

Digital Transformation & Real-Time Data Strategy for Oil & Gas

Presented by Russell Herbert (rherbert@osisoft.com)



Welcome To London



Russell Herbert (based in London)

rherbert@osisoft.com

Industry Principal – Oil & Gas



Cindy Crow (based in Houston)

ccrow@osisoft.com

Industry Principal - Oil & Gas



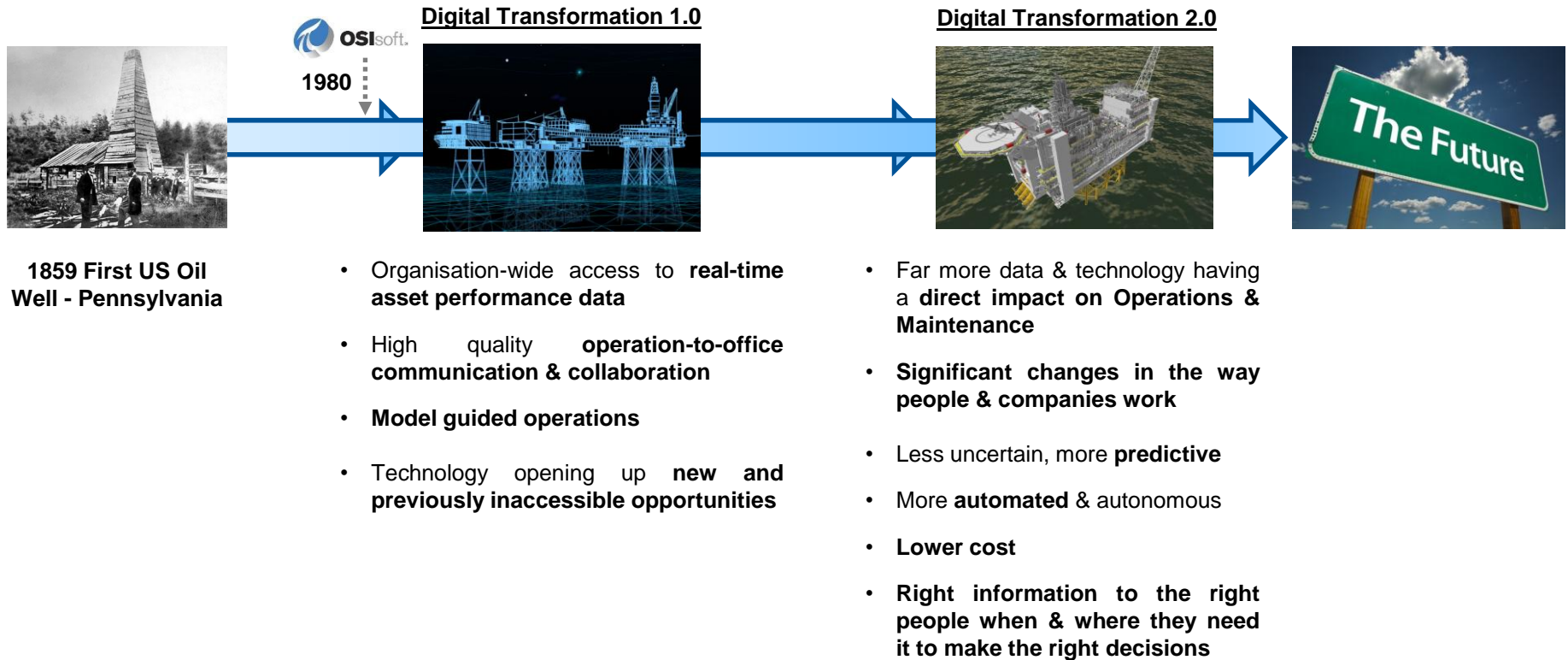
Nathaniel Adebayo (based in London)

nadebayo@osisoft.com

Industry Champion – Oil & Gas



Further Digitally Transforming Our Businesses Around Data



A Lot More Real-Time Data Than Ever Before...

Industrial Control



Sensors



Controllers



Actuators



Intelligent Motor Control



Terminals

Extended Operation



Mobile Devices



Vehicles, Robotics & Drones



Remote Cameras & Sensors



3rd Party Service Providers



Equipment Manufacturers



Maintenance Contractors



Support & Inspection



Oil & Gas Services



Engineering Companies



Material Suppliers



Analytics Specialists



Real-Time Drilling

Others



Governments



Industry Regulators



Partners



Digital Oilfield

- Production Optimization
- Process Visualization
- Integrated Modelling
- Hydrocarbon Allocation
- Flow Assurance
- Virtual Metering
- Improved Oil Recovery



Refinery Operations

- Process Optimization
- Process Visualization
- Process Quality Control
- Maximizing Yield



Pipeline & Storage

- Pipeline Management
- Process Optimization
- Process Visualization
- Asset Utilization & Line Pack



Maintenance & Integrity

- Real-Time Equipment Monitoring
- Condition Based & Predictive Maintenance
- Inspections & Integrity Management



Health, Safety & Welfare

- Alerts & Safety Systems
- Crisis Management
- Real-Time Barrier Assessment
- Incident Analysis
- Emissions Monitoring



Assets & Facilities

- Energy Management
- Chemical & Water Management
- Import & Export
- Resource Monitoring



Remote Operations

- Collaboration Suites & Tools
- Automation



Drilling & Wells

- Real Time Drilling
- Well Integrity
- Well Completions
- Artificial Lift
- DTS/DAS



BI, Reporting & Analytics

- 'Live' Dashboard & KPI Reporting
- Government & Regulatory Compliance
- Self Serve BI
- Advanced Analytics



Maps

- 'Live' Operational Maps



Shipping

- Fleet Monitoring
- Cargo, Loading & Offtake



Retail

- Stock & Inventory Management
- Rechargeable Cars

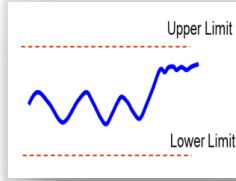
Analytics & Automation Are Going To Play a Critical Role



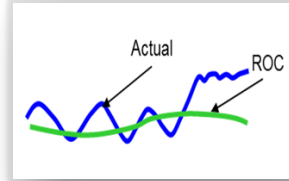
Equipment
Status



Equipment
Usage



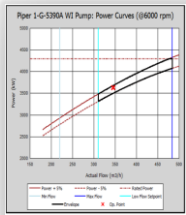
Engineering
Limits



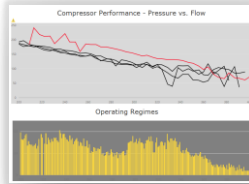
Rate of
Change
(ROC)



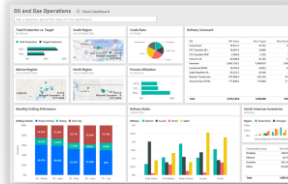
Automated
Analysis



Operating
Envelopes



Multi Dimensional
Analysis



Complex Statistical
Analysis

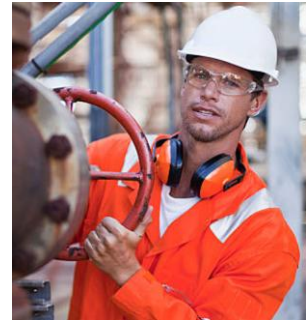
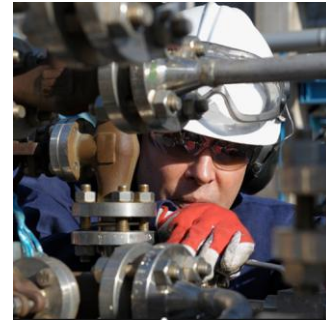
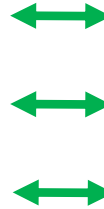
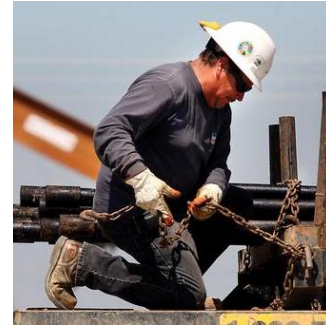
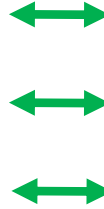
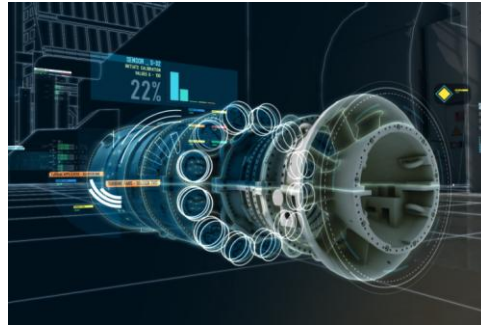


Machine Learning &
Predictive Analytics



Automated
Workflows

People Are At The Heart Of This Transformation



3rd PARTY REAL-TIME SERVICES

Equipment Specific Monitoring & CBM
Specialist Data Driven Services



Vehicles



Mobile



Logistics



Security



Drones



Machines



Sensors



Actuators



Intelligent Motor Control



Controllers



Terminals



Safety



ENTERPRISE

'Live' Management
Dashboards & Reports
Business Intelligence



PI Advanced Integrations

OPERATIONS

'TOOLS BUILT BY YOU'

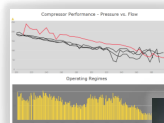
Real-Time Process & Equipment Monitoring
Condition Based Maintenance
Operational Optimization
'Live' Operational Dashboards & Reports
Real-Time Barrier Assessment
Alerts & Alarms



PI Vision

DATA SCIENCE

Advanced Analytics
Machine Learning
Predictive & Prescriptive Analytics



SPECIALIST APPLICATIONS

Digital Oilfield
Maintenance Management
Real Time Drilling
Well Integrity
Logistics
Offtake/Pipeline Management
Mass Balance
Energy Management



Today's Agenda



9:45 - 10:15

Statistical and Advanced Analytics with PI AF



10:30 - 11:00

Improving Equipment Reliability and Availability through Real-Time Data



11:15 - 11:45

Shell's Journey to Advanced Analytics



12:00 - 12:30

Water Injection Asset Integrity by means of OSIsoft Connected Services



PETRONAS

14:30 - 15:00

PROTEAN - Rotating Equipment Analytics



15:15 - 15:45

Digital Transformation for Oil & Gas Drilling



16:00 - 16:30

Operational Integration using a PI AF Master Asset Model



16:30 - 18:00

EMEA Oil & Gas User Group Meeting

[illegible]

Users Group

London, UK October 18, 2017



- First ever **EMEA Oil & Gas and PetroChem User Group Meeting!**
- **4:30pm until 6pm** in this room
- Broad range of potential Oil & Gas and PetroChem topics...**agenda will be decided by you!**
- **Break Out Sessions** with peers and **Group Discussion**

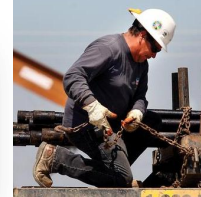
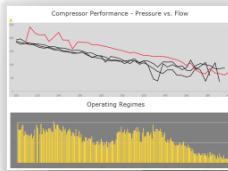


LUNCH

- **'Oil & Gas and PetroChem' tables** set aside every day in the 'Arora 7' restaurant
- **12:30pm until 2:30pm**
- **Please come and join us!**

Closing Thoughts...

1. The modern Oil & Gas operation is generating **more Real-Time Data than ever before**
2. There is a growing need to **embrace Emerging Technology Trends** and **Digital Transformation**
3. There is **significant value** that can be realised by widely **embracing the use of real-time data** across your operation
4. The modern **PI System is a foundational and critical building block** to successfully implementing Data Driven Analytics & Operational Excellence within your Industry
5. Today we have a **fantastic agenda of Industry leading speakers** to share their experiences and expertise.



Questions

Please wait for the **microphone** before asking your questions



State your **name & company**

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Thank You!



Russell Herbert
rherbert@osisoft.com
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