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MOL's IIoT journey from concept to implementation

The basis of Digitalization and Digital Transformation is good quality and quantity sensor data. Industrial Internet of Things (IIoT) is therefore the key enabler of modernization. In 2022, MOL Automation and Process Intelligence team carried out a research and assessment to identify available IIoT technologies, communication protocols and shortlist the best available technologies for the refining and petrochemicals industry. LoRaWAN was the clear winner and was selected as the core communication technology for IIoT in MOL. The concept was defined, reference architecture and suggested RACI were set. As part of the first phase: the core LoRaWAN infrastructure and a few sensors were deployed in Q4 2022 – Q1 2023. The sensors are fully integrated to the refinery data stream and to the information system (AVEVA-OSIsoft PI). The raw sensor data is transformed to valuable information and actionable notifications, therefore further enhancing the engineering workflow.

Following the success of the MOL Duna refinery implementation, MOL HQ decided to roll-out the solution to other MOL Group sites, including MPC, Slovnaft and INA. The presentation will give an overview of the theory and concept; as well as the practical aspects of the implementation, lessons learnt and next steps.

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Process Control
Systems Meeting

PCS

