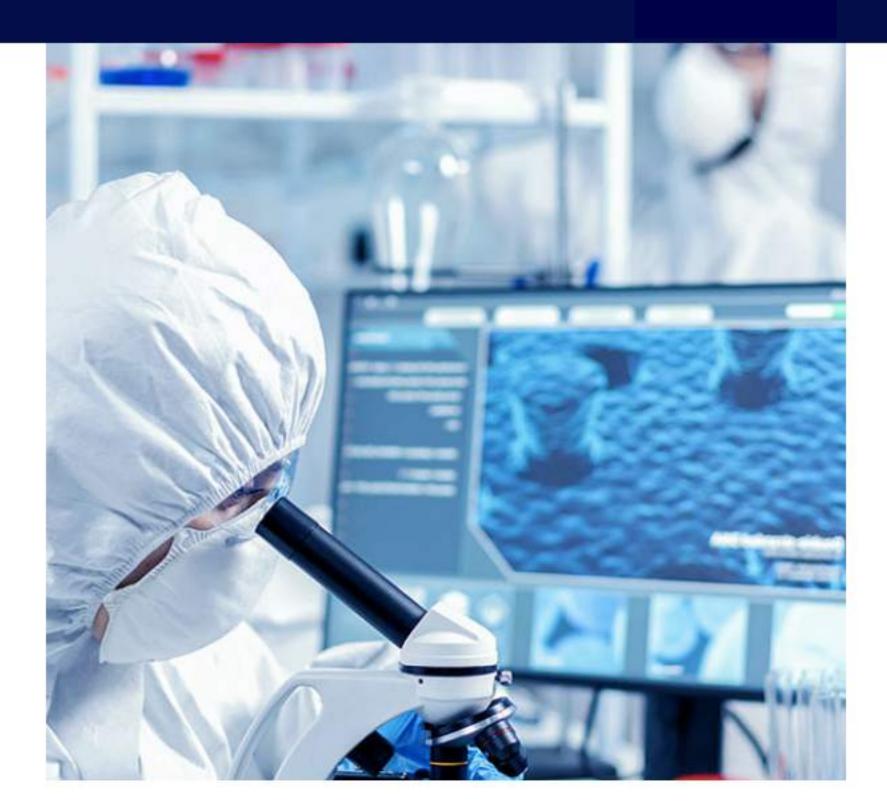Life Sciences

AWS IoT real time view for pharma operations

Client challenge

This global pharmaceutical company has multiple facilities plants across the Asia Pacific region. They wished to improve operations of their facilities by leveraging real-time performance measurement particularly for their Overall Equipment Effectiveness (OEE) which included:

- Calculate OEE of healthcare workforce management based on uploaded shift schedules on a rolling basis rather than at the end of the shift
- Catalogue reasons for downtime and provide relevant data to troubleshoot root causes
- Source data required across their ecosystem for accurate OEE calculation

The company also wanted the ability to discover recurring issues impacting Mean Time to Repair (MTTR) and Mean Time Between Failures (MTBF) to effectively monitor performance of plant machinery:

- Obtain real-time data from their existing plant software
- Diagnose machine behavior such as power-off signals and machine shut down
- Implement automated information for computation and quality control

Why Cognizant?

Cognizant is a global leader in building Life Science industry solutions on AWS. Cognizant's expertise helps Life Science clients conduct drug discovery, manage clinical trials, engage in manufacturing and distribution activities, drive research and development of novel genetic-based treatments and companion diagnostics.

Cognizant's long-standing relationship with AWS has created a pathway of endless possibilities that drive business ROI, deliver on desired outcomes, and ensure competitive edge and agility delivering over:

- 6,000 AWS certifications
- 100+ AWS customer launches
- 50,000+ applications migrated to AWS
- 40+ joint offerings on AWS

Our solution

Cognizant and AWS will provide the client with architectural guidance on Cognizant's Asset Performance Excellence (APEx 2.0) platform using AWS IoT SiteWise. The solution will simplify the process for the client to manage quality monitoring experience that will run entirely on-premise and calculate OEE based on the the clients scheduling requirements.

The solution platform experience will enable:

- End-to-end IoT security for the implementation
- Configuration of software to receive machine signal data
- OEE calculation for factory assets
- Near real-time calculation of machinery availability and productivity
- Visibility to machine events and downtime diagnostics

Project goals

- End to end IoT solution implementation on AWS.
- Near real-time calculations of machine performance.
- Visibility of downtime event reasons.
- Identifying processes that could be standardized across countries and facilities.

End to end AWS IoT

real time solution

Performance improvement

with near real-time calculation