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Integrity Management: Barriers to Digital Adoption and How to Move Forward

Executive Summary

Across the energy sector, digital transformation is still uneven. Teams capture huge amounts of data, but too much of it lives in silos, hard to find, hard to trust, and slow to use. Integrity management feels this more than most. Outdated processes, disconnected tools, and reactive planning still dominate day to day.

R2S helps asset owners and operators see more, plan better, and act faster, without stepping foot offshore. By bringing integrity data together in one intuitive

workspace, R2S lets onshore teams collaborate on offshore assets. The result: fewer people on board (POB), improved safety, faster decisions.

This paper explores what's getting in the way of digital adoption in integrity management and how operators can overcome those barriers to drive measurable and sustainable improvements in safety, performance.

Introduction: A Moment for Change

Oil and gas has historically moved in cycles. In boom times, production and uptime take centre stage. In downturns, budgets tighten and innovation pauses.

Integrity management sits right in the middle of this tension, balancing urgent operations, budget pressures, and long-term reliability. The biggest gains come when

teams move past these constraints and adopt digital tools that make asset health more proactive, auditable, and efficient.

R2S was built for this leap, bridging the gap between field and office, between asset and insight.

Barriers to Digital Adoption



Cultural Inertia

"The way we've always done things" is a powerful force. In production-focused environments, there's little incentive to challenge familiar routines. Integrity work stays reactive. Knowledge gets trapped in silos.



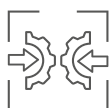
Budget Cycles and Prioritisation

In a downturn, funding integrity initiatives can feel counterintuitive. Yet delaying investment often turns small issues into bigger, costlier problems later.



Action Deficit and Scope Creep

When work isn't digitally coordinated, the gap between decisions and actions widens. Manual scheduling, incomplete data, and on-site communication gaps drive scope creep, downtime, and lost productivity.



Operational Constraints

Offshore space is precious. Bed space, logistics, permits, and access all limit how much work can be done safely. Without a shared digital view, clashes and rework are hard to avoid.



Opportunities for Operators

Digital integrity management is not just about data, it's about visibility, collaboration, and smarter decision-making.



Integrity Management That Works

With R2S, teams collaborate onshore using a trusted, visual view of the asset. That means fewer site visits and safer planning. It supports campaign planning, anomaly tracking, and audit trails, helping operators:

- Reduce POB and improve safety
- Spot weak links in ageing infrastructure
- Prioritise interventions with up-to-date asset condition data

Impact: Operators using R2S report up to a 25% reduction in unplanned downtime and a 90% increase in efficiency through time savings.

Case Study Highlights

10%

TAR planned efficiency improved

1,000

POB offshore man-days reduced

\$1.85M

Direct cost savings



Digital That Delivers

R2S collates legacy drawings, photographs, and records, then connects them with your CMMS, creating a single, trusted source of truth.

This eliminates the “search time” that plagues integrity teams and allows predictive maintenance and risk-based inspection strategies to thrive.

- Cut time wasted hunting for information
- Paper-based lag and manual reporting give way to instant access
- Predictive insights enable proactive, risk-based planning



Decommissioning with Confidence

R2S provides a clear, visual record of asset condition, modifications, and history, vital for safe and efficient decommissioning.

- Identify reusable equipment and reduce waste
- Streamline contractor collaboration
- Maintain transparency across all stakeholders

Impact: One operator reported decommissioning planning time reduced by 6 weeks enabled by capturing the full asset in two offshore days and giving teams immediate desktop access to a complete digital twin.

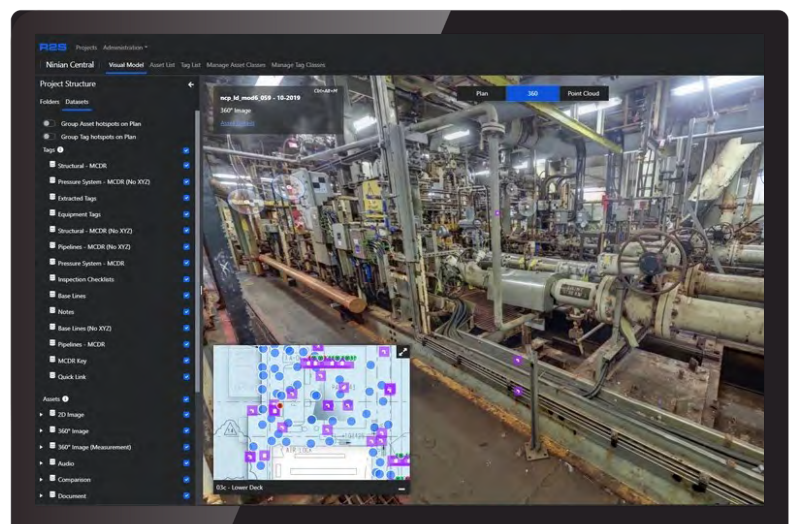


Turnarounds and TARs

R2S, brings clarity to complex turnarounds (TARs), streamlining strategic and detailed planning so the right work happens at the right time.

- Shorter shutdowns and improved safety
- Increase uptime post-TAR
- Lessons-learned captured and reused across cycles

Impact: TAR planning efficiency improved by 10%, and POB was reduced by over 1,000 offshore man-days during planning, delivering ~\$10M in earlier production and \$1.85M in direct cost savings.



Requirements for Success

Technology alone isn't enough. Sustainable digital adoption comes from aligning people, processes, and priorities:



Champions and Leadership Support

Empower advocates with visible support.



Change Management Programmes

Embed digital tools into daily workflows and habits.



Clear Communication

Keep field teams and decision-makers aligned.



Strategic Alignment

Tie digital initiatives to clear business outcomes.



Adaptability

Tailor implementation to the unique needs of each asset or region.

From Reactive to Proactive

When digital becomes the norm, integrity management becomes less about firefighting and more about foresight.

Data evolves into insight.

Insight becomes action.

Action becomes safer, smarter, and more sustainable operation.

R2S enables that shift, helping teams bridge the gap between where they are today and where they need to be tomorrow.

Conclusion

Integrity management is no longer just a technical function, it's a strategic lever for safety, sustainability, and performance. By tackling the cultural, operational, and informational barriers to digital adoption, operators can position themselves to thrive.

R2S makes that possible: a connected workspace where your teams can collaborate, prioritise, and deliver with confidence onshore or offshore, today and in the future.

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