

Climate Risk, Quantified: From Climate Data to Financial Impacts

Presenters

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Website

www.scientificratings.com

With you today



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What we will cover today

01.

~10 min

Introduction

- ▶ The Climate Risk Pricing & Adaptation Gap
- ▶ Scientific Climate Ratings: turning climate science into financial insights
- ▶ ClimateMetrics: From Climate Data to Financial Impacts
- ▶ The One-Stop Shop for Climate Intelligence to Fuel Investment Decisions

02.

~15 min

Methodology

- ▶ Overview of ClimateMetrics Computation Workflow
- ▶ Physical and Transition Risk Modelling
- ▶ A Platform Built On Internationally Recognized Frameworks
- ▶ Science-based Datasets Powering our Climate Analytics

03.

~10 min

Live Demo

- ▶ Live platform walkthrough – asset upload, asset dashboard and metrics, portfolio analysis, exports

04.

~15 min

Focus on Key Features

- ▶ Investment Due Diligence – Ensuring Asset-level Precision
- ▶ Resilience Strategy – Identifying the Right Resilience Strategy
- ▶ Adaptation Investment – Quantifying the Benefit of Adaptation Action
- ▶ Showing Resilience Value – Benchmarking Against Portfolio Assets

05.

~10 min

Future Developments & Q&A

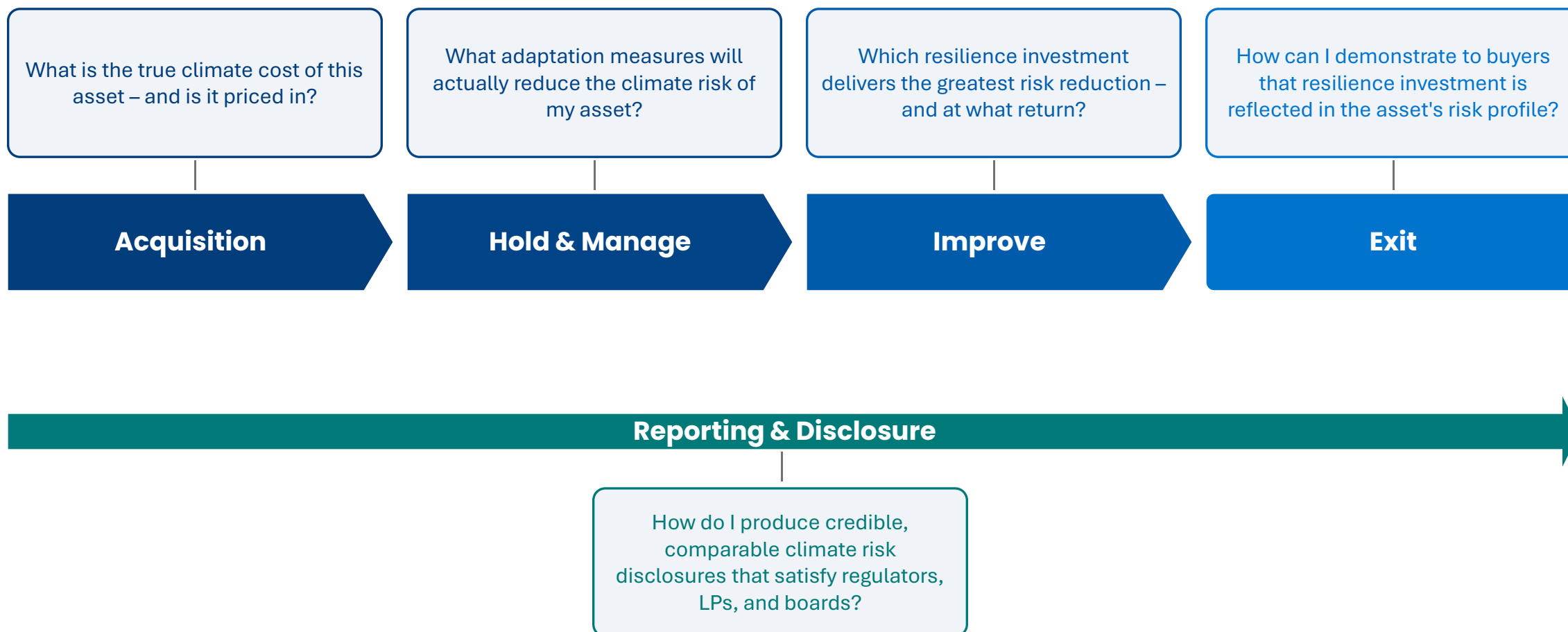
- ▶ Climate Risk Ratings
- ▶ Corporate Ratings
- ▶ Sovereign Climate Ratings

01.

Introduction

The Climate Risk & Adaptation Pricing Gap

Climate risk surfaces at every stage of the **asset investment lifecycle**. The gap is the inability to translate it into clear and actionable investment metrics.



Turning Climate Science into Financial Insights

We assist financial and corporate risk teams across the entire workflow – assessing climate risks and feeding investment decisions.

Scientific Climate Ratings

Climate Data

Asset-specific climate risk data

High-resolution climate and transition datasets powering asset-level risk analysis.

Climate Ratings

CER

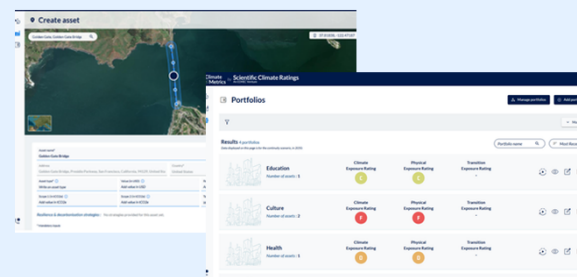
Climate Exposure Ratings
Measures exposure to climate hazards and transition pressures.

CRR

Climate Risk Ratings
Estimate how climate exposure translates into financial impacts.

Standardised, forward-looking ratings translating **climate exposure & financial risk into comparable metrics and evaluating resilience and adaptation strategies** that help protect asset value.

All-in-One Climate Intelligence Platform



ClimateMetrics is our online BI platform designed to help your teams **quantify and monitor climate risks and dynamics**.

ClimateMetrics: From Climate Data to Financial Impacts

ClimateMetrics builds on Climate Exposure Ratings to provide on-demand metrics at asset and portfolio-level, translating climate data into financial impacts.

Climate Exposure Ratings

Our standardised, comparable climate risk ratings – built on rigorous climate science, anchored in financial outputs.



A = Climate Resilient → G = Structurally Climate-Vulnerable

- ▶ Asset-level
- ▶ Physical and transition risk combined
- ▶ Standardised A-G scale – comparable across sectors
- ▶ Forward-looking: present day to 2100
- ▶ Unique universe of +6,000 assets for benchmark

ClimateMetrics Platform

On-demand climate risk intelligence – your assets, your portfolio, on your timeline. Assess, compare, and export in minutes.

- **On-demand** – Climate Ratings and metrics for any asset, anywhere
- **130+ asset types** – Infra, real estate, energy, corporates
- **Financial metrics** – Annual Expected Loss, split by Asset Value and Revenue
- **Adaptation-oriented** – Provides resilience measure suggestion and quantification
- **Portfolio aggregation** – Going beyond asset-level analysis
- **Regulatory-ready** – ISSB, CSRD and SFDR aligned

The One-Stop Shop for Climate Intelligence to Fuel Investment Decisions



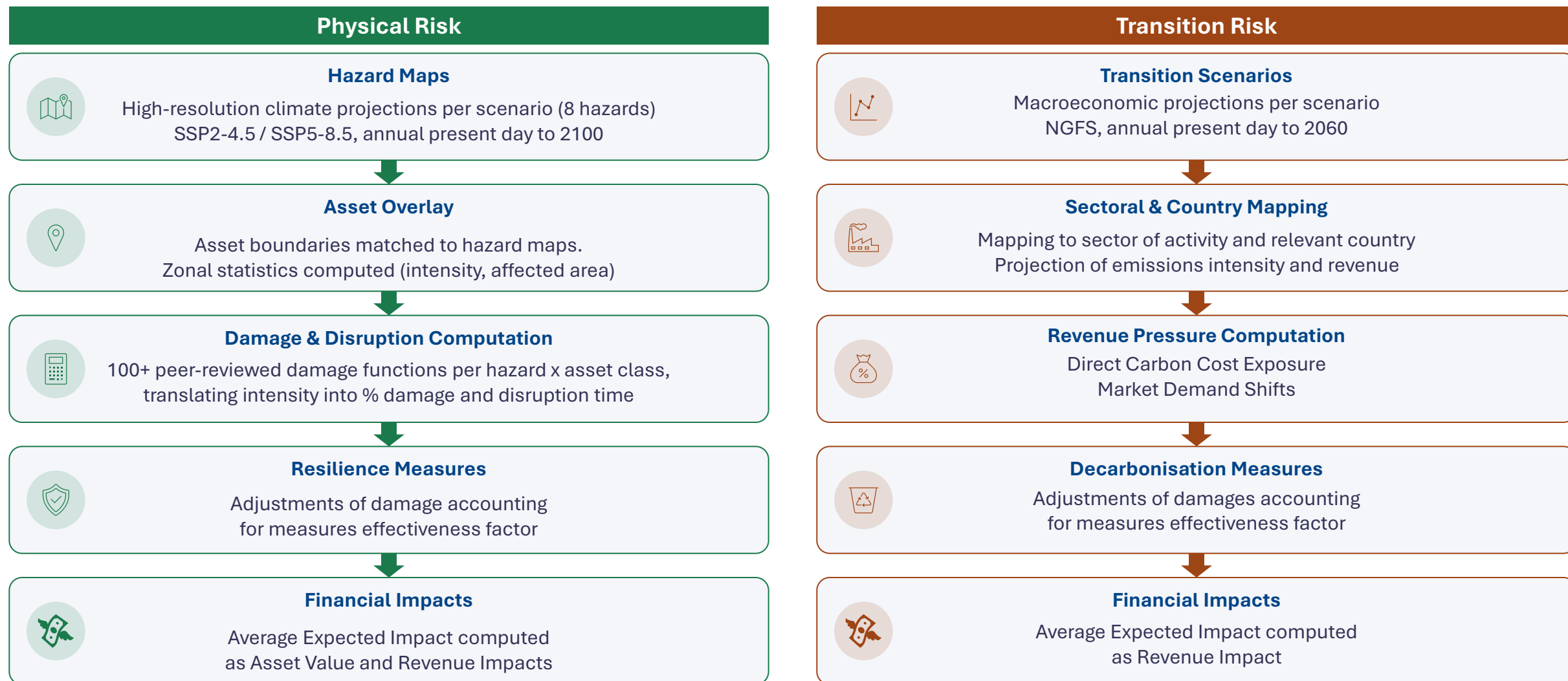
02.

Methodology

Overview of ClimateMetrics Computation Workflow



Physical and Transition Risk Modelling



A Platform Built On Internationally Recognized Frameworks

ClimateMetrics is designed to be compatible with the reference standards on climate and financial risk assessment.

What is required

IFRS S2 / TCFD

Climate-related Disclosures (ISSB Standard)

- Scenario analysis for +1.5°C and +4°C pathways
- Requires disclosure of 'current and anticipated financial effects' of climate-related risks

CSRD / ESRS E1

European Sustainability Reporting Standards

- Physical and transition risk identification and assessment
- Key financial metrics such as % of assets exposed and share of revenue at risk

SFDR

Sustainable Finance Disclosure Regulation

- Principal Adverse Impacts (PAIs) requiring climate-related indicators at portfolio level
- Requires disclosure for future time horizons

What ClimateMetrics delivers

- ✓ Metrics available for SSP5-8.5 and Net Zero scenarios
- ✓ Quantification of physical and transition risk impacts in financial terms

- ✓ Hazard list aligned with ESRS E1 requirements
- ✓ Evaluation of financial materiality through Climate Risk Ratings

- ✓ SFDR-compatible portfolio outputs through ready-to-use Portfolio Report
- ✓ Multiple time horizons available on demand

Science-based Datasets Powering our Climate Analytics

Our framework combines recognised climate models, 100+ peer-reviewed damage functions, granular macroeconomic datasets, and proprietary analytics to deliver robust, transparent assessments.

Flood

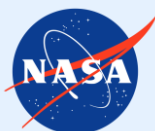
**Multiple Leading Climate
Data Providers**
Proprietary Integration



Wind



Wildfire



Heat



Damage functions



Macroeconomic data



Direct Carbon Cost Exposure



Market Demand Shifts



03.

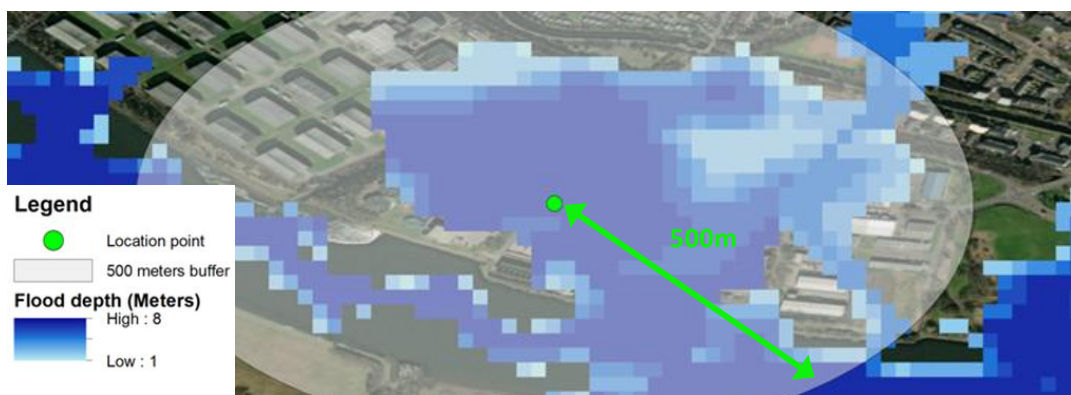
Live Demo

04.

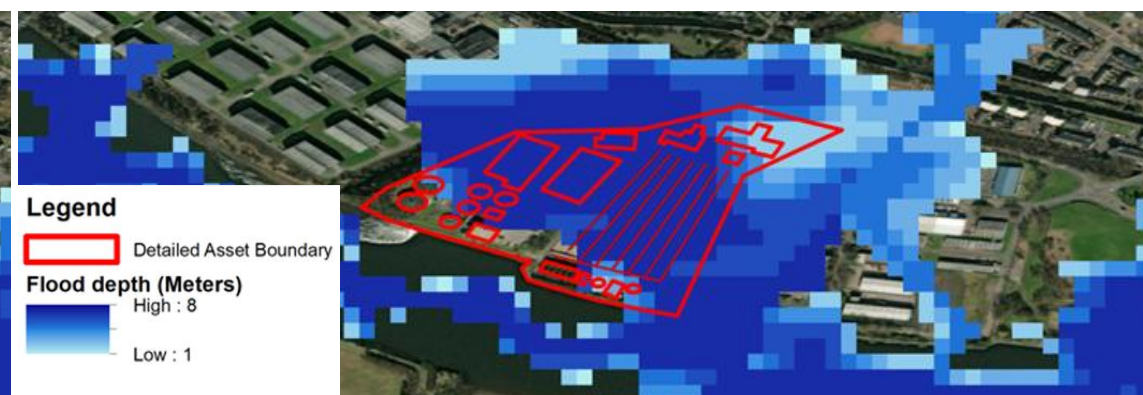
Focus on Key Features

Investment Due Diligence Ensuring Asset-level Precision

Getting climate impact projections right is key to surface any climate liabilities. ClimateMetrics ensure this through cutting-edge analytics.



With a generic buffer of 500 meters



With detailed asset boundary

2.8 meters Average 1 in 100Y flood depth	13.4% Physical Damage at Risk	\$2.39m Physical Damage at Risk (USDm)	6.25 meters ⬆️ Average 1 in 100Y flood depth	29.5% ⬆️ Physical Damage at Risk	\$5.25m ⬆️ Physical Damage at Risk (USDm)
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The hidden cost of a generic approach

Risk may vary within the same asset: making **generic assumptions on asset boundaries** is prone to risk **over/underestimations**. Ensuring detailed boundaries can improve accuracy drastically.

Resilience Strategy Identifying the Right Resilience Strategy

Not all resilience measures are equal. Identifying the right strategy for a specific asset type and risk profile requires structured, evidence-based evaluation.

HAZARD TYPES



Flood



Extreme Heat



Storm & Wind



Wildfire



Scope 1 Emissions



Scope 2 Emissions



Scope 3 Emissions

01.

Core Filters

- Hazard Geography
- Asset Type
- Risk Materiality

02.

Corporate Implementation

- Implementation Status

03.

Contextual Overlays

- System Level Enablers
- Implementation Feasibility

04.

Effectiveness Ranking

- Rank strategies by effectiveness

Resilience Strategy Identifying the Right Resilience Strategy

US Railway Storage Facility Example – Core Filters

 Texas, United States of America

 IC604030 – Freight Rail Rolling Stock

103

Pre-mapped strategies
across industrial class

40

Shortlisted — asset class
of 103 strategies

19

Shortlisted — location
final relevant strategies

RISK CATEGORY	TOTAL	SHORTLISTED	COVERAGE	NOTE
 Flood Risk	5	1		Drainage system upgrades are the most relevant and actionable measure
 Storm & Wind	5	3		
 Wildfire	9	4		Urban/industrial areas limiting vegetation and land use patterns exposure to large-scale wildfires.
 Extreme Heat	6	3		
 Scope 1 Emissions	7	3		
 Scope 2 Emissions	3	3		
 Scope 3 Emissions	5	2		

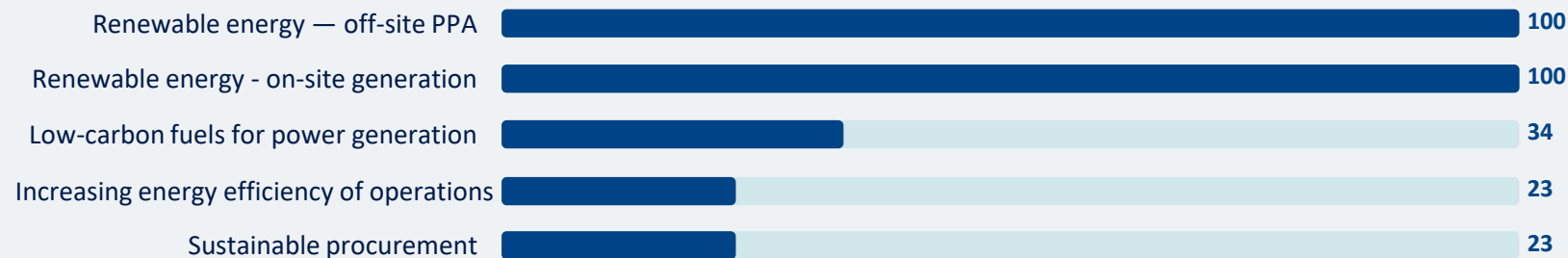
Resilience Strategy Identifying the Right Resilience Strategy

US Railway Storage Facility Example – Ranking Strategies by effectiveness

RESILIENCE



DECARBONISATION · SCOPES 1–3



RANKING METHOD

Effectiveness score (0–100)

Applicable strategies are ranked by expected contribution to risk reduction and emissions abatement, weighted by implementation difficulty at the asset.

5 strategies scored above 65 — recommended as primary levers.

NEXT STEP

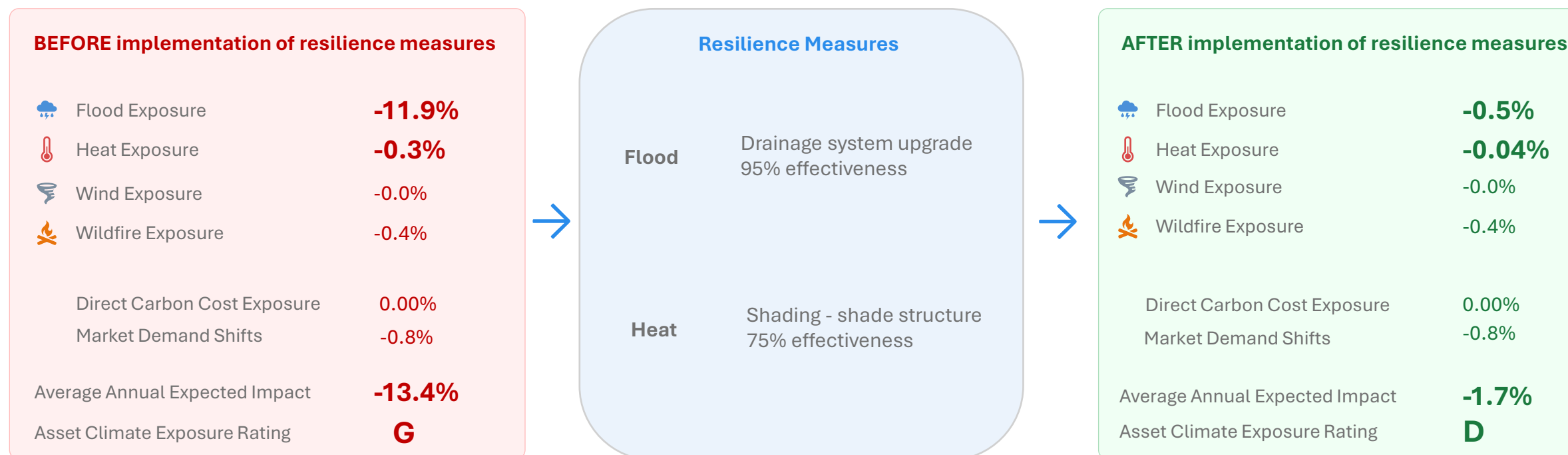
Asset-level roadmap

Strategies flow into ClimateMetrics Asset View to simulate rating uplift.

Adaptation Investment Quantifying the Benefit of Adaptation Action

Adaptation and resilience measures can reduce damage, disruption and cost. ClimateMetrics enables the quantification of resilience benefits, building the case for investment.

Case study: US Railway Storage Facility (2050 projection under SSP5-8.5 / Current Policies)

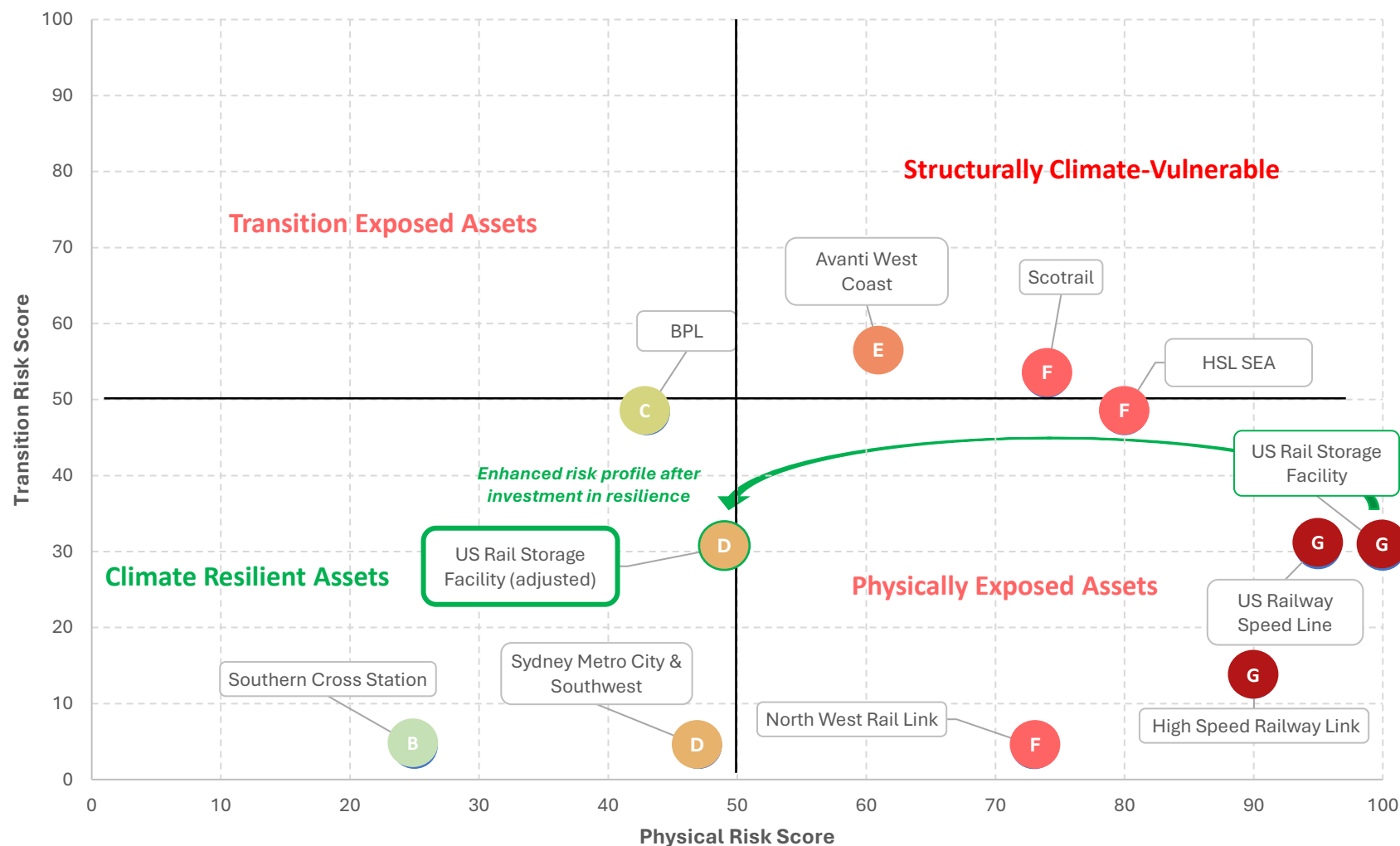


The Value of Investing in Resilience

Investing in the few strategies recommended by ClimaTech enables to reduce impact by 87%, protecting \$12.3M of asset value.

Showing Resilience Value Benchmarking Against Peers

ClimateMetrics showcases the value of investing in resilience by enabling benchmarking of assets between each other thanks to ratings.



- Peer Group considered: 14 assets in the railway sector (freight rolling stock, railway high speed line) across 5 countries (Europe, North America, Oceania)
- Climate Exposure Ratings displayed for SSP5-8.5, 2050

Comparing adjusted ratings with the peer groups directly illustrates the value factored in the asset thanks to the implementation of resilience measures.

05.

Future Developments

What's Next on Scientific Climate Ratings Roadmap

Infrastructure Climate Risk Ratings

Q2 2026

Climate Risk Ratings (CRR) for Infrastructure Assets

We updated the CRR which extend exposure-based CER to full financial risk quantification in a single rating.

The new version of CRR integrates DCF-based NAV impact modelling combined with Merton models to expressing climate risk as a direct impact on firm value, debt and equity.

The step from 'how exposed is this asset?' to 'what does this cost?'

Sovereign Climate Risk Ratings

Q2 2026

Climate Ratings for Countries

Economically interpretable, scenario-consistent expected macroeconomic losses, enabling investors to price sovereign climate risk rather than merely rank it. Sovereign Ratings provide the missing macroeconomic transmission channel between warming and sovereign financial fundamentals.

Positioning national climate risk as a priced financial macroeconomic risk, not as a sustainability overlay.

Corporate Climate Risk Ratings

Q3 2026

Extension to Corporate Entities

Expanding coverage beyond physical assets to include corporate-level climate risk ratings – covering listed and unlisted companies. Corporate Ratings aggregate heterogeneous risks across assets, activities, geographies, and supply chains, into a unified assessment that captures both physical and transition dimensions.

Enabling institutional investors to assess climate risk across their full portfolio, including corporate holdings.

Thank you for your attention

Any questions?

Turning Climate Science into Financial Insights

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06.

Appendix

Appendix – Alignment with the EU Taxonomy

ClimateMetrics' hazard coverage is aligned with the requirements of key frameworks and standards, enabling assessment of most climate hazards.

	Temperature-related	Wind-related	Water-related	Solid-mass related
Chronic	Changing temperature (air)	Changing wind patterns	Changing precipitation patterns and types (rain, hail, snow/ice)	Coastal erosion
	Changing temperature (freshwater, marine water)		Precipitation and/or hydrological variability	Soil Degradation
	Temperature variability		Ocean acidification	Soil Erosion
	Heat stress		Saline intrusion	Solifluction
	Permafrost thawing		Sea-level rise	
			Water stress	
Acute	Heat wave	Cyclone, Hurricane, Typhoon	Drought	Avalanche
	Cold wave/frost	Storm (including blizzards, dust storms, sandstorms)	Heavy precipitation (rain, hail, snow/ice)	Landslide
	Wildfire	Tornado	Flood (coastal, fluvial, pluvial)	Subsidence
			Flood (groundwater)	
			Glacial lake outburst	



Available in ClimateMetrics – Financial metrics



Available in ClimateMetrics – Exposure metrics



Available on demand – Rationale provided

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