

Fixed Tool Tracking & PM Logs to Stop Expensive Rig Downtime

CLIENT PROFILE

A major oil & gas drilling contractor operating multiple onshore and offshore rigs. Their operations depend heavily on highly specialized tools, drilling equipment, hoisting machinery, safety systems, and downhole assemblies, each needing strict tracking, calibration, and preventive maintenance.

With every hour of downtime costing significant money, improving equipment readiness was essential.

CHALLENGE

The rig operator struggled with recurring breakdowns and tool-related delays:

- Poor traceability of critical tools, such as torque wrenches, drilling jars, MWD/LWD tools, BOP spares, and downhole equipment.
- Missed preventive maintenance (PM) for rig hoisting equipment, pumps, and hydraulic systems.
- Calibration certificates often outdated or unavailable during audits.
- Tools frequently misplaced between rig sites, leading to urgent (and costly) replacements.
- Technician logs inconsistent, incomplete, or missing evidence of work performed.
- No unified dashboard to predict failure trends or identify neglected equipment.





Solution Provided by Asset Infinity

Asset Infinity deployed a robust Rig Equipment & Tool Reliability System, centralizing tracking, PM, and calibration workflows across all rig sites.

Rig Tool Tracking System (QR/RFID)

- Every high-value tool tagged and tracked from tool crib → rig floor → maintenance bay.
- Real-time visibility into tool location, usage history, and assigned crew.
- Alerts for overdue returns prevented tool shortages.

Preventive Maintenance Automation

- PM schedules for pumps, top drives, mud systems, generators, cranes, and hoisting equipment.
- Standardized checklists for lubrication, pressure checks, inspection of wear parts, and safety tests.
- PM overdue escalations reduced slippage dramatically.

Calibration & Certification Logbook

- Centralized repository for torque wrench calibration, pressure gauge checks, sensor inspections, and BOP component certifications.
- Auto-reminders for upcoming calibrations.
- Tools blocked from assignment when calibration expired.



Technician Service Logs

- All service jobs recorded with photos, readings, spare usage, and signatures.
- Geo-verified entries confirmed on-site work.
- Helped supervisors validate quality of repairs.



Rig Health & Downtime Dashboard

- Consolidated view of equipment readiness across all rigs.
- Early warnings for tools nearing failure or overdue PM.
- Trend analysis for frequently failing components.



MEASURABLE BENEFITS

31% reduction in rig downtime within 90 days.

Strong reduction in tool-related delays and emergency procurement.

100% visibility into tool movements, preventing misplacement or duplication.

PM compliance increased significantly, stabilizing rig performance.

Better audit readiness with complete calibration and maintenance documentation.

IMPLEMENTATION & ROLLOUT

- Rolled out across onshore and offshore rigs in phased deployment.
- Field crews, tool pushers, and maintenance technicians trained on mobile workflows.
- Integration with existing rig operations systems where required.
- Zero disruption to ongoing drilling operations.

OUTCOME & IMPACT

The operator achieved:

- Highly reliable rig operations with fewer surprise breakdowns.
- Better allocation and utilization of critical tools and assemblies.
- Faster repairs and improved technician accountability.
- Stronger HSE and audit compliance through structured documentation.
- Predictable and stable rig performance, saving significant operational cost.



CONCLUSION

By digitizing tool tracking, maintenance, and calibration processes, Asset Infinity helped the rig operator reduce downtime by 31%, strengthening operational reliability and protecting revenue in an environment where every minute matters.