

Accelerating Remote Maintenance and Expert Support Across Australia's Harshest Mining Sites

How Fortescue used Telepresenz® Smart Ops™ to connect field teams across remote mining operations with expert engineers 2,500 km away — reducing downtime, improving safety, and saving millions annually.



75%

Faster repairs — from 2–3 days to under 6 hours through real-time remote collaboration



80%

Fewer expert site visits — cutting travel costs and exposure risks



100%

Safety and compliance visibility — every task traceable through live video

Client: Fortescue

Industry: Mining / Energy & Infrastructure

Scale: Operations across remote northwestern Australia — up to 2,500 km from Perth

Worker Environment: Harsh, high-temperature environments with limited on-site expertise and intermittent connectivity

IT Environment: Secure local Wi-Fi and LAN with adaptive bandwidth optimization for remote collaboration

Devices: RealWear HMT-1 hands-free wearables for field technicians; desktops for domain experts in Perth

Fortescue, one of the world's largest mining companies, operates vast facilities across the remote Pilbara region in northwestern Australia. These include numerous auxiliary plants — from water treatment to communications and electrical substations — that require continuous maintenance under extreme environmental conditions. Maintenance was primarily handled by field generalists covering multiple sites, while specialized engineers and OEM experts were based in Perth, over 2,500 kilometers away. This created a recurring challenge: delayed response times, communication gaps, and costly downtime whenever local teams encountered complex issues.

Connectivity constraints further complicated the situation. Operations needed a platform that could sustain secure, real-time collaboration even in low-bandwidth environments, while maintaining full safety and compliance requirements.

"It used to take days to get an expert on site. We needed a way to see the problem live, collaborate instantly, and solve it safely — without losing days to travel."

Solution: Telepresenz® Smart Ops™ for Digital Inventory Management and Remote Inspections

To bridge the gap between remote field operations and centralized expertise, Fortescue deployed Telepresenz® Smart Ops™ — a connected worker platform enabling real-time, hands-free collaboration between field technicians and engineering experts.

Technicians equipped with RealWear HMT-1 devices streamed live video from the field to domain experts in Perth, allowing experts to visually assess issues and provide step-by-step guidance. Smart Ops™' adaptive bandwidth technology maintained smooth video even with intermittent connectivity, ensuring continuity in the harshest conditions.

Experts annotated directly on live feeds, shared schematics and procedures, and verified the resolution of issues in real time. Each session was automatically recorded for compliance, audit, and training purposes. Contractors handling first-line calls could escalate issues instantly to Fortescue experts, eliminating delays and miscommunication.

“With Smart Ops, our teams can resolve most issues without an engineer ever leaving Perth. We see what they see — and fix problems the same day.”

Within months, Fortescue achieved dramatic improvements in operational efficiency and maintenance performance. Average repair times dropped from two to three days to under six hours, while expert site visits decreased by 80%. The company saved millions annually through reduced downtime, improved reliability, and optimized resource deployment.

Additionally, the solution enhanced safety by reducing the need for travel to remote, high-risk sites. Each recorded maintenance session added to a growing library of visual documentation and best practices — forming the foundation for future training and predictive maintenance initiatives.

Key Outcomes:

- 75% faster equipment repair and recovery times
- 80% reduction in expert site visits and travel exposure
- Millions in savings from downtime prevention and improved productivity
- Stronger safety compliance through hands-free operation
- Growing knowledge base for training and root cause analysis

“Smart Ops is a game-changer — it allows us to maintain uptime and safety across one of the world’s most remote operations.”



About Telepresenz®

Telepresenz® — AI-Powered. Frontline-Focused. Future-Ready. Telepresenz connects inspectors, engineers, and administrators through real-time collaboration and AI-powered operational workflows. With Smart Ops™, aerospace teams gain digital control over inspections, inventory, and compliance — turning complex maintenance programs into seamless, transparent, and efficient operations.