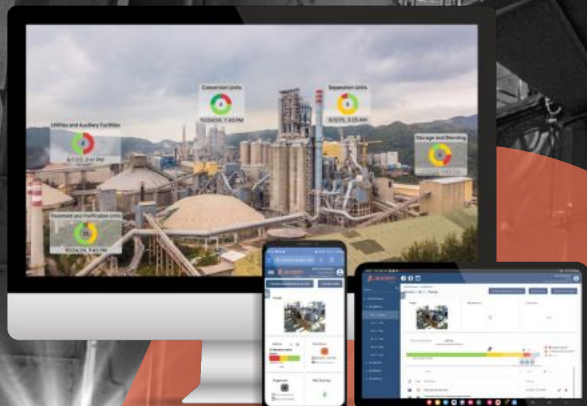


Smart & Connected Reliability for Cement Operations

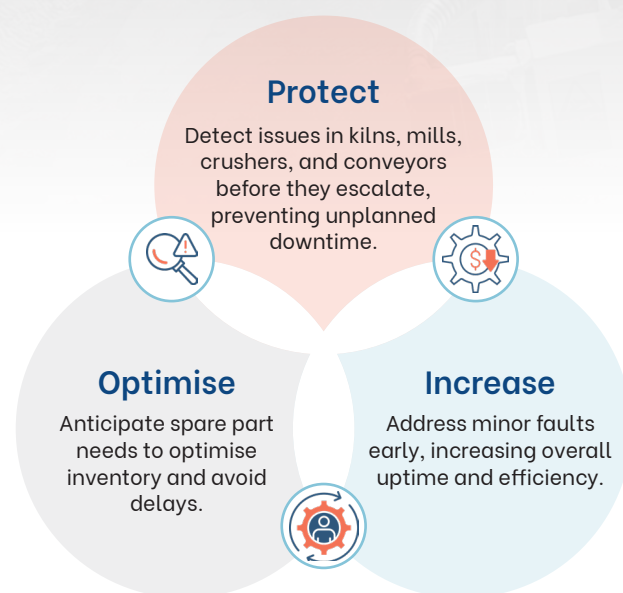




Stay ahead of the competition with smarter and more reliable operations

In the cement industry, social, environmental, and economic pressures demand high performance at lower costs. Unexpected equipment failures can halt production, causing downtime, losses, and safety risks. As a reliability partner, Acoem supports maintenance teams with predictive maintenance and shaft alignment solutions that enhance machine performance, reduce unplanned downtime, and ensure long-term asset reliability.

How Acoem ensures uninterrupted operations



Why choose Acoem?

Patented prescriptive AI

Our Accurex™ AI provides instant, accurate, and actionable insights on asset health.

Holistic & scalable ecosystem

From portable devices to online monitoring systems, all data is centralised in our NESTi4.0 platform.

Built for harsh environments

Our solutions include ATEX-certified options designed for safe operation in demanding cement plant environments.

Reliability experts for critical assets

Dedicated solutions for low-speed equipment like roller presses, kilns, and VRMs.

Comprehensive multi-parameter monitoring

Portable, wireless, and continuous data for complete, actionable insights.



Trusted by industry leaders for smarter & reliable operations



Are your workhorses performing at their best?

In the cement sector, reliability is essential. Identification and prioritisation of critical machinery is the foundation for a structured maintenance programme.

A single equipment failure can lead to production halts, regulatory penalties, and significant financial losses. Acoem's monitoring solutions ensure efficient, safe, and uninterrupted operations.

Typical failures covered with Acoem solutions

Kiln – rotary kiln

Main drive misalignment, trunnion roller and tyre-ring wear, shell deformation, and bearing failure.

Vertical Roller Mills (VRMs) & Ball Mills

Bearing failure, gearbox overheating, liner wear, hydraulic system malfunctions, rotor/table imbalance.

Roller Presses

Roller surface wear, hydraulic leaks, misalignment, bearing failure, uneven pressure.

Crushers

Hammer wear, bearing failure, shaft misalignment, drive motor overload, material blockages.

Separator Fans

Rotor/blade imbalance, bearing wear, motor overheating, blade erosion.

Reliability insights

25K\$ – 100K\$

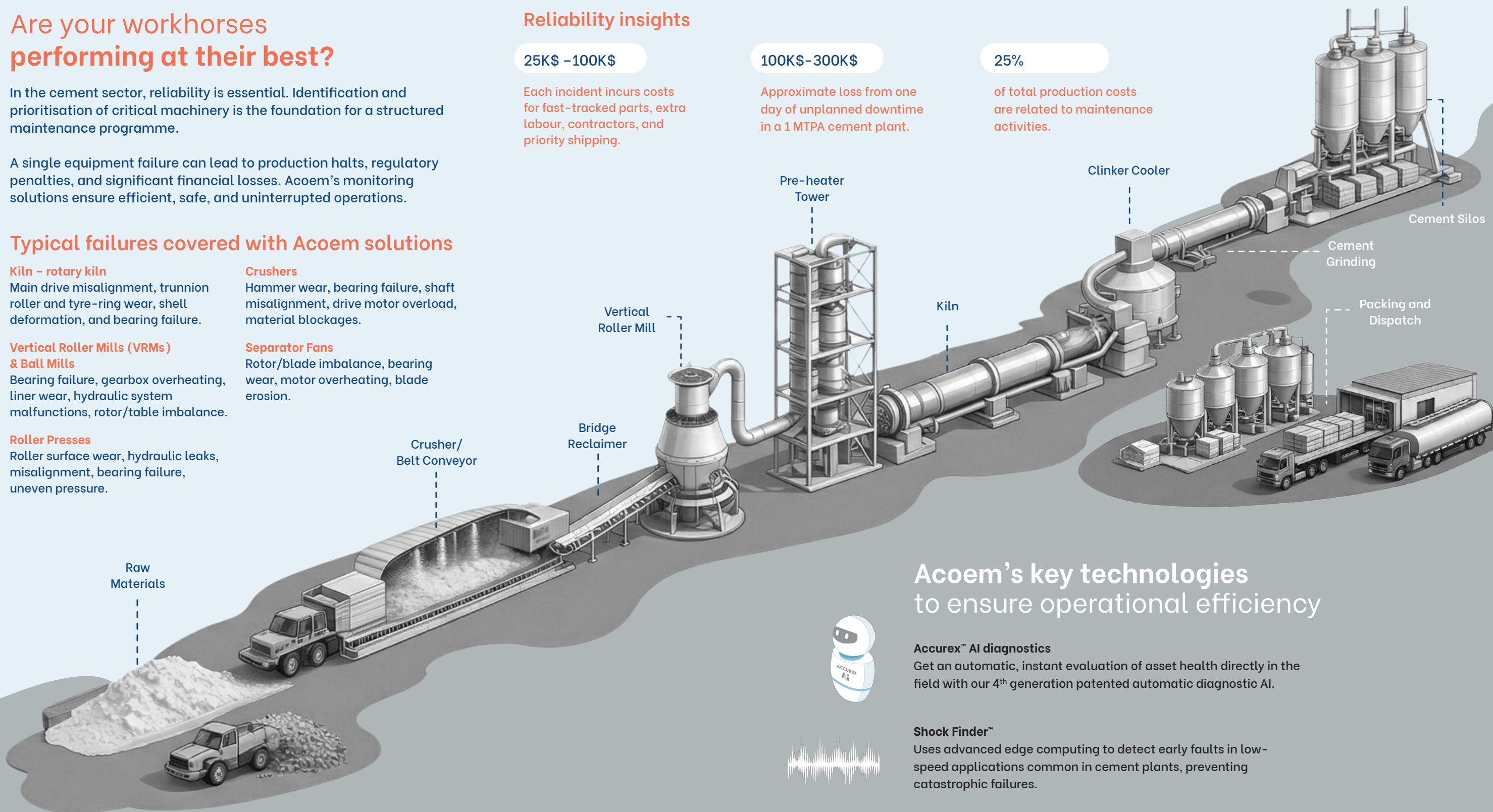
Each incident incurs costs for fast-tracked parts, extra labour, contractors, and priority shipping.

100K\$ – 300K\$

Approximate loss from one day of unplanned downtime in a 1 MTPA cement plant.

25%

of total production costs are related to maintenance activities.



Acoem's key technologies to ensure operational efficiency



Accurex™ AI diagnostics

Get an automatic, instant evaluation of asset health directly in the field with our 4th generation patented automatic diagnostic AI.



Shock Finder™

Uses advanced edge computing to detect early faults in low-speed applications common in cement plants, preventing catastrophic failures.



TrueLive™

Our laser shaft alignment technology shows the real-time position of both stationary and movable shafts during live adjustments, enabling fast and accurate alignment within short duration.

Acoem helps you to have **eyes on every asset**

With over five decades of expertise in asset reliability, we deliver tailored solutions across sectors, ensuring optimised performance and long-term asset health.



Tailored services for the cement industry

- Health assessment of critical assets such as Roller Presses, Kiln Main Drives, and Vertical Roller Mills.
- Advance engineering services for troubleshooting the rotating machinery of cement plants.
- Precision maintenance correction including torsion shaft alignment of Rotary Kiln, Ball Mill.
- In-situ dynamic balancing of separator fans.
- False air leakage detection.
- Compressed air and gas leak detection.
- Localising partial and corona discharge in switchyards and switchgears.
- Certified vibration analysis training to build in-house expertise in machinery health monitoring and fault diagnosis.



How can early fault diagnosis prevent roller press bearing failures?



Challenges

Wonder cement faced recurring bearing issues in its roller press. Operating at very low speeds (15–16 rpm), vibration detection was difficult as crushing noise masked early damage. Conventional tools missed faults, causing delayed diagnosis and unplanned downtime.

Acoem's Solution

Acoem engineers used the Falcon Vibration Analyser with advanced signal processing, including enveloping, Shock Finder Index (SFI), and long waveform capture, to isolate bearing faults from noise, enabling clear fault frequencies and accurate identification.

Impact on operations

- Proactive bearing maintenance reduced failures.
- Downtime reduced, overall equipment reliability improved.
- Production became smoother and more consistent.
- Data-driven decisions improved uptime and efficiency.



How did SCG standardise reliability across five plants?



Challenges

Siam Cement Group needed to unify machine monitoring across five plants. Incompatible systems created data silos, inefficient analysis, and inconsistent reliability strategies. The goal was a standardised platform covering ~1,300 critical points for streamlined maintenance and clearer oversight.

Acoem's solution

SCG and local partner FAAD deployed a comprehensive Acoem ecosystem, combining MV-x online monitoring (140+ units), portable Falcon tools, Eagle wireless sensors, and AT-400 alignment systems. A centralised platform unified data, enabling consistent analysis, training, and support across sites.

Results & impact

- Acoem is now central to SCG's reliability strategy, driving efficiency and consistency.
- Unified monitoring across five plants.
- Standardisation improved training and resource use.



Acoem:
Your partner in industrial reliability

At Acoem, we are committed to helping organisations and public authorities find the right balance between progress and preservation. We empower industries with smarter, data-driven reliability solutions to safeguard assets, optimise performance, and ensure operational excellence. Our AI-powered monitoring systems and expertise help organisations predict, prevent, and resolve reliability challenges with confidence.

With a global presence in 50 countries and dedicated reliability centres in strategic locations worldwide, we provide localised expertise and support to keep industries running efficiently.



Reliability centres

- **Australia**
- **Brazil**
- **Canada**
- **France**
- **Germany**
- **India**
- **Sweden**
- **Thailand**
- **USA**
- **UK**

