



**Better
Buildings®**
U.S. DEPARTMENT OF ENERGY

Invest to Impress!

Energy Efficiency Considerations for
Investment Owners

Today's Presenters

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**Senior Director, Global Sustainability &
Enterprise Initiatives,
TIAA**

Brenna Walraven



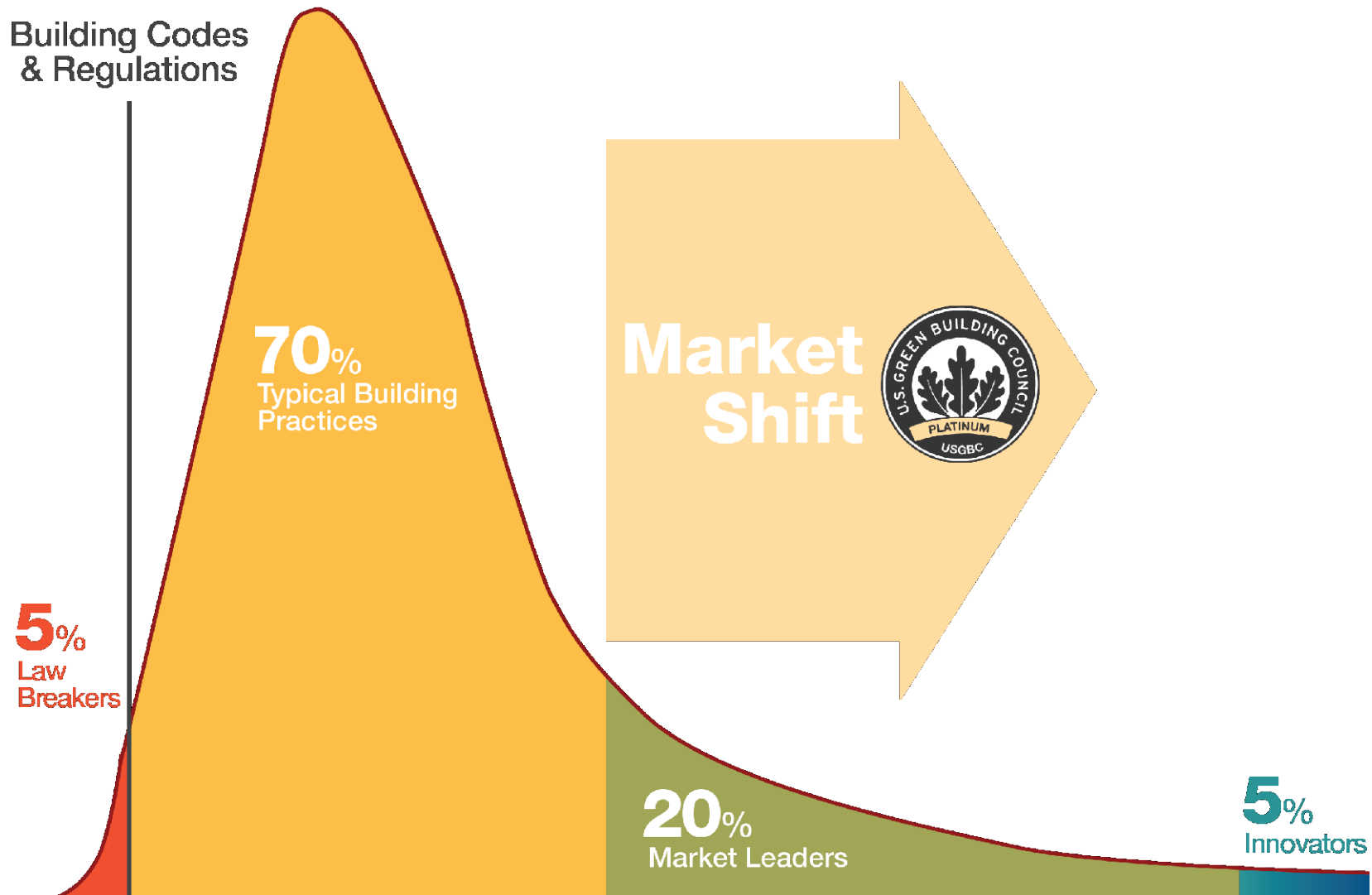
**CEO & Founder,
Corporate Sustainability
Strategies**

Dan Winters



**Head of North America,
GRESB**

Market Transformation



Integrating sustainability through the CRE value-chain

energy efficiency



- Utility cost savings

Historically driven utility cost savings, and impacts on asset value....

Integrating sustainability through the CRE value-chain

sustainability

Business case expanding to all phases of real estate transactions, finding value through risk mitigation, competitive advantage, brand enhancement...



- Utility cost savings



- Investor demand



- Appraisals and valuation



- Tenants/leasing



- Repositioning assets, deep retrofits



- Health and wellness

Responsible Property Investing

- United Nations Principles of Responsible Investing
 - 1,380 signatories
 - \$4 trillion in 2006 to \$59 trillion in assets under management in 2014
- Factors environmental, social, and governance (ESG) considerations into real-estate decision making
- Expands beyond “green” and reinforces stakeholder engagement, transparency and accountability, social equity, and other factors into investment management



UNEP

United Nations Environment Programme

“Failing to consider long-term investment value drivers, which include ESG issues, in investment practice is a failure of fiduciary duty.”

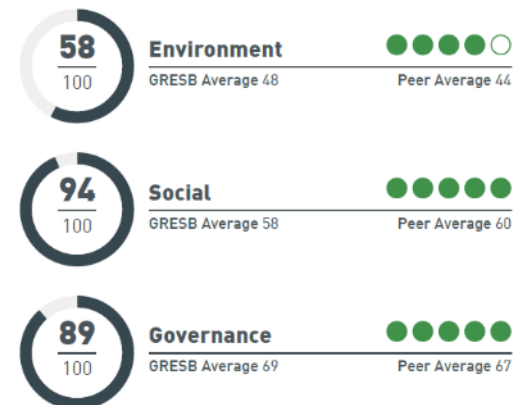
Source: Fiduciary Duty in the 21st Century. United Nations Environment Programme
6 <http://www.unpri.org/wp-content/uploads/Fiduciary-duty-21st-century.pdf>

Investor Demand

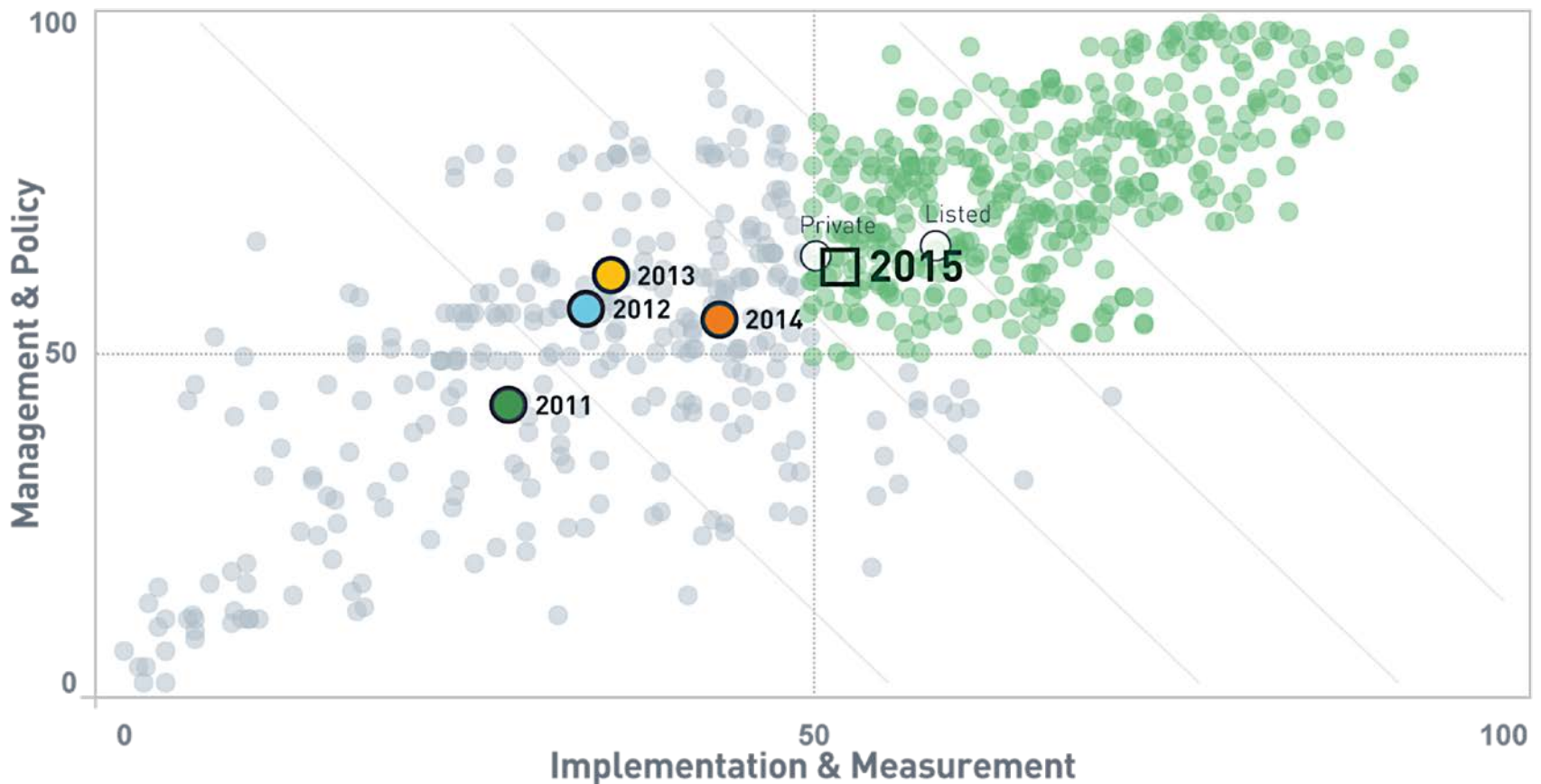
- Surge in investor interest, reporting frameworks, and attention to environmental, social, and governance (ESG) factors
- Exemplified by the growth of the Global Real Estate Sustainability Benchmark (GRESB)
 - Since 2011, the value of assets managed by GRESB members grew from \$1.7 trillion to \$6.1 trillion
 - From 21,000 to over 61,000 real estate assets covered in the 2015 survey
 - Avg. GRESB score rose from 47 to 56 (2014 to 2015)
- Introducing ESG “scores” for real estate funds



ESG Breakdown



GRESB: Driving Industry Progress



Moving Beyond Risk Management to Social Impact

- CREFC – looking at how the lending community could move beyond risk management and explore opportunities that provide positive social impact as well as commercial benefits, such as borrower engagement strategies and green lending products
- Lower Default Risk of Securitized Commercial Mortgages – 20% lower default rates
- Harvard Study shows cognitive performance correlates to CO2 levels in workspace



**Brenna Walraven,
Corporate Sustainability Strategies**

Why Sustainability?



Sustainability Execution Output

Sustainability Execution Drives:

- Reduced Risk
- Lower Operating Costs
- Improved Financial Performance
- Tenant Engagement, Satisfaction, Comfort & Retention
- Employee Satisfaction, Retention & Recruitment
- Improved Investor Engagement
- Energy Efficiency to Sustainability to ESG



The Challenge

Think about our strategic focus and value proposition

Look at global reporting standards

How will we define sustainability?

Think about our strategic focus and value proposition

Research & consider carbon footprint and LEED

What savings will be achieved and what value will be created?

What disclosure is required?



How will we communicate and infuse it into our business and culture across all disciplines?

How will it be branded?

Consider investor, customer and associate perspectives

How to weave sustainability strategy into the company story?

Recommend a sustainability initiative – prioritize its roll out

What are the key performance metrics?

How will we measure and report it in a systemic way?

How will we measure ROI? How will we leverage the benefits and value?

How does it materially affect our business?

Where will enterprise ownership reside – resources needed – estimated costs?

SEC Requires Disclosure

SASB Defines What & How

“We’re glad the SEC is stepping up to the plate to protect investors. Ensuring that investors are getting timely, material information on climate-related impacts, including regulatory and physical impacts, is absolutely essential. Investors have a fundamental right to know which companies are well positioned for the future and which are not.”



Anne Stausboll

Chief Executive Officer - [California Public Employees Retirement System](#)
the nation’s largest public pension fund

What do investors think?

- Transparency is increasingly a requirement – by investors, tenants and employees
- EY analysis of why companies participate in Sustainability:
 - Contributes to business outcomes
 - Profitability, brand, cost savings, reputation and consumer trust
 - Access to capital
 - Research on Kaplan-Zingale Index scores, which measures access to capital, found that firms ranked highly for sustainability had fewer capital constraints than for low-sustainability companies
 - Employee loyalty and recruitment
 - Risk management benefits
 - Insurance benefits
 - Functional obsolescence risk reduction
 - Competitiveness
 - As the amount of green building stock has increased dramatically (office and industrial)
 - Inefficient, non-LEED/Energy Star buildings will have a harder time competing



USAA Real Estate Company Government Buildings Fund

Participation



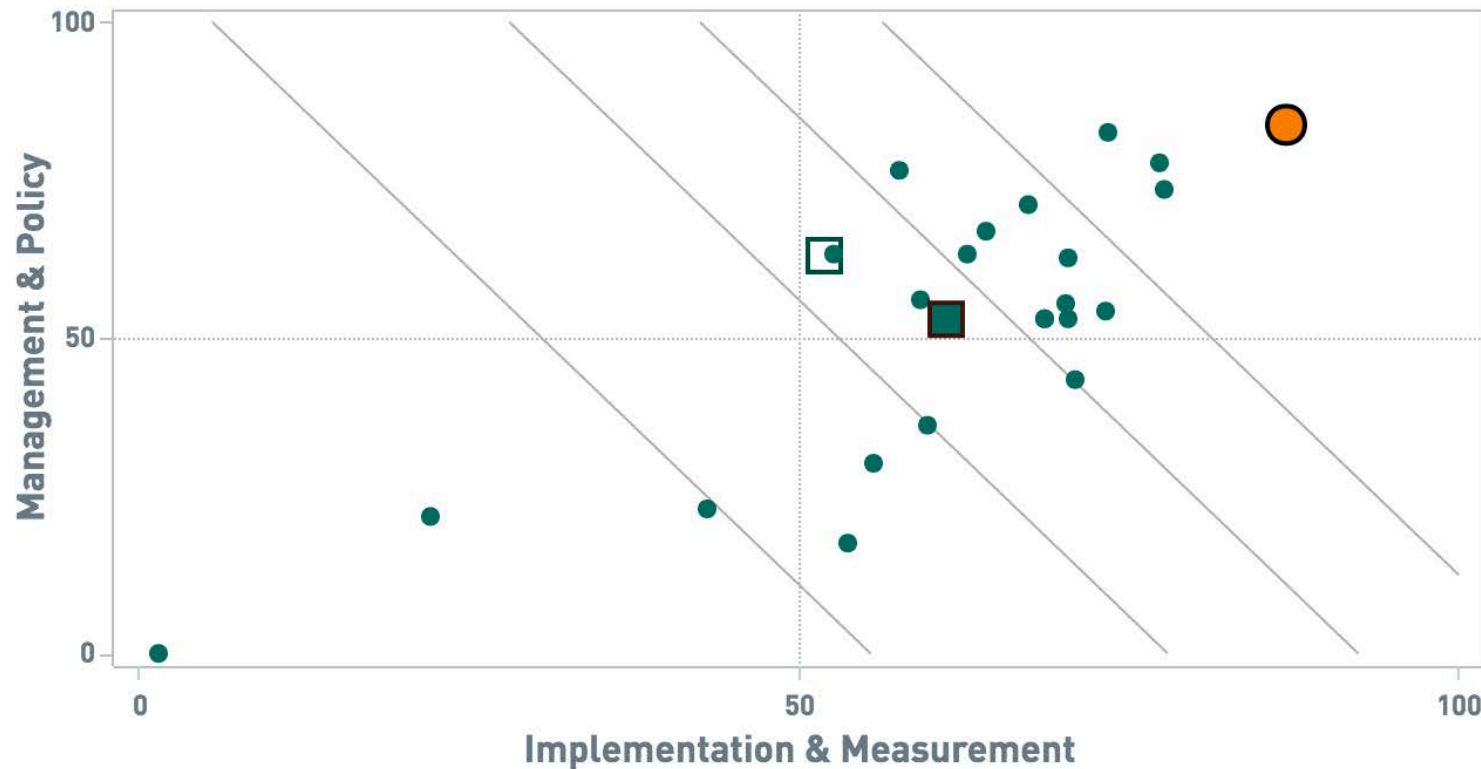
Peer Group

Legal Structure Non-listed
Sector Office
Region United States
Peers 23



G R E S B
Green Star 2015

Sector Leader



- This Entity
- Peer Group Average
- Peer Group
- GRESB Average
- Green Stars
- GRESB Universe



USAA Real Estate Company Government Buildings Fund

Participation



Peer Group

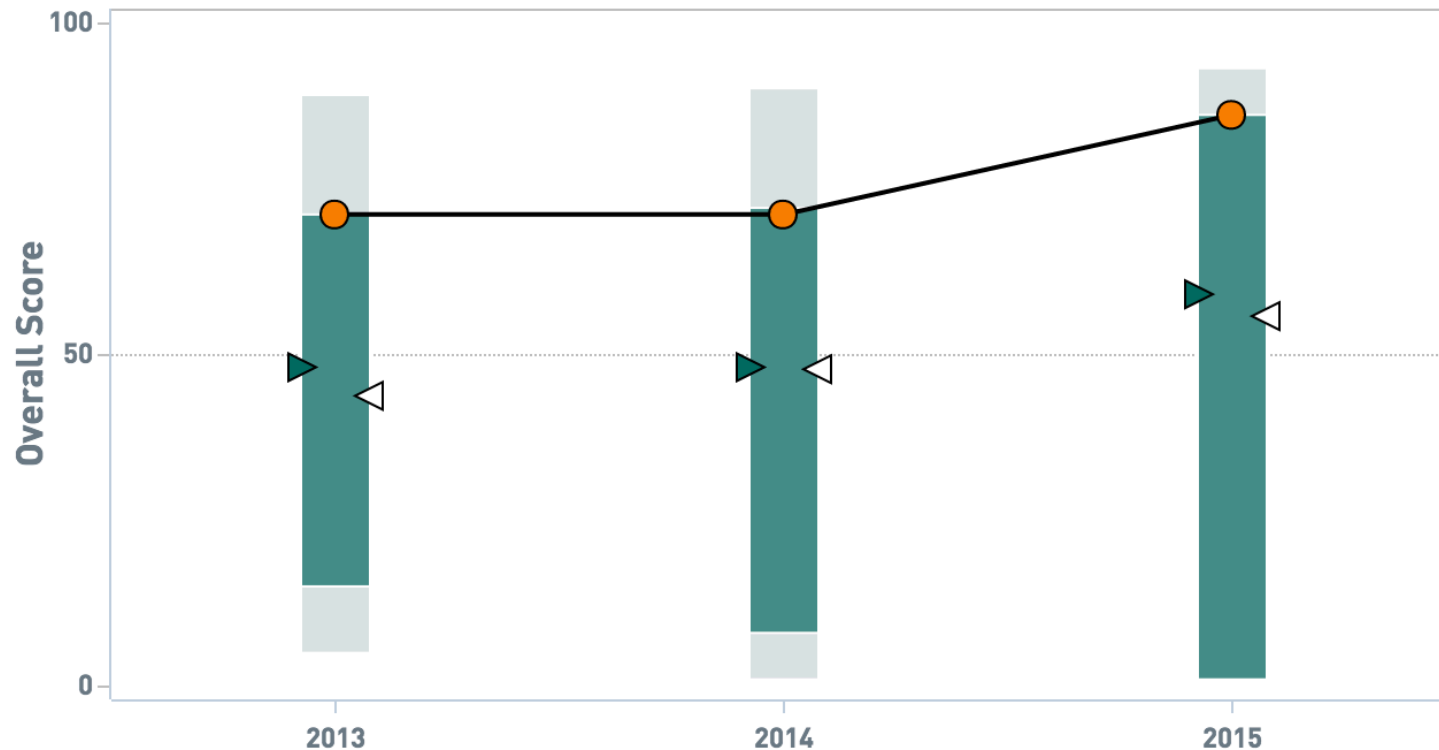
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G R E S B
Green Star 2015



USAA Real Estate Company

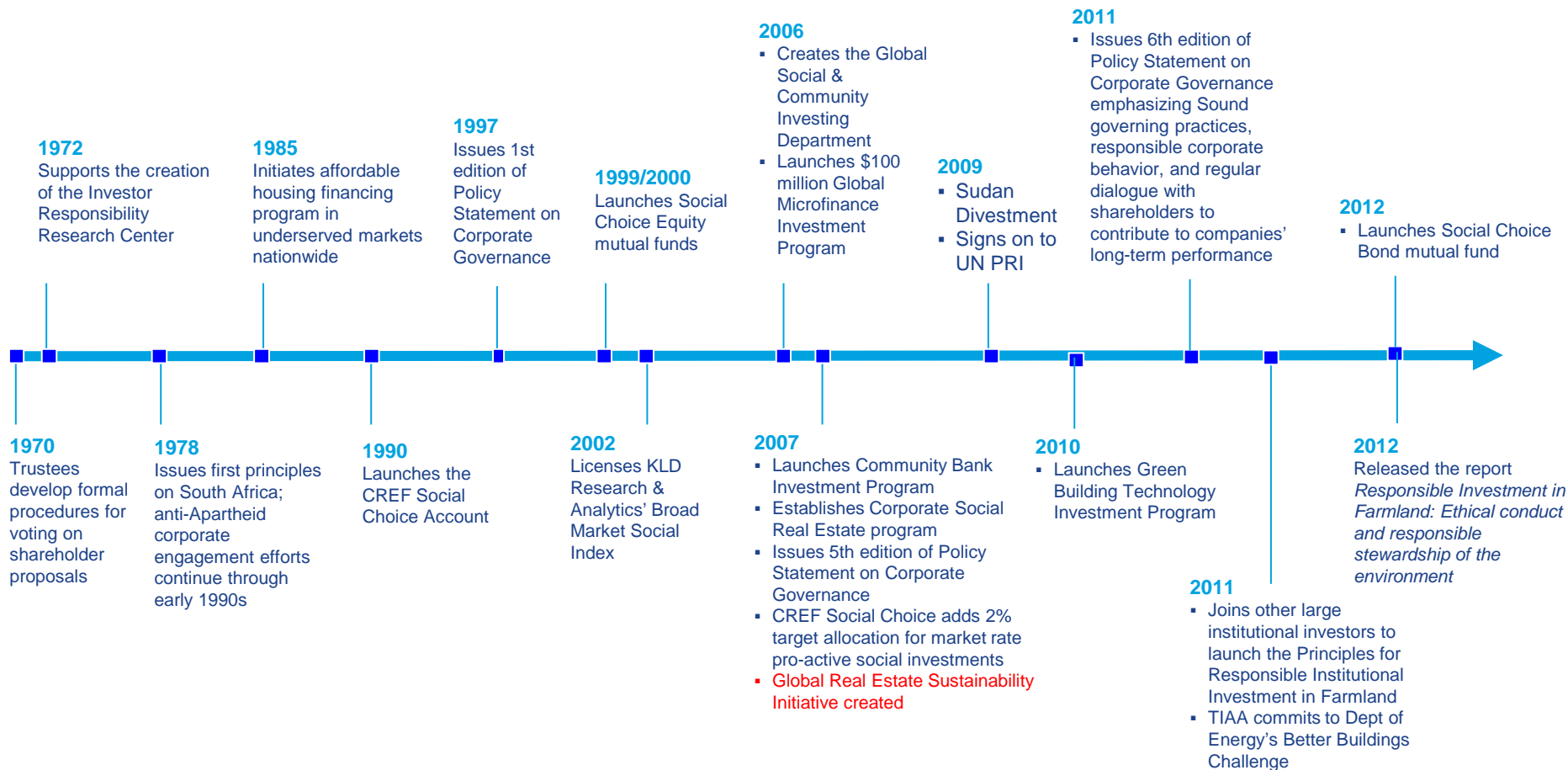


➔ 15% Improvement

- This Entity
- Peer Group Range
- GRESB Range
- ▶ Peer Group Average
- ◀ GRESB Average

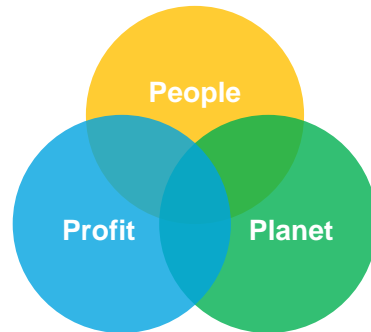
Nick Stolatis,
TIAA

TIAA's historical commitment to responsible investing



Global Real Estate Sustainability Initiative – Keeping it Simple

Why we do it:



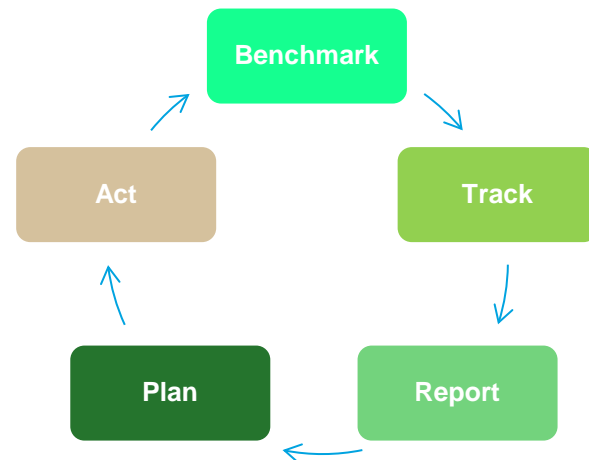
ESG Integration –

Triple Bottom Line

- Environmental - *Planet*
- Social - *People*
- Governance - *Profit*

How we do it:

Benchmark – measure performance
Track – measure change over time
Report – disclose performance
Plan – develop program to improve
Act – implement plan for improvement



Global Real Estate Sustainability Initiative – High Performance Case Study

801 Brickell, Miami

- TIAA identified a series of low- and no-cost strategies to further reduce utility consumption at 801 Brickell, an already efficient urban office building, reflecting its ongoing commitment to identify and capture energy savings opportunities across its real estate portfolios
- **Annual energy use savings: 32%**
- **Annual energy cost savings: \$400,000**
- The projects yielded an overall payback period of 2.7 years and an ROI of 37%.
- Over the course of four years, we:
 - Upgraded the building's energy management system and optimized programming to enhance building heating, ventilation, and air conditioning (HVAC) controls
 - Performed water balancing for the HVAC system
 - Installed and adjusted exhaust fan variable frequency drive (VFD) controls
 - Reduced garage fan energy use by 25% by installing high efficiency fans and reducing the number of fans required
 - Implemented stairwell, tenant space, garage and trellis lighting retrofits
- These efforts increased 801 Brickell's ENERGY STAR score from 76 in 2011 to 90 in 2015.



Global Real Estate Sustainability Initiative

– Performance Metrics

TIAA integrates sustainability in decision-making processes throughout its investment portfolio from the budget process to ongoing property management activities – and tracks opportunities portfolio-wide to target high returns on investments in sustainability measures

Key initiatives driving sustainable practices...

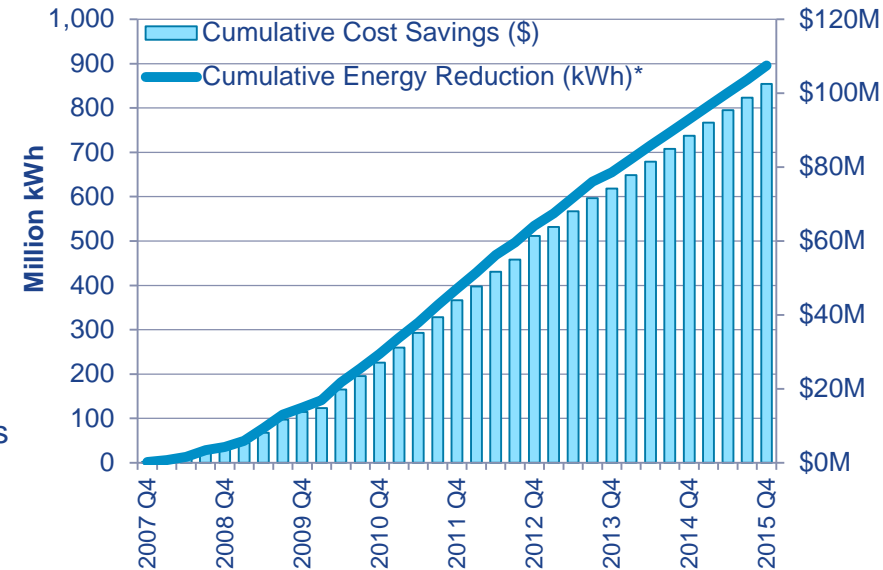
- Benchmarking the energy and water use of its office, multifamily and retail portfolios – currently comprising approximately 29.1 million square feet of office space, 15,989 multifamily units, and 3.7 million square feet of retail space – using ENERGY STAR Portfolio Manager
- Focused assessments and analyses to identify sustainability opportunities and challenges during the acquisition process – with standardized processes in place for introducing new acquisitions to the sustainability program
- Mandated LEED certification for all new development projects and directed pursuit of LEED certification for selected existing properties
- Pursuit of ENERGY STAR certification for all eligible properties

...with significant outcomes

- Average ENERGY STAR rating of 83 across entire office portfolio
- Greenhouse gas emissions avoided through December 31, 2015 equivalent to removing about 91,700 cars from the road
- Total reduction in annual energy costs in 2015 alone equal to approximately \$14.96 million

Aggregate TIAA portfolio savings as of December 31, 2015

Cumulative Energy Savings (All Portfolios)



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Thank You!