Conference on

IT & OT IN OIL & GAS

New Developments, Convergence and Way Forward

June 30-July 1, 2016, The Imperial, New Delhi

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The oil and gas industry in India, as elsewhere in the world, is under a great deal of pressure to reduce costs, improve efficiency and increase productivity. The margins are lower, the competition more intense, the consumers more demanding and the regulators more strict.

Greater use of information technology is clearly part of the answer, as is alignment or convergence of OT and IT. This can lead to optimised business processes, better information for decision making, reduction in costs, lowering of risks and faster project implementation.

The combination of decreasing costs and increasing capacity in sensors, communication and computing power is not only enabling the collection of unprecedented amount and range of data but also the analysis of information and visualisation.

The nature of operational technology systems is changing with underlying technologies - as in platforms, software, security and communications - becoming more like IT systems. At the same time, there are exciting new developments in big data, analytics, cloud, mobility, GIS, social and security technologies. Industrial Internet of Things (IIoT) is connecting people, assets and processes.

All these developments are leading to exciting new applications in all segments of oil and gas industry - from digital oilfields upstream to pipeline integrity midstream to retail terminal automation downstream.

While SCADA has been in use in the industry for quite some time, the systems today can generate or are generating much more data. This needs to be combined with information management tools/systems and safety/security solutions for more effective and efficient management, particularly in pipelines and city gas distribution.

The convergence of OT and IT also holds great potential for refineries and other process-intensive segments, especially in areas such as asset management, predictive maintenance, supply chain efficiency, etc.

Many of these new technologies and applications are already being used in India. It should be noted here that, until less than two decades ago, the oil and gas industry in India was almost a monopoly of the public sector units, not always the pioneers in use of information technology. But the PSUs in oil and gas have been more sophisticated in their understanding and use of information technology than PSUs in other industries. Companies like ONGC, IOCL and GAIL are no laggards. The private sector players that entered the industry in the last two decades, like Reliance and Cairn, have already gone for the state-of-the-art solutions in all areas, including information technology.

So the Indian oil and gas companies, both public and private, are well-equipped to take advantage of new advances in IT as well as of convergence of IT and OT. This convergence, though, brings its own risks, cybersecurity the most obvious one, because of the "connectedness" of critical infrastructure.

There are many other issues and challenges, some not all unique to the Indian oil and gas sector. These include large legacy systems, silo and piecemeal solutions, proprietary systems that are low on interoperability, shortage of talent, etc, etc.

The mission of the two-day conference is to highlight the most promising information and operational technologies, examine their potential and relevance to Indian oil and gas industry, and discuss the key issues and challenges in their deployment and convergence. The conference will also showcase noteworthy applications, innovative projects and best practices across all segments - upstream, midstream and downstream. It will provide an excellent forum for all stakeholders - oil and gas firms, technology providers, consultants, system integrators and equipment manufacturers - to share the experience so far and exchange views.

**Previous participants**

**Target Audience**
The conference is targeted at operators and IT managers in:
- E&P firms
- Pipeline operators (Oil & Gas)
- Oil Refineries
- City Gas Distributors
- LNG Terminals, etc.

The conference will also be useful for:
- Providers of Operational technologies (SCADA, C&I, GIS)
- Providers of Information technologies (ERP, CRM, Cloud, etc.)
- System Integrator
- Industry consultants
- IT Hardware manufacturers
- Communication/Connectivity solution providers
- Data centre solution providers
- Solution providers for data analytics
- Big data, technology providers of workforce management, etc.
AGENDA/STRUCTURE

Most of the sessions will cover topics which are of interest and relevance to all segments of the oil and gas industry. These include:

KEY TRENDS AND OUTLOOK
- What are the key trends relating to the use of IT/OT in the Indian oil and gas sector?
- What are the most promising and relevant technologies?
- What are the key issues and opportunities?

INDUSTRY NEEDS AND REQUIREMENTS
- What are the emerging IT and OT requirements of the oil and gas industry?
- What are the initiatives that the leading companies are planning for the next few years?
- What are the key challenges they are facing?
- What are their expectations from technology providers?

INDUSTRIAL INTERNET OF THINGS
- What is the promise of Industrial Internet of Things (IIoT) for the oil and gas industry?
- What are the key enabling technologies?
- What has been the experience globally? What are the key issues, challenges and risks?

BIG DATA ANALYTICS
- How can oil and gas companies manage vast amounts of data to derive value?
- What are the key applications of big data analytics in the oil and gas industry?
- What has been the experience so far? What are the key issues and challenges?

CONVERGENCE OF IT AND OT
- What are the key drivers for the convergence of OT and IT systems in the industry?
- What are the key enabling technologies for IT and OT convergence?
- What are the key issues and challenges?

CLOUD COMPUTING
- What are the potential benefits of cloud computing for the oil and gas industry?
- What has been the experience so far?
- What are the key issues and challenges?

NEW REQUIREMENTS AND OPTIONS IN ASSET MANAGEMENT
- What are the emerging industry requirements in asset management?
- What are the best practices? What are the new technology enablers and options?
- What are the key issues and challenges?

SCADA: EXPERIENCE AND NEXT STEPS
- What has been the experience with SCADA in the Indian oil and gas industry?
- Is the industry fully exploiting and using the SCADA data? What are the possibilities?
- What are the key issues and challenges?

PIPELINE INTEGRITY
- What is the key requirements for ensuring pipeline integrity?
- What are the best practices and technology options?
- What have been the key issues and challenges?

GIS AND BEYOND
- What has been the industry experience with GIS mapping and geo-spatial technologies?
- What are the new technology developments and enhancements?
- What are the key challenges? How can they be addressed?

FOCUS ON CYBER SECURITY
- What are the key cybersecurity threats to the oil and gas industry?
- How can they be addressed? What are the key technology options and best practices?
- What has been the experience so far? What are the key issues and challenges?

NEXT STEPS ON ERP
- What are the emerging ERP requirements of Indian oil and gas industry?
- What are the new enhancements offered by the vendors?
- What are the key issues and challenges?

COMMUNICATION REQUIREMENTS
- What are the new communication requirements of the industry?
- What are the technology options for meeting these requirements?
- What are the key issues and challenges?

WORKFORCE MOBILITY
- What are the industry requirements for mobile/field workforce management?
- What are the technology options and best practices?
- What has been the experience? What are the key issues and challenges?

NEW REQUIREMENTS OF REFINERIES AND PROCESS-INTENSIVE SEGMENTS
- What are the new IT requirements of process-intensive segments?
- What are the new options and enhancements in key operating technologies?
- What are the possibilities created by IT/OT convergence?

DIGITAL OIL FIELDS
- What are the key components and benefits of “digital oilfields”?
- What are the technology and other requirements?
- What has been the experience so far? What are the key issues and challenges?

MDR: EXPERIENCE AND NEXT STEPS
- What has been the experience with MD in the Indian oil and gas industry?
- Is the industry fully exploiting and using the MD data? What are the possibilities?
- What are the key issues and challenges?

CUSTOMER RELATIONSHIP MANAGEMENT
- What are some of the CRM initiatives taken by gas utilities and oil marketing companies?
- What are the best practices and enabling technologies?
- What are the main issues and challenges?

There will also be some sessions that focus on the needs of specific segments. These sessions include:

- DIGITAL OIL FIELDS
- CGD FOR SMART CITIES
- NEW REQUIREMENTS OF REFINERIES AND PROCESS-INTENSIVE SEGMENTS
- CUSTOMER RELATIONSHIP MANAGEMENT
- RETAIL OUTLET AUTOMATION SYSTEMS
- NEXT STEPS ON ERP

The conference will feature, as appropriate, the viewpoints of all key stakeholders. Each session will be followed by a Q&A round.

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Registration Fee

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<td>One delegate</td>
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- There is also a 20 per cent “early bird” discount for those registering before June 14, 2016. Service tax of 15 per cent is applicable on the registration fee.
- There is a special fee of Rs 10,000/- plus taxes per participant for organisations nominating a minimum of 10 officials.
- Registration will be confirmed on receipt of the payment.
- To register online, please log on to http://indiainfrastructure.com/conf.html

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