

Case Studies

Engineering, Cybersecurity & Automation in Practice

Mining Site OT Security Hardening

Industry: Mining

Challenge

A mid-tier iron ore operator needed to connect remote pits to a central operations centre without exposing legacy control systems to modern cyber risks.

Solution

S5 assessed the OT network, designed segmented zones and conduits per ISA/IEC 62443, specified jump-host remote access, and delivered an implementation roadmap.

Outcome

Reduced external attack surface by 70%, enabled secure remote monitoring, and provided audit-ready documentation for insurer review.

Water Utility Control System Upgrade

Industry: Water & Utilities

Challenge

A regional water utility was replacing ageing SCADA hardware while maintaining continuous service and regulatory compliance.

Solution

S5 led requirements definition, HMI redesign, alarm rationalisation, FAT/SAT planning, and operator training framework development.

Outcome

Cut nuisance alarms by 60%, improved operator response time, and achieved smooth commissioning with no safety incidents.

Oil & Gas SIF Verification Program

Industry: Oil & Gas

Challenge

An upstream operator had modified process conditions and needed to confirm existing SIFs still met their SIL targets.

Solution

S5 re-verified SIF architectures, updated failure data, reviewed proof test effectiveness, and revised the safety requirements specification.

Outcome

Identified three SIFs needing modification, avoided costly over-engineering on five others, and satisfied regulatory expectations.