LEAD ASSET MANAGEMENT

CAPABILITY STATEMENT

2026

OPERATIONAL READINESS

Reliable Today, *Ready for Tomorrow*

LEAD ASSET MANAGEMENT

// Lead Asset Management Pty Ltd (LAM) is a Perth-based engineering consultancy specialising in asset management solutions.

+120 PROJECTS for clients in the Mining, Electricity and Renewables, Water Infrastructure and Oil and Gas sectors

+250 YEARS of combined expertise

Asset Management

- Alignment with ISO 55001
- Strategic Asset Management Plan (SAMP)
- Asset Management Plan
- Asset Management Assessment & Audit
- Asset Management Benchmarking
- Asset Management Coaching & Mentoring
- Asset Management System Audit
- Asset Health Dashboards
- Lifecycle Cost Development and Optimisation

Operational Readiness

- Material & Critical Risk Management
- Spare Parts & Materials Cataloguing
- Change Management
- Project Management Support

Reliability Engineering

- Equipment Criticality Assessment
- Root Causes Analysis (RCA)
- Asset Performance Management
- Master Data Optimisation
- Defect Elimination Program
- Spare Parts Management Optimisation
- Reliability Centred Maintenance (RCM) Analysis
- Maintenance Strategies & Tactics Optimisation
- Failure Mode, Effects, and Criticality Analysis (FMECA)

Maintenance

- Precision Maintenance
- Maintenance Capabilities Assessment
- Work Management Process Improvement
- Budgeting Process & Cost Control
- Material & Critical Risk Audit
- Troubleshooting & Breakdown Management
- Planning and Scheduling Processes Optimisation
- Shutdown (Turnaround) Performance Improvement
- Condition Monitoring Program Management

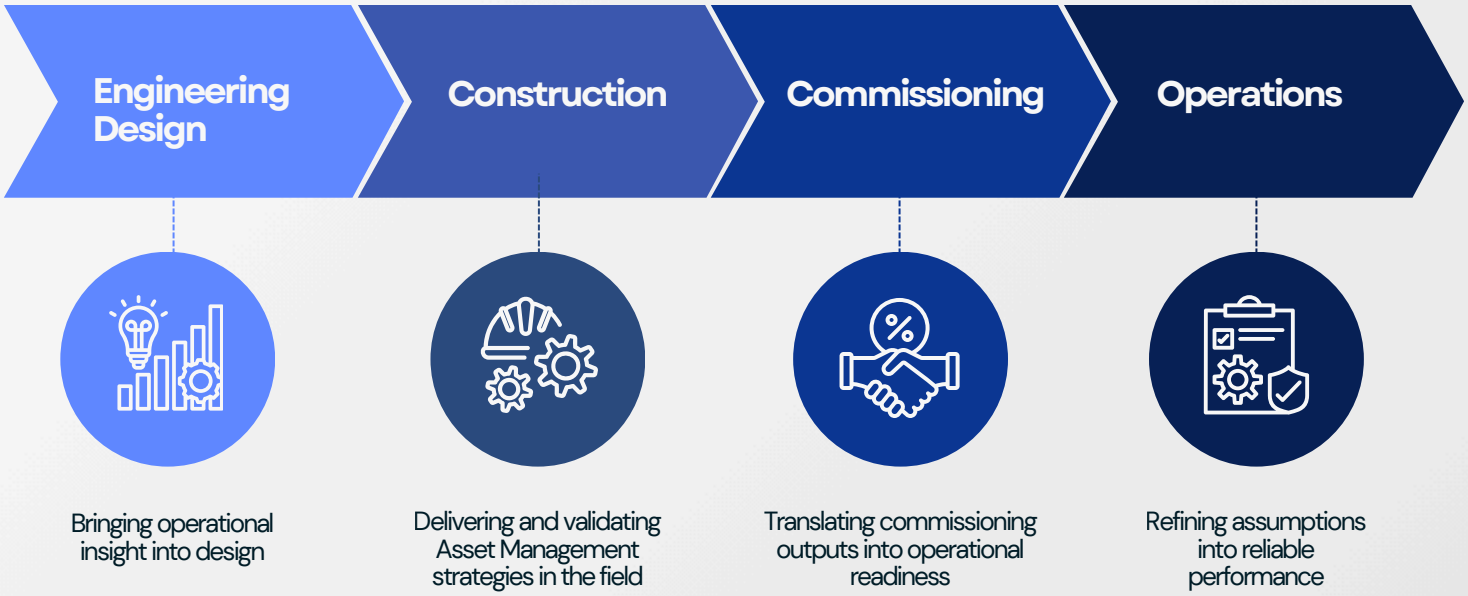
Operational Readiness

Zero delays from operational requirements point of view for Asset Management deliverables, that's the standard we aim for.

// Operational Readiness ensures that operations have everything they need - systems, documentation, processes, people, materials, and knowledge - **to begin safely and efficiently from day one**.

Is more than a late-stage project activity. It's a lifecycle strategy that flows from **engineering design and construction, through commissioning, and into operations**.

Our approach integrates Operational Readiness **from the earliest design phase**, focusing on the full asset lifecycle and aligned with ISO 55000 series principles.



Results you can expect

Reduced Downtime
Up to 40% reduction in unplanned downtime

Less Reactive Maintenance
Up to 50% reactive tasks

Improved Safety & Sustainability Performance
Over 30% increase in production

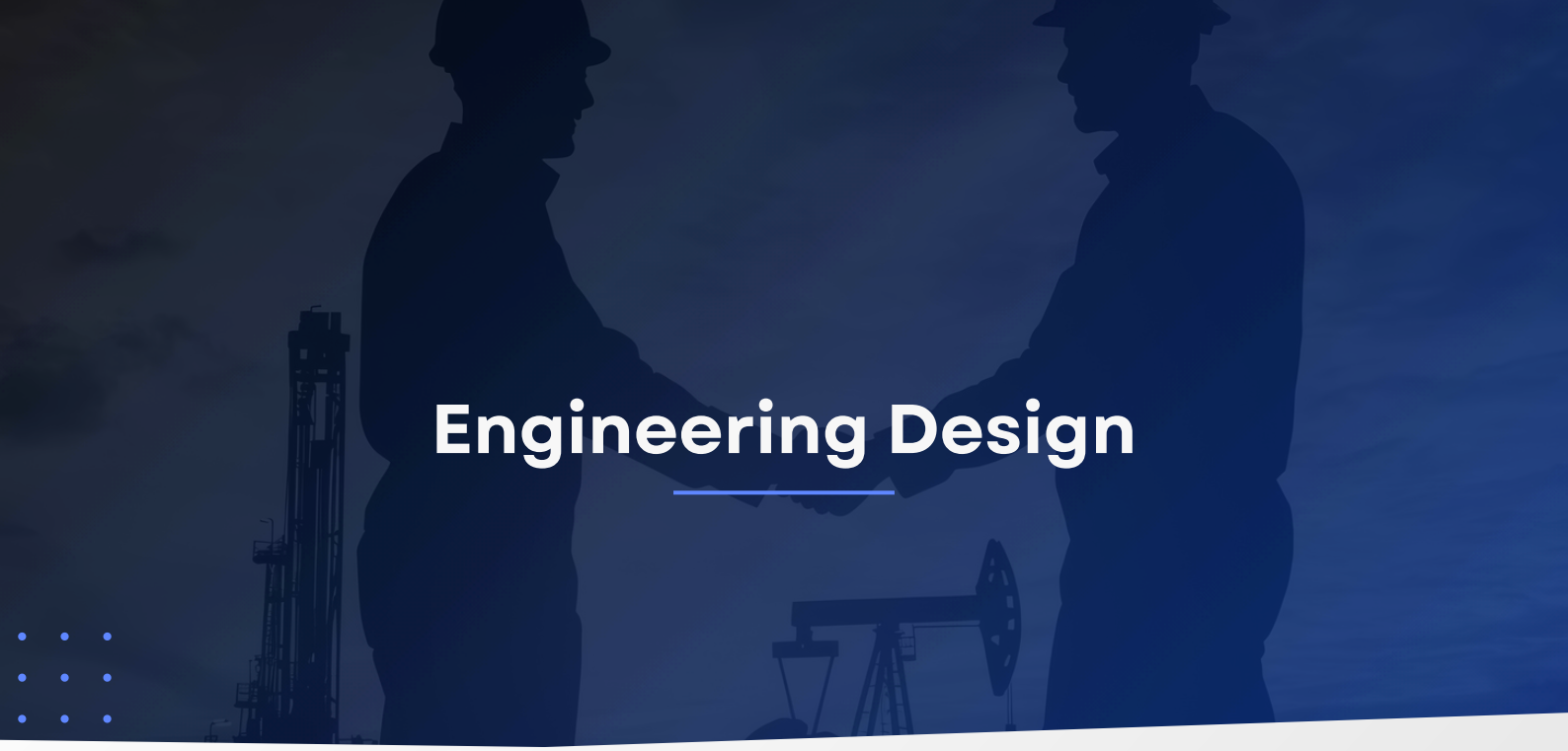
Increased Tonnage Output
Up to 30% production

Reduced Carbon Emissions
Up to 20%

Cost Reduction
Avoidance of $30M+

Reduced Stress for Personnel
Clear systems and training from day one

Improved Company Reputation
Trusted by stakeholder as safe, reliable operator.



Engineering Design

// **Design is where readiness must begin.** This is where long-term asset performance is shaped, by aligning lifecycle thinking with the organisational structure, business goals, legal requirements, and productivity targets.

At this stage, LAM gathers all available design information and performs an **assessment focused on operational criteria.**

We bring an **operational lens** and connect the Engineering and Operations teams to assess possible operational requirements in the design. We help test the design to confirm that it addresses operational needs holistically, from accessibility and tooling to maintainability and shutdown logistics.

New technologies, infrastructure types or asset classes often introduce critical or material risks. We support the Engineering and Operations teams in identifying, assessing, and mitigating those risks early. This collaborative approach ensures that decisions made at the design stage enable smoother construction, minimise rework, and set the foundations for a successful and operable asset.

What we deliver in Engineering Design

- Design revision as per operational requirements (Reliability, Availability, and Maintainability)
- High-level identification of critical risks

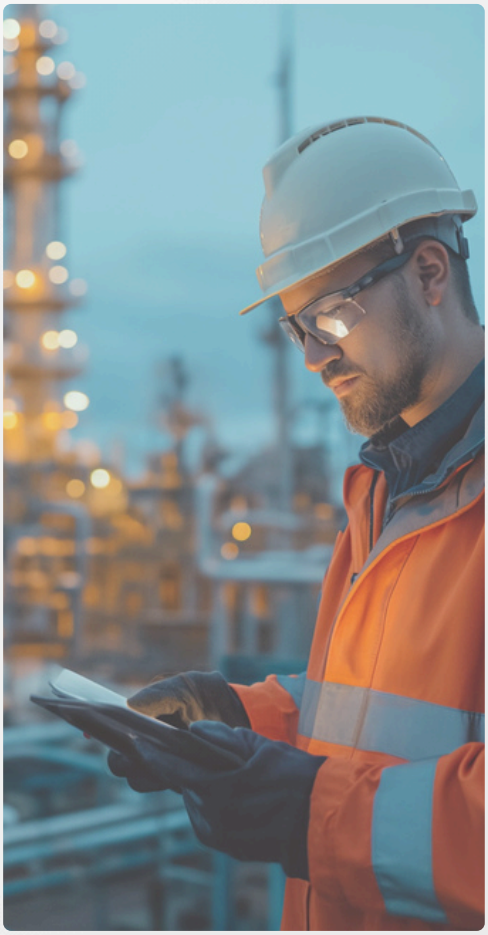
Construction

// The Construction phase **is where the Operational Readiness work becomes tangible.** It's the moment to transform strategy into structured deliverables that will support operations from day one.

During this stage, Asset Management requirements are progressively delivered and validated in collaboration with engineering, procurement, and operations teams. **Our role is to bridge the gap between the asset being built and the asset being operated.**

Progress against planned deliverables and costs is closely tracked, with reforecasting applied as needed to account for scope changes or updates to the construction schedule. This ensures continued alignment and operational preparedness as the project evolves.

Deliverables are endorsed by the operations team to ensure they reflect the reality of how the asset will function, reducing the risk of disconnects at handover.



What We Deliver in Construction:

- Strategic Asset Management Plan (SAMP)
- Asset Management Plan (AMP)
- Equipment Criticality (ECA)
- Materials Cataloguing
- Spares Criticality
- Bill of Materials (BOM)
- Spares Stocking Strategies
- Spares Preservation Strategies
- Preventive Maintenance Strategies
- Corrective Maintenance Strategies
- Business Continuity Plans (BCP)
- Equipment Recovery Plans (ERP)
- Review of the Maintenance Organisational Structure
- Five-Year (5Y) / Two-Year (2Y) Maintenance Budget
- Operational training requirements
- Work Instructions
- Accuracy and readiness review of design and construction drawings
- Completeness and Accuracy Review of Original Equipment Manufacturer (OEM) Manuals
- Reliability-Centred Maintenance (RCM) / Failure Modes, Effects and Criticality Analysis (FMECA)-Based Maintenance Strategies and Tactics



Commissioning

// The test and commissioning phase is critical for validating whether assets perform as intended, and for preparing a smooth transition to operations. At this stage, **LAM works closely with the commissioning team to ensure that the data, documents, and knowledge generated are captured and translated into** future operational requirements.

Support includes identifying spares required for operations that differ from commissioning needs, as well as ensuring that final documentation reflects any blueprint changes made during testing. Commissioning plans and test results are also documented to support future equipment replacements, overhauls, and major component change-outs.

This phase is where a structured, traceable handover process is executed, with operational deliverables recorded, stored, and integrated into maintenance systems and enterprise platforms.

By bridging commissioning and operations, this phase ensures that operational readiness is not just planned, it's proven.

What we deliver in Commissioning

- Master Data Audits
- Maintenance Strategies activation (start)
- Major replacement strategies update with final commissioning data

Operations

// The first six months of operations are where assumptions meet reality. During this critical ramp-up phase, **LAM supports the operations teams in validating operational parameters and refining the strategies built during Operational Readiness.**

Our framework, aligned with ISO 55001 principles, ensures that all assumptions made earlier in the project, such as ore or material characteristics, process, and equipment performance, are tested against actual performance data. Gaps are identified, and agile adjustments are made to the operational data recently prepared, such as **maintenance strategies, stocking strategies, and work instructions.**

This stage is also where manuals, procedures, or technical documents may need to be re-evaluated and re-implemented based on operational feedback. By applying a structured post-implementation review process, early risks are mitigated, and long-term reliability is reinforced.

With our support, clients can **accelerate their ramp-up, minimise reactive maintenance, and reinforce the foundation built during Operational Readiness,** transforming lessons learned into sustainable operational excellence.

What we deliver in Operations

- Operational parameters validation
- Maintenance Strategies adjustments

Case Studies

Over the past three years, our Operational Readiness framework **has supported more than 30 major projects across mining operations.** From greenfield developments to infrastructure upgrades, in both sustaining and major projects, LAM has delivered value at every stage of the asset lifecycle, from design to ramp-up.



CASE STUDIES

// Engineering Design

New Crushing Circuit, Overland Conveyor and Stacking System - 30Mtpa Iron Ore Expansion

During the design stage, LAM assessed the proposed layout to identify and mitigate long-term maintenance risks. **Key inputs included defining space for crane access, adjusting handrails for safer equipment handling, and designing a lifting tool to assist battery replacements at height.** These contributions improved operational safety and maintainability before construction began.

New Lithium Mine Site

At this early-stage lithium project, LAM reviewed the client's catalogue and stocking strategy to reduce cost and improve procurement efficiency. By challenging the practice of linking spare parts solely to equipment OEMs, we enabled direct sourcing from component manufacturers. This change **resulted in AUD 400k in savings** for motor stocking alone and led to updated internal cataloguing guidelines, **improving long-term asset support and cost control.**

// Construction

New Iron Ore Mine Site 70Mtpa – Fixed Plant, HV Infrastructure, and new Camp

In this large-scale development, LAM delivered key Operational Readiness activities during construction, including the Asset Management Plans (AMPs), asset criticality assessment, and corrective maintenance strategies - some of which were initially outside the original scope. We also facilitated major component change-out workshops to develop detailed maintenance methods. **The client recognised the quality of the readiness work as a key factor in reducing the ramp-up period from 24 to 12 months.**

Nickel Processing Plant - New Substation for Thickener

During construction of a new substation supporting a thickener circuit, LAM developed an Operational Readiness framework aligned with ISO 55001. The framework defined the scope, structure, and governance of readiness activities, ensuring consistent delivery across the project. **After implementation, the model was formally endorsed and replicated across additional projects within the site, establishing a standardised approach to readiness for the client's broader operations.**

// Commissioning

New Digital Radio System

In this project, LAM supported the commissioning of a new digital radio system by capturing all engineering requirements for operational handover, including drawings, manuals, procedures, and training materials. Stakeholder mapping was also carried out to ensure alignment across all parties. The result **was a structured and delay-free handover process**, with the client describing it as the smoothest transition they had experienced, with full approvals and no rework required.

// Operations

Underground Distribution Boards

LAM developed detailed maintenance strategies for fourteen newly installed underground distribution boards at a nickel processing site. **The quality and structure of the strategies** were validated during the first 6 months of operations and led the client to hire a new project with LAM to align approximately 80 existing boards to the same standard. This demonstrated the long-term value of readiness work when correctly done and based on the correct assumptions to improve reliability across the site's electrical infrastructure.



Lessons from Late or Incomplete Operational Readiness

// While LAM is often engaged during project phases, there are instances where we're brought in after operations have already begun, usually in response to emerging gaps, risks, or inefficiencies. In these situations, our role shifts from proactive planning to structured remediation.

These examples demonstrate the challenges that arise when Operational Readiness is not embedded early and correctly and **highlight the value of engaging readiness expertise during the project phase, not after handover.**



Organisational Role Clarity

Within the first six months of operations, LAM supported the development of a RACI (Responsible, Accountable, Consulted, or Informed) structure aligned with ISO 55001 to clarify the responsibilities of the reliability team in relation to other maintenance and operational functions. The assessment involved leadership (managers and superintendents), engineers, planners, and frontline teams. Operators and maintainers were trained to understand when and how to escalate technical issues.

This alignment improved coordination and decision-making across functions but would have delivered greater impact if established earlier through Operational Readiness planning.

Risk Control Gaps Identified After Safety Incidents

Following two lifting-related incidents shortly after the start of operations, LAM was engaged to review site-level risk controls. In one case, slings used during a lifting activity had not been inspected or were past their inspection date. In another, an inadequate lifting plan failed to capture a clear hazard during workshop activities.

Our review found that critical risk identification and operational controls had not been addressed during project delivery and could have prevented both events. **These gaps highlight the importance of integrating risk assessments during the readiness phase, not after operations begin.**





Missed Design Review Inputs

LAM identified design gaps in the chute systems that were impacting material presentation on the conveyor. These issues resulted in significant operational losses, including tracking problems and run-offs.

The Asset Management specialist on site noted that **these gaps could have been identified earlier through a draft design review with operational inputs, rather than relying solely on engineering.** This reinforced the importance of involving operations-focused expertise during the design phase to avoid costly inefficiencies downstream.

Maintenance Strategy Failures

LAM was brought in after the client experienced repeated downtime and production losses related to chute performance. The maintenance strategies in place were overly simplistic, such as “check for corrosion”, and failed to account for wear management, liner replacement, or failure mode analysis effectively.

No FMECA had been conducted, and failure likelihood was not considered during strategy development. These **gaps emphasised the need for structured and detailed maintenance planning and risk-based analysis** during the Construction phase, where asset strategies should provide reliable information to the execution teams.





Master Data Remediation After Go-Live

Six months after a new stacker began operating, LAM was engaged to address recurring maintenance issues. The boom conveyor had been assigned strategies designed for ground-level conveyors, such as counterweight inspections, which were not applicable to its configuration.

All maintenance strategies had to be rebuilt from scratch. In addition, there were no Bill of Materials (BOMs) in place, and essential components - such as pulleys - could not be identified or located in stock when needed.

These issues significantly impacted maintenance planning and responsiveness and could have been avoided through proper maintenance strategy development and master data preparation during the Construction phase.

LEAD ASSET MANAGEMENT

Contact Us

Whether you're planning a new project or looking to improve an existing operation, we're here to help you make it ready - reliably, efficiently, and with measurable impact.

Speak to our team to explore how we can support your goals.

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