

Optimizing efficiency through digitalization in chemicals, petrochemicals and refining
31st Oct – 1 Nov 2018, Sands Expo & Convention Centre, Singapore

SPEAKER INTERVIEW



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**NEW SOLUTION
STRATEGY AND
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**KBC (A YOKOGAWA
COMPANY)**

1. Please introduce your role at KBC (A Yokogawa Company).

At KBC I lead new solution strategy and launch, which means I look at how we can bring together existing and new technologies to create new solutions for our customers.

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

Digital Transformation is too often mis-represented as a big list of technologies looking for a use. At KBC, we work back from what Operational Excellence looks like, and will look like in future, and then look at how this can be facilitated using technology

3. Please highlight why you think there is a need for a digitalization and transformation roadmap in downstream oil and gas.

It's become clear that digitalization doesn't happen overnight, and a range of factors including both technical maturity and organisational maturity have to come together to make it work.

4. 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?

Agility is the key attribute that these technologies can bring – being able to react to internal or external events in much closer to real time, or predict the events before they occur, enables agile operators to take advantages of short term opportunity, at the expense of their slow-footed competitors.

5. 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?

There are still a huge number of 'unknowns' inside refineries and chemicals plants – the exact molecular composition of the fluids inside, the exact condition of the equipment. IIoT slashes the total cost of instrumentation, and makes it practical to truly understand the asset. The key challenge is harnessing this information when operators are already swamped with un-used data.

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

At present there are geographic imbalances in talent, due to differing demographics and skills in different regions. This will normalise, as the data goes to the people, rather than people going to the plant. Overall, roles will become more specialised, and interesting, as routine work is automated, leaving a new breed of 'super staff' making high value decisions

7. What are the main areas of technological investments in oil and gas?

Although a huge amount is being spent on digitalisation, this is still relatively small compared to the cost of steel in the ground, so there is plenty of scope for digital technology investments to further increase

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

We see strong appetite for energy management solutions, and interest in Digital Twins, however Digital Twin adoption outside the US is lagging behind

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

Yes, but not completely. There is vast scope for AI, mainly because a lot of the tasks humans are doing are not all that sophisticated in reality. However the risks in oil and gas mean that AI will never get the free reign it has in some other industries, for instance a self-driving car may kill one person at a time, but an accident at an oil and gas facility could be catastrophic, and therefore some elements will never be trusted to AI systems

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

Current cybersecurity is reasonably robust, but very conservative, basically by resisting adoption of powerful technologies such as cloud. Cybersecurity is set to evolve by remaining just as robust but adopting more technologies.

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

Currently not much – it's more promise than reality. However, a few leaders are just starting to get true value from all the data they hold. The main change will be a breaking down of silo's and the enablement of truly holistic optimisation

12. What are your views on Asia's downstream industries rate of digitalisation as compared to counterparts in other regions i.e. America, Europe and the Middle East markets?

In my opinion, I see Asia as being in 2nd place, behind the US but ahead of Europe and the Middle East.

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

The traditional constraints to effectiveness – skills, knowledge, ability to act in the face of dynamics in the market, can potentially be overcome with digitalisation.

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

The workforce will be smaller, more highly skilled, more empowered and able to manage a far wider sphere of influence than today's siloed teams who spend much time processing data and having ineffective meetings.

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

My presentation will be focusing in concrete terms on how Digital Twin and Cloud can move beyond vague concepts into practical tools for optimisation.