

Taskforce on Climate-Related Financial Disclosures (TCFD) Alignment

Below are Digital Realty's disclosures to the TCFD Guidelines for calendar year 2019, as reported in Digital Realty's 2019 ESG Report.

Governance

BOARD OVERSIGHT

Digital Realty's Board of Directors provides oversight of the company's sustainability strategy and major initiatives. The Board's Nominating and Corporate Governance Committee is updated on the strategy, plans and performance semi-annually and as-needed, and the entire Board of Directors is updated on an annual basis. The updates also provide status on operational project performance, portfolio sustainability KPIs, peer and marketplace benchmarking, as well as projections for upcoming periods. Additionally, we have adopted an Enterprise Risk Management model with the identification of risk ownership to ensure accountability and appropriate visibility at the Board and Executive Leadership levels.

MANAGEMENT OVERSIGHT

Digital Realty's Senior Director of Sustainability reports to the Executive Vice President, General Counsel, providing regular updates on sustainability performance through in-person meetings, presentations, and other forms of communication. Sustainability program updates and major activities are provided to the Executive Leadership Team on a quarterly basis and as-needed. During these briefings, the Executive Leadership Team is provided with necessary information to assess and determine climate-related risks and opportunities with regards to major activities. Management of risk and is a company-wide priority, delivered through an interdisciplinary effort with contributions from our global operations team, risk management, environmental occupational health and safety, compliance, information security, physical security and other functions. Our Risk Management team, led by our Vice President of Risk Management, is responsible for managing operational risk for our business, while our Chief Financial Officer is the executive responsible for enterprise risk management.

Strategy

SHORT, MEDIUM AND LONG TERM CLIMATE-RELATED RISKS AND OPPORTUNITIES

Physical Risks	
Acute	Short-term weather events exacerbated by climate change such as hurricanes, floods, and extreme temperatures may lead to increased risk of property damage and operational impacts.
Chronic	Long-term climate impacts may pose several risks to our portfolio. More extreme weather events and extreme temperatures may lead to higher and more volatile energy costs; severe droughts may lead to higher water costs; air quality impacts related to forest fires could affect operational resilience; extreme rainfall events could exacerbate the risk of localized flooding and water ingress at buildings; sea level rise could increase the risk of flooding for a small number of assets. These impacts may contribute to increased insurance premiums, incremental planning and prevention costs, and costs to limit or further 'harden' assets to resist these impacts. These impacts could also drive customer preferences for certain markets and away from others.
Transition Risks	
Policy and Legal	Increased environmental regulations may increase the cost to develop or the ability to develop in certain areas. To a lesser extent, regulatory changes may increase administrative requirements for reporting and compliance. Building codes are expected to become more stringent over time, potentially increasing development costs and requiring the adoption of new and different technologies.
Technology	Current products and materials may become obsolete more quickly than anticipated or may be replaced with lower-carbon technologies, which could result in increased construction costs. We expect the sophistication of our building systems and controls will become more advanced over time, which may lead to increased construction and operational costs. We may see varying levels of customer acceptance of newer technologies.
Market	Our customers may choose data centers in markets where utility costs are lower or where the utility grid has lower emissions which could result in accelerated obsolescence of certain assets. Disruptions in the supply chains of building materials and data center infrastructure may extend construction times or increase construction costs. Higher costs for energy and water may influence customer leasing decisions.
Reputational	Data centers consume significant amounts of energy and the associated emissions contribute to climate change. Customers and investors may increase their scrutiny of data centers, encouraging increased investment in cleaner renewable energy solutions and low-carbon technologies and diversifying away from more carbon-intensive properties and portfolios. We may face scrutiny by local communities, NGOs, and regulators but at this time we do not believe we are exposed to material litigation risk due to climate change.

Opportunities

Resource Efficiency

We have the opportunity to lower our energy and water costs through efficiency measures and operational enhancements. Additionally, our data centers that have received green building and energy efficiency certifications have the opportunity to see increased asset value. Increased waste diversion rates may reduce our waste hauling costs. Employee-focused health, wellness, and engagement programs may improve workforce satisfaction and lead to reduced costs related to employee turnover.

Energy Source

Transitioning to low-emission sources of energy and investing in new renewable solutions have the potential to lower our operating expenses and may reduce our data centers exposure to potential future carbon regulations, fees, or taxes. Additionally, we have the opportunity to generate incremental revenues by developing renewable products and solutions for customers.

Products and Services

Our sustainably certified data centers may result in increased customer demand and retention, reflecting consumer preferences for lower-carbon buildings. This may also result in reduced insurance premiums. Additionally, we have the opportunity to provide renewable energy and sustainability solutions to our customers to support their specific sustainability goals, which could also increase customer demand and retention.

Markets

Our globally diversified portfolio enables us to take advantage of a broad range of utility incentives and renewable and low-carbon energy products that become available. We have the opportunity to pursue green bond offerings, such as our first green bond in 2015, our second in 2019, and our third offering in 2020 (see Green Bonds section), which further diversifies our pool of investors and expands our ability to access capital to cost-effectively fund the growth of our business.

Resilience

Our customers rely on us to provide resilient data centers to ensure data privacy, security and business continuity. Continuing to provide resilient data centers through physical adaptation measures such as site selection and climate prevention measures, appropriate levels of insurance, green building designs, efficiency measures, as well as data privacy, cybersecurity and physical security practices may increase stronger customer demand and retention.

IMPACT OF RISKS ON BUSINESS AND FINANCIAL PLANNING

We consider exposure to weather events, flooding, and climate change at the time of acquisitions, development, and regularly throughout the operational phase of our properties. We evaluate portfolio concentration and related geographic risks as part of our enterprise risk management program. We evaluate energy and water conservation opportunities annually as part of each asset's capital plan, and our energy supply chain team affirmatively solicits and evaluates low carbon and renewable energy options when sourcing energy.

To manage reputational and regulatory risks, we have continued our commitment to developing green buildings that seek to minimize impacts on the communities where we operate expanding our supply chain engagement efforts to address upstream carbon emissions in order to reduce environmental impacts, manage costs, and enhance supply chain resilience.

We will proactively seek the required financial information to undertake long-term financial impact modelling and expect to evaluate the resilience of our strategy in light of differing climate scenarios in the years ahead.

Risk Management

PROCESS FOR ASSESSING AND IDENTIFYING CLIMATE RISKS

Our Risk Management team assesses a range of risks for all of our assets, from the time of acquisition, during the construction process and annually throughout each property's operational lifecycle. Sensitivity analyses and stress-testing are performed primarily to identify changes in financial risks. Our insurance providers have developed a "Resilience Index" to evaluate risk across our data centers, inclusive of environmental risks such as exposure to natural hazards and fire risk as a result of climate change. We utilize live maps of our global portfolio to identify data centers that may be at risk of natural hazards such as rainfall, snowfall, temperature, wind, hail and floods, and we can view which properties are near 100-year and 500-year flood zones. Based on our analyses of physical risks from climate change, floods and pose the greatest financial risk to our business operations. Risk reports are developed for each data center to include prevention recommendations specific to each identified risk. We also assess our exposure to social risks such as physical security, cybersecurity and pandemics.

PROCESS FOR MANAGING CLIMATE RISKS

We manage potential risks first via our siting and design standards, then by implementing recommendations to proactively mitigate losses related to short-term acute weather events as well as long-term climate-related events. We maintain appropriate levels of insurance for each asset. For each property, our Risk Management team receives reports from insurance providers that identify opportunities to enhance protection for each facility and improve loss expectancy values. We annually measure the reductions in value-at-risk achieved through the implementation of these measures. We ensure each site has mitigation plans in place specific to its location and exposure to climate risk. Our global Operations team actively implements and refines operating procedures to ensure our data centers are safe and resilient. This includes regular emergency response plan updates and other measures that result from property-specific risk reports. Fuel delivery agreements for backup power systems are on par with those held by the Federal Emergency Management Agency (FEMA) and allow for power to be maintained in the event of an extended power outage.

We continue to implement sustainability projects to minimize our environmental impacts and reduce our contribution to global carbon emissions that contribute to climate-related risks. These efforts include, but are not limited to, supporting the development of new renewable energy supplies, designing and constructing environmentally friendly data centers that use less water and energy to operate, and improving energy and water efficiency for operating data center sites. We also encourage employees to use mass transit and green transportation through transit pass subsidy programs and by installing electric vehicle (EV) charging and bicycle storage facilities at many of our properties.

INTEGRATION OF PROCESSES INTO OVERALL RISK MANAGEMENT

Our Enterprise Risk Management program is comprehensively updated to reflect short- and long-term physical impacts of climate change, as well as social risks including physical security, cybersecurity, public health and modern slavery.

Metrics and Targets

METRICS USED TO ASSESS CLIMATE RISKS AND OPPORTUNITIES

In addition to carbon emissions and emission intensities, we currently track and monitor a number of risk metrics through our insurance risk provider. These metrics include total insured value (TIV), loss expectancy (LE), and a proprietary risk score which is composed of four major causes of property loss – fire and equipment hazards, natural hazards, social risks and inherent occupancy hazards. We also identify which properties are Highly Protected Risk (HPR) sites, which are locations at which all reasonable physical and social loss prevention measures have been implemented.

SCOPE 1, 2 AND 3 GREENHOUSE GAS EMISSIONS

2019 GHG Emissions (MtCO₂e)

Scope 1 ¹	Scope 2 (Location-Based) ²	Scope 2 (Market-Based)	Scope 3 ³
25,980	2,481,150	1,603,160	1,777,790

¹Scope 1 emissions are related to natural gas and diesel consumption of our directly managed properties

²Scope 2 emissions are related to electricity and district energy consumption of our directly managed assets

³Scope 3 emissions include energy consumption of properties where we do not have operational control, purchased goods and services, business travel, employee commute, energy and fuel-related activities not in Scope 1 or Scope 2, and waste generated.

TARGETS USED TO MANAGE CLIMATE RISKS AND OPPORTUNITIES AND PERFORMANCE AGAINST TARGETS

We have an annual site-level proprietary risk score reduction goal to place in the top quartile in the offices/data center category based on loss prevention and safety improvements. In 2019, 39% of our sites placed in the upper 25%, a 10% improvement from 2017. We aim to achieve HPR status for all of our sites over the long term. Measures to improve HPR status at our facilities are primarily from reductions in physical exposures as our sites generally have strong workplace programs including: hot work management, fire protection maintenance and supervision program, electrical preventive maintenance program, emergency response planning and ongoing communications about facility changes. In 2019, 59% of our insured sites received HPR status and on average our portfolio has a weighted risk score of 86%.