

OCT 23, 2018 TO PRESENT

The Impact of AI and Digital
Transformation on the Energy Workforce

# Deloitte.

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### **FACILITATOR**



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# Marsha Williams CIO and Board Member

Marsha Williams has over 25 years of executive technology experience across a diverse set of industries including energy, manufacturing, medical device, pharmaceutical, transportation, criminal justice, and various private equity environments. Ms. Williams has served as the Vice President and Chief Information Officer of several publicly held companies working in both the United States and Europe. She currently serves on the board of several technology organizations.



# THEME #1

What are the Advanced Technologies being Implemented Today?

# PANELISTS



Panel members include (1) senior Oil & Gas industry experts focusing on innovation and technology, (2) industry operational leaders experienced with all stages of the energy value chain, (3) strategic workforce planning and talent acquisition within the Oil and Gas sector.



# Glenroy London

Chief Knowledge Executive Energy and Oil & Gas



### **Amitabh Bhattacharya**

Safety Expert with 7 years of versatile experience managing Health, Safety, and Environment in Oil & Gas



### **Andrey Zolotavin**

Sr. Real Time Systems Engineer



#### **Ullasa Bhat**

Expert Oil & Gas Consultant



#### Kin Lim Lee

Data Science Communicator



#### **Luis Vargas**

Consulting Power Systems Engineer at EnviroPower Renewable Inc.



#### Patrice L. Tiolet

Performance Excellence, Procurement Supply Senior Consultant | Blockchain



#### **Neil Williams**

Tilix Smart Energy



#### **Dr. Jeffrey Forsyth**

CEO nFluids | Strategic | Innovative | Nanotechnology | Product Development Conceptualization to Commercialization



#### Jennifer Arkhurst

Executive Director & Managing Partner at Arkhurst & Abdellah Solicitors FZ LLE



#### **Daniel Serrano**

Energy Markets and Portfolio Manager Expert



#### aldwin labuga

Project Development Manager at Trina Solar



### **Jayant Parimal**

CEO



#### Vijay Karna

Chief Certified Architect



#### **Naveed Irshad**

Head of Site Design and Power Planning at Telenor Pakistan Telenor Group



#### **Ron Levine**

Cyber Security Architect



## Mark Slaughter

COO at eFrac Well Services



### **Niel Root**are

Director, Processing and Pipelines at DTE Energy

## **Executive** Summary

Al and Digital Transformation are seen as futuristic technologies, however, *they are actively changing workforce roles today across all dimensions of the Oil & Gas industry*.

In this theme our panel focused on the following dimensions:

- Breadth of Impact
- Workforce Wins
- Skills Advancement



## **Key Point** #1

When thinking about the impacts of AI it is natural to focus on areas such as extraction, however, *AI engagement is evident across all functions* including logistics, HR, and finance.

One of the advanced technologies includes the deployment of **advanced transportation technologies** in oil and gas industry. More comprehensive and detailed surveillance and optimized transportation routes are being carried out to reduce the time for transportation and delivery.



# Kin Lim Lee Data Science Communicator

Al will affect the *financial side of the energy business*. Blockchain will ensure transaction, confirmation of product dispatch and delivery to customer. Al will verify variety of factors like unloading, generate and deliver automated bill. This will significantly reduce need in accounting.



#### **Andrey Zolotavin**

Sr. Real Time Systems Engineer

As in many industries, *AI has arrived in HR to improve search*. According to the Deloitte Human Capital Trends report, 38 percent of companies use AI, and 62 percent expect to by end of year. With talent scarcity and low unemployment, AI will quickly emerge as a key tool for the HR manager's toolbox.





### **Key Point** #2

The use of *AI generates numerous workforce wins* including retiring workforce knowledge capture, minimization of hiring bias, and enhances geographically separated team dynamics.

An important need for the industry is that of *knowledge transfer*. With the pending retirements of significant portions of the workforce in design, construction and operations roles the industry faces the possibility of having to "re-learn" many of the lessons learned through experience.



#### Luis Vargas

Consulting Power Systems Engineer at EnviroPower Renewable Inc.

Al can prevent bias in hiring. "The practice sharpens the talent acquisition function by using data-driven analytics and digital, cognitive tools to better source and assess candidates and prevent possible misjudgments caused by bias or false logic," Deloitte's press release on the report.



#### Amitabh Bhattacharya

Safety Expert with 7 years of experience | Health, Safety, and Environment in Oil & Gas

Working across boundaries, time zones, cultures can be better managed via collaborations and networks of excellence. *Organizations are learning faster and capturing tacit knowledge* riding on the ICT Platform thereby gaining competitive advantage and distinctive capabilities.





### **Key Point** #3

Workforce adaptations include the obvious need to grow technology capabilities - but also to *focus on moving up the value chain to decision making and supervisory roles*.

The *growing use of UAVs/Drones* has a direct impact on field workforce. Opportunities are increasing for reskilling workforce to learn and operate drones, become UAV pilots, learn to better execute end to end inspection workflow to increase overall efficiency and effectiveness of the process.



Ullasa Bhat Expert Oil & Gas Consultant

Those engaged in *subsea operations today are a dwindling population* (those who actually do the most difficult and risky jobs). They can do well by moving up the value chain to supervisory, monitoring and decision roles. High risk and extreme hazard jobs will increasingly move away from humans.



**Ullasa Bhat** Expert Oil & Gas Consultant

I would suggest that existing workforces should develop **more soft than hard skills**. Collaborative tools are easy to use (Facebook-like user experience), but they need a change in culture and in the way of working. Collaboration requires openness, team working, collective problem-solving.



Patrice L. Tiolet, INPG, MBA, CPSM

Performance Excellence, Procurement Supply Senior Consultant

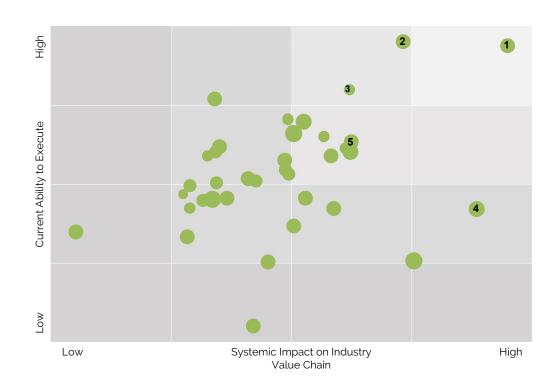


## **Priority Map**

What are the disruptive trends in the oil & gas industry that will impact the workforce talent gap?

Highest rated discussion points to-date:

- 1 Digital Transformation
- 2 Logistics and supply chain with AI
- 3 Powered exoskeleton
- 4 Smarter and intelligent workforce
- 5 Al in industry process optimization





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