Invoration

 Branding

 Solution

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RIDER 3605

Delivering on the promise of digitalization

Rider International – August 16, 2018



Never miss a critical step

3 Asset Types







Data Streams

- ✓ Equipment sensors
- ✓ Control systems
- ✓ Electronic Data Recorder
- ✓ Electronic Telemetry
- ✓ Alarm management system



- ✓ Training
- ✓ Competency
- Experience/Currency
- Safety performance
- Productivity performance



- Work planning
- × Procedural adherence
- × Procedural performance
- Safety system/control of work
- Barrier management















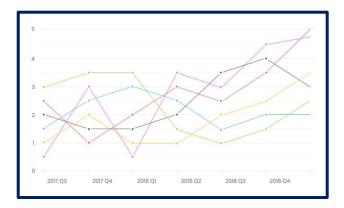


Never miss a critical step

Benefits: Operator



- Digital handover
 - Well planning to well construction
 - Bridging document integration

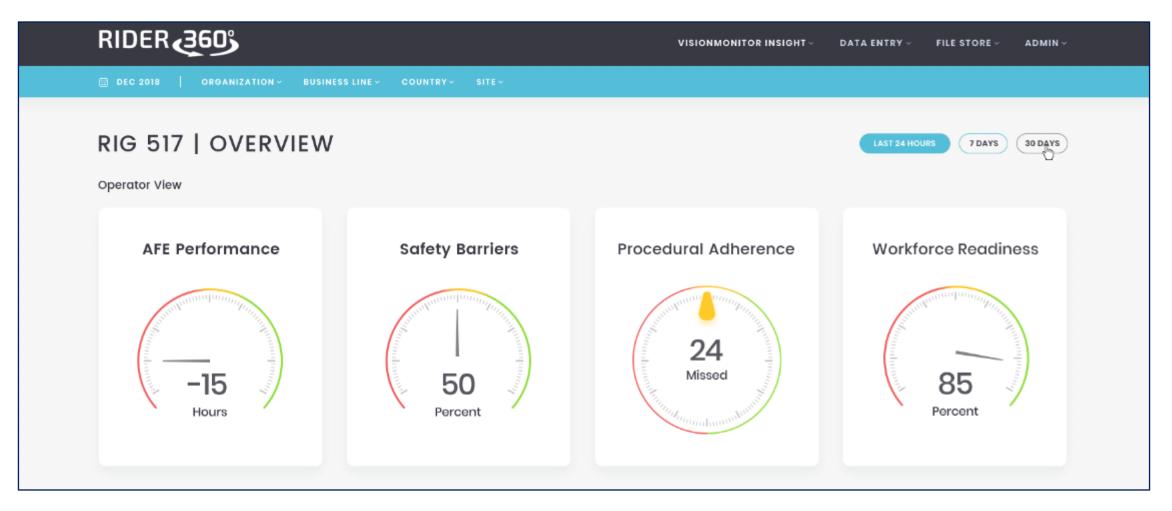


- Contract management
 - Workforce readiness
 - Procedural adherence
 - Safety barrier visibility
 - Performance vs AFE





Operator Dashboard







Benefits: Drilling Contractor Management



- Actionable Information
 - Workforce readiness
 - Safety barriers
 - Operational productivity
 - Predictive maintenance



- Performance Improvement
 - Invisible lost time
 - Invisible risk
 - Incident investigation in "replay" mode





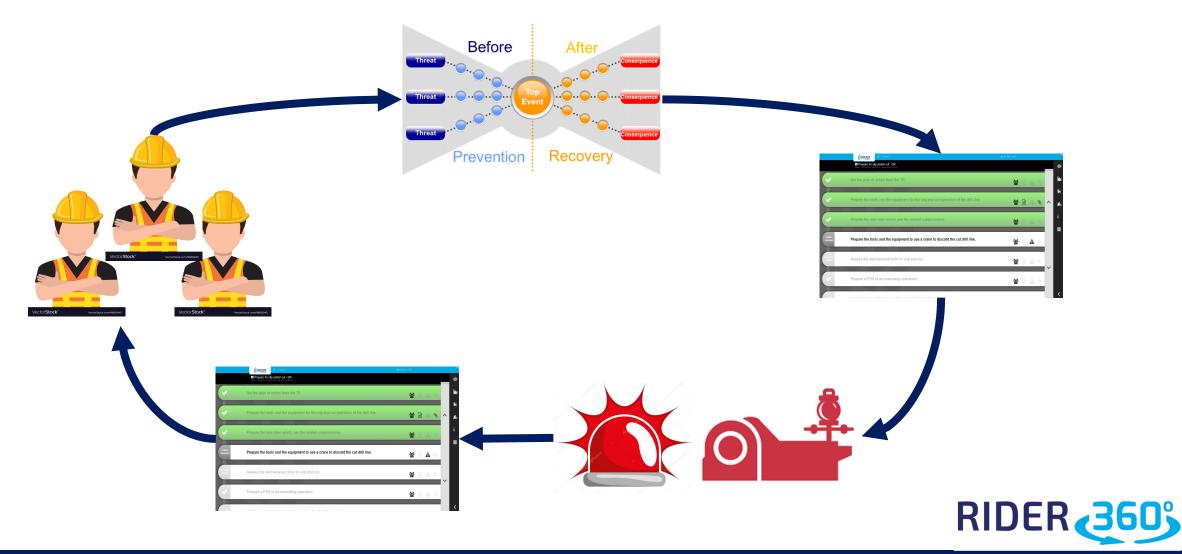
Contractor Dashboard

	ATION~ BUSINESS LINE~ CI	DUNTRY~ SITE~		VISIONMONITOR INS	IGHT~ DATA	ENTRY	FILE STORE
RIG 517 OF					C A	ST 24 HOURS	7 DAYS 30
AFE Performo	ance S	afety Barriers	Proce	edural Adherenc	e V	/orkforce	e Readiness
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Benefits: Drilling Contractor Operations





Preparing to Run in the Hole

Action	Data Set	Visibility
Define job to be done, with safety and productivity expectations	Work plan, procedures	O, DCM, DCO
Crew assigned to job, with capabilities (DR, AD, TP, FH, DH)	Workforce	O, DCM. DCO
Job preparations: trip sheet, pipe tallies, equipment checks, equipment setpoints, set alarms, etc.	Equipment, workforce, procedures	DCM, DCO
Safety procedures: Haz-IDs, Toolbox talk, safety barrier check	Equipment, workforce, procedures	O, DCM, DCO





Running in the Hole with Event

Action	Data Set	Visibility
Start RIH procedure	Workforce, procedures	DCM. DCO
Pick up stand and make up to torque	Equipment, workforce, procedures	DCM, DCO
Check casing pressure before opening blind rams	Equipment, procedures	DCM, DCO
EVENT: Positive Casing Pressure	Equipment	O, DCM, DCO
RIH procedure interrupted, casing pressure procedure initiated, procedures distributed to workforce	Workforce, procedures	DCM, DCO





Breakout Procedures

Action	Data Set	Visibility
Safety barriers maintained, perform diagnosis	Equipment, workforce, procedures	DCM, DCO
Relieve pressure, parameters within acceptable range	Equipment, workforce, procedures	DCM, DCO
Resume RIH procedure	Workforce, procedures	O, DCM, DCO
Show productivity variance and why	Equipment, workforce, procedures	O, DCM





Current State

- Progress to Date
 - Rider deployed on 15 drilling rigs and an LNG plant
 - Rider 360 proof of concept complete
- Next Steps
 - Rider 360 testing on simulator in September
 - Looking for contractor and operator for joint pilot project







Going to Market

- MVBs (Most Valuable Benefits)
- Benefit/Cost sharing
- Product and service mix









Thank you!

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