

# GREEN BUILDING AND RISK MANAGEMENT FOR THE BUILT ENVIRONMENT



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Following is a brief overview of opportunities for sustainable design to mitigate current and emerging sources of risk for the owners, developers, and investors in real estate portfolios.

## Introduction

It is no secret that green is big in the building sector. Over the last five years, green building has moved from a fringe concept to a powerful force for market transformation. The success of green building is due, in part, to an increasingly well-understood value proposition: Green buildings can deliver higher occupancy rates, lower tenant turnover, higher rents, greater occupant comfort and productivity, and lower total cost of ownership. In many situations, it may also be possible for real estate portfolio managers to use green building practices as a cost-effective part of their firms' risk management strategy.

## Green Building

Green building has gone mainstream because it makes good business sense. Green buildings involve consideration of factors such as indoor air quality, energy consumption, materials, water use, and location. The overriding goal is to increase the sustainability of buildings by reducing waste and inefficiency while increasing comfort and productivity. Consumers have shown that they are ready and willing to pay for these features, particularly when claims of builders and developers are backed up with independent certification such as the US Green Building Council's LEED™ rating system. These factors have repeatedly been shown to make sense for individual buildings, and a number of progressive firms are beginning to consider green building opportunities for entire real estate portfolios.

## Current Risks

CTG defines *current risks* as issues for which proximate causes and consequences are well-known and quantifiable. Technical solutions, well-established through professional experience, are generally applicable. The success of any real estate portfolio is subject to current risks related to *capital, operations, and reputation*. Current green building practices can help mitigate each of these factors.



Traditional *capital risks* include:

- Exceeding the construction budget
- Quality problems in design and installation leading to unexpected remediation costs
- Delay in positive cash flow from beneficial occupancy

CTG has found that attention to sustainability and green building standards reduces a number of these capital risks. Green building often involves adding another perspective to the design process – one that is carefully focused on design and construction details. For example, the combination of building energy modeling and building systems commissioning helps prevent and address problems in building systems early on. This reduces problems that could delay occupancy or lead to costly post-construction repairs.

*Operating risks* include:

- Workers compensation claims
- Lost profits associated with lower worker productivity
- Higher-than-expected utility and/or maintenance costs

Far and away the largest lifecycle cost and most serious risk associated with the majority of buildings is the value of the labor performed there. Buildings with poor air quality, lighting or temperature control, to name a few examples, result in lowered productivity and reduced profits. On the positive side of the ledger, green buildings with carefully engineered, site-appropriate measures to minimize power drawn from the grid can mitigate the effect of fluctuating energy costs.

*Reputational risks* include:

- Loss of customer loyalty
- Loss of employee loyalty; attrition of key staff
- Degradation of brand equity

Many companies have articulated a set of core values that include a commitment to care about communities and the environment. These values can be synergistic with other important corporate values, but they also create a new set of risks. Today, firms that tout their “green” practices face higher expectations for their level of environmental performance than do many of their potential competitors. They are expected to be exemplary corporate citizens, and an intelligent and skeptical public is making it increasingly clear that their actions will be closely scrutinized. At the same time, highly educated and ecologically conscious staff may subject a firm to even more intense scrutiny than its own customers. Retention of key staff is a top-priority challenge for virtually all organizations today; failure to do so could result in costs that many firms



would deem unacceptable. Green building can minimize all of these risks by providing a tangible symbol of a firm’s sustainability goals and values, and an integrated methodology for ensuring delivery of the expected levels of performance.

## Emerging Risks

**Current risks to capital, operations, and reputation are well-known. In contrast, there are *emerging risks* for which CTG has observed developing trends, but whose characteristics are not yet clear. However, they all represent potentially significant threats to firms’ capital investments. The emerging risks particular to real estate portfolios include ownership risk, regulatory risk and casualty risk.**

*Ownership risks* include:

- Losses associated with latent defects
- Delays or losses associated with permitting issues
- Future salability/leasability
- Loss of incentives due to failure to achieve required third-party certification

“Green” considerations are an ever-increasing concern with respect to property sales. In the future, prospective customers may be unwilling or unable to purchase or lease properties that fall below a minimum standard of sustainability. This standard is constantly evolving, and promises to do so at an accelerating rate. For example, the increased scrutiny given to the design and operation of a green building may reduce the frequency and severity of losses associated with latent defects in that building. Alternatively, in some regions, greenhouse gas emissions associated with new construction are increasingly becoming a liability during land use entitlement. Green building practices that increase energy efficiency and reduce emissions can help avoid delays in permitting. Finally, CTG has noted an accelerating trend wherein local and regional governments provide incentives such as tax credits to projects that receive third-party sustainability certification. These incentives can run into the hundreds of millions of dollars in some instances. Addressing such risks helps owners prepare for future markets where sustainability will be a standard feature for many consumers.

*Regulatory risks* include:

- Disclosure
- Evolving standards
- Compliance costs

Many public firms address sustainability in their financial reports. Some give triple bottom line metrics in addition to Securities and Exchange Commission (SEC)–required financial statements,



providing their shareholders a window into the environmental and human resources–related aspects of their performance. What is a cutting–edge trend today, however, often becomes standard operating procedure tomorrow. Looking ahead, CTG anticipates that entities such as the Financial Accounting Standards Board (FASB), the SEC and others may require greater transparency in the presentation of firms’ environmental business positions to the public, including sustainability metrics (e.g., greenhouse gas emissions). Green building emphasizes high–performance, “above code” practices. This provides a buffer against changing regulatory standards, and reduces the risk that unpredictable political changes will require changes in property management or building design.

*Casualty risks* include:

- Threats to property from changing environmental conditions
- Threats to business continuation
- Threats to public health and safety

Changing conditions create new risks to property, business operations, and public health and safety. For example, rising temperatures may require new approaches to the design of heating and cooling systems. Failure to make changes may jeopardize occupant comfort and worker productivity. In addition, global climate change may increasingly affect such *force majeure* considerations as flooding or destructive winds. Green building practices can be extended to ensure that built environments continue to perform under changing conditions.

## Conclusion

Green building provides a diverse set of cost–effective tools that can be deployed as part of a real estate portfolio’s comprehensive risk management strategy. Green building can help manage well–known risks to capital, operations, and reputation and prepare for emerging risks related to ownership, regulation, and casualty. Moreover, these benefits can be added to the already compelling value proposition underlying the success of green building.

## For further information

CTG combines on–the–ground experience with innovation and technical expertise to guide the creation and operation of built environments that minimize risks, maximize return on capital, and reflect a long–term commitment to sustainability. CTG helps clients develop systematic approaches to sustainability that make good business sense, and can be used as part of a comprehensive risk management strategy.



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