

Speaker Interview



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1. 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?

Big Data & IoT are enablers for Digital Transformation. Digital Transformation, or Digitalisation, is a much grander vision to drive complete transparency throughout an organisation, provide visibility into each and every operation, and provide strategic foresight through the use of Digital Twins (a live digital replica of business operations) augmented with advanced analytics. IoT is the part of this puzzle that allows for the capture & transmission of operational parameters related to physical equipment or assets. Operations Digitalization encompasses data from every other facet of the organization as well, and allows the convergence of it all to create comprehensive **Operations Digital Twins** of Equipment, Functions, Workflows, Processes, etc. while Big Data, including ML & AI, refers to the set of technologies that make this possible by enabling this data to be leveraged for multiple purposes.

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

Operations Digitalization will play a massive role in the industry as it not only provides tactical insights into day to day operations, but strategic foresight that is economically contextualized. What this means is – for every current standing issue and foreseeable future ones, refiners will have visibility into the economic impact associated with it. This will enable the rapid prioritisation of tasks and drastically

reduce LPOs (Lost profit opportunity). It will automate most of the processes and aid stakeholders with critical decisions.

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?

Previously, it took years to run large IT projects and realize value from them – a long and painful process. The biggest paradigm shift will be that an Operations Digitalisation platform will create an ecosystem where applications addressing any use case can be delivered within weeks, if not days, as all the data and knowledge will already lie within one single platform. This will not only have a bottom line impact but create new revenue generating models for manufacturers by enabling them to offer Digital Services to their customers.

4. What impact does Big Data have on operational efficiency and how is Big Data changing the industry? With these radical changes looming what opportunities lie ahead for manufacturers? How will this paradigm shift affect talent in manufacturing & downstream industry overall?

Some key examples include – Yield Optimization, Energy Optimization, Predictive Maintenance & Failure Prediction, Inventory Optimisation & Reduced Emergency Purchases, Demurrage Loss Reduction, etc. The list is endless and keeps growing as Operations Digitalization delivers value across the value chain.

Operations Digitalization means value as well as survival. Data is the most valuable asset – just look at the trends in the Market Cap of some of the largest companies in the world. The most valuable companies today are the ones that have embraced Digitalization and harvested the most amount of Data. There are numerous organisations that have simply fallen off the face of the earth due to their resistance to change. Operations Digitalization is the only thing that can ensure business continuity.

5. What are the current challenges and hurdles that affect the spread and deployment of the Internet of Things in your organization? (for refiners, petrochemical & chemicals companies only)

Fear of change is human nature. Resisting it and maintaining “status quo” feels safe. However, embracing change and adapting to it is what makes us successful. The fear of change is the biggest hurdle to Digitalisation. This fear generally stems from the lack of understanding of Digitalisation and its benefits throughout the organisation. The solution to it is good leadership. Leaders need to take the initiative to understand what this technology can do for their organisation and establish a sense of security and positivity about it throughout their teams.

6. How will this paradigm shift affect talent in manufacturing & downstream industry overall? Will Artificial Intelligence replace humans working in oil and gas?

One of the key issues the industry is facing right now is knowledge drain. According to many reputable reports, about half of the experienced workforce in the Oil & Gas industry is due to retire within the next few years. With them, critical experiential knowledge will flow out of the industry. Digitalisation offers an opportunity where this knowledge can be “codified” and retained in the organization.

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

There is some fear that AI will replace humans, but the changes digitalization will bring about will not eliminate jobs but rather redefine them. Manual processes will be automated, and human involvement will be removed from many hazardous ones. People will have to become more tech savvy and adapt to the continuous positive change that digitalization brings about. They will have to continuously learn on how to make the best out of this technology to aid their decision-making process. Instead of focusing on repetitive day to day work, each and every individual will have to learn to be a decision maker at some level of hierarchy – they will essentially have much more control over what they deliver.

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

We have seen a lot of success with our deployments in the Asian Market. Some key examples would be finding bad actors, reduction in lost production due to break-down, reduction in KPI QGA, DMRG, secrets of golden set points leading to lesser energy, lesser utility, etc. The list is ever-growing.

9. What are the key technologies which your company would like to implement in the next 5 years? (for refiners, petrochemical & chemicals companies only)

Over the next five years, we would like to be the trusted digitalization partner to more Asian Downstream players. Our Operations Digitalization platform, dDriven Unleash, has done wonders for our existing customer and we would like to see it do the same for many more.

10. 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?

When it comes to the Downstream sector, Asia is adapting, and adopting faster than their counterparts in the west. When it comes to the US, the dependence on Crude has reduced drastically due to the rise of Shale and Renewables. As such, there are numerous Digitalisation initiatives in these sectors including upstream (shale) but limited ones in the downstream sector. When it comes to the Middle-East, the major road block to digitalization and in general to any connected technology, is the overblown security concern. Security is definitely a major concern for every industry and every geography, and it must to be addressed. However, denial of entry to technology is not an option.

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

As I said earlier, fear of change is human nature. Adapting to it makes us survive and be successful. Yes, security is a concern, but it WILL evolve and mature over time. It does not mean that we stop taking advantage of the technology available to us today. When the automobile was invented, it did not come with seatbelts or airbags. When the computer was invented, there were no firewalls or anti-viruses. These technology marvels have helped the human race evolve and reach unimaginable heights. If we had waited for everything to be perfect and cushy before exploring opportunities with these technologies, we would have gone nowhere.

12. Are manufacturers concerned about cybersecurity in their organization?

Yes, the Oil & Gas involves lots of very expensive moving pieces. But, if there is a technology that can connect all of these pieces and reduce leakage, we MUST give it a chance. The cost of not doing so and maintaining status quo is just too high and will drag all enterprises, big or small, into an existential crisis.