

Optimizing efficiency through digitalization in chemicals, petrochemicals and refining
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Speaker interview



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1. What does the subject of digital transformation and IoT mean to you?

The subject of digital transformation and IoT is of the highest importance to us. Our service offering is focused on helping organisations go through the digital transformation, with a specific focus on the human factor and workforce implications that that transformation requires.

2. What's the greatest impact IoT, data analytics and AI will have on the industry? What lies ahead of operators and how will they adapt?

The greatest impact will be in the area of the workforce and what that workforce will need transfer into. It will cause a transformation in the knowledge and skills the workforce will need to operate in a new environment where AI might have taken over work that was done by themselves in the past. It will also need people that can use, understand and analyse the new feeds of data that become available and take the appropriate measures to use this data to their best advantages.

3. How do you see the role of the Industrial Internet of Things in refining, petrochemicals & chemicals? What are the key benefits and opportunities of using IIoT solutions in downstream operations?

The development of the IoT will highly support the standardization and optimization of all normal operations and work processes, making sure that the remaining workforce can focus on handling abnormal situations and not be distracted by normal operations. This will result in the organisations being able to further optimize the output of the operations with a smaller more dedicated workforce, resulting in big financial gains that will support the investment in the transition to the digital future.

4. How will this paradigm shift affect talent in manufacturing & downstream industry overall?

This shift will highly affect the talent and talent requirements for the industry. The new skills will need to focus more and more on being able to analyse the data streams and being able to intervene when the AI or automated equipment is encountering abnormal situations. From a maintenance perspective, the demands for Electronic Technician skills will highly grow and might even outgrow the need for Mechanics and Electricians. Finally, in the area of security, we already see the need for skilled people around Cyber Security grow by the day.

5. What are the latest technology adoptions by downstream operators in Asia? Are there any success stories that other operators can learn from?

We are just starting to focus on the Asian market, so do not have any success stories in that region yet, how we do see a big demand for our services coming from that region.

6. Will Artificial Intelligence replace humans working in oil and gas?

Over time, starting quite soon, we expect to see an ever increasing number of activities being taken over by AI which will definitely replace humans in the workplace. However, we do not think this will make the industry humanless, it will result in a big shift in the number of people required in the industry and the type of skills this new workforce will need.

Our key technology and services are be focused on the digitization of the workforce performance. By digitizing and making the work processes relevant to the people, we can start with the optimization of the process, before the AI developments will take over. Even, from our perspective, we think that digitized, optimized processes are also required and the key for the development of the AI systems.

While the development of AI and automated systems continues, our systems and services will be able to support the transition of the workforce from their current skills to the future skills required to keep these fully automated facilities running.

7. What is the current state of cybersecurity preparedness across refining, petrochemicals and chemicals and how is the cybersecurity market set to evolve?

Overall, we have identified that there seems to be a severe lack of cybersecurity preparedness in the industry, mainly caused by the fact that it was never a strong requirement in the original business model. Other industries that are already further advanced in the digitization transformation are further advanced and we expect the

8. Are manufacturers concerned about cybersecurity in their organization?

Yes, we see an increasing awareness and concern around cybersecurity.

9. What impact does Big Data have on operational efficiency and how is Big Data changing the industry?

In itself, Big Data will not lead to operational efficiency. The challenge lies in the ability to translate the Big Data in usable Knowledge which can be analysed to present the opportunities for efficiencies in an organisation.

At this moment, we think that it is interesting to see that there is already a push towards big data, while there are many obvious, much simpler, areas that can lead to operational efficiency which are to addressed (procedural standardization, health, performance, to mention one).

10. With these radical changes looming what opportunities lie ahead for manufacturers?

In almost any area, being equipment, design, construction, operation, there are large opportunities for manufacturers, as long as their products are prepared for, supporting the digital demands of the future.

11. What will the future workforce look like in the digital age?

As mentioned before, the future workforce will be very different from the workforce today. We do expect that the number of people will be highly decreased, with a demand for a more educated workforce capable of handling the digitized/automated/AI driven facilities.

12. What will be the highlight of your presentation at Asian Downstream Summit 2018?

Our presentation will focus on the first step towards the workforce transition towards the digital future and focus on making sure the workforce has digital access to all information (policies, procedures, hazards, etc.) that they require. At the same time, we address the benefits for the organisation that this digitization brings them, enabling them to optimize procedures, identify quick wins where automation or AI could be used and start making sure their workforce is performing to expected operational excellence standards.