



INTERVIEW

Integrating digital excellence

Samik Mukherjee, Group Senior Vice President of Projects at EPC giant McDermott, discusses the need for integrated digital delivery, and how it can transform the EPC-Operator relationship

What does integrated digital delivery really mean?

Integrated digital delivery has two components. We are integrating everything from start to finish, an end-to-end project lifecycle. Starting from a conceptual space to pre-FEED to the engineering and supply chain in our own

fabrication yards, using our own people and assets, we install, commission and start up facilities. That's what we bring to our customers.

Digital delivery means embedding digitalization in our integrated project to execute better, safely and with a higher degree of certainty. Our customers have

been looking for transparency, where they can get the same visualization of a project from start to finish sitting in their own offices instead of chasing us down.

Integrated digital delivery creates transparency and collaboration where we are digitally collaborating internally and with our customer from end to end.

How does this approach actually impact operators?

The oil and gas industry is pretty complex, with the challenges of delivering mega projects, complicated projects, managing global supply chains, managing global political risks, and more recently, pandemic risks. Projects have faced significant challenges with managing costs, managing the schedule, and with partners ultimately not meeting the expectations of their customers.

What we're trying to do using digitalization and innovation is to bring certainty. When we are forecasting the cost and schedule for a project, we have the right data well ahead of time. Digitalization helps us to get the right data at the right time and allows project directors to make the right decisions.

"DIGITALIZATION HELPS US TO GET THE RIGHT DATA AT THE RIGHT TIME AND ALLOWS PROJECT DIRECTORS TO MAKE THE RIGHT DECISIONS."

How has integrated digital delivery impacted McDermott's ability to execute projects?

Most importantly for our customers, it has created value. That value comes from three things; They are getting better certainty in terms of cost and schedule forecasting; It's much more collaborative instead of transactional, building relationships and creating long term value; and it creates transparency.

The world is becoming much more transparent, you can share the same data at the same time with multiple people to get the right perspective on a project. It is positively impacting efficiency, reducing reworks, improving quality while creating customer value throughout the process. We can give them the right information ahead of time so that they can take well-informed decisions to ensure their projects are going in the right direction.



Samik Mukherjee
Group SVP of Projects
McDermott

What role can operators play in order to help facilitate integrated digital delivery on their projects?

There are a few flagship initiatives that we are delivering to our customers. One prominent example is Gemini XD, a software platform which allows our customers and operators to digitally collaborate. That is our digital collaboration platform, which is specifically designed to coordinate information, and to automate and enable workforce collaboration. This platform not only integrates with our customers and joint venture partners, but also integrates data elements from multiple systems to provide dashboards both for us and our customers.

A lot of our key customers, including major national oil companies and international oil companies, are embedding digital requirements into the invitation to bids. Recently, I have seen quite a few coming from very large operators that have aspirations to build digital twins, digital replicas of physical assets, with offers asking for integrated and collaborative digital delivery. We are now able to support that.

We are able to push for this from our end, but we truly want the motivation and the aspirations to come from our customers, to make sure that they are willing participants as we transform the integrated digital delivery of projects within the oil and gas sector.

What are the challenges associated with integrated digital delivery in this region?


There are four elements that we need to consider when we are thinking through digital transformation and integrated project delivery.

The top priority should always be the people. Changes like this are massive, so companies need to get their people on board to transform and accept that change through training, through support and by ensuring that they truly believe in it.

The second challenge involves helping the more traditional companies move to a digital-ready model, so that they are prepared to accept integrated project delivery and digital domain specifications as their own standards.

The third challenge is the supply chain, which is vast and complex. We have to ensure that this transformation is not only linked with EPC contractors or operators, but also the supply chain, so they can adapt in order to play their part in the wider value chain under an integrated digital delivery model.

Finally, we have to consider the overall ecosystem, with governance, regulations and environmental authorities, because ultimately the whole system needs to be seen as an improvement to efficiency, and to our ability to deliver projects with the energy transition in mind as well. We are looking for the entire ecosystem to be supportive. It is a journey. It will be a challenge.

At McDermott, we have already created a global digital and analytics group to advocate for and support our customers, our people and our supply chain. 

"THE WORLD IS BECOMING MUCH MORE TRANSPARENT... IT IS POSITIVELY IMPACTING EFFICIENCY, REDUCING REWORKS, IMPROVING QUALITY WHILE CREATING CUSTOMER VALUE..."