

newtral

Navigating the net zero transition: A guide to climate risk management

Your Comprehensive Guide to Climate Risk and Implications:
Unveiling the Environmental Impact of Products and Services



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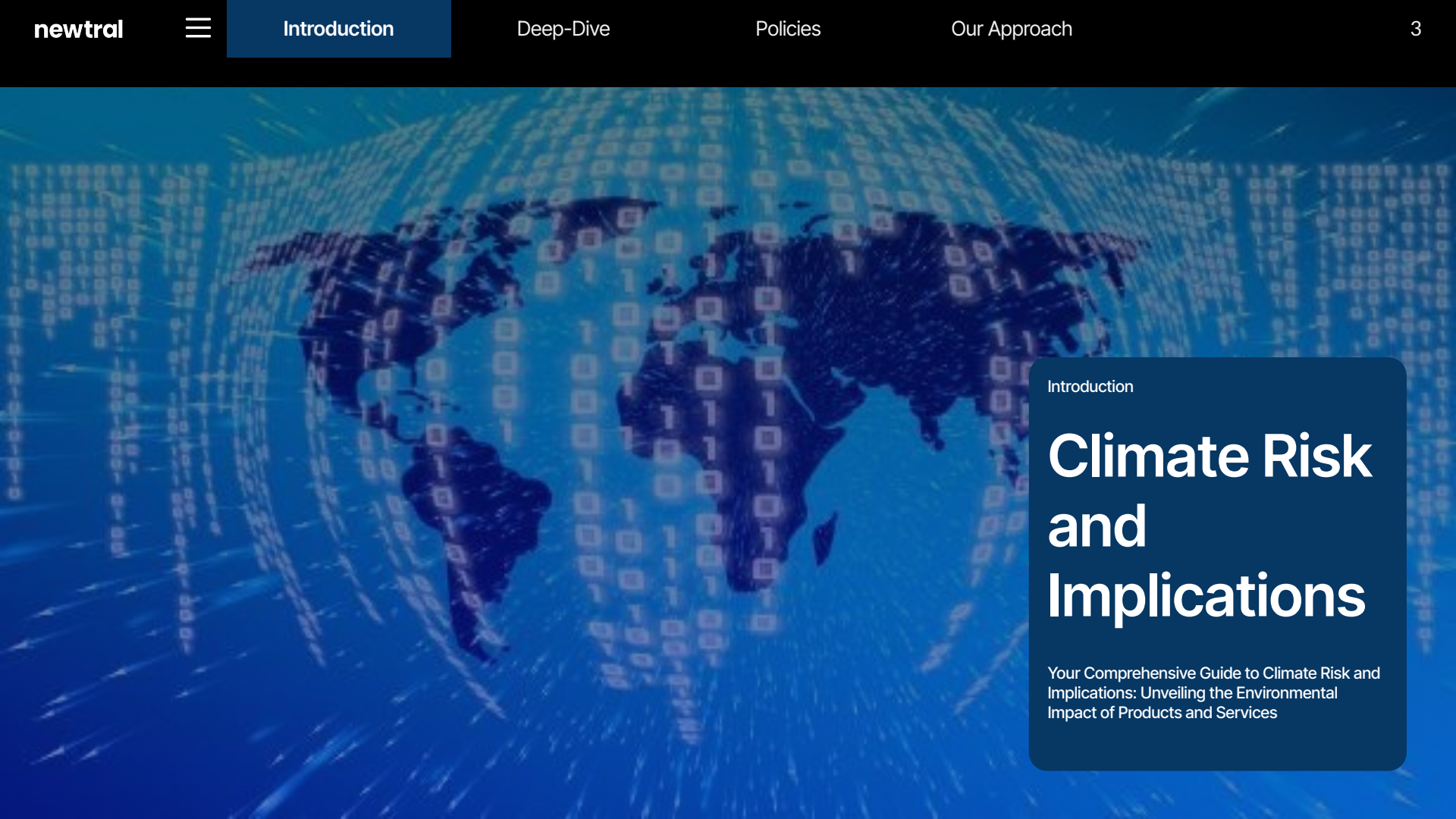
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Introduction

Climate Risk and Implications

Your Comprehensive Guide to Climate Risk and
Implications: Unveiling the Environmental
Impact of Products and Services

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Definition of Climate Risk and Implications:

Climate risk refers to the potential negative impacts that climate change can have on an organization's operations, revenue, expenditures, assets, liabilities, supply chain, and overall business continuity. These risks can be categorized into two main types:

1. Physical risks:

- **Acute:** Extreme weather events like hurricanes, floods, wildfires, and heatwaves that can disrupt operations and damage assets.
- **Chronic:** Longer-term shifts in climate patterns, such as rising sea levels, temperature changes, and drought, affecting resource availability and productivity.

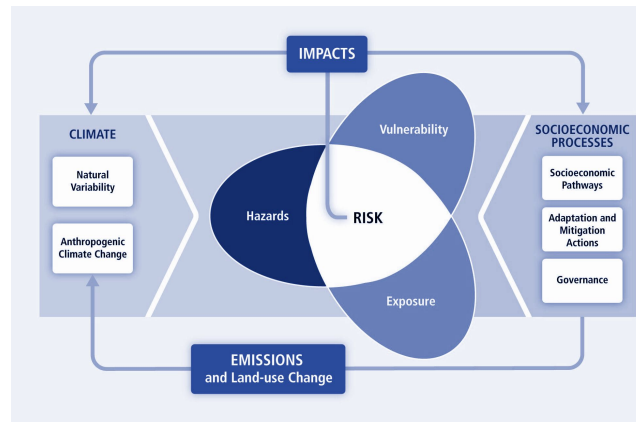
Example: In 2017, Hurricane Harvey caused widespread flooding and disrupted operations for several energy companies in Texas, resulting in billions of dollars in losses.

2. Transition risks:

- **Policy and legal risks:** Emerging climate regulations, carbon pricing mechanisms, and litigation exposure.
- **Technology risks:** Shifts towards low-carbon technologies disrupting existing business models.
- **Market risks:** Changing consumer preferences and investor sentiments towards sustainable products and practices.
- **Reputational risks:** Negative public perception and loss of stakeholder trust due to poor climate action.

Example: Automakers face transition risks as stringent emission standards and consumer demand for electric vehicles threaten their traditional gasoline-powered vehicle business models.

Implications for businesses include increased operational costs, supply chain disruptions, asset impairments, litigation risks, and potential loss of market share or revenue due to changing consumer preferences and regulatory compliance costs.





Drivers Behind the Net-Zero Transition:

Regulatory Pressures:

- Governments globally are introducing policies and regulations to address climate change, such as carbon pricing, emission standards, and renewable energy mandates.
- Example: The European Union's Green Deal aims to make the EU climate-neutral by 2050, with various policy initiatives like the Carbon Border Adjustment Mechanism (CBAM).

Investor Pressures:

- Investors are increasingly considering climate risks and opportunities in their investment decisions, pushing companies to enhance disclosure and take concrete actions towards decarbonization.
- Example: The Climate Action 100+ initiative, representing over \$60 trillion in assets under management, engages with companies to improve climate governance and align with a net-zero future.

Consumer Pressures:

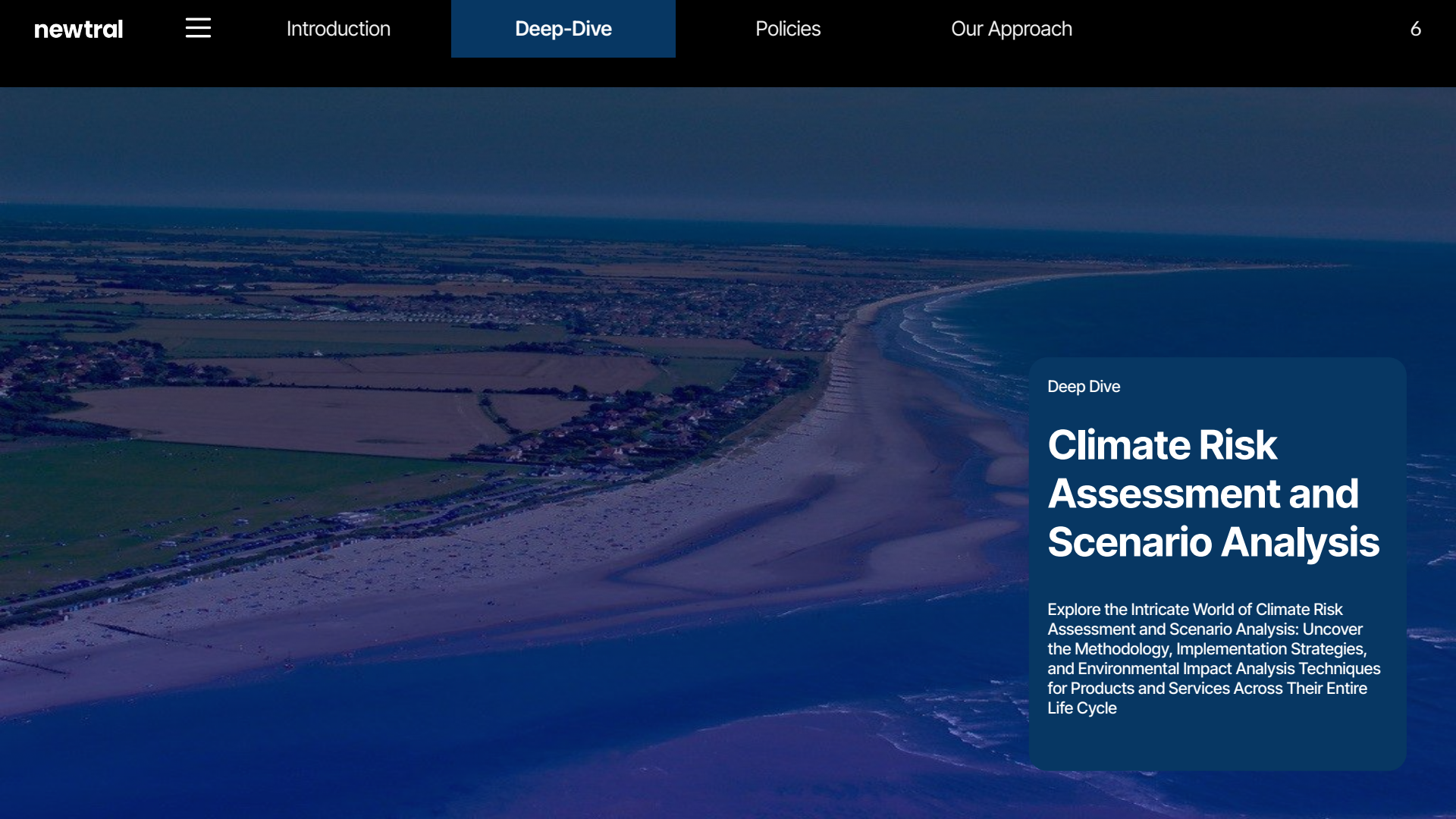
- Consumers, especially younger generations, are demanding more sustainable products and services, and are willing to shift their purchasing decisions based on a company's climate performance.
- Example: In 2021, consumer goods giant Unilever reported that their sustainable living brands grew 66% faster than other brands, driven by consumer demand for environmentally conscious products.

Role of Climate Risk Management in Achieving Net-Zero Goals:

Effective climate risk management is essential for organizations to navigate the risks and opportunities associated with the net-zero transition. It involves:

- Identifying and assessing climate-related risks and opportunities across the value chain.
- Developing strategies to mitigate risks and capitalize on opportunities, such as transitioning to low-carbon technologies and sustainable business models.
- Integrating climate risk into overall risk management processes, decision-making, and strategic planning.
- Enhancing transparency and disclosure to meet stakeholder expectations and regulatory requirements.
- Aligning climate risk management with the organization's net-zero targets and decarbonization roadmap.

By proactively managing climate risks, organizations can build resilience, minimize potential financial impacts, and position themselves as leaders in the net-zero economy.

An aerial photograph of a coastal town and beach, overlaid with a semi-transparent blue filter. The town is situated inland, with a wide sandy beach and the ocean in the foreground. The blue overlay is darker on the right side, where the text is located.

Deep Dive

Climate Risk Assessment and Scenario Analysis

Explore the Intricate World of Climate Risk Assessment and Scenario Analysis: Uncover the Methodology, Implementation Strategies, and Environmental Impact Analysis Techniques for Products and Services Across Their Entire Life Cycle

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Climate Risk Assessment and Scenario Analysis

Identifying and evaluating climate-related risks:

Climate change poses a wide range of risks to organizations, which can be broadly categorized into physical risks and transition risks.

Physical risks:

- **Acute risks:** Events like hurricanes, floods, wildfires, and heatwaves that can damage assets and disrupt operations.
- **Chronic risks:** Longer-term shifts in climate patterns, such as sea-level rise, temperature changes, and drought, which can affect resource availability, supply chains, and operational conditions.

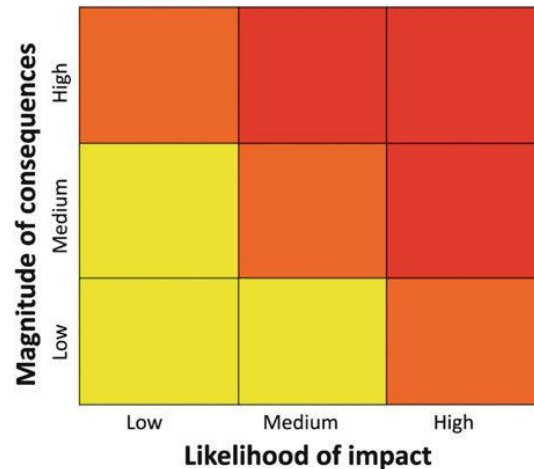
Example: A coastal manufacturing facility may face physical risks from rising sea levels and increased frequency of storms, leading to potential flooding, damage to infrastructure, and supply chain disruptions.

Transition risks:

- **Policy and legal risks:** Emerging regulations, carbon pricing, and litigation related to climate change.
- **Technology risks:** Disruptions and shifts in technology needed to transition to a low-carbon economy.
- **Market risks:** Changing consumer preferences, reputational impacts, and shifting market dynamics.

Example: An automotive company may face transition risks due to policies promoting electric vehicles, technological advancements in battery technology, and consumer demand for low-emission vehicles.

Evaluating these risks involves assessing their potential financial implications, including direct costs (e.g., property damage, operational disruptions) and indirect costs (e.g., supply chain impacts, regulatory penalties, market shifts).





Climate scenario analysis methodologies:

Climate scenario analysis is a critical tool for organizations to assess the potential impacts of climate change under different future scenarios. It helps identify risks and opportunities and informs strategic planning and decision-making.

Common methodologies for climate scenario analysis include:

- **Qualitative scenarios:** Descriptive narratives of plausible future climate conditions and their potential impacts.
- **Quantitative models:** Use of computer models and simulations to project climate variables (e.g., temperature, precipitation) and their potential financial impacts.
- **Integrated Assessment Models (IAMs):** Combined models that incorporate climate, economic, and policy factors to assess climate change impacts and mitigation strategies.

Example: The IPCC (Intergovernmental Panel on Climate Change) uses scenario analysis to explore different greenhouse gas emission trajectories and their associated climate impacts, such as temperature rise, sea-level changes, and extreme weather events.

Incorporating climate risks into enterprise risk management:

Integrating climate-related risks into an organization's existing enterprise risk management (ERM) framework is crucial for effective risk governance and decision-making.

Key steps include:

- **Governance and oversight:** Establish board-level oversight and accountability for climate risk management.
- **Risk identification:** Conduct a comprehensive assessment to identify and prioritize climate-related risks across the organization's operations, supply chain, and value chain.
- **Risk analysis and evaluation:** Assess the potential financial and non-financial impacts of identified risks using scenario analysis, stress testing, and other quantitative and qualitative methods.
- **Risk treatment:** Develop and implement strategies to mitigate, transfer, accept, or control identified risks, such as emissions reduction initiatives, adaptation measures, or insurance solutions.
- **Monitoring and reporting:** Continuously monitor and report on climate risk exposures, risk management actions, and progress towards climate-related goals and targets.

Example: A financial institution may incorporate climate risks into its ERM framework by assessing the potential impacts of physical and transition risks on its loan portfolio, investment strategies, and operational resilience, and developing appropriate risk mitigation and adaptation strategies.



Net Zero Transition Strategies

Setting science-based emissions reduction targets:

Science-based targets are greenhouse gas (GHG) emissions reduction targets that align with the level of decarbonization required to limit global temperature rise to well below 2°C above pre-industrial levels, as outlined in the Paris Agreement.

Key steps in setting science-based targets:

- Establish a base year and define the organizational boundary for emissions accounting.
- Develop emissions reduction targets for Scope 1 (direct) and Scope 2 (indirect, from purchased electricity and heat) emissions, and consider Scope 3 (upstream and downstream value chain) emissions where relevant.
- Choose a target-setting approach (sector-based, absolute, or intensity-based) and time frame (short-term, long-term) based on industry guidance.
- Submit targets for validation by the Science Based Targets initiative (SBTi) or other credible organizations.
- Integrate targets into business strategy, operations, and stakeholder communication.

Example: Microsoft has set a science-based target to become carbon negative by 2030 and remove all the carbon it has emitted since its founding by 2050.

Decarbonization pathways and technology solutions:

Achieving net zero emissions requires a comprehensive decarbonization strategy that involves transitioning to low-carbon technologies and energy sources, as well as implementing operational and process improvements. Key decarbonization pathways and technology solutions include:

- **Renewable energy:** Transitioning to renewable sources like solar, wind, and geothermal for electricity generation and heating/cooling.
- **Energy efficiency:** Implementing energy-efficient technologies, building design, and operational practices to reduce energy consumption.
- **Electrification:** Replacing fossil fuel-based systems with electric alternatives, such as electric vehicles and electrical heating/cooling systems.
- **Carbon capture, utilization, and storage (CCUS):** Technologies that capture and store or utilize carbon dioxide emissions from industrial processes or power generation.
- **Hydrogen and biofuels:** Using low-carbon hydrogen and sustainable biofuels as alternative energy sources for transportation, heating, and industrial processes.
- **Sustainable materials and circular economy:** Adopting sustainable and recycled materials, and implementing circular economy principles to reduce resource consumption and waste.

Example: Apple has committed to becoming carbon neutral across its entire business, manufacturing supply chain, and product life cycle by 2030, through strategies like renewable energy, energy efficiency, low-carbon materials, and product recycling.



Circular economy and resource efficiency strategies:

Transitioning to a circular economy is crucial for reducing resource consumption, waste generation, and associated greenhouse gas emissions. Key strategies include:

- **Product design for circularity:** Designing products for durability, repairability, and recyclability, using sustainable materials and minimizing waste.
- **Sustainable sourcing:** Procuring materials and components from sustainable and recycled sources, and implementing responsible sourcing practices.
- **Waste minimization:** Reducing waste generation through process optimization, lean manufacturing, and waste diversion programs.
- **Reuse and refurbishment:** Extending product life cycles through reuse, repair, and refurbishment initiatives.
- **Recycling and recovery:** Implementing effective recycling programs and recovering valuable materials from end-of-life products.
- **Industrial symbiosis:** Collaborating with other industries to exchange and reuse byproducts and waste streams as resources.

Example: Patagonia, an outdoor apparel company, has implemented a range of circular economy strategies, including using recycled materials, offering repair and trade-in programs, and partnering with recycling facilities to recover and reuse fibers from discarded garments.

Adaptation and resilience measures:

In addition to mitigating climate change through emissions reduction, organizations must also adapt to the physical impacts of climate change to enhance their resilience and ensure business continuity.

Key adaptation and resilience measures include:

- **Risk assessment and scenario planning:** Identifying potential physical risks (e.g., floods, drought, extreme weather events) and developing contingency plans based on climate scenarios.
- **Infrastructure resilience:** Implementing measures to enhance the resilience of physical assets and infrastructure, such as flood protection, reinforcement, or relocation.
- **Supply chain resilience:** Diversifying suppliers, sourcing locations, and transportation routes to mitigate disruptions and enhance supply chain resilience.
- **Natural resource management:** Sustainable management of water resources, forests, and ecosystems to maintain their ability to provide essential services and support climate adaptation.
- **Community resilience:** Collaborating with local communities, governments, and stakeholders to enhance overall resilience and preparedness for climate-related impacts.
- **Financial and insurance strategies:** Exploring financial instruments, such as catastrophe bonds, resilience bonds, and insurance solutions, to manage climate-related risks and support adaptation measures.

Example: The City of Miami Beach has implemented various adaptation measures, including installing pump stations, raising roads and seawalls, and improving stormwater management systems to address the risks of sea-level rise and coastal flooding.

Climate Risk Management and Mitigation

Governance and oversight of climate-related risks:

Effective governance and oversight of climate-related risks are essential for organizations to manage these risks effectively and integrate them into their overall risk management framework.

Key elements of governance and oversight include:

- **Board-level responsibility:** Establishing board-level oversight and accountability for climate-related risks, with clear roles and responsibilities defined.
- **Organizational structure:** Developing an organizational structure and dedicated teams or committees responsible for identifying, assessing, and managing climate-related risks.
- **Risk management framework:** Integrating climate-related risks into the organization's overall risk management framework, including risk identification, assessment, mitigation, monitoring, and reporting processes.
- **Incentive and remuneration structures:** Aligning executive compensation and incentives with the achievement of climate-related goals and targets.
- **Stakeholder engagement:** Engaging with stakeholders, including investors, customers, employees, and communities, to understand their expectations and concerns related to climate risks.

Example: Unilever has established a Board-level Corporate Responsibility Committee responsible for monitoring the company's sustainability performance, including its response to climate change. Additionally, Unilever has integrated climate risks into its enterprise risk management framework and links executive remuneration to sustainability targets.

Climate risk disclosure and reporting frameworks:

To enhance transparency and accountability, organizations are increasingly disclosing and reporting on their climate-related risks, strategies, and performance. Several frameworks and standards have been developed to guide these disclosures:

- **Task Force on Climate-related Financial Disclosures (TCFD):** Established by the Financial Stability Board, the TCFD provides recommendations for organizations to disclose climate-related risks and opportunities across four core elements: governance, strategy, risk management, and metrics and targets.
- **Greenhouse Gas (GHG) Protocol:** Developed by the World Resources Institute and the World Business Council for Sustainable Development, the GHG Protocol provides standards and guidance for accounting and reporting greenhouse gas emissions.
- **Sustainability Accounting Standards Board (SASB) Standards:** Industry-specific standards developed by SASB to help companies disclose financially material sustainability information, including climate-related risks and opportunities.
- **Global Reporting Initiative (GRI) Standards:** A widely adopted framework for sustainability reporting, including guidelines for disclosing climate-related information.

Example: In its annual report and sustainability report, Apple discloses its climate-related risks, strategies, and performance in alignment with the TCFD recommendations, as well as its greenhouse gas emissions data following the GHG Protocol.



Engaging with stakeholders and value chain partners:

Effective climate risk management and mitigation require collaboration and engagement with stakeholders across the value chain, including suppliers, customers, and industry partners.

Key stakeholder engagement strategies include:

- **Supplier engagement:** Collaborating with suppliers to assess and mitigate climate-related risks within the supply chain, setting expectations and requirements for emissions reduction, and supporting suppliers in their sustainability efforts.
- **Customer engagement:** Understanding customer preferences and expectations related to climate-friendly products and services, and collaborating with customers to develop solutions that meet their sustainability goals.
- **Industry collaboration:** Participating in industry initiatives, partnerships, and coalitions to share best practices, develop common standards, and drive collective action on climate change mitigation and adaptation.
- **Community engagement:** Engaging with local communities to understand their concerns and priorities related to climate change impacts, and collaborating on adaptation and resilience initiatives.
- **Investor engagement:** Communicating climate-related risks, strategies, and performance to investors, responding to their information requests, and aligning with investor expectations and guidelines.

Example: The Fashion Pact is a global coalition of fashion and textile companies, including brands like Adidas, Chanel, and Nike, that have committed to achieving shared environmental goals, including reducing greenhouse gas emissions and supporting renewable energy.

Financing the net zero transition:

Achieving net zero emissions and building climate resilience requires significant investments and access to finance. Organizations can explore various financing mechanisms and instruments to support their climate-related strategies and initiatives:

- **Green bonds:** Debt instruments used to finance environmentally sustainable projects or activities, such as renewable energy, energy efficiency, or climate adaptation initiatives.
- **Sustainability-linked loans and bonds:** Financial instruments with interest rates or coupon payments tied to the achievement of specific sustainability or climate-related targets.
- **Climate finance:** Accessing climate-related funds and financing mechanisms provided by international organizations, development banks, and public-private partnerships.
- **Carbon pricing and offset markets:** Generating revenue through carbon pricing schemes or selling carbon offsets in voluntary or compliance markets.
- **Internal carbon pricing:** Implementing an internal carbon price to incentivize emissions reductions and drive investments in low-carbon technologies and projects.
- **Public-private partnerships:** Collaborating with government agencies, development organizations, and private sector partners to co-finance and de-risk climate-related investments.

Example: In 2022, Walmart issued its first green bond worth \$2 billion to finance various sustainability initiatives, including renewable energy projects, zero-emission vehicle fleets, and sustainable supply chain initiatives.



Industry-Specific Considerations

Sector-specific climate risks and opportunities:

Different industries face unique climate-related risks and opportunities due to their specific operations, supply chains, and market dynamics. Understanding these industry-specific factors is crucial for organizations to develop targeted strategies and mitigation measures.

- **Energy and Utilities:**

Risks: Transition risks (e.g., carbon pricing, renewable energy policies), physical risks (e.g., extreme weather events, sea-level rise), and reputation risks.

Opportunities: Renewable energy development, energy efficiency solutions, carbon capture and storage technologies.

- **Manufacturing:**

Risks: Supply chain disruptions due to physical risks, transition risks (e.g., carbon pricing, resource scarcity), and regulatory risks.

Opportunities: Eco-design, circular economy practices, energy and resource efficiency improvements.

- **Transportation:**

Risks: Physical risks (e.g., extreme weather events, sea-level rise), transition risks (e.g., emissions regulations, shift towards electric vehicles), and changing consumer preferences.

Opportunities: Low-emission transportation solutions, alternative fuels, and infrastructure development.

- **Agriculture and Food:**

Risks: Physical risks (e.g., droughts, heat waves, crop failures), supply chain disruptions, and changing consumer demand.

Opportunities: Sustainable agriculture practices, climate-resilient crop varieties, and supply chain optimization.

- **Financial Services:**
Risks: Climate-related risks impacting investments, loans, and insurance portfolios, as well as regulatory and legal risks.
Opportunities: Green finance products, climate risk assessment and disclosure services, and sustainable investment strategies.

Example: The insurance industry faces physical risks from increased frequency and severity of natural disasters, as well as transition risks related to regulatory changes and shifting consumer preferences towards sustainable practices. Opportunities include developing climate risk assessment tools, offering climate-resilient insurance products, and investing in green infrastructure.

Best practices and case studies across various industries:

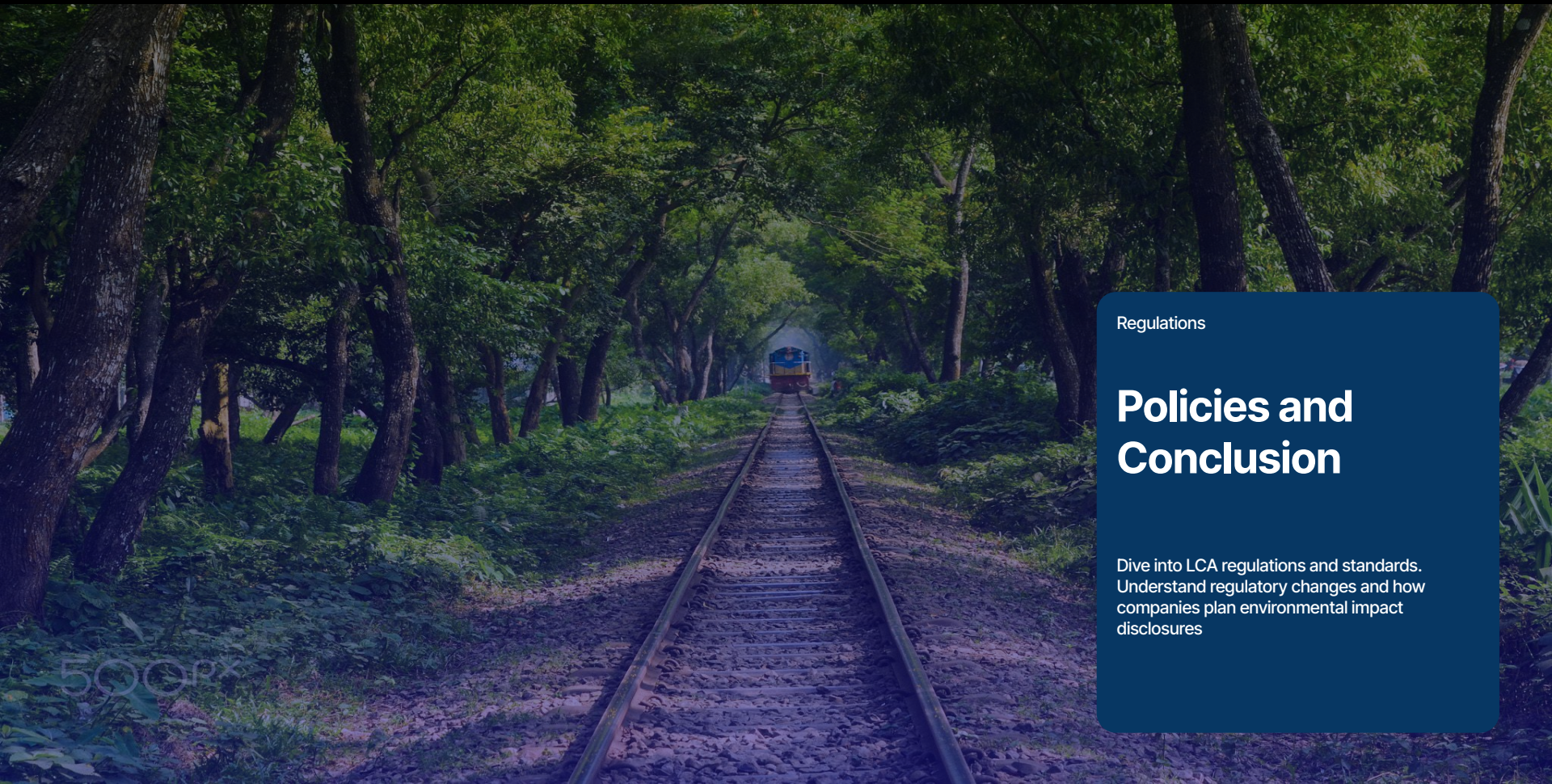
Organizations across various sectors are implementing best practices and innovative strategies to address climate-related risks and opportunities. Here are some examples:

Energy and Utilities:

- Ørsted (Denmark): Transformed from an oil and gas company to a global leader in offshore wind energy, achieving a 99% reduction in carbon emissions since 2006.
- Xcel Energy (USA): Committed to delivering 100% carbon-free electricity by 2050 through a combination of renewable energy, energy efficiency, and carbon capture technologies.

Manufacturing:

- Volkswagen (Germany): Committed to becoming a net-zero carbon company by 2050, with plans to launch 70 new electric vehicle models by 2030 and invest in renewable energy and battery production.
- IKEA (Sweden): Aims to become a circular business by 2030, using only renewable and recycled materials in its products, and implementing various energy efficiency and renewable energy initiatives.



Regulations

Policies and Conclusion

Dive into LCA regulations and standards. Understand regulatory changes and how companies plan environmental impact disclosures

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Regulations

Policies and Conclusion

Dive into LCA regulations and standards. Understand regulatory changes and how companies plan environmental impact disclosures

Policy and Regulatory Landscape

Overview of climate policies and regulations (national and international): Governments and international organizations have implemented various policies and regulations to address climate change and promote the transition to a low-carbon economy. These include:

International agreements and frameworks:

- **Paris Agreement:** A global framework for countries to set nationally determined contributions (NDCs) to reduce greenhouse gas (GHG) emissions and adapt to climate change impacts.
- **United Nations Framework Convention on Climate Change (UNFCCC):** An international treaty that sets the foundation for global cooperation on climate action.
- **Sustainable Development Goals (SDGs):** The United Nations' blueprint for achieving sustainable development, with several goals related to climate action, energy, and environmental protection.

National and regional policies and regulations:

- Carbon pricing mechanisms (e.g., carbon taxes, emissions trading systems)
- Renewable energy and energy efficiency standards and incentives
- Fuel economy and emissions standards for vehicles
- Building codes and green building certifications
- Sustainable finance regulations and disclosure requirements

Example: The European Union's Emissions Trading System (EU ETS) is a cap-and-trade system that covers various sectors, including power generation, energy-intensive industries, and aviation, aiming to reduce greenhouse gas emissions cost-effectively.

Emerging trends and future policy developments

As the urgency to address climate change grows, policymakers are exploring and implementing new approaches and ambitious targets:

- **Net-zero emissions targets:** Many countries and regions have set targets to achieve net-zero greenhouse gas emissions by mid-century or earlier, such as the European Union's goal of reaching climate neutrality by 2050.
- **Circular economy policies:** Regulations and incentives to promote circular economy practices, such as extended producer responsibility, waste reduction targets, and eco-design requirements.
- **Sustainable finance and disclosure regulations:** Mandatory requirements for companies to disclose climate-related risks and integrate sustainability factors into financial decision-making, such as the EU Sustainable Finance Disclosure Regulation (SFDR).
- **Carbon border adjustment mechanisms:** Proposed measures to level the playing field for domestic industries by applying a carbon price on imported goods from countries with less stringent climate policies.
- **Nature-based solutions and biodiversity protection:** Policies and incentives to conserve and restore natural ecosystems, such as forests and wetlands, for their carbon sequestration and climate adaptation benefits.

Example: The European Commission's Circular Economy Action Plan aims to promote sustainable product design, reduce waste, and foster a more circular economy through various legislative proposals and initiatives.



Implications for businesses and organizations:

Climate policies and regulations have significant implications for businesses and organizations across various sectors, including:

- **Compliance and reporting requirements:** Companies need to comply with emissions reporting, disclosure, and other regulatory mandates, which may involve additional costs and resources.
- **Operational and supply chain impacts:** Regulations related to energy efficiency, emissions standards, and circular economy practices may require changes in manufacturing processes, product design, and supply chain management.
- **Market and consumer shifts:** Policies and regulations can influence consumer preferences and market dynamics, creating opportunities for sustainable products and services, as well as potential risks for non-compliant or high-emission industries.
- **Financing and investment opportunities:** Sustainable finance regulations and incentives can create new opportunities for green investments, such as renewable energy projects or sustainable infrastructure development.
- **Competitive advantages:** Companies that proactively align their strategies with climate policies and regulations may gain competitive advantages through improved resource efficiency, innovation, and stakeholder trust.

Example: The introduction of stringent fuel efficiency standards for vehicles has prompted automotive manufacturers to invest in electric vehicle technology, lightweight materials, and aerodynamic designs to comply with regulations while meeting consumer demand for sustainable transportation options.

Measuring and Monitoring Progress

Key performance indicators and metrics:

To track progress towards climate goals and targets, organizations need to establish relevant key performance indicators (KPIs) and metrics. These may include:

Greenhouse gas (GHG) emissions:

- Scope 1 (direct) emissions
- Scope 2 (indirect, from purchased energy) emissions
- Scope 3 (indirect, from value chain activities) emissions

Energy and resource efficiency:

- Energy consumption (electricity, fuel, etc.)
- Water consumption
- Material consumption and waste generation

Renewable energy use:

- Percentage of renewable energy in the energy mix
- Installed capacity of renewable energy sources

Climate risk and adaptation:

- Exposure to physical climate risks (e.g., flooding, heat waves)
- Adaptation measures implemented (e.g., infrastructure resilience)

Financial metrics:

- Climate-related investments and expenditures
- Revenues from sustainable products and services
- Carbon pricing or emissions trading costs

Example: Apple tracks its comprehensive carbon footprint, including Scope 1, 2, and 3 emissions, as well as its renewable energy usage and energy efficiency improvements across its operations and supply chain.



Tracking and reporting emission reductions:

Accurate tracking and transparent reporting of greenhouse gas emissions and emission reductions are crucial for measuring progress towards climate goals and targets. Organizations can follow established frameworks and methodologies, such as:

- **Greenhouse Gas (GHG) Protocol:** A widely-adopted standard for accounting and reporting GHG emissions, providing guidance on setting organizational and operational boundaries, quantifying emissions, and reporting requirements.
- **Science-Based Targets initiative (SBTi):** A collaboration that provides guidance and validation for companies to set science-based emissions reduction targets aligned with the Paris Agreement goals.
- **Carbon Disclosure Project (CDP):** A global disclosure system that enables companies, cities, and investors to measure and manage their environmental impact, including reporting on climate-related metrics and strategies.
- **Task Force on Climate-related Financial Disclosures (TCFD):** A framework that provides recommendations for companies to disclose climate-related risks and opportunities, including metrics and targets related to emissions and climate risk management.

Example: Microsoft reports its progress towards its carbon negative goal through annual sustainability reports, disclosing its Scope 1, 2, and 3 emissions, emission reduction initiatives, and progress against its science-based targets.

Continuous improvement and update of climate strategies:

As climate science, policies, and stakeholder expectations evolve, organizations need to continuously review and update their climate strategies to ensure their effectiveness and alignment with best practices. This may involve:

- **Regular strategy reviews:** Conducting periodic assessments of climate strategies, targets, and initiatives to identify areas for improvement or adjustment based on changing conditions or new information.
- **Stakeholder engagement:** Engaging with relevant stakeholders, such as investors, customers, employees, and local communities, to gather feedback and understand their evolving expectations and concerns related to climate change.
- **Scenario analysis:** Utilizing climate scenario analysis to explore potential future impacts and risks under different climate scenarios, informing the development and adaptation of climate strategies.
- **Innovation and technological advancements:** Monitoring and embracing new technologies, processes, and innovations that can enhance climate change mitigation and adaptation efforts.
- **Policy and regulatory monitoring:** Staying informed about emerging climate policies and regulations at the national and international levels, and adjusting strategies accordingly to ensure compliance and capitalize on potential opportunities.

Example: Unilever conducts regular reviews of its Sustainable Living Plan, which includes targets and initiatives related to climate change, and engages with stakeholders.



Summary of key takeaways:

1. The transition to a net-zero economy is an imperative to mitigate the severe impacts of climate change and achieve global temperature goals outlined in the Paris Agreement.
2. Effective climate risk management requires a comprehensive approach that includes identifying and assessing climate-related risks, setting science-based emissions reduction targets, implementing decarbonization strategies, and adapting to physical climate impacts.
3. Organizations must integrate climate considerations into their governance structures, risk management frameworks, and decision-making processes, while engaging with stakeholders across the value chain.
4. Disclosure and reporting of climate-related risks, strategies, and performance are essential for transparency, accountability, and informed decision-making by investors and stakeholders.
5. Innovative financing mechanisms, such as green bonds, sustainability-linked loans, and carbon pricing, can support the transition to a low-carbon economy and facilitate climate-related investments.
6. Industry-specific strategies and best practices are crucial to address unique climate risks and opportunities across various sectors, fostering collaboration and knowledge-sharing.
7. Continuous monitoring, progress tracking, and strategy updates are necessary to align with evolving climate science, policies, and stakeholder expectations.

Challenges:

- **Financial and economic barriers:** The significant upfront investments required for transitioning to low-carbon technologies and infrastructure can be a challenge, particularly for developing economies.
- **Technological limitations:** While progress is being made, there are still limitations in the availability, scalability, and affordability of some low-carbon technologies, such as carbon capture and storage, and green hydrogen.
- **Policy and regulatory uncertainties:** Inconsistent or rapidly changing policies and regulations across jurisdictions can create uncertainties and hinder long-term planning and investment decisions.
- **Behavioral and cultural shifts:** Achieving net-zero emissions will require widespread behavioral and cultural changes, including shifts in consumption patterns, transportation habits, and societal norms.
- **Geopolitical tensions:** Competing national interests, trade disputes, and geopolitical tensions can hinder international cooperation and coordinated efforts to address climate change.

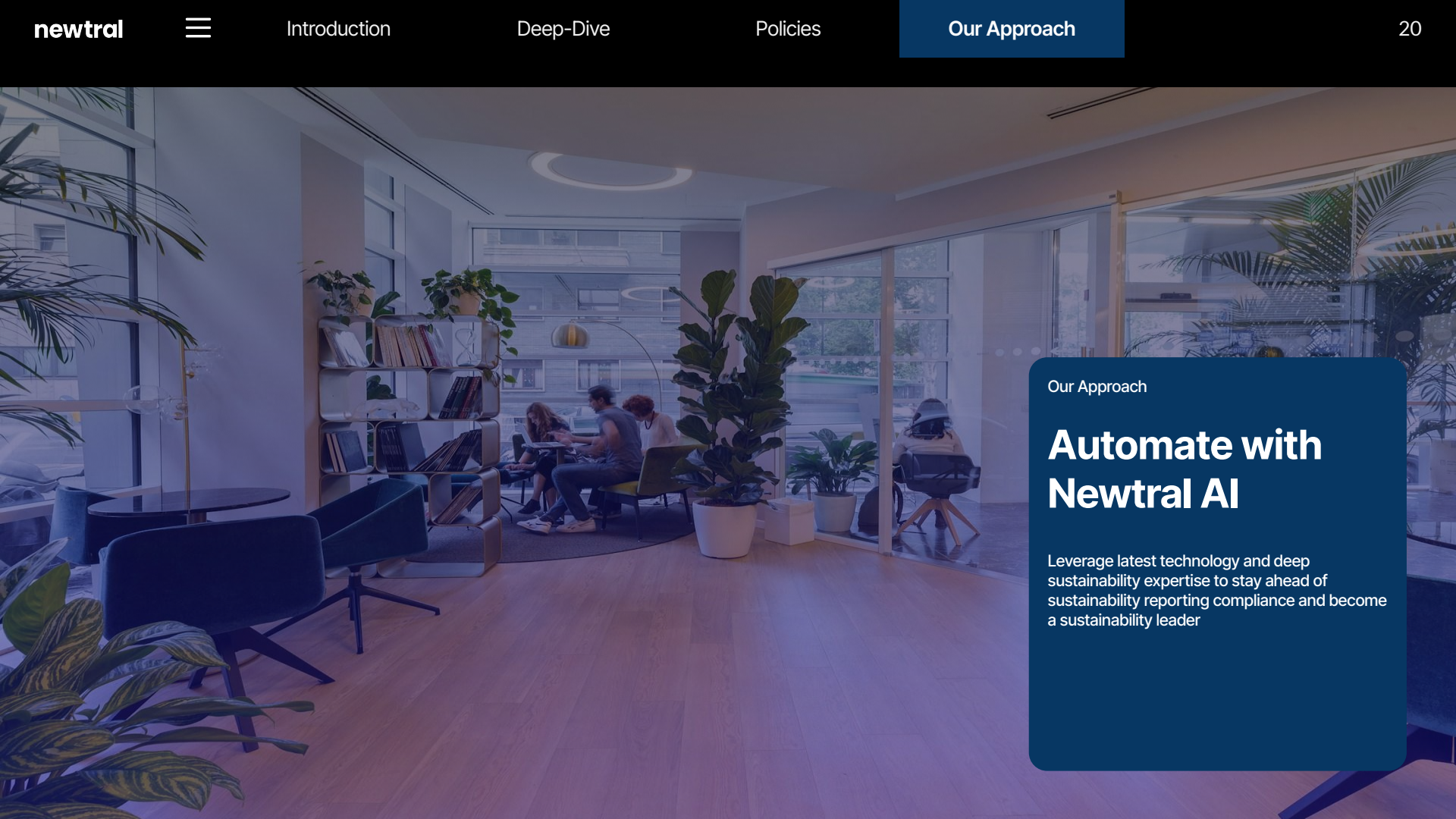


Opportunities:

- **Economic growth and job creation:** The transition to a low-carbon economy presents opportunities for innovation, entrepreneurship, and job creation in sectors such as renewable energy, sustainable transportation, and green technology.
- **Resource efficiency and cost savings:** Implementing energy-efficient and resource-efficient practices can lead to long-term cost savings and improved competitiveness for businesses.
- **Improved public health:** Reducing greenhouse gas emissions and air pollution can have significant public health benefits, including reduced respiratory illnesses and improved overall well-being.
- **Resilient infrastructure and communities:** Investing in climate-resilient infrastructure and adapting to physical climate impacts can enhance community resilience and reduce long-term economic losses.
- **Sustainable finance and investment:** The growing demand for sustainable and responsible investments presents opportunities for financial institutions to develop innovative green finance products and services.

Future trends and considerations for long-term climate resilience:

- **Circular economy and resource efficiency:** Transitioning towards a circular economy that maximizes resource efficiency and minimizes waste will be critical for long-term sustainability and climate resilience.
- **Nature-based solutions:** Protecting and restoring natural ecosystems, such as forests, wetlands, and mangroves, can play a vital role in carbon sequestration and enhancing climate resilience.
- **Climate-smart agriculture:** Adopting sustainable and climate-resilient agricultural practices will be essential for ensuring food security and addressing the impacts of climate change on agriculture.
- **Sustainable urbanization:** As urbanization continues, cities will need to prioritize sustainable urban planning, green infrastructure, and climate-resilient development to mitigate and adapt to climate change.
- **Digitalization and emerging technologies:** Leveraging digital technologies, such as artificial intelligence, Internet of Things (IoT), and blockchain, can enable more efficient data collection, monitoring, and decision-making for climate action.
- **International cooperation and collaboration:** Addressing the global challenge of climate change will require continued international cooperation, knowledge-sharing, and coordinated efforts among governments, businesses, and civil society organizations.
- **Climate adaptation and resilience:** While mitigation efforts are crucial, adaptation strategies will become increasingly important to enhance resilience and protect communities and ecosystems from the unavoidable impacts of climate change.

A modern office interior with large windows, indoor plants, and people working. The scene is bright and airy, with a mix of greenery and contemporary furniture. In the background, three people are seated at a table, working on laptops. The room is filled with various types of plants, including a large fiddle leaf fig in the center and several smaller ones on shelves and tables. The floor is made of light-colored wood, and the walls are white. Large windows on the right side offer a view of the outside world.

Our Approach

Automate with Newtral AI

Leverage latest technology and deep sustainability expertise to stay ahead of sustainability reporting compliance and become a sustainability leader

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Automate with Newtral AI

Leverage latest technology and deep sustainability expertise to stay ahead of sustainability reporting compliance and become a sustainability leader

At Newtral, we understand the challenges businesses face in navigating the complex landscape of sustainability reporting and ESG integration. That's why we've developed a cutting-edge, AI-powered sustainability platform that streamlines your entire sustainability workflow, ensuring compliance, transparency, and value creation for all stakeholders.

Key Features and Benefits:

Automated Sustainability Workflow:

- Our AI-driven platform automates data collection, analysis, and reporting, saving time and resources
- Seamless integration with existing systems for efficient data management
- Ensures accuracy and consistency in sustainability reporting

Comprehensive Concierge Services:

- Dedicated sustainability experts to guide you through every step of your sustainability journey
- Tailored strategies and actionable insights based on your unique business needs
- Continuous support and expertise to help you achieve your sustainability goals

ESG Supply Chain Innovation:

- Advanced tools to assess and manage ESG risks and opportunities within your supply chain
- Collaborate with suppliers to improve sustainability performance and transparency
- Gain a competitive edge by demonstrating responsible supply chain practices

Scope 3 Emissions Management:

- Accurately measure and report your Scope 3 emissions with our AI-powered platform
- Identify hotspots and implement targeted reduction strategies
- Demonstrate leadership in addressing indirect emissions and climate change

Regulatory Compliance and Transparency:

- Stay ahead of evolving sustainability regulations and disclosure requirements
- Communicate your sustainability performance effectively to investors, customers, and other stakeholders
- Build trust and credibility through transparent and reliable sustainability reporting

Take the first step towards a more sustainable future with Newtral. Our AI-powered platform and expert concierge services provide the tools and guidance you need to integrate sustainability seamlessly into your business operations. Contact us today to schedule a demo and discover how Newtral can help you create lasting value for your stakeholders while contributing to a greener, more resilient world.



Newtral AI Platform- Enterprise ESG Platform for Corporates and Supply Chain

We help organizations automate their ESG metric measurements, tracking and reporting across company as well as their supply chain. Our platform solves for all corporate sustainability reporting and carbon accounting needs, visit newtral.io for more information.

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For more information about Newtral and its AI-powered sustainability platform, please visit www.newtral.io or [contact](https://www.newtral.io/contact) [us](https://www.newtral.io/contact) [directly](https://www.newtral.io/contact).

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