



WORLD RECOGNISED
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ACCREDITED FOR
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WITH ISO/IEC 17025
CALIBRATION

ACCREDITATION
NO. 14184

Blast Monitoring

100% CAPTURE RATE: 100% CERTAINTY*



acoem
CREATING ENVIRONMENTS OF POSSIBILITY



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OUR PEOPLE
OUR HARDWARE
OUR FIRMWARE
OUR SOFTWARE

100% ACOEM

☎ ☒

7 days a week
365 days a year



100% Capture Rate: 100% Certainty*

Whether the project is above or below ground, on a construction, demolition, mining or quarry site, in a high-risk environment, you need to ensure that you continually maintain a traceable and defensible blasting position.

MULTI-LEVEL ASSURANCE

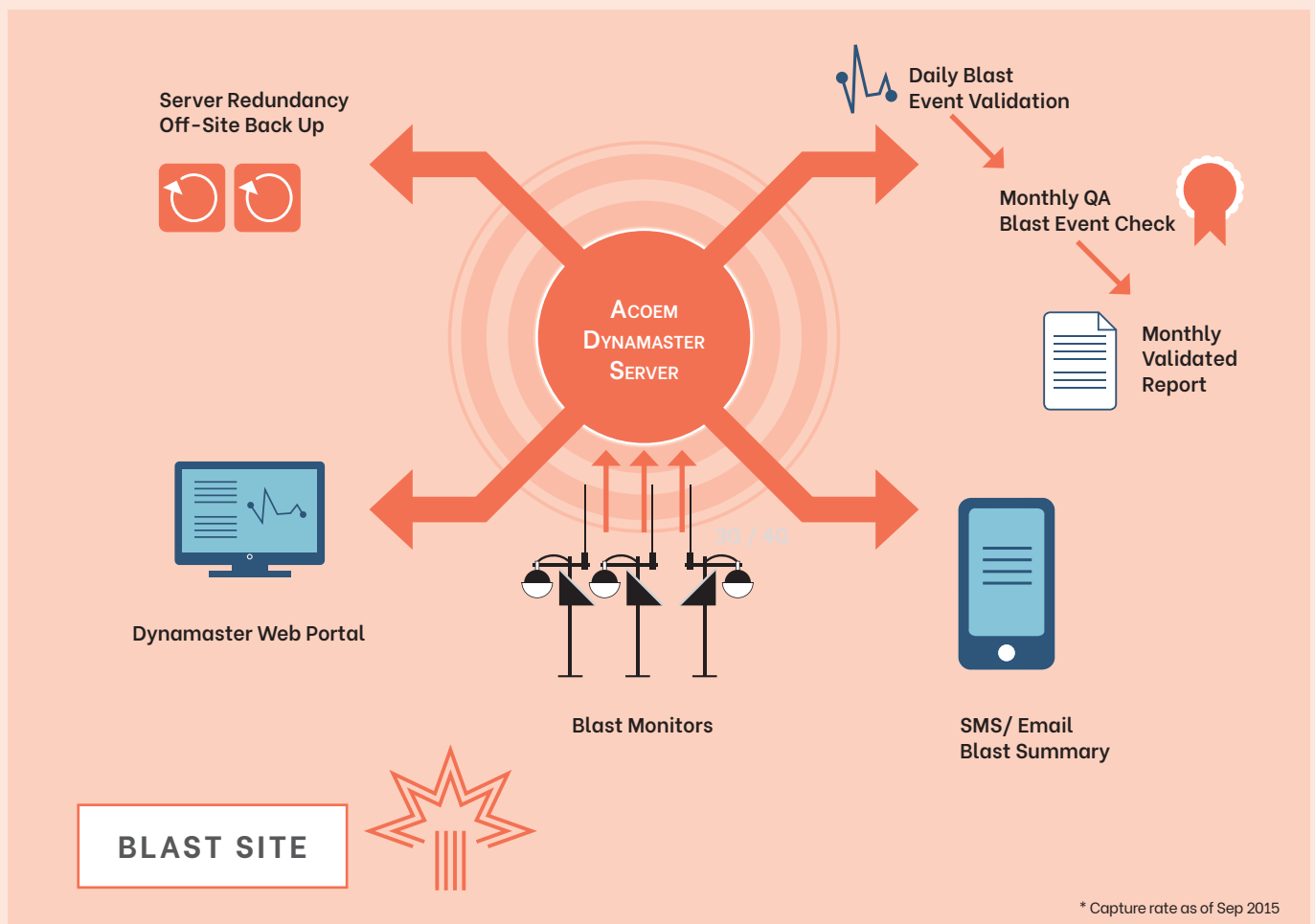
With 100 % raw data capture rate, Acoem Australasia (formerly known as Ecotech) sets the benchmark for data capture.

The Acoem Dynamaster Blast Monitoring System is a fully-integrated package for long-term rental or purchase with our trained staff managing the provision of blast data remotely.

5 POINT SERVICE PROVIDER AUDIT CHECKLIST:

✓	A proven track record capturing all blasts, every time
✓	A fully 3rd party audited process for the capture and reporting of blasts
✓	Can provide fully traceable and NATA accredited onsite calibrations quarterly
✓	Has fully redundant off-site disaster recovery capability
✓	Conducts daily pseudo-blast downloads to check system integrity.

A score of 5/5 is required for 100% capture rate, 100% certainty*





Where It All Starts

Acoem Australasia Blast Monitors:

- Operate autonomously 24 / 7, using solar power
- Let you retrieve events up to 25 weeks after blast
- Ping continuously to ascertain operational status – if they are offline, we know within minutes
- Trigger daily to test recording status & download capability
- Inform customers of faults within 24 hours with quick technician response times.

ACCESS TO DATA AT ALL TIMES

Acoem Australasia Blast Network Provides:

- Private network for remote downloading and control of monitors
- Two independent central servers, located in Sydney & Melbourne (Australia)
- Two independent fibre connections, two independent power feeds backed up by UPS
- Two independent SQL servers for data backup
- SMS messaging system to alert you if monitors go offline
- Access to real-time data on website.

Our People Make the Difference

The Dynamaster Blast Monitoring System is managed by the expert Acoem Environmental Reporting Services (ERS) team.

Acoem Australasia's dedicated Environmental Reporting and Services (ERS) team performs all data management from data download, validation and reporting, to live data on the web and coordination of on-site repair and maintenance.

Every waveform generated and uploaded is reviewed and audited by ERS team members which includes data analysts, a blast monitoring coordinator, a technical coordinator and a quality coordinator.

- Our reporting services crew includes degree-level scientists & engineers who are all fully trained in blast monitoring quality control
- Our blast services have a dedicated coordinator whose sole task is to ensure dependable & reliable results are delivered day in day out.



NATA – Acoem Quality Assurance

National Association of Testing Authorities (NATA) Australia is the national organisation for conformity assessment of technical operations such as laboratories, inspection bodies, proficiency testing scheme providers and reference material producers.

- We are NATA & ISO17025 accredited for blast monitoring
- We are audited annually by independent assessors to check the validity and integrity of systems, processes and results
- We maintain a primary reference microphone that is cross-checked against two standards from Australia and overseas
- We perform proficiency studies to ensure vibration and over-pressure readings are within stated uncertainty
- We calibrate geophone responses against traceable voltage and time standards
- We check geophone responses against reference geophones certified by NMI – the highest authority in Australia for these measurements
- We conduct field response checks on all our blast monitor geophones and microphones quarterly
- We review every blast waveform for quality and integrity to ensure correct event result
- We have an internal peer review system for sign off on all reports prior to release.



NATA accredited facilities & services comply with the requirements of ISO/IEC 17025:2017 & include Acoem Australasia (Ecotech Pty Ltd) testing laboratories, calibration & blast monitoring services.

Acoem Blast Monitoring Specifications

Acoem's Blast Monitoring System is available as a fully-integrated package for long-term rental with our expert team managing the provision of blast data remotely.

The system consists of remote blast monitoring stations, called Dynamates which are continuously supervised by a remote software package known as Dynamaster on our server at the Acoem Australasia Head Office in Melbourne.

Blast results are automatically collected from the stations, collated and then made available within minutes of the blast. You can then view blast results, produce reports and interact with the server software via the Dynamaster web portal.

FEATURES

- Easy post-mount installation
- Solar powered system with battery
- Remote communication over GPRS, 3G or 4G
- Results & data are available only to authorised users & can be downloaded or viewed anytime at work, home or on the road. All you need is access to the internet
- Automatic notification of blast results by SMS, email or both within minutes of the blast
- Event-file generation & retrieval
- No minimum time between event captures
- Advanced triggering methods ensure 100% blast capture can be achieved
- Advanced buffering methods enable the capture of results up to 25 weeks after a blast, even if an automatic trigger did not occur
- Acoem blast monitors are triggered daily to test their recording status & download capability.





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GROUND VIBRATION MEASUREMENT

Tri-axial 4.5Hz Geophone Assembly (NATA accredited):

- Range: up to 24 mm/s
- Resolution: 0.01 mm/s
- Uncertainty: +/- 4.7 %
- Frequency range: 5 - 250 Hz.

Tri-axial 2Hz Geophone Assembly (NATA accredited):

- Range: up to 20 mm/s
- Resolution: 0.01 mm/s
- Uncertainty: +/- 9.6 %
- Frequency range: 2 - 250 Hz.

Tri-axial Piezo Sensor Assembly:

- Range: up to 173 mm/s
- Resolution: 0.01 mm/s
- Uncertainty: +/- 11 %
- Frequency range: 2 - 250 Hz.

OVERPRESSURE MEASUREMENT

Microphone (NATA accredited):

- Range: 65 - 135 dBL (Peak)
- Resolution: 0.1 dB or 0.01 Pa
- Uncertainty: +/- 10 % or +/- 0.9 dB, whichever is larger
- Frequency range: 2 - 250 Hz
- Weighting: Linear.

High Range Microphone:

- Range: 65 - 150 dBL (Peak)
- Resolution: 0.1 dB or 0.01 Pa
- Uncertainty: +/- 10 % or +/- 0.9 dB, whichever is larger
- Frequency range: 2 - 250 Hz
- Weighting: Linear.

WAVEFORM RECORDING

- 8 Gb CompactFlash Memory
- 1 kHz detailed waveform sampling rate
- Detailed waveform capture with 10 days on-board storage
- Summary waveform capture with up to 25 weeks on-board storage
- Continuous waveform recording uninterrupted by other activities.

TRIGGERING & RETRIEVAL

- Automatic vibration triggering & retrieval of data to Dynamaster website
- Proprietary integral triggering technique to prevent false triggers
- Manual triggering of data possible via the Dynamaster website up to 25 weeks after the event.

SYSTEM HARDWARE

- Power: 20 watt solar panel
- Battery: 35 Ah gel cell: Up to 7 days power with no sun
- Primary communications: GSM/GPRS, UMTS/HSPA (3G)
- GPS & time auto synchronisation (+/-1ms)
- PC interface: RS232
- Electromagnetic compatibility: CISPR-22 (Australia) (PTBRC, FCC Part 15, CE Pending)
- Temperature Range: - 10 °C to + 50 °C.

Ecotech is now
Acoem Australasia



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About Acoem

At Acoem, we **create environments of possibility** – helping organisations find the right balance between progress and preservation – safeguarding businesses and assets, and maximising opportunities while conserving the planet’s resources. We deliver unrivalled, interoperable AI-powered sensors and ecosystems that empower our customers to make enlightened decisions based on accurate information.

Together with 220 distributors, our 850+ employees work across 28 offices, 6 manufacturing facilities and 5 R&D centres in 9 countries, to provide trusted, holistic data solutions for customers worldwide.

Acoem links possibilities with protection.

For more information visit acoem.com



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