MONTHLY RESEARCH DIGEST

An Executive Briefing on New & Notable Sustainability Research

In This Issue – **January 2026**

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CORPORATE CLIMATE ACTION & PERFORMANCE

The Business Action Guide to Climate Transition

By WBCSD, Carbon Trust

View the full report here

Notable Highlights

- Companies report that **the top stakeholders/functions who must buy into the financial benefits** of the company transition plan are the CFO/Finance (79%), business unit leads (64%), and the CEO (50%).
- The **three biggest barriers to approving transition-related projects** within the organization are costs or trade-offs being perceived as too high (71%), other priorities interfering (57%), and difficulty securing leadership engagement (43%).
- The **three benefits of transition planning that are most persuasive** when gaining wider organizational support are projects with a strong ROI (79%), enhanced regulatory resilience (57%), and improved reputation (50%).
- The following Report Findings include **guidance, tools, and frameworks to help companies build the business case for the climate transition, provide evidence, and pitch the business case, as well as steps to implement the transition plan,** including foundational processes/structures and cross-functional collaboration.

Objective

- To provide tools, evidence frameworks, and organizational strategies to help companies build the business case for the climate transition and implement the transition.

Background

- The report data is based on input from a cross-sector peer group of 30 large businesses, a survey of 14 WBCSD members on the business case for their transition, and a survey of 11 WBCSD members on the implementation of the transition.

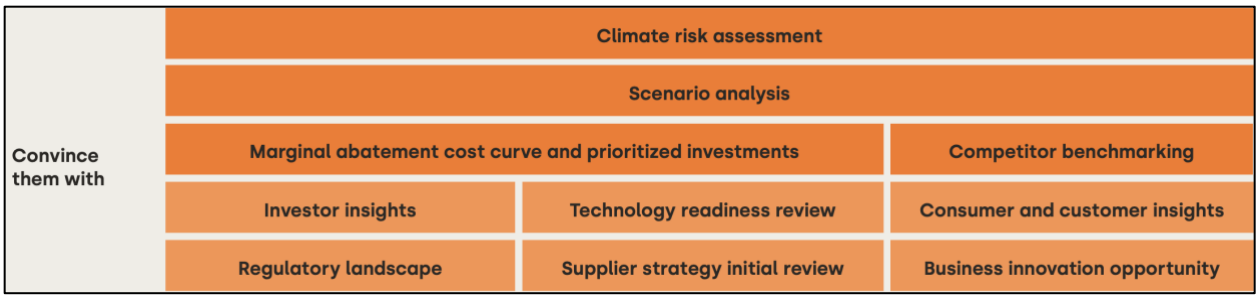
Report Findings

Building the business case for the climate transition (pg. 6-18):

Prepare your business case architecture (pg. 7-8):

- **Determine which internal stakeholders you need buy-in from** and what drives value for them.
- **Businesses commonly use a finance, operations, or growth "lens" to build the business case for the climate transition:**

	Finance	*Operations*	*Growth*
Decision-makers	→ Chief Finance Officer → Head of Risk → Performance Management → Head of Compliance	→ Chief Operations Officer → Head of Supply Chain → Site leads → Head of Procurement	→ Chief Marketing Officer → Head of Sales → Head of Innovation
Their priorities	→ Ensure projects with a strong ROI are prioritized → Manage risk closely → Build strong investor relations	→ Oversee operational stability → Maintain strong supplier relationships → Control cost and increase efficiency	→ Launch successful new products and services and bring in new revenue streams → Differentiate the brand from competitors → Delight customers and consumers
Their concerns	→ Wary of significant capital expenditure and short-term OpEx increases → Competing priorities – frequently turns down project funding → Additional disclosure and reporting burden	→ Complexity of implementation across sites and teams → Increased demands on suppliers → Reliance on unproven technology and systems → Challenges in data collecting and harmonization	→ Uncertainty over claims about willingness to pay and increased sales → Sustainability concerns blocking innovation → Risk of greenwashing backlash
Transition planning enables	→ Quantified return-on-investment – especially in the short term → Controlled long-term risk and avoid stranded assets → Strengthened investor relations and improve valuation metrics, cost of capital, access to capital and merger and acquisitions uplift	→ Improved operational and energy efficiency → Reduced operational risk and improve resilience → More adaptable supply chains and improved supplier relationships through engagement → Reliable data systems to drive continuous improvement	→ Driving – not blocking – product and service innovation → Meeting emerging customer needs → Enhanced brand perception → Gaining a competitive advantage



Images taken from pg. 8

Gather evidence (pg. 5-18):

NOTE: The following pages include tools for collecting evidence, examples of what success looks like, and implementation tips.

- **Four key types of evidence can get stakeholder buy-in.** The best evidence will vary depending on the context and the culture of your business:

1. **Demonstrate how the plan will deliver financial value (pg. 10-12).**
   - ▷ **Tools:** Climate risk assessment, scenario analysis, Marginal Abatement Cost Curve (MACC), tips for getting the right granularity in your business case
2. **Demonstrate whether your transition delivers systemic financial benefits (pg. 13).** Consider capital access, regulatory risk, and cost reduction.
   - ▷ **Tools:** Investor insights (how transition planning improves access to capital), regulatory landscape (a map of compliance requirements across your markets)
3. **Demonstrate operational feasibility and address implementation risks (pg. 13).** Consider capital access, regulatory risk, and cost reduction.
   - ▷ **Tools:** Technology readiness review, supplier strategy initial review
4. **Position the transition as a competitive advantage (pg. 15-17).** Early movers capture market share, strengthen customer relationships, and access new revenue streams.
   - ▷ **Tools:** Business innovation opportunities, competitor benchmarking, customer insights (B2B and B2C)

Pitch the business case (pg. 18):

- Invest in board- and leadership-level **sustainability training** to equip leaders with the knowledge needed to ask better questions and understand trade-offs.
- **Tailor the language** to your target audience.
- Some people respond to rigorous analysis, some to practical action. Consider taking key stakeholders to **observe transition projects** in action to ground the solution.

- Focus your initial efforts on **likely allies** in the senior leadership team so they can champion your cause.
- Be available for **small-group discussions** with senior leaders before decision-making meetings to identify concerns and questions while you have time to respond.
- **Indicators of success:**
    - Leadership proactively asks about transition progress in business reviews.
    - Other business units approach you for collaboration on transition projects.
    - Transition considerations become embedded in regular processes, including investment decisions.
    - Site managers and regional leaders reference transition benefits in their own presentations.

Implementing your company's climate transition plan (pg. 20-40):

Foundational processes and structures (pg. 20-27):

- **For an effective transition, companies need (1) governance** to set direction and remove barriers, **(2) performance metrics**, **(3) incentives**, and **(4) team structures** to shape how quickly knowledge spreads and decisions are made.
- These foundational processes and structures should align with your organization's culture, your transition objectives, and the complexity of your transition.

Governance:

- 56% of companies report that the Chief Sustainability Officer has executive responsibility for their transition plan, and 44% say the CEO.
- **Establish climate governance on the board** to approve overall climate ambition and major strategic shifts, and hold executive leadership accountable. Page 21 breaks down the advantages and disadvantages of an **all-board reporting** model versus a **sustainability board subcommittee**.
- **Establish an executive governance body** that makes binding decisions on transition priorities and ensures accountability of business teams.
    - Linking the sustainability team to business functions can help balance competing priorities and make difficult decisions.
    - Page 22 includes critical success factors; indicators of effective and ineffective governance; and which transition decisions to involve specific C-suite and business-unit leaders.
    - Page 23 has a case study on Unilever's cross-functional governance structure.

Performance metrics and tracking:

- **Set both sustainability targets related to outcomes** (e.g., Scope 1 emissions intensity at the business unit level) **and functional targets** related to actions that teams must take to deliver the transition plan (e.g., sourcing 30% recycled aluminum).
    - Set carbon targets at the business-unit or regional level for 1 year, 3 years, and the target year.
    - Align functional targets closely with the prioritized actions identified in your MACC analysis and decarbonization strategy.
    - Page 24 includes **examples of 2030 sustainability targets** translated to one- and three-year functional targets.
- **Metrics and KPIs should "cascade" to business units** and potentially to business teams (see **example on page 25**). Assigning targets at the appropriate level is critical to avoid unclear accountability, unnecessary work, and micromanagement.
- Page 26 includes **tips on implementing metrics and targets**.

Incentive systems:

- **Leading companies tie 10-25% of executive compensation to climate targets** (rather than functional metrics) through bonuses or long-term share options, typically linked to externally stated targets for transparency.
- **All-employee incentives can accelerate implementation but require careful design.** Group-wide bonuses tied to emissions often fail when key drivers lie outside individual teams' control. Where possible, link bonuses to targets tailored to each team.
- **Non-financial recognition can complement financial incentives**, particularly where performance metrics are still emerging. Employee awards or spotlight features help motivate and maintain engagement.

Sustainability expertise structure and roles:

- When designing the structure for sustainability expertise, **focus on two key decisions:** how integrated sustainability experts should be within operational teams and where the main sustainability team should report.
- **If you are clear on strategic direction but haven't achieved the necessary buy-in,** increase the number of hybrid roles to help bridge the gap between teams. **If your sustainability efforts feel directionless**, reduce the number of hybrid roles and bring them into the central team.
- Consider the ideal **sustainability team reporting line** to streamline reporting and avoid operational barriers (see **examples** on page 27).

Driving collaboration and progress with other teams (pg. 29-40):

- The sustainability team must work across silos. **Overcoming barriers created by mismatched team priorities, unclear expectations, low trust, and scale and resource concerns is critical.**
- Pages 30-34 include **"momentum maps" on collaborating with five teams** (finance (pg. 30), procurement (31), product (32), operations (33), and marketing (34)), from initiating the collaboration to achieving full team buy-in.
- The sustainability team is likely to be **sharing data** with many teams. This can be an opportunity to **push for consistency** across organizational, site-level, and product data.

A Review of the Link Between Sustainability Performance and Company Valuation

By WBCSD

View the full report here

Notable Highlights

- **Sustainability strategies can increase corporate profitability by 5% to 20%**, both defensively (through hedging against risks and reputational costs) and offensively (through capturing growth and price premiums and increasing efficiency).
- **Sustainable funds have performed comparably to traditional funds over the long term,** with $100 invested in 2018 growing to $136 by year-end 2024, compared to growth of $100 to $131 for traditional funds.
- 92% of businesses report achieving **commercial returns from sustainability initiatives within 1 to 3 years.**
- Companies' **emissions profiles and credible climate transition plans are influencing borrowing costs** in bond markets and bank lending spreads.
- Incorporating sustainability into fixed-income markets gives companies **access to new pools of capital,** thereby increasing and diversifying their investor base.
- **Higher company valuations are earned by delivering** on cost, revenue mix, and resilience, not generic ESG claims.
- **Markets reward credibility:** Publish milestones that investors and lenders can price over time and tie sustainability metrics to capex, incentives, and strategy.

Objective

- To explore how capital markets are recognizing corporate sustainability performance, including the impact of performance on company valuations.

Background

- The report data is based on 60 recent academic and business studies, with contributions from WBCSD members and partners (methodology on pg. 2).

Report Findings

The short-term impact of corporate sustainability initiatives (pg. 4-5):

- **Several factors limit the financial returns of sustainability initiatives:**
  - The need for companies to balance R&D and marketing expenses with measurable returns
  - The rigorous certifications and robust data controls required to enhance reporting credibility
  - Low consumer demand for sustainable products (49% of shoppers want to buy sustainably but are not willing to pay a premium).
  - Standard accounting omits many short-term sustainability outcomes from the balance sheet, such as reduced pollution and lower emissions.
  - Financial markets are slow, inconsistent, or incomplete in pricing the risks and opportunities associated with the low-carbon transition
- **Returns take multiple forms, including** financial (e.g., cash flows, ROI), regulatory, market, and operational risk mitigation, strategic positioning (e.g., differentiation, first-mover advantage), and broader stakeholder value (customer, workforce, investors).
- Renewables are increasingly cost-competitive with fossil fuels, and improved energy efficiency **could yield $2 trillion in annual savings** globally (at 2024 prices).

The longer-term upside of corporate sustainability initiatives (pg. 6-7):

- **CEOs of companies with fully integrated sustainability strategies report greater business confidence than those without such strategies.** 94% expect profitable growth (compared to 71% for others), 92% anticipate attracting top talent (vs. 68%), and 87% foresee having a stronger brand and customer engagement (vs. 36%).
- **Management interest in an offense-oriented approach to sustainability** (e.g., to expand revenue or improve supply chain efficiency) **is growing,** possibly due to an improved ability to attribute financial returns to sustainability spending.
- **The most significant factor in management teams' hesitation to invest more heavily in sustainability strategies** is the perception of high upfront costs (31%), followed by conflicts with financial goals (28%), economic uncertainty (24%), business model challenges (24%), and insufficient government incentives (24%).

Companies taking a do-nothing approach (pg. 8):

- Companies that are unprepared for the physical and regulatory effects of climate change **could lose 5-25% of 2050 EBITDA**. The introduction of carbon pricing alone could account for up to half of EBITDA losses.

How financial markets respond to corporate sustainability performance (pg. 8-12):

- **91% of companies feel pressure from investors to advance sustainable practices.**
- 72% of investors believe that sustainability-linked value creation has a "moderate" to "significant" financial impact, but only **33% have measured those impacts on company valuations.**
- Sustainability-linked financing instruments can lower pricing: For matched **green bonds**, strong sustainability performance is associated with **yields 2-4 bps lower** on average.
- Quantifying a green premium is complex because isolating ESG factors from other market influences is difficult; however, one survey indicates that investment professionals and C-suite leaders **would pay a median premium of approximately 10% to acquire companies with above-average ESG records.**
- **Recent fund flows reinforce investor interest in sustainability.**
    - By 2022, global ESG assets exceeded $30 trillion, representing over 25% of total global assets under management.
    - Transition-labeled funds are growing fastest. There are 139 such funds, managing over $50 billion, with nearly 70% launched in the past four years.
    - The green, social, and sustainability bonds issued worldwide have a cumulative value of $6.9 trillion. Issuance grew by 7% in Q1 2025.
- **Equity markets don't fully factor in the impact of sustainability measures on risk mitigation and value creation because** investors often view environmental issues as externalities, lack high-quality, timely information on companies' sustainability performance, and discount long-term cash flows, which makes long-term sustainability-related returns appear financially insignificant.
- The financial returns associated with sustainability will become clearer as regulations tighten and equity markets evolve.

TECHNOLOGY SECTOR

2025 Climate Tech Investment Trends

By Sightline Climate

View the full report here

Notable Highlights

- **Climate tech venture and growth investment totaled $40.5 billion in 2025** (up 8% from 2024).
- **Cumulative climate tech investment since 2020 reached $255 billion** (up 19% from 2024).
- Deal count fell by 18% to 1,545 (the lowest annual level since 2021) and **early-stage investment declined,** while **growth investment increased by 78%** (largely due to mega-deals). This indicates that the climate tech **market is entering its maturation phase, where investors are consolidating and doubling down on fewer, proven bets.**
- There were **10 "mega-deals" in 2025,** totaling $10.1 billion. Six deals focused on **energy security/resilience** and two on **data center development.**
- **Transportation investment grew by 4%** following three years of decline. **Energy investment increased by 31%** to a three-year high of $14.4 billion.
- **Data centers** have eclipsed all other Built Environment sectors, **accounting for 78% of the vertical's** $18.9 billion in funding.

Objective

- To identify 2025 trends in private venture and growth investment in climate tech, including investment stage, geography, vertical, investors, funds, and exits.

Background

- The data in this annual report is based on VC and growth equity deals publicly announced by December 11, 2025. Deals were verified with investors. Project finance, private equity, and post-IPO funding are excluded (methodology on pg. 35-38).
- Verticals covered (encompassing 60+ sectors): Transportation, Energy, Food & Land Use, Industry, Built Environment, Climate Management, and Carbon.

Report Findings

2025 climate tech investment trends (pg. 9-12):

- Page 10 breaks down **cumulative climate tech investment by vertical** from 2020-25.
- **Investment peaked** in Q3 at $13.5 billion, **driven by mega-deals** in fusion, EVs, data centers, and energy storage.

Investment stage (pg. 14-15):

- **Early-stage investment is in decline**, with Seed and Series A investments falling by 20% and 7%, respectively. In crowded sectors such as EVs and carbon removal, investors shifted capital from underwriting new entrants toward more seasoned bets that are likely to emerge as category winners.
- Series B declined by 3%, suggesting that companies beyond initial commercialization continue to receive support. Series C declined by 44% to an all-time low of 45 deals.
- Average deal size increased from $57 million in 2024 to $71.6 million—well below the 2020-24 average of $164 million.

Investment geography (pg. 17):

- **US investment continued to exceed investment in all other regions.** VC funding grew by 27%, mostly driven by mega-deals in data centers, nuclear, and EVs.
- **European investment decreased by 13%** to $10.1 billion, the lowest level since 2020. A pullback from the most aggressive climate policies and some high-profile corporate bankruptcies are leading to investor hesitancy to back startups in hard-to-abate sectors.

Investment vertical (pg. 7, 19-20):

- **Page 20 breaks down climate investment by vertical and sector** from 2020 to 2025.
- Transportation remains the **largest share of cumulative climate tech investment** (34%, $86.7 billion), but **Energy is closing the gap at 25%** ($62.6 billion).
- The share of **Energy investment has increased by 2 percentage points** per year since 2023, as electrification and **AI-driven demand** have pushed investors toward technologies that prioritize energy expansion.
- Fission and fusion funding reached all-time highs.

Investment exits (pg. 22-24):

- **Exits declined by 5% from 2024**, primarily due to a decline in acquisitions, which accounted for 89% of all exits. **Climate tech remains a buyer's market**, with larger companies acquiring smaller ones in or adjacent to their core markets.
- **Renewables development topped the acquisition charts** for the second consecutive year, though the absolute number was less than half of 2024's 30 acquisitions. US developers were particularly affected after the OBBBA rolled back tax credits, thereby impacting project economics.
- There were nearly 50% fewer bankruptcies in 2025.

Investors (pg. 26-28):

- Total climate **investors across all stages fell 11% in 2025**. All stages are now following the trend of fewer, larger deals, **driven by specialist climate investors.**
- Energy and electricity companies now dominate corporate venture investing, using CVCs to rapidly build the technologies and expertise they need to meet rising power demand and decarbonize their supply chains.
- Big Tech firms are increasingly investing in decarbonization technologies, AI and data center assets, and low-carbon materials.

Funds (pg. 30-31):

- **New funds raised $103 billion in 2025.** European LPs' funds accounted for 54%, and US funds accounted for 16%, due to investor caution regarding climate mandates.
- **Only two of the top 10 largest funds were from US investors.** The top three were from European and Canadian investors.
- Infrastructure funds accounted for half of the top 10. Many investors incorporate renewable investments into their infra funds, indicating that there is **less explicit funding for climate investments but a larger pool from which to draw.**
- **Only 60% of the targeted capital was secured in 2025.** 40% remained in progress, indicating that another $69 billion could come down the pipeline.

Nature Positive: Role of the Technology Sector

By World Economic Forum (WEF), in collaboration with Oliver Wyman

View the full report here

Notable Highlights

- While 78% of **Fortune Global 500 companies** had climate targets in 2024, only **26% had freshwater consumption targets, 12% had biodiversity targets,** and **5% had assessed their impacts on nature**.
- The global **semiconductor manufacturing** industry consumes **over 1 trillion liters of freshwater annually.**
- By 2030, **hyperscale** datacenters may require over **1GW of power**, 500-800 acres of land, and over **2 billion liters of water annually**.
- Hardware and electronics manufacturing generate over **136.7 trillion pounds of e-waste annually**.
- **Failure to address nature impacts and dependencies could threaten tech companies' near-term license to operate and long-term resilience.**
- **Reducing nature impacts and dependencies** can enable tech companies to **unlock about $800 billion in cost savings and revenue upside by 2030**; develop resilience and adaptability to nature-related risks; minimize disruption from incoming policy and regulatory requirements; overcome community and regulatory opposition to advance projects; and meet investor, customer, and employee expectations.
- The following Report Findings include **nature-positive business opportunities for the tech sector** and **priority actions for tech companies, their customers, and financial institutions to drive nature-positive outcomes.**

Objective

- To provide an overview of the tech sector's impacts and dependencies on nature, as well as priority actions for tech companies, their customers, and financial institutions in semiconductor manufacturing, data center, and hardware to drive nature-positive outcomes.

Background

- This report is part of the Nature Positive Transitions report series.

- To identify potential business opportunities for the priority actions in the tech sector, the authors selected relevant opportunities within the nature-positive economy (from 60 identified in the Future of Nature and Business report) and estimated their market potential using the sector's share of global GDP as the most relevant adjustment factor (methodology on pg. 64-71).
- Priority actions were assigned leadership and feasibility ratings using a qualitative framework validated with business, civil society, and academic experts.
- "Nature-positive" is defined as halting and reversing global nature loss by 2030 (2020 baseline) and achieving full nature recovery by 2050.

Report Findings

Tech sector impacts and dependencies on nature (pg. 14-17, 19-26):

NOTE: Pages 19-26 include detailed findings.

- The TNFD LEAP approach and the SBTN **frameworks can help companies assess** their nature impacts and dependencies.

Semiconductor manufacturing:

- From 2010 to 2024, energy use per wafer increased 3.5x, and **GHG emissions increased nearly 3x.**
- Manufacturing a 12-inch wafer can generate approximately 66 pounds of waste, with solid-waste recycling rates averaging 70%.
- 60-70% of recent semiconductor production was concentrated in Taiwan and South Korea, creating **supply chain risks** and potential geopolitical impacts. The EU and the U.S. have passed legislation to support domestic chip production.
- 6-8% annual growth is expected for the sector by 2030.

Data centers:

- Over 11,000 data centers are operating worldwide, with **demand expected to grow by around 20% annually through 2030.**
- By 2030, 60-65% of global AI workloads may be hosted by **hyperscalers**.
- Governments in some data center hubs are limiting development due to power grid strain and concerns about centers monopolizing natural resources.
- **$64 billion** in US data center **projects have been blocked or delayed** since May 2024 due to local concerns about natural resource demands and power constraints.

Hardware/electronics:

- **E-waste is projected to reach 180.8 trillion pounds by 2030**.
- **Only 22% of e-waste is recycled.** Around 3.3 billion tons are sent to middle- and low-income countries, where they are often processed under unsafe conditions
- E-waste accounts for 70% of US toxic waste, and **volumes are expected to grow 5x** faster than recycling volumes.
- Hardware and electronics manufacturing is expected to grow by approximately 8% per year through 2030.

Nature-positive business opportunities for the tech sector (pg. 11):

Socio-economic system	Business opportunity from *Future of Nature and Business* report	Original size in *Future of Nature and Business* report ($ billion)	Adjustment factor to size share of technology sector	Opportunity size for technology sector ($ billion)
Food, land and ocean use	Nature climate solutions	85		13.2
	Restoring degraded land	75		11.6
	Sustainable forestry management	165		25.6
	Non-timber forest products	65		10.1
Infrastructure and the built environment	Energy efficiency (buildings)	825		127.9
	Smart metering	95		14.7
	Urban green roofs	15		2.3
	Waste management	305		47.3
	Waste and sanitation infrastructure	155		24.0
	Wastewater reuse	50		7.8
	Energy access	45		7.0
	Natural systems for water supply	140		21.7
	Building resilience to climate shocks	20		3.1
	Sustainable infrastructure financing	295		45.7

Energy and extractives	Circular economy (appliances)	565	Technology sector share of global GDP: **15.5%**	87.6
	Circular economy (electronics)	390		60.5
	End-use steel efficiency	210		32.6
	Additive manufacturing	135		20.9
	Circular models (construction)	70		10.9
	Reducing packaging waste	70		10.9
	Resource recovery	225		34.9
	Shared infrastructure	130		20.2
	Water efficiency in mining	75		11.6
	Mine rehabilitation	70		10.9
	Sustainable substances in extraction	20		3.1
	Technology in energy and extractives supply chains	30		4.7
	Expansion of renewables	650		100.8
Additional opportunity	Energy efficiency (energy-intensive sectors)	187		29.0

Images taken from pg. 11

Actions for tech companies to drive nature-positive outcomes (pg. 28-47):

NOTE: The following pages include detailed guidance, actions, tools, and company examples. Pages 44-47 **categorize the actions as foundational, leading** (expanding nature benefits and competitive advantage), **or aspirational** (transformational for the value chain), and include corporate case studies.

- **Advance resilient and restorative water use (pg. 30-31):**
  - Review site locations for **water stress levels** and work with local and regional officials to ensure water availability.
  - Design buildings and processes for **water efficiency**. During operations, update existing processes to improve inefficiencies and reduce water use.
  - Implement a standard (e.g., ISO 46001) to conduct a full **accounting of water use** in operations and key supply chain components.
  - Use non-potable water where feasible.

  - Use closed-loop water systems for server and facility cooling, with onsite water purification to minimize net freshwater withdrawals.
  - Support projects to monitor and restore local aquifers and watersheds.

- **Mitigate pollution and pursue circularity (pg. 32-34):**
  - Optimize **hardware design** with circularity in mind (e.g., utilize recycled materials and design with a modular focus to support repairability).
  - Prioritize the maintenance and replacement of individual tech components to extend a product's lifespan.
  - Embed **digital circularity** practices to minimize data waste and the associated storage, computing, and network resources required over a product's lifespan.
  - Develop the **infrastructure** (e.g., collection systems and consumer awareness) for the repair and reuse of consumer electronics.
  - Develop **collection programs** to streamline recycling processes and harvest reusable device components.
  - Invest in **e-waste recycling infrastructure**.
  - Avoid pollution and contaminants by using advanced waste control systems and setting zero-waste-to-landfill standards (e.g., UL 2799).
  - Invest in and support land and water restoration efforts.
- **Tackle non-power operational and embodied emissions (pg. 34-35):**
  - Develop **monitoring processes** to identify and prevent GHG leaks.
  - Utilize gas scrubbers to capture waste gases and prevent emissions.
  - Design products to **reduce embodied carbon** by minimizing material inputs.
  - Invest in high-quality, verified carbon **offset and removal** credits to cover any remaining emissions. Consider biodiversity and other co-benefits.
- **Promote land stewardship and restoration (pg. 36-37):**
  - Prioritize new developments in brownfield areas to avoid net new impact.
  - Utilize **biodiversity risk assessments** when conducting site selection to avoid construction on high-value ecosystems, such as protected areas.
  - For new sites, conduct **land assessments** to identify existing harm and establish a baseline for comparison during decommissioning.
  - Consider green roofs and native landscaping that promote local biodiversity, are pollinator-friendly, and reduce irrigation requirements.
  - Use **biodiversity offsetting** to account for unavoidable habitat conversion.

  - Engage community stakeholders to ensure they benefit from the project's value.

- **Power operations sustainably (pg. 38-39):**
  - Use onsite **low-carbon power sources** and PPAs to minimize nature impacts from electricity generation.
  - Design buildings for **power-use efficiency.**
  - Sponsor the development of generation capacity, storage, transmission, and distribution infrastructure to enable additional renewable energy.
  - Monitor and optimize **cooling systems** to improve efficiency and performance (e.g., by upgrading technology).
  - Install dynamic process management systems aligned with ISO 50001 to prevent idle energy use.
- **Engage the supply chain (pg. 40-41):**
  - **Set commitments** across nature-loss drivers (e.g., GHG emissions, water, land, pollution, and waste) to build a responsible supply chain.
  - Identify and work with **suppliers** that hold sustainability certifications (e.g., ISO 14001, Forest Stewardship Council, Rainforest Alliance) and have conducted **impact assessments of their operations**.
  - Engage metal and mineral suppliers to provide recycled materials, and engage mining companies to provide lower-impact materials (e.g., through book-and-claim transactions).
  - Collaborate with suppliers to replace high-impact chemicals and gases (e.g., PFAS) with lower-impact alternatives. If none exist, work to develop new processes and inputs to phase out these materials.
  - Pursue zero- or low-carbon building materials.
- **Engage externally and support policymaking (pg. 42-43):**
  - **Report on key nature-loss drivers** using science-based frameworks such as the TNFD.
  - Consider setting **external commitments** (e.g., SBTN).
  - Proactively engage in **policy development** to help shape balanced, science-based policies that are feasible for implementation.
  - Collaborate with regulators to track and publish nature impact metrics, thereby developing reliable sector data and benchmarks.

Priority actions for tech customers and financial institutions (pg. 53-54):

- **Companies can better include nature considerations in their procurement strategies by prioritizing suppliers that demonstrate nature-positive practices.** Page 53 includes questions companies can ask tech suppliers and vendors **to assess their nature practices and progress.**
- **Companies can integrate their nature-positive and net-zero strategies using the ACT-D framework** (pg. 49-50):
    - **Assess:** Identify, measure, value, and prioritize nature-related impacts and dependencies across value chains to ensure companies act on the most material ones.
    - **Commit:** Set transparent, time-bound, specific, science-based targets when material.
    - **Transform:** Take actions to transform business models.
    - **Disclose:** Track performance to publicly disclose material nature-related information.
    - Pages 49-50 include **tools and guidance** for applying the ACT-D framework, developing nature transition plans, and adapting net-zero transition plans to include nature and biodiversity commitments and objectives.
- **Financial institutions can support credible transition plans by embedding nature metrics into assessment frameworks and client engagement.**
    - The Nature Positive: Corporate Assessment Guide for Financial Institutions report provides guidance for financial institutions on assessing companies' nature performance and the indicators used to do so.
    - **Leading financial institutions are shifting from a compliance focus to viewing nature as an opportunity for value creation.** Many are linking financing to nature-positive outcomes and supporting projects such as sustainable data centers and digital infrastructure.

HEATING

Heat Resilience: An Opportunity for Cross-Sector Action on Heat in the United States

By Trane Technologies, the Forum for the Future Climate and Health Coalition

View the full report here

Notable Highlights

- The U.S. economy **lost an estimated $162 billion in 2024 alone due to heat-related impacts.**
- Only **4% of companies have assessed their vulnerability to heat stress**, despite rising temperatures driving employee absenteeism, lower productivity, and higher healthcare costs.
- **Leading companies** are adopting dual sourcing for products, materials, and services, supplier collaboration, and supply chain resilience initiatives to reduce supply chain vulnerability to heat.
- **Barriers to scaling heat resilience solutions** include a lack of strategic leadership on heat adaptation, a compelling business case, reliable data on heat-related illnesses, and collaboration on heat adaptation initiatives.
- The following Report Findings include **actions all companies can take** across operations, risk management, employee health and safety, product innovation, manufacturing, and the supply chain **to build heat resilience in the U.S.,** as well as **sector-specific guidance** for six sectors and **corporate case studies**.

Objective.

- To provide an overview of the current risks and impacts of extreme heat in the U.S., innovative ways sectors are addressing them, and actions for companies to cultivate heat resilience.

Background

- The report data are based on a convening held in June 2025, a follow-up dialogue between leaders in business, government, philanthropy, community organizations, and civil society during Climate Week NYC, and case studies and feedback from various companies, NGOs, and coalitions (methodology on pg. 3, 59).

Report Findings

Current state of extreme heat hazards in the United States (pg. 8-10):

- **Power grids are increasingly strained** by surges in cooling demand, affecting factories, warehouses, and digital infrastructure.
- Water scarcity, exacerbated by prolonged drought and heat, is **threatening production in water-intensive industries** like agriculture, textiles, and manufacturing.
- Extreme heat is **straining US health care systems**, with nearly 120,000 heat-related ER visits in 2023 alone.
- Extreme heat **exacerbates existing environmental and social inequalities**. Historically disadvantaged communities facing chronic underinvestment experience higher heat exposure, limited access to cooling, and elevated mortality rates.

Innovation and collaboration to address extreme heat (pg. 10-16):

- **Companies are incorporating heat resilience into occupational health and safety practices, implementing heat safety checklists, adaptation toolkits, and flexible work policies to reduce heat-related illness and improve productivity.**
- Parametric insurance products are being designed to issue payouts to workers during extreme heat events.
- Forecasting and scenario analysis tools, such as EarthScan, can help assess financial and operational heat risk.
- Pages 13-16 include **case studies of private-sector innovation** to address extreme heat and make the business case for investment in heat resilience. Pages 10-12 break down community-driven initiatives to address extreme heat. (See pp. 41-52 for detailed case studies.)

Barriers to scaling heat resilience solutions (pg. 18-20):

- **A compelling business case for heat adaptation is lacking.**
    - Heat adaptations, such as cooling infrastructure, usually offer **indirect or long-term benefits** rather than immediate revenue.
    - Employers struggle to justify investment in the absence of clear returns.
    - Heat generally does not leave visible physical destruction, making economic impacts **harder to trace and assess**. As a result, banks and investors struggle to integrate heat-related risks into financial models.

  - Financial institutions and businesses **lack the data or tools** to link heat exposure directly to business losses or loan defaults.

- **Strategic leadership on heat adaptation is absent across sectors.**
  - In the private sector, heat protection is typically not integrated into core governance and strategy, and is often framed as a **tick-box ESG exercise**.
  - Placing climate adaptation and mitigation at the heart of business strategies has become even more challenging amid **ideological debates** surrounding ESG.
  - Heat-resilience strategies are often developed in **response to crises** rather than proactively developed for future risks.
- There is a **significant need for investment in retrofits** to lower energy costs and reduce the burden on low-income households during heatwaves.
- **Heat adaptation initiatives often lack coordination and collaboration** across government levels and the private sector. Medical and sustainability departments often work in siloes, delaying the development of integrated heat adaptation strategies.
- **Reliable data on heat-related illnesses, emergency department visits, and deaths are lacking.** Data on the equity dimensions of heat impacts is sparse, which risks that interventions overlook the most vulnerable groups.
- **US policies are limited:**
  - There are no **stringent rules or guidelines** for businesses to implement comprehensive heat-prevention plans to protect workers' health and safety.
  - Urban planning and **building codes don't account for climate risks**, increasing the likelihood of damage and long-term costs (e.g., rising insurance rates).

Actions for all companies to cultivate US heat resilience (pg. 22-34, 39):

*Recommendations are classified as "foundational" (F) (critical for duty of care) or "advanced" (A) (an upfront investment of time and/or funds is needed). Pages 41-52 include **case studies**.*

▷ **Subchapters (sector-specific actions):** Pharmaceuticals & Consumer Health (pg. 28), Agriculture & Food (29), Built Environment (30), Technology & Innovation (31), Insurance (32), Media & Communications (34)

- **Recognize heat as a material risk** to operations and workforce health (e.g., by internalizing climate- and heat-related costs, such as lost productivity).
- **Earmark capital for climate resilience** and use innovative finance to bolster heat adaptation. Invest in physical upgrades and financial products that spread risk (e.g., green bonds to fund resilience projects).

- Foster a **company culture** that **acknowledges extreme heat as a new norm** that must be planned for (rather than an anomaly) and treats extreme heat events as **a shared responsibility** and an opportunity for innovation.
    - Empower employees at all levels to suggest new ideas.
    - Establish feedback loops, such as tracking the effectiveness of new cooling equipment or surveying employees on safety measures.

RISK MANAGEMENT, STRATEGY AND GOVERNANCE

- Formalize the oversight of extreme heat risks through robust governance processes, starting with comprehensive risk assessments of company operations, assets, and supply chains that feed into corporate strategy and sustainability reports / disclosures – and include metrics that capture both avoided losses and productivity gains to enable tracking of ROI on resilience investments (F)
- Build heat stress management comprehension and capabilities from the Executive Board level to the workforce at risk (F)
- Incorporate extreme heat analyses and scenarios into enterprise risk management and continuity planning (alongside other climate-related risks like flooding, drought, and sea level rise) (A)
- Introduce monitoring systems that measure financial and operational benefits (e.g., reduced downtime, lower healthcare costs, improved retention), so that resilience actions demonstrate a clear return on investment (A)

WIDER ASSETS

- Capitalize on cross-functional collaboration across sustainability, occupational health, commercial, R&D, and facilities / engineering to address heat systemically for maximum impact and innovation (F)
- Upgrade physical infrastructure from air-conditioned vehicle fleets to heat-reflective roofing, radiant cooling panels, and high-efficiency chillers – to reduce downtime and health risks during extreme heat (A)
- Use digital tools to stress-test operations against extreme heat such as:
    - *Geographic Information Systems (GIS) to identify high-risk zones and design preventative measures* (A)
    - *Digital twin simulations – virtual replicas of physical facilities – to model how those systems respond to heat extremes and experiment with suitable adaptations* (A)
    - *Climate analytics platforms (often powered by AI) to map out future heat risks* (A)
    - *Forecasting models to optimize operations daily, such as scheduling deliveries or maintenance at cooler times* (A)

EMPLOYEE HEALTH & SAFETY

- Assess heat risk in the workforce and build a business case for the incorporation of heat into health and safety policies on the central rationale of business continuity (F)
- Incorporate extreme heat readiness and heat adaptation measures into occupational health and safety policies and practices. Heat adaptation measures can include shade, misting fans, well-ventilated, dry / air-conditioned spaces, reflective or heat-absorbing shielding or barriers, heat training for staff at all levels, flexible working policies during extreme heat episodes, earlier / later shifts, heat acclimatization, increased / guaranteed hydration / shade breaks, lighter workload, possibility for remote work to avoid heat exposure while commuting, effective monitoring for heat-related conditions, extra staff hire, encouragement of active lifestyles, clear emergency protocols, and income insurance schemes to compensate lost wages when it is unsafe to work (F)
- Establish workplace heat stress management and emergency action plans that outline clear escalation procedures for extreme conditions, such as access to designated cooling zones, buddy systems, and coordination with local emergency services, while acknowledging that acute or chronic heat is location and season-specific issues (F)
- Engage employees in heat-related conversations and actions, acknowledging that the mental and physical health impacts of heat differ according to local context and tailoring protections for vulnerable groups such as heavy laborers, pregnant employees, and those with pre-existing health conditions (F)
- Develop extended employee support programs, for example expanded health benefits or emergency aid for heat-related impacts, reviewing insurance and paid leave policies to cover heat-related illness, and integrating mental health services to address heat-related fatigue, stress, and cognitive decline (F)
- Track and report heat-related incidents, absenteeism, and productivity impacts to refine policies and demonstrate ROI (F)
- Where workers are most at risk and when viable, deploy cost-effective wearables with smart sensors, among other tools, to monitor core body and environmental temperature, hydration, and exposure setting alarm thresholds for when extra precautions kick in (A)
- Account for heat exposure beyond the workplace by recognizing that employees may arrive at work already fatigued, dehydrated, or heat-stressed from conditions outside the workplace such as commuting and poorly cooled housing, and by adapting health and safety strategies to reflect cumulative risks through supportive measures like hydration support, recovery time, flexible scheduling, and access to cooling resources (A)

PHYSICAL INFRASTRUCTURE (INCLUDING MANUFACTURING)

- Create strategies for critical facilities to adapt to extreme heat e.g., by equipping manufacturing sites and storage warehouses with enhanced (or mobile) cooling systems, better insulation, and backup power generation (F)
- Introduce automatic and proactive response to heat through smart HVAC and building management systems (BMS), which automatically adjust heating, ventilation, and air conditioning (HVAC) based on occupancy, real-time heat patterns, and weather forecasts (A)

PRODUCTS AND SERVICES	• Explore product and service innovation through the lens of heat resilience, designing products and services that enable heat resilience (see pages 28-34 for specific examples) (F) • Harness customer-facing brands to raise awareness of impacts of extreme heat and encourage behavioral and culture change through storytelling and broader communication (F)	• Ensure safe conditions for employees and customers in company-owned facilities (e.g., temperature standards in stores, warehouses, and offices) (F) • When using brands and products to communicate on heat, collaborate and partner with influential, trusted voices (e.g., doctors, pharmacists, local and national leaders, or relevant celebrities) (A)
SUPPLY CHAIN AND COMMUNITIES	• Conduct heat risk assessments for supply chains, increase supplier awareness of heat and their ability to shift to more heat-resilient practices and engage experts to assist in ensuring safe workplaces (F) • Partner with local communities and neighborhoods where employees live to enhance heat resilience by opening company facilities as cooling spaces during heatwaves (F)	• Harness technology and digital solutions (i.e., forecasting, and early warning systems) to anticipate heat disruptions and inform decision-making across operations and supply chains (F) • Invest in local cooling infrastructure at supplier sites (A) • Broader investment in communities to build heat resilience, especially vulnerable, low-income groups most affected by extreme heat (A)
WIDER ENABLING ENVIRONMENT	• Capture, advance, and integrate data on climate, health, heat, and ROI metrics to illustrate the costs and benefits of heat resilience and adaptation (F) • Influence local, national, and international government and industry policy to create an enabling policy environment for heat adaptation, including advocating for tax credits, subsidies, and insurance mechanisms that reduce financial barriers to resilience investments (A) • Enable open access to heat research identifying effective ways of measuring and valuing impacts, while highlighting successful heat interventions (A) • Make the case for practical change, leveraging business' considerable influence on peer networks, investors, and trade bodies, illustrating negative heat impacts and galvanizing support for delivering co-benefits (A)	• Create in-sector and cross-sector collaborations on heat to capitalize on many sectors' complementary expertise and influence, including partnerships with healthcare providers to co-develop communication, workplace health interventions, and research on heat-health risks, and partnerships with insurers and financial institutions to design packages and incentives that protect businesses, workers, and communities (A) • Educate and activate through local community partnerships and existing community-based initiatives bringing together community, local policy makers, and industry partners to strengthen local-level solutions. Share learnings broadly to inform broader policy frameworks, scale effective interventions, and ensure adaptation strategies are grounded in local realities (A)

Images taken from pages 25-27

ESG RATINGS

Rate the Raters 2025

By ERM Sustainability Institute

View the full report here

Notable Highlights

- Companies perceive the following as the top three rating entities:
  - EcoVadis as the No. 1 most useful rating agency and No. 3 for quality
  - CDP as No. 2 in quality and usefulness
  - S&P Global ESG as No. 1 in quality and No. 3 in usefulness
- The number of **companies engaging with over 10 raters dropped** by more than half from 2023, while those working with 2 to 5 rose by 25%. This suggests that **sustainability teams are stretched by increasing disclosure requirements and focusing resources** on the ratings most relevant to their stakeholders and strategies.
- **Investor demand remains the top motivation for corporate engagement with ESG ratings** (cited by 46% of companies, down from 57% in 2023). **Customer demand is increasingly influential,** with 23% citing it as the top driver (up from 7%), tied with performance assessment (23%).
- **81%** report having moderate to high **trust in raters' ability to assess companies' sustainability performance accurately.**
- **77% want raters to align their methodologies** with leading mandatory and voluntary ESG reporting standards.
- The following Report Findings include **recommendations for companies engaging ESG ratings providers.**

Objective

- To examine which ESG ratings providers are most trusted by companies and how companies perceive their usefulness and quality, as well as to provide recommendations for companies engaging with providers.

Background

- The last Rate the Raters report was published in 2023.
- The report data is based on a 2025 survey of 386 corporate respondents across 39 countries and 28 industries, as well as interviews with 34 corporate sustainability professionals (methodology on pp. 4, 12, 38).
- Raters analyzed: Bloomberg, CDP, EcoVadis, FTSE4Good, ISS, JUST Capital, LSEG (formerly Refinitiv), MSCI, RepRisk, Sedex, Sustainable Fitch, Sustainalytics, and S&P Global ESG.

Report Findings

Perceived quality and usefulness of ratings providers (pg. 13-22):

- **Pages 14-15 compare the average perceived quality and usefulness of all ESG raters analyzed in 2023 versus 2025.**
- **Companies perceive EcoVadis as the No. 1 most useful rating agency and No. 3 in quality** (up from No. 7 in 2023). The platform contains reporting data and ratings of 150,000 companies, far more than most competitors, giving companies and investors broader insight into the sustainability of the supply chains they examine. This indicates the **growing popularity of supply chain solutions over investor-focused ratings**.
- **Companies still rank active raters** (which require companies to provide direct data) **higher in quality and usefulness** than passive raters (which collect public information), despite the reporting burden.
- Methodology and the **credibility of data sources** remain the top factors determining rating quality.

Company trust in and engagement with rating providers (pg. 23-28):

- Average **trust in raters' ability to accurately assess** companies' sustainability performance has **risen by 6% from 2023,** likely due to many countries introducing codes of conduct and planned regulations to improve the transparency of rating methodologies.

The future of ESG ratings (pg. 29-34):

- About **84% of companies plan to continue engaging with ESG ratings** and see them as an important part of their sustainability strategy, and 64% agree that investor demand for ratings will remain strong. However, **46% agree that the relevance of ESG ratings will decrease over time.**
- CDP, MSCI, and Sustainalytics are the most frequently cited raters that companies plan to engage in the 2026 ratings cycle.
- **77% want raters to align their methodologies with leading mandatory and voluntary ESG reporting standards.** The simplification and delayed rollout of ESG regulations in Europe, as well as ESG backlash in the U.S., have given raters more time to adjust their strategies.

Recommendations for companies engaging ESG ratings providers (pg. 36):

- **Re-evaluate your ratings strategy to reflect changes in stakeholder expectations, emerging disclosure requirements, and evolving methodologies.**
    - Consider external users, such as investors and customers, as well as internal uses for the ratings, including benchmarking, performance management, executive engagement, disclosure preparation, and sustainability strategy development.
    - Prioritize ESG ratings based on the stakeholders and factors most important to the company.
- **Use ratings as a management tool** to identify performance gaps, track progress, improve data collection and governance, and inform strategic decisions.
- **Strategically engage priority ESG raters to ensure they have accurate data.** This can include providing context for and clarifying data submissions, discussing methodology changes, and participating in data review periods.
- **Provide raters with feedback** on how they can improve the corporate engagement experience.
- Participate in consultations on **public policy related to ESG ratings**.