



ROBOTIC
DRILLING SYSTEMS

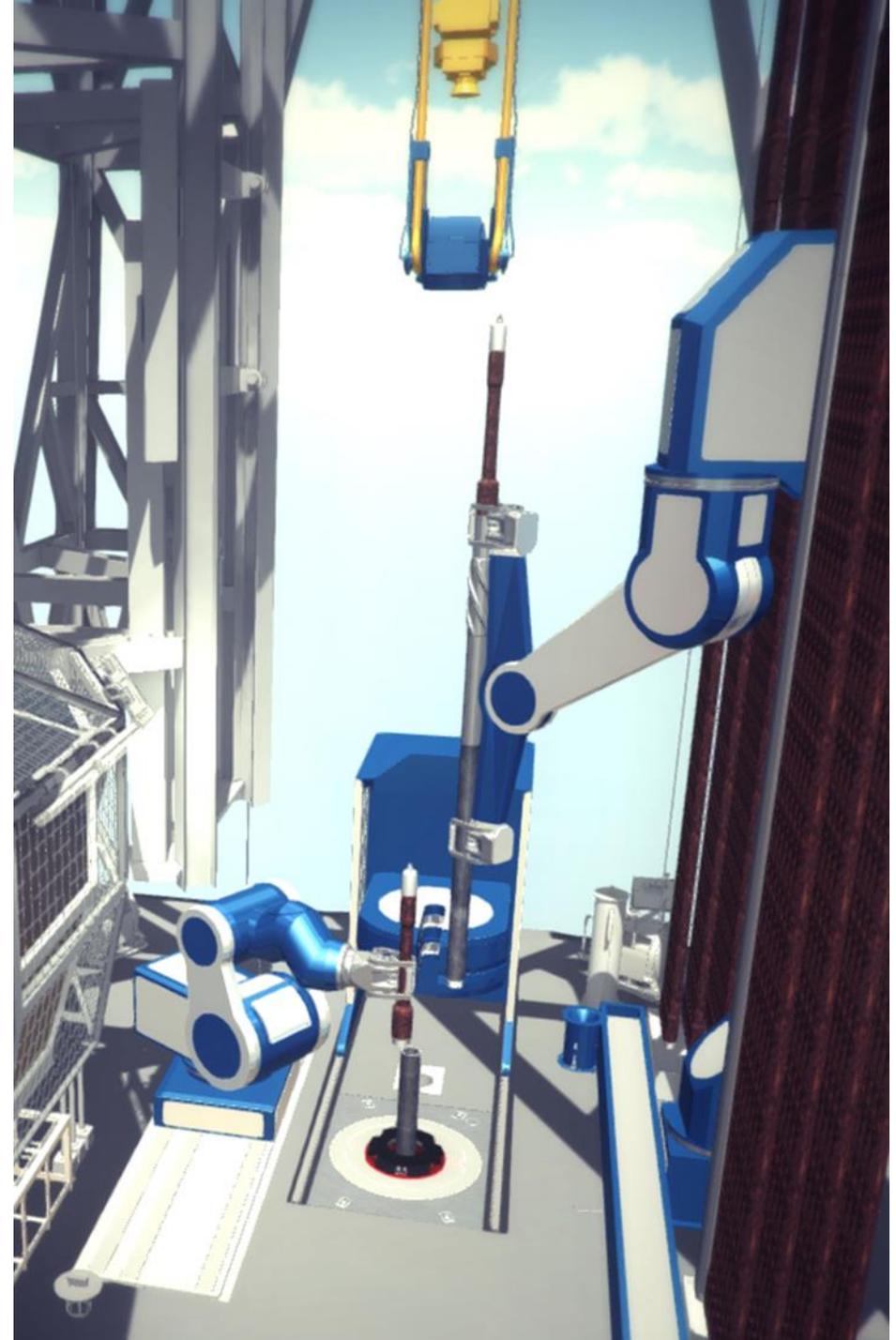
GAME CHANGING
DRILL FLOOR SOLUTIONS

Robots on the drill floor

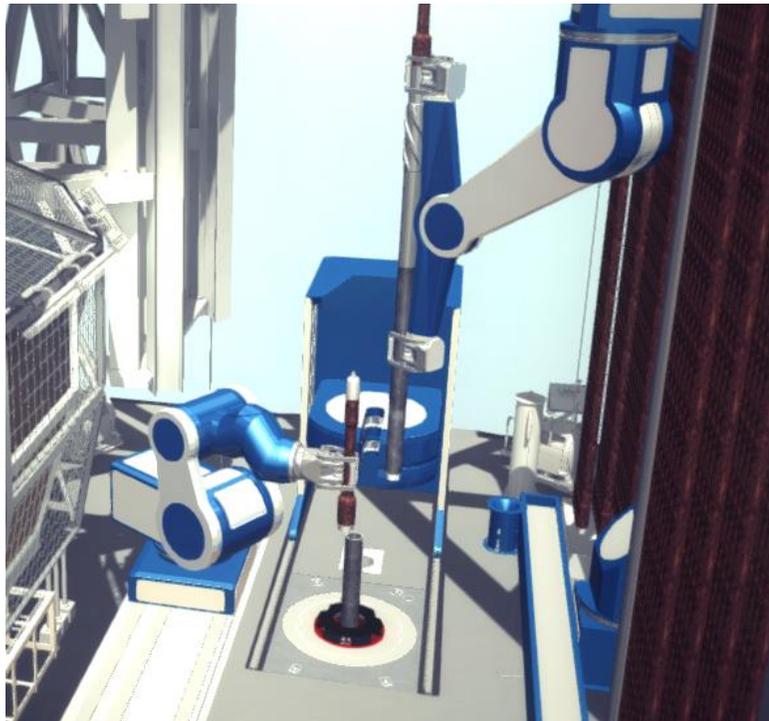
Lars Raunholt, Founder & VP Bus. Dev.

Norsk Olje og Gass, May 2016

www.rds.no



Robotic Drilling System – in brief



Value Proposition - visualized

Present: Manual / semi automatic drill floor



Photo: Harald Pettersen, Statoil

Soon: Robotic and electric drill floor

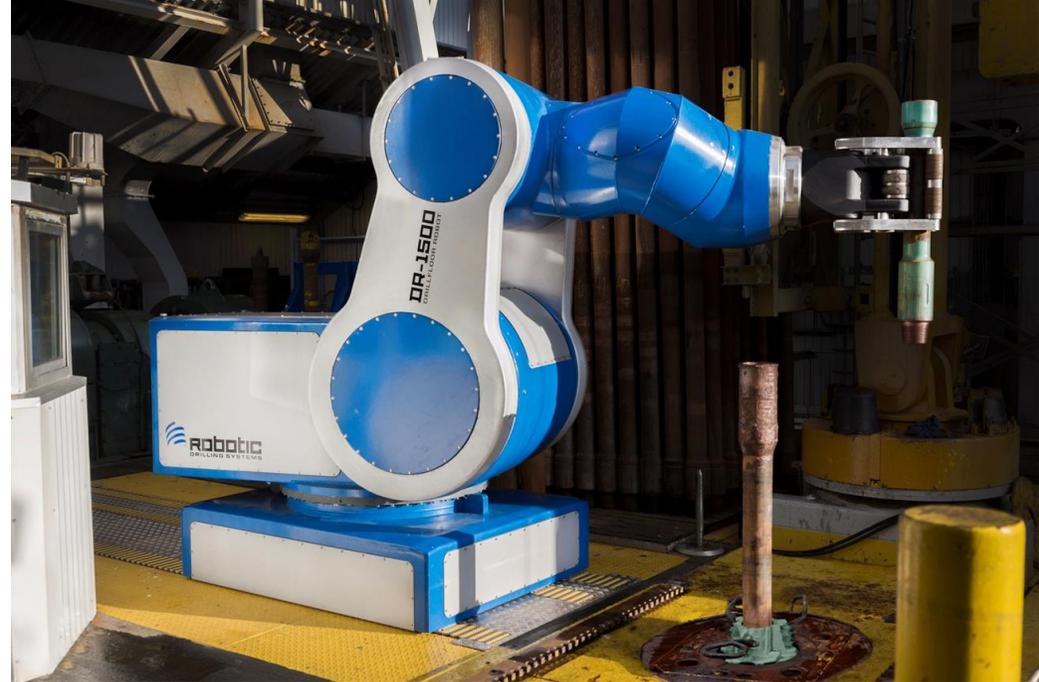


Photo: RDS

Save up to 3,000 manual operations per year
and critical time

Lower noise and energy consumption

Robot activities on the drill floor

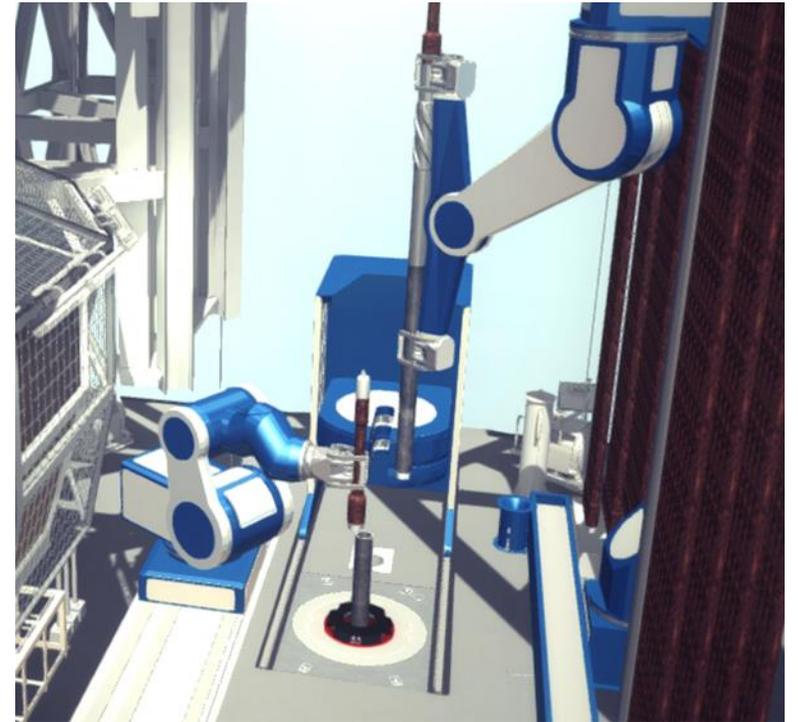
- Horizontal & vertical handling of lifting subs
- Handling and spinning of X-overs and similar subs
- Handling of Kelly Cock
- Handling of stabilizers
- Handling of hole cover
- Handling of dog collar
- Handling of manual slips
- Handling of radioactive sources
- Handling of protectors
- Washing and doping of threads
- Mud bucket
- Handling of completion components



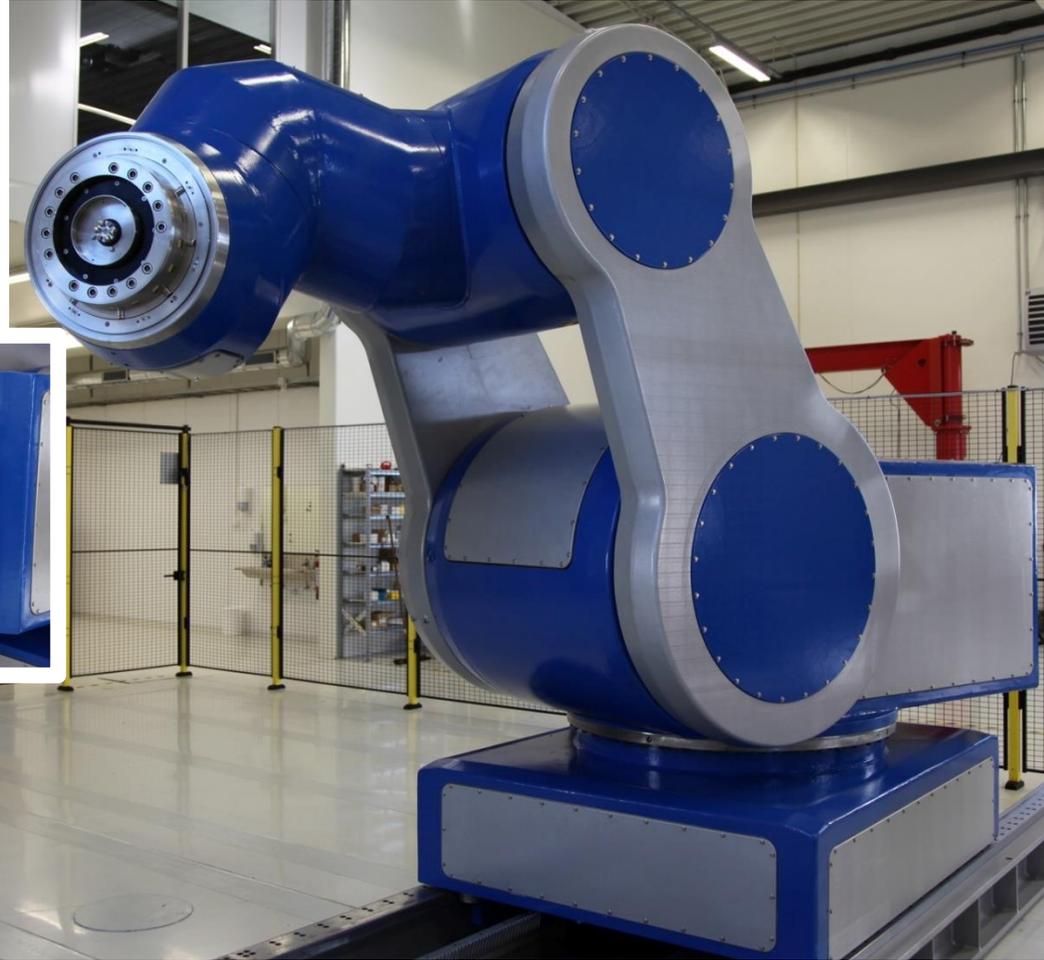
Photo: Gazprom

3 important technology innovations

- Making drill floor machines electric and robotic
- Running the system on a dynamic robot control system
- Adding the drill floor robot to the system



Drill Floor Robot



- ▶ 7 axis robot incl. rails
- ▶ Tool interface for fast exchange of tools
- ▶ Control system integrated on board
- ▶ Prepared for EX approval
- ▶ 1500 kg on 3 meters arm

