Digital Transformation and Remote Operations in the Oil & Gas Industry, Nawara as Example

Ahmed Hammouda[1] and Nikolaus Manojlovic[2]

[1]OMV Tunisian Production Gmbh, Tunis, Tunisia
[2]OMV, Vienna, Austria

Abstract

The COVID-19 has changed the way of working for all types of business in the globe forcing companies to mitigate mobility restriction and logistic challenges. Oil and gas companies have to build **new strategies** that offer more flexibility and resilience **by utilizing technology and innovative solutions** to ensure the health and safety, and business continuity. **Technologies for remote operations, Augmented Reality (AR) and Artificial Intelligence (AI)** are game changers towards a new digital and agile way of working by offering **remote access capabilities** to the plants supporting the on-site engineering activities. **Artificial Intelligence** helps to **monitor complex operations and respond quickly to operational problems. AI** can be used to extract information and get insights from complex and decentralized asset data that helps to identify and optimize opportunities. For OMV Tunisia, the COVID-19 outbreak happened during the commissioning of Nawara project, few steps before the production startup leading to the evacuation of EPC contractors due to the global lockdown. Nawara production startup could have been delayed for months due the impossibility to resume the commissioning activities but thanks to the **digital by design concept** of Nawara, OMV Tunisia was able to **continue the commissioning remotely using secure remote access (SRA)** by connecting EPC engineers from Europe to Nawara plants and startup the gas production as planned. As a new asset, the continuous monitoring of Nawara was crucial to stabilize the operations environment through real time collaboration where the experts are sitting in the head quarter or at home **having an internet connectivity and** discuss with **field engineers** and **decide in real time on challenging situations to optimize operations** and anticipate operations disturbance. **Wearable and Augmented Reality (AR)** solutions can help also on remotely inspecting and repairing machines saving time, cutting costs, and improving safety with sophisticated equipment and connected intelligence. In addition, the **Cloud computing** provides sustainable access to data and applications offering more flexibility and availability. During the pandemic, **OMV Tunisia Exploration and Reservoir teams were able to work from home running seismic interpretations and building reservoir models**. The oil and gas industry was facing even before COVID-19 a substantial challenge related to the global demand declines and COVID-19 has just magnified these challenges forcing operators to look for alternatives to reduce cost and enhance productivity. The COVID-19 has showed that the oil and gas companies can **operate successfully using innovative and digital solutions, the digital transformation is no longer an option and** companies have to accelerate their digital agenda to adopt the new normal and make the integration of digital technologies a priority which become crucial for business survival and growth.