

ROWAN DROPPED OBJECTS PREVENTION PROGRAM



AL BROWNING
ROWAN COMPANIES



ROWAN DROPPED OBJECTS PREVENTION PROGRAM

INTRODUCTION

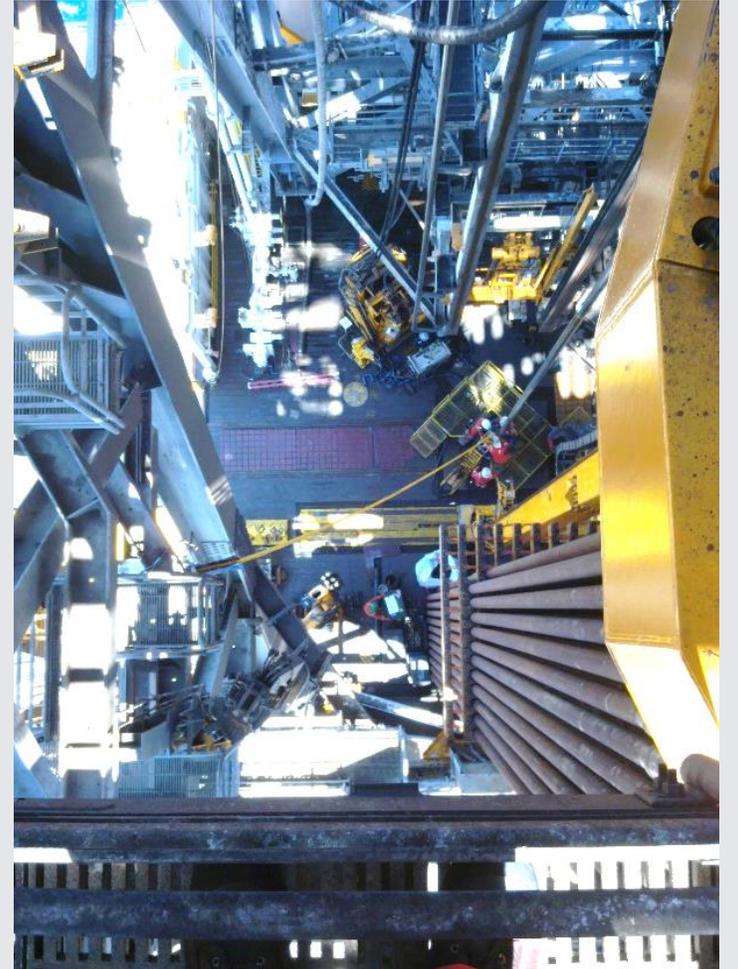
- Rowan is a global provider of contract drilling services with a fleet of 26 mobile offshore drilling units, comprised of 22 self-elevating jack-up rigs and four ultra-deepwater drillships.
- The Company's fleet operates worldwide, including the United States Gulf of Mexico, the United Kingdom and Norwegian sectors of the North Sea, the Middle East, and Trinidad.
- Rowan is a partner in a 50/50 joint venture with Saudi Aramco, named ARO Drilling, that owns a fleet of four self-elevating jack-up rigs that are contracted in the Arabian Gulf.



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BACKGROUND

- Dropped objects remain one of the highest safety risks to our rig crews
- Reporting of dropped objects at Rowan has improved, but numbers have been fairly consistent on a fleet wide average over the last several years
- Audits, surveys, and inspections continue to be effective in identifying high potential DROPS
- Several high profile dropped objects in the offshore industry have raised awareness to us and our customers



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EXISTING PREVENTION AND MITIGATION MEASURES

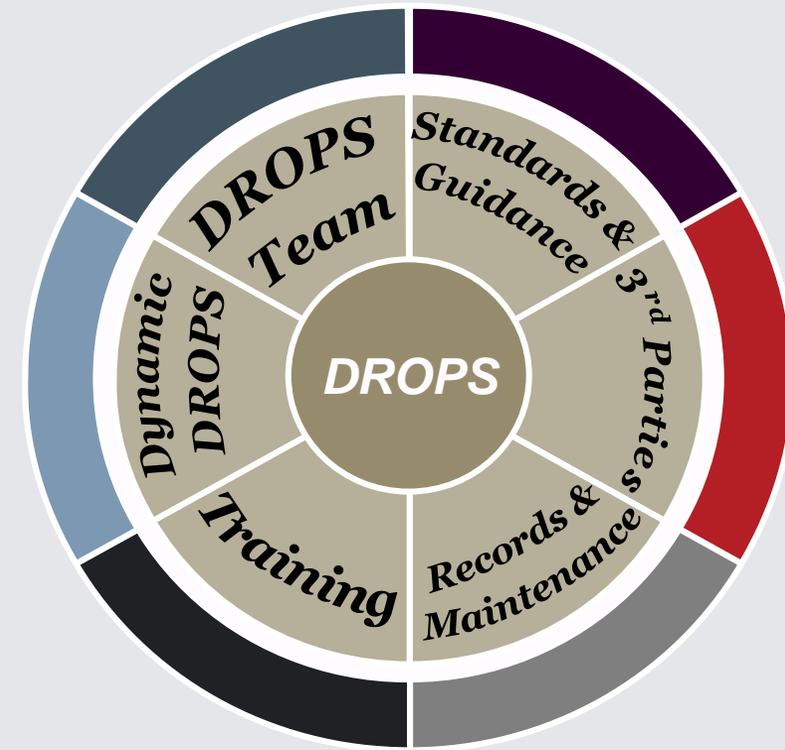
- Policies / Procedures / References
- Red Zones
- Area Authorities / Owners
- Internal Dropped Object Inspections
- 3rd Party DROPS Surveys & Picture Books
- Dedicated working at height tools & registers
- Documentation / Investigations of all DROPS



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PROGRAM OUTLINE

- Analyzed all past incidents
- Reevaluated all the policies and procedures we provided to our rig crews and looked for any gaps
- Reviewed DROPS books & Inspection reports
- Interviewed our rig crews to understand their level of understanding and ownership
- Reviewed our maintenance procedures and history
- Developed a program based on what we found



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ROWAN INTERNAL DROPS TEAM

- 4 dedicated shore based DROPS SME's divided in two teams with a manager providing oversight
- Perform detailed DROPS surveys over 5 to 7 days
- Work closely with our rig crews to provide training and education through daily reviews of all findings
- Develop a consistent approach on inspections and share learnings across the fleet
- Teams have performed eight DROPS surveys YTD and are currently creating detailed dropped object registers with identification labels on three rigs



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STANDARDS & GUIDANCE

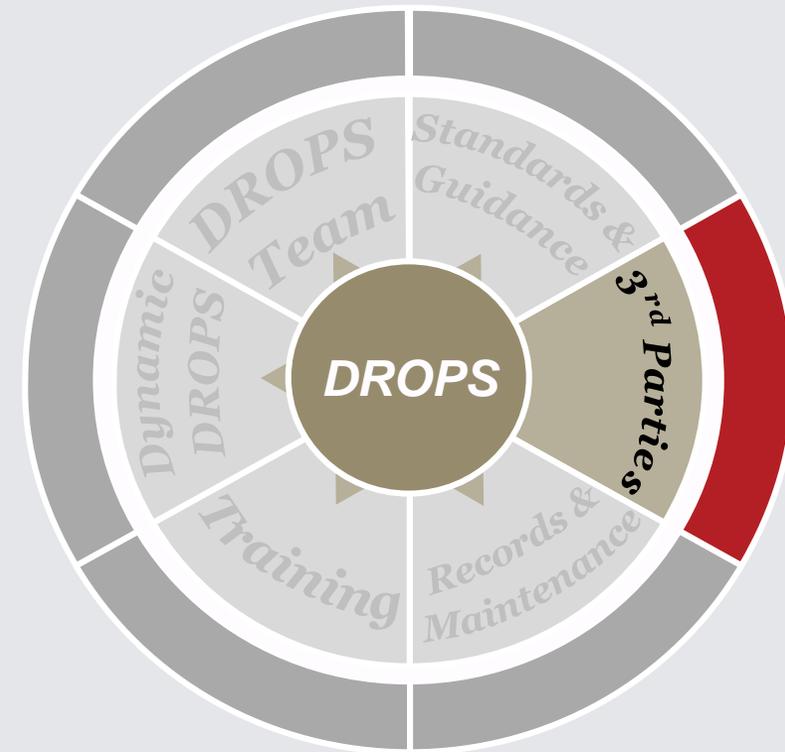
- Focus has been on creating specific guidance tailored to Rowan's equipment / operations
- Dropped Object Prevention Scheme Recommended Practice and Reliable Securing
- Created Rowan DROPS Management Standard.
 - Location risk
 - Equipment risk
 - Specific retention / guidance requirements
 - Specific Guidance for each type of equipment



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3RD PARTY MANAGEMENT

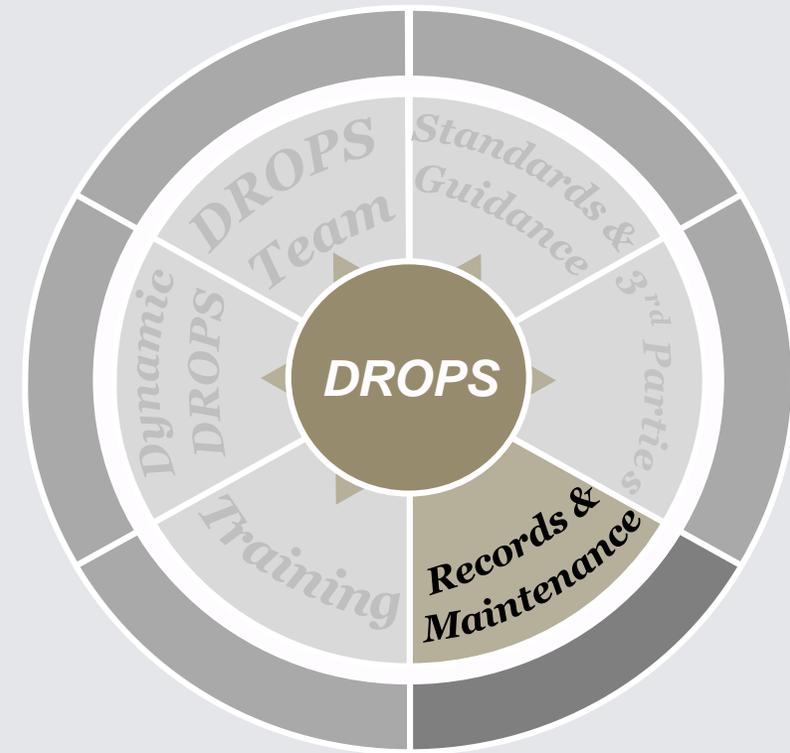
- Rowan has taken back ownership of DROPS, but will continue to develop longer term relationships and agreements with 3rd party inspection companies
- Closer integration and management of inspection work scopes and reporting
- Inspections will be based on our standards
- DROPS registers and findings are driven by Rowan and results are recorded in our systems
- We rely on our 3rd party companies for their on rig exposure, experience, shared learnings, and skills



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RECORDS AND MAINTENANCE

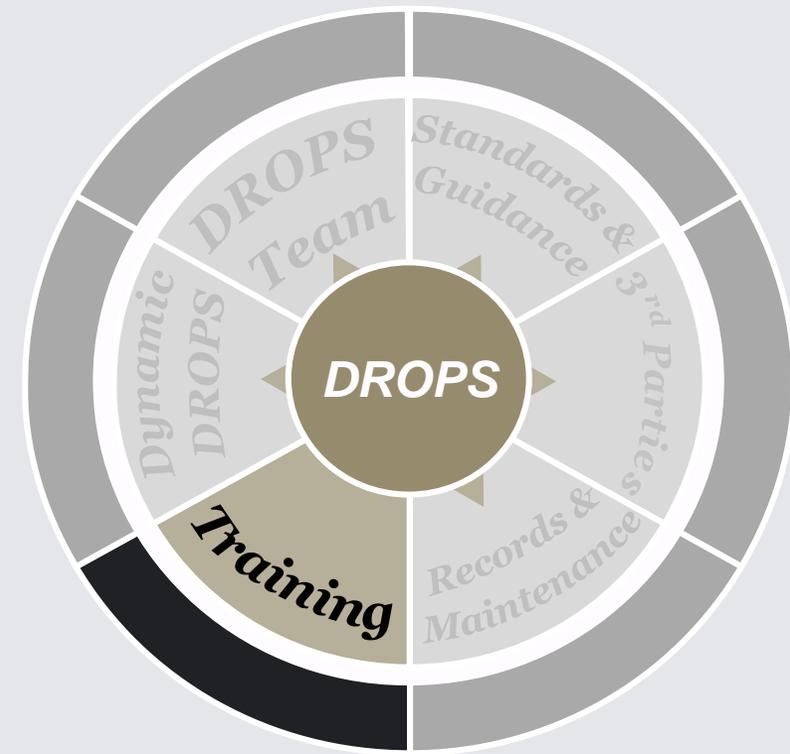
- All drops inspections and guidance will be driven out of our maintenance system
- DROPS registers and inspection results will be documented and tracked inside our systems in a consistent way
- Inspection findings will be tracked through corrective work orders and key lessons learned will be shared across our rigs
- Standards and procedures will be updated based on what we learn



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TRAINING

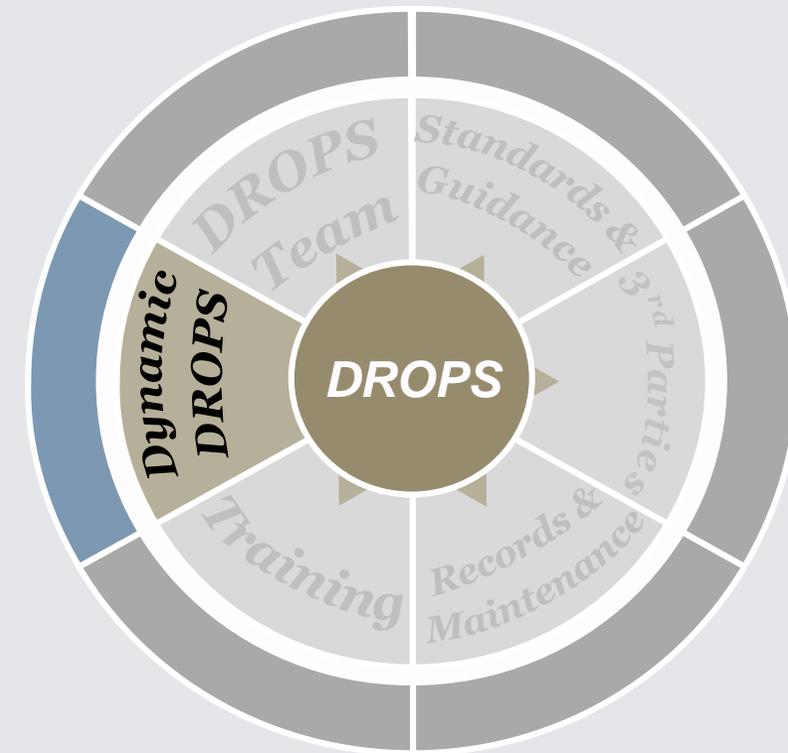
- Going forward training will be based on Rowan's specific DROPS standard with an understanding of the challenges of completing successful inspections
- Training will be rolled out in a staged sequence
 - Notification of the new standard
 - Update of the existing awareness training
 - New Computer Based Training (CBT) on Rowan's new DROPS prevention standard
 - Reinforcement and hands on training for our rig crews by our DROPS team



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DYNAMIC DROPS

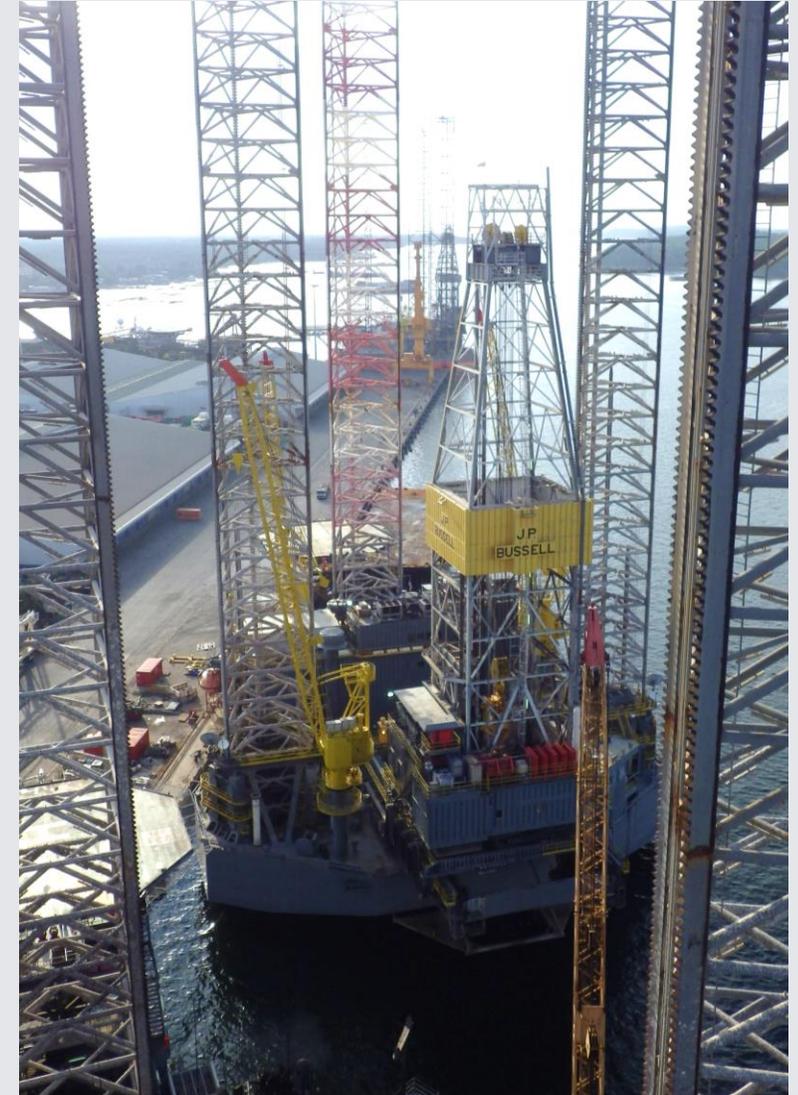
- Evaluation of our historic incident data confirms the majority of our dropped objects are “dynamic”
- The majority of our dynamic incidents occur during drilling, tripping, pipe handling, and lifting activities
- Rowan is addressing “dynamic” DROPS through several methods
 - Rig Specific Operating Procedures (RSOPs)
 - Zone Management enhancements
 - Equipment modifications and improvements



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FUTURE INITIATIVES

- Implementation of integrated mobile digital devices for DROPS inspections and management
- Additional methods of cross training crew members with a goal of building expertise across the organization
- Work closer with Equipment OEM's to improve methods of safety securing and secondary retention on high risk equipment



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SUMMARY / TAKEAWAYS

- Own the accountability for dropped objects and make it important
- Develop a clear achievable Dropped Object Prevention Program / Scheme specific to Rowan
- Provide clear guidance and thorough training to our rig crews
- Set clear expectations and guidance for our 3rd party inspection companies



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Questions?

