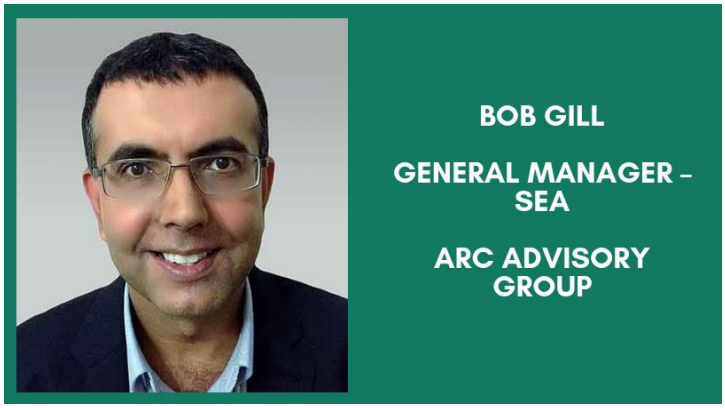
# ASIAN DOWNSTREAM SUMMIT 2018

PART OF THE SIEW SINGAPORE INTERNATIONAL ENERGY WEEK

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

## SPEAKER INTERVIEW




---

1. **Please introduce your role at ARC Advisory Group**

I am responsible for managing ARC Advisory Group's business operations and market research activities in Southeast Asia. ARC provides technology research, advisory and consulting services to many of the world's leading industrial automation and software suppliers as well as to prominent end-user companies in the energy and manufacturing industries.

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

The transformation of industrial products, operations, value chains, and aftermarket services enabled through the augmentation of people and knowledge by the expanded use of sensors, networks, and analytics.

3. **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?**

Enable a much greater and far timelier insight into plant operations and asset health. Operators need to stay abreast of the new enabling technologies as well be cognisant of the organizational aspects associated with new technology implementations.

**Tanushree Mulraj**| Event Director Tel: +65 6590 3976 | Fax: +65 6223 9196
Email: tanushree.mulraj@clarionevents.com Web: http://www.downstream-asia.com/

CLARION EVENTS

4. **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?**

When we look at the approach most companies take towards equipment maintenance, it still very much skews towards the lower levels - i.e. Reactive, Preventive - on ARC's 5-step Asset Management Maturity Model.

We believe that ascending to the higher level of the Maturity Model will enable the goal of almost zero unplanned downtime to be achieved. So that's moving towards Predictive Maintenance – getting information on when a machine is likely to fail, and Prescriptive Maintenance – getting information on how it will fail and what you can do about it. And this is where technology in the form of Industrial IoT comes in – enabling that push from conventional maintenance approaches to more sophisticated and effective strategies for asset management.

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

Overall, it create demands for people with knowledge of IoT, data analytics and artificial intelligence.

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

There are projects ranging from Industrial IoT and other technology (AR, drones, etc.) implementations to full-scale digital transformation efforts. It's important to understand what category of projects an operator has undertaken in order to correctly learn from these.

7. **What Does Industrie 4.0 mean for your company?**

Our clients want to know what it is all about, what it means for them, and what their industry competitors are doing in this area.

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

AI can augment human abilities by providing high quality and timely information e.g. on impending asset failure. But unlikely to result in wide scale replacement of people.

**Tanushree Mulraj**| Event Director Tel: +65 6590 3976 | Fax: +65 6223 9196
Email: tanushree.mulraj@clarionevents.com Web: http://www.downstream-asia.com/

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

Still somewhat lacking in Asia compared to other parts of the world. Cybersecurity will be an ever-present concern for operators and take up more C-level time and attention. Operators must remain vigilant to threats and up-to-date on protection technologies and strategies.

10. **Are manufacturers concerned about cybersecurity in their organization?**

Yes, more so for the larger manufacturers with global operations that have more extensive resources.

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

Big Data enables businesses to improve in operational efficiency through expanded use of data analytics.

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, the rate of digitalisation in Asian appears to be somewhat behind other regions.

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

Opportunities that lie ahead for manufacturer are to improve operational efficiency and to develop new business models.

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

The future workforce will be highly familiar and conversant with both IT and OT technologies.

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

I will lead a panel discussing the important topic of talent, leadership and the role of millennials in the digital age.

**Tanushree Mulraj**| Event Director Tel: +65 6590 3976 | Fax: +65 6223 9196
Email: tanushree.mulraj@clarionevents.com Web: http://www.downstream-asia.com/