



# Breakthrough for sustainability in commercial real estate



Deloitte Center  
*for* Financial Services



# Introduction

Jacek Utko, art director for Bonnier Business Press, Europe, changed the design of Bonnier newspapers at a time when print media circulation was being substantially challenged by digital gadgets to an extent that he said “there is no reason — no practical reason — for newspapers to survive.” Jacek drew from his combined architectural and artistic background and decided that design of the paper was an important lever to reverse the decline. And so he asked questions such as why do we do it? What is the goal? Depending on the answer to these questions, Jacek then went on to change the newspaper design. He added visual appeal to newspapers and considered them as posters and not really newspapers. Result — readers reconnected with newspapers<sup>1</sup> and circulation went up in three countries, Russia, Poland, and Bulgaria, with the latter posting a 100 percent increase within three years.

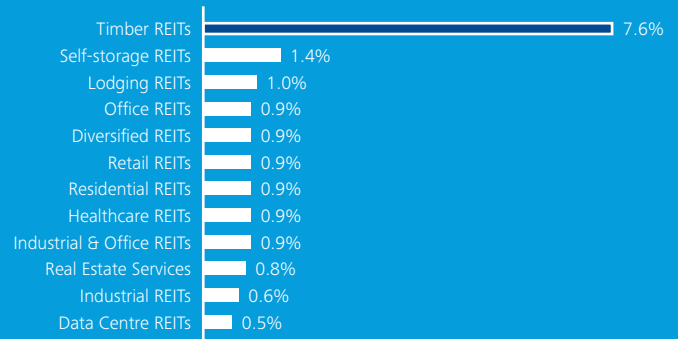
The commercial real estate industry (CRE) is at a similar crossroads. Industry players are posting average growth. Technology is changing the way in which real estate business is done. Client needs for physical space are also changing due to increased use of technology and enhanced environment consciousness, among other things. This in turn is changing the nature of demand for physical real estate space. As such, new development activity is at record lows across most property types, except multifamily and hotels. So what can CRE players do to break out of the old mold? Can sustainability do for CRE what Jacek Utko’s graphic design did for newspapers? We believe so.

Like Jacek Utko, CRE players need to answer the big questions: Why do we do it? What is the goal? They need to evaluate sustainability adoption in the context of the environmental impact of buildings and the benefits that accrue to property owners in terms of growth in top line, bottom line, and asset valuations, and to tenants in terms of operational efficiency and productivity.

What progress has been made on sustainability adoption thus far? Green building certifications continue to rise year on year. However, there is a common belief that retrofitting an existing building with green features is considered relatively challenging compared to developing new ones, and so the former tends to have lower sustainability adoption. Now, new construction, excluding renovations, accounts for approximately 1.8 percent of the total U.S. building stock.<sup>2</sup> Hence, there lies significant opportunity to increase sustainability implementation in the existing building stock. In fact, we believe that existing certified green buildings also have a scope to expand sustainability adoption. In 2013, a Wharton Initiative for Global Environmental Leadership (IGEL) study estimated that the market for green buildings in the United States, including both new and retrofits, is likely to rise from \$85 billion in 2012 to \$200 billion by 2016.<sup>3</sup>

Evaluating the various property types (Figure 1), timber REITs, on average, have the highest environmental impact and carbon footprint, driven by high costs related to water abstraction.<sup>4</sup> They are followed by self-storage and lodging REITs, respectively.<sup>5</sup>

**Figure 1: Environmental impact ratio<sup>6</sup> across real estate sub-sectors (2012)**



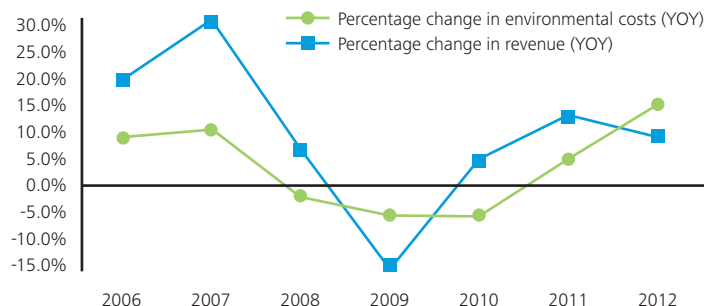
Source: Trucost Environmental Register & Deloitte Center for Financial Services Analysis

## Environmental impact of CRE buildings

CRE buildings have a significant impact on the environment. According to the U.S. Department of Energy, commercial buildings account for 18.7 percent of energy usage, 40 percent of carbon dioxide (CO<sub>2</sub>) emissions, and 88 percent of potable water consumption in the United States.

Such environmental impact entails significant costs, in the form of greenhouse gases, water abstraction, and air pollutants, among others. In fact, in 2012, together these accounted for nearly 90 percent of the total environmental impact costs<sup>7</sup> of CRE companies.<sup>8</sup> In the same year, environmental impact costs grew at a faster pace than revenues, at 13 percent versus 8.6 percent, respectively (Figure 2).<sup>9</sup>

**Figure 2: Change in environmental cost vs. revenue growth for real estate investment trusts (REITs)**



Source: Trucost Environmental Register and Deloitte Center for Financial Services Analysis

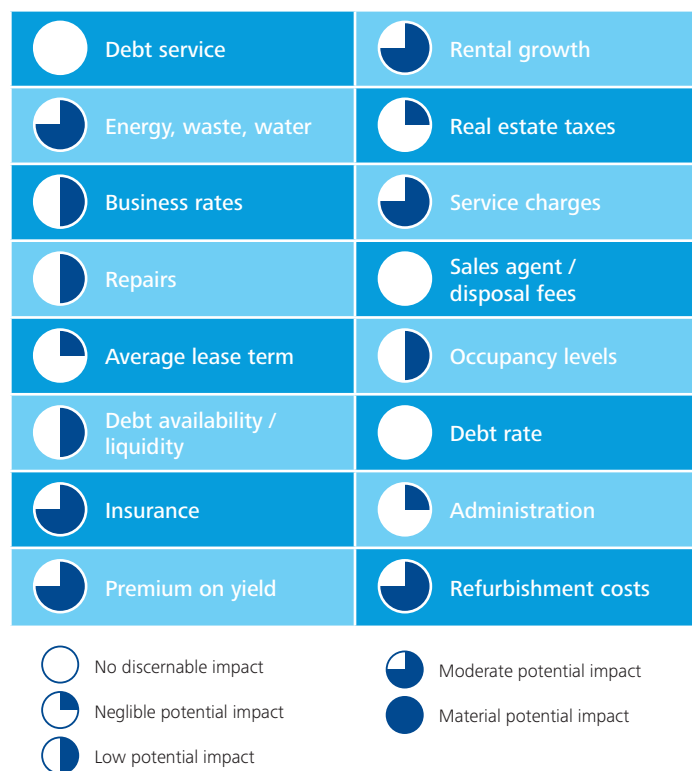
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### Impact of environmental measures on CRE asset valuations

Considering that utility costs (as they relate to energy, water, and waste) impact CRE company profits, it makes business sense to adopt green buildings<sup>10</sup>, which are estimated to consume 29 to 50 percent less energy than “non-green”;<sup>11</sup> use 40 percent less water;<sup>12</sup> emit 33 to 39 percent less CO<sub>2</sub>;<sup>13</sup> and produce about 70 percent less solid waste.<sup>14</sup> Consequently, environmental measures targeted towards reducing these costs stand to have a positive impact on asset values (Figure 3). There is increasingly clear evidence that buildings (re)designed with green features will depreciate less quickly than others and will be more likely to meet the growing demand of a more discerning occupier and investor market, as various studies suggest that green buildings have higher tenant attraction, rents, and sale prices.<sup>15</sup> Consequently, buildings with relatively better sustainability credentials enjoy increased marketability.<sup>16</sup> In fact, in markets where green buildings are common, there tends to be a ‘brown discount’ for the ones that are not green, which implies a potentially lower rent or sale price than the average market rate.<sup>17</sup>

**Figure 3: Potential relationship between sustainability and factors affecting building value**



Source: Deloitte Analysis. The original illustrative analysis is based on UK market context, but is considered to have a high degree of resonance with the U.S. markets, too.

**A March 2012 Rockefeller Foundation and Deutsche Bank Climate Change Advisors study expects over \$97 billion to be invested in energy upgrades and/or replacement of existing equipment across the U.S. commercial and institutional properties over the next ten years. This will likely result in \$350 billion in energy savings as well as additional employment.**

### Current efforts of CRE companies

The growth in green building certifications indicates that the industry has made progress in increasing energy, water, and waste efficiency. CRE players have begun to implement and report sustainability, with some also collaborating with stakeholders such as tenants, investors, and the government. However, we believe sustainability adoption tends to be narrow either in terms of aspects of sustainability (energy, water, waste) or localized to specific properties in the total portfolio. Further, the sector is at a nascent stage in uptake of enhanced disclosure and reporting on broad sustainability performance. While some initiatives have had a significant impact on non-financial disclosure within the industry, these remain subject to notable limitations (information collection and measurement), which suppress transparency and relevance. Along with scope for CRE players to increase certifications of existing buildings, there is substantial room for deepening sustainability implementation in certified buildings, where in-use performance can remain stubbornly below design expectations.

### Prologis — Current sustainability adoption

Prologis is one of the leading adopters of sustainability in the CRE space. As of 2012, the company made energy efficiency lighting upgrades to 51 percent of its global property portfolio and completed solar rooftop installations across six countries, with a capacity to generate 83 megawatts of power. These initiatives have helped Prologis achieve an 18-percent reduction in energy use. That said, the company has set a target of reducing its energy consumption and operational carbon footprint by 20 percent each by 2020. While Prologis will likely achieve its energy efficiency target, it will also benefit from a broader environmental goal that includes water and waste management.

Further, the company has been collaborating with tenants to help the latter meet their sustainability goals. For instance, at one of its sites in California, Prologis developed an array of solar rooftop installations and also supported the energy conservation efforts of its tenant, Stanley Black & Decker. Prologis’ efforts highlight the sustainability approach of geographically diversified portfolios, although there is still a long way to go for the broader industry.

# Demand for green buildings

## The push from tenants, investors, and government alike

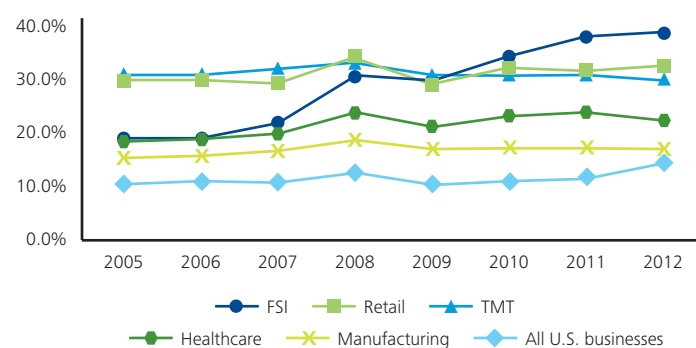
### Tenants

CRE owners are gradually recognizing the importance of green buildings in enhancing tenant attraction. This is validated by a 2010 McGraw Hill Construction-CBRE Survey, wherein 79 percent of respondents (owners) expect green buildings to attract more tenants. Both tenants and property owners have started including elements of sustainability in leases. Commonly referred to as green leases, they include an upfront establishment of sustainability goals and allocation of implementation responsibilities between the owner and the tenant. The challenge here is inclusion of clauses to deal with non-compliance on either side, which is yet to become a common practice. Also, it is relatively easier for landlords and tenants to include green features in new leases than it is to retrofit them into existing leases or renewals.

**“The large publicly traded retail tenants are the ones that are forcing more sustainable features in buildings and more efficient management,” says Norman Miller, a real estate economist and professor at the University of San Diego.<sup>18</sup>**

Sustainability is becoming an important influencer in the design of overall business strategy of tenants. According to a 2013 United Nations Global Compact’s Global Corporate Sustainability report,<sup>19</sup> approximately 63 percent of the respondents are aligning their core business strategy to advance their sustainability goals. In fact, per a 2012 Deloitte CFO survey, 93 percent of CFOs believe that there is a direct link between sustainability programs and business performance.<sup>20</sup> The increased focus on CRE is validated by its substantive contributions to the total natural capital<sup>21</sup> costs of businesses (Figure 4). Real estate-related natural impact makes up a significant portion of the total for the financial services (38 percent in 2012) and retail (32 percent in 2012) industries.

**Figure 4: Real estate’s share in natural capital impact costs of key tenant industries**



Source: Trucost Environmental Register and Deloitte Center for Financial Services Analysis

For this, CRE owners, on their part, need to keep pace with tenants’ green demand, with respect to both existing and new leases. Increase in tenant collaboration will likely result in improved satisfaction and subsequently retention. CRE owners can adopt best practices from other countries, such as the UK, as companies are beginning to evaluate ways to incorporate green features into existing leases.

### Marks & Spencer, UK — retail tenant includes green clauses in new and old leases

Marks & Spencer (M&S) is one of the largest retailers in the UK. The company has set a target for reducing energy consumption in its offices, stores, and warehouses by 35 percent by 2015, over its 2007 base. To achieve its energy efficiency goal, M&S evaluated its entire property portfolio and essential details of gas, electricity, and water usage for all its facilities. The challenge was to obtain this data for older leases, particularly for shared space. According to Clem Constantine, Director of Property at M&S, “There’s often no real structure for measurement, incentives, or sharing of goals.” The company then decided to work closely with landlords. Thus, in 2013, in collaboration with England’s Better Building Partnership, it added green clauses to its new and old leases. Some of the key elements of the green clauses include:

- Both landlord and tenant will share information about gas, electricity, and water usage for each shared space
- Encourages both tenant and landlord to promote use of advanced green technologies such as biomass boilers, rainwater harvesting, and LED lighting

By 2012, M&S had already achieved 28 percent of its energy reduction targets. The company’s new initiative of including green clauses for both new and existing leases will help meet the set target. It now requires landlords to invest in sustainability initiatives — implementation, measurement, and reporting — for the space leased out to M&S.

Further, in lieu of an effort to do more with fewer resources, tenants are becoming increasingly efficient about usage, which expands from the physical space (square footage) to its utility. They are re-evaluating their physical space to save costs and also enhance the softer benefits at the workplace. According to the 2013 World Green Building Council (WGBC) report titled “The Business Case for Green Building,” some leading businesses are now shifting their thinking from “how much will green building cost my business” to “how much will not investing in green building cost my business.” While determining this, companies are considering the positive impact of sustainability measures on employee absenteeism, productivity, and well-being. According to the WGBC report, certain design attributes of a green office building enhance occupant health and well-being, therefore resulting in healthier, happier, more satisfied, and ultimately more productive workers.

#### Impact of green building on...

**Employee productivity** — Various studies demonstrate productivity benefits of individual temperature control (up to +3 percent), improved ventilation (up to +11 percent), lighting design (up to +23 percent), and access to natural daylight (up to +18 percent).

**Health and well-being** — Fisk (2000) estimates that in the United States, “potential annual savings and productivity gains are \$6 to \$14 billion from reduced respiratory disease, \$1 to \$4 billion from reduced allergies and asthma, \$10 to \$30 billion from reduced Sick Building Syndrome symptoms, and \$20 to \$60 billion from direct improvements in worker performance that are unrelated to health.”

Source: The Business Case for Green Building, World Green Building Council, 2013

In fact, tenants’ focus on reducing energy costs may be financially far less significant and less remunerative in comparison to a modest boost in productivity. Further, tenants want to meet their corporate environmental and social responsibility goals. For this, tenants need to track, measure, and include data related to utilities consumed in their leased spaces. Hence, leasing decisions are increasingly influenced by green building features that result in improved productivity and investor interest and are effectively tracked and measured.

In summary, with tenants’ business performance increasingly evaluated on a non-financial basis — not just by their customers, but also by investors — the focus on sustainability implementation and measurement of leased space is only going to increase.

“Particularly with large institutional shareholders — they are requesting greater transparency into the sustainability performance of real estate portfolios, and view sustainability as an opportunity to improve property performance and mitigate risks,” says Will Teichman, Director of Sustainability, Kimco Realty.<sup>22</sup>

#### Investors

Investors continuously have an eye on generating higher returns while balancing risks. We believe that investors can derive tangible benefits from embedding sustainability into the full investment process. As part of their decision-making process, investors are now beginning to analyze the risks associated with sustainability through the property investment cycle (Figure 5). It’s important for investors to understand the risk of obsolescence of their assets when sustainability measures are not adopted, particularly in view of changing tenant preferences, regulatory requirements, and technology advancements.<sup>23</sup>

**Figure 5: Manifestation of sustainability risk through property investment cycle**



Source: Deloitte Analysis

Overall, this requires CRE owners to increase environmental sustainability implementation at the property and portfolio level, and improve valuations and inform investors about performance through appropriate reporting.

According to the Global Real Estate Sustainability Benchmark (GRESB),<sup>24</sup> investors are increasing their focus on integrating sustainable practices into their existing and new investments due to the favorable impact of sustainable factors on both risk and returns. Investors are setting goals to improve the environmental performance across their portfolios through lower carbon emissions, improved energy efficiency, better utilization of water and other resources, and superior waste management. To effectively pursue and achieve these goals, investors encourage companies to increase transparency and effectively disclose information related to sustainability performance.<sup>25</sup>

**California Public Employees' Retirement System (CalPERS)  
— active role in deploying sustainability with investee  
companies**

CalPERS, the largest public pension fund in the United States, has adopted a portfolio-wide approach to integrate key environmental issues in its investment process. As part of its real estate environmental strategy, CalPERS focuses on implementing green building technology across its real estate portfolio with respect to energy efficiency, water conservation, waste stream management, and indoor air quality. In 2004, CalPERS's Investment Committee laid out a five-year goal to reduce energy consumption of its core real estate portfolio by 20 percent. The fund began tracking environmental performance data that same year, while working toward achieving this goal. In addition, a large part of the sustainability agenda was driven by CalPERS's investment managers and by active involvement with investee companies. At the end of 2009, the fund exceeded its target and reported a 22.8 percent reduction in energy usage.

Given the mandates from limited partners, investment managers now take a more active role in improving the sustainability performance and disclosures of their investee companies and real estate assets.

On the reporting side, CRE companies have begun to increase disclosure around their sustainability performance. This trend is supported by the 2013 GRESB survey which highlights that the U.S. real estate sector continues to increase its sustainability disclosure practices. Companies release annual corporate social responsibility (CSR) or sustainability reports to communicate performance around environmental and social initiatives and goals, while demonstrating a commitment to reduce the environmental impact of their operations as well as commitment to creating positive social impact. However, most CRE players currently disclose either qualitative information around their greening initiatives or unit savings in energy and other resources on an ad-hoc basis. In contrast, investors prefer more structured reporting frameworks such as the Global Reporting Initiative (GRI) and Carbon Disclosure Project (CDP). We believe that this investor focus on structured reporting and adherence to accounting standards will only increase in future, as organizations such as the Sustainability Accounting Standards Board (SASB) are likely to release real estate specific standards by 2015. Furthermore, the emergence of Integrated Reporting<sup>26</sup> presents property owners with an opportunity to create an evidence-based narrative of how the integrated management of financial and non-financial capital through their investment processes creates value for their financial capital providers.

## Government

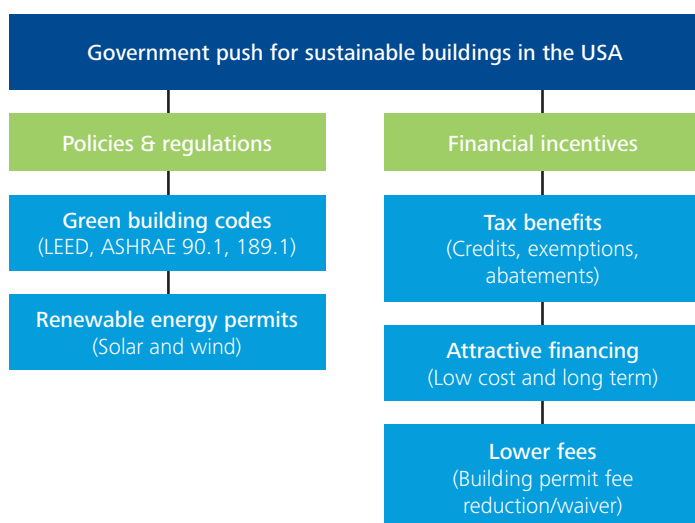
Various governments (local, state, and federal) have put regulations in place to drive sustainability adoption by commercial buildings. Companies need to comply with the green building codes and zoning regulations, among others. In addition, governments are providing financial incentives to CRE owners to drive compliance with the regulations. Companies on their part are more aware of, and compliant with, the mandates and the incentives.

Energy saving remains the governments' key focus area from a sustainability perspective. Governments at various levels, have issued a slew of building energy efficiency measures, and consider onsite renewable energy generation as a prudent way to manage the increase in energy demand and reduce carbon emissions. All U.S. states have some form of commercial building energy codes based on LEED or American Society of Heating, Refrigerating and Air-Conditioning Engineers (ASHRAE) standards.<sup>27</sup> Tax relief is one of the most common incentives provided by governments (Figure 6). Some of the tax benefits include business tax deductions on energy efficiency investments under Energy Policy Act (EPACT) 2005 and investment tax credits (ITCs) for solar and wind energy properties.<sup>28</sup> Further, innovative financing programs such as property assessed clean energy (PACE) allow access to low-cost, long-term capital to fund energy efficiency upgrades.

Energy savings apart, water and waste management are gradually gaining more prominence. The state of California was the first to introduce a state-wide green building standard in 2010, popularly known as the CALGREEN code. The code includes mandatory targets for increased energy efficiency, lower water usage, diversion of waste, and use of low-pollutant-emitting materials. In fact, California is among a number of states that are constantly revising their policies to push companies to raise their sustainability adoption.

Comparing policies across the globe, many countries are stepping up the sustainability drive with more stringent policies and guidelines. For instance, the UK has issued stricter energy efficiency regulations, wherein owners of buildings, which are rated below 'E' in the energy performance certificate (EPC), will not be able to lease their properties after April 2018.<sup>29</sup> In France, the "Grenelle II Act," legislation passed in 2012, requires owners and tenants to include environmental sustainability clauses in their existing leases to share and review the environmental performance data on a regular basis, collectively aiming to improve the environmental performance of the property.<sup>30</sup> For companies with a global presence, understanding and complying with respective national regulations is an important aspect of doing business. We believe it is only a matter of time before sustainability implementation and compliance requirements are made more stringent across various nations and geographies.

**Figure 6: Summary of government initiatives to promote sustainable buildings**



Source: Deloitte Center for Financial Services Analysis



# Debunking the myths

"It's difficult to see the picture when you're inside the frame" — Eugene Kleiner



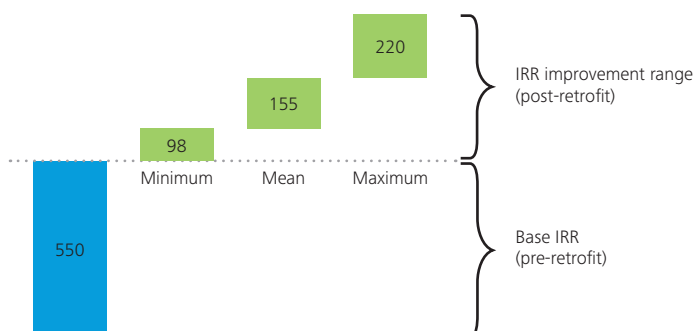
Sustainability initiatives clearly have a significant bearing on CRE operations, which manifest themselves in various forms — environment, portfolio performance, top- and bottom-line, asset values, stakeholder engagement, and brand perception. What is stopping CRE players from pushing the sustainability agenda? Is it just a matter of debunking myths?

## Myth: Incremental cost of implementing sustainable practices acts as a deterrent

**Reality:** Many CRE players view adoption of sustainability practices as an incremental cost and prefer to invest in dressing up the exterior of a building. However, research demonstrates that there isn't a significant incremental cost of greening an existing building compared to the cost of mending a building exterior.<sup>31</sup> More awareness and education concerning green building techniques have helped reduce sustainability certification costs.<sup>32</sup> Also, the higher upfront costs associated with greening a building tend to be offset by lower long-term life cycle costs.<sup>33</sup> Results from a General Services Administration (GSA) LEED cost study<sup>34</sup> of greening mid-rise office buildings showed that upfront retrofit costs for an office building range from 1.4 percent of the building's market value for an "LEED certified" rating, to 8.2 percent of the building's market value for an "LEED Gold" rating. Further, a Deloitte Center for Financial Services analysis of retrofitting an existing office building with sustainable measures, including energy and water efficiency and waste reduction, reveals a higher internal rate of return (IRR) of approximately 155 basis points (bps) on average, on the overall building investment (Figure 7). Hence, to a large extent the hesitance toward sustainability adoption can be attributed to lack of awareness about returns versus costs.

"We've gotten better and more efficient at certifying our projects. We believe this experience is a competitive advantage because so many municipalities or other stakeholders are interested in green buildings," says Mark Peternell, Regency Center's vice president of sustainability.<sup>35</sup>

Figure 7: Simulation results — IRR\* improvement post-retrofit (in basis points)



\*IRR represents the unlevered internal rate of return on the overall building investment.  
Source: Deloitte Center for Financial Services Analysis

### Methodology: Impact of sustainability initiatives on the returns of an existing Class-A office building

Deloitte Center for Financial Services' illustrative study used a discounted cash flow (DCF) model to calculate the internal rate of return (IRR) of investment in an office property, pre- and post-sustainability implementation. Our sample property is an average middle-aged (30+ years) Class-A U.S. office building, with a leasable area of 400,000 square feet.

The post-retrofit analysis assumed the following, based on publicly available estimates obtained from academic studies and industry associations:

- Upfront investment in sustainability initiatives to achieve a LEED Gold rating or equivalent.
- Positive impact of sustainability adoption on the property, including higher rental income and occupancy, increased lease term, improved valuation, easier and low-cost financing, lower operating expenses, property tax rebates, and discounts on insurance premiums.

We then ran a Monte Carlo simulation, involving 10,000 simulations, for a robust assessment of sustainability benefits and the relative sensitivity of the overall returns of a retrofitted building to the above-mentioned benefits.

**Caveat:** The results of our study are based on modeled assumptions and represent the combined impact of all the above-mentioned benefits in a simulated environment. It effectively demonstrates the potential impact on value in the hypothetical event that all of the benefits were to be explicitly priced in by the market. However, in reality, the market is yet to adopt a mature and transparent approach to monetizing and valuing sustainability benefits, although a positive shift in this direction is becoming more evident.

### Myth: Sustainability investments result in cost savings only

**Reality:** Many players believe that one of the key benefits of sustainability is cost savings. However, sustainability investments result in even broader payback in the form of higher rental income and occupancy, improved valuation, easier and lower-cost financing, lower operating expenses, property tax rebates, and discounts on insurance premiums. These benefits can eventually result in a competitive advantage for CRE players. For instance, Class A properties in supply-constrained markets tend to be differentiated by the level of sustainability adoption. The Deloitte Center for Financial Services analysis of an illustrative office property suggests that operational excellence, in the form of energy and operational and maintenance cost savings, has lower sensitivity to the overall returns of a building compared to top line benefits arising from higher rental and occupancy rates and eventual rising property values. Our analysis also suggests that the relatively higher loan-to-value ratios provided to finance a LEED certified building have the most significant impact on the post-retrofit IRR of the equity investment.

Hence, keeping the individual and broader impact and benefits of green buildings in mind, CRE players have the opportunity to derive greater gains from stepping up sustainability efforts.





# What should you be thinking next about sustainability?

"The best way to predict the future is to invent it" — Alan Kay, President & Founder of Viewpoints



It is imperative that CRE players understand the full benefits of, and the external push for, retrofitting their existing property portfolio to improve performance in sustainability terms, in order that interventions can be targeted in the right assets at the right time to enhance total returns. Companies need to understand that well-placed and appropriate sustainability initiatives have a positive impact on both property performance and valuation. With this understanding as a backdrop, companies need to assess their current adoption level in context of market and regulatory demand, taking account of peer implementation, and then determine the next steps. CRE players should have a clear understanding of sustainability initiatives that are considered “table stakes,” compared to those that can act as “game changers,” leading to improved brand value and competitive advantage. In our view, there are three focus areas, which can help companies differentiate themselves in the marketplace:

1. Embed environmental, social, and governance (ESG) risk management into core investment processes to maintain stakeholder confidence
2. Improve measurement and reporting to manage sustainability risk
3. Plan resource efficiency to enhance occupant satisfaction and investment returns

## **Embed ESG risk management into core investment processes to maintain stakeholder confidence**

Sustainability is a fundamental real estate concern affecting long-term value generation and short-term profitability. As we have seen earlier, sustainability has implications at every stage of the investment cycle, requiring careful consideration of the issues and engagement with an array of stakeholders. Hence, it is important for CRE owners to understand the value of tangible benefits that can be derived from embedding sustainability into the entire investment process. It is equally important for owners to understand how non-financial performance relates to risk profile, market appeal and tenant retention, depreciation, and obsolescence. Eventually, these factors are critical to resilient asset management.

With this in mind, CRE owners need to consider how sustainability issues relate to each action and decision taken throughout the investment process. In particular, sustainability factors should be an explicit component of the following:

- Investment appraisals and acquisition due diligence, taking account of regulatory, market, and physical risks pertinent to the properties in question, which may require a longer-term risk outlook to identify possible impacts on exit yields, rental growth, and capital expenditure;

- Capital investment and business planning decisions in relation to both development projects and the routine maintenance, refurbishment, and retrofit of standing assets, again taking account of the specific circumstances of the assets;
- Portfolio strategy with respect to the exposure of capital to sustainability risks (e.g., physical hazards, tenant migration, lease liabilities, cost increases, etc.) over time, the approach to which will vary from owner to owner depending on risk appetite.

Finally, the above needs to be supported by credible narrative and non-financial information to engage investors, many of whom are requiring increasing levels of disclosure and greater rigor in related risk management processes.

#### **Improve measurement and reporting to manage sustainability risk**

It's important for companies to measure internally and report externally (implementation and results) in a credible and reliable manner, and in accordance with recognized frameworks that demonstrate commitment to transparency around sustainability performance. For this, the key is awareness, analysis, and action. According to Will Sarni, Director and Practice Leader, Enterprise Water Strategy, Deloitte, "It may not be long before all of these sustainability-related measurement trends become standard operating practices. As a business leader, what should your company begin doing now to get ready?" Hence, CRE players should put processes in place that drive environmental performance, which reinforce or enhance investment returns. In addition, companies need to embed enterprise sustainability risk management into core investment processes, and across the whole property life cycle. The key question here is:

#### **Is there room to improve my organization's measurement and reporting standards?**

Companies can use predictive analytics to analyze historical and current sustainability data (costs and benefits), and gain insights to potential future risks. This will increase transparency and help meet tenant, investor, and regulator expectations. In addition, companies can preempt potential sustainability risks and take appropriate steps in a timely manner with the help of the right measurement metrics.

Further, companies should focus on quality over quantity, i.e., disclosing the right metrics rather than a large volume of metrics, of which many may be redundant. Numerous industry organizations (SASB, GRI, and CDP) lay down the guidelines for measurement, reporting, and disclosure. In fact, these guidelines also highlight the market expectations from green buildings in general.

Finally, the impact of measurement and reporting is also visible on brand value. Impact on brand value is at two levels — building and enterprise. This impact will vary across companies, and each CRE company needs to have the right metrics in place to measure their green performance. As the wider economy begins to transition toward integrated reporting, there is an opportunity for the CRE industry to further reinforce the value it delivers to investors as a result of the interface between the financial and non-financial aspects of its business processes. We therefore expect positive engagement with integrated reporting principles to be the next vanguard for sustainable business practices for the CRE sector.

#### **Plan resource efficiency to enhance occupant satisfaction and investment returns**

Traditionally, CRE owners have focused on energy saving initiatives. This is not surprising as energy is one of the largest items in buildings' operational expenses, and many energy-efficient solutions are simple to adopt and have quick paybacks. While players have covered significant ground in this area, focusing only on energy can narrow the scope of sustainability. To achieve the well-rounded benefits of sustainability while minimizing the environmental impact, other aspects such as water and waste management are also important. While a certification system such as LEED for Existing Buildings (EB) is a good starting point for sustainability adoption, CRE players need to make a conscious effort to have a broader strategy with enhanced focus on water and waste management measures. Companies will benefit from considering the impact on total workplace productivity, along with health and well-being, while planning their sustainability initiatives to improve occupant satisfaction. This will also result in higher investment returns for RE investors. Concurrently, companies should aim to answer the following key questions, recognizing that adoption will vary based on existing and potential for future implementation:

#### **Has my organization done enough toward energy efficiency?**

Companies have implemented advanced energy saving initiatives such as smart metering, efficient HVAC systems, and electric vehicle charging stations. We believe opportunities to gain ground toward energy efficiency still remain, as the external operating conditions for commercial buildings (rising energy costs, higher carbon taxation, increased vulnerability to climate impacts, etc.) continue to evolve.

Companies should now turn their focus to achieving deep energy savings, working closely with their tenants to ensure that the benefits realized are captured for mutual advantage. According to the New Buildings Institute, deep savings implies a minimum 30 percent and a target 50+ percent energy reduction in existing buildings. Currently, only a small proportion of buildings have reduced energy usage in the 30 percent to more than 60 percent range. Companies can consider targeting tenants that lease multiple sites to implement these initiatives. Certainly, we are witnessing the emergence of niche products (low carbon real estate funds, for example) that are focused specifically on green transformation of secondary assets, and we expect these approaches to become more mainstream over the medium term.

For the longer term, companies should be starting to think about the implications of zero-net energy and similar standards. This implies that a commercial building consumes energy equivalent to that produced from on-site renewable sources. While a move towards zero-net energy may involve incremental design costs, there is likely to be greater payback over a period of time. As CRE companies implement such initiatives, they will have to be wary of developers and investors that concentrate on short-term profit maximization and may be reluctant to pursue these efforts.

State governments are gradually mandating and promoting adoption of deep energy savings and zero-net standards. For example, California has made revisions to its building codes, namely Title 24, whereby beginning in 2014, all new commercial buildings are required to achieve zero-net energy by 2030. Similar statutory goals exist for the European Union. There is a strong likelihood that these rules for new buildings will, by virtue of their impact in the market place, become a driver for ever higher standards of existing stock too, and in some cases may become mandatory requirements for existing buildings under legislation. In fact, the proposed revisions to Title 24 include additional incentives to companies that use comprehensive building solutions through the use of smart and energy efficient technologies.

This closely ties to our final recommendation on the energy front. We believe technology will be both a competitive differentiator and a key enabler to achieve deep energy efficiencies, and that there are two aspects to using technology on this front. On one side, CRE companies can use technology to achieve deep energy savings, eventually moving towards zero-net. On the other side, companies can use energy management systems (EMS) that measure, monitor, and manage electricity usage.

### **Is my organization giving enough thought to water and waste efficiencies?**

For water management, companies should understand the energy-water nexus<sup>36</sup> and its potential business implications.<sup>37</sup> Companies should look inward, asking specific questions such as: what is the effect of interrelationships among resources? How might water scarcity affect my immediate access to energy and my long-term energy strategy?<sup>38</sup> One of the immediate areas of focus and benefit can be water preservation, which can include reducing water consumption and/or preserving water quality. Eventually, companies should aim to create and/or adopt the technology and necessary processes to achieve water-related goals.

Waste management is an area that is relatively harder to implement in existing buildings, as it requires more significant structural overhaul of existing systems as well as tenant participation. Yet all the same, it is an area gaining importance. As with water management, CRE companies should understand the interrelation between resources for waste management too. In particular, companies should ask: How can I effectively reduce, re-use, recycle, and recover waste? Companies typically tend to focus on waste reduction through sound solid waste disposal mechanisms. However, they should aim to achieve zero-waste<sup>39</sup>, which implies that “all discarded materials are designed to become resources for others to use.”<sup>40</sup> This will require a well-defined program of waste minimization, recycling, composting, and material reuse.



# My take — Jon Lovell

**Director of Sustainability, Deloitte Real Estate, United Kingdom; Leader of Deloitte's global community of practice on sustainability and the built environment**

There is no question that sustainability is now a fundamental commercial real estate concern affecting long-term value generation and short-term profitability, especially in the context of mature markets such as the United States, Western Europe, and Australia. The combined demands of occupiers, investors, and regulators are such that tangible benefits can be derived from embedding sustainability into the full investment process, with a range of property value fundamentals — rental growth, yield premiums, total occupancy costs, and the like — increasingly sensitive to sustainability factors.

Critically, value impacts are, and will continue to be, property specific, influenced as they are by local market context, tenant and leasing profiles, and climate conditions. Moreover, it would be a mistake for those operating in secondary and tertiary markets to assume that sustainability is predominantly relevant to prime markets and assets. While there's no doubt that strong sustainability performance has become a prerequisite for prime market expectations of quality, the narrowing of capital flows to core product in recent years has arguably inflated values to the extent that some of the subtleties of sustainability performance have become hidden in the competition for stock. Moreover, it is reasonable to expect that rental growth will be more heavily suppressed in properties in which energy and other utility costs are high compared to rental levels. In this sense, sustainability is driving a greater divergence between prime and secondary/tertiary property. That said, these effects remain muted by a deficit in proper in-use performance data across the sector, but we have every expectation that, as this situation begins to improve and reliable data becomes more widespread, the transparency of real estate performance will increase and more informed capital pricing and rental decisions can be made.

Much of the industry's response to the sustainability agenda to date has been centered on the application of green building rating tools as proxies for non-financial performance. In the United States, schemes such as LEED and Energy Star have become increasingly prominent, and, more recently, Green Globes and Living Building Challenge have entered the market too. The expansion of these tools in the United States is echoed around the world, where the array of rating schemes has proliferated. Their use is reinforced by attention given to them in global benchmarking initiatives, such as GRESB and the International Sustainability Alliance. This poses two major challenges for the market, and indeed for the rating scheme operators:

- First, while competition among green rating scheme operators can drive innovation and quality if handled well, there is also a risk that competitive rhetoric becomes a distraction to their purpose of catalyzing market transformation.

- Second, green rating tools continue to be targeted, in the main, at new construction and refurbishment projects. Clearly, these capital events are hugely important stages in the commercial real estate life cycle, but they are only a small part of the overall sustainability performance story. Commercial property occupiers and operators are recognizing increasingly that the performance gap between new build and refurbishment design expectations, driven in no small part by the requirements of rating tools, are often massively under-realized once buildings are in use. Rating schemes, and the market's appreciation of them, need to evolve to address this performance disconnect.

Clearly, with implications at every stage of the investment cycle, commercial real estate owners need increasingly to develop robust and comprehensive approaches to sustainability, with Responsible Property Investment as an embedded feature of their portfolio and asset management activities. This requires careful consideration of complex, dynamic issues and engagement with an array of stakeholders throughout the value chain. Evidently, understanding how non-financial (sustainability) performance relates to risk profile, market appeal, tenant retention, depreciation, and obsolescence is critical to resilient asset management and optimized total returns. In our conversations with clients, we find that progress on truly embedded Responsible Property Investment approaches remains limited, but for a small group of market leaders. In most cases, in both institutional and private markets, approaches remain somewhat superficial, and robust disclosure of impacts is still nascent.

However, the tide is most definitely turning, and those that chose to remain agnostic and defensive in their approaches to sustainability will more than likely see their investment returns underperform the wider market. Encouragingly, we are seeing a marked increase from our clients across most commercial real estate market geographies on the need to take a more proactive and comprehensive stance, coupled with strengthening engagement with industry bodies such as the worldwide network of Green Building Councils, which have hitherto been largely representative of the supply side of the market.

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