

# Digitalization thrust in Oil & Gas Engineering Procurement Construction

The past few years have been challenging for the oil and gas industry, with the multiple pressures of volatility in prices, increasingly stringent environmental regulations, climate change impact on the value chain, and demand concerns in a world that's been seeking alternative and sustainable sources of energy. These uncertain times also offer promising opportunities to redefine the competitive landscape and establish a long-term winning strategy by creating a sustainable competitive advantage. Business models evolve out of value a firm can create for its clients that exceed the firm's cost of delivering it. The COVID-19 pandemic has marked a paradigm shift in organizational structure and culture. For example – work from home is the new normal. Digital transformation is no more a choice rather it's a business imperative for sustainability.

The Engineering Procurement Construction (EPC) companies have played a vital role in the growth of the oil and gas industry, with services ranging from providing conceptual FEED, detailed design, process simulation, layout, equipment procurement, testing, construction, commissioning, and delivery of the project to clients. With a growing focus on improving profitability, EPC players have been turning to new digital technologies and digital-enabled work processes to deal with these challenges, through smarter and more efficient operations.

This shift in business priorities demands EPC players to adopt a data-driven strategy. In simple terms, this would mean deploying technology platforms to engage better with all stakeholders especially customers, consolidate technology systems, and focus on areas that have been left out until now. The eventual goal is to use this downtime to gather resources and



Digitalization has for long been considered the future of EPC in the Oil & Gas industry.

The COVID-19 pandemic has now made this a strategic imperative according to Mr. Prakasan, CEO, Sterling Wilson Mechanical, Electrical, and Public Health Engineering (MEP) Business. Sterling and Wilson is the leading MEP player in India, offering 360° MEP solutions to business segments across all sectors





Sterling and Wilson is the leading MEP player in India, offering 360 °MEP solutions to business segments across all sectors.

The current scenario of integrated MEP (Mechanical, Electrical, and Public Health Engineering) is advantageous and beneficial to not only customers but also service providers. Integrated MEP has revolutionized the MEP industry. Individual jobs which were being taken up earlier has replaced the integrated MEP service offerings.

The IEPC Business Division comprises four sub-divisions namely - Process Control & Instrumentation (PCI), Industrial Fire & Safety (IFS), Mechanical EPC (MEPC), and Flue-Gas Desulfurization (FGD). We cater to a large section of industrial projects in Hydrocarbons, Gas Processing Plants, Mines, Nuclear power plants, Defence, Fertilizers, Power and Steel Plants, etc. The company is certified by all renowned PMC and EPC contractors in India; has executed projects of various capacities including site assistance, solutions customisation, management, engineering, process design, etc., across industries in India; and have plans to widen the operations abroad also.

helping improve procurement efficiency to operational performance and mitigating supply chain risks. With successful deployment in other industries across the world showing favourable returns on tech investments, the case for digitalization in Oil & Gas EPC is stronger than ever before.

From IoT-enabled monitoring and maintenance to Big Data for smarter design and inspections, AI-driven intelligent automation and the use of Augmented Reality (AR) and Virtual Reality (VR) in ensuring better safety and in communication and training, further, the use of Drone

prepare for the uptick in business activity when it resumes. When nearly every aspect of the oil & gas and EPC services supply chain moves towards automation backed by a data-centric approach, they will be truly agile, responsive to changing client needs, and be long term partners in their progress.

Much before COVID-19 struck in early 2020, the Oil & Gas EPC was ripe for transformation, in nearly every aspect of the supply chain. The big part of this worldwide call for change has been digitalization. Legacy IT systems designed for a couple of decades ago were no longer proving adequate or agile for an emerging industry landscape. With digitalization, organizations can effectively manage the operation, save costs, and improve quality. It enables EPC players in process design, engineering, and offering enhanced value to customers by eliminating non-value-added costs, save on project capital costs, improve Project Management and Governance, manage risk to prevent cost overspend, and schedule over-run in EPC projects.

With the COVID-19 pandemic, everything has changed in almost a flash. Staring at an uncertain future, EPC players have taken the digitalization plunge. This pandemic has guaranteed one thing: The Oil and Gas business will never be the same again. It threatens to eliminate quite a few independent Oil & Gas producers that do not have protective shields to weather the looming economic crisis.

Digital technologies will play a key role here, from

technologies for construction and monitoring with smart real-time KPI dashboards, the possibilities with digitalization are only beginning to open up.

The risk of transitioning from manual and legacy systems to agile, automated IT and business models is always perceived to be high, and it takes time. With the cost of technology tools declining rapidly, this risk is also being mitigated. Couple this with the three-fold benefit that digitalization promises to bring: cost savings, productivity improvements, and increased customer satisfaction. Another critical element in making technology transformation work is the training of people and the culture change that needs to be managed to ensure adoption in the real sense.

The promise of new digital technologies goes beyond simple cost savings and operational improvements. It offers real-time insights on operational issues and performance in the field and offshore locations. Digital tools allow predictive maintenance through harvesting of data and creating new flexible models of revenue.

The COVID-19 pandemic has inflicted an unprecedented disruption upon the industry worldwide. Oil & Gas EPC companies must take a much more strategic approach to digitalization than in the past. While most EPC companies have already embarked upon the digitization journey in some form, this is the time to reimagine their digital transformation strategy for what is often being termed as a 'new normal' for businesses. [dew journal.com](https://dewjournal.com)