

Solutions for Digitalization and Automation of Drilling

Rustam Biktimirov

VP Digital and Integration,
Schlumberger
Russia and Central Asia

Schlumberger

Trends of Digital Transformation



Cost Reduction

Reducing Operating Costs



Analytics

Increasing Efficiency with Advanced Analytics



Resilience

Increasing Resilience with a Remote Workforce



Sustainability

Improving Environmental and Safety Profile Proactively

Barriers

Skill gaps, outdated infrastructure, lack of digital alignment between different parts of O&G Ecosystem

Industry 4.0

big expectations

Cloud computing, Big Data, Machine Learning, Artificial Intelligence, Computer Vision, Industrial IoT, distributed registry.

Digital Solution available in Russia



Yandex  Cloud

Cognitive DELFI E&P environment on Yandex.Cloud platform – deployment completion in December 2021



Digital Drilling – well engineering and wellsite execution

- DrillPlan engineering – in-country deployment completed in May 2021. PoV in Messoykhaneftegas and GPN-Khantos
- DrillOps Automate – autonomous drilling solution, deployment in Q1'22



INNOVATION
FACTORI

Joint Innovation via INNOVATION FACTORI to create new digital solutions (including for the creation of intellectual property)



Yandex  Cloud

Dataiku - Data Science and Machine Learning Platform – deployed in Yandex.Cloud, can be installed in customers' infrastructure



Open Subsurface Data Universe

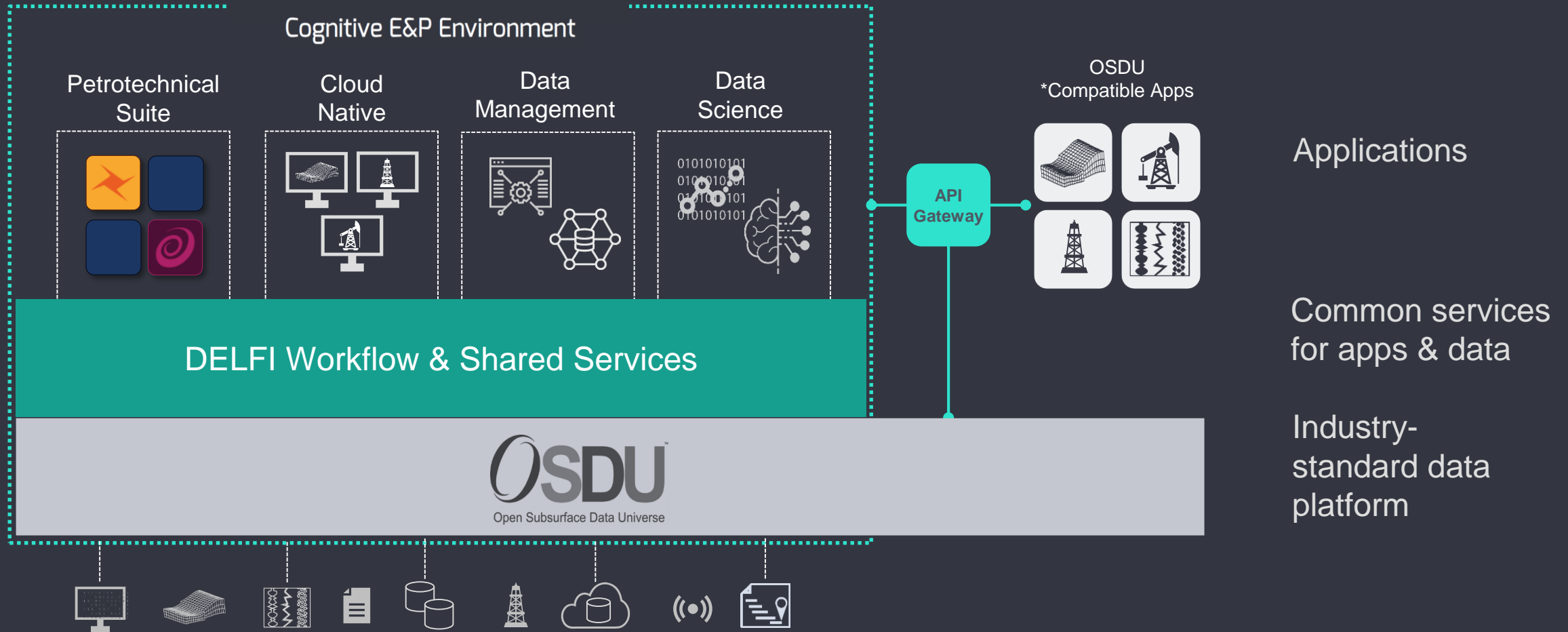
Yandex  Cloud

Extended version of OSDU with data management tools deployed in Yandex.Cloud, can be installed on customers' infrastructure



Industrial IoT Platform Agora to develop digital oilfield project and creation of own Edge IIoT solutions

DELFI Ecosystem



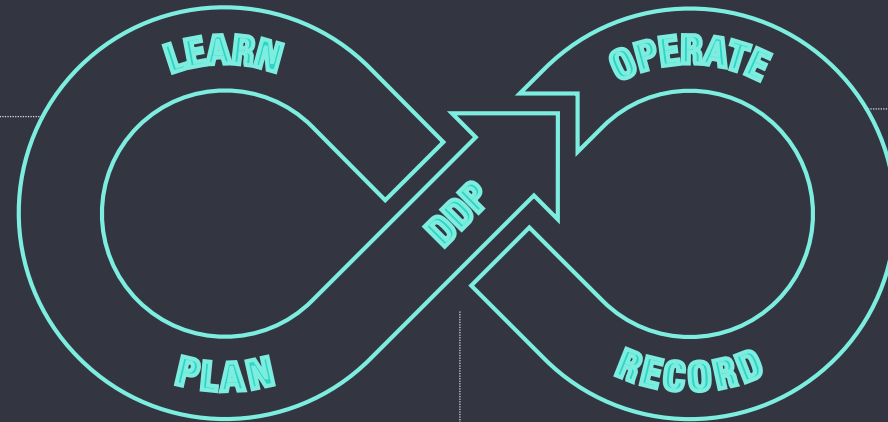
Digital Vision of the Well Construction Cycle

 DrillPlan

Planning & Design Platform



Well Integrity Solutions



 DrillOps

Execution Platform



Data Solutions

Data Management

Performance Evaluation

OSDU

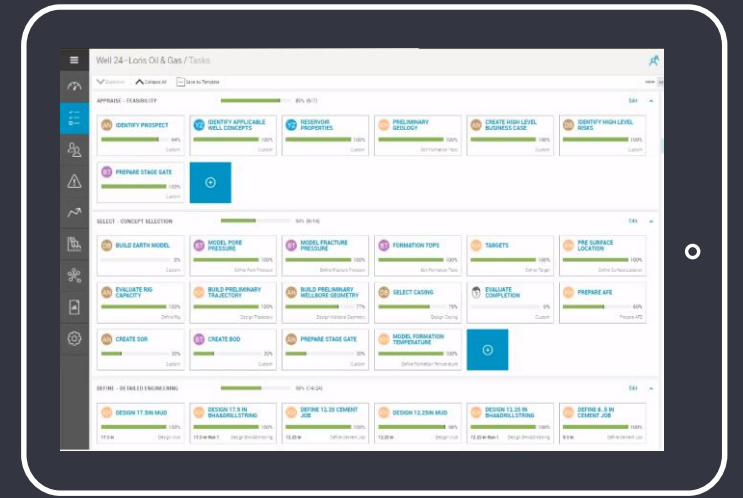
Evaluation

Data Science

Custom Solutions

DrillPlan


Maximizes the results from drilling teams in a single, common system





20⁺ Customers
Worldwide


50% Increase
planning efficiency

5-10% Optimized
well time and cost

 Increases a
planning & design
process efficiency

 Offset well experience
is seamlessly
integrated

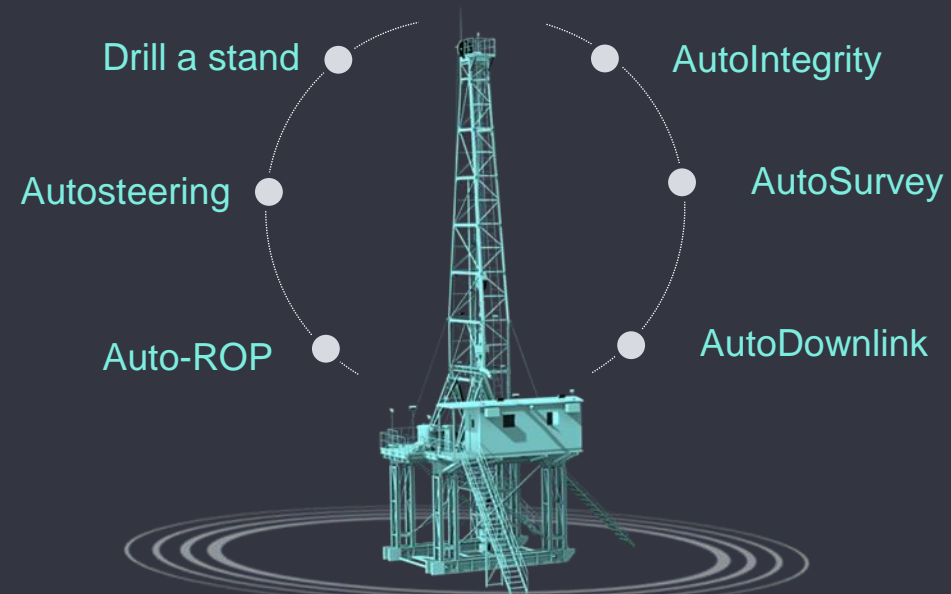
 Integrates workflows
between subsurface
and wells teams

 Delivers optimal and
coherent plan ready
for digital execution



DrillOps

Consistently deliver top performance



18⁺ Rig deployments

70⁺ Wells drilled

25% Reduction drilling time



Offset well experience is seamlessly integrated



Integrates workflows between subsurface and wells teams



Delivers optimal and coherent plan ready for digital execution

- Drill a section
- Smart tripping
- Stuckpipe prevention

IIoT Platform

Edge Computing with ML/AI



Connects to any field device



Increases Production up to 6-10%

Connect, Monitoring and Control



Agile edge computing platform



Reduces Cost of Operation

Customize solutions (Chemical, Gas handling, others)



Security built



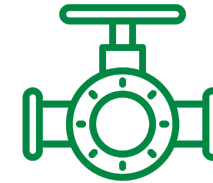
Improves HSE efficiency for Asset and People

Control Emissions and Reduce Carbon Footprint – up to 13%.

Use best practices to ensure software and hardware security

Agora

The gateway to Edge Intelligence



Reliable preventive maintenance solution for methane leak detection



Edge-based “Computer Vision” Apps to analyze and automate real-time video feed

Partnership with Gazprom Neft

Establishing long-term strategic cooperation on the joint development of digital solutions and their localization, implementation and commercialization in the following areas:

- Digital well construction planning and drilling
- Data management for the OSDU Platform
- Exploration data interpretation, geological and reservoir modeling using traditional software applications with OSDU Open Digital Platform
- Management of activities to improve production efficiency and achieve asset potential
- Other areas of mutual interest to the Parties



Nov 16th, 2021. Memorandum of Understanding between Gazprom Neft and Schlumberger signed

Solutions for Digitalization and Automation of Drilling

Rustam Biktimirov

VP Digital and Integration,
Schlumberger
Russia and Central Asia

Schlumberger