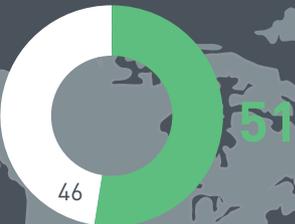


Key Figures

2014 2015

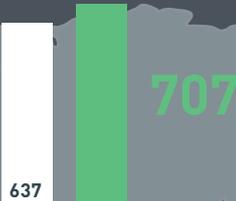
Investor Members



Institutional Capital



GRESB Participants



Property value



Assets covered

* Excluding single-family residential assets



New Construction and Major Renovations Assets



Company and Fund Manager Members



Associate Members



Partners



Investor and Bank Members

Aberdeen

ABN·AMRO

actiam

AEGON
Asset Management

FÖRSTA
AP-FONDEN

Andra AP-fonden
Second Swedish National Pension Fund - AP2

AP3 Third Swedish National Pension Fund

FJÄRDE AP-FONDEN

apg

ARCADIS PENSIOENFONDS

AustralianSuper

AVIVA
INVESTORS

Blue Sky Group

BMO
BMO Global Asset
Management

BNP PARIBAS

Bouwinvest

catholic
super

CBRE
CLARION
SECURITIES

CBRE
GLOBAL
INVESTORS

COHEN & STEERS

DBJ

GEFP
your retirement your future

Grontmij | Capital Consultants

HOOPP
Healthcare of Ontario
Pension Plan

HERMES
INVESTMENT MANAGEMENT

HESTA
An Industry SuperFund

KAMES
CAPITAL

KEMPEN & CO
Merchant Bank

LOCAL GOVERNMENT
SUPER

MAJID AL FUTTAIM

mirova
Responsible Investing

MN

NORGES BANK
INVESTMENT MANAGEMENT

AN OMERS WORLDWIDE COMPANY

oxFORD

TEACHERS'™
PENSION PLAN • RÉGIME DE RETRAITE
DES ENSEIGNANTES ET DES ENSEIGNANTS

stichting bedrijfstakpensioenfonds voor de detailhandel

PGGM

PRESIMA

NN

ROBECO
The Investment Engineers

SEB
TRYGG LIV

TRS
TEACHER RETIREMENT SYSTEM OF TEXAS

THE CROWN
ESTATE

TOWNSEND GROUP

TKP
Investments

LAW RETIREE
Medical Benefits Trust

UBS

cbus
super fund

USS

VFMC
Vulcan Funds
Management Corporation

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GRESB's mission is to enhance and protect shareholder value by evaluating and improving **sustainability best practices** in the global real estate sector.

-  Click to access Innovation Case Studies
-  Click graphs to explore dynamic content online
-  Refers to question result in 2014
-  Explore external resources
- [more](#) Click to access further online resources

How to read this Report

The 2015 GRESB Report is in digital format, downloadable as a PDF. In 2015, the Report also links with additional online materials. These online resources, accessible via the [GRESB website](#), contain additional analysis and data, together with topic-specific innovation case studies collected from 2015 benchmark participants and 2015 Sector leaders. You can access these additional materials by clicking on the links in the Report.

Preface

Buildings as the solution

Expectations are changing rapidly in the global property industry. Investors, owners, tenants, regulators and other stakeholders are asking for greater levels of transparency in general, and specifically with respect to environmental, social, and governance (ESG) issues. This trend is fueling demand for disclosure and information on the sustainability performance of property companies and fund managers. An increasing number of investors now incorporate such information directly into their investment processes and strategies.

This year we saw the publication of another set of independent studies linking ESG issues with financial returns – suggesting that fiduciary duty and robust management of ESG matters reinforce each other in the real estate sector. This convergence of factors encourages market participants to better understand sustainability risks and discover new opportunities to create value for shareholders, customers and society.

As leaders in the global real estate industry, we recognize GRESB's central role in this transformation and encourage our constituents to participate in the annual GRESB assessment. This report summarizes the 2015 GRESB assessment results and provides unique insights into sustainability practices across the global property industry. In reviewing this year's findings, we are impressed by the work of our members toward better ESG management. Activities include setting clear goals, taking coordinated action, expanding impact monitoring and improving sustainability performance.

Overall, we believe the 2015 GRESB Report underlines that the real estate sector provides practical solutions to our most pressing challenges. We can create better places for people and communities – places that reduce environmental impacts, improve social practices, and set high standards for corporate governance. Importantly, as an industry, we can do this in ways that make business sense and reward innovation.

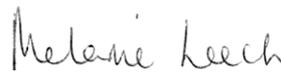
Sincerely,



Nicholas Loup
Chairman, ANREV



Lim Swe Guan
Chairman, APREA



Melanie Leech
Chief Executive, BPF



Gavin Dunn
CEO, BRE Global



Luciano Gabriel
Chairman, EPRA



Tanya Cox
Chair, GBCA



Patrick Kanters
Chairman, INREV



Henk Jagersma
Chairman, IVBN



David Neithercut
Chair, NAREIT



Tom Grosskopf
Director, NSW Office
of Environment &
Heritage



Tom Arnold
Chairman, PREA



Michael Brooks
CEO, REALpac



Rick Fedrizzi
CEO, USGBC

Introduction

Steady progress, but... a long road ahead

The global property industry is at the heart of the most important and far-reaching issues of our time, including urbanization, demographic change, resource constraints, environmental impacts, and emerging technologies. The design, construction, and operation of buildings reflects, drives and potentially mitigates the impact of all of these issues on occupants, owners, communities and society at large.

There is strong evidence that thoughtfully designed and operated buildings can provide practical solutions to the most challenging issues, while creating value for [shareholders](#). Conversely, we also have evidence that more traditional, conventional approaches to property development often have the [opposite effect](#).

This distinction motivates GRESB to provide institutional investors with clear, actionable information about the environmental, social, and governance (ESG) aspects of their real estate investments around the world. GRESB seeks to offer investment decision-makers the tools they need to understand the positive and negative impacts of their investments, recognize leadership, and engage effectively with companies, fund managers and operating partners.

After six years, we have started to see tangible results. On average, property companies and funds in the GRESB universe are significantly more advanced on ESG issues than they were just a few years ago; for example, sustainability policies are widespread and actions to save energy, conserve water, and reduce waste are more common. These are only a few of the many findings of the annual GRESB assessment, which creates clarity and transparency on the ESG performance of the real estate industry. Importantly, early studies show that relative outperformance on the GRESB benchmark translates into higher total returns [for private equity funds](#) and higher returns on assets and equity [for listed property companies](#).

Despite this success, the journey of the property industry towards better ESG performance and reporting has only just begun. The industry has a vast and growing environmental footprint. Its large share of total global resource consumption continues to attract attention from local and national regulators, notably including mandates for transparency in building energy performance and more aggressive building codes. The industry has begun to appreciate the role of property in emerging issues such as occupant well-being, public health, and resilience. In the years ahead, the industry will be challenged to continue to not just understand, but also to demonstrably address the impacts and opportunities of these emerging topics.

The 2015 GRESB Report provides many new insights on global issues in sustainability, energy, and real estate, and we hope readers will explore the full breadth of resources offered, including key findings, research highlights, and innovation case studies provided by leading property companies and fund managers.

Adjusted for risk, there is a significant link between portfolio sustainability indicators and REIT stock market performance.



Fuerst, 2015

2015 ESG Research Highlights



Finding: Higher GRESB ratings correlate to superior financial performance

A University of Cambridge study by Franz Fuerst, commissioned by the Carbon War Room and the Rocky Mountain Institute, found that, adjusted for risk, there is a significant link between portfolio sustainability indicators and REIT stock market performance. [More](#)

Finding: Companies with superior ESG practices receive market benefits

An updated literature review by Gordon Clark et al. indicated that 90% of empirical studies found that strong sustainability standards lower the cost of capital and in 80% of studies strong sustainability practices are positively correlated with superior stock price performance. [More](#)

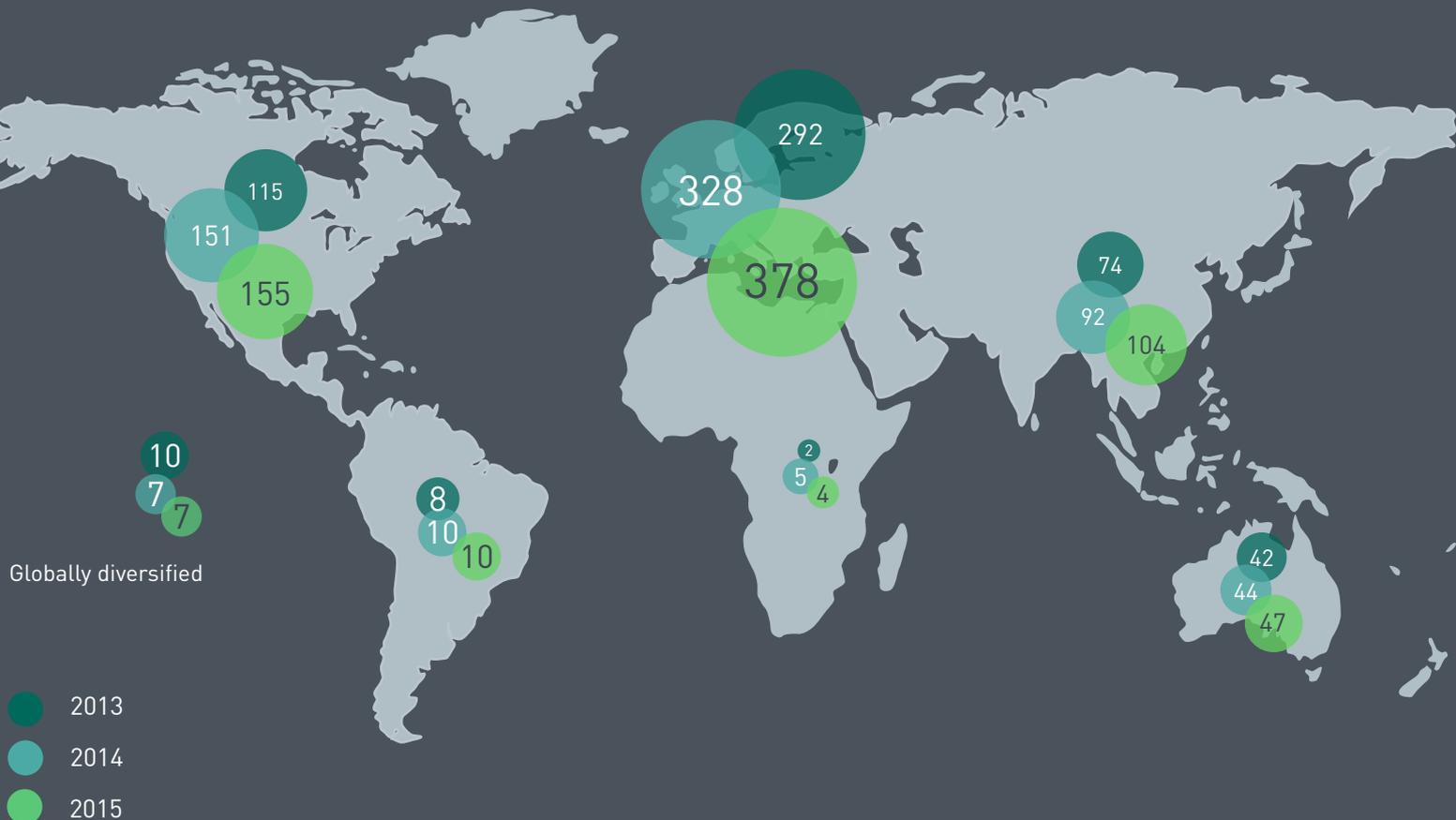
Finding: Consideration of ESG improves risk-adjusted returns

Natalie Trunow and Joshua Linder found empirical evidence that incorporating ESG factors into investment decisions improves the investment selection process and enhances risk-adjusted returns. [More](#)

Finding: Sustainable property features lower default risk

Xudong An and Gary Pivo document that certain sustainability features, including energy efficiency, walkability, and proximity to fixed-rail transit, significantly reduce default risk in CMBS loans. [More](#)

2015 GRESB Response Rate



	Total	North America	Europe	Asia	Australia/NZ	South America	Africa	Globally diversified
Listed no of participants	170	41	69	41	12	1	3	3
Gross asset value USD million	1,339,733	521,529	377,088	290,919	84,048	1,185	9,151	55,813
Average size based on GAV in USD million	7,881	12,720	5,465	7,096	7,004	1,185	3,050	18,604
Market coverage* <small>Based on the regional FTSE EPRA/NAREIT Developed Index</small>	56%	55%	74%	39%	67%			
Private no of participants	537	114	311	63	35	9	1	4
Development only participants	19	0	2	12	1	4	0	0
Gross asset value USD million	962,149	434,036	372,860	73,167	72,704	3,230	1,423	4,730
Average size based on GAV in USD million	1,792	3,807	1,199	1,161	2,077	359	1,423	1,182
Total no of participants	707	155	380	104	47	10	4	7
Development only participants	19	0	2	12	1	4	0	0
Gross asset value USD million	2,301,881	955,565	749,948	364,086	156,751	4,415	10,574	60,543
Average size based on GAV in USD million	3,256	6,165	1,974	3,501	3,335	441	2,644	8,649

Global Results

Response rate

The real estate industry experienced significant growth during the past years, with the market capitalization of the global public real estate market growing from USD1.1 trillion on Jan 1, 2014 to USD1.3 trillion on Jan 1, 2015. Similarly, the [private equity real estate market](#) grew from an estimated AUM of USD697 billion to USD742 billion at the end of 2014. This growth partially masks the underlying dynamic in the market: the public market saw a large number of IPOs and mergers, and in the private equity market more than 180 new funds closed (while a significant number of older vintage funds were in wind-down mode).

Participation in the 2015 GRESB Survey reflects some wider industry dynamics – the aggregate value of the property companies and funds reporting to GRESB is now USD2.3 trillion (USD 2.1 trillion in 2014 and USD1.6 trillion in 2013), representing about 61,000 assets (56,000 in 2014). The total number of participating property companies and funds increased to 707, a net increase of 11% or 70 entities from 2014. Notably, this increase in the response rate is a combination of 159 new companies and funds reporting to GRESB, and 89 companies and funds no longer reporting. Analyzing this number further: about half (42 entities) were in liquidation mode, 10 entities changed ownership or reporting scope, and 37 did not provide a reason for not responding. Over the 2009-2015 period, the GRESB database covers a total of 971 unique property companies and funds, of which 166 participated for at least five consecutive years.

On the private equity side (this includes JVs and separate accounts, as well as private funds, non-listed companies and developers), the number of entities reporting in 2015 is 537, an increase of 11% or 54 entities as compared to 2014. While there is no private equity real estate index with global coverage, GRESB for example covers 93% of the NFI-ODCE index (the main index for US open-ended core funds). Regarding investment strategy, the majority of private funds

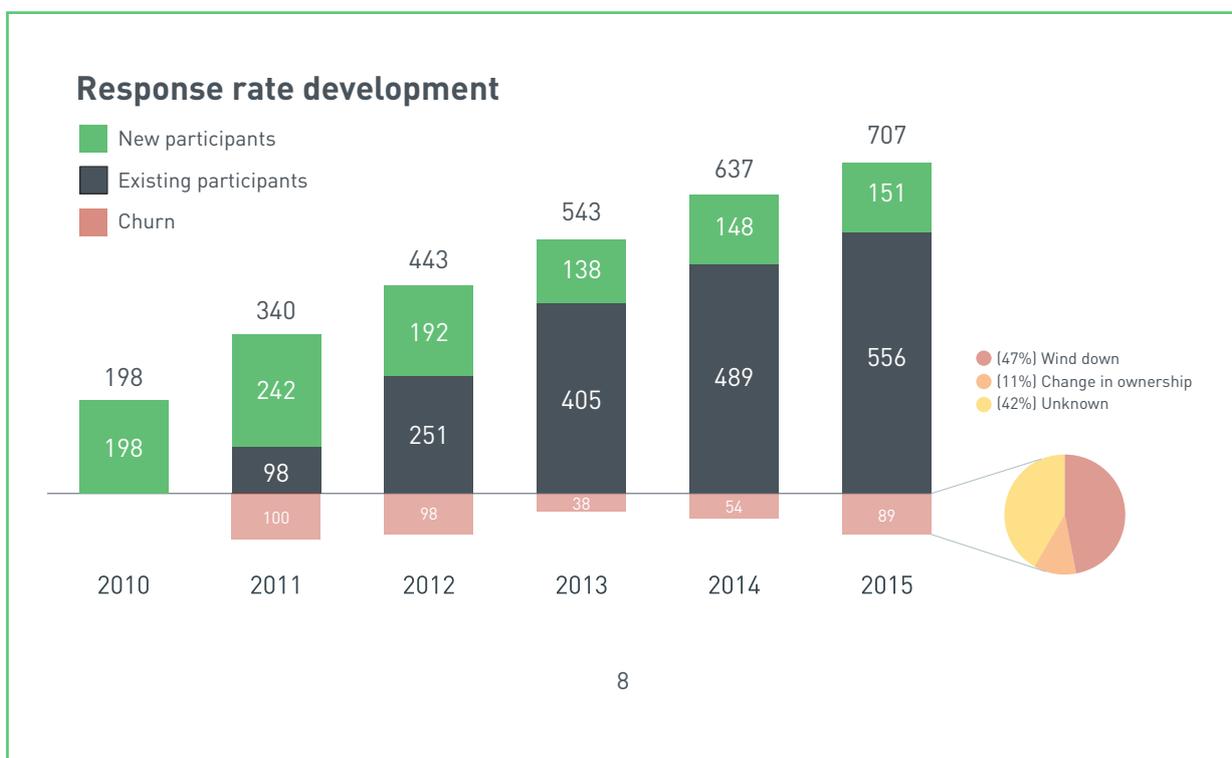
(67%) identify themselves as Core, 22% as Value Added, and 11% as Opportunistic. For listed property companies, the response rate increased to 170 participants, an increase of 10% or 16 companies. The database now covers 56% of the FTSE EPRA/NAREIT Developed Index.

Most companies and funds reporting to GRESB have standing investments only and do not have new construction or major renovation projects in their portfolio – 57% or 393 entities are classified as “standing investments only.” However, GRESB also evaluates and benchmarks sustainability practices in new construction and major renovation work, through a separate Aspect in its assessment (NC&MR). In 2015, 46% or 315 companies and funds completed this Aspect, of which 19 entities had development activities only. These entities receive a separate “Development Score” to better reflect their sustainability profile.

GRESB Scores

The outcomes of the GRESB Survey are reflected in the GRESB Score, as well as sub-scores for the dimensions of Management & Policy (30% weight) and Implementation & Measurement (70% weight). The GRESB Quadrant Model visualizes these GRESB sub-scores, and an entity’s position in the Model can be evaluated both relative to its peer group (the competitive set of entities with the same legal status, region, and sector) as well as absolute, where entities are ranked “Green Starter” (bottom left), “Green Walk” (bottom right), “Green Talk” (top left) or “Green Star” (top right).

In 2015, the performance of companies and funds reporting to GRESB increased quite significantly, with the average GRESB Score now standing at 56, as compared to 47 in 2014. The average Management & Policy Score increased from 54 to 63, and the average Implementation & Measurement Score increased from 43 to 52. These improvements are accurate like-for-like comparisons, as the 2015 GRESB Survey remained stable compared to the year prior.





Clearly, the awareness of sustainability issues in the real estate industry is increasingly reflected in both strategic development as well as actual implementation of sustainability measures. Also, as further described in the Disclosure & Assurance section of this Report, the quality of the data and of documents provided as supporting evidence

for sustainability programs and policies has been improving rapidly, leading to more positive validation outcomes (and thus higher scores).

The GRESB Quadrant Model also reflects improved performance as measured by the fraction of companies and funds that are Green Starters, Green Walk, Green Talk, and Green Stars. Continuing the trend of previous years, the number of Green Star-rated entities increased significantly in 2015, and now stands at a total of 387 entities, or 56% of the total. There is still significant variation in scores

among Green Stars, from those entities that are on or just above the 50/50 cut-off point, to entities that score above 90 on both Management & Policy and Implementation & Measurement. The percentage of entities rated Green Starters has decreased from 38% in 2014 to 18% in 2015. Many of those entities are now Green Talk, which represents 22% of total participants (as compared to 23% in 2014). Green Walk remains a rare phenomenon, with 18 entities or 2% of the total number of participants.

In 2015, the performance of listed property companies and private entities is evaluated separately through dedicated peer groups in those markets where market coverage is sufficiently large. The GRESB Quadrant Model also separately presents the average GRESB Scores of public companies and private entities. The average GRESB Score of private entities is 54, as compared to an average score of 60 for listed companies. This performance difference between listed property companies and private property funds is consistent with the performance differences observed in 2014.

ESG scores

In 2015, GRESB introduced a breakdown of the GRESB Score into separate scores for Environmental, Social and Governance (ESG). These scores are calculated based on the allocation of individual questions to E, S, or G. The results show that GRESB participants score relatively high on Governance, with an average score of 69, a score of 58 on Social, and a score of 48 on Environmental. The Regional Snapshots show how these scores vary by region.

2015 GRESB ESG scores



GRESB rating

In addition to the well-known quadrants, the 2015 GRESB Quadrant Model introduces a new overall metric – the GRESB Rating. In response to specific industry feedback and in line with best practices in the financial industry, GRESB has developed a novel approach to providing an overall categorization of companies and funds. Each year, the performance of an entity is ranked relative to the global GRESB database, and the entity is then provided with a 1-5 rating based on its quintile position. The diagonal lines in the Model show the cut-off for each quintile – GRESB rating will thus provide a relative performance measure where every quintile and corresponding rating contains 20% of the GRESB participants.

Regional Results

The 2015 GRESB database covers 37 countries across 6 continents. To reflect the specific sustainability strengths and opportunities of national and regional real estate markets, there are Regional Snapshots for individual geographies – including [Australia/NZ](#), [Asia](#), [Europe](#), and [North America](#). These Regional Snapshots include more details on the participating companies and funds, region-specific sustainability trends, and an overview of regional GRESB Scores.

Response rate

All regions are well represented in the 2015 GRESB Survey, with Europe having the largest number of companies and funds, and North America having the greatest weight measured by gross asset value (GAV). The response rate in North America increased from 151 to 155, a small increase that is mainly attributable to participation by listed property companies. The coverage of the FTSE EPRA/NAREIT North America Developed Index now stands at 55%. Within North America, 11 participants have the majority of their assets in Canada, and 144 participants have the majority of their assets in the United States. The response rate in Europe increased quite strongly, from 328 companies and funds in 2014 to 378 in 2015. The listed sector now has market coverage of 74%, as measured by the FTSE EPRA/NAREIT Europe Developed Index. On the private side, more than 40 funds were added to the database. Most European portfolios are allocated to the United Kingdom (139), Netherlands (41), and France (30). Notably, participation strongly increased in the Nordics (from 21 to 41 participants) and in Germany (now 25 participating companies and funds). Participation in the Asian market grew by 13% to a total of 104 participants, despite the underlying dynamics of fund liquidations and privatization of several listed companies. The number of

participating listed companies increased to 41, resulting in a market coverage of 39%, as measured by the FTSE EPRA/NAREIT Asia Developed Index. Participation in the Australia and New Zealand region remains high and increased even further; with three more reporting entities, resulting in a total of 47 participants.

GRESB Scores

While investor and tenant preferences for more advanced, more efficient and more productive buildings may be global, the market forces for the implementation of sustainability policies and practices differ significantly per region, and often even per market within a region. These differences are driven by the general development of the economy, but also by regulation, energy prices, competition and cultural awareness and acceptance of sustainability as an important societal issue. The 2015 GRESB results clearly reflect these regional differences: while the average GRESB Score is 56, property companies and funds in Australia/NZ outperform other regions with an average GRESB Score of 69. Interestingly, even though all regions improved strongly, there does not seem to be convergence or “learning effects” in global best practices, with continued performance differences between Australia/NZ and the other regions. The sustainability performance of Asia (average GRESB score of 54), Europe (average GRESB score of 56) and North America (average GRESB score of 54) is, on average, quite similar. Obviously, there is a large degree of performance variation within each region, which is described in more detail in the Regional Snapshots.



Global Trends

Better management, more action, improving outcomes

Management



Globally, most GRESB participants have established specific lines of responsibility for ESG management, integrated sustainability into their business strategy, implemented processes to periodically inform senior management, developed strategies to communicate performance to external stakeholders via reports and websites, and established clear policies for third-party contractors and the supply chain. Notable trends between 2014 and 2015 include:

- ↑ Sustainability objectives incorporated in overall business strategy: **93%** from 81%
- ↑ Sustainability requirements for procurement: **76%** from 65%
- ↑ Sustainable site development requirements: **85%** from 80%

[More in Management](#)

96% of GRESB participants have a specific person with responsibility for implementing sustainability objectives

Disclosure & Assurance



Investor expectations for transparency, information availability, and data quality continue to rise. Consequently, GRESB has repeatedly included a set of criteria addressing internal and external communications and efforts to check, verify, and assure ESG information disclosure. Notable trends between 2014 and 2015 include:

- ↑ Review of sustainability disclosure by a third-party: **63%** from 59%
- ↑ Integrated reports: **6%** from 2%
- GRESB participants are using over 200 different building certification schemes

[More in Disclosure & Assurance](#)

92% of 2015 GRESB participants report having specific sustainability objectives

Climate Risk & Resilience



Climate risk has now become a key consideration for companies around the globe, as extreme weather events and shifting weather patterns threaten economies and the built environment. Buildings play a critical role in reducing the drivers of anthropogenic climate change and for building urban resilience. The majority of GRESB participants have organizational policies to address climate change and a growing fraction is developing policies and interventions to promote resilience. Findings include:

- ↑ Environmental policies addressing climate/climate change: **54%** from 48%
- ↑ Environmental policies addressing resilience: **35%**
- ↑ Climate change risk assessments for standing investments: **46%** from 35%

[More in Climate Risk & Resilience](#)

-3.04%
reduction in GHG emissions

Energy



Efforts to address the cost and environmental impacts of energy consumption remain fundamental to ESG management around the world. GRESB participants have begun taking a set of coordinated actions, including setting organizational objectives, implementing a range of measures, and monitoring environmental performance. At the same time, these actions also increase the need for robust commissioning, effective management, leadership and communication in order to achieve efficiency goals. Notable findings include:

- Installation of high-efficiency equipment: **57%**
- Building energy management: **36%**
- Systems commissioning: **35%**

[More in Energy](#)

-2.87%
reduction in energy
consumption

Water & Waste



Global trends in energy management are mirrored by trends in water conservation and waste management. Overall, water conservation measures appear to be growing more slowly than energy-related practices. The largest increases are in low-cost, operationally controlled measures, such as leak detection or cooling tower management. Findings include:

- Installation of high-efficiency fixtures: **67%**
- Re-use of grey-water: **21%**
- ⬆️ New construction measures to improve water efficiency: **91%** from 71%

[More in Water & Waste](#)

-1.65%
decrease in water use

Health & Well-Being



Health, safety, and well-being are rapidly emerging as a global priority for property companies and funds. In 2015, the World Green Building Council issued a report calling this trend “the next chapter in green building”. Investments in health and well-being have shown to provide disproportionate opportunities to reduce costs and create value. GRESB participants have begun to recognize this theme as a source of both risk and opportunity. Notable trends between 2014 and 2015 include:

- ⬆️ Employee health and safety check during the last three years: **88%** from 77%
- ⬆️ Monitoring employee health and safety: **70%** from 48%
- ⬆️ Community engagement program addressing health and well-being: **52%** from 26%

[More in Health & Well-Being](#)

New construction
measures to
support health
and well-being:
84%

Tenant & Community Engagement



Ultimately, relationships with tenants and local communities are essential to sustained income, environmental performance, and risk management. To create more productive workplaces and healthy and more efficient buildings, landlords and tenants will need to collaborate with each other on all the elements that contribute to shared goals. In 2015, tenant engagement by GRESB participants often focused on efforts to foster this collaboration. Notable trends between 2014 and 2015 include:

- ⬆️ Community engagement programs including sustainability-specific issues: **81%** from 64%
- ⬆️ Sustainability-specific requirements in standard lease contracts: **60%** from 43%
- ⬆️ Undertaken tenant satisfaction surveys during the last three years: **59%** from 52%

[More in Tenant & Community Engagement](#)

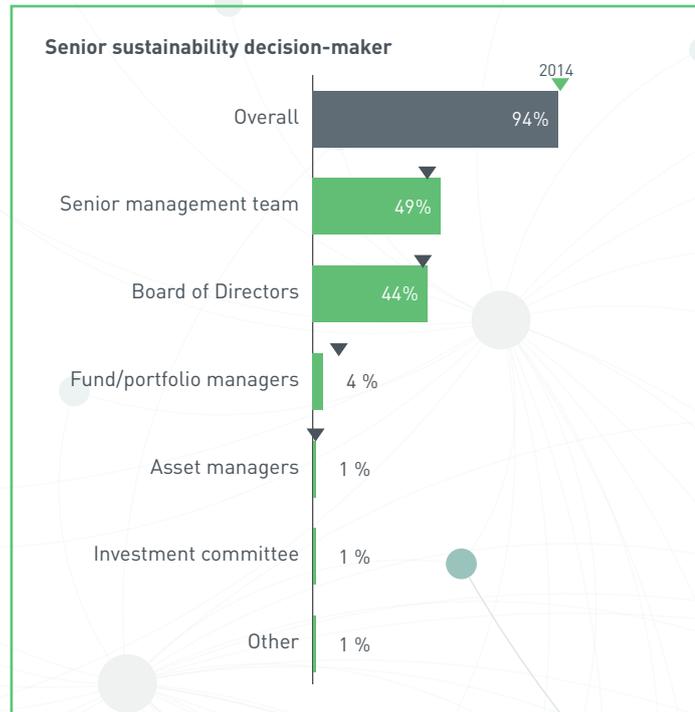
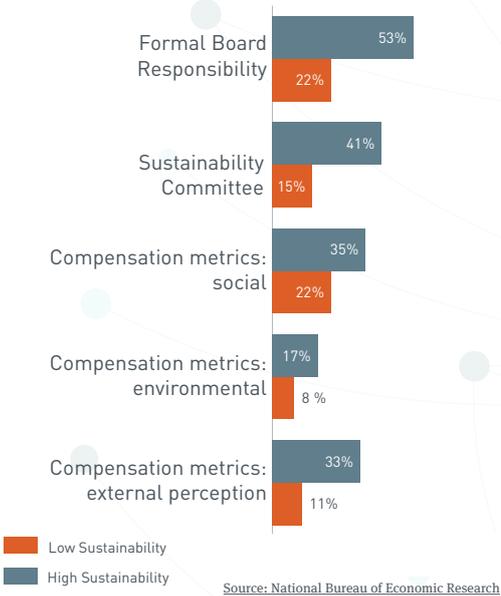
Best practice
lease clauses
60%

Management

Providing leadership, ensuring accountability, aligning incentives

Effective management is the foundation for enhanced ESG performance. Successful organizations set clear objectives, provide qualified leadership, ensure accountability, and align incentives to set the conditions for high sustainability performance. [Academic research](#) has repeatedly shown that the governance structure of “High Sustainability” companies is significantly different from conventional organizations, and that companies with these governance attributes significantly outperform their peers over the long term with respect to stock market performance.

Governance of “High Sustainability” companies is different



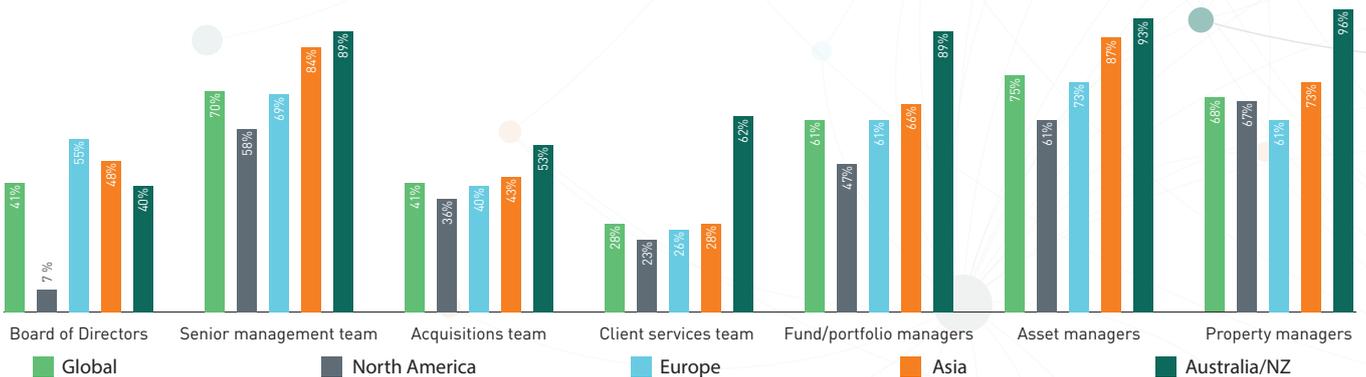
Over 94% of GRESB participants have a senior decision-maker dedicated to sustainability, most commonly a member of the senior management team (49% in 2015 from 42% in 2014). Globally, 91% of participants have a formal process to inform this decision-maker on the entity’s sustainability performance. Moreover, GRESB participants are increasingly embedding sustainability deeper into their organizations by including sustainability factors in annual performance targets (78% in 2015 from 75% in 2014).

Embedding ESG

Overall, 2015 GRESB data shows industry-wide progress in ESG-related management and policy, along with significant regional variation. Designation of one or more persons responsible for implementing sustainability objectives is ubiquitous: 96% of participants have designated an internal or external resource to sustainability. Further, an organizational sustainability taskforce or committee is also standard practice and now in place for 91% of GRESB participants.

Sustainability-related performance targets in place

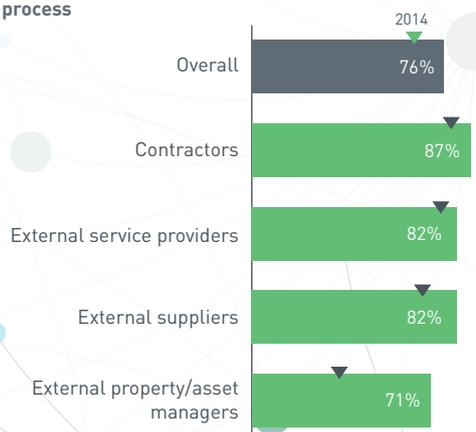
*Percentages refer to participants with sustainability-related performance targets in place



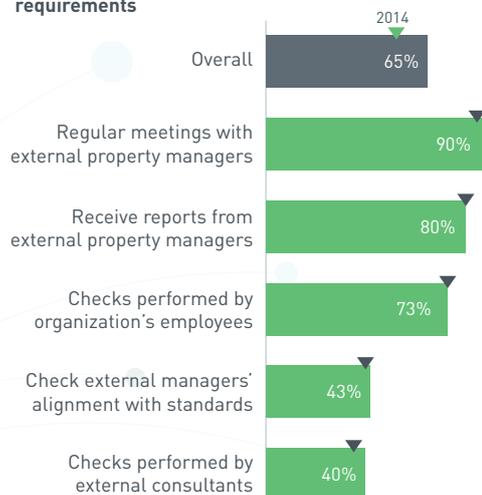
Supply chain

ESG management extends beyond employees, to business partners throughout the supply chain, including the organizations that provide products and services to support property development and operations. A [recent global survey](#) by IBM of chief supply chain offices found that supply chain visibility (transparency) was the most frequently mentioned priority, along with risk management, rising customer demands, cost control, and globalization. Institutions such as the United Nations Global Compact initiative on [Sustainable Supply Chains](#), the [Sustainable Purchasing Leadership Council](#), and a growing universe of allied organizations are providing practical guidance and are developing standards to score and benchmark enterprise-wide performance.

Sustainability-specific requirements in procurement process



Monitoring compliance with sustainable procurement requirements



A large and growing fraction of GRESB participants include sustainability-specific requirements in their organizational-wide procurement process (76% in 2015 from 65% in 2014). The majority of GRESB participants also support their procurement policies with compliance monitoring. In 2015, 71% of GRESB participants report monitoring of external managers and 82% report monitoring of direct external suppliers and service providers, an increase from 71% in 2014.

Research Highlights

Finding: A new model for governance that integrates sustainability into governance and corporate boards' strategic agenda.

The United Nations Environment Program discusses widespread limitations in the integration of sustainability into corporate governance and recommends a specific framework to advance sustainability within organizations. [More](#)

Finding: A study of 180 companies in the United States finds that "High Sustainability" organizations have a distinct set of governance and management attributes.

Bob Eccles and colleagues with the National Bureau of Economic Research find that "High Sustainability" companies assign responsibility for sustainability to their Board of Directors and top executives, including linking compensation to specific metrics. [More](#)

Finding: A review of 50 large listed Australian companies finds a significant shift to integrate sustainability into core business operations, including Board and senior management involvement.

Alice Klettner and colleagues from the Centre for Corporate Governance, University of Technology Sydney report on a significant increase in senior management involvement in sustainability topics, aligned financial compensation, and external communications. [More](#)

Disclosure & Assurance

Meeting demand for transparency and high quality data

Investor expectations for transparency, information availability, and data quality continue to rise. The ongoing push for regulation to require asset-level energy efficiency ratings for privately and publicly-owned real estate is one reflection of this trend and such regulation is [spreading rapidly around the world](#). In 2015, the number of countries and municipal governments requiring asset ratings increased

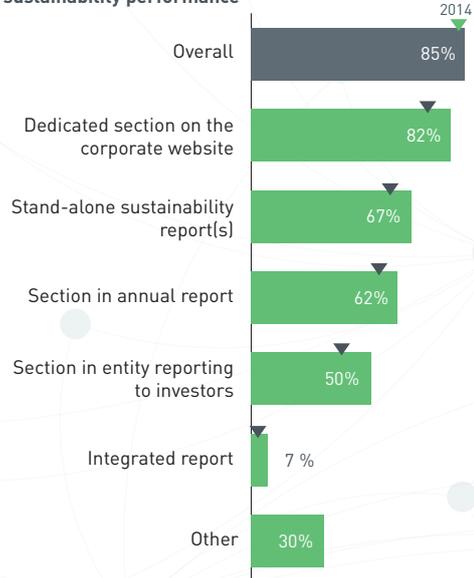
further, and many markets now have several years of data available. The transparency trend is also reflected in other types of reporting, such as participation in the [Global Reporting Initiative](#) (8,074 companies in 2014) and the [Carbon Disclosure Project](#) (5,003 companies in 2014). Most importantly, demand for data appears to be growing quickly, as illustrated by the rapid increase in the number of Bloomberg terminal users accessing ESG data.

Number of Bloomberg terminal customers using Environmental, Social, and Governance (ESG) data



Source: Bloomberg, LLC.

Global trends in communication strategies for sustainability performance

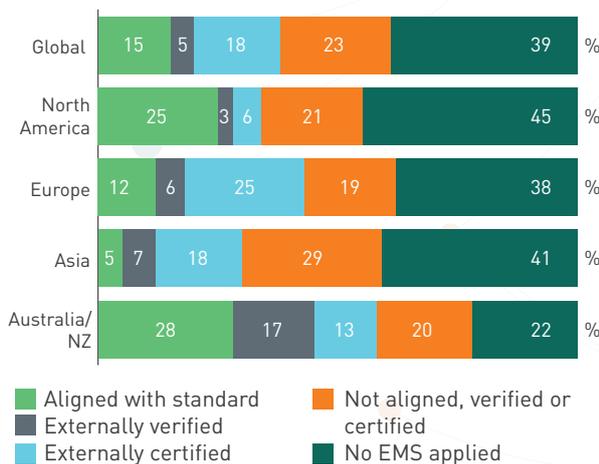


Disclosure

Articulation of clear, actionable sustainability objectives is the foundation for any organization seeking to manage its ESG performance. In 2015, 90% of GRESB participants report having specific sustainability objectives and 79% of these participants report making this information available online. Notably, the fraction of participants indicating that their sustainability objectives are not available to the public declined from 28% in 2014 to 21% in 2015. These trends underscore that sustainability goals and organizational communication are firmly part of mainstream business practice.

Disclosure of ESG performance enables companies and funds to communicate both risks and opportunities relating to sustainability. GRESB participants use many different approaches to disclose sustainability performance and the prevalence of different practices varies regionally. Overall, the most common strategy is a dedicated sustainability section on the corporate website (70%), followed by a stand-alone sustainability report (57%). The use of integrated reports remains relatively limited (6%). The majority of participants (63%) subject their sustainability disclosures to review by an independent third party, which supports the integrity and reliability of the reported information. The nature of third-party review varies significantly for different types of disclosure and across regions, including a mixture of checks, verification, and assurance.

Third-party alignment and review for Environmental Management Systems



Robust and organized systems

The importance of having high-quality operational performance data motivates many GRESB participants to seek alignment and third-party review of their Environmental Management Systems (EMS). In 2015, 61% of GRESB participants reported having an EMS in place of which 63% reported alignment with a third-party standard and/or external verification or certification. The most common practice was third-party certification of an EMS; this was reported by 30% of participants with EMS.

However, even the most robust EMS is only as useful as the quality of the data it contains. Consequently, a large and growing fraction of GRESB participants pursue review, verification, and assurance for energy, water, and waste data. This helps identify errors and affirm the veracity of often complex data coming from disparate sources.

Building certifications

Publicly disclosed asset-level building certifications provide another layer of transparency and accountability to inform investors and occupiers. Typically, building certifications affirm that individual assets are designed or operated in ways that are consistent with independently developed criteria. In 2015, GRESB participants reported using over 200 different building certification schemes. These schemes vary greatly in the scope of topics that are assessed, the rigor of the assessment, and in the degree to which the schemes require third-party verification of scheme compliance.

The industry continues to make extensive use of a core set of global asset rating schemes, including BREEAM, Green Star, LEED and others (see table). These robust systems share many common attributes, including widely available information about the rating system requirements, professional training, third-party review, and publicly available project lists.

Most-used green building certification schemes

2015 Rank	Building certificate	Percentage of use
1	LEED	30%
2	BREEAM	21%
3	BOMA	16%
4	Green Star	7%
5	DGNB	5%
6	HQE	3%

- Green building certificate for design and construction obtained by **51%** of participants
- Green building certificate for operations and maintenance obtained by **40%** of participants
- Energy rating obtained by **71%** of participants

Research Highlights

Finding: Green building certification dominates large existing buildings in major metropolitan areas, lower adoption rates elsewhere.

Maastricht University and CBRE found that at the end of the fourth quarter of 2014, 13% of US commercial building stock now has an ENERGY STAR label, LEED certification, or both. [More](#)

Finding: Green building is growing around the world.

McGraw-Hill Construction provides findings for 60 countries, and report that green buildings and related industry activities are expected to expand. [More](#)

Finding: Institutional investors continue to seek large-scale exposure to positive social impact through listed equities.

Linda Elling-Lee from MSCI identifies key ESG trends, including the expectation that investors are increasingly seeking to overlay exposure to social impact opportunities across broad, diversified public equity portfolios.

[More](#)

Finding: Energy-efficiency performance benefits from efforts to link energy codes with benchmarking and disclosure policies.

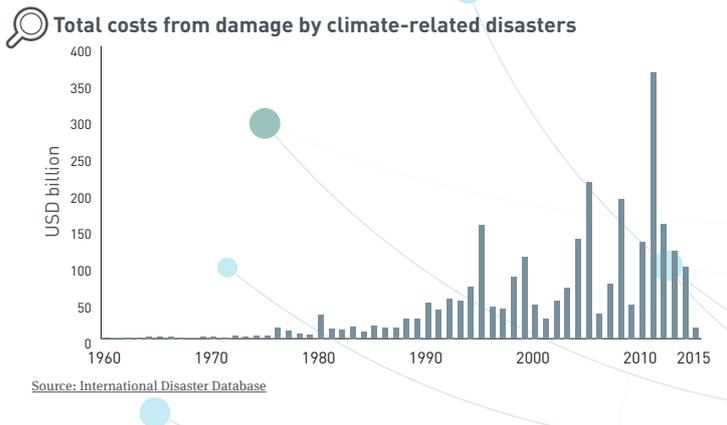
Ryan Meres and Jayson Antonoff from the Global Building Performance Network discuss potential synergies between policy and regulatory regimes for building energy codes and building benchmarking and disclosure.

[More](#)

Climate Risk & Resilience

Risk and resilience key considerations in real estate investments

According to the United Nations' [World Urbanization Prospects](#), urbanization and population growth will likely add another 2.4 billion people to urban populations by 2050. Given that the real estate sector already contributes up to 30% of global annual greenhouse gas emissions and consumes up to 40% of all energy, the increase in urbanization implies that carbon emissions and the pressure on natural resources will continue to grow.



Buildings are also adversely impacted by climate change. Extreme weather events and shifting weather patterns can expose properties to physical damage, increase insurance costs or, in some cases, make buildings uninsurable. Flooding from sea level rise and increased damage from storm surges already causes billions of dollars in coastal area property losses each year. Seven of the ten most costly tropical storms in terms of damage (adjusted for inflation) occurred [in the past ten years](#) (2004-2014), and the costs from damage from climate-related disasters are expected to rise even further in the coming decades.

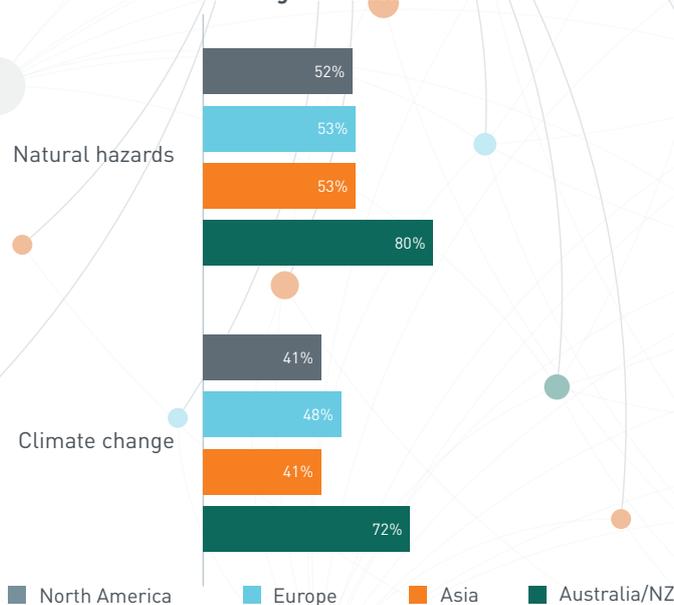
Incorporating measures that make buildings more resilient to climate risk will help decrease their vulnerability and, importantly, provide long-term savings and protection of asset value. Resilience is the capacity to survive, adapt, and grow no matter what sorts of chronic stresses and acute shocks occur. A [recent survey](#) by The Economist Intelligence Unit of 248 executives at companies around the world about the role of business in building climate resilience, showed that few dispute the benefits of investing in climate change resilience: the vast majority (90%) see benefit to such investments. Increased competitiveness, improved employee health and well-being, greater productivity and lower absenteeism, as well as cost savings, rank high as perceived benefits.

Policies and assessments

Climate risk and resilience are important topics for real estate investors, as reflected by a multitude of questions in the GRESB Survey. The 2015 GRESB results show that 54% of all GRESB participants have a policy in place that addresses climate risks. However, of all participants, only 35% have policies in place that address resilience. This topic clearly needs attention, as the need for buildings to be resilient to the impacts of climate change becomes more critical, and current extreme events have the potential to become even more extreme.

Resilience planning requires a detailed assessment of the exposure of buildings to natural hazards and climate risks, as well as an evaluation of the risk of loss or failure from that exposure. Risk assessments are performed by the majority of property companies and funds. For new acquisitions, 68% of all GRESB participants perform risk assessments related to natural hazards (2014: 48%), such as flooding and earthquakes, while 42% perform climate change risk assessments (2014: 36%).

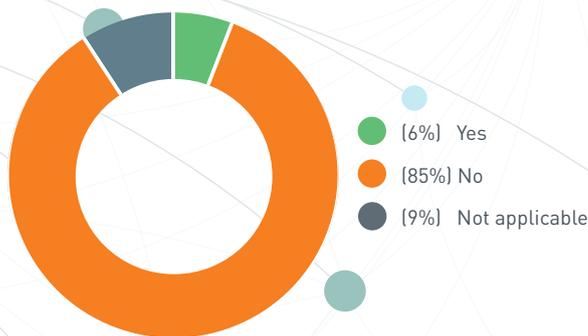
Risk assessments standing investments



Regulations

Internationally, governments increasingly show commitment to reduce emissions that contribute to climate change. In the United States, President Obama's [Clean Power Plan](#) sets standards to reduce greenhouse emissions by 32% from 2005 levels by 2030. The United Nations Climate Change Conference, which will be held in Paris in November 2015, aims to achieve a binding and universal agreement to combat climate change. With regard to the built environment, the European Union requires Member States to ensure that from 2019 onwards, new buildings occupied and owned by public authorities are nearly zero-energy buildings, and that from 2021, all new buildings are nearly-zero energy buildings. In the meantime, national building codes are being updated in order to offer enhanced protection against natural hazards and climate risks. This not only makes new buildings more resilient, but also lowers the future cost of climate change mitigation and adaptation for building owners.

New construction projects designed to meet net-zero energy codes and standards



The 2015 GRESB results show that a mere 5% of participants design their new buildings to meet (future) net-zero energy codes and standards. Not surprisingly, the percentage is the highest for European participants, although it is only 8%. However, 35% of global participants design their development projects to generate energy from on-site renewable resources, which will reduce emissions that contribute to climate change.

Existing buildings

Many of the buildings that will exist in 2050 have already been built. These buildings, constructed prior to contemporary building codes, are likely to be more vulnerable to current climate events, and would be even more vulnerable when faced with the prospect of more severe future events. Indeed, 46% of 2015 GRESB participants perform risks assessments related to climate change for their standing investments in order to identify the measures that might prevent and mitigate these risks (2014: 35%). Interestingly, these assessments are most common in Australia/NZ (72%), while only 41% of participants in North America and Asia perform climate risk assessments for their standing investments.

Innovative adaptation strategies, rating tools and comprehensive risk maps can support approaches to determine vulnerability, e.g., by providing a “resilience rating” of a property or an entire area. The development of these tools and best practices, as well as new building resilience technologies, improve buildings’ resilience and provide an increasingly attractive and important business case for the industry.

“Understanding the potential impacts of the climate on our buildings enables us to better plan for and manage weather related incidents and operating challenges, and influence the design and resilience of Goodman’s new developments.”



Goodman Group

Energy

Managing the bottom line and reducing environmental impact

Buildings represent a large and growing fraction of global energy consumption but also provide some of the most cost-effective opportunities to reduce operating expenses while mitigating energy-related environmental impacts. Consequently, efforts to reduce energy demand, promote efficiency, and generate clean, renewable power have emerged as part of the foundation for sound ESG management in the built environment.

Energy policies

This year's GRESB results show that the real estate industry has increased its focus on sustainability performance in general, and specifically on energy consumption. GRESB participants take a more structured and targeted approach towards energy policies that include planning, implementation, and monitoring of energy management. Notable achievements include:

- ↑ Participants with environmental policies: **91%** from 87%
- ↑ Environmental policies including energy consumption/management: **100%** from 97%
- ↑ Environmental policies including GHG emissions/management: **86%** from 83%

These management priorities are reflected in sustainability risk assessments, now conducted by 84% of participants. Energy is an important consideration for risk assessments for both new acquisitions and standing investments. Notable findings include:

- New acquisition risk assessments addressing energy: **92%**
- New acquisition risk assessments addressing GHG emissions: **56%**
- Standing investment risk assessments including GHG emissions: **70%**

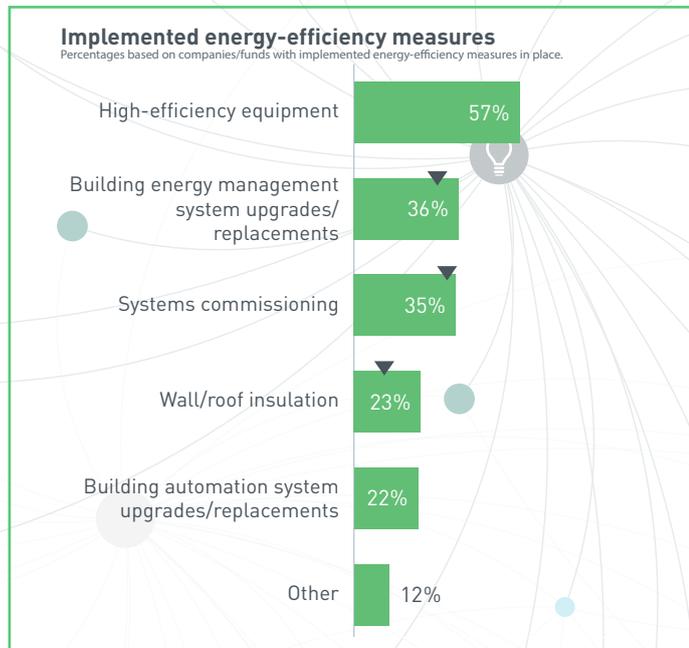
Opportunities

Technical building assessments provide more detailed information on energy efficiency opportunities. In 2015, GRESB participants reported a significant increase in the prevalence of technical building assessments and changes in implementation practices. Typically participants focus on conducting:

- ↑ Technical building assessments: **83%** from 61%
- ↑ External assessments: **80%** from 75%
- ↓ In-house assessments: **51%** from 74%

These assessments resulted in the implementation of several energy efficiency measures by 85% of participants, a significant increase from 78% in 2014. In 2014, the majority of participants focused on implementing lighting upgrades and replacements and HVAC upgrades. In 2015, there is more variation, measures include:

- High-efficiency equipment and appliances: **57%**
- Building energy management systems: **36%**
- Systems commissioning or retro-commissioning: **35%**



Management systems

In 2015, 61% of GRESB participants report supporting their sustainability and energy management activities with an Environmental Management System (EMS), an increase from 46% in 2014. Patterns of EMS adoption vary regionally. Notable trends from 2014 to 2015 include:

- ↑ Australia/NZ: **78%** from 53%
- ↑ Europe: **62%** from 53%
- ↑ Asia: **59%** from 43%
- ↑ North America: **55%** from 32%

Data management systems enable organizations to monitor performance in an efficient and effective way, for example by integrating building management systems for individual locations across the portfolio. Similar to 2014, 78% of participants use data management systems to collect and structure performance data throughout their portfolio. Nearly all of these systems include energy consumption data and 88% also include greenhouse gas emissions data. Importantly, data management systems are becoming more structured: 37% of participants align the system with a standard, compared to 19% in 2014.

Monitoring and measurement

The scope and frequency of energy data monitoring is also increasing: 90% of participants monitor energy consumption within their portfolio. In 2015, 65% of those property companies and funds monitoring energy consumption used automatic meters, covering on average 56% of their portfolio. Collecting data through energy invoices remains common (78% of those monitoring consumption), often as an additional check.

Over the past six years, data availability has continuously increased across all sectors. On average, 72% of participants are now able to report some data. There is a clear difference between “Managed” and “Indirectly Managed” portfolios: in Managed portfolios, data availability is 74%, as compared to 30% in Indirectly Managed portfolios. This can likely be explained by the limited ability of landlords to collect data for properties for which they do not have operational control.

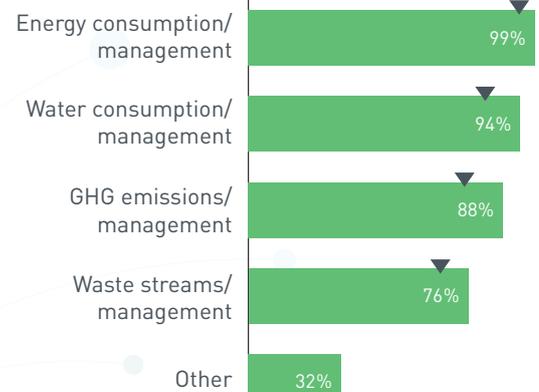
There are also clear differences in energy data collection between property sectors. Changes in energy data availability between 2014 and 2015 include:

- ↑ Office: **88%** from 80%
- ↑ Retail High Street: **62%** from 53%
- ↑ Retail Warehouse: **77%** from 68%
- ↑ Residential: **67%** from 65%
- ↑ Industrial Distribution Warehouse: **64%** from 62%
- ↑ Industrial Manufacturing: **66%** from 61%

These differences reflect a variety of issues and circumstances, including tenant-landlord relationships, regulation, and lease structure. Industrial and retail properties often require special lighting and tenant-specific heating and cooling systems, which may result in fragmented data in comparison to sectors such as Office. In the residential sector, data privacy laws often impose restrictions on data collection.

Data management system includes

Percentages based on companies/funds with data management system in place.

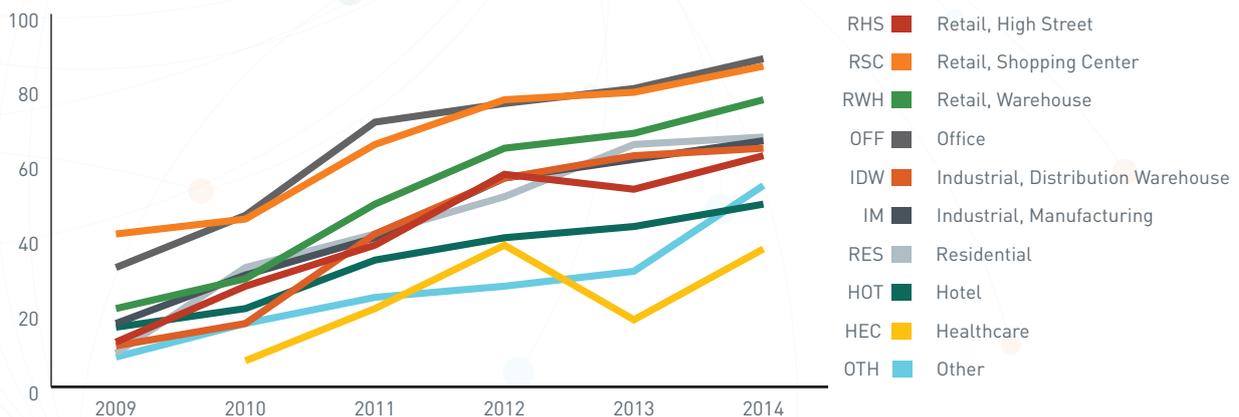


Besides general availability of data, GRESB measures the portfolio coverage of energy consumption per sector. Similar to data availability, overall data coverage per sector has increased strongly since GRESB undertook its first assessment in 2009. GRESB’s reporting structure separates base building (common areas and shared services), from tenant areas. Notable results for data coverage (in percentage of portfolio floor area) include:

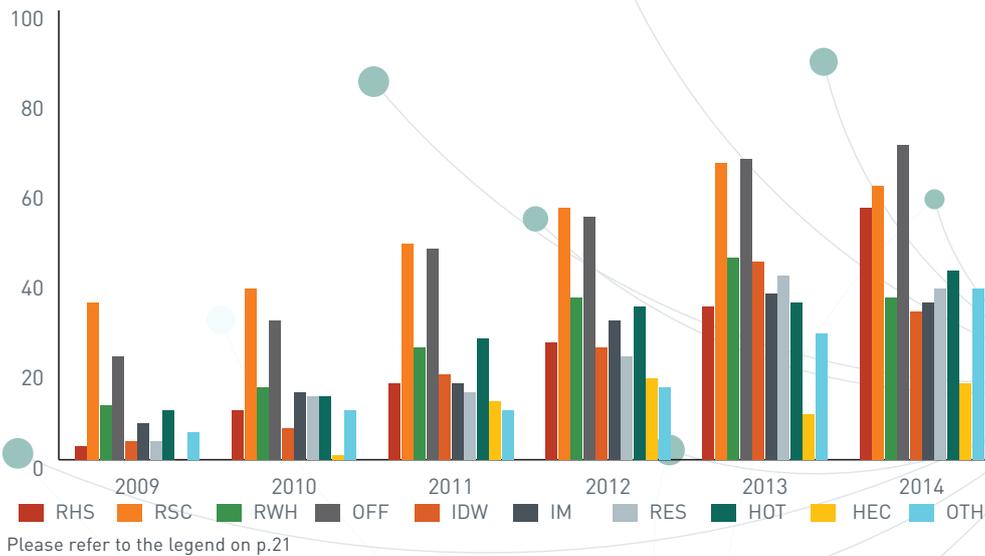
- ↑ Retail High Street: **56%** from 34%
- ↑ Office: **79%** from 67%
- ↑ Industrial distribution warehouse: **56%** from 44%

The GRESB Survey uses “like-for-like” metrics to provide one indicator of short-term change in energy consumption. GRESB defines like-for-like as the stable portion of a portfolio, i.e., assets in the portfolio for two consecutive reporting years. This year’s GRESB results show a 2.9% average reduction in energy consumption. On aggregate, this reduction totals 1.7TWh (or: 1,700GWh), which is the equivalent energy consumption of about 105,000 homes.

Data availability (%)



Whole portfolio coverage of energy consumption (%)



Intensities

Energy intensities offer a complementary set of energy performance indicators that can control for variables such as operating hours, weather, or operational conditions (e.g., occupancy, service levels, etc.). The 2015 GRESB Survey explores how intensities are used across the real estate industry. Patterns include:

- Participants reporting energy intensities: **66%**
- Participants reporting incorporating intensities into business or operational decisions: **83%**

Energy intensities are most common in Office portfolios, where they are used by 78% of participants. Mostly common used normalization factors for Office include:

- Occupancy rate: **35%**
- Weather: **20%**
- Degree days: **20%**

In contrast, only 29% of participants in the Retail Shopping Center sector report using energy intensities. Commonly used normalization factors include:

- Occupancy rate: **53%**
- Degree days: **42%**
- Operating hours: **33%**
- Weather conditions: **30%**
- Footfall: **15%**

Renewables

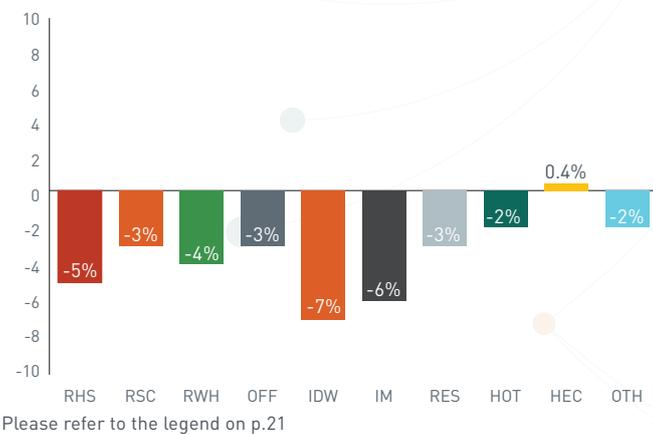
Efforts to reduce energy demand and improve energy efficiency are the foundation of energy management. Attention to energy supply is the other half of the equation, and the global real estate industry continues to explore opportunities to generate clean, renewable energy. Notable findings include:

- GRESB participants reporting generation or consumption of some form or renewable energy: **33%** from 27%
- Absolute renewable energy generation and consumption reported: **4.8TWh** in 2015 from 3.6TWh in 2014
- On-site renewable energy generation reported: **445GWh** in 2015 from 296GWh in 2014

Although significantly more renewable energy is generated on-site, it still comprises less than 0.5% of the total energy consumption reported by all GRESB participants. The Industrial sector leads with 42% of participants using renewable energy. Measured with respect to total energy consumption, the sectors with a significant fraction of renewable energy use include:

- Distribution Warehouse: **6.5%** (generated on-site: 3.7%)
- Industrial Manufacturing: **6.0%** (generated on-site: 0.4%)
- Retail Warehouse: **2.5%** (generated on-site)

Like-for-like change energy consumption (2013-2014)



Construction projects

Energy is also a focal point for new construction and major renovation projects, where building regulation and market trends are drivers for innovation. Findings from 2015 include:

- Minimum energy-efficiency requirements for new construction and major renovations: **80%**
- Participants reporting energy performance exceeding mandatory requirements by 10% (new construction) or 5% (renovation): **51%**

In 2015, 35% of New Construction & Major Renovation participants reported the use of renewable energy generation. Notable findings among these participants include:

- ↑ Fraction of projects designed to generate on-site renewable energy: **51%** from 46%
- ↑ Average generation capacity as a fraction of total project demand: **22%** from 19%

Among those installing renewable energy, 85% of participants report using solar photovoltaic technology, with a fraction reporting co/tri-generation (25%) or geothermal energy sources (22%).

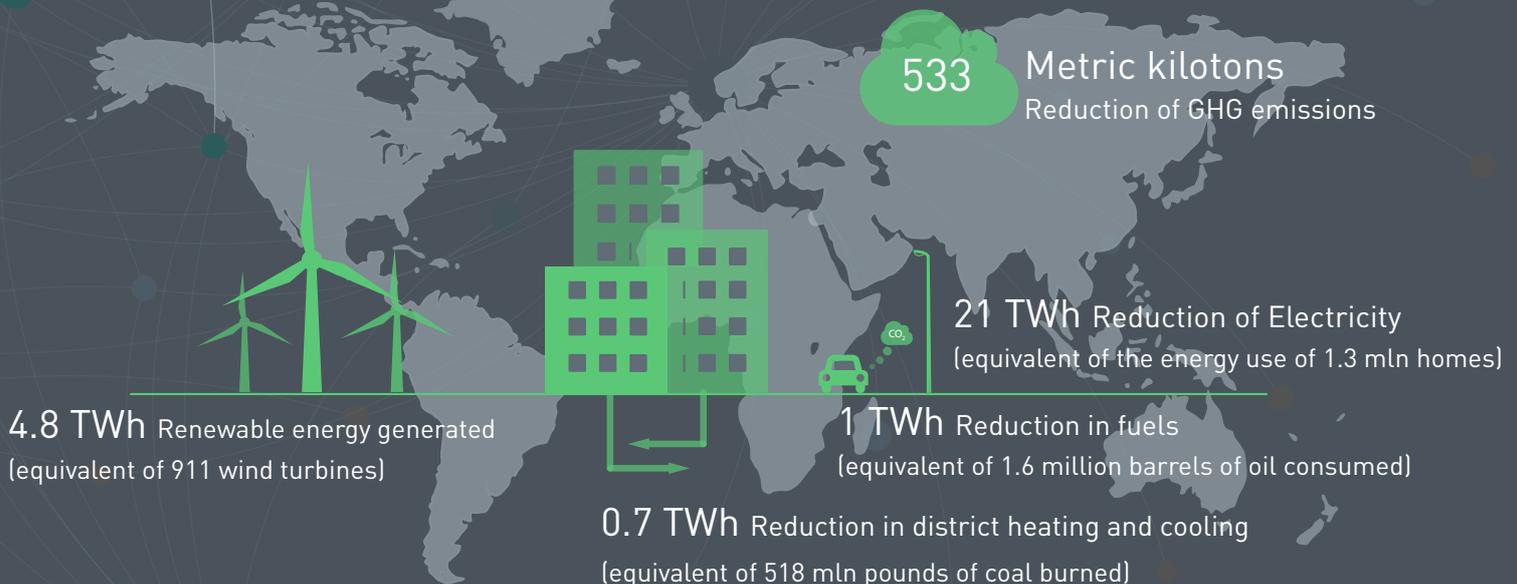
Greenhouse gas emissions

The number of property companies and funds reporting on greenhouse gas emissions has increased in line with reporting on energy consumption, but differences between sectors remain:

- Retail Shopping Mall: **91%** of participants report data for **84%** of the portfolio, on average
- Office: **78%** of participants report data for **85%** of the portfolio, on average
- Healthcare: **37%** of participants report data for **45%** of the portfolio, on average

The aggregate greenhouse gas emissions reported by the 2015 GRESB participants equal 20 million metric tons, or the equivalent of 4.4 million passenger vehicles. However, in 2015 the commercial real estate sector reduced its greenhouse gas emissions with 3.04%, which on aggregate is the equivalent of 112,250 passenger vehicles off the road. This is a significant reduction in total emissions, exceeding many of the national carbon reduction targets that have been set in advance of the Paris climate change conference.

2013-2014 Consumption Change



Water & Waste

Smarter water management and increasing waste diversion

Water management

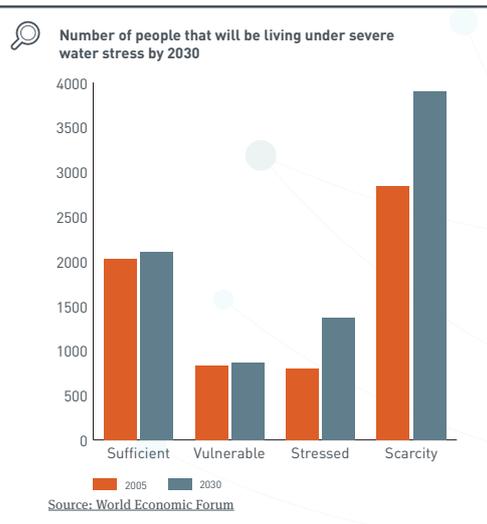
Access to clean, reliable water supply is a fundamental issue for human health and economic prosperity. A review by the [World Economic Forum](#) concluded that over six billion people might be at risk of water supply vulnerability, stress or scarcity by 2030. This is not only an issue for developing countries, but is also a major concern in developed economies;

the droughts in California and Australia are recent examples. These trends underscore the need for action to conserve water and protect water supplies.

Water resource management is a core element of the GRESB assessment. The 2015 GRESB results contain multiple measures of actions by property companies and

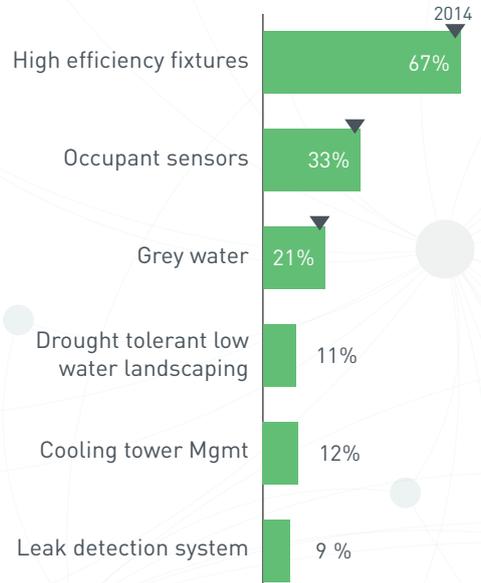
funds to address this critical issue. Their work begins with establishing policies, setting targets, and including water-related issues in risk assessments for new acquisitions and standing investments. Important findings include:

- ↑ Participants with environmental policies: **91%** from 87%
- ↑ Environmental policies specifically addressing water consumption/management: **95%** from 90%
- ↑ Participants considering water efficiency in risk assessments for new acquisitions: **77%** from 68%
- ↑ Participants setting short-term targets for water consumption: **28%** from 22%
- ↑ Participants setting long-term targets for water consumption: **34%** from 31%



Implemented water-efficiency measures

Percentages based on companies/funds with implemented water-efficiency measures in place.



The 2015 GRESB Survey also examines specific water conservation measures taken by property companies and funds. 69% of participants undertake water conservation measures, up from 63% in 2014. The most commonly implemented measures are high-efficiency fixtures (67%) and occupant sensors (33%).

“The team designed the HVAC equipment to collect and pipe all HVAC condensate (from a total of 320 residential condensing units) to provide water supply to the on-site water feature, landscaping irrigation zones, a holding cistern, and a pond/retention area. This approach virtually eliminates the need for any potable water for exterior applications.”



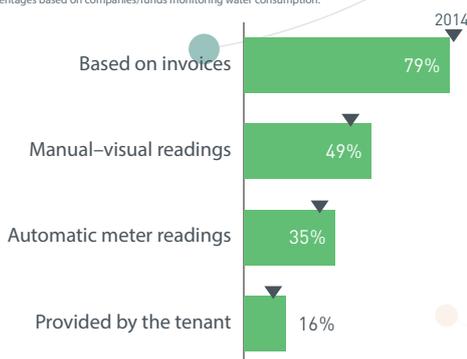
USAA Commingled Portfolio

Evaluating the effectiveness of water conservation measures requires systematic performance monitoring. In 2015, more property companies and funds included water in their data management systems (74% from 64% in 2014). Other notable results and trends include:

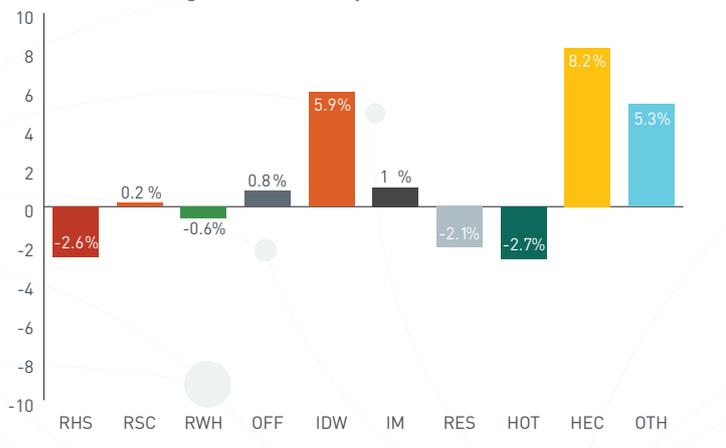
- ↑ Monitoring water consumption: **87%** from 81%
- ↑ Independent checks on water data: **68%** from 61%
- ↓ Independent verification of water data: **5%** from 12%
- Independent assurance of water data: **27%** from 27%

Monitoring water consumption

Percentages based on companies/funds monitoring water consumption.



Like-for-like change water consumption (2013-2014)



Water consumption is reported by 59% of the property companies and funds. Data availability and data coverage differs significantly between property types:

- 53% of participants with Industrial Warehouse properties report water data, covering on average 87% of the portfolio
- 61% of participants with Residential properties report water data, covering on average 67% of the portfolio

The aggregate water consumption reported by GRESB participants is 945 million cubic meters (or nearly a million Olympic-size swimming pools). Overall, the combination of policies, targets and implementation actions contribute to improvements in average water efficiency and water consumption across all GRESB participants: the like-for-like water consumption decreased by 1.7% on average, with the largest reduction for Retail Shopping Malls (-3.6%) and an increase in consumption of 1.9% for Hotels. The aggregate reduction by all property companies and funds reporting to GRESB is about 8 million cubic meters (quite similar to the aggregate reduction in water consumption reported in 2014).

Waste

According to United Nations Environment Programme for [Sustainable Buildings and Climate Initiative](#), the built environment is responsible for 30% of total solid waste generation. Despite efforts to increase waste diversion, total municipal solid waste generation continues to increase in every major geographic region.

The 2015 GRESB results indicate that efforts to address waste are a common part of ESG management. Nearly all participants report having environmental policies and many set short- and long-term for waste reduction. Notable results include:

- Participants with specific waste management policies: **88%** from 83%
- Short-term waste diversion targets: **25%** from 18%
- Long-term waste diversion targets: **29%** from 26%

These policies and targets are the foundation for specific measures to manage material flows through procurement, waste reduction measures, and tenant engagement. Regarding the latter, 51% of all participants provide tenants with feedback on energy/water consumption and waste. Results for new construction and major renovations include:

- Participants with waste management plans: **66%**
- Project-specific targets for waste reduction, re-use or recycling: **47%**
- Waste management education for employees and contractors: **38%**

Evaluating the effectiveness and impact of these measures requires systematic monitoring and data collection. Many GRESB participants now incorporate waste as an indicator in data management systems: 76% from 63% in 2014. Other results for waste-related monitoring and measurement include:

- Participants that reported waste performance data: **38%**
- Independent checks on waste data: **21%**
- Independent verification of waste data: **3%**
- Independent assurance of waste data: **9%**

The waste generation per unit of space (square footage or square meters) shows quite some variation across property types, from 11.7kg/m² of non-hazardous waste for Hotels to 29kg/m² of non-hazardous waste for Offices. While absolute waste generation increased from 5.2 million tonnes in 2013 to 6.3 million tonnes in 2014, waste management actions have resulted in overall improvement in average waste generation intensity and total waste generation across all GRESB participants. The waste diversion rates show a positive development for most property types. Some trends in recycling rates:

- Retail High Street: **53%** from 49%
- Other property types: **44%** from 30%
- Distribution Warehouse: **37%** from 45%

Waste policies new construction and major renovations projects

Percentages based on companies/funds with waste policies for construction and renovation projects in place.

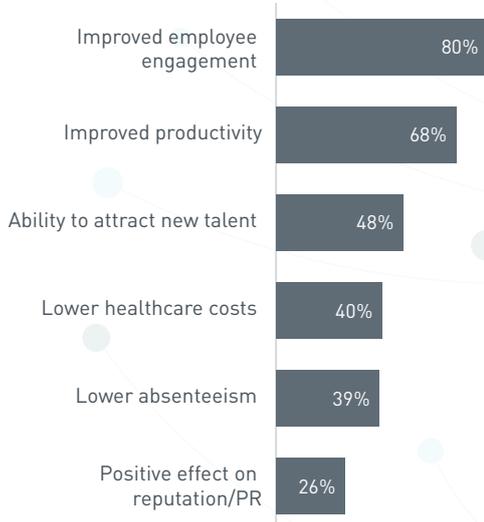


Health & Well-Being

Creating healthy, productive and safe environments

The built environment shapes behavior, social interaction, and environmental exposures. Over time this has direct and indirect impacts on the health, safety and well-being of occupants, communities and the supply chain. The real estate industry has begun to recognize these themes as a source of both risk and opportunity. Recent [research](#) by the World Green Building Council indicates that efforts to promote health, safety, and well-being can improve employee engagement, assist in recruiting, increase productivity, and, in some situations, potentially reduce health care costs. Research also indicates that the annual economic value of improvement to US indoor environments could be more than [double the total annual cost of energy](#).

Asset owners and human resource executives believe that buildings can provide business benefits

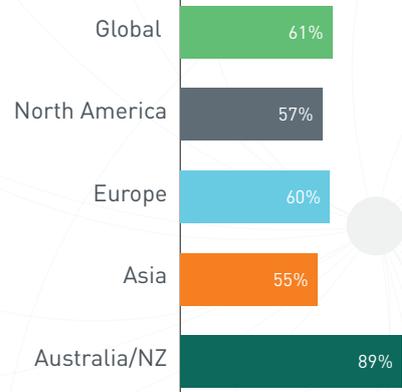


Source: McGraw-Hill Construction

Health and safety policies

As asset owners and human resource executives become more aware of the impact that buildings have on occupant and community health, the demand for health-promoting real estate is likely to increase. The 2015 GRESB results indicate many health and safety promotion plans and actions are already widespread in the commercial real estate sector. However, the language used to describe such activities is [highly variable and often ambiguous](#). Consequently, it is difficult to understand and compare actions between different property companies and funds. Equally important, consistent [operational performance indicators](#) to assess health and well-being have not yet been established, and, as a result, it is difficult to consistently connect plans, actions, and outcomes.

Health, safety and well-being risk assessments for standing investments



Nearly all GRESB participants report having specific employee policies related to health and safety: 95% of all reporting entities have such policies in place. Health, safety and well-being are also represented in 65% of sustainability risk assessments for new acquisition and 61% of assessments for standing assets. Participants in Australia/NZ include health, safety, and well-being most frequently, with 89% of participants reporting including it in risk assessment for standing investments.

Occupant well-being is also increasing as a priority during new construction and major renovations. In 2015, 84% of GRESB participants reported incorporating health and well-being promoting features into development projects, including daylight provision, the use of low-emitting materials, occupant controls, and natural ventilation.

Additionally, health and well-being are more common in community engagement policies. 42% of 2015 GRESB participants included health and well-being considerations within their community engagement programs, compared to 26% in 2014.

"Our new offices aim to be the first in Mexico certified by Delos with the WELL Building Standard®, which takes into account seven fundamental aspects: Air, Water, Nourishment, Light, Fitness, Comfort and Mind."



Corporacion Inmobiliaria Vesta S.A.B. de C.V.

Monitoring of indicators

While health, safety and well-being are increasingly specified as objectives and considered in risk assessments, operational performance data remains limited. In 2015, a minority of GRESB participants reported including health, safety, and well-being information in their data management systems. Those companies that do so, report that they include data elements for occupant comfort and satisfaction (15%), indoor environmental quality (15%), and employee travel and transportation (18%).

It is encouraging to see that 88% of all participants actively monitor specific aspects of employee health, safety and well-being. Of participants reporting that conduct health and safety checks, 52% use written surveys, 73% offer physical health checks, and 80% conduct workstation checks (e.g., ergonomics). The majority of all GRESB participants (70%) also monitor health and safety indicators, including absentee rate (75%) and lost day rate (56%). Additionally, 29% of 2015 GRESB participants report monitoring impact on the well-being of local residents.

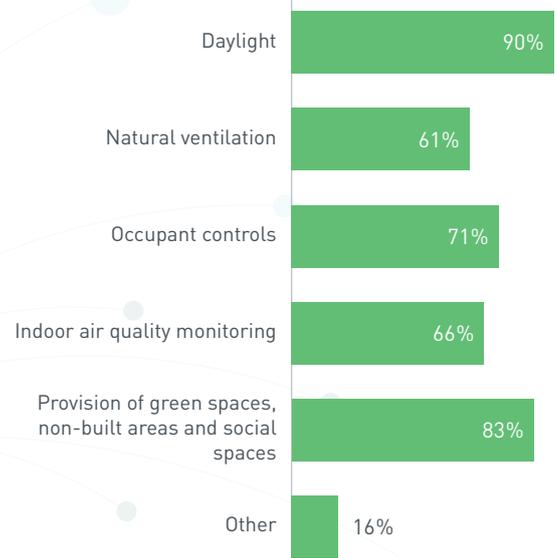


“The Hercules Campus takes ‘occupant comfort’ to a whole new level and, accordingly, attracts top-tier tenants that have made this a high priority for their employees. This asset demonstrates Invesco Core Real Estate–USA’s commitment to invest in projects that implement cutting-edge sustainability practices.”

The Hercules East & South Campuses, Invesco Core Real Estate – U.S.A., LP

Building measures focused on occupant well-being (new construction projects)

Percentages based on companies/funds with building measures focused on occupant well-being in place.



“AEON MALL has been promoting CSR activities based on the ‘five pillars’ corresponding to ISO26000. Our group aims to become ‘the best company for women to work and take active roles’ with a goal of increasing female managers to 50% by 2020. This nursery is one of the measures to support women employees and achieve this goal.”



AEON Mall Co., Ltd

Certifying health and well-being: the WELL Building Standard

The past two decades have witnessed rapid growth of the green building industry and a variety of building labels and standards. In November 2014, the WELL Building Standard was announced by the International WELL Building Institute (IWBI). The WELL Building Standard was created by bringing together physicians, architects and engineers to establish an evidence-based system for measuring, certifying and monitoring the performance of building features that impact human health and wellbeing.

Our built environment has a profound impact on health, well-being, happiness and productivity. The built environment can shape our habits and choices, regulate our sleep-wake cycle, drive us toward healthy and unhealthy choices, and passively influence our health through the quality of our surroundings. Health and wellness is one of the largest growing industries, and consumers are impacting this growing demand. In the design and development industry, owners, designers and builders expect health to have a higher influence on design and construction decisions over the next two years. WELL provides the opportunity to design and build with a human-centered approach, which ultimately supports the industry in comprehensively addressing human health.

There is strong interest for WELL around the world, and many of the new and existing green building projects are also considering using WELL. According to IWBI, WELL is growing fast, with four million square meters of building space using the system today.



Tenant & Community Engagement

Raising awareness and promoting better cooperation

The relationship between landlords and tenants largely determines the success of sustainability strategies, as performance outcomes strongly depend on the behavior of the people that occupy and use buildings. Therefore, engagement with tenants is crucial, as are the choices made by the people living, shopping or working in buildings. Such choices are related to the resources they consume and the way they use building technologies; combined these choices can do more to enhance sustainability performance of buildings than building design alone. Engagement is also important for gathering baseline information on energy and water consumption, carbon footprints, transit use and other performance indicators. Having data that includes tenant spaces supports both efficiency benchmarking and informed decision-making. [Research shows](#) that tenant engagement on sustainability is an important means to bridge the gap between predicted and actual building performance, leading to energy and other savings averaging up to 10%.

Tenant engagement programs

Already, many property companies and funds have been finding innovative ways to engage with their tenants in order to raise awareness, promote better cooperation, and increase a building’s sustainability performance. This year, 79% of all GRESB participants have a tenant engagement program in place, compared to 72% in 2014. Similar to last year, engagement mostly takes place via tenant engagement meetings (78%). Further, a large number of participants (66%) provide their tenants with a sustainability guide that covers guidelines and practical advice on operating the building in a sustainable matter.

Today’s environment will reward tenants and landlords that know that to create more productive, efficient and sustainable buildings, they need to collaborate with one another on all the activities that contribute to shared sustainability goals.

Best practice leases

Getting the lease right is critical for creating incentives for the tenant to use a building in a sustainable way. However, many standard lease clauses are inflexible, discourage cooperation, and hinder rather than promote alignment of financial and operational incentives. In some cases the split incentive – which occurs when the economic benefits such as energy or water conservation do not accrue to the party making the investment – remains a barrier for implementing efficiency measures, specifically in existing buildings.

“Incorporating environmental language into our standard leases ensures that avoidable tenant-landlord incentive issues will not hinder our ability to deliver a steady stream of sustainable, high quality, adaptable and productive work environments to our tenants.”

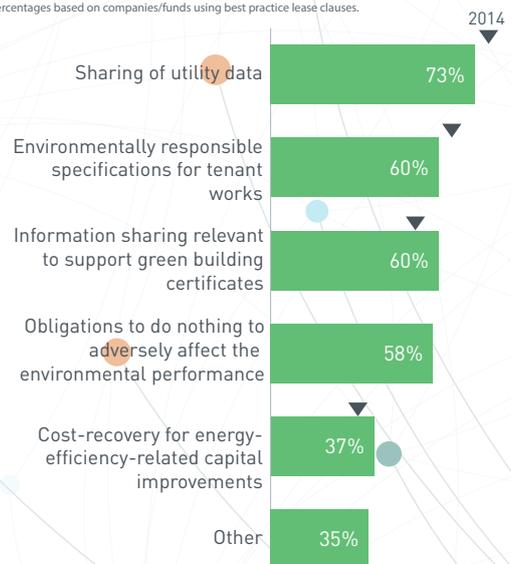


Kilroy Realty Corporation

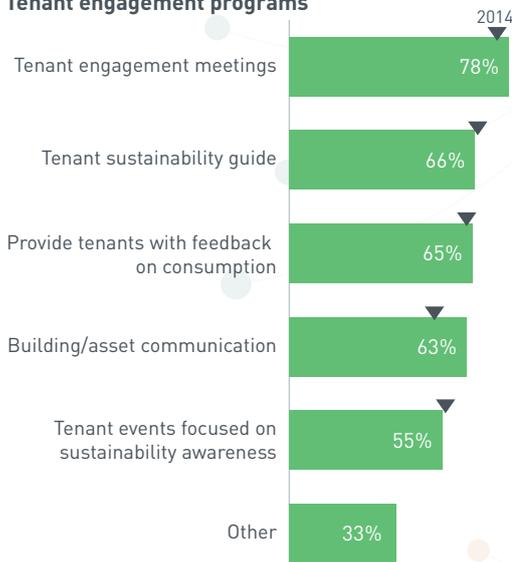
Including sustainability-specific clauses in lease contracts, so called “best practice leases”, enhances the working relationship between landlord and tenant. These clauses create tenant awareness, encourage mutual commitment, and empower owners to positively influence tenant behavior. They can also support productivity, health and well-being, and contribute to energy and water efficiency.

Use of best practice lease clauses

Percentages based on companies/funds using best practice lease clauses.



Tenant engagement programs

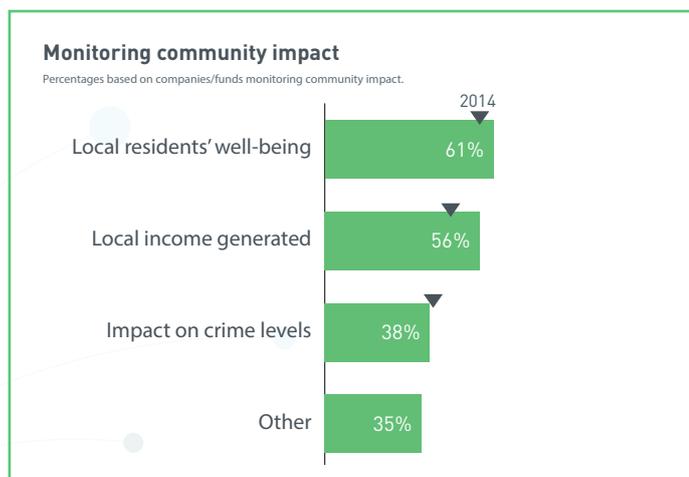


This year's GRESB results show that best practice leases have started to become mainstream. The majority of participants now have sustainability-specific clauses in their leases: 60% of participants as compared to 43% in 2014. Of these participants, 73% include clauses on sharing of utility data. Such clauses help to assess building performance, without having to worry about confidentiality or the costs of gathering the information.

Community engagement

The built environment has direct and indirect impact on local communities. That impact can be positive, for example creation of local jobs, or reduction of crime levels. However, impact can also be negative, for example increased traffic, noise, or pollution. In many cases it is not just the operating building that impacts the community. The process of construction can also be disruptive. Increasingly, the local community participates in the design or development process, in order to help determine or guide what positive impacts might be achievable. Almost half of all 2015 GRESB participants monitor the impact of their assets on the local community (48%). The well-being of local residents is monitored by 61% of these participants, while local income generated is monitored by 56%.

Active community engagement by building owners provides the opportunity to create positive impact, drive economic self-reliance and enhance the well-being of local communities. 81% of participants have a community engagement program in place, up from 64% in 2014. These programs most often include supporting local charities and community groups (92%), research and network activities



(58%), communication and processes to address community concerns (56%), and health and well-being programs (53%). The majority of these participants (71%) also have a monitoring process in place to measure the impact of their community engagement program.

Property companies and funds can help support the local community, for example by providing affordable housing, supporting local charities, creating community spaces or shelter during a natural disaster. Further, assessing the impact of buildings helps to minimize any negative effects and enhances positive influences, thus creating more livable and sustainable communities.

Best Practice

The Better Buildings Partnership in Australia has developed [model lease clauses](#) designed to be inserted into standard lease documents. The clauses are intended to encourage constructive collaboration between landlord, occupant and building manager in order to enhance workplace efficiency and productivity, reduce outgoings and help deliver high performance workplaces. The model lease clauses are grouped as follows:

Cooperation and management – these clauses highlight the importance of the parties working together to achieve the aims of the green lease provisions and set out a structure for doing so, such as forming a building management committee to oversee the implementation of the green lease obligations. These clauses also include data sharing, reporting and information provisions.

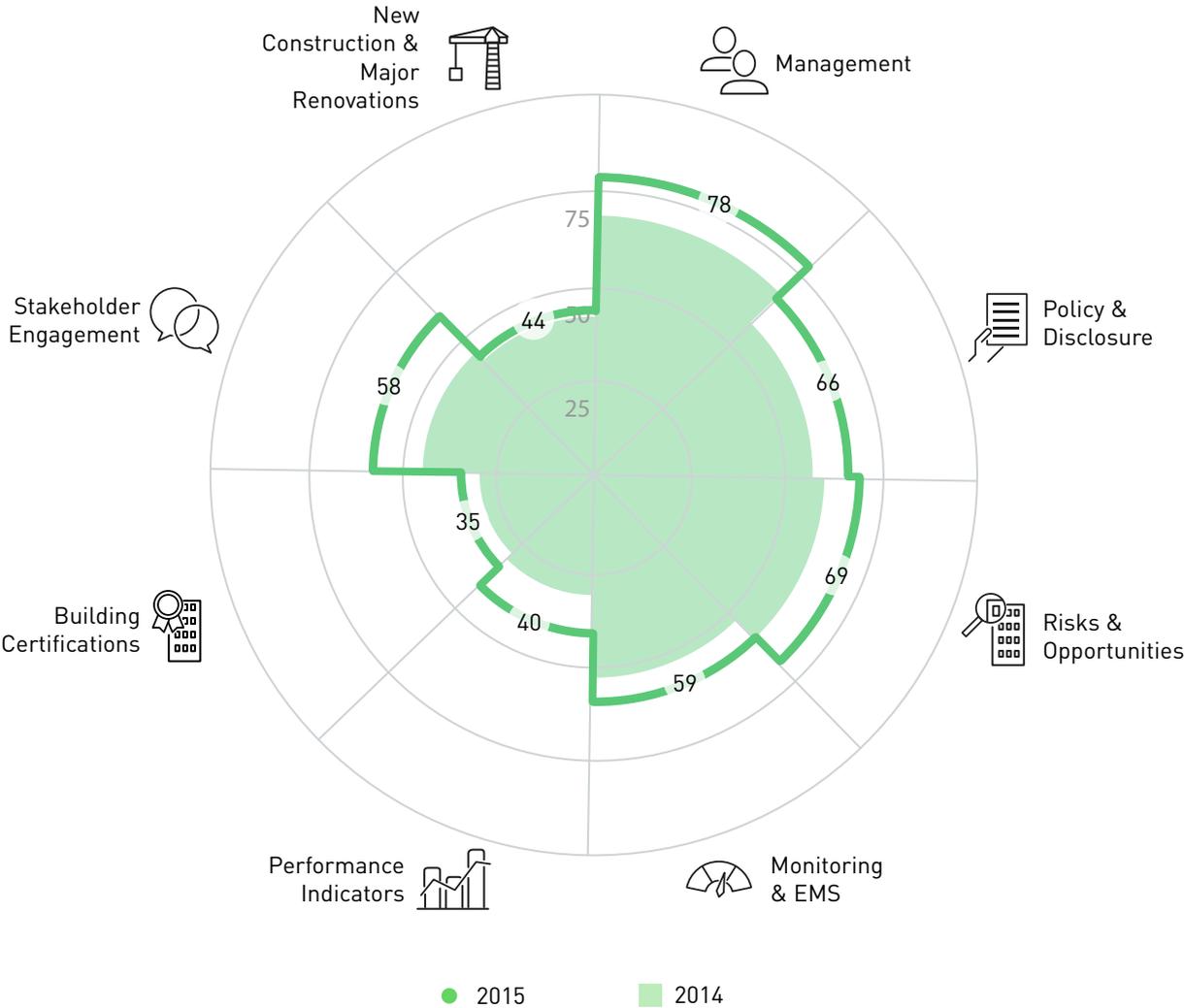
Consumption, waste and recycling – this is a group of clauses that sets out practical ways each party can lessen their impact on the environment. They also look at how parties can collaborate to achieve an environmentally beneficial outcome in traditional lease areas, such as “make good”.

Specifications and standards – these clauses explain and set out targets for the parties to achieve with reference to industry accepted and standard ratings tools such as green building certifications and energy ratings.

Compliance and costs – the clauses offer different options to allow the parties to settle the disputes on a level of commitment that meets their comfort levels. The clauses also deal with how to allocate costs associated with environmental best practice. Benefits to each party are explained to lessen the likelihood of resistance to allocation of costs, for example, initial capital expenditure only allowed as a recoverable outgoing if it results in a cost saving over a fixed period during the term.

Source: Better Building Partnership

Global Aspect Scores



The GRESB Survey is structured into seven unique sustainable Aspects, plus a separate Aspect for New Construction & Major Renovations. The maximum score for each Aspect is the sum of scores for each question in that particular Aspect. The weighted scores for each of the seven Aspects combined generate the overall GRESB Score.

Data Validation

The purpose of data validation is to encourage and ensure submission of high quality information, and it is an important element of GRESB's roadmap to investment grade data. Following the submission deadline, prior to analyzing the data, GRESB validates participants' input data. This process continues from the date of the first Survey submission until August 1.

All data submitted by GRESB participants is included in this process. 2015 is the second year that GRESB has operated its three-layer data validation process, which is being introduced over a three-year period (2014-2016).

In 2015, the topics covered by the validation process and the number of participants selected for the two most detailed levels of validation, increased significantly. Alongside this, GRESB has expanded the data validation team with resources from its parent company, GBCI, and has further developed the IT infrastructure used for validation, and refined and expanded on the participant selection process for Validation Plus and Site Visits.

All Participant Checks

- Checks on all Survey participants;
- 176 data point checks across all Survey Aspects;
- Validation per question with a secondary review system;
- Focus on open text boxes and open fields, including service providers, standards, and green building certificates and energy ratings;
- Supplemental check to confirm the existence of supporting evidence for questions requiring documentary evidence (hyperlink, uploaded document, or details of the name and date of the document);
- In total, the GRESB team validated about 26,000 open text boxes and open fields in 2015;
- In addition, GRESB validated 1,400 outlier messages, which were triggered by automated outlier checks in the online Survey Portal.

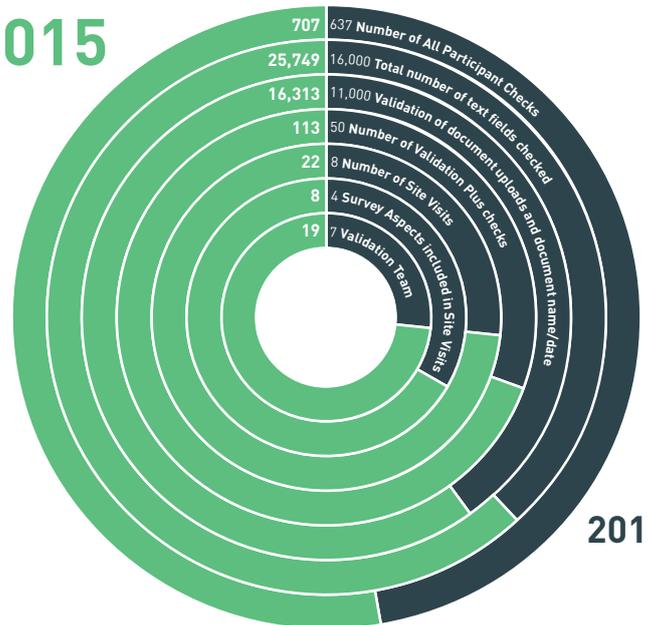
Validation Plus

- Validation of data for 113 participants;
- Automatic, random selection via the GRESB Portal, using a pre-defined algorithm;
- 99 data point checks per selected participant;
- Validation per participant with a secondary review system;
- Document review of supporting evidence for questions requiring documentary evidence. Where no document was provided, the GRESB team contacted the participant to request the document;
- Combined with the All Participant Checks on documentary evidence, the GRESB team validated over 16,000 uploaded documents.

Site Visits

- In-depth assessment of data for 22 participants;
- Random selection of participants using a system that analyzes criteria based on 2014 Survey submission data. The system automatically picks participants based on a

2015



profile that takes into account 2014 Survey validation decisions, outliers, and performance;

- 95 data point checks per selected participant;
- Focus on the mapping of the portfolio (Reporting and Entity Characteristics), and all Survey Aspects;
- Validation per participant.

Outcomes of the data validation process

As in 2014, GRESB does not publicly disclose that a Survey participant has been selected for Validation Plus or a Site Visit, nor the individual outcomes of the validation checks. GRESB does not impose penalty points for errors.

If the validation team encounters issues or topics for clarification, where possible, participants are given the opportunity to correct these errors. In the absence of such correction, GRESB will not approve certain answers. For Site Visits, GRESB assesses the quality of a Survey submission and provides the participant with feedback that is for their internal use.

GRESB has developed its knowledge databases used to help validate Survey data and has developed a process for systematic review of information stored regarding building certification schemes, systems and standards used by GRESB participants, and organizations working with GRESB participants and referred to in validation fields in Survey submissions.

In September 2015, GRESB will launch a system allowing building certification schemes, systems and standard providers and organizations working with GRESB participants to request a copy of the information that GRESB stores in its databases, and to provide updates in time for the 2016 Survey Year.

GRESB Process



Scoring & Methodology

Scoring model

The GRESB Survey is structured into seven unique sustainability Aspects (42 questions), plus a separate Aspect for New Construction & Major Renovations (14 questions). Each question in the Survey receives an absolute score. A small selection of questions in the GRESB Survey is scored by comparison to performance within a specified region or sector. Consequently, the GRESB Survey provides absolute overall scores based, in part, on relative scoring for individual questions.

The [2015 GRESB Guidance document](#) states the maximum score awarded for each question and provides additional scoring context. The maximum score for each Aspect is the sum of scores for each question in that particular Aspect. The sum of scores for each question in the Survey adds up to a maximum of 138.5 points, and the GRESB Score is then expressed as a percentage – from 0 to 100. The scoring is based on an automated system and is calculated without manual intervention after data validation has been completed.

Sustainability Aspect	Absolute Points	Weight
Management	12	9%
Policy & Disclosure	14	10%
Risks & Opportunities	16	12%
Monitoring & EMS	13	9%
Performance Indicators	33.5	24%
Building Certification	15	11%
Stakeholder Engagement	35	25%

Sector

GRESB takes into account the unique characteristics of different sectors (i.e. property types), not only in benchmarking, but also in the scoring of a selection of questions. For certain questions in the Performance Indicators and Building Certifications Aspects, GRESB requires participants to respond to questions per property type. For example:

- The Performance Indicators score for a portfolio that consists of 50% Office and 50% Industrial (measured by Gross Asset Value) will be 50% x Performance Indicators score for Office plus 50% x Performance Indicators score for Industrial;
- Certain questions, including those in the Performance Indicators and Building Certifications Aspects, are scored based on performance relative to peers in the same property type and region. This question-level benchmarking means that scores for these questions depend on the performance of other Survey participants.

Participants reporting on both standing investments and new construction and major renovation projects also complete the New Construction & Major Renovations (NC&MR) Aspect, and receive a separate NC&MR Aspect score. The NC&MR Aspect Score is presented separately and is not included in the GRESB Score. However, information from the NC&MR Aspect is combined with selected questions from

Aspects 1 to 7 (Management to Stakeholder Engagement) to calculate a “Development Score.” Participants reporting on new construction and major renovation projects only (“development only” participants) do not receive an overall GRESB Score, but instead only receive the Development Score.

Peer group allocation

Each participant is allocated to a peer group, based on its legal status (i.e. listed or private), geographic location, and sector. To ensure participant anonymity, GRESB will only create a peer group if there are a minimum of six peers in the group. If this minimum peer group requirement is not met, an entity will be allocated to a peer group with the same legal status and property type, but at a higher level of geographic aggregation. If there are insufficient peers with the same legal status and property type at the regional level, legal status will not be incorporated in peer group construction.

A pre-set threshold determines an entity’s geographic location and property type:

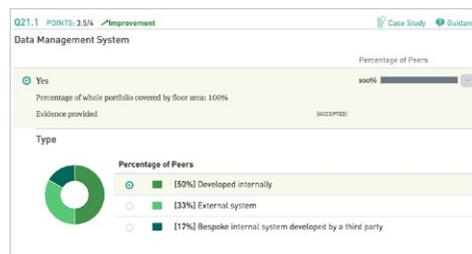
- The threshold for property type categorization is set at 75% of the Gross Asset Value (GAV). This means that based on GAV, 75% or more of the Portfolio must be comprised of a single property type. If a participant does not reach the threshold for categorization in a specific sector, it is assigned to the “diversified” category. Within this category, there are three additional sub-categories: retail/office, residential/office, and industrial/office. A participant will be assigned to one of these diversified property type sub-categories, where the combination of the two property types is at least 75% of GAV.
- GRESB assigns participants to a geographic category using a four-tier system: country, sub-region, region and global. The threshold for assigning a geographic category is set at 60% of GAV. The four-tier systems works as follows:
 - Country: Based on GAV, 60% or more of the portfolio must be allocated to a single country;
 - Sub-region: If a participant does not reach the threshold for assignment to a specific country, where possible, it is instead assigned to a sub-region, meaning that 60% or more of the portfolio must be allocated to that sub-region. For 2015, GRESB’s sub-regional categories are: Nordics, Benelux, West Asia, East Asia, or Southeast Asia;
 - Region: If a participant does not reach the threshold for assignment to a sub-region, where possible, it is instead assigned to a region, meaning that 60% or more of the portfolio must be allocated to that specific region. For 2015, GRESB’s regional categories are Asia, Australia/Australia/NZ, Europe, North America;
 - Global: If a participant does not reach the threshold for assignment to a region, it is assigned to “globally diversified.”

Products & Services

Benchmark Reports

The GRESB Benchmark Report provides an in-depth analysis of a Survey participant's sustainability performance. In addition to the information in the Scorecard, the Benchmark Report lists strengths and opportunities for improvement and contains a detailed question-by-question comparison with peers. This helps participants to focus on best practices and develop detailed action plans to improve their sustainability performance.

Customized Benchmark Reports (available on request) provide an alternative comparison and ranking against a self-selected peer group.



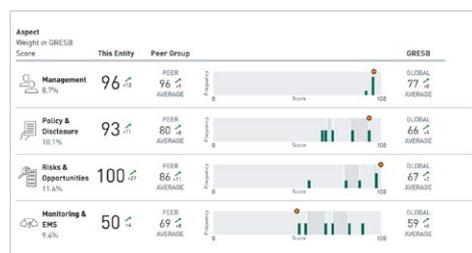
Portfolio Analysis Tool

The GRESB Portfolio Analysis Tool allows GRESB members to compare their aggregated portfolio to a self-selected benchmark, based on region, property type and management style. The Portfolio Analysis Tool contains extensive reporting functionalities to analyze the sustainability performance of portfolios. The tool offers added value specifically for investors, as well as for fund managers that participate with multiple of entities.



Scorecards

The GRESB Scorecard contains an overview of a Survey participant's GRESB performance. Using the GRESB Quadrant Model, the Scorecard highlights both the absolute sustainability performance and performance relative to peers. It also highlights areas for improvement and contains valuable information both for industry leaders and for participants that have just started to implement sustainability practices into their portfolios.



Response Checks

A Response Check is a high-level pre-submission check of a participant's Survey response by the GRESB team. It

minimizes the risk of errors that could adversely impact Survey scores.

GRESB Member Portal

Investors and Company and Fund Manager Members can access the annual GRESB Survey results for each of their participating entities via the GRESB Member Portal. Members can view and download individual Benchmark Reports for each of their portfolios. Additionally, using the

Portfolio Analysis tool, members can compare results per region and per property type. Membership also unlocks a number of tools in the Survey Portal, such as Survey templates, that will ease the process of submitting Survey responses for multiple entities.

GRESB Training Program

GRESB offers the following trainings for real estate professionals:

The Participant Training program is for professionals involved in implementing sustainability within real estate portfolios, collecting and managing related performance data, and those involved in collection and submission of data to GRESB. The program offers a high-quality and content-rich educational experience that addresses all aspects of sustainability in real estate portfolios as covered by the GRESB Survey, as well as the Survey submission process, including scope, process, methodology and the results.

The training helps participants to assess and enhance their current performance, to more efficiently prepare their GRESB response, and to improve the quality of their submission. The training program is offered from March to May of each year.

The Investor & Analyst Training program is designed to address the sustainability aspects of real estate investment portfolios that are included in the GRESB benchmark. Investors, portfolio managers, and real estate analysts will gain practical skills on how to use ESG data to inform investment decision processes, evaluate and interpret the GRESB benchmark results, and apply tools to improve portfolio performance.

The program is aimed at real estate investors, portfolio managers, finance specialists and related industry professionals, and supporting professionals (e.g., investment advisors) and is delivered via face-to-face group sessions in select locations around the world.

For more information, please refer to the [GRESB Training Program webpage](#).

Governance

GRESB is an industry-driven organization committed to rigorous and independent evaluation of the sustainability performance of real estate portfolios around the globe.

Since its inception, GRESB has grown from an initiative pioneered by three institutional investors (APG Asset Management, PGGM Investments and The Universities Superannuation Scheme (USS)) with the assistance of Maastricht University, into a benchmarking tool used by more than 150 institutional investors, listed property companies and fund managers and backed by all leading international real estate associations and industry bodies.

GRESB's mission is to work in tandem with institutional investors and their portfolio managers to identify and implement sustainability best practices in order to enhance and protect shareholder value.

GRESB B.V. undertakes the day-to-day management of GRESB's activities. It is a private limited company incorporated in the Netherlands (registration number 55416071), with its registered office at Sarphatistraat 370, 1018 GW, Amsterdam, Netherlands. GRESB B.V. is a wholly owned subsidiary of Green Business Certification Inc., a non-profit corporation incorporated in the United States under the laws of the District of Columbia.

The GRESB Board oversees GRESB's governance. It includes one executive director (Chief Executive Officer) and six

non-executive directors. Three of the non-executive directors are representatives from GRESB's investor members.

GRESB's activities are supported by its membership's input regarding developments in the real estate sector, in particular, in the field of sustainability. Its ambition is to develop benchmarking services alongside awareness of sustainability in the real estate industry. For this reason, in addition to the GRESB Board, GRESB also benefits from the guidance of its Advisory Board, regional Benchmark Committees (Asia, Australia/NZ, Europe and North America) and its Industry Working Groups. The individuals that sit on the Advisory Board, Benchmark Committees and that participate in the Industry Working Groups are drawn from GRESB's membership community and they perform a crucial role in giving GRESB strategic, commercial and technical input regarding both the benchmark and services offered to the real estate industry. The Advisory Board and Benchmark Committees meet three to four times per year at key points in the Survey cycle. The Industry Working Groups meet on an ad hoc basis.

A detailed explanation of GRESB's governance structure is available on the [GRESB website](#).

Disclaimer 2015 GRESB Report

This Report is an aggregation and analysis of data that has been undertaken by GRESB using data provided by participants in the 2015 GRESB Survey using a dataset dated August 25, 2015. This Report reflects the opinions of GRESB and not of our members. The information in the Report has been provided in good faith and is provided on an "as is" basis. We take reasonable care to check the accuracy and completeness of the Report prior to its publication. However, the Report has not been independently verified. In addition, the statements in the Report may provide current expectations of future events based on certain assumptions. The variety of sources from which we obtain the information in the Report means that we make no representations and give no warranties, express or implied as to its accuracy, availability, completeness, timeliness, merchantability or fitness for any particular purpose.

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GRESB Members

Company and Fund Manager Members



Partners



Global Associate Members



Associate Members



Strategic Alliances



2015 GRESB Participants

Listed participants

Activia Properties Inc.	Government Properties Income Trust	Robinson Land Corporation
Advance Residence Investment Corporation	GPT Metro Office Fund	Scentre Group
AEON MALL Co., Ltd.	Grainger plc	SEGRO plc ⑤
Affine	Great Portland Estates plc	Sekisui House SI Residential Investment Corporation
AIMS AMP Capital Industrial REIT	Growthpoint Properties	SFL
Alexandria Real Estate Equities, Inc.	Growthpoint Properties Australia	Shaftesbury Plc ⑤
alstria office REIT AG	Hammerson plc ⑤	Simon Property Group, Inc. ⑤
Altearea Cogedim ⑤	HCP, Inc.	Société de la Tour Eiffel
AvalonBay Communities, Inc. ⑤	Health Care REIT, Inc.	Sponda Plc
Ayala Land Inc.	HEIWA REAL ESTATE REIT, Inc.	Standard Life Investments
BEFIMMO SA ⑤	Hersha Hospitality Trust	Standard Life Investments Property Income Trust
Beni Stabili SpA Siiq	Host Hotels & Resorts, Inc.	Stockland
Big Yellow Plc ⑤	Hulic Co., Ltd.	Swiss Prime Site Group AG
Boston Properties	Hyprop Investments Limited	Taubman
Brandywine Realty Trust	Icade	Technopolis Plc
British Land Company Plc ⑤	Igd Siiq	The GPT Group
Brookfield Office Properties Inc.	Industrial & Infrastructure Fund Investment Corporation	The Macerich Company
Cambridge Industrial Trust Management Limited	Inmobiliaria Colonial SA	The UNITE Group Plc
Camden Property Trust	INP Retail, LP ⑤	TIAA Henderson Real Estate
CapitaCommercial Trust	Intu Properties plc	TIER REIT
Capital & Counties	Investa Office Fund (IOF) ⑤	Tokyo Tatemono Co. Ltd.
CapitaLand Limited ⑤	Iron Mountain	TOKYU REIT, Inc.
Capitaland Mall Trust ⑤	Japan Excellent, Inc. ⑤	Top Spring International
Castellum AB ⑤	Japan Logistics Fund, Inc.	Triodos Vastgoedfonds
Cegereal	Japan Prime Realty Investment Corporation ⑤	Unibail-Rodamco
China Overseas Land & Investment Ltd.	Japan Retail Fund Investment Corporation ⑤	Union Investment Institutional Property GmbH
China Resources Land	Kenedix Office Investment Corporation ⑤	Union Investment Real Estate GmbH
City Developments Limited	Keppel REIT Management Limited	United Urban Investment Corporation
Citycon Oyj ⑤	Kilroy Realty Corporation ⑤	Vastned Retail N.V.
CLS Holdings	Kimco Realty Corporation ⑤	Ventas, Inc.
COFINIMMO ⑤	Klépierre ⑤	Victoria Park AB
conwert Immobilien Invest SE	Land Securities Group PLC ⑤	Vornado Realty Trust
Corporación Inmobiliaria Vesta, S.A.B. de C.V.	LaSalle Hotel Properties	Washington Real Estate Investment Trust
Corporate Office Properties Trust	Liberty Property Trust ⑤	Weingarten Realty
Cousins Properties Incorporated	Link Real Estate Investment Trust	Wereldhave NV
Credit Suisse	LondonMetric Property Plc ⑤	Wihlborgs Fastigheter AB
Cromwell Property Group	Mahindra Lifespaces Developers Limited	Workspace
Daiwa House Residential Investment Corporation	McKay Securities PLC	Yatra Capital Limited
Daiwa Office Investment Corporation ⑤	Mirvac ⑤	
Derwent London Plc ⑤	Mobimo Holding AG	
Deutsche EuroShop AG ⑤	Monogram Residential Trust, Inc. ⑤	
Deutsche Wohnen AG	Mori Hills Reit Investment Corporation	
DEXUS Property Group ⑤	New Europe Property Investments plc	
DiamondRock Hospitality Company	Nippon Building Fund Inc.	
Equity One	Nippon Prologis REIT, Inc.	
Equity Residential	Norwegian Property ASA	
Eurocommercial Properties	Novion Property Group ⑤	
Fabega	ORIX JREIT Inc.	
Federal Realty Investment Trust	Paramount Group, Inc. ⑤	
First Industrial Realty Trust, Inc.	Parkway Properties, Inc.	
Foncière des Régions	Post Properties, Inc.	
Forest City Enterprises, Inc.	Premier Investment Corporation	
Franklin Street Properties	Prologis ⑤	
Frontier Real Estate Investment Corporation	PSP Swiss Property ⑤	
GECINA	Public Storage	
General Growth Properties	Quintain Estates & Development PLC	
GLP J-REIT	Redefine International PLC	
Godrej Properties	Redefine Properties Limited	
Goodman Group	Regency Centers Corporation ⑤	

⑤ Participant has reported for 5 consecutive Survey years

Private participants

Aberdeen Asset Management ⑤	Deutsche Asset & Wealth Management ⑤	Kenedix, Inc.	SATO Corporation
AEW Capital Management	DEXUS Funds Management	Keppel Land Limited ⑤	Savanna ⑤
AEW Europe	DivcoWest	KingSett Capital	Schroders Property Investment Management
Alberta Investment Management Corporation	DNB Real Estate Investment Management	La Francaise	SDA
Alpha Investment Partners Ltd	DTZ Investors Ltd	LaSalle Investment Management ⑤	Sentinel ⑤
AltaFund	e-Shang Cayman Limited	Legal and General Property ⑤	Shorenstein Properties, LLC
Alterra Vastgoed NV ⑤	Eurindustrial N.V. ⑤	Lend Lease ⑤	Sirius Capital Partners
Altis Property Partners	Europa Capital LLP	LimeTree Capital Car Park Investment Management Limited	SOCAM Development & TAN-EU Capital
American Realty Advisors	Exeter Property Group	Local Government Super ⑤	Sonae Sierra ⑤
AMP Capital Investors ⑤	F&C REIT Asset Management	Lothbury Investment Management Limited	Standard Life Investments ⑤
Amundi Asset Management	Fairfield Residential Company LLC	M&G Real Estate ⑤	Steen & Strom AS ⑤
Amvest	Fastighetsaktiebolaget Norrporten	MacFarlane Partners Investment Management ⑤	Stockbridge Capital Group
Arcadia Funds Management	Federal Capital Partners	Madison Marquette	Storebrand Eiendom AS
Arch Capital Management Co. Ltd.	Folksam	Majid Al Futtaim Properties	Syntrus Achmea Real Estate & Finance ⑤
Ardstone Capital Ltd	Forum Partners	Mayfair Capital Investment Management	TA Realty LLC
Areim ⑤	Frasers Property Australia	MedicX	The Blackstone Group
ASR Real Estate Investment Management	Frogmore	MetLife Investment Management	The Crown Estate
ATP Ejendom A/S	Gables	Meyer Bergman	The GPT Group ⑤
AvalonBay Communities, Inc.	Gaw Capital Partners	MOMENI Gruppe	The Hampshire Companies
Avison Young	GenCap Partners	Morgan Stanley ⑤	The Laramar Group, LLC ⑤
Aviva Investors ⑤	Generali Real Estate	National Real Estate Advisors LLC	The Lemon Tree Hotel Company
AXA Investment Management ⑤	Genesta Property Nordic	NBIM	The Minto Group
AXA Real Estate	Gerding Edlen Investment Management	Neinver SA	The UNITE Group Plc
Bank J. Safra Sarasin	GI Partners	Niam AB	Thor Equities
Bentall Kennedy Group ⑤	Global Logistic Properties Limited	Nordea Ejendomsinvestering A/S	Threadneedle Property Investments Limited ⑤
BlackRock ⑤	Godrej Fund Management Private Limited	Nordic Real Estate Partners AB ⑤	TIAA Henderson Real Estate ⑤
Bluehouse Capital	Grainger Asset Management Ltd	Normandy Real Estate Partners	TIAA-CREF ⑤
BNP Paribas REIM France	GreenOak Real Estate	Novion Property Group ⑤	Tishman Speyer ⑤
Bouwfonds Investment Management ⑤	Greystar Investment Management ⑤	OFI REIM	Triovest Realty Advisors Inc.
Bouwinvest REIM	Grosvenor Fund Management ⑤	Orion Partners	Tristan Capital Partners
Bridges Ventures LLP	GTIS Partners ⑤	OVG Real Estate	UBS Global Asset Management
British Land Company plc	GWL Realty Advisors	Oxford Properties Group ⑤	UBS Real Estate KAG mbH ⑤
Brockton Capital LLP	Harrison Street Advisors, LLC	PAG	UBS Realty Investors LLC ⑤
Brookfield Office Properties Australia Pty Ltd	Harrison Street Real Estate Management, LLC	Pamfleet	Urban American Management
CapitaLand Fund Management Pte Ltd	HDFC Limited	Pareto Limited	Urban Car Park Management Limited (Investment Manager)
Carr Properties	Healthcare of Ontario Pension Plan	Parmenter Realty Partners	USAA Real Estate Company ⑤
CBRE Global Investors ⑤	Heitman ⑤	Perella Weinberg Real Estate UK LLP	VALAD Europe ⑤
Cbus Property	Hemso Fastighets AB	Phoenix Property Investors	Value Retail PLC
CDH Investments	Hermes Real Estate Investment Management	Pradera ⑤	Vasakronan
Charter Hall	IEF Capital Management B.V.	Pramerica Real Estate Investors (Asia) Pte Ltd	Vesteda Investment Management B.V. ⑤
Chongbang Holdings (International) Ltd.	IKEA Group	Principal Real Estate Investors ⑤	Virtu Investments
CIM Group	Inland Real Estate Investment Corporation	Prologis ⑤	Willhem
CITIC Capital	Internos Global Investors	Prosperitas Investimentos	WP Group
CitizenM Asset Management ⑤	Invesco Advisors, Inc.	Prudential Real Estate Investors	XYMAX REAL ESTATE INVESTMENT ADVISORS Corporation
Clarion Partners ⑤	Invesco Real Estate	Prudential Real Estate Investors & Pramerica Real Estate Investors	
Commercial Estates group	Investa ⑤	PT Farpoint Realty Indonesia	
CommonWealth Partners	ISPT ⑤	QIC Global Real Estate	
Cordea Savills Investment Management ⑤	Ivanhoe Cambridge	Q-Park NV ⑤	
Cornerstone Real Estate Advisers	J.P. Morgan Asset Management	Redwood Group Asia	
CorVal	J.P. Morgan Investment Management, Inc ⑤	Rikshem AB	
Credit Suisse	Jamestown Properties	Rockefeller Group Development Corporation	
Crocker Partners LLC	Jonathan Rose Companies	Rockspring Property Investment Managers ⑤	
Curlw Capital	JPMorgan Chase	Royal London	
DBJ Asset Management Co., Ltd.	Kames Capital Plc		
DDR			
Delancey			

⑤ Participant has reported for 5 consecutive Survey years



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