

BuildUp 2030 Framework for the Transformation of Real Estate



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Executive Summary

The business world is shifting and adapting constantly, and the business of real estate is no exception. Along with the changes resulting from the COVID-19 global pandemic, the industry is also transforming its understanding of and approaches to how buildings contribute to the economy and to healthy communities. The question is not *whether* the industry will change, but rather *how* it will change.

The Institute for Market Transformation (IMT) is dedicated to understanding how the real estate industry is—and should—transform itself to produce high-performing buildings that nurture the people in them and the communities around them to secure healthy, resilient, and robust futures for all. What will it take for the real estate industry to make this vision a reality? The BuildUp 2030 Framework for the Transformation of Real Estate is a call to action for building owners, operators, tenants, as well as real estate investors and others, to move collectively toward a more just and sustainable future.

The Framework is an effort to listen to the calls of communities for a [Just Transition](#) to a regenerative economy. It is an effort to listen to the calls of scientists and world leaders to dramatically reduce greenhouse gas emissions and limit global warming by 1.5 degrees Celsius, recognizing that this will require collective action at a rapid pace—and that 1.5 C still brings consequential changes to the biosphere. It is also an effort to respond to the calls to action from business leaders, in particular the statements laid out in the [Business Roundtable CEO Letter](#) published in August 2019 about redefining the purpose of a corporation to promote “an economy that serves all Americans.” Despite these broad calls for the transformation of industries, there is a dearth of clear guideposts and unifying ideas to help the real estate sector navigate the convergence of these issues at this time.

In taking on this effort, IMT sought to more clearly define what transformation of real estate might look like by 2030 to better protect, support, and nourish the people in buildings and the world around them. The resulting framework pulls from more than four months of discussion with a coalition of more than 20 real estate professionals from across the U.S. who represent portfolios of varying building types and sizes as well as geographies. Through this engagement, IMT sought to illuminate a vision that was informed by the realities and potential seen by professionals in the field transforming the industry.

IMT’s Framework for Transformation comprises 10 principles that real estate professionals and companies can use to actively transform their business practices and their communities.

The principles are:

1. Support the strength and growth of local communities, especially communities of color.
2. Use supply chains as levers for change to promote fair and equitable access to opportunities while reducing environmental impact.
3. Significantly increase diversity internally by recruiting and promoting women and people of color and compensating them fairly.
4. Reduce sector carbon emissions to help limit global temperature rise to 1.5 degrees C.
5. Diversify business relationships and partnerships to bring more power and opportunity to businesses that are led by and employ women and people of color.
6. Ensure that all buildings and neighborhoods are healthy and safe through active management of health factors for inhabitants and community members.
7. Measure, manage and report relevant ESG metrics and commit to improving these metrics collectively to improve transparency and accountability.
8. Creatively finance improvements to buildings to reduce risk and unnecessary or unaligned financial burdens.
9. Plan for future natural disasters, like hurricanes, floods, and wildfires, through climate risk management and improve the resilience of individual buildings and communities.
10. Align all business actions with the values espoused in ESG reports.

These principles are not ranked in priority and are designed to be a roadmap for positive action in the industry, a collection of tangible actions that companies can collectively commit to and individual leaders can push in their organizations. It is not meant to be an exhaustive checklist. However, we have endeavored to create a foundational framework, a clear and achievable set of action ideas, and an inspiring vision for the future that we can all reach if we work together in a spirit of positive change.

This framework is intentionally designed to be aspirational and to consider fundamental shifts in the industry, not just incremental change. We at IMT do not expect these shifts to happen overnight, this will all take time. We offer this framework with an eye to how real estate might mobilize to produce permanent, economy-wide changes to how U.S. buildings are capitalized by investors, built and managed by operators, and valued by occupants, communities, and society at large. We understand that this may elicit questions from readers on how some of these shifts can even be possible, given the current system, and we welcome conversation on what is needed to get there.

Introduction

In these fast-paced and technology-influenced times, it is reasonable to expect that massive change can and will happen, regardless of whether we are ready for it. Whether through the growth of technology and social media, a global pandemic, waves of social upheaval, or the threat of climate change, there are many forces rapidly transforming the world right now. The business world in particular is shifting and adapting constantly, and the business of real estate is no exception. Along with the changes that the COVID-19 pandemic brought, the industry is going through transitions in how it builds, what spaces we collectively need, and where and how people want to live. The question is not *whether* the industry will change, but rather *how* it will change.

The Institute for Market Transformation (IMT), is a national, 501(c)3 organization focused on the transformation of real estate to create buildings—offices, schools, homes, hotels, and the many structures that make up the fabric of daily life—that positively enhance the lives of the people in them and the communities around them. With this mission in mind, IMT sought to answer: What does the path from today's disruptions to this robust, resilient, just future look like?

The BuildUp 2030 Framework for the Transformation of Real Estate is a call to action to guide the many decision makers in real estate—investors, owners, operators, occupants, and communities—toward a more just and sustainable future. It is an effort to listen to the calls of communities for a [Just Transition](#) to a regenerative economy. It is an effort to listen to the calls of scientists and world leaders to dramatically reduce greenhouse gas emissions and limit global warming by 1.5 degrees Celsius, recognizing that this will require collective action at a rapid pace—and that 1.5 C still brings with it consequential changes to the biosphere. It is also an effort to respond to business leaders, in particular the statements laid out in the [Business Roundtable CEO Letter](#) published in August 2019 redefining the purpose of a corporation to promote “an economy that serves all Americans.”

Despite these broad calls for the transformation of industries, there is a dearth of clear guideposts and unifying ideas to help the real estate sector navigate these times. We at IMT believe that the industry needs a new roadmap that centers the imperatives of climate crisis and social crisis, accelerates change, and addresses equity and resilience more integrally. This framework seeks to identify the building blocks of that path forward.

Many things may shift over the coming years, but the core values of the real estate industry will remain and be useful for society:

- Buildings keep us safe and support human life in all its forms.
- They enable communities to form and come together.
- They provide revenue that supports community-wide investments beyond the property line.
- They provide significant employment and high-potential career paths.

In order to chart a visionary path for the future, we must also acknowledge current systemic injustices that real estate can help address as we move forward. Specifically, this includes ensuring that real estate:

- Protects the planet through improved materials manufacturing and reduced carbon emissions.
- Provides healthy and safe shelter to all.
- Provides fair employment for all.
- Increases access and service to marginalized communities—most often low-income communities and communities of color—that have previously been penalized by systemic racism.
- Uses real estate ownership to build local communities and community wealth.

In addition to this, increasingly the main stakeholders of the real estate industry are pushing for a more equitable and sustainable future. Institutional investors are moving funds toward financial assets with higher scores in Environmental, Social and Governance (ESG) performance. The biggest corporate real estate occupiers are committed to ambitious carbon neutrality goals that impact their leased and owned buildings. Governments are establishing more regulations to follow through on their Nationally Determined Commitments (or NDCs) in the Paris Agreement to reduce their carbon footprints by 2030.¹ Many governments (local, state, and federal) are also committing to reducing the structural racism and economic inequalities that exist in their jurisdictions today. Real estate can play a clear role in this transformation.

This work will lead the industry into a better future, and this transformation will happen in parallel with other industries transitioning to this vision. In fact, this future not only can be obtained without compromising a healthy economy but, we believe, will become the new foundation of a healthy economy. People need places to live and work, and the real work to create and maintain those spaces should give this industry a lasting place in the future. However, going forward, business success must be coupled with environmental protection, the closing of the wealth gap, and the more equal distribution of basic life-giving resources such as healthy air, water, and resilient neighborhoods. The time for this transformation is now.

¹ Schmidt, Jake. "Paris Climate Agreement Explained: What actions did countries commit to implement?" Natural Resources Defense Council, December 21, 2015. <https://www.nrdc.org/experts/jake-schmidt/paris-climate-agreement-explained-what-actions-did-countries-commit-implement>



Our Vision

IMT envisions a world in which buildings positively transform people's physical, social, and economic well-being.

What will this look like by 2030?



Economic Opportunity

The real estate sector can play a critical role in accelerating the transformation of the U.S. economy. Changes in business practices could lead to local job creation, new forms of real estate ownership and management, increased engagement with local communities, and reduction of the racial wealth gap by eliminating historical barriers to real estate ownership. Home ownership, specifically, is the number one wealth builder for Americans, and transforming industry processes around this can help eliminate the inequalities that exist in America today. In addition, by supporting government policies to set quality standards for all buildings (new and existing), we can help ensure that everyone has a safe and healthy environment in which to live, learn, and work.

In 2030, IMT envisions a transformed industry (and world) in which cities and neighborhoods are based on a complete reimagining of the role of buildings in the economy. Buildings will

need to be high-performance and can play new economic roles—as sites for local food production, collection, and distribution, and for storage of water, and more. New forms of real estate development that prioritize local wealth and community will abound, and American families will be building household wealth by building community wealth and stability via emerging real estate investing mechanisms such as Community Land Trusts. Our vision is that by 2030 environmental, social and governance (ESG) investing frameworks will have evolved to effectively value the quality of employment that companies provide, which, in turn, will produce more competition around benefits, wages, and other aspects of employee economic health. These changes will mean that real estate (throughout the industry and at its leadership level) will be as diverse as the American population, that women and men are paid equally for equal work, and that the ownership of real estate is equally diverse.



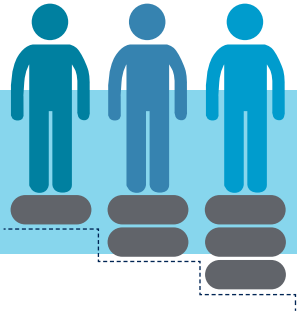
Decarbonization

According to the UN Environment Programme, buildings must decarbonize fully by 2050, and largely by 2030². We envision that by 2030, all new construction will be capable of operating with zero carbon emissions. We envision that embodied carbon accounting and policy will have shifted the market for building materials toward naturally low-carbon components such as mass timber, but also that R&D efforts to produce low- and no-carbon materials (notably, steel and concrete) will be fruitful and enable the use of those materials without the harmful emissions they create today. Companies (including architecture, engineering, and construction firms, real estate companies, corporate tenants, and others) will report their carbon emissions

through significantly simpler business processes and be appropriately measured and regulated on those emissions. These changes will have created millions of new, good-paying jobs (one estimate suggests as many as 25 million peak new jobs by 2030³) for energy managers, facilities managers, mechanical engineers, controls manufacturers, and more, creating a new generation of building stewards to ensure that our buildings use energy resources wisely over time. Finally, we envision that these changes will partially occur because of the real estate industry's vocal advocacy in supporting new climate policies that appropriately regulate and reward industry action.

2 "2020 Global Status Report for Buildings and Construction," Global Alliance for Buildings and Construction, UN Environment Programme, December 2020. <https://globalabc.org/index.php/news/launched-2020-global-status-report-buildings-and-construction>

3 Griffith, Saul and Sam Calisch. "Mobilizing for a zero carbon America: Jobs, jobs, jobs, and more jobs," Rewiring America, July 2020. <https://www.rewiringamerica.org/jobs-report>



Social Justice

Buildings and the business of real estate have a significant impact on the lives of Americans every day. This is apparent in different facets of our lives, and some people feel these impacts more than others. They are felt acutely during climate-related weather disasters such as the winter storms in Texas in early 2021 and the record-shattering heat wave in the Pacific Northwest in late June 2021. They are felt through the higher energy bills that moderate- and low-income households (many of them primarily in communities of color) pay compared to white households⁴. And they are felt

through the legacy of decades of racist zoning policies, such as redlining, that have led to unequal access to services and opportunities.

We envision that by 2030, every American will have safe and healthy housing, schools, workplaces, and community structures. And not only will buildings be better, but also the industries around them will be better: the manufacturing of building materials will create jobs that are equally accessible to all people.

⁴ Drehobl, Ariel. "How High Are Household Energy Burdens?" American Council for an Energy-Efficient Economy, September 2020. <https://www.aceee.org/energy-burden>



Health

We envision a world where buildings actively improve health. By 2030, the real estate industry will embrace the active management of health as a part of its core responsibility, and a set of new practices will have emerged. Building managers will use expertise, technology, and innovation to manage the day-to-day health of buildings. Some buildings (especially larger and more critical facilities) will be managed using indoor environmental quality sensor networks to continuously monitor the quality of the indoor space, identifying opportunities for improvement that operators and managers will attend to. Other buildings will be manually managed through regular government-mandated audits

and inspections. Buildings will sustain health in other ways that are not captured by data, such as in their design. For example, workplaces will support all lifestyles more holistically and spaces will be designed in ways that promote wellness activities. Data will also be captured to understand the health of inhabitants, employees, and other people who interact with buildings, and will be collected by community organizations, government agencies, and other independent groups. The health impact factors of a building will be transparently disclosed during rental and sale transactions, leading to a more accurate valuation of buildings.



Community Resilience

By 2030, communities all over the U.S. will have built stronger interconnections of support, especially in times of disruption and disaster. As this relates to buildings, we collectively will have a robust network of buildings that are equipped to sustain communities during utility outages and as a part of a decentralized energy system that goes well beyond a centralized utility grid. These buildings will often (but not always) be public buildings such as schools, and they will be places for shelter, electricity, water, warmth and cooling, and healthcare for those in need. They will be reliable centers for these services because they will be equipped with water storage, energy storage, energy generation, and food and healthcare supply storage. Buildings with surplus stored energy will be able to interact with local microgrids to transmit power to neighboring buildings that need it. But in order for these interconnections to function, the people—not just the buildings—will need to be connected, and that means that building owners and managers will be a part of emergency response networks and members of local government-led and community-led groups.

For individual buildings, this will mean a wave of effort and investment to increase passive survivability measures, hardening and wildfire-proofing, and operational measures to ensure

that buildings sustain as little damage as possible during disasters. This will grow increasingly necessary as insurance rates go up and insurance is harder to obtain in the face of increasingly expensive disastrous events. More buildings will be built to ultra-low energy use standards, such as Passive House, which allow buildings to stay comfortable during extreme temperature swings through effective insulation and HVAC strategies.

As some cities and regions experience more of the impacts of climate change, relocation of both buildings and communities will become a more prominent discussion. There will be a growing need for effective planning of communities that can no longer be effectively habitable in the face of the increasing costs of infrastructure and life in hazardous landscapes like flood zones and wildfire-prone areas. This is already necessitating hard-but-critical negotiations across the insurance industry, the real estate industry, financial institutions, governments, and communities, and that difficulty will only increase. Managing retreat and fortification must be done through thoughtful collaborations between all parties impacted by these decisions, not just top-down government decisions or through the happenstance and slow tragedy of individual private decisions to gradually divest from vulnerable places.

A city street scene at dusk, featuring a dark blue overlay with white text. The background shows a mix of modern glass skyscrapers and older, ornate buildings. In the foreground, there's a sidewalk with a stone railing, a person walking, and a person sitting on the railing. A street lamp with three glowing globes is visible. The text is centered in the upper half of the image.

10 Principles for the Transformation of Real Estate

To achieve its vision of the future, the Institute for Market Transformation (IMT) proposes this set of 10 Principles for the Transformation of Real Estate. These principles primarily look at the ways that real estate professionals and companies can transform real estate through business practices, involvement in the political sphere, and as community members. This document touches on, but does not seek to comprehensively cover, the realm of homeownership or very small commercial building ownership. Rather, it focuses on large private and institutional owners, developers, operators, the AEC community, and service firms. The principles also address areas where public policy interventions may be needed.

These 10 Principles are designed to be a roadmap for positive action, a collection of tangible actions that companies can collectively commit to and individual leaders can push in their organizations. They are not listed sequentially nor by order of priority. It is not meant to be an exhaustive checklist. IMT recognizes that within the diverse realm of real estate, the degree of action stakeholders can take may vary by their portfolio composition. However, we have endeavored to create a foundational framework, a clear and achievable set of action ideas, and an inspiring vision for the future that we can all reach if we work together in a spirit of positive change.

The Principles are

1. Support the strength and growth of local communities, especially communities of color.
2. Use supply chains as levers for change to promote fair and equitable access to opportunities while reducing environmental impact.
3. Significantly increase diversity internally by recruiting and promoting women and people of color and compensating them fairly.
4. Reduce sector carbon emissions to help limit global temperature rise to 1.5 degrees C.
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7. Measure, manage and report relevant ESG metrics and commit to improving these metrics collectively to improve transparency and accountability.
8. Creatively finance improvements to buildings to reduce risk and unnecessary or unaligned financial burdens.
9. Plan for future natural disasters, like hurricanes, floods, and wildfires, through climate risk management and improve the resilience of individual buildings and communities.
10. Align all business actions with the values espoused in ESG reports.

01 Support Local Communities

One of the powerful lessons that the COVID-19 pandemic taught many Americans is the importance of having strong local community networks to build social strength, economic strength, and sometimes even as means for survival. The real estate industry should be learning from these lessons and finding ways to support the strength and growth of local communities, especially communities of color that have been historically disenfranchised. This includes supporting local businesses and organizations, helping diverse community leaders get a seat at the table so their voices can be heard, and showing respect for communities in the ways real estate is built and employs people. Here are some areas where real estate companies can work toward better support of local communities.

- Find meaningful relationship-building opportunities with diverse community organizations and leaders that specifically inform real estate decisions, either via public process or internal processes.
- Participate in projects that bring essential services (such as healthcare, healthy food, green space) to underserved communities.
- Partner with locally owned businesses through major purchasing decisions, investment partnerships, design and construction teams, and outsourcing decisions.
- Partner with diverse local community organizations to support their work.
- Engage with local organizations working for policy change to address inequalities in communities related to real estate (such as rezoning and affordable housing policy).
- Research and analyze potential development sites for the environmental, social and economic impacts they may have on surrounding communities, particularly frontline communities with a history of displacement and environmental toxic exposures.
- Invest in, partner with, and pilot innovative real estate businesses that prioritize creating diverse community wealth such as the [East Jefferson Community Development Corporation](#) or the [Love Campus](#) led by Designing Justice, Designing Spaces.

Ultimately, the hope is that these action items will lead to fairer access to healthy homes and neighborhoods, affordable housing and transit, and just living conditions for all. Real estate companies may find other ways to contribute to these goals outside of the recommendations listed. At a basic level, companies should endeavour to do no harm to communities in their work and strive to be community positive.



Profile: Jonathan Rose Companies

Jonathan Rose Companies is a national development, asset management, property management, and investment firm with multifamily residences across the U.S. Its portfolio encompasses 14 million square feet of assets with 15,000 residential units and more than 13,700 affordable units. For 30 years, the company's guiding principle has been to develop thriving communities. To do this, it uses a co-creation model called Asset-Based Community Development (ABCD) to support and deliver Communities of Opportunity—that is, communities that empower and connect residents through co-created, housing-based interventions to improve their physical, mental, financial, social, and spiritual health and well-being.

Working toward this, the ABCD model draws upon the input and expertise of an interdisciplinary team of internal stakeholders, as well as external stakeholders including residents, financing partners, regulatory agencies,

nonprofits, and consultants. The company's model of intervention is rooted in research that poor housing can have detrimental and long-term effects on an individual's health, education, and employment. It seeks interventions via a combination of services, programs and physical spaces in 10 "Categories of Impact": safety; food security; financial security; civic engagement; transformation; community building and recreation; healthy living; lifelong learning; green education; and communication and sharing.

Property staff works with residents through ongoing engagement and annual surveys to identify needs and existing assets within the community, such as resident skill sets and existing relationships and networks that can be leveraged to foster culture and build tailored resident programming. In addition, to help scale successful delivery of social programming, Jonathan Rose Companies developed the Communities

of Opportunity Toolkit, which equips community managers, resident services coordinators, and partners across the portfolio with step-by-step guidance for implementing a variety of programs to make residents and staff happier, healthier, and more connected. Ideally, each property can hire a Resident Services Coordinator (RSC) either full- or part-time, who is trained in social services, to help implement social programming and resident support. However, the Community of Opportunity Toolkit was designed so that anyone, including community managers can successfully implement programs.

"We invest for impact not only because it's the right thing to do," the company notes in its 2020 Impact Report, "but because it is an essential tool in our investment strategy: helping to increase available capital, lower operating costs, enhance income stream stability, and reduce long-term exposure to risk."



Helpful Links

To help real estate leaders take the first steps toward putting these principles into action, we compiled a set of helpful links and documents. This list is not exhaustive, and we plan to keep adding to this library of resources. Please reach out with additions and updates to the IMT team at info@imt.org.

Asset Based Community Development (ABCD) Toolkit

This approach is the foundation of the community engagement work at Jonathan Rose Companies, and is supported by a research institute at DePaul University that provides many resources to help leaders adopt ABCD in their work.

<https://resources.depaul.edu/abcd-institute/resources/Pages/tool-kit.aspx>

Sustainable Economic Law Center's "Rethinking Home" Resources

SELC, a non-profit organization, researches different legal approaches to real estate ownership, including the new cooperative model of ownership called the Permanent Real Estate Cooperative model, which can help build community wealth and fight displacement through a co-op model of real estate ownership.

<http://www.theselc.org/rethinking-home>

02 Use Supply Chains as Levers for Change

This is the first of three principles in the framework that address leveraging business relationships for change. This principle explores how companies might adjust supply chain management to drive change, while Principle 3 examines internal company practices, and Principle 5 explores expanding external business relationships to expand access to opportunities across the industry.

According to a report from the Boston Consulting Group, the construction industry has the second largest global supply chain carbon footprint of any industry in the world⁵. In many cases, supply chains have a far larger impact than the daily operations of businesses. Data collected through CDP Supply Chain in 2020 reveals that companies' supply chain emissions are 11.4 times higher than their operational emissions on average⁶. This means that when companies strive for supply chain emissions reductions, they can have greater than 10 times the positive impact, creating a ripple of positive action throughout their value chains. The industry makes decisions every day about the products it uses to build and operate buildings, and those decisions can be infused with criteria around greenhouse gas emissions (usually scope 3), fair and safe labor practices, health and chemical exposures and other non-financial factors. In particular, real estate companies should commit to the following practices:

- Following the leadership of sectors such as fashion and consumer packaged goods, real estate companies must establish and enforce a Vendor Code of Conduct. This should cover critical areas of compliance such as the UK Modern Slavery Act.
- Survey critical Tier 1 suppliers on a regular basis on ESG issues to maintain transparency and emphasis of purchasing priorities.
- Ensure that all outsourced employees are being paid a living wage through Vendor Codes of Conduct, bid processes, and otherwise.
- Conduct annual supply chain surveys to inquire about diversity among vendors, and report on this data publicly over time.
- Commit to thorough management and transparency around subcontracted labor and services.

5 Burchart, Jones, Fredeau, M., Hadfield, M, Herhold, P, O'Brien, C, Pieper, C, and Weise, D., "Supply Chains as a Game-Changer in the Fight Against Climate Change," BCG, January 26, 2021. <https://www.bcg.com/publications/2021/fighting-climate-change-with-supply-chain-decarbonization>

6 "Transparency to Transformation: A Chain Reaction," CDP, 2020. <https://www.cdp.net/en/research/global-reports/transparency-to-transformation>

- Use lifecycle assessments to make critical decisions about larger purchasing decisions.
- During new construction and renovation projects, set goals for the reduction of embodied carbon, especially for the larger categories of carbon emissions (concrete, steel, etc.).
- Use detailed specification language during development, renovation, and tenant improvement projects to specify low-carbon, healthy, and otherwise positively impactful products. Also, companies should request Environmental Product Declarations and Health Product Declarations for building materials and use them to inform purchasing decisions.



Helpful Links

To help real estate leaders take the first steps toward putting these principles into action, we compiled a set of helpful links and documents. This list is not exhaustive, and we plan to keep adding to this library of resources. Please reach out with additions and updates to the IMT team at info@imt.org.

Health Product Declaration® (HPD) Collaborative's Project Team Guide

This user guide offers a practical "how-to" template to help Project Teams using HPDs support material health programs and incorporate health considerations in the specification and selection of building products. The guide can help teams meet client and sustainable building certification requirements, such as LEED and WELL.

<https://www.hpd-collaborative.org/hpd-user-guide/>

Owner's Toolkit from the Carbon Leadership Forum

A helpful compilation of resources for owners on making embodied carbon commitments, including an ongoing list of corporate commitments around embodied carbon.

<https://carbonleadershipforum.org/clf-owner-toolkit/>

Harvard Business Review: "What Supply Chain Transparency Really Means"

This article clarifies the meaning of supply chain transparency and offers guidelines to map and extend progress.

<https://hbr.org/2019/08/what-supply-chain-transparency-really-means>

03 Expand Power within Firms

Real estate leadership today is not diverse—more than 75% of real estate executives are white men⁷, and yet white men are less than one-third of the population of the country. In addition, the industry more broadly is predominantly white and male, and men are paid 34% more than women for the same roles. Research shows that diverse teams consistently outperform more homogeneous teams, so this is a business opportunity as well.⁸ While all companies will have different goals for achieving better diversity and representation on boards and in other leadership roles, overall the transformation must be one where more power is given to women, people of color, and other underrepresented demographics. Leading companies in the real estate sector should be taking the following actions to be a part of this important transition.

- Hire, promote, and retain women and people of color, and address these activities at the Board level annually, as well as report these statistics publicly and/or to investors. Also ensure that they are paid equally through annual pay equity checks.
 - Specifically focus on recruiting a diverse workforce through partnerships with Historically Black Colleges and Universities (HBCUs), Minority Serving Institutions, and organizations that support diversity in real estate such as Commercial Real Estate Women (CREW), the Real Estate Executive Council (REEC), and the Asian Real Estate Association of America (AREAA). Simultaneously, eliminate biased practices in this realm such as internship nepotism and unpaid labor.
 - Partner with educational institutions, workforce development programs, and other groups that help to train the next generation of real estate professionals to ensure that programs are training diverse student cohorts.
 - Examine the practice of compensating employees on commission, where some of the greatest compensation disparities exist. Adjust these policies to ensure that there are no unfair barriers to equal pay for women.
 - Train staff around unconscious bias and inclusionary practices, and hold them accountable to be welcoming and inclusive to all co-workers, regardless of position in the company, background, gender, race or age.
 - Ensure that all employees are receiving a livable wage.
- As is the case with all best practices in business, companies should be simultaneously finding effective ways to measure these activities, track progress, and set strategies for improving their performance in these areas. The research and educational community around real estate can be helpful in providing training, assistance and feedback on these practices, and our professional communities and media outlets can celebrate accomplishments in these areas.

⁷ crewnetwork.org/about/resources/industry-research/gender-and-diversity-in-commercial-real-estate-202

⁸ D Rock and H Grant, "Why Diverse Teams are Smarter", Harvard Business Review, November 2016.



Profile: CBRE

As the world's largest commercial real estate firm, CBRE embeds diversity, equity, and inclusion (DE&I) in its core values of respect, integrity, service and excellence. Signaling a further commitment to strengthening DE&I across its global enterprise, in June 2020, the firm announced the newly created position of global Chief Diversity Officer. Tim Dismond, the inaugural officer, is one of nine global executives who report directly to CBRE's CEO. Since then, Mr. Dismond has been promoted to Chief Responsibility Officer, overseeing the company's environmental, social and governance efforts holistically, including DE&I. This type of leadership role and scope is focused on leading and accelerating impactful change in the company and community.

CBRE has taken several actions to diversify its employee community and advance measurable progress. In 2018, it launched a global Executive Inclusion Council comprised of senior leaders to enable DE&I efforts across

the company. In 2019, it enhanced DE&I training for all new employees in the Americas, and also elevated a set of partnerships with organizations to advance diverse talent recruiting efforts including with Historically Black Colleges and Universities (HBCUs), as well as Latino professional associations and more. Hiring processes also ensure that diverse candidates are included as part of in-person interview stages for all Director-level positions and above, interviewer panels at that level are also diverse, and all performance appraisals for firm management include diversity and inclusion-focused objectives. It also has 16 Employee Business Resource Groups (EBRGs) that provide career and professional development opportunities across the firm's global operations. CBRE also discloses its employee diversity metrics in its annual Corporate Responsibility Report.

As a company that manages a large supply chain—including significant spending for clients whose properties

it manages—CBRE has made a commitment to spend \$1B with diverse suppliers in 2021 and to grow this to \$3B in five years. In 2020, the company launched a fundraising campaign to provide financial support for efforts to advance social justice and combat racism. It donated \$1 million each to the NAACP Legal Defense and Educational Fund and the National Urban League, and committed to match employee contributions to these organizations, dollar for dollar, up to an additional \$1 million for each organization. It has also spoken out against racial, ethnic, sexual and religious violence and discrimination.

CBRE is a member of the Business Roundtable, which recently launched a new website devoted to corporate leadership around DE&I. Details of CBRE's commitments can be found on this site:

<https://www.businessroundtable.org/policy-perspectives/diversity/cbre>



Helpful Links

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NAACP Centering Equity in the Sustainable Building Sector's Diversity Scorecard

This scorecard provides companies with a means to evaluate the diversity of its workforce by comparing their staff's percentage of People of Color against the NAACP's recommendations by industry. A Diversity and Opportunity scorecard for the Real Estate sector is being developed at present. In the interim, companies can refer to the NAACP grading standards provided for the consumer banking industry (Appendix B: Grading)

https://www.imt.org/wp-content/uploads/2021/07/NAACP_OpportunityDiversityReportCardBanking.pdf

CREW Network Benchmark Study: Gender and Diversity in Commercial Real Estate

A benchmarking study of gender and diversity in commercial real estate. A call to increase diversity in recruiting, hiring, and promoting in the commercial real estate industry and reduce disparities.

<https://crewnetwork.org/about/resources/industry-research/gender-and-diversity-in-commercial-real-estate-202>

Resources for Living Wage

Resources to justify and develop a corporate commitment to the "living wage" principle from the Partnership for Working Families' Living Wage Commitment here:

<https://www.forworkingfamilies.org/resources/policy-tools-living-wage>

and the MIT Living Wage Calculator, which helps identify the Living Wage for specific regions and metropolitan areas:

<https://livingwage.mit.edu/>

04 Transition to a Low-Carbon Economy

The climate is actively changing and business as usual will fundamentally transform over the coming years as a result. This creates an opportunity for real estate to lead the transition to a low-carbon economy. Buildings consume 40% of the primary energy in America, and much of that is through on-site use of a fossil fuel: natural gas. However, buildings also are prime for innovation via increasing renewable energy use and innovations in how energy is stored and shared between buildings and the grid. According to the Intergovernmental Panel on Climate Change, the global economy needs to act immediately to prevent some of the most catastrophic impacts of climate change. The business of real estate can lead the way.

Real estate companies should set emissions goals in line with limiting global temperature rise to 1.5 C, as described above. Many American cities and states have already committed to these goals. In fact, as of 2019, over 1 in 3 Americans already lives in a city or state that is committed to 100% clean energy by 2050 or before. Real estate leaders are actively pushing toward zero carbon by 2050 or sooner. Ideally, real estate companies would set ambitious targets such as carbon neutral by 2030 or sooner.

Real estate companies can best achieve meaningful decarbonization by investing in building improvements as a more direct way to boost return on investment and a more certain way to reduce carbon than by purchasing offsets. This means first investing in energy efficiency and onsite renewables and storage, then looking for meaningful off-site renewable energy that has clear additionality (i.e. is adding actual renewable energy to the grid, not taking credit for something already built). Specific actions include:

- Set company goals that are in line with community/public sector goals, including an ambitious target year to be carbon neutral as a business, as well as interim milestones such as a 25% reduction and 50% reduction date. Ideally, have goals approved by the global non-profit organization, the [Science-Based Targets](#)

(SBT) Initiative. Committing to an SBT requires companies to take a full inventory of existing carbon emissions, identify the greatest areas of impact, and make meaningful reductions.

- Commit to an energy efficiency goal that reflects the sector-wide goal (suggested by the United Nations and [RMI](#)) of 6% reduction per year.
- Given that many buildings have leased space, landlords and tenants should collaborate to improve whole-building performance with a performance-based lease. See Green Lease Leaders in Helpful Links for resources.
- Minimize carbon offsets, using them only as a last resort, and only high-quality offsets should be purchased.
- Work with governments to craft and pass policies that require energy and carbon reduction in new and existing buildings, including building performance standards.
- Commit to phase out gas-powered equipment (electrify buildings) and onsite combustion, for health reasons as well as for carbon emissions reductions.
- Reduce the embodied carbon footprint of portfolio operations and projects by selecting low-carbon materials and encouraging reuse of buildings and materials.



Profile: Salesforce

A leading cloud-based software provider, Salesforce is committed to continuous improvement of its governance, risk management, strategy, and goals related to climate change and to transparently sharing its progress. This includes the company's efforts to eliminate fossil fuels from its operations.

The company is committed to reducing absolute scope 1 and scope 2 greenhouse gas (GHG) emissions by 50% from a 2018 baseline year by 2030. It is committed to the same goal for scope 3 GHG emissions from fuel and energy-related activities. These targets are consistent with reductions required to keep global warming to 1.5 degrees Celsius. In addition, it is committed to having suppliers that represent 60% of the company's scope 3 emissions (covering all upstream emissions categories) set science-based targets by 2024.

In 2013, Salesforce committed to 100% renewable energy for all data center operations for its cloud-based customer relationship management software through the purchase of renewable energy equivalent to the amount of electricity used to power these operations on an annual basis. In 2015, this commitment expanded to cover all global operations. Salesforce has committed to reach 100% renewable energy by FY22.

By 2017, the company announced that it had achieved net-zero greenhouse gas emissions for its operations, and delivers a carbon-neutral cloud for all customers. Salesforce reached these milestones by first avoiding or reducing energy use, then purchasing high quality renewable energy through tariffs or virtual power purchase agreements, and finally procuring carbon offsets for the remaining emissions that the company couldn't first avoid, reduce, or offset with renewable energy.

Salesforce brings these priorities into its real estate portfolio in many ways, and is a pioneer in corporate real estate climate action. It has been implementing all electric commercial kitchens throughout its portfolio, and has committed two of its largest real estate projects (in Dublin and Chicago) to be all electric. The company is actively measuring the embodied carbon of several interiors projects to quantify emissions and make absolute reductions, and has already seen a 20% reduction in embodied carbon compared to its baseline. Its activism extends beyond its own operations into influencing its supply chain, exemplified by their recent announcement of the [Sustainability Exhibit](#), a contract addendum that requires suppliers to set Science Based Targets to reduce their carbon emissions.



Helpful Links

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Science-Based Targets

A clearly defined path, aligned with the latest climate science, to reduce greenhouse gas emissions to future-proof business growth.

<https://sciencebasedtargets.org/how-it-works>

Green Lease Leaders program

The U.S. Department of Energy and IMT's Green Lease Leaders program provides guidance and recognition for creating mutually beneficial landlord-tenant relationships through "green leases" that lead to higher performing buildings and healthier, more sustainable communities.

<https://www.greenleaseleaders.com/green-lease-library/>

Future of Real Estate Power Program at the Renewable Energy Buyers Alliance

Principles intended to guide and encourage collaboration between landlord and tenants to increase sustainable energy solutions, including energy efficiency and renewable energy, to commercial buildings.

<https://rebuyers.org/programs/supply-chain-and-international-collaboration/future-of-real-estate-power-forep/>

05 Diversify Business Relationships

While other principles in this framework explore relationship diversification as it relates to supply chain and internal firm management, external business relationships also hold potential for improvement. According to one study of real estate investment management firms, less than 3% of businesses were owned by non-white males⁹. Real estate companies can positively affect the success of small, minority-owned, and women-owned businesses by deliberately setting goals to help cultivate and include these businesses as strategic partners. Specific practices include actions listed below.

- Find opportunities to support pipelines and organizations that are nurturing small businesses owned by women and people of color, to increase the overall number of businesses in the industry. This could include supporting locally established entrepreneur centers or accelerators via mentor programs, project-based work, and financial assistance.
- Expand the purchasing practices of the industry to buy from women-owned businesses and minority-owned businesses, businesses with models that ensure long-term wealth creation for women and people of color, and businesses with higher percentages of employees who are women and people of color. Practically speaking, this would mean incorporating metrics such as those set by local jurisdictions to encourage the development, guidance, and utilization of small and medium-sized businesses, minority- and women-owned businesses, and programs such as a diverse supplier development program.
- Find opportunities specifically to partner with women and people of color (and their businesses) as equity partners in real estate development.
- Support ownership models for real estate that create decentralized wealth and build wealth for low-income communities and communities of color. This includes community land trusts, non-profit real estate development, and other forms of community-owned real estate.

This externally focused Principle spotlights growing new or smaller businesses and is supported by the actions described in Principle 2 and Principle 3. Together, these three principles could be addressed as a broader strategy around diversity, equity, and inclusion.

⁹ Dutton, Holly. "Real Estate Has a Diversity Problem. Will This Moment Lead to Real Change?" Commercial Property Executive August 3, 2020. <https://www.cpexecutive.com/post/keeping-the-momentum-furthering-diversity-in-cpe>



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Equity Fund Workforce Policy Brief

Policy brief that supports increased access to high-quality jobs for women and people of color through measures like targeted hiring, workforce training, and apprenticeship programs.

<https://equityfund.egnyte.com/dl/GwNOckdToD/>

National Multifamily Housing Council's Industry Framework for Racial Equity and Economic Inclusion

NMHC's guidance for organizations in its industry, but the diversity, equity, and inclusion framework is highly applicable for real estate companies more broadly, and the project has additional resources forthcoming.

<https://www.nmhc.org/about/diversity-equity-and-inclusion/nmhc-industry-framework-for-racial-equity-and-economic-inclusion/>

DC Building Innovation Hub High-Road Contracting Resources

To increase fair access and equity in contracting, companies can follow high-road procurement principles with these step-by-step resources from IMT's [Building Innovation Hub](#) in Washington, DC.

<https://buildinginnovationhub.org/resource/find-a-qualified-vendor/high-road-contracting>

06 Ensure All Buildings are Healthy & Safe

The average American spends 90% of their time indoors, where they are exposed to a variety of conditions that can either improve or compromise their health. The COVID-19 pandemic underlined the particular connection between real estate and indoor air quality, and made health a top priority. Given the intersection of health and real estate, companies must do more to ensure that all buildings are healthy and safe. This includes the following areas of leadership.

- Support legislative efforts to put holistic safety standards in place for buildings that include ongoing monitoring and improvement over the life of a building, similar to energy performance standards but for health.
- Invest in the active management of indoor environmental quality to manage health indicators in a similar way to how we manage energy.
- Measure and report on health metrics such as air quality, water quality, thermal conditions, equipment and envelope conditions, and soil contamination of outdoor areas.
- Invest in supporting active lifestyles and physical activity by providing spaces for fitness, such as open stairwells that encourage use of stairs rather than elevators, etc.
- Invest in spaces that are better equipped to support people during future health crises like the COVID-19 pandemic. This especially includes prioritizing operable windows and effective ventilation systems.
- Provide public green spaces that are easily accessible by local community members, especially in locations where healthy green space is not readily available.
- Measure community health impacts and test potential health-improving strategies by partnering with research institutions, healthcare providers and community groups.
- At the community scale, measure and report on access to green space, healthy food, exercise space and other infrastructure that enables healthy lifestyles.

For architecture, engineering, and construction firms, educational institutions, and other groups in the industry, these actions and goals should be reflected as well in the evolution of practice and training. Materials selection and system design in design and construction can have a large impact on the health of occupants, and building professionals should be receiving more training around these issues.



Profile: The Tower Companies

The COVID-19 pandemic forced many companies to compromise building energy performance for healthier indoor air, but The Tower Companies, a family-owned real estate firm that owns, develops, and manages over 6 million square feet in the DC metro area, has invested in technology and developed operational protocols to improve both property performance and occupant health.

In 2019, the U.S. Department of Energy (DOE) and Lawrence Berkeley National Laboratory (LBNL) announced a [Better Buildings](#) field validation study opportunity to test a smart building technology product from [Prescriptive Data](#). Tower applied to participate in the study. The software, Nantum OS, is designed to optimize building performance by uniting otherwise disparate building systems and using machine learning to automate building operations to optimize whole-building performance. Nantum OS analyzes real-time data, such as zone-by-zone occupancy, energy data, BMS points,

and Internet of Things (IoT) sensors monitoring metrics like temperature and relative humidity, which can help identify energy conservation measures, lead to notable energy savings, and help maintain industry-leading healthy building standards. The advantages of Tower participating in the pilot include data review and validation from experts at DOE and LBNL, meaning Tower gets an unbiased perspective on the technology's effectiveness.

The COVID-19 pandemic spurred a huge demand for healthier spaces—with tenants even sending in their own mechanical engineers before returning to the office. Tower, a [Fitwel Champion as of 2018](#), was well positioned to meet this demand. While many companies have struggled to prioritize both energy efficiency and healthy building strategies, Tower recognized the role of technology and monitoring to improve both simultaneously. Its team deployed [WellStat's](#) real-time indoor air quality sensors and sanitizing UVC technologies (including in HVAC systems and Far-

UVC in common areas). In addition, Tower deployed Nantum at 1828 L Street NW in Washington DC, to automate HVAC controls and use data to balance efficiency and comfort and make the building an attractive office space. WellStat monitors 15 indoor air quality attributes unique to each air handling zone in their commercial buildings. Tower is now integrating this data with Prescriptive Data's system to view efficiency and wellness metrics all in one platform.

Further supporting health and wellness, Tower has implemented Fitwel's Viral Response Module across its entire 3 million-square-foot portfolio of managed commercial and multifamily properties. The module establishes effective viral mitigation protocols that improve indoor environmental quality, encourage behavior change, and build occupant trust. In addition, Tower continues to pursue Fitwel certification for its properties, a commitment started in 2018. By 2022, it should have achieved certification for nine properties.



Helpful Links

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2015 Enterprise Green Communities Criteria: Health Impact Assessment

Guidance for conducting a Health Impact Assessment (HIA) on new projects, primarily in the affordable housing space, in order to identify the potential effects of a proposed policy, project or program. The HIA also offers practical options for maximizing health benefits and minimizing health risks.

<https://www.enterprisecommunity.org/sites/default/files/media-library/solutions-and-innovation/green/ecp-2015-criteria-manual-11-15.pdf>

Harvard School of Public Health: 9 Foundations of a Healthy Building

The “9 Foundations” outline the actions building projects can take to meet or exceed the public health design standards for indoor environments related to: Ventilation, Air Quality, Thermal Heat, Moisture, Dust & Pets, Safety & Security, Water Quality, Lighting & Views, and Noise

<https://9foundations.forhealth.org/>

WELL Building Standard

The International WELL Building Institute offers a roadmap for creating and certifying spaces that advance human health and well-being. The WELL program addresses 10 core building concepts that improve the physical and mental health of the people who utilize a space.

<https://www.wellcertified.com/about-iwbi/>

Fitwel

Fitwel is a leading building certification that enhances buildings by addressing a broad range of health behaviors and risks. Its seven impact categories capture strategies to make residents more active, safe, and healthy.

<https://www.fitwel.org/standard/>

07 Manage, Measure & Report Impacts

ESG leaders in the building industry are masters in the art of measuring the previously unmeasurable and using those metrics to drive positive change. Just 10 years ago, measuring and managing energy consumption was a relatively uncommon practice, but it has been at the front of a growing list of metrics that are used to evaluate environmental and social impacts in the world. Investors, tenants, business partners, and the general public increasingly demand transparency and performance in ESG metrics, and government agencies are beginning to require it as well. In particular, the Biden administration has begun processes to require federal agencies to disclose ESG metrics, and has directed the SEC to consider requiring ESG disclosures for all public companies. We must continue, and indeed accelerate, this search for effective metrics, good data infrastructures to inform decision-making, and streamline the processes around capturing and using ESG data.

- More real estate companies need to take the first step in managing impacts by hiring ESG professionals. Without dedicated efforts to address social and environmental impacts, real estate companies cannot effectively improve.
- Much of the industry has begun collecting and analyzing data related to COVID-19 and indoor air quality, and should consider continuing these practices even if the immediacy of this need fades.
- The industry needs to continue devoting collective effort to building consistency around ESG metrics and reporting practices. Whether through participating in standards bodies, government convenings or other business convenings, real estate leaders need to make time to establish industry expectations in these areas.
- ESG performance should be moving toward performance-based metrics over prescriptive ones, especially moving beyond prescriptive metrics like the presence/absence of policies and annual reports. Actual positive environmental and social impacts should be the priority.
- Collective efforts are needed to streamline the process of collecting and reporting data. Technology providers, real estate executives and standards bodies must work together to reduce the burden and cost of ESG reporting on businesses.
- Executives need to do more to bridge the gap between employees who manage actual building performance and those working on high-level metrics and ESG reporting.
- The industry needs more social impact metrics outside of the realm of hiring and leadership diversity. Surrounding community impacts, supply chain impacts and impacts around charitable giving and political involvement need greater prioritization. See Principles 1 and 2 for details.
- Similarly, the industry needs more health impact metrics. See Principle 6 for details.

As ESG performance becomes more critical to investors, clients, and regulators, there may be less need for the intermediary of private certification bodies in this area, because performance data will likely speak for itself. But during this critical transitional decade, the industry will need every tool and mechanism it has to get these business processes up and running.



Profile: Legal & General Investment Management (LGIM)

As one of the world's largest asset managers, Legal & General Investment Management (LGIM) is leveraging the power of action in its \$1.7 Trillion asset portfolio to drive industry movement around gathering and deploying valuable ESG data. Specifically, the company developed the [Climate Impact Pledge](#), a targeted engagement program to guide and measure progress against a set of key indicators, all aimed toward the goal of carbon neutrality.

In creating this program, LGIM produced specific guides for “climate-critical” sectors, including one targeted to buildings, that outline pathways and expectations for progress. Large public companies are evaluated and ranked

against a range of indicators—combining data points from eight sources with sector-specific metrics that range from governance structures to business targets to lobbying activities—to gain a view to their exposure to climate risk and opportunity.

Within LGIM, the pledge and associated metrics help drive portfolio decisions. For example, real estate company metrics include whether or not they have a public goal to reduce the embodied carbon of their construction supply chain. In addition to these evaluations, LGIM has individual engagements with some real estate companies to dig into their ESG strategies. The cumulative findings of LGIM's efforts then factor into engagement and capital

allocation decisions. In addition, assets that have not demonstrated adequate public progress risk voting and investment sanctions.

While the program is used to guide LGIM decisions, it is also presented publicly with a high level of transparency to drive action across the industries in which LGIM operates. Its sector guides are publicly accessible and company scores are searchable via an online database. Public companies can see how they are currently scored on LGIM's public dashboard for their Climate Impact Pledge score:

<https://esgscores.lgim.com/uk/en/>

Real Estate Investment Trusts (REITs): How are we assessing companies' pathways to net zero?

Net-Zero commitment Is the company committed to net-zero emissions, both on an operational basis and in term of embodied carbon?

- Strategy**
- How much capital is being committed to decarbonization efforts?
 - Is executive remuneration aligned with the net-zero pathways?

Resilience Is the company analyzing the physical climate risks to its portfolio and evidencing measures to manage these?

- Targets**
- Does the company have a target to achieve net-zero operational emissions?
 - Has the company set-out ambitions or targets for specific construction materials (e.g. steel, cement)?

- Collaboration**
- Evidence of the company working collaboratively across its value chain to reduce emissions?
 - Evidence of the company advocating for meaningful policy action?

Red lines Net-zero operational emissions target



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Task Force on Climate-Related Financial Disclosures (TCFD)

Report on climate-related financials to TCFD across their four disclosure areas: Governance; Strategy; Risk Management; and Metrics & Targets. <https://www.fsb-tcfid.org/>

The Global Real Estate Sustainability Benchmark (GRESB)

GRESB focuses on corporate policies and data compilation to generate ESG benchmarks for the real estate industry. Companies that report to and evaluate themselves with GRESB can use their scores to better engage with investors.

<https://gresb.com/2020-real-estate-results/>

Certified B Corporation (B Corps)

B Corps is a certification system that measures a company's entire social and environmental performance. Its requirements for public transparency and legal accountability set the standard for businesses hoping to balance profit and purpose while addressing climate change, racial equity, and social impact.

<https://bcorporation.net/about-b-corps>

08 Invest & Finance Creatively

A true reflection of a company's values can be best assessed by where it invests its money. That's why it is critical for companies espousing ESG values to prioritize related investments. Sometimes this is straightforward, such as dedicating funds to energy efficiency or renewable energy projects, and sometimes it is more complex, such as changing property valuation to better reflect the full value of health and energy improvements or addressing financial disincentives such as those in traditional lease structures. This also creates opportunity for ideating and piloting innovative new financial mechanisms to fund the change that is needed.

For real estate owners with capital or the ability to raise capital and take on debt:

- Green banks like the New York Green Bank are providing capital to real estate owners and tenants for the purposes of upgrading facilities without needing access to capital. There is consideration of a Federal Green Bank, which would significantly help here in providing access to capital for projects that otherwise can be impossible to finance.
- Green bonds can be issued by real estate firms, taking advantage of the growing demand for ESG financial vehicles to fund energy and sustainability retrofits.
- Commercial Property Assessed Clean Energy (C-PACE) programs allow building owners to finance improvements through a government-provided loan that is paid off via property taxes, allowing the loan to be attached to the property rather than the owner.

For real estate owners and renters without the ability to take on debt or obtain capital:

- Performance contracting businesses like ESCOs and “efficiency as a service” companies, put the risk (and reward) of performance in the hands of the service provider, rather than the owner.
- Utilities (especially deregulated ones) are full of innovations around the reduction of energy using financing mechanisms. One particularly promising model is on-bill financing, or Pay As You Save®, where utility customers are able to

get energy upgrades with no upfront cost, paying back the cost as they save on their energy bill. This form of utility program is more accessible to all incomes and owners than many forms of financing can be, which often require good credit and a fair amount of risk.

- Fannie Mae and Freddie Mac’s Green programs are allowing homeowners (including multifamily residential owners) to receive beneficial loan pricing and financing for energy and water efficiency activities.

This is not an exhaustive list, and there are many more important ways that creative financial mechanisms can be deployed to improve buildings. Historically, one of the lagging areas has been the lack of options for low-income owners and renters. While some of these mechanisms are helping to overcome that barrier, ultimately this remains an area in need of innovation and thoughtful government involvement.



Profile: New York City Energy Efficiency Corporation Case Study

New York City’s (NYC) government created the New York City Energy Efficiency Corporation (NYCEEC) in 2011 as a nonprofit green bank to help NYC achieve its economic development goals and climate change goals of reducing CO2 emissions by 30 percent by 2030. NYCEEC’s mission is to deliver financing solutions and advance markets for energy efficiency and clean energy in buildings. NYCEEC’s vision is for energy efficiency and clean energy financing for buildings to achieve scale and be accessible to all. NYCEEC was initially capitalized with \$37.5 million from the 2009 American Recovery and Reinvestment Act.

NYCEEC offers direct loans to contractors, project developers, and building owners for both construction and

permanent financing of energy efficiency and clean energy projects. These loan products include green construction, green predevelopment, energy services agreements, power purchase agreements, and PACE loans.

NYCEEC finances a wide range of energy efficiency and clean energy technologies, including energy efficiency, energy storage, fuel conversions, high performance, and passive house buildings.

NYCEEC coordinates with city and state agencies to target its services to buildings that need it most and to ensure that it is maximizing all possible incentive funds available to minimize the cost of efficiency projects. It seeks to

help simplify complex transactions for its customers. NYCEEC is self-funded through loan fees and interest payments, so it does not require any budgetary support from the city. This means that it can be a viable independent organization regardless of changes in political administration. Accomplishments as of fiscal year 2021 include:

- \$320M of capital mobilized for energy efficiency and clean energy projects in buildings
- 322 Buildings upgraded
- 11,495 affordable housing units greened
- 974,000 metric tons of CO2e eliminated
- 25.1M MMBTUs of energy saved



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Green Bond Principles

An outline for authoring Green Bond Principles for your organizations in order to enable capital-raising and investment for new and existing projects with environmental benefits.

<https://www.icmagroup.org/sustainable-finance/the-principles-guidelines-and-handbooks/green-bond-principles-gbp/>

The Global Real Estate DOE's Better Buildings Financing Navigator

The Navigator helps users explore a wide array of financing choices and identify relevant financing options for their energy projects. Through the Navigator, users can also connect to the larger Better Buildings Challenge Financial Ally community, which includes banks and lenders that are committed to making bold financial investments in efficiency and

renewables and are actively pursuing new opportunities to finance projects.

<https://betterbuildingssolutioncenter.energy.gov/financing-navigator>

The Navigator also includes a financing landscape that summarizes the energy efficiency and renewable energy financing options available in the market.

<https://betterbuildingssolutioncenter.energy.gov/financing-navigator/explore>

09 Plan for the Future with Resilience

Climate change is contributing to an increasing disaster toll. The National Oceanic and Atmospheric Administration reported 22 separate events in 2020 that caused a total of almost \$100B in damages. These events bring with them an array of new risks for the real estate sector. The smart strategy is to ensure building assets can adapt to a changing climate, including more frequent extreme weather and higher energy costs. Additionally, buildings should play a role in making the surrounding community safer, particularly during emergencies.

- Buildings themselves should be renovated and managed to increase their “passive survivability”—that is, the degree to which they can keep people sheltered and safe even without utility power or water service. On-site energy and water storage are necessary but not sufficient to create passive survivability. The [RELi Rating System](#) is a good reference point for other critical considerations.
- Real estate companies should have established avenues to help support community survival during emergencies. While it is critical that they serve in a supporting role to local government or organized aid groups, they can provide much-needed space and safety if they are plugged into community emergency networks.
- All companies owning real estate need to understand their physical climate risks and begin taking action to address those risks. The case study and resources below can help companies take the necessary steps to begin active climate risk management.
- The real estate industry needs consistent metrics for risk readiness across jurisdictions, property types, and disaster types. These metrics will help companies hold themselves accountable and be proactive about climate risk vulnerability. The metrics will also assist insurance and investment companies that want to invest in less risky assets and companies.
- In parts of the U.S. that are suffering from more frequent and severe weather events such as sea level rise, hurricanes, and wildfires, some property owners are divesting from those markets, while low-income businesses and families remain with assets that lose value significantly. The industry should work with government and non-profit groups on this issue of disproportionate economic impacts.

The growing field of climate risk management and resilience is quickly emerging as a priority for real estate leaders, so this area in particular deserves dedicated resources for real estate firms to stay informed and create strategies to evolve with other sectors as the economy collectively grapples with this increasing concern.



Profile: Heitman Case Study

In 2016, Heitman, a global real estate investment management firm with approximately \$44B in assets under its management, began seeking greater climate risk transparency to improve its investment decisions and manage asset- and portfolio-level risk. However, the company found that currently available data were not granular enough to assess the extent to which an asset is resilient. To resolve this, Heitman partnered with Four Twenty Seven, a provider of market intelligence on the economic risk of climate change, to screen the company's assets and potential new acquisitions, as well as map climate risks around the world.

These new climate risk mapping tools enable Heitman to screen its current portfolio and potential new acquisitions using historical weather and environmental risk data, as well as forward-looking climate models, to build an overall view of climate-related risks for Heitman's properties, encompassing both acute and chronic risks. For

example, floods are mapped in 30-meter by 30-meter (98 ft. by 98 ft.) zones. "A property on one side of the street could have a higher risk score for flooding than the other, reflecting differences in elevation or proximity to a local water body," said Laura Craft, head of global sustainability at Heitman.

Each asset is allocated a score from zero to 100 based on multiple dimensions—including risk related to cyclones, floods, earthquakes, sea-level rise, heat stress, and water stress—and then benchmarked to these dimensions using a proprietary database of over 1 million properties. Heitman can now use these climate risk mapping tools to gain a better perspective of the risk profile and exposure of each asset and portfolio than what is provided through readily available data. Armed with this data, real estate investors can pinpoint areas most vulnerable to risk and, through further due diligence, determine if risk factors have been mitigated at the property and municipal level.

As of 2018, Heitman has screened all of its assets under management and is able to make better-informed decisions about asset weighting in specific portfolios. If a portfolio is determined to have a higher-than-targeted exposure, the portfolio can be rebalanced over time through limiting new acquisitions or exiting existing assets, exposed to a certain risk.

*This case study is adapted with permission from its original publication in *Climate Risk and Real Estate Investment Decision-Making*, published by Heitman and the Urban Land Institute in 2019. The full report can be accessed at <https://www.heitman.com/news/climate-risk-and-real-estate-investment-decision-making/>.*



Helpful Links

To help real estate leaders take the first steps toward putting these principles into action, we compiled a set of helpful links and documents. This list is not exhaustive, and we plan to keep adding to this library of resources. Please reach out with additions and updates to the IMT team at info@imt.org.

RELi 2.0 Rating Guide for Resilient Design and Construction

RELi 2.0 outlines resilient design considerations to and offers a certification for projects that meet their social and environmental resilience criteria.

<https://gbc.org/reli>

Alliance for National & Community Resilience: Community Resilience Benchmarks

Establish Community Resilience Benchmarks for your buildings around social, organizational, and infrastructural resiliency in order to respond to emergencies, risks, and unforeseen events (i.e. COVID-19).

<http://www.resilientalliance.org/wp-content/uploads/Final-Buildings-Benchmark-January-2020.pdf>

Climate Risk Reports from ULI and Heitman

These two reports from 2019 and 2020 describe the emerging issue and best practices around climate risk management. They also include case studies, perspectives across the industry, and helpful guidance for real estate leaders.

<https://www.heitman.com/news/climate-risk-and-real-estate-investment-decision-making/>

<https://www.heitman.com/news/climate-risk-2/>

10

Align All Actions with Values

Much as individuals work to align their life decisions with their morals and values, so too must companies. For companies that believe that climate change poses a real threat to humanity, and who also believe that it is just and fair to treat all people equally, these morals and values should be expressed in all facets of the company. In particular, the following actions are opportunities for real estate companies to express their leadership in environmental and social issues.

- Align and be a member of trade associations and professional associations that support your values, encouraging them to support your values, and leaving them when they act in contradiction to your values.
- Similarly, allocate resources to join climate advocacy organizations and coalitions supporting policies at the local, state and federal levels, including specifically policies surrounding buildings and real estate like existing building performance laws
- Offer 401k investing options for employees that allow them to invest in socially responsible investment mechanisms.
- Divest corporate treasuries or other investment accounts from companies that are counter to your vision for the future.
- Empower and designate specific individuals on the board to provide climate and social justice strategy, who also serve as a resource to employees responsible for implementing these strategies.
- Take advantage of the unique opportunities that the real estate industry has to build awareness and support for climate action, specifically tenant engagement and communications, as well as broker education and engagement.
- Consider other ways that the company can use its voice to support legislation, private action and societal shifts toward a more sustainable and just economy. This can be through marketing, free space use or other supportive acts.



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Just Capital

Just Capital's annual polling of the American public aims to identify the issues that matter most in defining just business behavior today. Separated into categories of "workers," "communities," and "customers," Just Capital identifies the relative weight of each issue such that companies can adjust their corporate governance plans.

<https://justcapital.com/issues/>

Fossil Free Funds "Action Kit"

Fossil Free Funds identifies sustainably-invested mutual funds and ETFs in order to help companies add ESG funds to its employees 401k options.

<https://fossilfreefunds.org/fossil-free-action-toolkit>

Certified B Corporation's Anti-Racism Resources

B Corp offers a collection of professional resources on guiding teams, providing individual support, and centering equity and justice in company practices.

<https://bcorporation.net/anti-racism-resources>



About IMT

The Institute for Market Transformation (IMT) is a national 501(c)(3) nonprofit organization that aims to decarbonize buildings by catalyzing widespread and sustained demand for high-performance buildings. Founded in 1996 and based in Washington, D.C., IMT leverages its expertise in the intersection of real estate and public policy to make buildings more productive, affordable, valuable, and resilient.

A trusted, non-partisan leader, IMT focuses on innovative and pragmatic solutions that fuel greater investment in high-performance buildings to meet local market priorities. IMT offers hands-on technical assistance and market research, alongside expertise in policy and program development and deployment and promotion of best practices and knowledge exchange. Its efforts lead to important policy outcomes, widespread changes in real estate practices, and lasting market demand for energy efficiency—resulting in greater benefits for all people, the economy, and the environment.

Visit us at www.imt.org and follow us on Twitter [@IMT_speaks](https://twitter.com/IMT_speaks).