

DIGTIAL PROCEDURE

Implementation Experience

Wintershall Dea Norway

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AGENDA

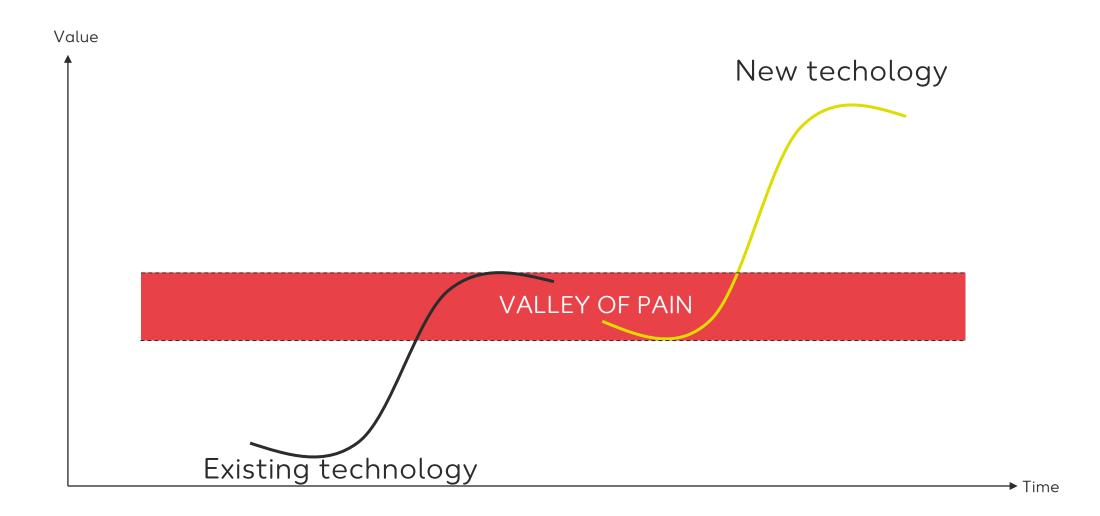
- Innovation cycles
- WD D&W digital strategy
- Digital procedure implantation on TNG
- Experiences.... So far
- What's next



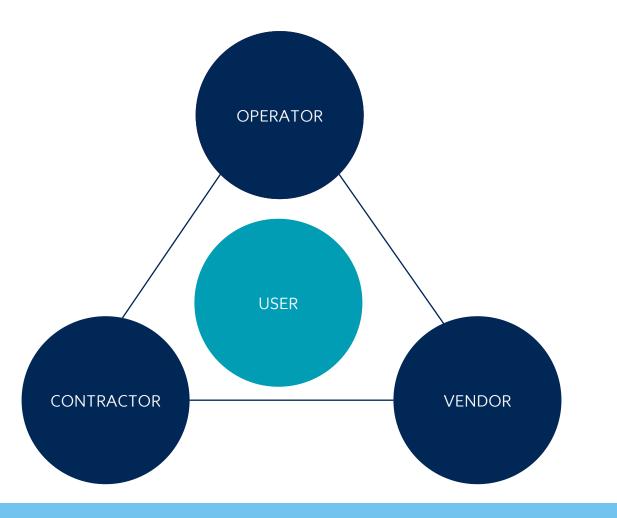


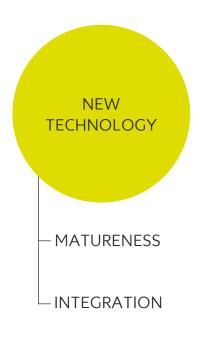


INOVATION CYCLE



CHALLENGES – IMPLEMENTING NEW TECHNOLOGY



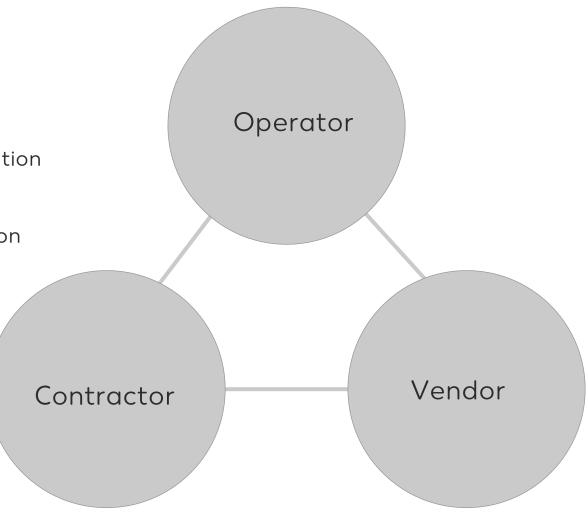


90% HUMANS

10%TECHNOLOGY

SUCCESS CRITERIAS

- 1. Long term collaboration with common visions and goals
- 2. Effective and quick adaption/decissions during implementation
- 3. Strong user involvement in developement & implementation
- 4. Right level technology matureness



WHERE DO WE WANT TO GO?



D&W VISION - DELIVERING PERFECT WELLS

Target 1 - HSE Performance



We set the HSE standard with no compromises - not accepting harm to people or the environment

Target 2 - Project Value



We deliver on agreed well objectives to maximise the overall project value

Target 3 - Operational Performance



We constantly strive to improve - and will deliver top quartile performance and a reduction of non-productive time a reduction of non-productive time



HSE Excellence

- We shall work proactively to establish the right HSE culture
- > We share a common risk picture
- > We commit to reduce total well emissions
- > We proactive use learnings and evaluate effect of initiatives



Performance Excellence

- We strive to be the best performing D&W organization
- We align performance targets with our customers to maximize
 - drilling performance
 - > rig utilization
 - > NPT reduction
- We set the standard for subsea operations



Ways of Working

- > We will align with our customers to maximize project value
- We never compromise on planning and quality to maximize offshore execution
- We shall work structured to learn from failures and avoid repetitions



Digitalization & Technology

- We work smart with data to make right decisions
- We shall digitalize our well planning processes and offshore execution
- We shall drive further automation and smart digitalization offshore



ONE TEAM

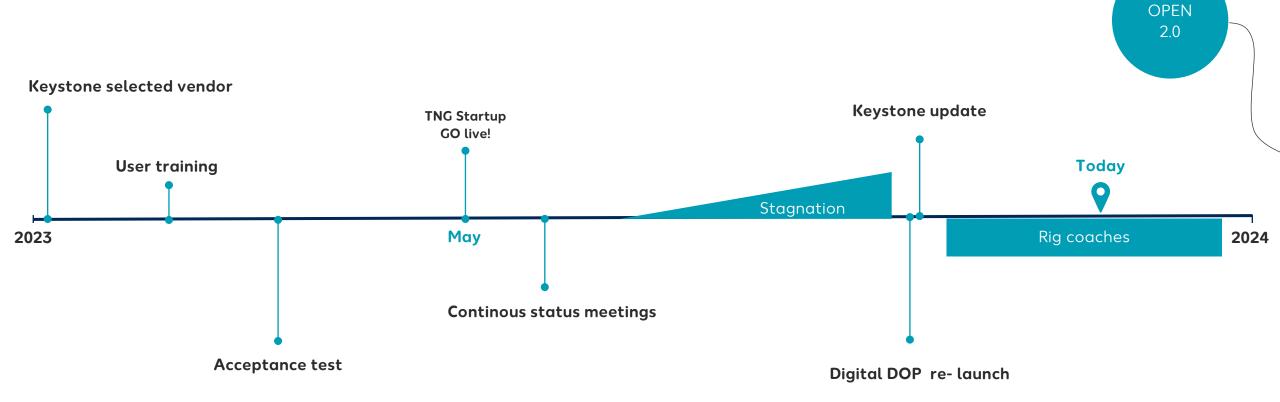
- We are **ONE TEAM** living our common values and commit to common targets
- We are the preferred employer and business partner
- We work proactively together as One Team to realize project values

WHY DIGITAL PROCEDURE IN WD

- Seamless DOP distribution across the operation
- Increased situational awareness offshore/ onshore
- Less paper administration on the rig
- Better Revision & access control
- DOP library and ease of reuse
- Data integration possibilities
- Tag on Contractor strategy



IMPLEMENTATION PLAN



IMPLEMENTATION CHALLENGES

- User interface/ friendliness onshore
 - Initial cumbersome workprocess
 - Loss of procedure overview
 - IT vs. engineer thinking Object vs. List
- Offshore issues
 - Bugs
 - Loss of procedure overview
 - User access multiple vendors visibility
 - Signing
- Editor to Executor bugs
- Paper culture





IMPLEMENTATION MITIGATIONS

- Structured Keystone/ Transocean collaboration status meeting (3 parties)
- User feedback loop and follow up
- User involvement/ ownership superusers
- Improve fast
- Implementation
 - Coaches onshore/offshore
 - Leadership buy in
 - Procedure Transformation support

VALUE CREATION

ANALOG



Paper procedure

Execution

...Updated **Paper** procedure



Manual process –potential achieved

WAY FORWARD... THIS IS ONLY THE BEGINNING!

NOW	NEXT STEP	POSSIBILITIES	FUTURE
Paper less Driller cabin	Paperless rigs / tablets on deck	Automated DOP proposals Automated EOW reports Automated Operators DDR	
Onshore digital DOP	Simplified invoice process		
	Auto timelog annotations	Auto logistics planning	Automated
	Gapping planned vs. actual		Drilling
Shared Situational awareness	Integrated trip risk log	Automated Drillers report	
	Global timestamp		
	Semiautomated drilling reports	Auto programming of drilling machinery	

THANKS FOR YOUR ATTENTION QUESTIONS?

