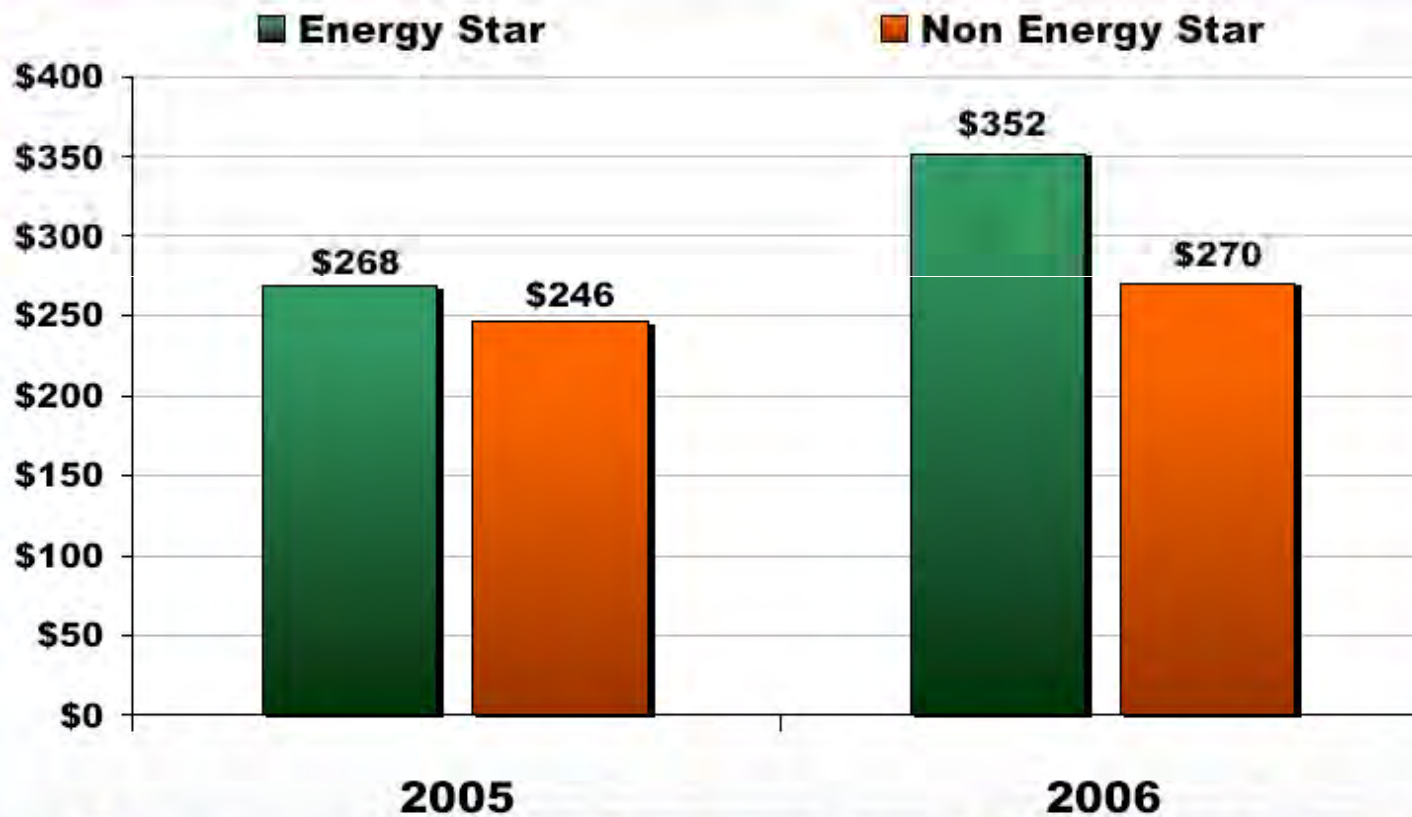


What We Found – Direct Rental Rates





What We Found – Sales Prices / Square Foot



**THE NEXT
GENERATION'S
PERSPECTIVE
WILL INCREASE
GREEN BUILDING**

89% choose brands aligned
with social cause

74% listen to brands aligned
with social cause

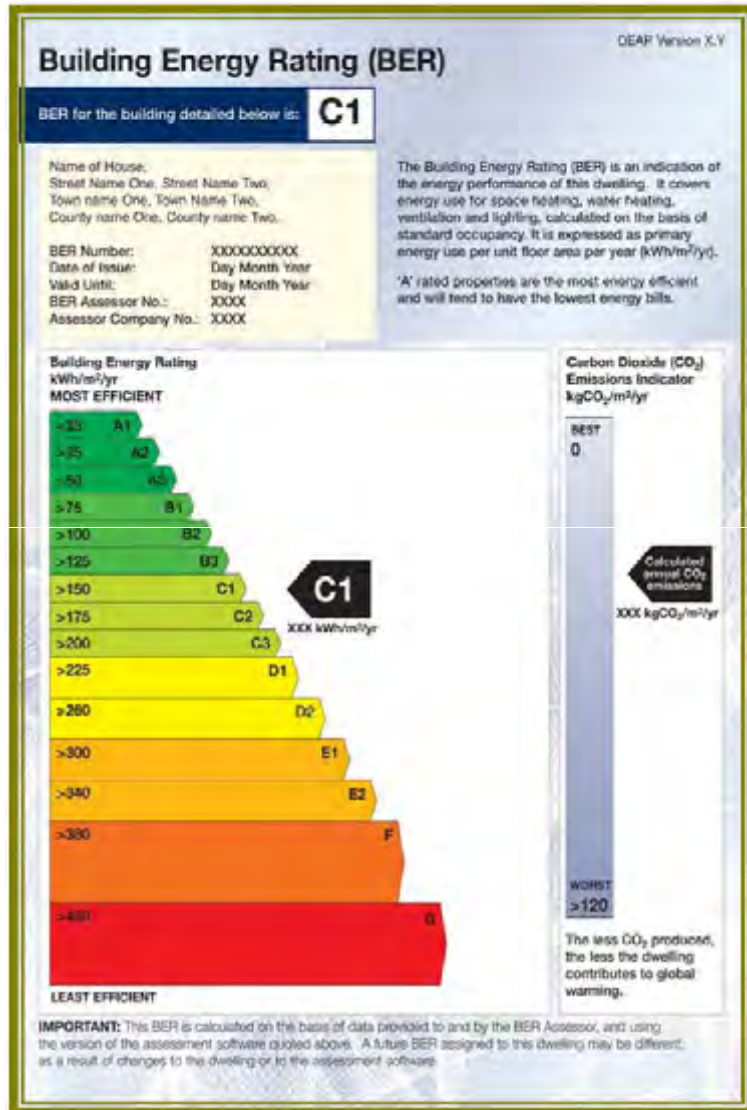
69% shop for brands aligned
with social cause

66% recommend brands aligned
with social cause

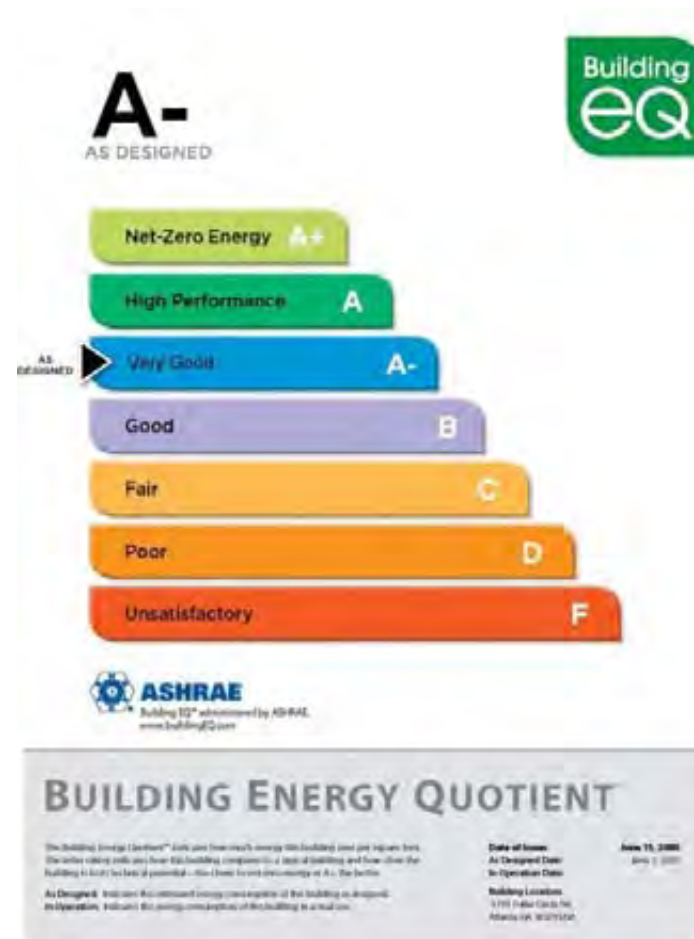


Sustainability influences attraction and retention rates

ENERGY LABELS HERE..COMING



UK Building Energy Rating



ASHRAE Building EQ in development www.buildingEQ.com

CARBON IS THE NEXT CURRENCY



 WHERE ARE WE GOING?



 GREEN LEASE





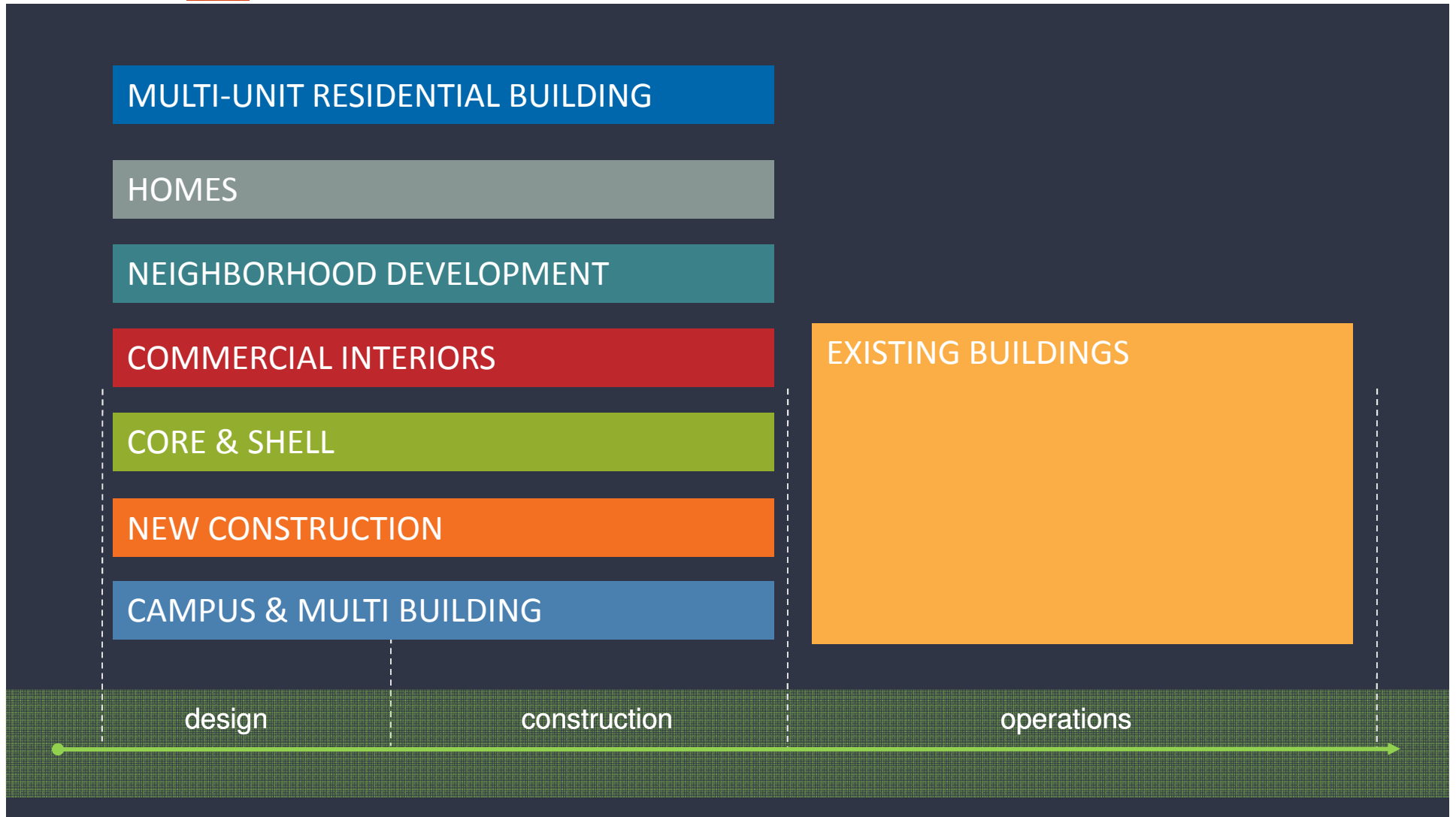
what is LEED-EB



*A method for building owners and operators of existing buildings to implement **sustainable operations and maintenance practices**, and reduce the environmental impact of a building over its functional life cycle.*



what is LEED-EB



LEED-EB → certification



Oxford MetroCentre King Tower
LEED-EB Certified Silver

- | optimized **energy performance** by converting to Enwave Deeplake Water Cooling
- | **commissioned** building systems to identify problem areas of performance
- | waste audit and enhanced waste reduction & recycling program resulted in **73% diversion rate** (a 14% pre-project increase)
- | replaced existing light fixtures to maximize efficiency reducing lighting loads by 20%
- | **low environmental impact cleaning policy** - 99% of products deemed sustainable



LEED-EB → certification



- | currently going through the LEED-EB Process – focus on operations and maintenance
- | multi-year planning effort including measuring and documenting a three month performance period
- | development of new policies: green cleaning; environmentally preferred purchasing; IAQ protection plan
- | upgrades to equipment and development of green equipment/vendors policy and construction waste management policy
- | The Missouri Botanical Garden strives to make the most sustainable choices for the future of people, plants and the planet.



Local Case Studies and Sustainable Business Resources

Disclaimer:

This power point will be on the RCGA website soon, the following pages are simply to show examples of the in-depth level of local interest and the wide variety of resources available to help you!



St. Louis Regional Sustainable Business Case Studies



Non-Profits

- Missouri Botanical Garden: www.mobot.org – Increased building space by 11% while also decreasing energy consumption by 22%; first green-certified restaurant in MO; remodeled auditorium and sent 250 theatre seats to City Museum; recycled over 13 tons of ceiling tiles in conjunction with Parkway School District so they could recycle their smaller quantity of ceiling tiles; demands 100% post consumer recycled paper stock to help drive market; established sustainable guidelines and more
- MBG's EarthWays Center: www.earthwayscenter.org/walktalk.html - a non-profit business case study from their previous, leased location in Maplewood

School Districts

- Parkway School District – used buying power of 28 buildings to negotiate better waste hauling and recycling contract, then convinced hauler to offer same rates to smaller area school districts; recycled literally multiple tons of resources, reduced energy costs
- St. Louis Community College Network – same use of buying power for their multiple campuses, also greened Wildwood campus resulting in LEED plaque

Leased Space Case Studies

- Manchester & 270 Office Center – started greening their leased space in 1987 to offer tenants better options, continue these offerings through today
- HOK – leases 1 floor of downtown building – multiple green aspects to leased space



St. Louis Regional Sustainable Business Case Studies



Small Businesses

- Small Hair Salons – negotiated improved ventilation systems in new lease to increase IAQ
- Murray Print Shop – started around 1990 to convert to all soy inks from solvent based inks, stock mostly recycled content papers; comprehensive recycling program themselves
- Restaurants in Grove Neighborhood on Manchester – grouped together to address recycling of cardboard and beverage containers
- Sappington Market and Produce Row – negotiated food composting pickups from Route 66 Landscape Supply and Composting
- Architectural Firms – developed policy of no disposables for use in meetings with food/drinks available, at first found major resistance when plastic items available, but when changed to nice glasses and dishes that matched the architectural philosophy of the firm they found widespread immediate acceptance

Mid-Large Businesses

- Federal Reserve – Green Teams, new environmentally friendly food service contract with Aramark, decreased food service packaging and increased use of recycled content items, increased recycling
- Wells Fargo, Reuters News Agency, Save A Lot Food Stores Headquarters in Earth City, Blue Cross Blue Shield Headquarters downtown, Monsanto, Emerson, Bunge NA, Enterprise Rent-A-Car, Christner, Sigma-Aldrich, CSI Leasing, various banks, Cardinals Baseball – all using Green Teams, expanding recycling, increasing employee awareness, data shredding services for automatic recycling, and more
- Alberici and Maritz – also incorporated native plant landscaping with on site storm water management

Overall efforts include green teams, recycling, controls, energy audits and efficiency retrofits/improvements, building or leasing LEED certified buildings, reducing water consumption, evaluating ghg emissions, green policies, IAQ programs, purchasing renewable energy, establishing metrics for tracking success, transportation incentives, employee education



Resources for Sustainable Business Practices



Survey Results

- Costar Study: <http://www.costar.com/partners/costar-green-study.pdf>
- Berkeley Study: http://repositories.cdlib.org/iber/bphup/working_papers/W08-001/
- <http://www.cascadiagbc.org/news/cascadia-releases-study-on-the-value-of-green-building>
- EPA's Energy Tracking Tool - Portfolio Manager: <http://www.energystar.gov/istar/pmpam>

Workbooks

- **HOT CLIMATE, COOL COMMERCE: A SERVICE SECTOR GUIDE TO GREENHOUSE GAS MANAGEMENT** - Publication that addresses how to reduce greenhouse gas emissions in service-sector companies such as banks, law firms, retailers, and real estate managers: www.wri.org/publication/hot-climate-cool-commerce
- MSD Landscape Guide for Stormwater Best Management Practices: <http://www.stlmsd.com/MSD/PgmsProjs/PhaseII/MSD%20Landscape%20Guide%204-13-09.pdf>

Consultants

- HOK
- Missouri Botanical Garden's EarthWays Center



Resources for Sustainable Business Practices



General Business Resources

- U.S. Green Building Council – LEED rating systems, best practices guidelines: www.usgbc.org – <http://chapters.usgbc.org/stlouis/> - St. Louis Regional Chapter

Recycling and Waste Reduction – try setting up a buying coop for recycling services with your local businesses

- Databases of local recycling options: www.swmd.net (general recycling)
- www.resourcestlouis.org – St. Louis regional material exchange
- www.ecyclestlouis.org - electronic equipment recycling
- “Less Is More” – a guide to workplace recycling - www.swmd.net/library.html \
- “Green Meeting Policy” – National Recycling Coalition: <http://www.fs.fed.us/sustainableoperations/greenteam-toolkit/documents/NationalRecyclingCollolitionGreenMeetingsReference.pdf>

General Workplace Greening

- <http://www.environmentalleader.com> – the executive’s daily green briefing
- http://www.treehugger.com/files/2006/12/how_to_green_your_work.php
- www.greenbiz.com – daily news for sustainability in business
- <http://www.greenbiz.com/resources/resource/greening-your-business-a-primer-smaller-companies> - “A Green Business Primer for Smaller Companies”
- www.sustainablebiz.org – The Sustainable Business Alliance
- www.newdream.org – Center for a New American Dream – good overall resources
- Green Commercial Cleaning Companies – many in local region – use LEED EB guidelines to establish parameters



Resources for Sustainable Business Practices



Energy Efficiency and Renewables

- www.energystar.gov – equipment and building energy resources
- www.dsireusa.org – renewable incentives by state

Purchasing – your product choices, influencing your suppliers

- Responsible Purchasing Network – multi-topic purchasing: www.responsiblepurchasing.org
- US EPA Environmentally Preferable Purchasing Guidelines: <http://www.epa.gov/epp/>

Transportation Alternatives

- Regional carpooling and van-pooling networking – www.ridefinders.org
- National database of ride-sharing options – www.erideshare.com
- Local car-sharing program – www.wecar.com/stl

Air Quality

- “Lungs At Work” – a toolkit for improving workplace indoor air quality: www.lungsatwork.org – **includes a Green Team approach to business sustainability**
- Gateway Clean Air Partnership – <http://www.cleanair-stlouis.com/>

Growing truly Green – avoiding “Greenwashing”

- www.terrachoice.com – the “six sins of Greenwashing”

Green office and business supplies

- www.pedrosplanet.com – will pick up recycling from St. Louis area customers at no cost if you buy their office supplies!
- www.thegreenoffice.com



Mary Ann Lazarus: mary.ann.lazarus@hok.com
Glenda Abney: glenda.abney@mobot.org