

The Climate Decision Advantage

Making Faster, Better and More Balanced
Decisions at Scale

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Executive Summary

Australian organisations are generating more climate and sustainability information than ever before. They are assessing physical and transition risks, measuring emissions, evaluating suppliers, establishing targets and preparing increasingly rigorous disclosures under Australia's mandatory climate-reporting regime. Yet much of this information remains disconnected from the operational, financial and commercial decisions that determine actual business and climate outcomes.

When a climate event disrupts a supplier, a carbon budget moves off track or supplier sustainability performance deteriorates, organisations must quickly determine what is exposed, which responses are viable and how to balance revenue, cost, service, resilience and emissions. Today, that process is often fragmented across functions, systems and approval pathways.

Climate Decision Intelligence addresses this decision gap. Developed by Climate & Decisions, the solution built on the Aera Technology decisions intelligence platform connects climate and sustainability signals with enterprise context, evaluates response options, makes trade-offs visible and delivers decision-ready recommendations with clear ownership, governance and evidence.

Five initial skills demonstrate this capability across supply-chain resilience, carbon-aware promotion, carbon-budget optimisation, supplier risk and sustainable sourcing. Each addresses a different business question but follows the same pattern: signal, exposure, options, trade-offs, recommendation, accountable action and learning.

The result is not another climate dashboard. It is a faster and more governed path from climate information to business action.

This white paper explores how agentic decision intelligence is reshaping climate-related enterprise decision-making. Inside, you will find:

- Why climate and sustainability signals need to become business decisions
- How decision latency exposes revenue, margin, service and climate commitments
- A repeatable pattern for moving from signal to governed action
- Five applied skills spanning resilience, carbon, suppliers and sourcing
- How Aera Technology and Climate & Decisions combine decision intelligence with climate expertise and governance

Climate Disruption Is Becoming an Operating Constraint

Climate disruption is moving from sustainability reports into daily business decisions. Physical events can interrupt suppliers, routes, assets, inventory, workforce and customers. Transition pressures can reshape input costs, demand, technology choices and capital allocation. Australia's mandatory climate-reporting regime is increasing expectations for organisations to understand, govern and explain the financial consequences.

Physical Disruption

Flood, bushfire, cyclone, heat and other hazards can interrupt assets, suppliers, transport routes and workforce capacity, creating revenue, service and cost exposure.

Transition Pressure

Carbon costs, technology shifts, customer expectations and policy changes create new trade-offs across capital, timing and performance.

Governance and disclosure

AASB S2 increases the need for decision-useful, financially connected and supportable information about material climate-related risks and opportunities.

Sources:

- [AASB S2 - Climate-related Disclosures](#)
- [ASIC RG 280 - Sustainability Reporting](#)
- [Australian Treasury - Mandatory climate-related financial disclosures](#)

The challenge is not only identifying climate risk. It is translating climate and sustainability signals into the right business decision.

The Climate Decision Gap

The Australian enterprise decision gap

- **Climate signals remain isolated.** Climate, sustainability, financial, operational and commercial information sits across different teams and systems.
- **Business exposure is not immediately visible.** A climate event or sustainability signal does not automatically identify which suppliers, products, assets, revenue or customers are affected.
- **Trade-offs are evaluated inconsistently.** Finance, operations, procurement, commercial and sustainability teams may optimise different outcomes.
- **Decision latency compounds the impact.** Time is lost reconciling information, modelling options and securing approval while the business remains exposed.
- **Actions and rationales are difficult to trace.** Decisions may be implemented without a connected record of assumptions, approvals, expected outcomes and actual results.

The business does not need another signal. It needs a decision-ready recommendation with clear trade-offs and accountable ownership.



Australia: Mandatory Reporting Makes Climate Risk Visible

Australia's mandatory climate-reporting regime, aligned with AASB S2, is accelerating expectations for organisations to connect material climate-related risks and opportunities with governance, strategy, risk management, metrics and targets.

Regulatory context

GROUP 1

≥ A\$500M revenue
≥ A\$1B assets
≥ 500 employees

FY beginning on/after 1 Jan 2025

GROUP 2

≥ A\$200M revenue
≥ A\$500M assets
≥ 250 employees

FY beginning on/after 1 Jul 2026

GROUP 3

≥ A\$50M revenue
≥ A\$25M assets
≥ 100 employees

FY beginning on/after 1 Jul 2027

An entity generally needs to meet at least two of the three size criteria, subject to the legislation. Separate pathways apply to certain entities registered under the National Greenhouse and Energy Reporting Act 2007. Refer to the legislation and ASIC Regulatory Guide 280 for the complete application requirements.

What governance and reporting provide

Board and executive oversight

Climate-risk ownership

Risk-management and disclosure discipline

Metrics, targets, controls and evidence

Accountability and escalation expectations

What an executable business decision still requires

What specifically needs to change

Which supplier, product, asset, campaign or allocation is affected

Viable response options and timing

Commercial, operational and climate trade-offs

A named owner, approval pathway and action

Climate risk becomes actionable only when it changes who does what, by when and against which trade-offs.

The Real Risk Is Decision Latency

Climate and sustainability signals may be detected quickly. The delay occurs inside the organisation as teams reconcile fragmented data, understand exposure, evaluate options, align competing objectives and secure approval. During that delay, revenue, customers, service and climate commitments remain exposed.

01 Signal

What changed?

The signal sits outside core enterprise workflows.

02 Exposure

What is affected?

Supplier, inventory, revenue and risk data are fragmented.

03 Options

What can we do?

Teams model different response scenarios manually.

04 Trade-offs

What are the consequences?

Functions optimise different outcomes.

05 Decision

Who approves?

Ownership, rationale and escalation are unclear.

06 Action

What happens now?

Operational teams receive analysis rather than a specific action.

The value is not another dashboard. It is a shorter path from signal to governed action.

Introducing Climate Decision Intelligence

Climate Decision Intelligence combines Aera Technology's enterprise decision intelligence platform with Climate & Decisions' climate, sustainability, governance and operating-model expertise.

It provides an accelerated and configurable way to connect climate and sustainability signals with business context, evaluate viable responses, make trade-offs visible and deliver governed recommendations to accountable decision-makers.

Organizations do not begin with a blank technology platform or an abstract AI strategy. They begin with proven decision patterns that can be configured around the organisation's data, priorities, decision rights and operating environment.

Aera Technology

- Connected enterprise information and decision modelling
- Option evaluation and ranked recommendations
- Workflow, approval and action support
- Outcome capture and continuous learning

Integrated result

Five configurable decision skills translating climate information into business action.

Climate & Decisions

- Climate risks, opportunities, emissions, targets and sustainability signals
- Decision criteria, thresholds and trade-off logic
- Governance, decision rights and evidence requirements
- Implementation and operating-model support

From Signal to Governed Action

1

Signal

A climate event, PCF issue, carbon-budget deviation, supplier deterioration or sourcing opportunity is detected.

2

Business context

Revenue, inventory, margin, suppliers, customers, assets and commitments are connected.

3

Options

Viable operational, commercial and sourcing responses are generated and evaluated.

4

Trade-offs

Cost, margin, service, resilience, carbon and risk consequences are made visible.

5

Recommendation

The highest-value response is ranked with quantified impacts and confidence.

6

Accountable owner

The decision is assigned for approval, modification, escalation or rejection.

7

Action and evidence

Approved action enters the workflow; rationale and outcomes are recorded.

8

Learning

The outcome improves future decision logic and recommendations.

Aera connects enterprise information, evaluates response options, ranks recommendations and supports execution through existing workflows. Climate & Decisions translates climate risks, emissions, targets and sustainability signals into financially and operationally relevant decision criteria, thresholds, trade-offs, governance and evidence.

Depending on the decision and its materiality, a recommendation may be approved, modified, escalated or rejected. Aera accelerates analysis and coordination; judgement, ownership and accountability remain with the business.

Aera recommends. The accountable owner decides.

Five Skills, One Decision Intelligence Pattern

The five initial skills apply one repeatable decision-intelligence pattern to different enterprise questions. Each connects a signal with business exposure, evaluates options and trade-offs, and delivers a governed recommendation to an accountable owner.

1

Supply Chain Resilience

How should the organisation protect availability, revenue and service when a climate event disrupts suppliers or logistics?

Signals and context

- Physical hazard
- Supplier and route exposure
- Purchase orders
- Inventory
- Criticality
- Revenue and margin
- Logistics emissions

Decision logic

- Quantify exposure
- Compare targeted expediting
- Rerouting
- Substitution
- Inventory use and timing changes
- Balance revenue, service, cost and emissions

Recommendation and action

- Recommend actions by product, supplier or location
- Quantify impacts
- Assign owner and approval
- Initiate workflows
- Retain evidence

2

Carbon-Aware Promotion

Can campaign or portfolio emissions be reduced without materially compromising margin, availability or customer outcomes?

Signals and context

- Campaign and product portfolio
- Product carbon footprints
- Margin
- Demand
- Inventory
- Alternatives
- Commercial commitments

Decision logic

- Identify high-emissions products
- Test lower-carbon substitutions and alternative configurations
- Compare stock
- Revenue
- Margin and emissions

Recommendation and action

- Recommend substitutions or campaign adjustments
- Quantify emissions and margin impacts
- Route material changes for approval
- Capture realised outcomes

3

Carbon Budget Optimisation

How should activity change when actual or forecast emissions exceed the organisation's carbon budget?

Signals and context

- Carbon budget
- Actual and forecast emissions
- Product or activity-level emissions
- Revenue, margin
- Demand
- Inventory
- Targets

Decision logic

- Detect the deviation
- Identify principal sources
- Test portfolio or activity scenarios
- Prioritise changes with the lowest commercial impact

Recommendation and action

- Recommend adjustments
- Quantify carbon
- Revenue and margin effects
- Assign the budget owner
- Escalate material deviations
- Retain evidence

4

Supplier Risk

When does deterioration in supplier sustainability performance require commercial intervention?

Signals and context

- Supplier ESG data
- External evidence
- Spend and revenue exposure
- Dependency
- Contracts
- Criticality
- Alternatives

Decision logic

- Connect deterioration to commercial exposure
- Assess continuity and dependency
- Compare engagement
- Audit
- Allocation hold and alternative sourcing

Recommendation and action

- Recommend intervention
- Quantify exposure
- Assign owner and approval
- Initiate audit or engagement workflow
- Maintain decision evidence

5

Sustainable Sourcing

Can supplier sustainability performance improve without materially increasing cost or compromising availability?

Signals and context

- Pricing
- PCF
- ESG performance
- Validated targets
- Capacity
- Quality
- Service
- Volume allocation
- Transition and physical risks

Decision logic

- Compare suppliers across cost, carbon, sustainability and service
- Test volume allocations
- Quantify consequences
- Apply sourcing policies

Recommendation and action

- Recommend optimal allocation
- Quantify cost
- Emissions and supplier-performance impacts
- Route approval
- Record rationale

The data and workflow change. The decision discipline remains consistent.

From First Decision to Enterprise Capability

Start with one high-value decision. Scale what works.

STAGE	ACTION	OUTCOME
01 SELECT	Identify one high-value, repeatable decision with material climate and business trade-offs.	OUTCOME A focused first use case with a named owner.
02 DEFINE	Set the signal, exposure, options, criteria, thresholds and decision rights.	OUTCOME A transparent decision model.
03 CONNECT	Bring together the required climate, financial, operational and commercial data.	OUTCOME A decision-ready view of the context.
04 CONFIGURE + TEST	Configure the relevant skill, test recommendations and validate governance with accountable users.	OUTCOME A deployable, governed workflow.
05 DEPLOY + LEARN	Measure outcomes, refine logic and extend the pattern to further decisions.	OUTCOME A scalable climate decision capability.

THE END STATE

The organisations that lead will not necessarily be those with the most climate information. They will be those that translate that information into better decisions with greater speed, balance and accountability.

The five skills demonstrate a repeatable enterprise pattern: connect a climate or sustainability signal with business context, evaluate viable options, make trade-offs visible, assign the recommendation to an accountable owner, convert it into action and retain the evidence.

Aera accelerates the decision. Climate & Decisions helps embed the climate intelligence, governance and operating model around it.

START WITH ONE HIGH-VALUE CLIMATE DECISION

Identify your first decision use case