Sharing data across Quebec Iron Ore’s IT and OT ecosystem with AVEVA's cloud technologies

AVEVA World

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Quebec Iron Ore

Champion Iron Limited, through its subsidiary Quebec Iron Ore Inc., owns and operates the Bloom Lake Mining Complex, located on the south end of the Labrador Trough, approximately 13 km north of Fermont, Québec.

Bloom Lake is an open-pit operation with two concentrators that primarily source energy from renewable hydroelectric power.

The Bloom Lake Phase I and Phase II plants have a combined nameplate capacity of 15 Mtpa and produce a low contaminant high-grade 66.2% Fe iron ore concentrate with a proven ability to produce a 67.5% Fe direct reduction quality concentrate.
Business Challenges

Main challenge: Share process data with management and reporting systems

- Allow systems across the whole company to make decisions automatically on live operational data (Industry 4.0).
- Must evolve from manual file sharing between systems.
- Need to find a robust and efficient way to transfer data across OT and IT multiple times per day.
- Allow management layer to make faster decisions based on aggregated operational data.
Solution architecture (Previous)

**Temporal Source Systems**

**AVEVA PI System Server**

**AVEVA PI Vision (Temporal Reporting)**

**Weaknesses**

- Resources intensive process to convert AVEVA PI Data to be able to use them in PowerBI.
- No way to request on-the-go data from 3rd party systems.
- File transfers are not a robust and efficient way to share data across systems.
- Many file manipulations errors because of 1st degree interaction with operating system.
- Overall processes are not reliable and depend on multiple instances.
Solution architecture

Benefits

• Universal way of interfacing AVEVA PI data to any other systems with API.
• Easy way to connect operational data to enterprise data warehouse.
• Secure way for suppliers to get data without having to enter our environment.
• Direct connection from AVEVA DataHub to a PowerBI dataset. No hassle to flip the data with another software.

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Main challenge: Reducing reaction time from event to resolution

Roadmap

Reliable HMI/SCADA

AVEVA Operations Control

Solid Temporal & Structured Data Architecture

AVEVA PI System

Process and Asset Performance Visibility

AVEVA Predictive Analytics & AVEVA Production Management*

Overall Pit to Port Visibility

AVEVA Unified Operations Center*

* Potential implementations
Recap

Challenges
• Share operational data with management systems.
• Build efficient reports from operational data.
• Have a simple way for suppliers to get data from our ops.

Solution
• Efficient integrated platform that allows us to access easily operational data.
• Have an orchestrator that can move data from AVEVA PI via AVEVA DataHub to multiple platform like SAP.

Results
• Added AVEVA DataHub to our infrastructure.
• Increased the efficiency of the data transfer between different platforms.
• Simplified the reporting via PowerBI.
Questions?
Please wait for the microphone.
State your name and company.

Please remember to...
Navigate to this session in the mobile app to complete the survey.

Thank you!
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