KEY ENGINEERING SOLUTIONS
CORPORATE PROFILE · 2026

From hidden performance to measurable results.

Asset performance optimisation for mining and industry.



Who we are

Key Engineering Solutions is an Australian firm specialising in process control and operational optimisation, helping mining and industrial operations capture greater production, stability and efficiency from their existing assets and systems.

THE CHALLENGE

Most industrial plants operate below their true potential — not for lack of equipment, but due to uncontrolled variability, inadequate control philosophies, poorly configured loops, and optimisation opportunities that haven't yet been turned into concrete action.

OUR APPROACH

Without necessarily relying on new infrastructure, we work directly on the control systems — from the real-time data through to the field loop — with a vendor-independent model led by senior specialists.

TRACK RECORD

Since 2014, our team has worked across approximately 41 industrial plants for 29 clients in Australia, including operations for BHP, Fortescue, Rio Tinto and Roy Hill.

REGIONAL PRESENCE

With a presence in Perth and Cartagena, we combine over a decade of hands-on experience in Australian operations with local capability to build relationships and pursue opportunities across Latin America.

More capacity. Less variability. Better operational efficiency.

Key captures measurable performance from existing assets, through practical interventions, technology independence, and a focus on sustaining results over time.

2014	41	29	2
Year founded	Industrial plants	Clients in Australia	Hubs: Perth and Cartagena

SOME OF OUR CLIENTS

BHP · Rio Tinto · Fortescue · Newmont · Capricorn Metals · Genesis Minerals · Greatland Gold · Mineral Resources · Orabanda Mining · Hancock Iron Ore · Engie · Acciona · Wabtec · ClarkeEnergy · Quintis · Tianqi Lithium · Galaxy · Arcadium Lithium · Covalent Lithium · Kimberley Mineral Sands · Iluka

The lost performance that CAPEX doesn't always solve

If any of this sounds familiar, there's probably already value trapped in how the plant operates today.

COMMON CHALLENGES

Manual operation
Conservative setpoints to maintain stability: the plant produces less so as not to lose control.

Process variability
Changes in ore, load and operation erode stability, quality and metallurgical recovery.

Misunderstood constraints
"Virtual" bottlenecks: the asset can do more, but the control strategy doesn't allow it.

Shift-to-shift variation
The plant performs differently depending on who's operating it: performance depends more on the operator than the system.

Loss of expertise
Operational knowledge leaves with staff turnover, and improvements achieved degrade over time.

US$4M/yr

This is what can be at stake: in a ~100,000 oz/year gold operation, one additional percentage point of recovery can represent ~1,000 oz/year — at ~US$4,000/oz, close to US$4M/year before costs, availability and metallurgical assumptions.

QUESTIONS WORTH ANSWERING

1. Where is the performance loss?
2. How much value could be at stake?
3. Does it make sense to act now or not?

If the operational data doesn't show sufficient value, it doesn't make sense to proceed. Deciding not to continue is also a good outcome.

TYPICAL IMPACT IN COMPARABLE CONTEXTS

2-6%
Potential improvement in stabilised production

10-30%
Reduction in variability of critical variables

04 — METHODOLOGY

From opportunity to sustained value on the plant

A structured approach to identifying opportunities in the operation, executing improvements, and sustaining performance over time.

APA™ — Asset Performance Assessment

A structured diagnostic to quantify real losses in capacity, energy, quality and stability across the plant. Delivers an opportunity map prioritised by economic impact, with clarity on what to tackle first and why.

KAPO™ — Key Asset Performance Optimisation

Converts identified opportunities on the plant into captured value. Senior engineers work directly on control loops, operating strategies and process constraints to stabilise the plant, reduce variability and bring the asset closer to its productive potential.

APS™ — Asset Performance Sustainability

Protects captured value so improvements aren't lost over time. Integrates performance monitoring, control governance, technical support, and knowledge transfer to the operations team.

Where variability, control constraints or uncaptured capacity exist, an initial technical conversation can help validate whether there is real value to capture.

Evidence: real cases and practical credibility

Examples delivered in Australia. Contexts vary; results depend on the actual condition of each plant.

FINES RECOVERY

+195 tph

improvement observed at the constraint

Recommissioning and redesign of the control strategy to remove operational constraints and stabilise the circuit.

Relevance: fines recovery circuits, reprocessing, stockpiles, and assets under high utilisation pressure.

PRIMARY CRUSHING

+19%

above a 180 tph baseline (+33 tph of capacity)

Automation of the primary feeder to dynamically adjust speed and improve feed consistency to the circuit.

Relevance: more stable production, lower variability, and better use of the existing circuit.

PH CONTROL

62.5%

less variability (StDev: 0.32 → 0.12)

Lower pH dispersion and better compliance with operating limits.

Relevance: recovery, reagent consumption, metallurgical stability, and reduced operator dependence.

CYANIDE CONTROL

44.2%

reduction in variability around setpoint

Optimisation of the cyanide control philosophy to improve metallurgical stability and efficient reagent use.

Relevance: recovery, reagent consumption, metallurgical stability, and reduced operator dependence.

Presence and contact

Let's talk about where hidden performance might sit in your operation. An initial technical conversation helps validate whether there is real value to capture.

keyengineering.com.au **info@keyengineering.com.au**

HOW THIS COULD START

A first step that builds trust

A fixed-scope APA performance diagnostic, two to four weeks in duration, with no initial changes to the plant. Deliverables: validated baseline, loss map, prioritised causes, business case, risks, recommended actions and an implementation proposal.

A joint gate at the end decides whether to continue or stop. If the data does not show enough value, stopping is a good outcome too.

LATAM CONTACT

Wilson Florez
Growth Director, LATAM
+61 40 230 6886 · +57 316 885 9406
wflorez@keyengineering.com.au

CONTACT AUSTRALIA

Andre Gibson
Growth Director, Australasia
+61 439 692 328
agibson@keyengineering.com.au

CONTACT BRASIL

Mauro Matos
Business Development Brasil
+55 91 98354-9902
mmatos@keyengineering.com.au

AUSTRALIA OFFICE

Key Engineering Solutions
Level 7, 28 The Esplanade, Perth WA 6000
+61 1300 305 650

COLOMBIA OFFICE

Key Engineering Solutions Colombia S.A.S.
Centro Corporativo Serena del Mar, Level 3, Km 8 Vía al Mar, Cartagena

