

This abstract will be presented during LNG2023 conference on 10-13 July in Vancouver, Canada among many other innovative projects, ideas and outlooks. LNG2023 will provide a unique platform for the global LNG industry and key stakeholders to discuss, debate, and showcase the latest industry developments and opportunities.



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TRANSFORMING GAS & LNG OPERATION: POWERED BY DIGITAL

In 2020, PETRONAS's Regas Terminal Sungai Udang ("RGTSU") faced logistics challenges in complying with HSE requirements amidst the COVID-19 pandemic lockdown in Malaysia. Resource planning was constrained by the stringent need to ensure personnel safety via quarantine procedures before and after getting onboard the RGTSU offshore facility. The dire situation created the impetus for adopting digital technologies that would enable agile plant operations to meet better the challenges caused by strict pandemic controls at the time.

The digital transformation program, dubbed RGTSU-DX, started with the critical focus of enabling remote operations at the offshore Jetty Regasification Unit ("JRU") for pandemic-proofing operations and reducing personnel presence in hazardous environments.

A digital twin supports remote operations with 3D visualisation and real-time data from plant equipment and IoT sensors. Remote incident management using mixed reality technology allows our emergency team to convene with live visual-audio feeds and other technical information from the event site. Field operators have on-demand access to contextualised equipment data and technical documents via head-mounted wearables. Timely decisions can now be made with expert remote-assist.

RGTSU-DX's success paved the way for digital scale-up at all PETRONAS facilities in 2022. Four other assets have now adopted these digital solutions with increased plant process safety and operational efficiency.

To view the full conference agenda, visit <https://www.lng2023.org/lng-programme-overview>