

Climate-Related Risks and Opportunities

Overview

A climate risk assessment was performed to identify and assess 3D Systems' climate-related transition risks, physical risks, and corresponding opportunities. Climate risks and opportunities are reviewed periodically with cross-functional business leaders. A risk owner is assigned to prioritized risks and opportunities to manage relevant action plans.

Risks and Actions

Category	Risk description	Potential impact to 3D Systems business strategy	Relevant initiatives and mitigating actions
Acute Physical	Increased occurrence of extreme weather events, increased mean temperatures, and related disruptions may impact operations and supply chain.	Severe weather events can damage critical infrastructure including facilities, warehouses, R&D, offices, and data centers leading to operational disruptions and increased costs to 3D System's to maintain, repair or replace infrastructure.	 3D Systems reevaluates business continuity plans for critical manufacturing sites to align with current conditions. 3D Systems prioritizes multi-sourcing for critical raw materials and other products where feasible. In cases where alternatives are unavailable, the company maintains adequate stock levels to ensure supply chain continuity and minimize operational disruptions. 3D Systems maintains distributed stock levels across multiple geographies to enhance resilience and mitigate operational disruptions caused by location-specific risks. Where necessary, 3D Systems explores transportation alternatives to maintain supply continuity.
Chronic Physical	Rising mean temperatures and an increase in the number of extreme heat days could impact quality of products.	Unmitigated increased temperatures could result in damaged materials, increased product returns, write-offs of damaged inventory, product liability, warranty claims, decreased sales and customer dissatisfaction. To prevent heat damage, 3D Systems may need to invest in climate-controlled shipping and storage, increasing operating expenses.	 3D Systems assesses appropriate transportation methods, including refrigerated containers, to protect from material degradation due to temperature and humidity fluctuations during shipping. 3D Systems continues to invest in R&D testing for materials for performance under extreme heat and UV exposure, for both indoor and outdoor conditions. 3D Systems provides customers with user manuals and best practices for storing and handling materials including recommended temperature ranges.
	Rising mean temperatures could lead to higher costs of energy consumption due to heightened demand for energy for heating / cooling manufacturing facilities.	Increased temperature could lead to Increased operating expenses due to higher electricity and HVAC costs and greater capital expenditures for upgrading energy-efficient cooling, insulation systems or investing in renewables.	 3D Systems continues to measure and monitor energy consumption across priority facilities and sharing best practices to reduce energy consumption. This includes evaluating feasibility of energy efficiency and renewable energy solutions at select sites. As technology develops, 3D Systems is analyzing cost-benefits of implementing demand response programs for additive manufacturing.

3D SYSTEMS

Category	Risk description	Potential impact to 3D Systems business strategy	Relevant initiatives and mitigating actions
Market	Increased cost and changes in availability of raw materials and rare minerals leading to necessary design changes.	3D Systems may need to diversify its procurement strategy for high-risk raw materials and invest into R&D for use of alternatives.	 3D Systems prioritizes multi-sourcing for critical raw materials where feasible. In cases where alternatives are unavailable, the company maintains adequate stock levels to ensure supply chain continuity and minimize operational disruptions. 3D Systems evaluates alternative materials where feasible in support of supply chain continuity.
Reputation	Negative impact on brand reputation and/or enhanced emissions-reporting obligation from customers and investors.	3D Systems may face scrutiny if unable to adequately respond to customer or investor inquiries related to company impacts on climate change.	 3D Systems measures its Scope 1 & 2 GHG emissions using a third-party climate advisor and recently expanded its Scope 3 GHG emissions categories to better understand its GHG emissions footprint. 3D Systems obtains external verification over calculated emissions totals to provide most accurate information to stakeholders, including customers and investors. 3D Systems works collaboratively with external stakeholders to understand their sustainability priorities. 3D Systems' ESG team coordinates with leaders within the business and investor relations to provide up-to-date data and information in response to external inquiries.
	Increased public awareness of climate change could result in perception of 3DS not taking sufficient action to address climate-related issues.	3D Systems may face scrutiny if unable to demonstrate to customers and end-users their efforts related to company impacts on climate change, including emissions and waste.	 3D Systems continues to expand its sustainability disclosures to include more information on ESG-related commitments, policies and practices, and annual metrics for GHG emissions, energy, waste, and water withdrawal. 3D Systems is exploring emerging topics such as its interface with nature and biodiversity. 3D Systems works collaboratively across business teams to confirm sustainability priorities and educate teams on climate-related industry practices and expectations.
	Negative impact on brand reputation from customers if printers are associated with improper waste management and enablement of more waste.	3D Systems may face scrutiny if unable to adequately respond to customer or investor inquiries related to company contributions to plastics or metal waste sent to landfill.	 3D Systems continues to expand its sustainability disclosures to include more information on ESG-related commitments, policies and practices, and annual metrics for GHG emissions, energy, waste, and water withdrawal. 3D Systems works collaboratively across business teams to confirm sustainability priorities and educate teams on climate-related industry practices and expectations.
Policy	Changes in government regulation related to climate could increase cost associated with reporting obligations compliance (e.g., emissions reporting, Extended Producer Responsibility).	3D Systems may need to invest continue investing in reporting-related efforts to meet compliance obligations in jurisdictions where it operates. In some cases, regulations may be prescriptive and require the introduction of new policies and actions.	 3D Systems' ESG team coordinates with its legal and advisory teams across the globe to monitor emerging local, regional, and national regulations. The ESG team works to proactively collect information and data to inform disclosures and maintain compliance at the global, entity, and site level.



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Policy	Changes in government regulation related to clean energy could increase the costs associated with procuring renewable energy.	3D Systems may need to invest more heavily into evaluating on-site renewables where feasible and exploring VPPAs to increase the number of renewables in its energy mix in accordance with national law in areas where it operates.	 3D Systems facilities evaluate renewable procurement on a site-by-site basis. In some cases, national or regional legislation may mandate a certain amount of renewable energy procurement. Where possible, 3D Systems is evaluating the options available to improve energy efficiency and renewable procurement options.
	Materials may face stricter regulations in end markets on end-of-life treatment (single use plastics, extended producer responsibility, use of materials covered under EU REACH).	3D Systems may face scrutiny and potential fines if unable to monitor and manage end-of-life treatment of 3D Systems materials.	 3D Systems regularly assesses regulatory risks in business operations and product development, to maintain compliance as well as proactively invest in necessary resources to meet applicable laws and regulations. In select locations, 3D Systems offers take-back programs for specific packaging as well as hardware refurbishment and have processes in place to reuse when appropriate.



Opportunities and Actions

Category	Opportunity description	Potential impact to 3D Systems business strategy	Relevant initiatives and actions
Products & materials	Development of new climate mitigation and adaptation products, materials, or services through R&D and innovation could open new markets for 3D Systems.	3D Systems could see increased demand for its products that can be used in climate mitigation and adaptation such as carbon capture and storage.	 3D Systems continues to work closely with its customers to optimize the performance of 3D Systems materials in customer applications such as carbon capture and storage. 3D Systems assists its customers and partners in developing new applications of its technologies to facilitate the use of 3D Systems products for specific applications.
	Customer preferences may shift to shorter supply chains and custom printing from additive manufacturing due to climate- induced supply chain disruptions.	3D Systems may see increased revenue from customers looking to increase local and on-site production capacity with additive manufacturing.	 3D Systems' products and technology solutions allow customers to optimize their supply chain to reduce lead times, enabling localized production.
	Customer preferences for reducing waste in manufacturing processes may create opportunities for additive manufacturing and increased demand for 3D Systems products.	3D Systems may see increased revenue from customers looking to reduce waste with additive manufacturing.	 3D Systems enables customers to accelerate prototyping and leverage additive manufacturing for precision, reducing overall waste. 3D Systems collaborates with its sales and business development teams to optimize product demand against inventory on hand to reduce excess waste.