

Turning asset intelligence into operational advantage

Climate Risk and Asset Resilience Summit 2026

April Jewell

Asset Management Systems Lead, Operations & Projects



EnergyAustralia
LIGHT THE WAY

April Jewell

FROM THE BOILER ROOM TO THE BOARDROOM



13 years across EnergyAustralia's fleet

Chartered Mechanical Engineer

MBA

CSAM Candidate

★ 2026 AMC Rising Star Award

EARLY CAREER

Graduate & Plant Asset Engineer

Engineering rotations at Wallerawang,
Mt Piper & Tallawarra Power Stations

STRATEGIC PIVOT

Lead Sustainability Analyst

Advising the Executive & Board on
climate risk — TCFD, TNFD, ISSB

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PROJECT DELIVERY

Statutory Works Project Manager

Statutory mechanical works and the
Wallerawang decommissioning program

TODAY

AMS Systems Lead

Leading AMS for the gas & coal fleet —
maturity, data governance & service levels

CURRENTLY LEADING

AMS Maturity Program

Lifting asset management capability
across the generation fleet

O&P Data Governance

A single trusted source powering
smarter asset decisions

Levels of Service

Linking enterprise strategy to
frontline maintenance decisions

The resilience problem isn't a data problem

It's a translation problem

Most asset-intensive organisations are not short of data. They are short of trusted data that reaches the right person at the right moment.



Data exists but fragmented

Decades of project-based delivery and acquired assets leave inconsistent definitions, unclear ownership, and siloed systems across sites.



Metrics exist but misaligned

Single high-level KPIs applied uniformly across different asset types obscure the trade-offs between cost, risk and flexibility.



Insight exists but stranded

Analytics and AI are only as good as the governance beneath them. Rubbish in, rubbish out: insight never reaches the frontline.

1. Finding the assets that underline resilience

Not every asset carries equal weight

IDENTIFYING CRITICAL ASSETS

Resilience is concentrated. A minority of assets drive the majority of risk exposure, so the first task is to find them, not to instrument everything equally.

A Critical Asset List focuses effort



How we rank an asset's influence on resilience

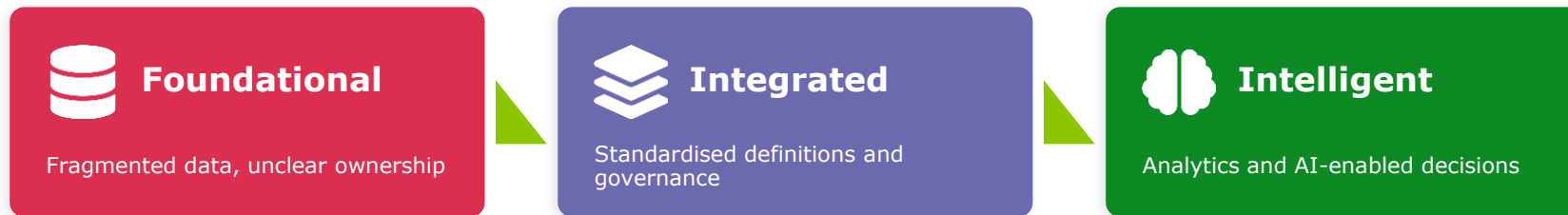
-  Consequence of failure — Safety, environmental, availability and compliance impact
-  Portfolio role — What the asset is there to do — baseload, peaking, system support
-  Condition and age — Failure likelihood informed by condition, history and design life
-  Interdependency — Whether one failure cascades through connected systems

You can't rank what you can't trust

THE GOVERNANCE FOUNDATION

Identifying critical assets depends on trusted data about them. That's why a single source of truth and governed Critical Data Elements come first, the foundation beneath every resilience decision.

Maturity is a pathway — not a leap



Most organisations attempt the leap straight to AI — and stall, because the foundation was never laid.

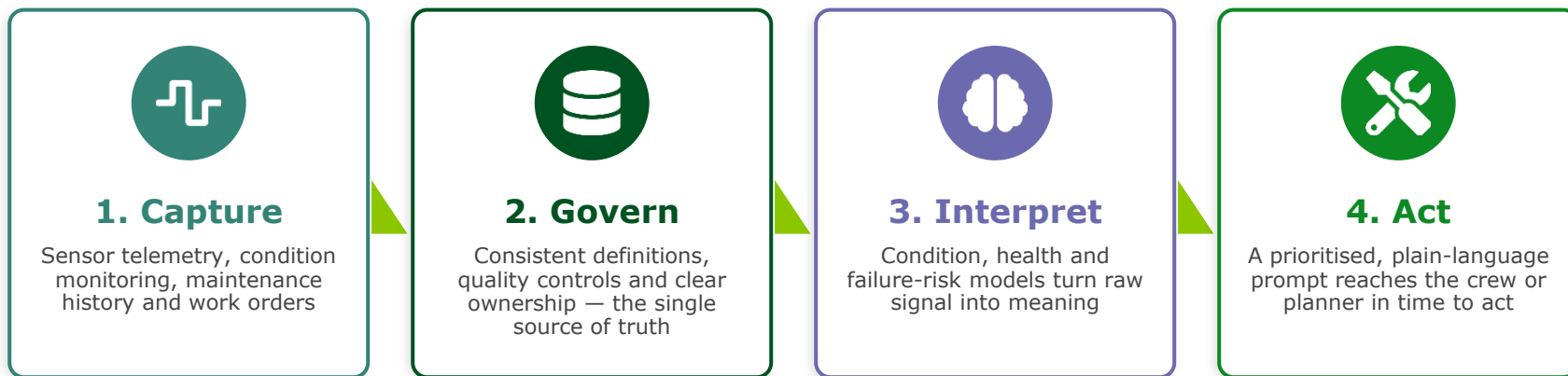
Foundation deliverables: single source of truth · Critical Data Elements · Critical Asset List · clear data ownership

2. From sensor data to frontline decisions

Turning data into decision support

THE DATA-TO-DECISION PIPELINE

Sensors and work orders generate signal. Value is only created at the last step, where a person makes a better decision because of it.



The trap: most programs stop at 'interpret' a dashboard nobody opens. Advantage is only realised at 'act'.

What good decision support looks like

FROM SIGNAL TO ACTION



Data without decision support

- Raw sensor feeds and a wall of dashboards
- Alerts with no priority (alarm fatigue sets in)
- Insight sits with analysts, not the frontline
- Crews rely on experience and gut feel
- Failures found after they happen, not before



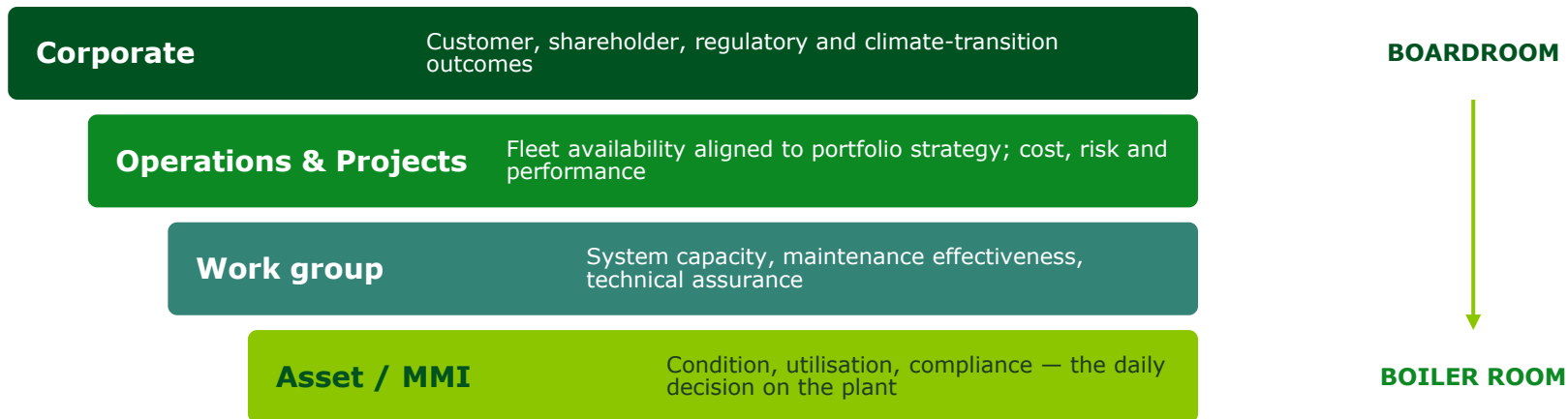
Governed data, frontline support

- One trusted source, one prioritised view
- Ranked prompts: most critical asset first
- Insight delivered where the work happens
- Decisions backed by condition and risk models
- Failures anticipated and prevented on condition

Measure what the asset is there to do

LEVELS OF SERVICE

Decision support is only as good as the measure behind it. Levels of Service cascade strategic intent down to the maintenance item, so the frontline optimises for value, not a legacy metric.



3. Optimising investment, reducing avoidable risk

Directing capital to where risk lives

RISK-BASED INVESTMENT

When condition and criticality data are trusted, investment stops being a contest of opinions and becomes an evidence-based allocation of capital against risk.

Three shifts real-time insight enables



Reactive → predictive

Intervene on condition before failure, not after, planned work costs a fraction of a forced outage



Flat → risk-weighted spend

Capital flows to the assets whose failure most threatens resilience, not evenly across the fleet



Opinion → evidence

Investment cases rest on condition and risk data, making trade-offs transparent and defensible

Much operational risk is avoidable



■ Avoidable — addressable with insight

■ Residual — inherent risk to manage

The operational advantage, made real

THE PAYOFF

When the three disciplines come together: right assets, trusted decision support, risk-based investment, resilience stops being a report and becomes a way of operating.



Fewer surprises

Failures anticipated on condition, not discovered on the run



Smarter spend

Capital directed to the assets that most protect resilience



Faster response

Frontline crews act on prioritised insight within the shift



Defensible decisions

Every trade-off backed by trusted data and clear service intent

Asset intelligence is climate resilience

SUSTAINABILITY & CLIMATE

Everything we've built, criticality, trusted data, condition insight, is what makes the fleet resilient to a changing climate. EnergyAustralia's first AASB S2 Sustainability Report names operational resilience as a material physical risk. Asset intelligence is how we manage it.

 **97%**

of property, plant & equipment
exposed to operational resilience risk

 **665 GL**

of water to rehabilitate Yallourn Mine —
drought could extend fill by 4–7 years

 **3–4°C**

upper physical-risk scenario modelled
against each asset's operating life

From physical risk to adaptation



Criticality flags the assets most exposed to flood, bushfire, heat and drought



Condition data anticipates climate-driven derating and failure before it bites



Risk-based capital funds firming, storage and adaptation where it protects supply

The transition and the physical risk are two sides of one job: a resilient, decarbonising fleet is a well-managed fleet.

Three things to take away



01 Resilience is concentrated

A trusted criticality ranking (not the whole register) tells you where data and capital protect the most.



02 Data becomes advantage at the point of work

Capture, govern, interpret, act. Insight only counts when it reaches the frontline as a prioritised prompt.



03 Managing the fleet well is managing climate risk

The same intelligence that lifts performance is what makes a decarbonising fleet resilient to physical climate hazards. Trusted condition and criticality data turns capital allocation from opinion into evidence. Shrink avoidable risk before it becomes an outage.

Thank you

April Jewell

www.linkedin.com/in/apriljewell-au



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