

Moving beyond compliance

Gaining data-driven climate insights to inform corporate strategy

The brief

Synthomer, a leading global supplier of high-performance, specialised polymers and ingredients, engaged climate and nature analytics firm, Risilience to develop a comprehensive, data-driven climate scenario analysis solution capable of identifying, quantifying and integrating both physical and transition climate risks. The objective is to embed these insights into enterprise risk management, strategic planning and financial decision-making – moving beyond regulatory compliance reporting towards strategic value creation.

In addition to complying with mandatory and voluntary climate reporting requirements, Synthomer partnered with Risilience to complete a second phase of climate risk assessment and scenario analysis aiming to strengthen corporate strategy and prioritise climate action:

- Develop a robust climate-scenario risk and opportunity solution
- Enable assessment and comparison of physical and transition risks
- Develop a standard financial quantification tool
- Identify the most material risks and opportunities
- Provide actionable insights to inform decision-making and strategic planning
- Support integration of risks and opportunities into risk management, business strategy and financial planning

The approach

The Resilience team supported Synthomer to gather relevant data used in the Resilience-powered platform, Riise, to analyse the financial risks of climate change. By creating a digital twin of Synthomer's business, the platform modelled various climate scenarios to financially quantify potential losses and identify opportunities to reduce costs.

Digital twin data is used across climate risk models

Synthomer digital twin

Data-driven representation of Synthomer using company data. Defines exposure to risk.



	Physical risk models		Transition risk models				
	Facility Disruption	Policy	Liability	Reputation	Consumer Sentiment	Investor	Technology
Financial data							
Market breakdown data							
Key facilities data							
Emissions data							

Data required for this model

- To build a digital representation using provided data, publicly available data and/or industry averages, any data gaps are bridged using assumptions
- Each component of data is used to generate climate risk results across different climate risk models

Figure 1: Digital twin data across climate risk models, Resilience 2026

Financial quantification of climate-related risk

Climate-related physical risk is quantified as the total revenue impact from sites exposed to climate hazards, as well as revenue at risk due to projected climate-related disruptions. Transition risk is expressed as five-year and ten-year earnings value-at-risk (potential loss in a company's future earnings due to adverse events) under different [Network for Greening the Financial](#)

[System](#) (NGFS) emissions pathways, with future carbon taxation emerging as the most material potential risk overall.

These insights are now feeding directly into Synthomer's risk management process, ensuring that risk mitigation measures are aligned with financial exposure and operational priorities.

Insights to support strategic decision-making

When considering the impact across all sites, the analysis indicates no material increase in annual expected physical risk in the short to medium term. This result is significantly influenced by substantial risk reductions at a few key locations. At a more granular level, several sites are projected to experience a non-trivial increase in physical risk. Therefore, while the overall earnings value-at-risk is expected to remain broadly consistent over the next five and ten years, the company's physical risk profile is becoming more varied, with increasing risks in some locations offset by decreases in others.

Under both five- and ten-year time horizons for three of the five NGFS scenarios; National Determined Contributions, Below 2°C and Net Zero by 2050, Synthomer identifies transition risk (carbon pricing, including the EU ETS) as the most significant climate-related risk.

In the medium term (to 2030), around 80% of any potential financial impact of the risks from climate change are likely to come from transitioning to a low-carbon, circular economy (mainly policy-driven higher costs). The remaining 20% will come from physical risks.

Looking beyond 2030, transitioning to a low-carbon economy would remain the most significant potential climate-related financial risk; by 2040 and 2050 the relative weighting of transition risks compared to physical risks will increase – approximately 8:1 versus approximately 4:1 in 2030.

The transition risk results have the potential to affect both current and future business planning; with physical risks (flooding, water stress) shaping both site and supply chain resilience. In addition to risk, Synthomer also sees the greatest potential opportunity for growth in demand from customers and their consumers, for products that offer lower-carbon or circularity benefits.

Business impact

In meeting the objective to leverage climate risk assessment and scenario analysis to support corporate strategy, the collaboration surfaced several specific priority actions for Synthomer, backed by rigorous data and financial evidence:

- Incorporate site-level climate assessments into due diligence and business continuity planning
- Engage insurance providers on specific risks and mitigation and/or adaptation plans
- Continue to drive Scope 1, 2 and 3 emission reductions across Synthomer's own operations, product portfolio and value chains to reduce both the company's and its customers' exposure to rising carbon tax costs

The ability to translate climate risk into financial terms has strengthened strategic decision-making and provided a clear pathway for integrating climate considerations across the organisation.

Client reflection

“Partnering with Risilience enabled us to prioritise key actions supported by robust evidence for our strategic planning. The process moved us beyond compliance, providing actionable insights for both operational and strategic decision-making. Financially quantifying climate risk has become a catalyst for advancing our risk management, business strategy and financial planning.”

Chris Brown, VP ESG, Synthomer

Timeline 2025

January: Begin data collecting process. Risilience uses publicly available data and/or industry averages. Any data gaps are bridged using assumptions.

March: Synthomer digital twin built and configured.

April/May: Climate-related physical and transition risk assessment and comparison.

June: Results and analysis. Onboarding of Synthomer team to operate the Risilience-powered platform Riise to continue monitoring and managing climate risk.

Learn how Risilience supports corporates to quantify the financial impact of climate and nature-related risks and opportunities to support business growth and profitability.

Let's connect: contact@risilience.com