Who we are

Our approach

Climate

Nature

People

Performance

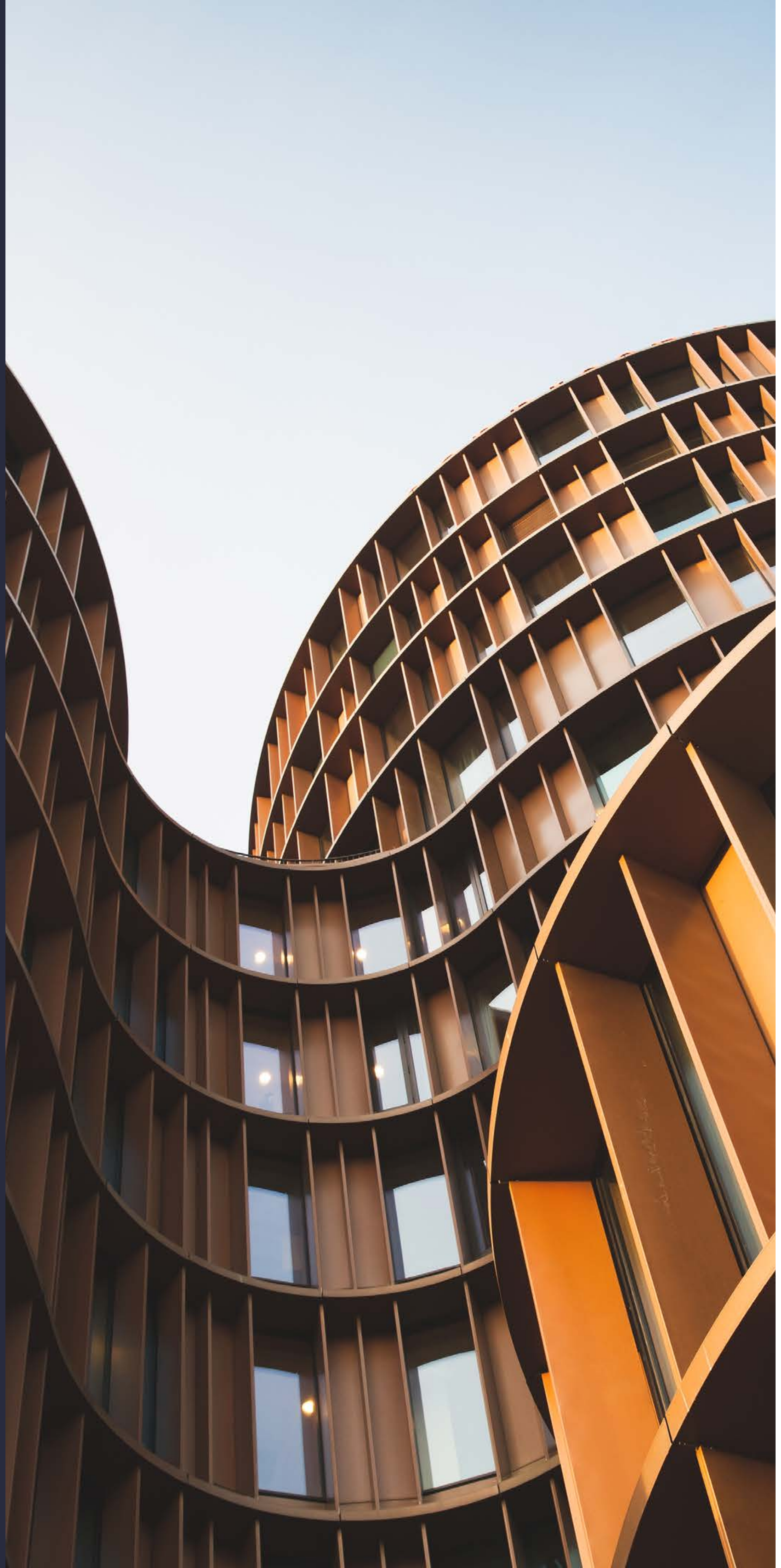
The road ahead

Manulife Investment Management

Sustainable investing

Real estate 2022

All information in this report is as of December 31, 2022, unless otherwise indicated. Report published September 2023.



Who we are

About Manulife Investment Management

Manulife Investment Management is the brand for the global wealth and asset management segment of Manulife Financial Corporation (Manulife). Our mission is to make decisions easier and lives better by empowering investors for a better tomorrow. Serving more than 17 million individuals, institutions, and retirement plan members, we believe our global reach, complementary businesses, and the strength of our parent company position us to help investors capitalize on today's emerging global trends. We provide our clients access to public and private investment solutions across equities, fixed income, multi-asset, alternative, and sustainability-linked strategies, such as natural capital, to help them make more informed financial decisions and achieve their investment objectives. Not all offerings are available in all jurisdictions. For additional information, please visit **manulifeim.com**.

Our real estate business

Manulife Investment Managements' real estate platform has been acquiring and managing real estate for nearly a century. As a global manager of real estate assets, our properties are diversified across sectors and strategically located in urban centers across the globe. We provide investment solutions globally as part of our comprehensive private markets capabilities.

Our real estate investments

As of December 31, 2022, our $26.7 billion[1] sustainably operated platform offers core, core-plus, and value-add strategies spanning over 74 million square feet of office, industrial, retail, and multifamily assets, strategically located in Canada, the United States, and Asia-Pacific. The real estate investment team leverages its global platform and asset management expertise to engage with and understand local markets and to drive results for its investment clients.

1 Assets are shown in U.S. dollars.

A message from Marc Feliciano

I'm pleased to share our latest real estate sustainability report. This report highlights some of the innovation and transformation we're executing across our business. In our practice of sustainable real estate asset management, a focus on stewardship has long been central to our approach.

As an early participant in the GRESB Real Estate Assessments, we played a role in helping to establish the GRESB benchmark that's used to assess ESG integration and performance of property companies, REITs, funds, and other real estate entities that today collectively represent $6.9 trillion in asset value across the globe. Over the past decade, our participation has helped us advance sustainability practices across the industry while simultaneously identifying areas for improvement in our own sustainability journey. Last year, our GRESB Real Estate Assessment performance scores were above average for all submissions, our global real estate portfolio was ranked second in its peer group, and we achieved Green Star ratings across the board.[1] We believe this performance rating of our sustainability profile accrues to the long-term risk-adjusted value of our clients.

It's a surprising fact that fewer than 20% of real estate companies in North America have set climate-related targets. Since committing to reducing our GHG emissions by 80% by 2050, this year we developed a road map for decarbonization that we're already executing on. We believe that the reduction of individual emissions profiles of our managed assets can improve the value of our client's properties as well as expense profiles.

We've also begun taking steps toward sustainability-linked compensation. We've seen major companies in other industries adopt this approach as part of their sustainability planning, and we appreciate the importance of embracing it across our industry.

1 Based on GRESB results released October 2022 that cover the 2021 calendar year. Manulife Investment Management paid a per fund submission fee, per year. The GRESB Rating is an overall measure of how well ESG issues are integrated into the management and practices of companies and funds. More information about the GRESB Real Estate Assessment, is available at gresb.com/nl-en/real-estate-assessment.

At the same time, I'm mindful of the work we have ahead of us to drive long-term sustainable growth. Last year, we transitioned from being a property owner and asset manager to a pure-play real estate investment manager. It means that we can focus on our core competencies and expand our capabilities to identify sustainable investment opportunities, which we believe will enhance the value we can add to our clients' portfolios.

As a result, we're taking on a different role and are now working collaboratively with third-party property managers to advance sustainability together; for example, we've updated our Sustainable Building Standards to ensure property managers have the guidance they need to succeed. For us, this change is part of a learning curve for developing the right relationships with our property managers and providing appropriate sustainability guidance at the senior level.

As our platform evolves, we'll continue to look at social and biodiversity issues such as social/nature impact and diversity of workforce. We believe enhancements in this area will lead to better investment decision-making and support property value outcomes.

Our efforts and achievements would not be possible without the real estate professionals across our organization. My goal when I came on board in early 2022 was to build a team with an institutional mindset and to create an entrepreneurial culture in which people thrive. Ultimately, our culture empowers our team to make decisions that bring us closer to achieving our clients' return and impact objectives; further, it's a key ingredient in helping us foster sustainability across our industry. I'm confident we're on the right path, and I'm excited about what lies ahead.

Marc Feliciano
Global Head of Real Estate Investments,
Private Markets

Our approach

We manage properties diversified across sectors and strategically located in major markets

Category	United States	Canada	Asia	Global
Assets under management (USD billion)	$12.2	$10.3	$4.2	**$26.7**
Square feet (million)	27.2	34.0	13.1	**74.2**

Source: Manulife Investment Management. Data as of December 31, 2022. Canada and the United States include property development investments. Totals may not sum due to rounding.

Vision

Our vision is to drive leadership in sustainable real estate across our global organization. Our employees, in collaboration with our stakeholders, property management partners, and tenants, work to provide healthy and efficient properties. Working together toward our sustainability objectives, we believe we can enhance the long-term value of our global real estate portfolio for the benefit of our clients.

Approach to sustainability and responsible investing

We incorporate environmental, social, and governance (ESG) considerations into our investment management and operational practices across the real estate value chain, from construction and acquisition of an asset through aspects of asset management. These practices are supported by resources such as our proprietary sustainability in investment and due diligence tool, sustainability clauses in our standard lease, and our proprietary Sustainable Building Standards.

Our real estate sustainability framework outlines our approach, and our five sustainability commitments detail our key areas of focus. The framework is based on responsible property investment and aligns with global standards. We validate our practices and performance through public and investor reporting and industry benchmarking.

We aspire to advance our **five sustainable real estate commitments** across our global platform.

Our real estate sustainable commitments

1. Minimize our environmental impact
2. Support health and wellness
3. Promote responsible business practices
4. Engage our stakeholders on sustainability
5. Be accountable for our performance

Managing sustainability

We continue to advance sustainability initiatives for investments, operations, asset management, and new developments. To ensure we're accountable to all stakeholders, we report on our performance using globally accepted standards and disclosure frameworks, including the Principles for Responsible Investment (PRI), the CDP, and the GRESB Real Estate Assessment.

Governance

In the case of real estate investing, key sustainability decisions related to businesswide policy and commitments are taken by the private markets' sustainable investing committee, with direction from the private markets' chief sustainability officer and support from the real estate sustainability team. Sustainability decisions affecting individual areas of the business are taken collaboratively through the participation of sustainability team members from decision-making bodies (e.g., through portfolio management, investment committees or strategy working groups).

Due diligence and investment decisions

Responsible stewardship of client capital is key to our business and culture. For us, sustainable investing involves assessing ESG factors in our investment analysis and ongoing portfolio monitoring. In this way, sustainable investing is an important part of our effort to manage risk and pursue attractive opportunities for our clients.

Systematic consideration of sustainability factors during the investment stage of real estate portfolio management aims to mitigate sustainability-related risks and support long-term value creation. Our Sustainable Investing & Integration Guidebook provides guidance and tools that enable investment teams to consistently apply the integration of ESG risks and opportunities throughout the investment process. We assess ESG risks such as greenhouse gas (GHG) emissions and climate change, social impact, nature, and environmental performance.

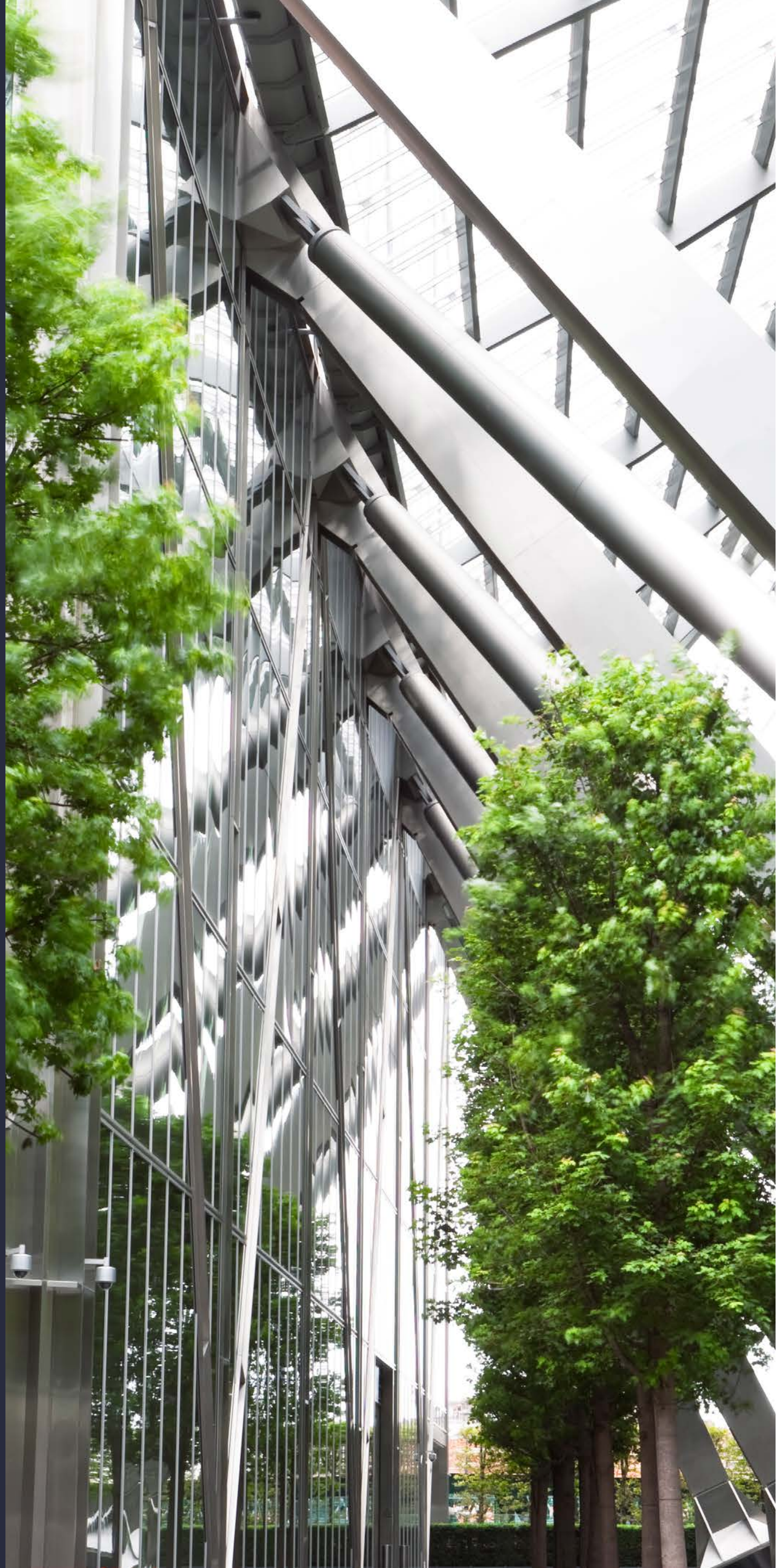
New development and construction

As real estate investment managers, we believe it's critical to manage ESG risks throughout the lifecycle of our assets. ESG risks like climate change and social inequity are systemic risks that can negatively affect the financial value of our clients' assets. Consequently, we've formalized our approach to ESG integration to recognize that our development pipeline represents an early means of managing risks and capitalizing on opportunities. Integrating sustainability into initial development is a key first step for supporting the financial and non-financial objectives of our clients.

To support implementation, we've created a suite of proprietary tools for our development teams. These include design requirements that address minimum energy performance, consideration for net zero carbon design, biodiversity, embodied carbon assessments, and health and well-being, as well as responsible contracting and procurement practices.

Stewardship and portfolio monitoring

Property operations make up the bulk of our environmental and social impact and are the focus of our interaction with our employees, tenants, and community members. Developing a comprehensive approach to asset management and operations is critical to ensure material sustainability factors are tracked, monitored, and improved on. To support this, we developed proprietary tools such as our property management Sustainable Building Standards and our sustainability dashboard, which are used to inform asset managers of sustainability improvement opportunities to be included in annual asset plans and budgets for our clients.



Sustainable Building Standards

Manulife Investment Management's Sustainable Building Standards act as our guide to advancing sustainability within all buildings, and across all regions. These standards define requirements and best practices to property teams and encourage improvement for the benefit of our clients, in areas such as environmental risks, energy and water consumption, waste diversion, GHG emissions, climate risks, nature and biodiversity, and social impact.

Our standards also allow us to:

- Meet industry and stakeholder expectations, such as supporting requirements for certifications, GRESB, and the PRI
- Drive leadership across our five sustainable real estate commitments
- Enable benchmarking of sustainability performance and understanding of business outcomes
- Provide tools and resources for third-party property managers

In 2022, we updated our Sustainable Building Standards to adapt to industry changes and ensure continuous improvement across our global portfolio. To ensure our sustainability practices are upheld, we include the Sustainable Building Standards in our property management agreements that require annual reporting on progress.

Reporting and collaboration

As with the present report, we annually disclose our sustainability activities, and we communicate material ESG-related information to our investors in quarterly reports. We also disclose our activities in line with industry standards such as GRESB and PRI on an annual basis.

Case study—updating our Sustainable Building Standards

Manulife Investment Management's Sustainable Building Standards were initially developed in 2017 and act as a guide for advancing sustainability across all our global properties. While the standards have demonstrably promoted sustainability across our real estate assets since their launch, the team recognized a need to update them; three key factors drove this decision:

1 Changes in the real estate business
2 Evolving sustainability priorities
3 Feedback from our users

In 2022, the Manulife Investment Management real estate sustainability team undertook a project to update the overall framework, annual review process, and the individual initiatives within the standards. The objective was to make the standards clear and simple and to drive performance while simultaneously ensuring the same level of success achieved since their initial launch. This involved:

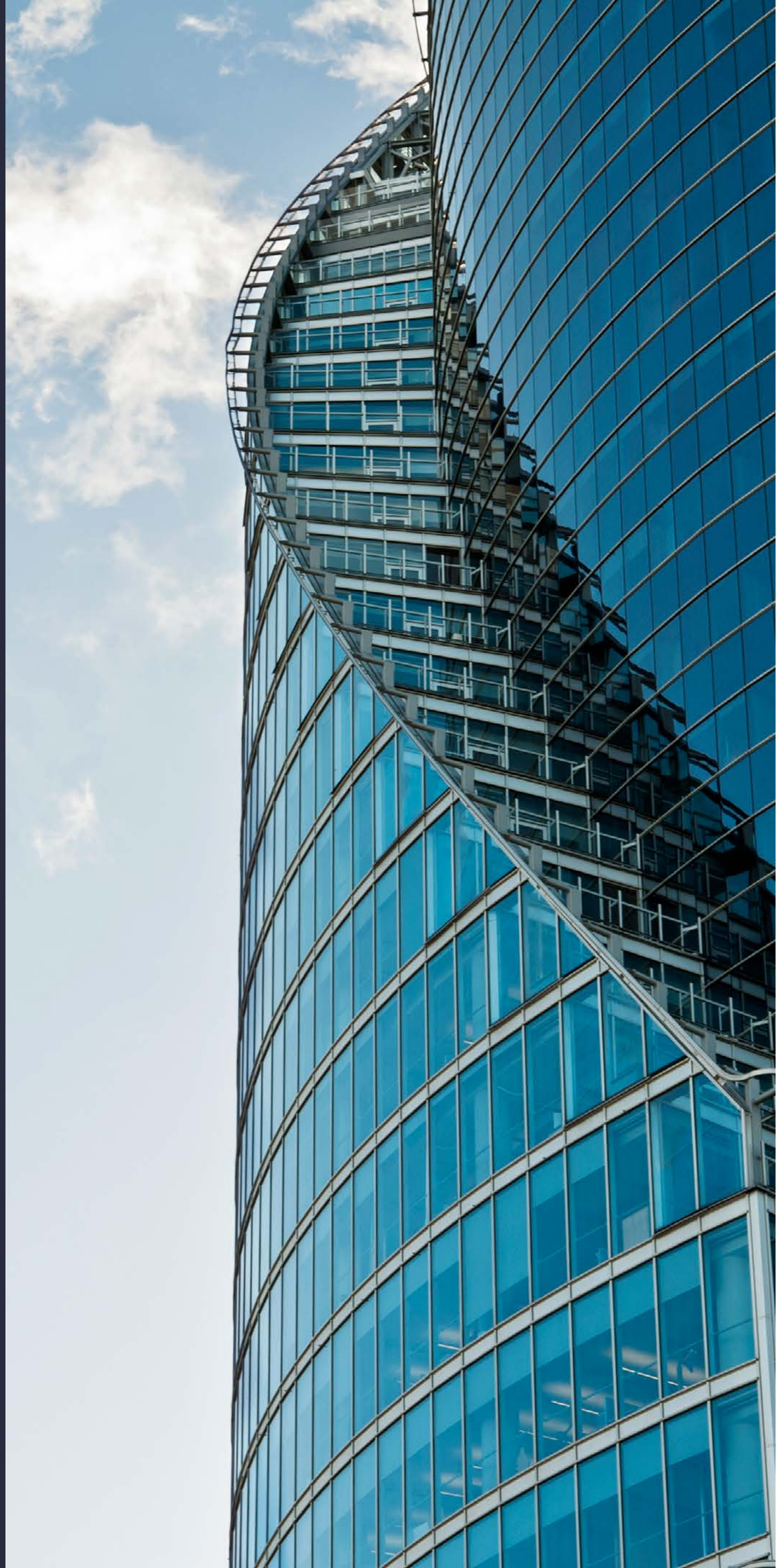
- Consolidating and removing standards that no longer meet our objectives
- Identifying gaps in priority topics, together with the latest best practices
- Collecting stakeholder feedback and advising them on changes
- Refining the standards with end users to ensure global representation and asset-specific applicability

The outcome was an overhaul of the framework resulting in three primary focus areas:

1 Environmental impact and nature
2 Climate change
3 People and communities

The structure of our standards was also updated to include both minimum expectations, which all properties must meet, and advancement initiatives, which outline optional initiatives to further advance our clients interests.

This reprioritization maintains alignment with our real estate sustainability framework.



Climate

Our approach to climate

As a manager of real estate investments, our business is exposed to risks and opportunities from the environment in which we operate, and we recognize that climate risk is a core real estate issue. As the impact of climate change is increasingly felt, it's vital for our investors, employees, and tenants to understand the importance of addressing the issue. While we continue our efforts to mitigate climate change by transitioning our operations and supply chains to low carbon, we also recognize the need to build climate resilience within our real estate portfolios and across our management practices. The nature and level of these risks are dependent on structural forces that will shape our short- and long-term decisions, and we expect our business will be affected in both positive and negative ways by the climate transition—the opportunities will depend on our action and response. Reducing our carbon footprint is critical to managing our clients' risk and improve their overall financial returns. In 2020, our real estate team set a long-term GHG-reduction target of 80% by 2050, using 2018 as the baseline.[1]

Scenario analysis for real estate

Identifying and monitoring various climate-related risks is essential to better-informed decision-making and our efforts to enhance the resilience of our business and buildings. To that end, in 2021 we produced our first climate risk disclosure report. In this disclosure, we identified the transition and physical risks that will potentially affect our business across the short term (1–5 years), medium term (5–10 years), and long term (10+ years).

1 Intensity-based target is for scope 1 and scope 2 emissions under operational control.

Identified transition risks and financial opportunities[1]

Risk	Timeline	Mitigation and financial opportunity
Regulation: Increasing climate-related regulations, including carbon pricing, regional efficiency, or emissions standards, and increasing disclosure requirements. Regulation changes could lead to increasing operating and compliance costs.	Short to long term	We continue to monitor emerging regulations and incorporate assessment of building performance and efficiency in our due diligence to stay ahead of carbon pricing and minimum efficiency requirements.
Market: Shift in capital away from high-emitting products and services, potentially affecting tenant demand, asset value, and fundraising.	Short to long term	Improving portfolio efficiency could create new avenues for financing and increase investor and tenant demand. We continue to certify and build assets to green building standards such as LEED, ENERGY STAR, Comprehensive Assessment System for Built Environment Efficiency, and BOMA BEST, implement energy and emission reduction programs, and collaborate with tenants and clients on shared climate goals.
Technology: There is a cost to move to a low-carbon economy, including capital upgrades to retrofit assets, advanced technologies for buildings, demand for high-quality transactable ESG data, real-time metering, and shifting to renewable energy sources.	Short to long term	Short-term capital costs are expected to be offset from paybacks on lower operating costs and meeting tenant demand. Our ongoing energy, water, GHG, and waste programs support our team in allocating capital toward low-carbon technology and improving property performance.
Reputation: Failure to act or the perception of not acting on climate change could affect our reputation as a global real estate investment manager and risk our relationship with tenants, employees, communities, and investors.	Short to medium term	To communicate our climate change action and impact, we disclose our objectives and performance annually through several independent and industry frameworks, including PRI, GRESB, our annual real estate sustainability report, and this climate disclosure report. We also support Manulife's disclosure to CDP.

1 Represent a non-exhaustive list of the main risks and financial opportunities currently identified across our real estate portfolio. Risks and opportunities are subject to change over time and are ultimately addressed on a case-by-case basis depending on the individual characteristics of each property.

Identified physical risks and financial opportunities[1]

Risk	Timeline	Mitigation and financial opportunity
Acute risks		
Flooding: Flooding can cause asset damage, downtime, and incurred costs through insurance premiums and deductibles. Flooding may affect our ability to obtain insurance in vulnerable markets.	Short to long term	Our insurance team reviews portfolio flood exposure annually to understand insurance implications. Properties have regular site assessments completed by our insurer, which include recommendations for protection measures.
Extreme storms: Climate change is expected to increase the frequency and severity of extreme storms, high winds from hurricanes, typhoons, snowfall, or ice storms from extreme temperature fluctuations. This can cause asset damage and downtime from power loss.	Short to long term	We prepare properties for storms through our emergency management planning and seek to minimize downtime by using on-site backup power generators.
Wildfires: Wildfires can not only cause asset damage, but may also affect occupant health through reduced air quality.	Short to long term	Our teams consider various resilience measures, including fire-resistant building materials, on-site emergency water supply, and high-efficiency air filters to protect indoor air quality.
Chronic risks		
Heat stress: Rising global temperatures can affect employee and tenant productivity and increase operational costs to maintain safe and comfortable building conditions.	Short to long term	We seek to identify opportunities to improve cooling efficiency and costs through capital upgrades, building commissioning, and operating procedures.
Water stress: Water scarcity can affect water availability and increase operational costs.	Short to long term	We seek to maximize operational efficiencies while minimizing consumption through practices such as water audits and installing low-flow appliances and faucets, and minimizing landscaping water requirements, where applicable throughout our portfolio.
Sea-level rise: Rising sea levels can present similar challenges to flooding while also risking failed development approvals and "stranded" assets in vulnerable areas.	Long term	We review and consider exposure to sea-level rise in acquisition and new development decisions, as well as across our existing portfolio. We invest in preventative infrastructure and consider underwriting, where applicable.

Climate and real estate

Managing climate risks

In 2021, we built a rigorous risk management approach and framework for our real estate platform that details how we can best identify and manage the climate-related risks and opportunities to which we're exposed. This work had its genesis in a portfolio-wide risk study conducted in 2020 that drew on third-party data combining historical results and forward-looking climate model outputs focused on seven distinct risks: floods, extreme windstorms, wildfire, sea-level rise, drought, heat stress, and earthquakes. As a result, our current framework takes a three-step approach involving raising awareness, evaluating risks and opportunities, and integrating best practices.

1 Raising awareness

Raising awareness is vital to educating both our property and asset management teams as well as our stakeholders about:

- The consequences of climate change, which put businesses and their operations at risk
- Our capabilities for mitigating these risks
- Our preparedness and resilience to these shocks and stressors

We've implemented two distinct approaches to improving climate risk and resilience awareness through improved training and access to climate data.

2 Evaluating risks and opportunities

Identifying and understanding the climate risks within portfolios enables the development of resources and tools for effectively managing those risks and improving resilience. To understand our real estate portfolio's climate threats, we inventory our existing resilience practices and features and identify improvement opportunities for climate change management.

3 Integrating best practices

Once opportunities for climate change management have been identified, it's necessary to develop operational standards to enhance the resilience of current practices. We seek to integrate best practices into each stage of the real estate investment lifecycle. We use a stepwise process to ensure that teams are putting into place essential measures to make our portfolios more resilient, which we supplement with training, guidance, and tools to support action while incorporating new initiatives to help teams to progress and improve.

Assessing both our physical climate risks and resilience aligns us with the recommendations of the Task Force on Climate-related Financial Disclosures, and keeps us focused on delivering attractive risk-adjusted performace across our clients' assets.

Who we are
Our approach
Climate
Nature
People
Performance
The road ahead

Metrics

We use a variety of metrics and targets to manage and monitor progress in our real estate portfolio. These are also used to identify and monitor the potential financial effects associated with climate change on our clients' assets. Some of the metrics we use include GHG reduction; energy, water, and waste reduction; asset-specific targets; and physical risk data.

- **GHG reduction—**Our ambition to manage our carbon impact has never been more imperative, and so we've set a long-term GHG reduction target of 80% for our real estate assets by 2050, using 2018 as the baseline.[1] This carbon reduction goal will keep us accountable and help measure our GHG emissions reduction in line with our global targets.
- **Energy, water, and waste reduction—**We monitor property and portfolio energy, water, and waste performance through our proprietary Sustainable Building Standards twice each year. Properties we operationally control aim to conduct an energy audit to identify improvements every three years.
- **Physical risk data—**We track property resilience scores, which combine third-party physical risk data with property resilience survey results. We also track the number of properties located in 100-year flood zones and report in alignment with the Sustainability Accounting Standards Board Alliance (SASB) through our insurance program.

1 Intensity-based target is for scope 1 and scope 2 emissions under operational control.

Targets

- Continue to quantify physical and transition climate risk exposure across our investment lifecycle
- Develop company and asset-specific decarbonization plans to achieve GHG reduction targets for the benefit of our clients
- Monitor and report material GHG emissions, including scope 3 emissions, to align with best practices
- Continue to evaluate renewable energy opportunities and strategies
- Increase inventory quality by collecting more scope 3-specific data (especially for embodied carbon and tenant data)

Who we are
Our approach
Climate
Nature
People
Performance
The road ahead

Case study—translating targets into action

In 2021, we saw carbon reduction targets being set across multiple industries and, for many organizations, 2022 was about implementation and action. In 2022, we undertook several initiatives toward executing on our carbon reduction targets that took shape across two focus areas: updating our internal procedures and standards and conducting a comprehensive GHG emissions inventory.

Updating our standards and policies

As part of our Sustainable Building Standards, we rolled out our GHG Management Workbook across our global portfolio. The workbook informs colleagues on:

- Educating teams on baseline emissions
- Modeling emissions out to 2035 and 2050
- Planning potential efficiency projects
- Supporting associated capital planning

Due to the technicalities of carbon transition planning, we also developed a standard scope of work for all properties to leverage when procuring consultants. We've also begun to execute net zero carbon transition audits with external consultants at priority assets: As we continue to identify the highest impact properties and opportunities across our portfolio, these audits will provide a list of reduction measures and associated costs that can potentially be capitalized on.

Our updated standards will also support asset managers' understanding of how these various initiatives align with our decarbonization strategy and focus on the direct financial benefits to our clients. For example, our recently developed renewable energy and carbon offset guidance document advises our teams that it's typically better to prioritize capital spending on building efficiency improvements before considering the purchase of renewable energy credits/carbon offsets.

Assessing scope and impact

To better calculate our GHG footprint, we scanned emissions across our real estate business, including scope 1, scope 2, and scope 3 GHG emissions. This helped us to identify the business's largest sources of emissions and identified where we could prioritize our GHG reduction efforts to greatest effect. It's also allowed us to better understand our scope 3 GHG emissions, which provides a more complete picture of our emissions across both investment lifecycles and business operations.

Nature

Our approach to nature

There's growing understanding that biodiversity loss and climate change represent crises that are interlinked: Climate change degrades many ecosystems, making the species that inhabit them more vulnerable. And reduced biodiversity, in turn, reduces the ability of ecosystems to act as carbon sinks that support human populations in a number of ways.

- From building construction to operations, the real estate sector is highly dependent on nature.
- We recognize the huge material inputs that the construction and maintenance of our buildings require.
- From an operations perspective, we also understand the role nature plays in protecting against flooding, providing clean water, reducing temperatures during heatwaves, and, for many buildings, creating a pleasant environment.

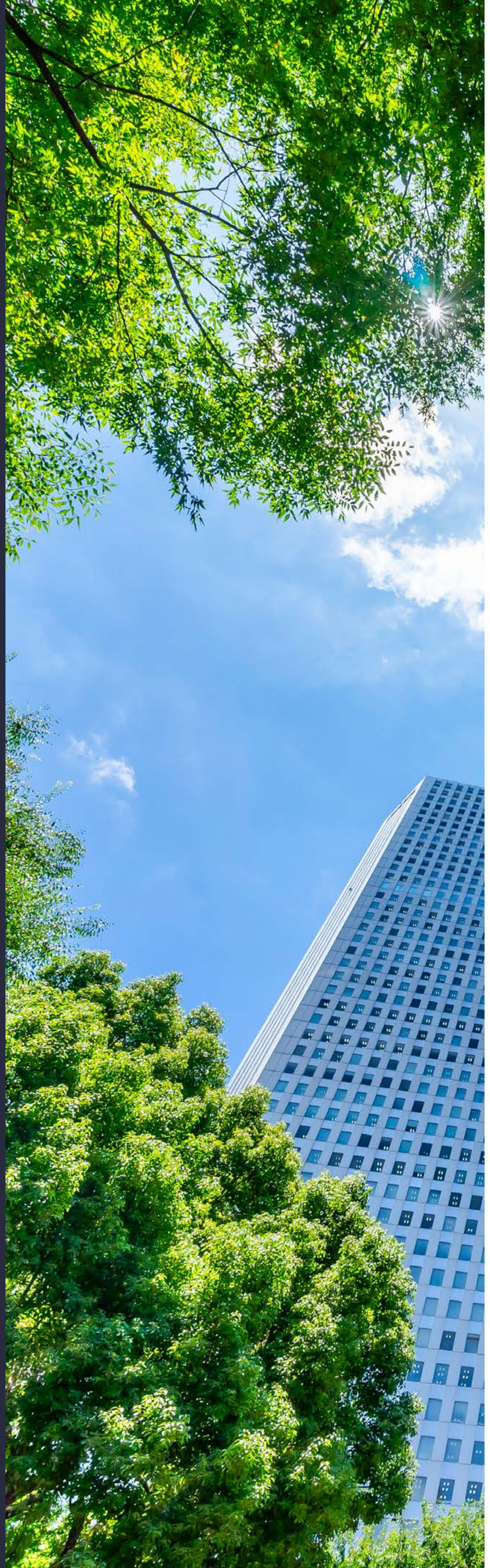
We believe that neglecting nature can negatively affect the value and resiliency of our clients' real estate assets. For this reason, we make a serious effort to safeguard surrounding ecosystems and natural habitats in which biodiversity thrives. We continue to review and update our processes to ensure best practices for benefiting nature and biodiversity are incorporated across the investment lifecycle.

We have been actively engaging in initiatives to support nature and biodiversity within the built environment for several years. This includes integrating rooftop greenscapes and gardens, hosting beehives at our properties, promoting bird-friendly property operations guidance, and supporting urban tree planting. During 2022:

- We hosted 81 honeybee hives across 52 of our buildings in 12 cities across Canada and the United States
- We hosted urban gardens at 12 of our buildings in 3 cities across Canada

Targets

- Assess business practice and investment processes against nature and biodiversity frameworks such as the Taskforce for Nature-related Financial Disclosures
- Develop tools and methodologies to assess and manage nature-related risks and opportunities
- Evaluate interactions with nature and our impact
- Contribute to the advancement of initiatives to scale up our nature-positive agenda for the financial benefit of our clients



Case study—nature in the built environment

The business world increasingly recognizes the economic value of nature and biodiversity. As a real estate investment manager, we understand the lasting effect our buildings have on people and the surrounding environment, including the natural world and species that live and interact within it. That is why we integrate nature and biodiversity considerations throughout the investment lifecycle.

Taking inspiration: reviewing industrywide best practice

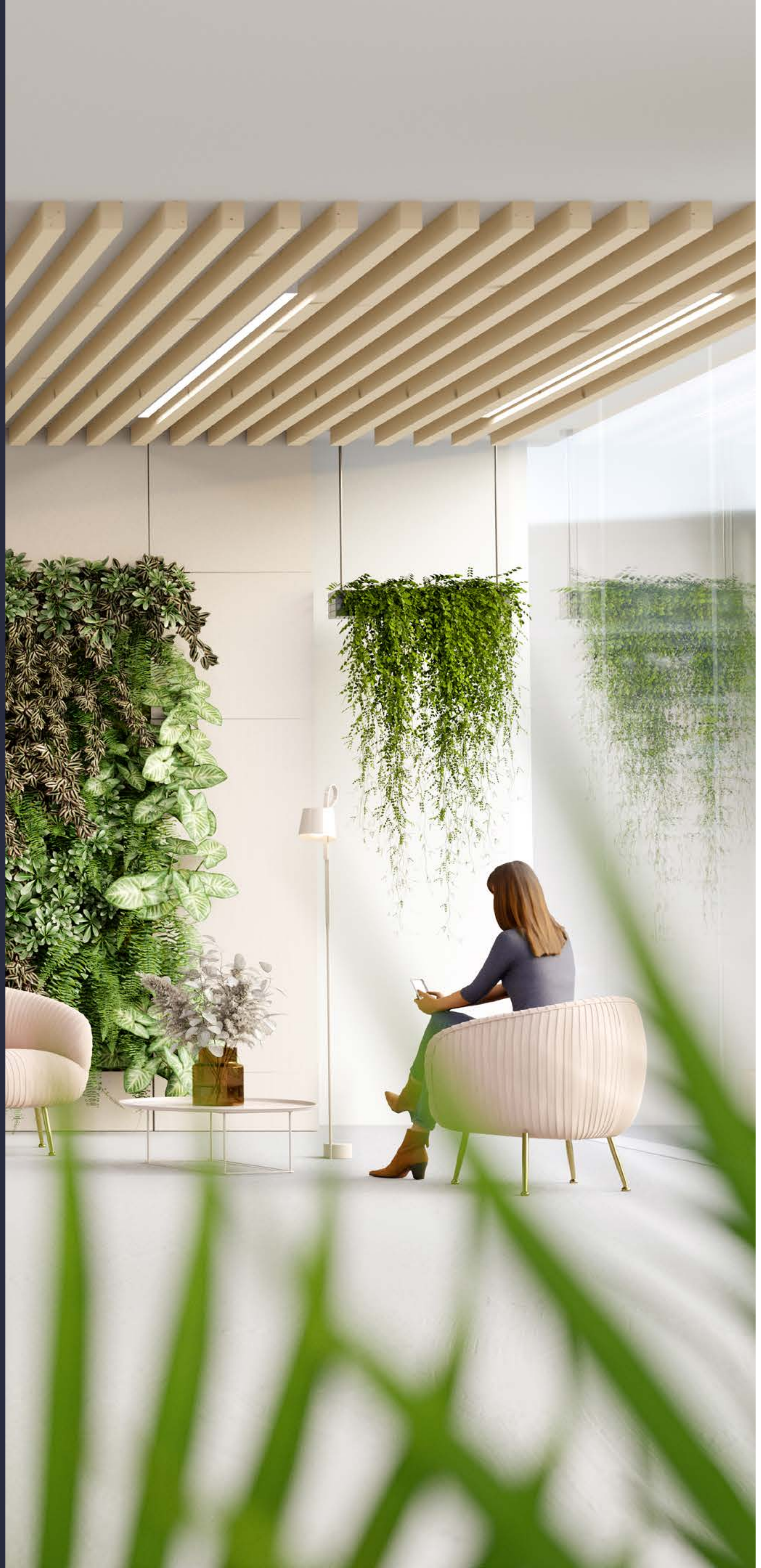
In 2022, our team undertook a landscape review of best practices for protecting nature and biodiversity across the real estate industry by researching global peers and standards; since this is a relatively underdeveloped topic in relation to our industry, we also examined other sectors for inspiration and examples of best leading practice. By leveraging our existing processes and incorporating sustainability within our investment considerations, we believe our teams are better able to integrate fresh considerations and initiatives into the investment process where beneficial to our clients.

Investment transactions and new construction

For new developments and acquisitions, we updated our process to consider nature and biodiversity. This includes requirements to grow tree canopy on streets and parking lots, convert hardscapes to green or cool paving, use a minimum of 50% native plants for landscaping, install a green roof for all usable roof space, and achieve net-positive biodiversity impact for greenfield developments.

Stewardship and asset management

As part of our approach to stewardship and asset management, we updated our Sustainable Building Standards to incorporate initiatives focused on the preservation of local biodiversity and nature. This includes requirements such as installing beehives or other wildlife shelters and eliminating pesticide use. We also developed guidance material to support bird-friendly management practices by identifying preventative measures such as integrating responsible lighting control and other operational protocols at our properties where feasible.



People

Our approach to people and our communities

Real estate provides environments in which people can live, interact, and thrive. As awareness of social issues grows, building owners can choose whether to contribute to building an inclusive society. We recognize the challenges our stakeholders face and the extent to which the built environment supports social well-being, and hence we choose to make inclusivity a principle of our business practice.

We include social considerations across all phases of our asset management practice, from acquisition to ongoing asset monitoring. We're committed to responsible and ethical business practices, and align with the efforts of our parent company to build a responsible and diverse supply chain, and follow the principles held in Manulife's vendor code of conduct.

Our investment and development teams are equipped with tools and resources that allow them to consider social initiatives such as active transportation options, health and wellness certifications (e.g., Fitwel, WELL), and indoor and outdoor wellness amenities. These considerations are incorporated into the decision-making process and reviewed by the private markets sustainable investing committee. We believe such initiatives support the overall value of our clients' assets.

We've used a formal process for assessing and improving social well-being in our real estate portfolio since we launched our Sustainable Building Standards in 2017. We continue to monitor leading social and wellness trends and incorporate best practices into our standards. Most recently, we updated our standards to include considerations across diversity, equity, and inclusion (DEI); sustainable procurement; economic development; health and wellness; and community and partnerships.

In our view, asset managers need to actively engage with partners and property managers to create meaningful outcomes. We leverage our position to define expectations and provide oversight and accountability for the social outcomes we prioritize. Our focus on improving social outcomes for our stakeholders supports long-term financial objectives for our clients and also provides a framework for measuring social impact across our global portfolio. This process will continue to be refined over time as our expertise grows and we create new ways to integrate social benefits into our business practices.

Diversity, equity and inclusion

We established a private markets DEI council to develop a DEI strategy across private asset classes in 2021. The council includes representatives from all private asset classes with a broad coverage of our major geographies and consists of four workstreams:

1 DEI best practices and opportunities
2 Education and initiatives
3 Communications
4 Data and metrics

Through this activity, we're seeking to create a culture that's more inclusive, better engages every employee, and provides opportunities for advancement regardless of race, ethnicity, age, gender, sexual orientation, religion, ability, economic status, and other aspects of diversity.

Targets

- Explore industry frameworks and standards assessing human rights risks and societal impact
- Continue to improve diverse workforce representation and hiring processes
- Track social impact initiatives across the real estate investment lifecycle and continue to integrate best practices within our process

Case study—formalizing the S in ESG

For many businesses around the world, social impact is a growing topic of interest, and the need for action and greater transparency surrounding this issue escalated during the COVID-19 pandemic and recent global social unrest. As this awareness grows, the real estate industry can play its part by understanding how it can contribute toward building a more inclusive society. As a global real estate investment manager, we have an opportunity to address specific social challenges, generate positive change, and improve outcomes for our stakeholders.

Focusing on the social component

In 2022, we undertook a two-pronged approach to integrating the S within our investment process.

1. We expanded our partnership with third-party certification provider Fitwel, which provides science-based strategies for developing healthy spaces. We believe centering decision-making on buildings that prioritize people can create significant value for landlords, tenants, developers, and investors while helping promote positive social impact.
2. We completed a materiality assessment to better understand our stakeholders' needs and to prioritize strategies with positive social outcomes.

Making strides

As a result of our focused efforts with Fitwel in 2022, we're proud to share that we've been designated a Fitwel Champion.[1] This achievement requires companies to attain a minimum of 10 certifications in the span of two years and demonstrates a commitment to creating healthy spaces. As of December 31, 2022, we achieved 16 Fitwel Scorecard Certifications and 67 Fitwel Viral Response Certifications.[2]

Using the results of our social impact evaluation, we developed initiatives that we could implement and embed into the people and communities section of our Sustainable Building Standards. This includes considering diversity and representation of marginalized groups in procurement decisions and affordable housing allocations in residential properties. By integrating these initiatives into our standards, investment management and third-party property management teams can better understand the tangible actions they can take to improve their overall asset values and financial returns of our clients.

1 Fitwel Champions are companies that own, occupy, or manage commercial and residential properties and have committed to using Fitwel at a portfolio scale. Fitwel Champion status is achieved when a company registers 20 assets upon signing and certifying at least 10 or more projects over a 24-month period. Manulife pays a fee by building to be certified. **2** Certification by Fitwel, based on square footage or gross floor area (GFA) of the building. Certification date varies by property and is valid for 12 months. For more information visit fitwel.org/certification.

Performance

Climate

Energy[1]

Metric	2022	2021	2020	2019	2018	2017
Absolute energy use (eMWh)	**670,011**	686,478	733,304	803,261	837,145	798,323
Normalized energy use intensity (ekWh/SF)[2]	**18.1**	18.4	19.8	23.3	23.8	23.7

Source: Manulife. As of December 31, 2022. SF refers to square feet. **1** Energy data includes electricity, natural gas, heating oil and steam consumption. **2** 2017–2019 Energy intensity is normalized for weather, occupancy (where data is available) and extraordinary use. 2020–2022 Energy intensity is only normalized for weather and extraordinary use due to the impact of COVID-19 on occupancy normalization. 2021–2017 values restated due to data updates.

In 2022 our total energy consumption was 670,011 eMWh. Comparing our like-for-like portfolio, our energy decreased 2.4%, equivalent to the energy required to power 600 Canadian homes.

Across our global portfolio, we decreased normalized energy use intensity to 18.1 ekWh per square foot, a reduction of 1.6% and 23.6% compared to 2021 and 2017, respectively. Our 2022 performance surpasses our five-year 10% energy target, however occupancy changes initially due to the COVID-19 pandemic and evolving hybrid work continue to make target progress monitoring complex.

Water[3]

Metric	2022	2021	2020	2019	2018	2017
Absolute water use (m^3)	**2,458,121**	2,343,638	2,287,139	2,520,652	2,579,437	2,564,789
Normalized water use intensity (L/SF)[4]	**55.6**	58.2	53.4	62.0	65.8	67.3

Source: Manulife. As of December 31, 2022. SF refers to square feet. **3** 2017–2021 values restated due to data updates. **4** 2017–2019 water intensity is normalized for occupancy (where data is available) and extraordinary use. 2020–2022 water intensity is only normalized for extraordinary use due to the impact of COVID-19 on occupancy normalization.

In 2022 we continued to see our water consumption increase closer to pre pandemic levels as occupancy climbed within our portfolio. This resulted in a 4.9% increase in absolute consumption compared with last year. Comparing our like-for-like portfolio, our normalized water use intensity decreased by 4.5% from 2021 to 2022. Since 2017, we have decreased out total consumption by 4.2%.

Waste

Metric	2022	2021	2020	2019	2018	2017
Recycled waste (tonnes)	**6,161**	4,163	5,889	8,448	9,395	9,037
Waste to landfill (tonnes)	**5,633**	4,695	6,013	8,137	8,140	7,504
Waste diversion rate (%)	**46**	47	48	46	47	48

Source: Manulife. As of December 31, 2022.

Our total waste generation decreased by 5% compared with 2020, while maintaining a diversion rate of 46%. With many companies having employee's work largely from home in 2021, an increase in generated waste for 2022 was anticipated. This however fell short of our five-year target of 60% waste diversion for 2022. We will continue to make waste management a priority and look for opportunities to increase diversion and reduce waste generation across our portfolio.

GHG emissions[1]

Metric	2022	2021	2020	2019	2018	2017
Scope 1 emissions (tCO_2e)[2]	**39,645**	36,571	37,772	39,606	37,086	32,468
Scope 2 emissions (tCO_2e)[3]	**103,602**	103,180	115,153	129,585	160,642	156,642
GHG intensity ($kgCO_2e$/SF)	**3.6**	3.8	3.9	4.6	4.9	5.0

Source: Manulife. As of December 31, 2022. GHG refers to greenhouse gas. SF refers to square feet. **1** Location based emissions. 2021–2017 values restated due to data revisions and operational control updates. **2** Scope 1 includes emissions from natural gas, diesel, and refrigerant emissions. Refrigerant and diesel emissions are only included in 2019–2022. **3** Scope 2 includes emissions from purchased electricity and steam.

To help mitigate the impacts of climate change on our clients' assets, Manulife is committed to reducing our greenhouse gas emissions and transitioning toward low-carbon energy sources. In 2022 our total greenhouse gas emissions increased by 2.5%, likely in part due to the increase in occupancy. As we continue to decarbonize our portfolio through on-site building retrofits, procurement of renewable energy continues to grow, with more than 35,600 MWh purchased in 2022.

To drive GHG reductions and support meeting our 80% reduction target by 2050, we integrated GHG management and reduction into our Sustainable Building Standard program. This aims to facilitate education, opportunity identification and emissions reduction planning to help property and asset management teams assess reduction pathways and financial implications to create realistic emissions reduction plans that have a financial benefit to our clients.

Nature

Protecting what matters

Metric	2022
Properties meeting our SBS nature and biodiversity minimum requirements	157
Properties meeting our SBS nature and biodiversity advancement initiatives	185
Number of beehives and rooftop gardens	• 81 urban beehives on 52 Manulife properties • 12 urban rooftop gardens producing 3,000lb of fruit and vegetables
Percentage of developments meeting one or more of our nature-focused design requirements	100% of 2022 development projects

Source: Manulife. As of December 31, 2022. SBS refers to Sustainable Building Standards.

Nature is challenging to measure, but the metrics above provide some insight into how much we prioritize it.

As threats to nature and biodiversity are increasingly recognized, we'll continue to prioritize their protection by engaging with our partners across the investment lifecycle, local communities, and broader industry associations to enhance the long-term value of our clients' assets .

People

Real estate business workforce diversity

Role	(%)
VP+ % women	—
AVP % women	31.3%
Director % women	33.0%
Overall % women	33.0%

Role	(%)
VP+ % racially and ethnically diverse	16.7%
AVP % racially and ethnically diverse	28.6%
Director % racially and ethnically diverse	8.0%
Overall % racially and ethnically diverse	16.4%

Racially and ethnically diverse percent is for U.S.- and Canada-domiciled employees/staff only. Data is based on 312 full-time equivalent staff as of December 31, 2022.

We've been working hard to understand our role in providing a diverse and equitable workplace. Together, we're committed to being transparent about our DEI challenges and taking steps to address them. We acknowledge that measuring the support of our DEI efforts can be challenging, but we're working on ways to improve this.

While we've made progress in some areas, we know we have more work to do, and we're committed to addressing the needs of our employees and, ultimately, to fostering a culture of inclusivity within all the communities in which we operate.

The road ahead

Our real estate business plays an important role across the organization, both at Manulife Investment Management and our parent company, Manulife, by providing insight on how to decarbonize our buildings around the globe. Over the last year, our in-house sustainability team has helped set targets across the organization, which was an important achievement. The focus is on the road ahead: putting action behind our words.

Over the next year, we'll be working on executing our GHG road map with internal and external parties. With the transformation of our investment platform, we'll be focused on developing strong relationships with our new property management partners to ensure we're pursuing our sustainability goals together. Externally, we'll be searching for new opportunities for industry collaboration. Efforts such as our participation in the Urban Land Institute report, sponsorship of the Carbon Risk Real Estate Monitor tool, being a signatory to the PRI, and the participation of our senior sustainability leaders in various industry working groups all encourage the pooling and sharing of knowledge, resources, and strategies. We view these collaborative activities as vital to improving our clients' risk-adjusted returns and improve portfolio value.

Manulife Investment Management

manulifeim.com/institutional/global/en/sustainability

It should not be assumed that any ESG or sustainability initiatives, standards, or metrics described herein will apply to each asset in which Manulife Investment Management invests or that any ESG or sustainability initiatives, standards, or metrics described have applied to any individual prior investment of Manulife Investment Management. There is no guarantee that any initiatives or anticipated developments described herein will ultimately be successful or achieve anticipated outcomes. Environmental, social and governance (ESG) factors are only some of many considerations that Manulife Investment Management takes into account when making investment decisions, and other considerations can be expected in certain circumstances to outweigh ESG considerations. Any ESG or sustainability initiatives described will be implemented with respect to a portfolio investment solely to the extent Manulife Investment Management determines such initiative is consistent with its broader investment goals. Individual portfolio management teams may hold different views and make different investment decisions for different clients, and views may change over time. Investors should always read the current investment services information or fund offering documents before deciding to select an investment manager or to invest in a fund.

The case study/ies shown here are for illustrative purposes only, do not represent all of the investments made, sold, or recommended for client accounts, and should not be considered an indication of the ESG integration, performance, or characteristics of any current or future Manulife Investment Management product or investment strategy.

Manulife Investment Management conducts many ESG engagements each year but does not engage on all issues or with all issuers in our portfolios. We also frequently conduct collaborative engagements in which we do not set the terms of engagement but lend our support in order to achieve a desired outcome. Where we own and operate physical assets, we seek to weave sustainability into our operational strategies and execution. The case studies shown are illustrative of different types of engagements across our in-house investment teams, asset classes and geographies in which we operate. While we conduct outcome-based engagements to enhance long term-financial value for our clients, we recognize that our engagements may not necessarily result in outcomes which are significant or quantifiable. In addition, we acknowledge that any observed outcomes may be attributable to factors and influences independent of our engagement activities. The case studies shown are a sampling across issues and geographies. Our approach to ESG investing and incorporation of ESG principles into the investment process differs by investment strategy and investment team. It should not be assumed that an investment in the company discussed herein was or will be profitable. Actual investments will vary and there is no guarantee that a particular fund or client account will hold the investments or reflect the characteristics identified herein. Please see our ESG policies for details.

We consider that the integration of sustainability risks in the decision-making process is an important element in determining long-term performance outcomes and is an effective risk mitigation technique. Our approach to sustainability provides a flexible framework that supports implementation across different asset classes and investment teams. While we believe that sustainable investing will lead to better long-term investment outcomes, there is no guarantee that sustainable investing will ensure better returns in the longer term. In particular, by limiting the range of investable assets through the exclusionary framework, positive screening and thematic investment, we may forego the opportunity to invest in an investment which we otherwise believe likely to outperform over time.

Investing involves risks, including the potential loss of principal. Financial markets are volatile and can fluctuate significantly in response to company, industry, political, regulatory, market, or economic developments. These risks are magnified for investments made in emerging markets. Currency risk is the risk that fluctuations in exchange rates may adversely affect the value of a portfolio's investments.

The information provided does not take into account the suitability, investment objectives, financial situation, or particular needs of any specific person. You should consider the suitability of any type of investment for your circumstances and, if necessary, seek professional advice.

This material is intended for the exclusive use of recipients in jurisdictions who are allowed to receive the material under their applicable law. The opinions expressed are those of the author(s) and are subject to change without notice. Our investment teams may hold different views and make different investment decisions. These opinions may not necessarily reflect the views of Manulife Investment Management or its affiliates. The information and/or analysis contained in this material has been compiled or arrived at from sources believed to be reliable, but Manulife Investment Management does not make any representation as to their accuracy, correctness, usefulness, or completeness and does not accept liability for any loss arising from the use of the information and/or analysis contained. The information in this material may contain projections or other forward-looking statements regarding future events, targets, management discipline, or other expectations, and is only current as of the date indicated. The information in this document, including statements concerning financial market trends, are based on current market conditions, which will fluctuate and may be superseded by subsequent market events or for other reasons. Manulife Investment Management disclaims any responsibility to update such information.

Manulife Investment Management

manulifeim.com/institutional/global/en/sustainability

Manulife Investment Management

Manulife Investment Management is the global wealth and asset management segment of Manulife Financial Corporation. We draw on more than a century of financial stewardship to partner with clients across our institutional, retail, and retirement businesses globally. Our specialist approach to money management includes the highly differentiated strategies of our fixed-income, specialized equity, multi-asset solutions, and private markets teams—along with access to specialized, unaffiliated asset managers from around the world through our multimanager model.

3106620 EN AODA

09/23 | IINV-823-438083