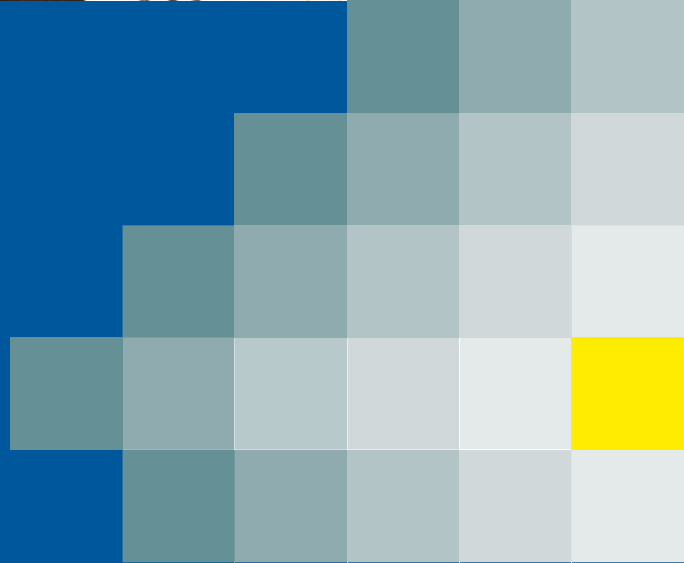




# Industry Insight Oil & Gas

Yokogawa Australia & New Zealand







## Yokogawa Electric Corporation

Established in 1915, Yokogawa is a leading provider of industrial automation, safety, instruments and analysers. Combining superior technology with engineering services, project management, and maintenance, Yokogawa delivers field-proven operational efficiency, safety, quality, and reliability.

Yokogawa has a wealth of experience in all parts of the oil and gas sector, from offshore and onshore facilities to pipelines, terminals, and deep-water operations. We provide solutions that enhance safety, ensure accurate and reliable operation, and increase plant efficiency. Our total solutions include not only the well site, but also the injection, pipeline, compressor station, and the process plant facility.



We are an energetic, service-focused organisation with a strong reputation for quality, technical expertise and the ability to solve the most complex problems for our clients.

Recognised for our ability to meet the most demanding of schedules, often on applications that test the limits of conventional platforms and expertise, we work collaboratively with our clients to ensure an optimal outcome designed and installed to the highest possible safety standards.



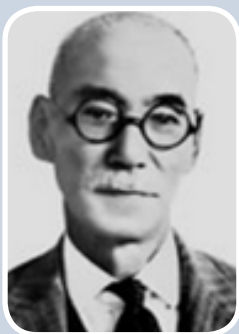
Refining | Coal Seam Gas | Subsea | LNG Platforms | FPSO | Pipelines | Terminals



## Using technology to drive sustainable growth

A key Yokogawa principle in supporting our Oil & Gas clients is the agility to rapidly and effectively co-develop solutions to the most complex of challenges. Be this on new applications, expansions or refurbishments, through our 'Co-innovating tomorrow' philosophy it is part of our culture in the co-creation of value with our clients. Such an approach not only ensures the latest and most applicable technology is employed for the right application but also supports sustainable growth through highly reliable, efficient and safe operations.

## Co-innovating tomorrow<sup>®</sup>



*"You don't need to worry about profits. Just learn and improve our technology. You must make products that earn us the respect of our customers."*

Pioneering Spirit  
Dr. Tamisuke Yokogawa

## Synaptic Business Automation<sup>™</sup>

Agility is crucial to enabling Oil & Gas companies to face the range of challenges from volatile shifts in the prices of crude oil and other raw materials to stiffening environmental and safety regulations, to structural changes in the industry. Such agility is only possible if your various business units work together and eliminate barriers that impede the flow of information and goods throughout the supply chain and between companies.

Synaptic Business Automation expresses an ideal state for a business whereby the synthesizing of data, systems, organizations, knowledge, and supply chains adds value and strengthens competitiveness.

The linked data on manufacturing processes, plant operations, human resources, and supply chains can be organised, integrated, controlled, broken down, and analysed to yield insightful decisions at various levels in the organization, from operations in the field to corporate management.



DCS | Process Safety | Wide Area SCADA | Process Instruments | Process Analysers





## Managing human resource shortage

The Oil & Gas industry is facing a human skills and generational crisis as engineers leave the sector due to retirement or exodus to other industries. This is compounded as cost control measures reduce manning levels still further. Oil & Gas companies are being forced to do more with less and review traditional methods of operation.

## Advanced Decision Support

Yokogawa are leading a new market-driven, standards-based, integrated approach to help alleviate skills shortage and cost issues in the Oil & Gas industry. Advanced Decision Support provides an integrated consulting solution that brings together existing concepts, standards, and capabilities to help improve the effectiveness of all operators.

While the industry has focused much thought and effort on automating procedures, alarm management, and human-machine interface individually, insufficient attention has been focused on how they can all work together to help improve operator effectiveness. This not only reduces manning requirements but also improves process consistency, operational efficiency, and safety.

Improve the effectiveness of operator decisions to support, rather than replace, operator judgment.

Integrates existing, but separate, industry standards into a cohesive solution.

Based upon research into human-automated path planning and decision support

## Integrated operations



The Oil & Gas industry is experiencing rapid changes through enabling technologies such as IIOT and intelligent operations. Yokogawa are working hard to assist in developing and deploying these technologies to meet the challenge. Key to this is a re-evaluation of how large-scale automation projects are implemented and how they can be leveraged to increase value through optimisation, improving plant performance.

Yokogawa's intelligent operations provide a framework for realising business objectives at the operations level by addressing total cost of ownership, enterprise-level information management, operations efficiencies, and production management.



# Deflecting cost pressures through productivity improvements

## Centre of Excellence

For over 30 years, Yokogawa has been a leading service provider to major Oil & Gas installations in the Australian and New Zealand regions. Our core expertise in Distributed Control, Process Safety, Process Instrumentation and Process Analysers has been a benchmark to the industry, providing exceptional levels of reliability and support. From refining, offshore and subsea, to more recent coal seam gas and LNG applications, our local team has expertise, which has led to the establishment of an Oil & Gas Centre of Excellence (CoE) in the region.

The CoE works closely with clients to ensure optimal plant design, from concept to implementation, supporting throughout the plant lifecycle. Our engineering and consultancy services focus on providing cost effective solutions to complex issues.



## Oil & Gas Services

Yokogawa's longevity as a key services provider to the industry has revealed a high level of insight into project challenges, especially that of skilled resource availability. As one of the biggest risks to a project during development and operational phases, we recognised the need to support our customers by creating a dedicated Oil & Gas Services team as part of the Centre of Excellence.

Yokogawa Oil & Gas Services provides teams of highly skilled engineers with many years industry experience to help client's complete projects on time and on budget.

The group provides solutions that enhance safety, ensure accurate, reliable operations and increase plant efficiency.



## Main Automation and Information Contractor

Oil & Gas companies have looked to Yokogawa to take on the role of main automation contractor (MAC) for many years. With the proliferation of diagnostic information and a growing business reliance on IIOT and enterprise operations, Yokogawa has expanded its offering to clients by integrating 'Information' as part of its MAIC philosophy. We now take a more holistic approach to such challenges by taking responsibility for all automation-related, business optimisation/operations & reporting aspects of the project with our Innovative MAIC Services method of project execution approach.

Yokogawa as an MAIC assumes responsibility over all automation-related phases of the project. The MAIC team constructs the most suitable project organisation and works directly with the end users, EPCs, and third parties. With our global engineering network and resources, Yokogawa can safely and efficiently execute projects and then provide optimal operations support over the entire plant lifecycle.



Functional Design | Engineering | Commissioning | Long Term Support | Safety Services | Cyber Security





KBC, a wholly-owned subsidiary of Yokogawa Electric Corporation, is all about excellence in the Oil & Gas, Petroleum, Energy and Chemical industries. Living excellence in all we create and in all the services we deliver and leaving a sustainable legacy of operational excellence among our customers.

We make excellence real for our customers through the actions of our people fused with our technology and best practices. We provide leading software and expert services, powered by the cloud, to assure process operations achieve their full potential, surpassing ordinary standards.



## DIGITALIZATION TECHNOLOGY

### Analytics

- First principles simulation
- Correlation-based modeling

### Manufacturing execution

- Planning
- Scheduling
- Production and yield accounting
- Operations management

### Automation

- Procedural automation
- Advanced process control
- Real-time optimization

### Personnel learning & development

- Operator training simulators



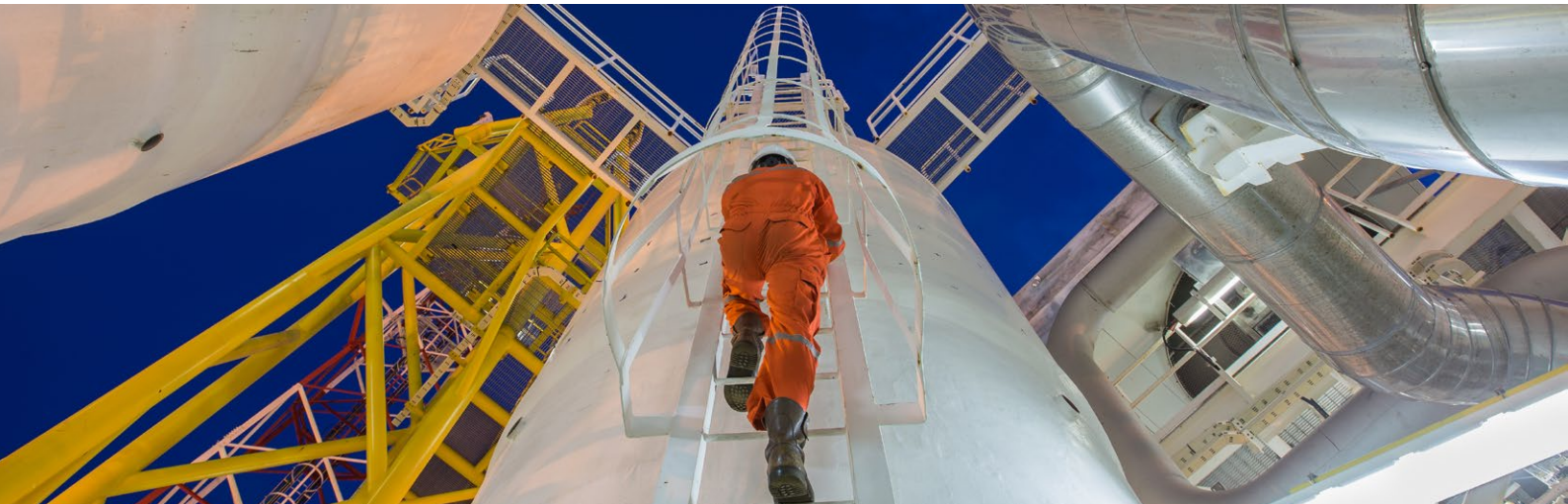
## DIGITALIZATION SERVICES

### OpX consulting

### Digitalization consulting

### IT & modeling services

### Cloud services



## Yokogawa Australia & New Zealand

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