SAP Leonardo IoT for the Intelligent Enterprise – Ideation Challenge

Industry: Energy & Resources

Business Scenario: Cathodic protection is a method of corrosion control used in underground gas pipelines in the utility industry. This method is used together with specific coatings on the pipes to prevent corrosion.

Regulations require companies to monitor the corrosion of pipelines and take corrective action to repair/replace pipes. Typically, readings are taken every 6 months to a year depending on the material of pipe. Rectifier Test systems are used to get the current flowing (in Amps) in case of a detected corrosion, these readings are used to decide on any repair required.

Smart sensors could be placed on these systems instead which can relay these readings to a gateway; utilizing SAP Edge services. Readings could be taken once or twice a day for example. Based on the previous readings and threshold values, any existing open repair work - Essential Business Functions Service – the decision to pass on the details to the core system can be done. If a corrosion is detected, then the details would be passed on to the backend system (SAP Cloud, ERP) by the Gateway to create a corrective notification or order.

Scope of Improvement with Intelligent Enterprise: The productivity of the maintenance crew could be improved, and costs reduced, if they do not have to manually check on the readings and can focus on repairs instead. The corrosions could be detected much earlier than in case of a manual reading.