

Oil and Gas Automation & Digitalization Conference 2021

AGENDA 2021

Day 1

Wednesday , 22 September 2021

Eastern Time (ET)

9:45 **Welcome Speech**

10:00 **Efficient Field Operation Scheduling and Dispatching**

- Unified technology solution for scheduling and dispatching
- Reduce unplanned downtime and optimize maintenance processes through efficient dispatching
- Optimize resource utilization

Shaji John | Pioneer Natural Resources

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PIONEER
NATURAL RESOURCES

10:30 **How dedicated Cellular Networks and IoT are Fueling Oil and Gas Digitalization and Transformation**

- How private networks provide the capacity and flexibility to cope with evolved network services.
- Why remote monitoring of tanks and industrial equipment in the midstream and downstream sectors comprise the most common uses for wireless solutions in the oil and gas industry.
- How to capitalize on the insights you already have to dramatically improve efficiency

Ammar Sabbagh | Ericsson

Platinum Sponsor

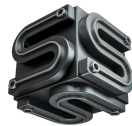
ERICSSON 

11:00 **Artificial Intelligence (AI) for Midstream Safety Solutions: Increase Safety, Compliance and Process Efficiency, while Mitigating Risk**

- Innovation has traditionally been focused on developing resources but in the current environment there is a greater focus on operating more efficiently
- There are many rudimentary document-based processes that have gone unchanged in decades and are ripe for optimization
- Significant breakthroughs in deep neural network architecture make it possible to extract information from documents and refine data for consumption by downstream systems, making it possible to automate paper-based processes

Yingchao Zhang | Singularity Systems & Bryce Bjornvick | Midstream Process Solutions

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11:30 **The Well of Innovation Suite of Digital Tools that add Value to Drilling Operations**

- A Machine Learning Model that facilitates the identification of systemic drilling operational issues and opportunities to reduce invisible lost time
- Digital technology at the rig floor to facilitate procedural compliance and equipment inspections
- Real-time measurement of CO2 emissions on drilling rigs

Anna Moffat | KCA Deutag Drilling

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KCA DEUTAG

12:00 **Utilizing Hybrid Private Mobile Networks to Improve Productivity**

- Understand the added benefits of a HYBRID Private Mobile Network (PMN)
- Expeto and Avanade will outline what the difference between a private mobile network and a Hybrid PMN and how this more future-proof and scalable approach can create opportunities utilizing any G connectivity to boost profitability
- The advantages of implementing a hybrid private mobile network for mission critical applications that maximize efficiencies in Oil and Gas Production, such as field service and communications that ensure reliability, security, and worker safety

Brian Anderson | Expeto & Kyle Kelin | Avanade

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expeto
Private Mobile Networking

12:30 **Mobile Field Service Management: Reducing Costs – and your Carbon Footprint**

- How MHI Vestas was able to deliver a mobile project in just 2 weeks
- What to look for when choosing a mobile field solution
- The top innovations that will make the life of your field workers easier
- How to use mobile field solutions for risk based inspections, asset maintenance, work orders, incident reports and more!

Giuseppe Felice | Resco

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resco.net
technology on the move

13:00 **Securing The Links In The Chain: Understanding Risk Management In The Supply Chain**

- Ongoing threats that exist in the supply chain and how to manage the ongoing threat landscape through the use of detective and preventative tools
- Risk assessment around people, processes and technology and what risk factors should prioritize

Jerome Farquharson | Burns & McDonnell

**BURNS
MCDONNELL**

13:30 **Networking Break**

14:00 **Avoiding Pitfalls of the Past in Cybersecurity**

- Avoiding pitfalls of the past in cybersecurity, when buying and implementing your new OT/IoT system. Lessons from large scale implementation
- Case study of main OT system replacement project and how cybersecurity was “moved to the left” on the systems lifecycle to avoid higher costs in the future

Michał Paulski | Accenture

accenture

14:30 **Digitalization in Hydrocarbon Inventory Management at Oil and Gas Clients**

- Loss control issues when handling hydrocarbon inventories and their logistics.
- Avenues for digitization that companies could adopt in their journey of automation.
- Latest offerings from SAP technology that address these concerns.

Girish Nair | SAP

SAP

15:00 **Leveraging Proactive Predictive & Prescriptive Maintenance Strategies to Improve Reliability and Precision & Minimize Downtime**

- Maintenance Maturity Roadmap
- Logical asset performance management Foundation
- Business value propositions
- Machine Learning Algorithms
- Digital Twins
- APA Case Study

Keith Holdaway | SAS

SAS

15:30 **IoT-Enabled Monitoring of Oil & Gas Assets**

- Challenge: traditional SCADA systems can't provide the granular visibility needed for comprehensive monitoring of hundreds or thousands of kilometers long pipelines.
- Using long range (LoRa) IoT technology can positively impact operations, safety and sustainability.
- Working with ultra long range and star network topology empowers operators to gather data from geographically dispersed measuring points while reducing the time and technology needed for monitoring
- Rugged IoT devices make for a flexible, scalable monitoring solution which integrates seamlessly with existing infrastructure and can be deployed quickly even in harsh, hard-to-access environments
- There is an opportunity for the Oil & Gas industry to fast-track the adoption of LoRa IoT technology to reap the benefits adjacent industries such as mining and construction have already been enjoying

Ignasi Vilajosana | WorldSensing

WORLD W SENSING

16:00 **Methane Detection efforts using Satellites & IOT devices**

- ESG has been gaining momentum with a parallel growing interest in Sustainability.
- Methane Emissions from the O&G represents a key area to look after. Methane is 84 times more potent than CO2 and so much harder to remove.
- The best approach to handle Methane emissions is to curb them. This can be achieved using satellite imaging along with other IOT devices.
- IEA (International Environmental Agency) is aware of the dangers posed by the Methane Emissions but lacks the means to measure them. On average 3 of 4 emissions go unaccounted for! O&G companies have a responsibility towards society in curbing Methane Emissions in every possible way.

Osama Hanna | Microsoft

 **Microsoft**

16:30 **Best Practices for Digitalized Subsurface Data on Cloud**

- Operator experience with large volume seismic data sets
- Lessons learned from digitalization of legacy media and formats
- Comparisons of search and discovery workflows using open-source code

Jess Kozman | Katalyst Data Management

 **KATALYST**
DATA MANAGEMENT

17:00 **End of Day 1**

Day 2

Thursday , 23 September 2021

Eastern Time (ET)

9:30

Best Practices for Secure Cloud Connectivity

- Cloud connectivity offers a wealth of benefits for oil and gas operators and other critical infrastructure organizations. New connections, however, can introduce new risks. Inadequately secured connections create
- Opportunities for unauthorized parties to access critical systems, and some security "solutions" have the potential to be hijacked and used to launch attacks by sophisticated threat actors
- This session will identify the challenges associated with current approaches to cloud connectivity, and describe new strategies and technologies that enable secure OT-to-cloud connections while minimizing risks to critical assets

Brian Romansky | Owl Cyber Defense
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10:00

How will Digital Determine the Future of Oil and Gas?

- The findings from our recent survey of 150 oil and gas industry leaders on digital trends and key priorities
- Our participants told us they are ready to invest, but what were the priority areas and key themes?

Nick Mayhew | Axora
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10:30

Leveraging Digitalization, Reduce Unplanned Downtime and Optimize Maintenance Processes

- Real life applications & how technology can change legacy ways of working
- Technology cost vs benefit scenarios and fit for purpose ways to implement
- Impact on current teams competence and how current staff can help in digital deployments

Dipak Patki | Shell



11:00

Protect Sensitive Data in the Cloud

- Cloud security challenges faced by organizations
- Identify challenges faced by organizations with the adaption of cloud services and applications
- Recommending a solution that has become a critical element of enterprise cloud security strategies

Rafiq Khurshid | Saudi Aramco



11:30

How can a Digital Twin Drive Innovation & Transformation?

- What does data-driven operations look like?
- Digital twins can accelerate the pace of digital transformation at scale
- The green shift - How to improve operational efficiencies and reduce overall emissions

Haavard Oestensen | Kongsberg
Gold Sponsor



KONGSBERG

12:00

Best Practices and Case Studies of Digitalization - Business Objectives and Technology Alignment

- Key Components to consider while developing Digitalization Programs –
 - Clarity of purpose
 - Selection of approach – Hybrid Modeling, tech stack
- Clarity on objective or purpose of implementing technology applications is the first step towards achieving effective digitalization. Fitting technology stack to purpose/objectives and not go searching for a purpose based on tech stack will allow faster & effective value realization from the Digitalization program
- Hybrid models incorporating the best of what is known from deterministic first principles and combining it with AI/ML real-time models, along with Data Engineering and Decision Engineering, should form the basis of all digitalization programs esp the ones targeting process manufacturing, sustainability.
- Ingenero's digitalization program (I-SSPDE) incorporates both these aspects to provide Augmented Intelligence to operations managers, engineers and operators in the Oil & Gas Industry (Upstream, Midstream & Downstream), that would otherwise have taken years of operational experience.

Pratap Nair | Ingenero



12:30

Digitization using ML and Analytics for Midstream Pipeline Integrity and Optimization

- Quantifying trust in the data and risk score modeling in pipeline risk assessment
- ML-based Heuristic approach to optimize power consumption and operational cost reduction
- Threat detection and terminal optimization using ML image object classification

Pritesh Bhoumick & Kevin Rush | Enbridge
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13:00

Digital Maintenance as Key Enabler of Efficient Operations

- Digitalization of asset management focuses to improve on three business cases for drilling contractor: Avoidance of major equipment breakdowns and significant downtime during operations, optimization of preventive maintenance and simplification of recertification. All three are approached, but require significant combination of domain knowledge, regulatory understanding and level of data/information integration
- Data driven, AI or physics based modes require data of proper controlled quality being streamed to the analytical engine(s). This step often neglected is crucial for success. Model developed will be presented.
- How it can be leverage for your successful transformation
- Tying automation to on rig execution processes, systems and subjects is an absolute necessity. Work orders generated by systems and humans are streamlined through maintenance management system in prescriptive form, included in existing maintenance process and executed as required.

Julian Zec | Maersk Drilling



13:30

Networking Break

14:00

The Application of VR/AR/XR Immersive Technology in Oil and Gas

- Understanding VR and AR/XR using Digital Learning
- Dealing with integration constraints when digital represent your process
- Key aspects of UX when in the field

Vitor do Valle | Petrobras



14:30

Emerging Digitalization Technologies - Blockchain in Oil & Gas and its Applications

- Blockchain 101
- Blockchain for Energy (B4) - A consortium of Oil & Gas companies focused on blockchain applications
- Blockchain applications in the oil & gas industry

Raj Rapaka | Exxon Mobil



15:00

The Bots are Coming: You can Leverage Robotic Process Automation to your Advantage

- Low hanging fruit for Robotic Process Automation (RPA) in Upstream, Midstream, and Downstream Oil & Gas workflows
- How to ensure your RPA Programs are built for scale from the start
- Real-world examples of automation results and how to measure yours

Steve Shah | Automation Anywhere
Gold Sponsor



15:30

Discoveries in Delivering an Industrial App Store

- Hear of situations that have happened in the past, from the founder of Intelligent Plant, the developers of the Industrial App Store, things to attempt to repeat, and to avoid
- Real life examples and experience
- Audience interaction throughout

Steve Aitken | Intelligent Plant



16:00

DEEP Compounded Disruption to Move Ahead from Digitalization to Digital Transformation at an Accelerated Pace

- The challenges and opportunities in taming the DEEP compounded disruptions
- Quantifying the capital waste to focus on 'projects' for digital transformation
- Measuring the success in 'financial terms' the outcome of digital transformation of workflows
- Key ingredients for a successful path for increasing automation

Satyam Priyadarshy | Halliburton



16:30

Next-Generation Digital Maintenance Practices in O&G

- The transition from the traditional field worker to the digital fieldworker
- Optimized maintenance scheduling and asset monitoring
- Guided workflows with self-services field technician experiences
- Advanced analytics best practices for maintenance

Jason Olbekson | Salesforce



17:00

End of Day 2

Day 3

Friday , 24 September 2021

Eastern Time (ET)

9:30

Digital approach to the Well and Geology screening process for Carbon Capture and Storage

- Aquifer and well evaluation based on primary existing data
- Develop CCS Data standard built on alignment with ISO/International standards on CO2 storage
- Digital presentation methods, showing the overall well CO2 storage performance feasibility

Petter Mathisen | DNV



10:00

Improving Productivity and Safety of the Oil and Gas Industry via Long-Range Wireless Mesh Technology

- Oil and Gas assets and projects spread across vast land areas and even in remote locations, including offshore rigs.
- Reliable and real-time monitoring of various sensors used in such projects are essential to improve safety, manage risks, and improve productivity.
- However, deploying manual and legacy monitoring solutions can be costly and ineffective, and would not help stakeholders obtain the sensor data they require for their decision making processes.
- Existing LoRa and other star-based wireless monitoring systems have severe disadvantages that limit their applicability in the oil and gas sector.
- In contrast, long-range wireless mesh-based monitoring systems provide more advantages. They can be deployed seamlessly to monitor sensors, even in challenging settings.
- With this groundbreaking new technology, the oil and gas sector can significantly improve its monitoring process, providing safer and productive outcomes.

Nimantha Baranasuriya | Ackcio



10:30

Digital Transformation won't Succeed Until the Focus Expands to Include these Tools

- The industry is focusing on automated operations, AI, and other technology to transition our energy mix
- Applying new technology to the same business processes is simply digitalization of the status quo
- Strategic planning tools are still operating inside poorly connected silos and must be transformed as well

Philip Black | Wood Group



11:00

Reverse and Forward digitalization The Yin & Yang of IIoT Implementation

- The Yin & Yang Philosophy could be transmitted to reverse and forward digitalization concepts.
- Use existing/proven technical solutions and make them smart/IIoT capable
- Save the CAPEX/Invest you have spent! Reverse digitalization concepts can provide solutions to these desires
- IIoT insiders and early IIoT solution adaptors are demanding digital innovations / forward digitalization involving edge computing, artificial intelligence and sensor to cloud communications

Uwe Scherf | WIKAI

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11:30

A Digitization Playbook for Heavy Asset Industries is Emerging

- There is a convergence in approach and conclusions on digitization approaches from standardization organizations such as NAMUR, IIC, Industrie 4.0 and OPC Foundation. The session focuses on the key strategies and essence of this convergence, and includes the separation of topics like architectures, protocols, information models, dictionaries and "purpose of use"
- Early adopters of these digitization approaches, now eye the benefits and are confident to be on the right path. Examples from big multinational operators are provided

Espen Krogh | Prediktor AS

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12:00

Industrial Cybersecurity – A Catalyst for Digital Transformation (KNOW/BUILD/GROW)

- How security is building block to enable digital transformation
- A risk based approach to Industrial cybersecurity to focus investment, resources and training
- Learn how to quickly measure your current cybersecurity status and move from a reactive approach, to a proactive and holistic one
- Strategic long term roadmap to bridge the gap to future state
- Security data enrichment and digital transformation for advanced analytics and predictive maintenance
- Digital Twins for cyber security and the Power of ML/AI

Arthi Vasudevan | Baker Hughes



12:30

Failure to Finish - The last 25% takes up to 50% of the Overall Duration

- Changing the way the completions phase of projects is approached to shorten schedules and improve project outcomes
- Learn how to plan with the end in mind through the application of the completions enablement process
- Understand critical data requirements to leverage completions planning
- How technology creates greater visibility and predictability of project outcomes

Daniel Cahalarn | Asset55

Platinum Sponsor



13:00

Case Studies in digitalization and the Pathway to Net Zero

- The urgency and relevance of digitalization in the industry's pathway to net zero
- Specific examples showcasing how we are helping customers embrace digitalization and drive results at mCloud
- Thoughts on what businesses can do today to more urgently adopt digitalization

Arnel Santos | mCloud Technologies

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13:30

Networking Break

14:00

Digital Disruption

- What is disruption?
- Causes of disruption and transformation.

Hussain Kassem Wasly | Jubail Energy Services Company



14:30

When IT becomes an OT Nightmare

- Lessons learned from Ukraine 2015/2016
- Observations from Colonial Pipeline
- Information sharing and risk assessments as defense in depth

Bill Lawrence | SecurityGate



15:00

Digital Twin for Net Zero & Sustainability Outcomes

- The topic would cover the digital infrastructure and tools that would be needed to support Net Zero outcomes
- Implementation Journey & Critical Success Factors
- Real Life case study

Srikanth Muralidhara | Flutura

Silver Sponsor



15:30

Digitalization on Pipeline Right-of-Way information and Automation of Risk Management

- Automate damage prevention, better plan digs and enable detection of invisible slow leaks in liquid pipelines
- Automate high-res photo-documentation of your right-of-ways with geo-referenced integration in your GIS
- Detect encroachment, geo-hazards and anomalies in vegetation

Andrew Marshall | Flyscan

Platinum Sponsor



16:00

Data Science and Digitalization in O&G Retail

- Predictive models to enhance retail operations
- Computer Vision to build better business and customer understanding

Erima Goyal | Data Science Leader

16:30

Closing Remarks