WEBINAR · 2026

Integrating AI into Organisational Systems, Processes, and Risk Management

A practical view for resources and energy employers

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Content co-created with AI; reviewed and verified by the presenter.

PRESENTER

About me

Javier Gonzales

Principal AI Domain — Hancock Iron Ore

- 20+ years across data, automation, and AI.
- Led AI strategy and adoption programs in large enterprises.
- Focus: practical AI integration, governance, training, and safe value delivery.

The views expressed are the presenter's own and do not represent Hancock Iron Ore's position on AI.

CONTEXT

Why this matters now to resources and energy

01

Margin & complexity

Volatile commodities, thinner margins, more variables to manage.

02

Workforce reality

Skill gaps, ageing workforce, rising safety expectations.

03

Capital at stake

Long-cycle decisions; large blast radius for mistakes.

04

Pace of change

AI capability is moving faster than most change cycles.

AI is not new — but the gap between leaders and laggards is widening fastest in our sector.

AUDIENCE POLL

Temperature check

Drop a number in the chat, or use show-of-hands.

Q1

How often do you use generative AI for work?

1 = never · 5 = daily

Q2

Has your team formally adopted any AI tool?

Yes · Trialling · Not yet

Q3

Do you have AI guardrails or policy in place?

Yes · In progress · No

AUDIENCE POLL

What excites you? What worries you?

Drop one word in the chat for each.

EXCITES

What's the upside you see?

- Speed and access to expertise
- Smarter, safer operations
- Better decisions under uncertainty
- Less drudgery, more judgement

WORRIES

What's the risk you're watching?

- Confident but wrong outputs
- Sensitive data leaving the org
- Job and skills disruption
- Hype outrunning the controls

We'll come back to both lists during the session.

REALITY CHECK

Expectations vs Reality

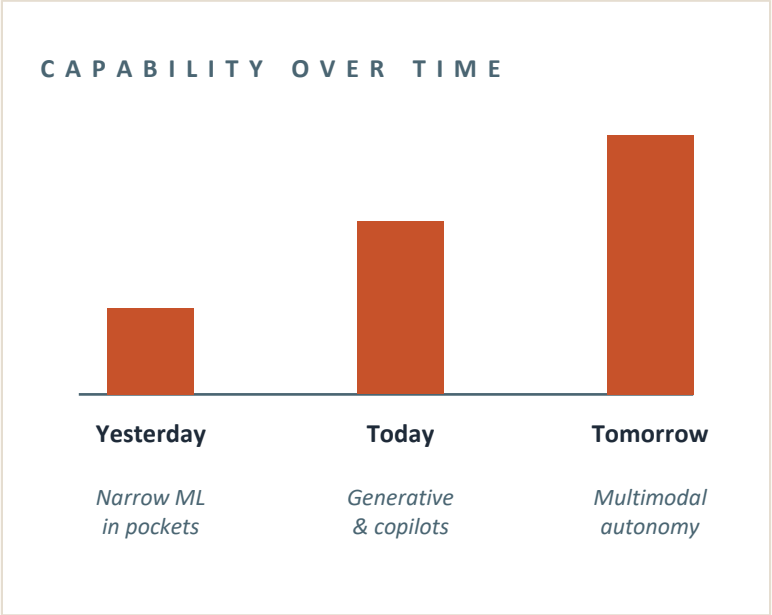
EXPECTATION	REALITY
Replaces experts	**Augments expert judgement**
Always accurate	**Confident, sometimes wrong**
Plug-and-play	**Needs your data and process redesign**
Solves any problem	**Best on bounded, repeatable tasks**
Set and forget	**Requires monitoring, retuning, oversight**

Treat AI like a capable, sometimes-wrong colleague — useful, but never unsupervised.

PACE OF CHANGE

Build the habit, not the tool

- Models change every quarter
- Memorising one tool ages out fast
- The skill is judging output, not syntax
- Coach the model; verify before trusting
- Adaptive capability beats certification



Curve is steepening — adopt a learning habit, not a single tool.

INDUSTRY APPLICATIONS

AI in mining and energy today

SAFETY

Vision-based hazard detection

Fatigue, PPE, and proximity alerts from cameras.

MAINTENANCE

Predictive maintenance

Sensor signals flag rotating-equipment issues early.

OPERATIONS

Drill & haul optimisation

Route, pattern, and load planning at scale.

EXPLORATION

Geoscience pattern discovery

Mineralisation cues across drill, seismic, satellite.

ENERGY

Load & grid optimisation

Forecasting, dispatch, and demand response.

Documented public application categories. Outcomes vary by site and maturity.

BEFORE YOU BUILD

Identify the value — pick the right problems

01

PROBLEM

What pain are we removing?

Specific, scoped, painful enough to act on. Whose problem, when, how often.

02

SOLUTION

What's the high-level shape?

Buy, build, or augment. Where does AI sit in the workflow.

03

FEASIBILITY

Can we deliver it safely?

Data quality and access, tech maturity, risk profile, cost to run.

04

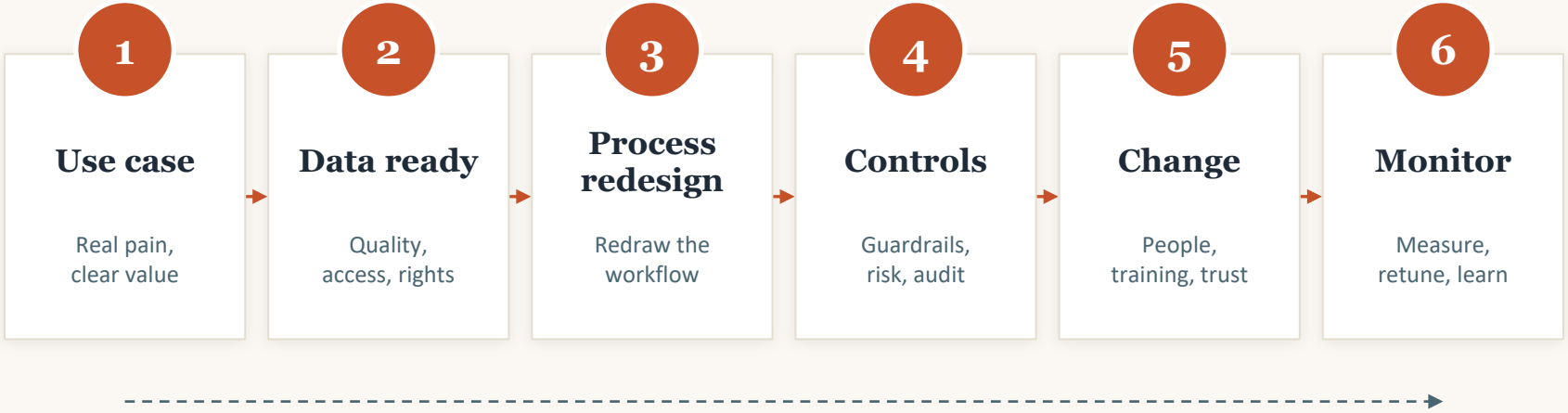
BENEFIT

How will we measure impact?

Baseline today, target tomorrow, $$ or time or risk reduction.

If you can't answer all four in one paragraph, the idea isn't ready.

Critical steps to integrate AI



Two-thirds of this is people and process. One-third is technology.

Experimentation beats the strategy deck

THE STRATEGY-DOC TRAP

- Frozen at sign-off
- One big bet, slow to test
- No measurable outcome
- Avoids risk by waiting
- Learns slowly, scales nothing

PORTFOLIO OF EXPERIMENTS

- **Defined ambition, flexible tactics**
- **Many small bets with hypotheses**
- **Time-boxed, measurable, killable**
- **Manages risk through guardrails**
- **Compounds learning, scales winners**

Define ambition. Run experiments. Scale winners. Kill losers.

RoyBot — internal knowledge assistant

01

Knowledge at hand

Internal · approved sources

WHAT IT DOES

- Answers procedural and policy questions from approved sources
- Summarises long documents on request
- Points users to the source, not just the answer

WHAT CHANGED

- Faster access to the right knowledge
- Less manual lookup; more time on judgement
- Greater confidence in day-to-day decisions

Built with guardrails: approved sources, source citations, human-in-the-loop for sensitive use.

TrackDefect X — vision-based rail inspection

02

Eyes on the network

Computer vision · rail safety

WHAT IT DOES

- Detects rail defects from imagery captured along the network
- Triages anomalies for engineering review
- Feeds findings into planned-maintenance scheduling

WHAT CHANGED

- More consistent detection across long stretches of track
- Stronger signal for planned over reactive maintenance
- Better-supported safety and engineering decisions

Humans remain in the loop for every action that affects safety or operations.

AI literacy: belts, not lectures

WHITE BELT

Introductory

For: Everyone

Where AI fits, prompting basics, RoyBot AI assistant

YELLOW BELT

Foundational

For: Many

Basic AI concepts, AI applied to mining, Do's and Dont's in AI

GREEN BELT

Advanced

For: Fewer

Building solutions, governance, scaling experiments.

Behaviours we expect at every level: curious · critical · accountable.

Risk management — for work and life

RISK THEME	AT THE ENTERPRISE	AT YOU
Data & privacy	Approved tools, DLP, no-paste rules, classification	*Treat every prompt like a public post*
Accuracy	Evaluations, monitoring, human-in-the-loop on impact	Verify before you act or send
IP & ethics	Source provenance, policy, vendor due diligence	Cite sources; respect copyright
Bias & fairness	Use-case risk tiering, testing, audit trails	Notice your own confirmation biases
Over-reliance	Skills uplift, autonomy controlled by risk	Use AI to learn, not to outsource thinking

Same instinct, different settings: be curious, be careful, stay in the loop.

The illiterate of the 21st century will not be those who cannot read and write, but those who cannot learn, unlearn, and relearn.

Alvin Toffler

Curiosity is the new core skill.

Q & A

What would you like to dig into?

Where to start?

How do you measure value?

What about the risks?

Drop your question in the chat or unmute — we'll get to as many as we can.

Thank you.

Javier Gonzales

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Keep learning. Keep questioning. Keep humans in the loop.