



The value of a dynamic environmental building certification

the BOMA BEST example

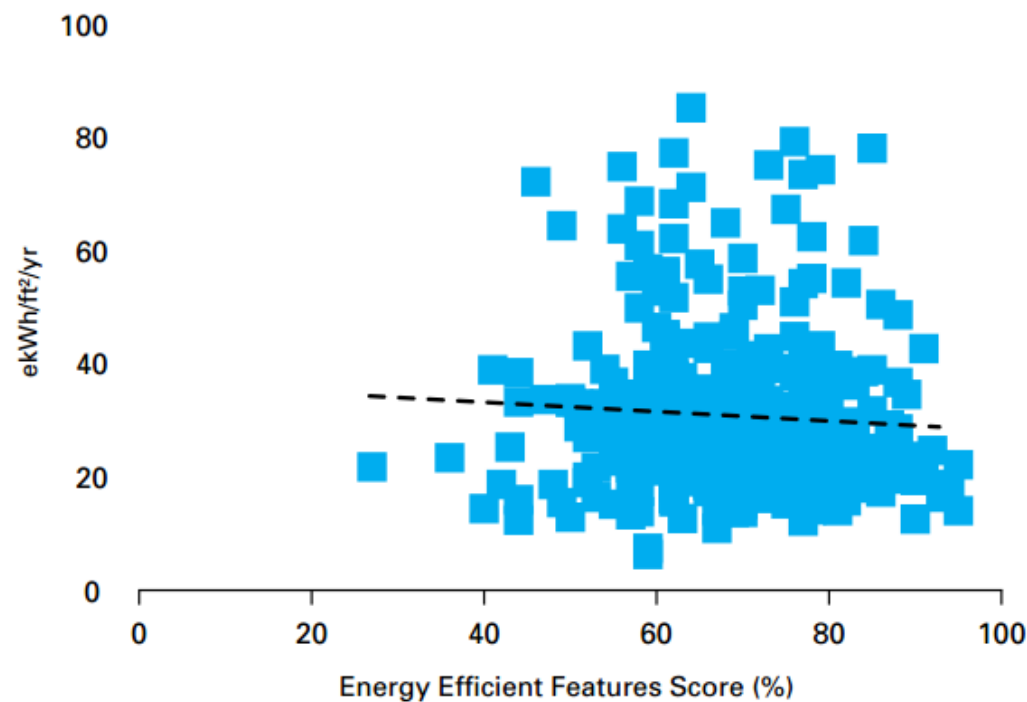


Hazel M. Sutton
Manager, Environmental Standards
BOMA Canada



Energy efficiency features are not the only variable critical to good building performance

FIGURE 33: EEF SCORE AND EUI OF CERTIFIED OFFICE BUILDINGS





AGENDA

1. What is dynamic certification program?
2. What is BOMA BEST?
3. What is the value of green building?
4. Myth versus Reality = How continuous improvement will bring more value than single, one time efforts.
5. Going beyond the building – “Building in the City”



What makes it dynamic anyway?

- ✓ Holistic approach to building assessment
- ✓ Encourages partnership between tenants, operations team, management
- ✓ Strive for continuous improvement



ABOUT BOMA BEST – Program Description

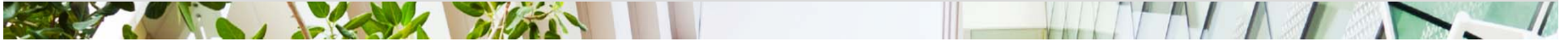
Building Environmental Standards (BEST)

- Environmental performance and management practices of existing buildings
- Five modules for existing buildings
- Healthcare Module to be launched in spring/summer 2014
- BOMA BEST Energy and Environment Report 2013





Modules Available



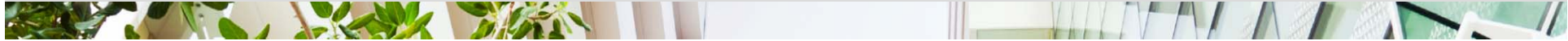
OFFICE



ENCLOSED RETAIL



Modules Available



OPEN AIR RETAIL



LIGHT INDUSTRIAL



Modules Available



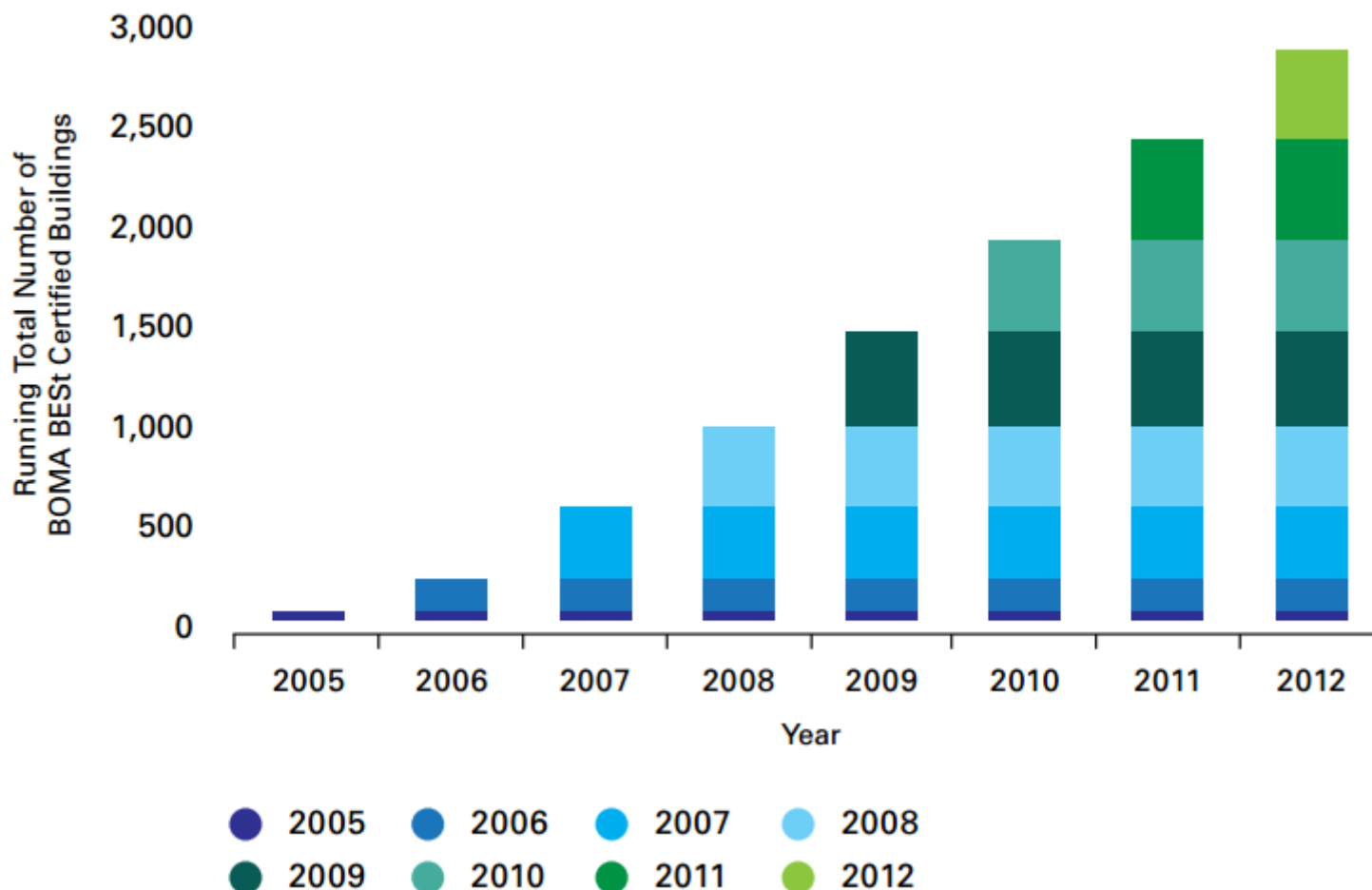
HEALTHCARE - NEW IN 2014!





ABOUT BOMA BEST – Uptake

FIGURE 1: BOMA BEST CERTIFIED BUILDINGS (cumulative)





ABOUT BOMA BEST – Program Description

- Six areas of management and performance:



- Offered in both Official Languages
- Accessible: user friendly, affordable and inclusive

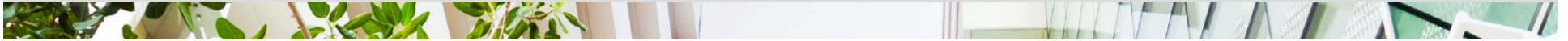


Green building = Good Value

- **Operations and management:** Identifying opportunities for improvement
- **Differentiation:** Demonstrated public commitment to sustainability
- **Asset value:** Increased marketability and reduced tenant turnover
- **Occupant well being and workplace productivity:** Investments in occupant health and well-being increases productivity.
- **Risk mitigation:** Improving future value of real estate asset, reduces risk of obsolescence and effect of “brown discount”.



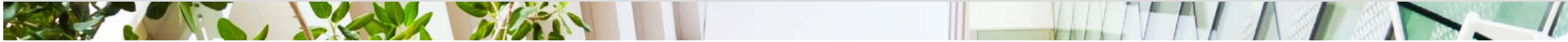
Continuous improvement = Good, Green Value



- **Operations and management:** Identifying opportunities for improvement.

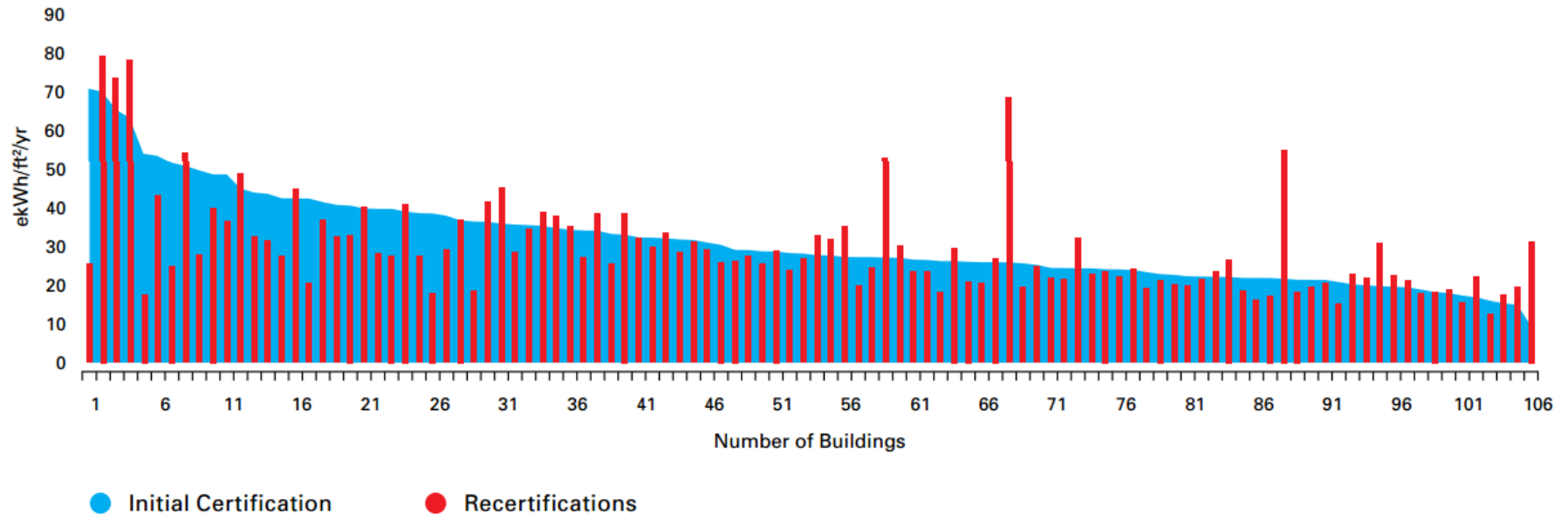


BBEER 2013 RESULTS: ENERGY (Office)



BOMA BEST buildings are reducing their EUI at recertification

FIGURE 3: BOMA BEST EUI – CERTIFICATION VS. RECERTIFICATION



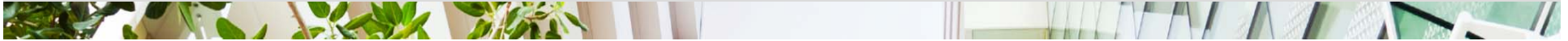


Continuous improvement = Good, Green Value

- **Operations and management:** Continuous adjustment and commissioning.
- **Differentiation:** Ongoing improvements and innovation
- **Asset value:** Building on value over time
- **Occupant well being and workplace productivity:** Conditions that meet present requirements, adjusted over time to meet new need
- **Risk mitigation:** Improving future value of real estate asset, reduces risk of obsolescence and effect of “brown discount”.



Maintaining your high performing building

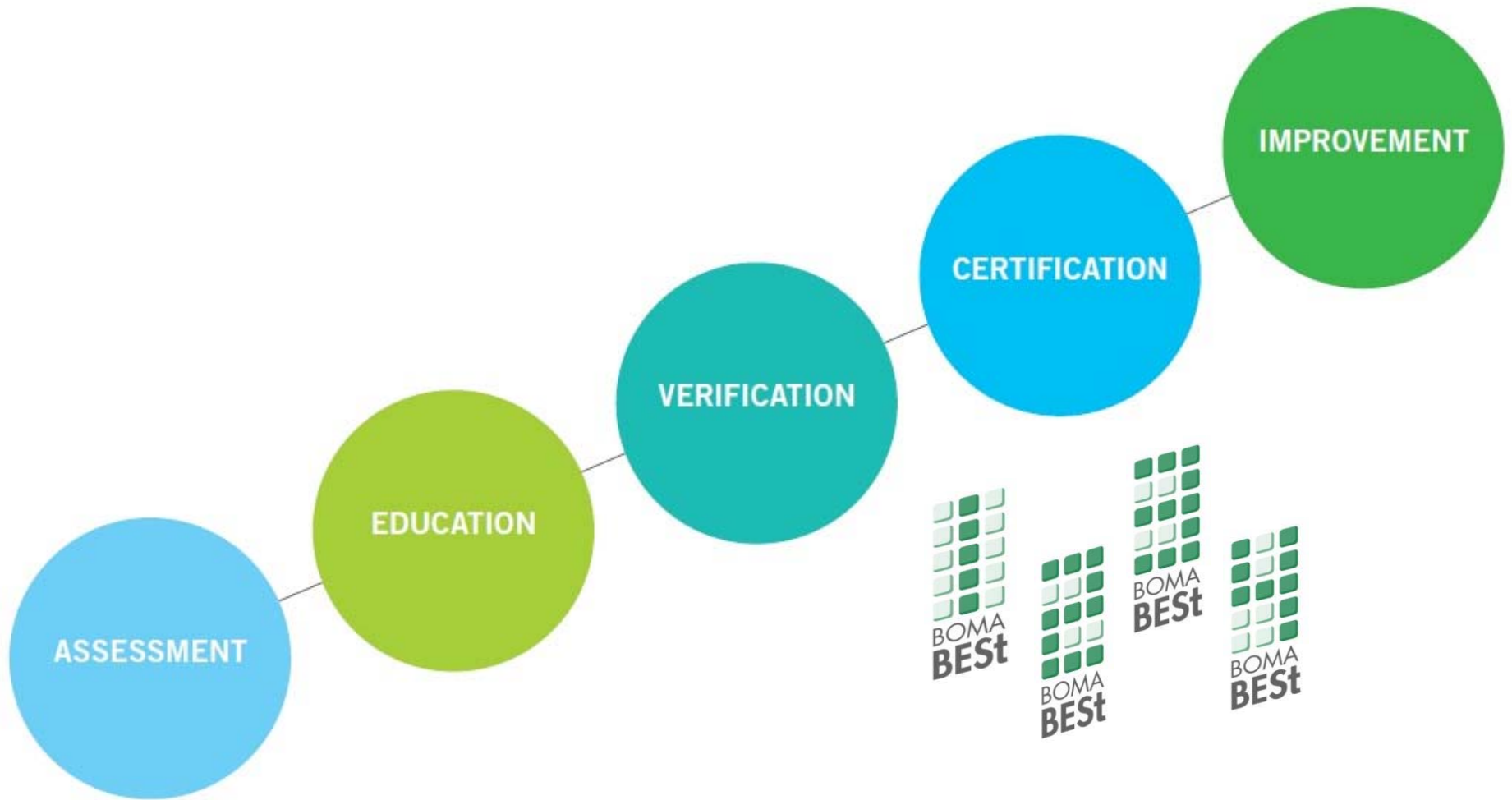


Building performance can be influenced by a number of factors:

1. Age of the building;
2. Size of the building;
3. Efficiency features of the buildings;
4. Management practices including operations, monitoring and on-going commissioning; and
5. Occupant engagement.



Five Pillars of BOMA BEST

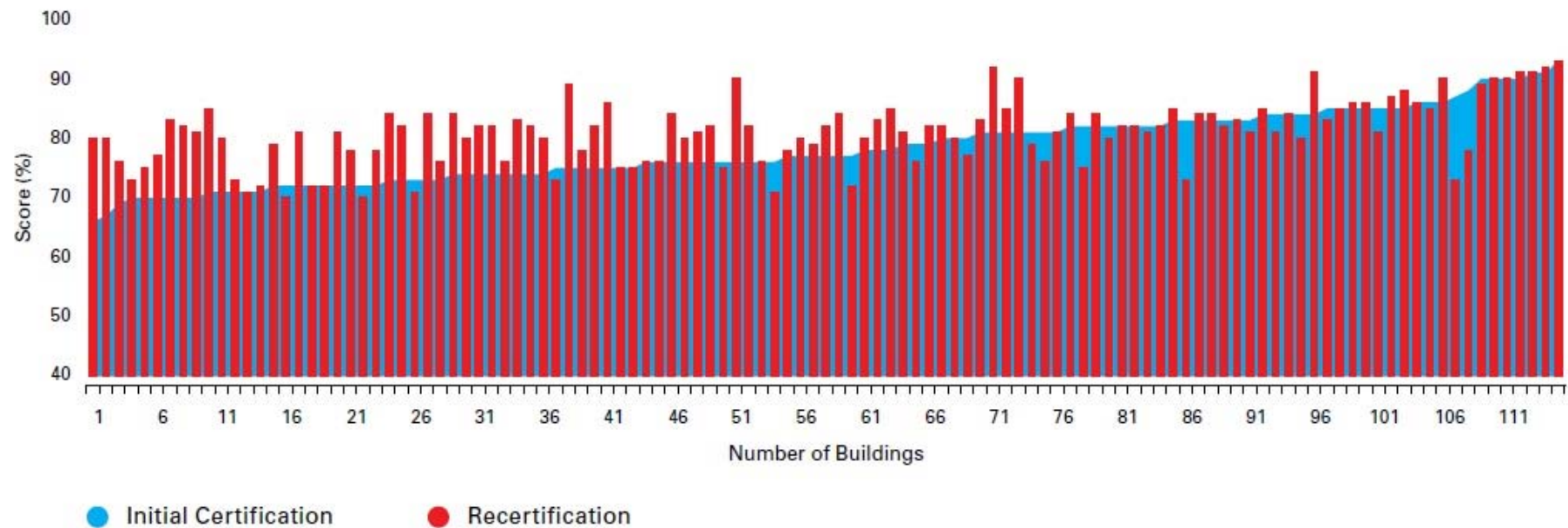




BBEER 2013 - Results

Buildings are improving their score at recertification
from Level 2 (78.3%) to Level 3 (81%)

FIGURE 2: BOMA BEST SCORES – CERTIFICATION VS. RECERTIFICATION



SPECIAL FEATURE

JOURNEY THROUGH BOMA BEST – A CASE STUDY



SCOTIA CENTRE, St. John's East Port Properties





BOMA BEST CASE STUDY: Getting to certification

The BOMA BEST Certification Process can inform your environmental strategy:

1. Scoping
2. Benchmarking
3. Low hanging fruit – management
4. Low hanging fruit – performance
5. Capital investments



BOMA BEST CASE STUDY: Building improvements

	Go Green (2007)	BOMA BEST Level 2 (2008) (formerly Go Green Plus)	BOMA BEST Level 3 (2012)
Energy	<p>Achieved BEST Practices</p> <ul style="list-style-type: none"> • First building audit; • Re-scheduled equipment start times; • Reduced hot water boiler temperature; • Installed T8s and electronic ballasts; • Replaced exit lights with LEDs; • Installed lighting sensors in garage; • Upgraded lighting controller. 	<p>Score: 57%</p> <ul style="list-style-type: none"> • Replaced chiller (30% more efficient); • Implemented annual re-lamping program. <p>Energy Use Intensity: 29.08 kWh/ft²/year</p>	<p>Score: 70%</p> <ul style="list-style-type: none"> • Energy audit update; • Installed lighting sensors in washrooms; • Installed variable speed drives; • Implemented daytime cleaning. <p>Energy Use Intensity: 27.86 kWh/ft²/year</p> <p>Estimated 2012 Savings: \$26,018</p>
Water	<p>Achieved BEST Practices</p> <ul style="list-style-type: none"> • Installed hands free faucets; • Installed low-flow toilets; • Installed auto flush urinals. 	<p>Score: 47%</p> <ul style="list-style-type: none"> • Detected faulty water city metre thanks to water audit; • Continued investigation towards eliminating once-through water cooled units. 	<p>Score: 50%</p> <ul style="list-style-type: none"> • Implemented use-billing for excessive water use. • Budgeted for replacement of water meter (completed in early 2013) <p>Estimated water savings: 1,700,000 L</p>
Waste Reduction & Site	<p>Achieved BEST Practices</p> <ul style="list-style-type: none"> • Created tenant manual and design criteria manual for tenants and contractors. 	<p>Score: 81%</p> <ul style="list-style-type: none"> • Management and tenant-led initiatives are featured in a new tenant informational tool kit. 	<p>Score: 76%</p> <ul style="list-style-type: none"> • Expanded recycling program to accept batteries, fluorescent lamps, and electronic waste.



BOMA BEST CASE STUDY: ENERGY

Energy Saving features of Scotia Centre:

- Re-scheduled equipment start times
- Lower hot water boiler temperature
- Installed T8's & electronic ballasts
- Replaced exit lights with LED's
- Installed lighting sensors in garage & washrooms
- Upgraded lighting controller
- Replaced chiller (30% more efficient)
- Annual Re-lamping program
- Installed variable speed drives
- Daytime Cleaning

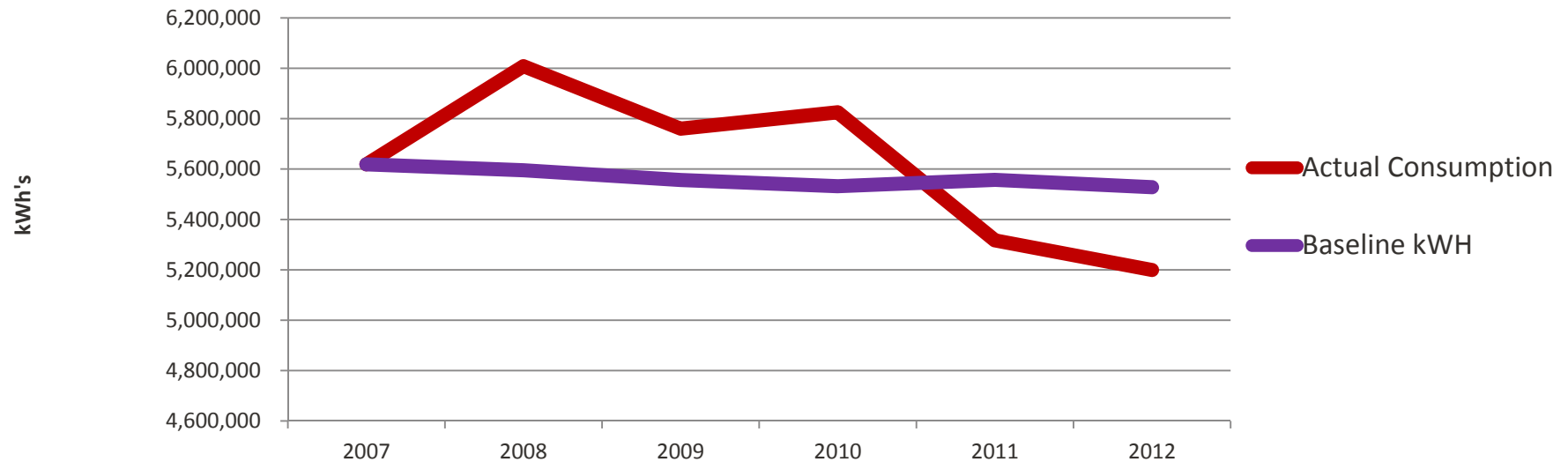




BOMA BEST CASE STUDY: ENERGY

Scotia Centre - KWh's

Scotia Centre



2011 Cost Savings: \$40,325 2011 Baseline Comparison \$19,031

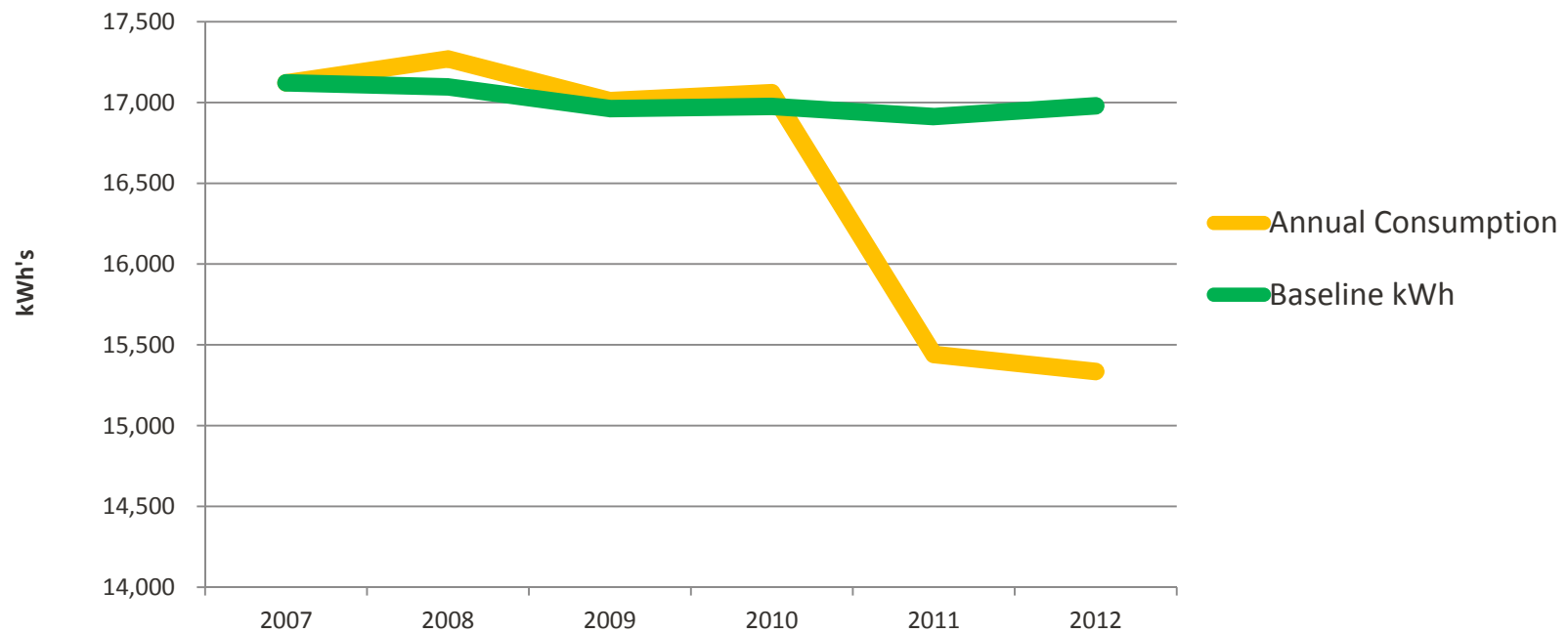
2012 Cost Savings: \$8,135 2012 Baseline Comparison \$26,018



BOMA BEST CASE STUDY: ENERGY

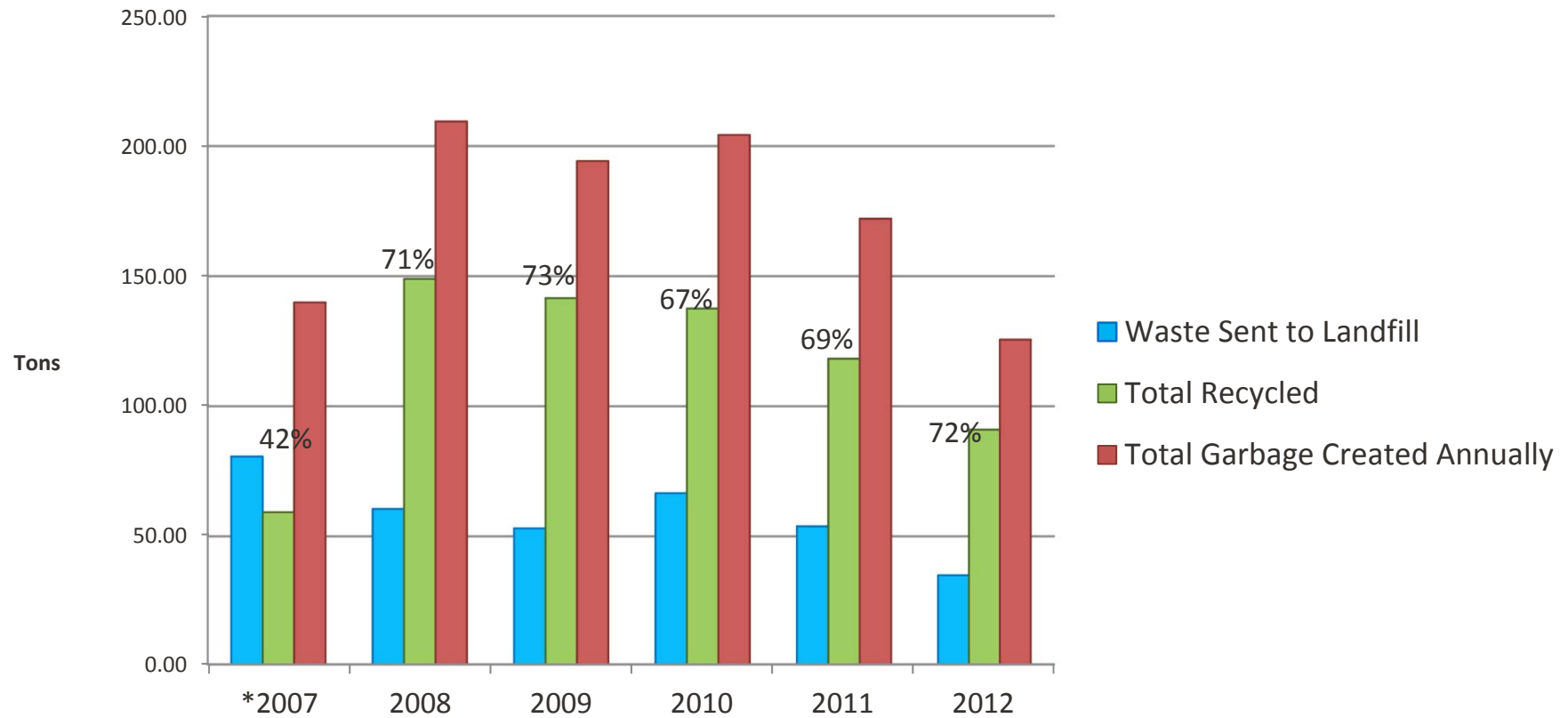
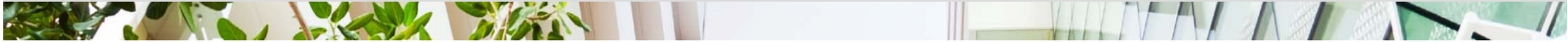
Scotia Centre – Demand

Scotia Centre





BOMA BEST CASE STUDY: WASTE DIVERSION & SITE



* tenant shredding figures not available prior to May 2007



BOMA BEST CASE STUDY: TENANT PARTICIPATION

Sustainability has become more visible

- Tenants looking for ways to help
- Building occupants often leading change



Increase waste diversion rates

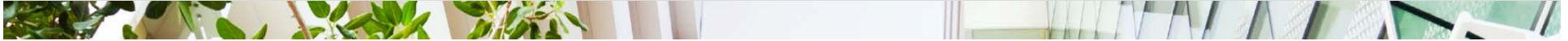
- Rechargeable batteries
- Ink cartridges
- Electronic waste recycling
- Construction waste materials

But also:

- Recycling eyeglasses
- Office material donated to schools
- Diabetes Association collection



BOMA BEST CASE STUDY: Program Benefits



BOMA BEST provides a platform for engaging tenants and staff

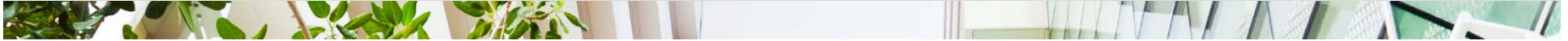
1. Increasing tenant engagement and awareness of environmental impacts

“They are a wonderful resource and contribute many ideas to improving the building. they want to be part of the process too!” East Port Properties

2. Increasing staff engagement and awareness of environmental impacts
3. Increasing familiarity and comfort with building operations



Buildings in the City



- Bring meaning to tenant efforts
- Personal connection to the community around the building
- Tenants will be more compelled to help building management in a host of other areas.

long lasting change!



- Conservation and operational efficiencies
 - Identify inefficiencies by using a detailed assessment
- Tenant engagement
 - Cooperative work that is required with head office and on-site team enhances team work and creates shared pride at achieving certification, speaking more with tenants and becoming more innovative to reduce environmental footprint.
- Marketing opportunities and enhanced reputation
 - Taking pride in a green building certification through display of marketing materials, website and communicating with tenants.
 - Enhanced corporate reputation

Higher performing building lead to monthly savings and enhanced asset value



Questions?

Thank you.

Hazel Sutton, Manager, Environmental Standards

BOMA Canada

hsutton@bomacanada.ca

(416) 214-1912 ext. 103