AVEVA WORLD

MFQ continues its digital transformation journey by relying on AVEVA Operations Control & Predictive Analytics using the AVEVA PI System data foundation

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- Based in Quebec, Canada
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- Manages the OT architecture

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.

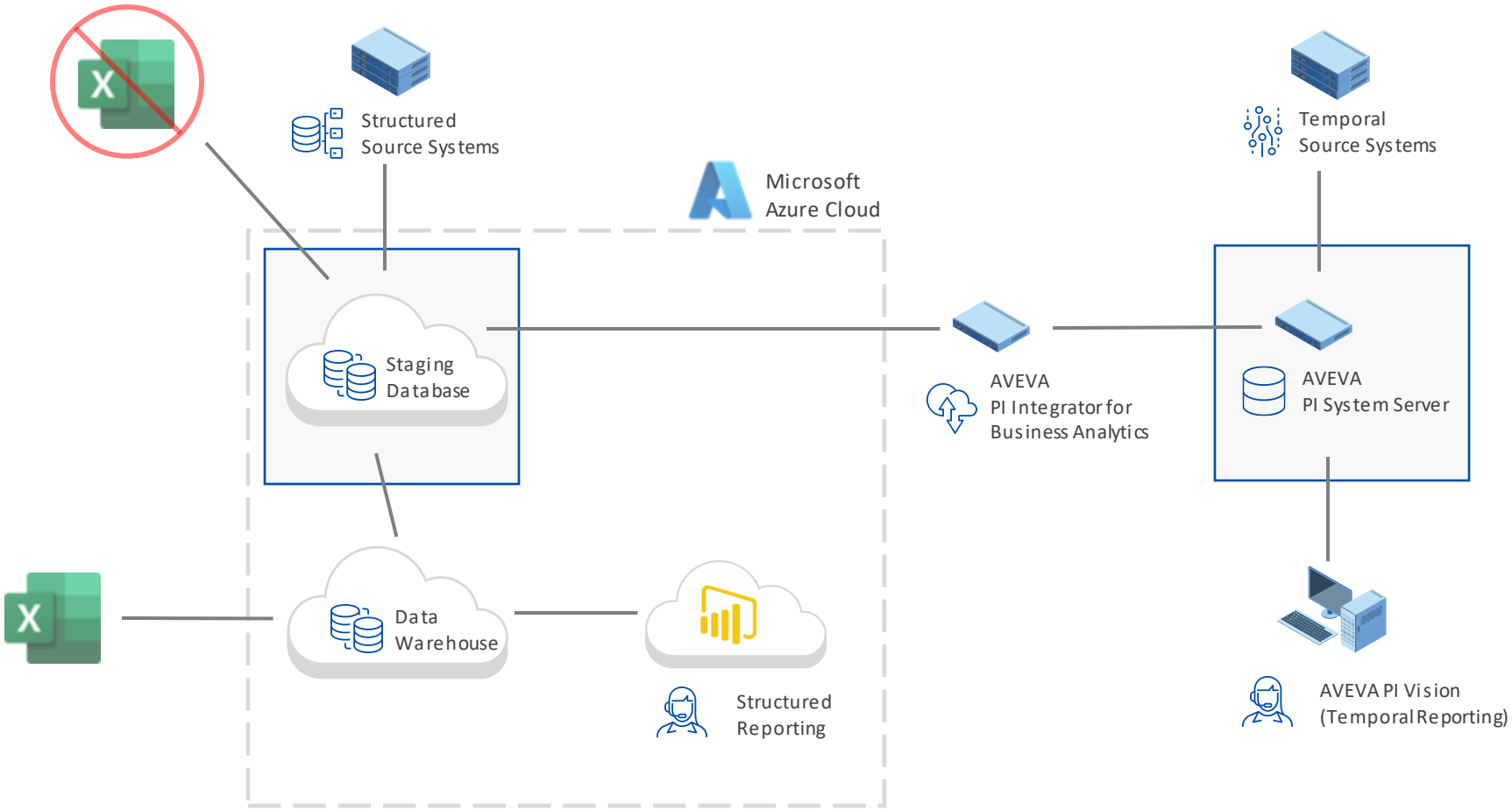
The Bloom Lake Phase I and Phase II plants have a combined nameplate capacity of 15 Mtpa and produce a low contaminant high-grade 66.2% Fe iron ore concentrate with a proven ability to produce a 67.5% Fe direct reduction quality concentrate.

Business Challenges

Main challenge: Reducing reaction time from event to resolution

- Must evolve from Excel based analytics
- Lacked a solid data foundation to efficiently feed business and operational reports
- Multiple isolated control rooms across the mine operations
- Reliability of critical equipment needs to be improved to support phase two expansion
- Improve production traceability
- Increase real-time visibility of pit to port operations

Data Foundation & Excel Transition

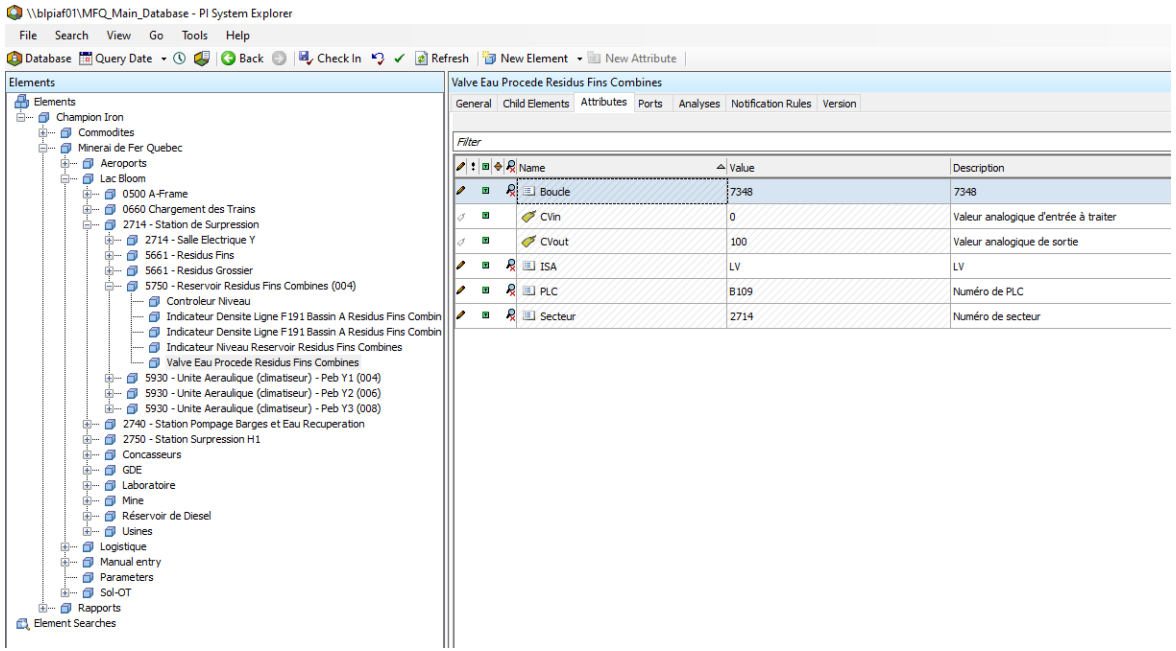


Key Element

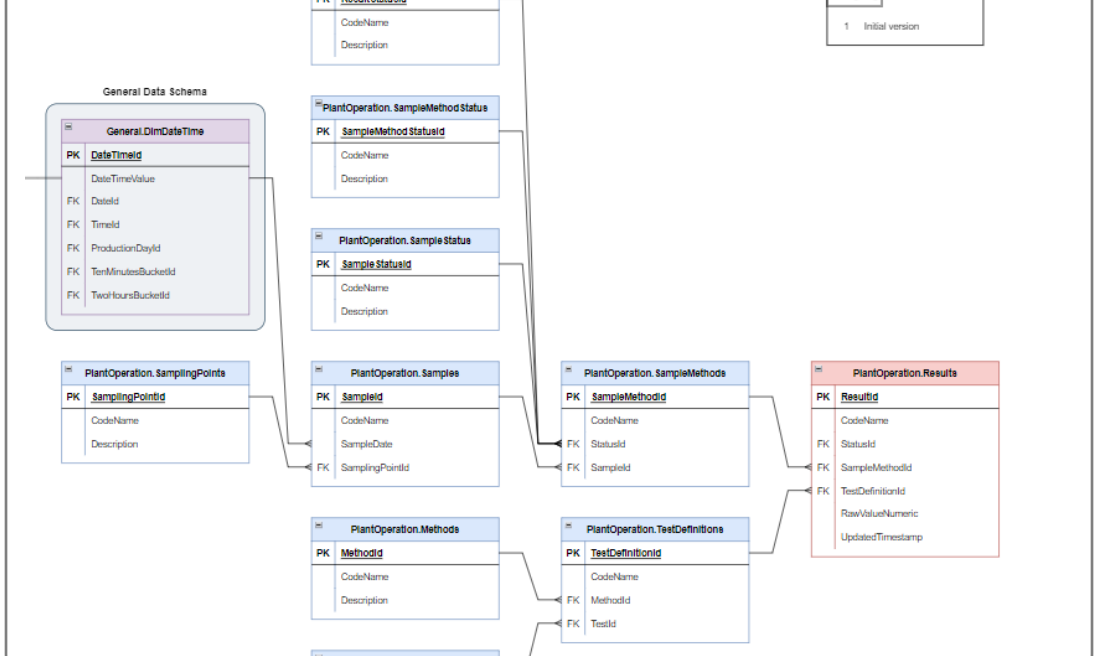
Data Foundation & Excel Transition

Key: Having a solid data architecture

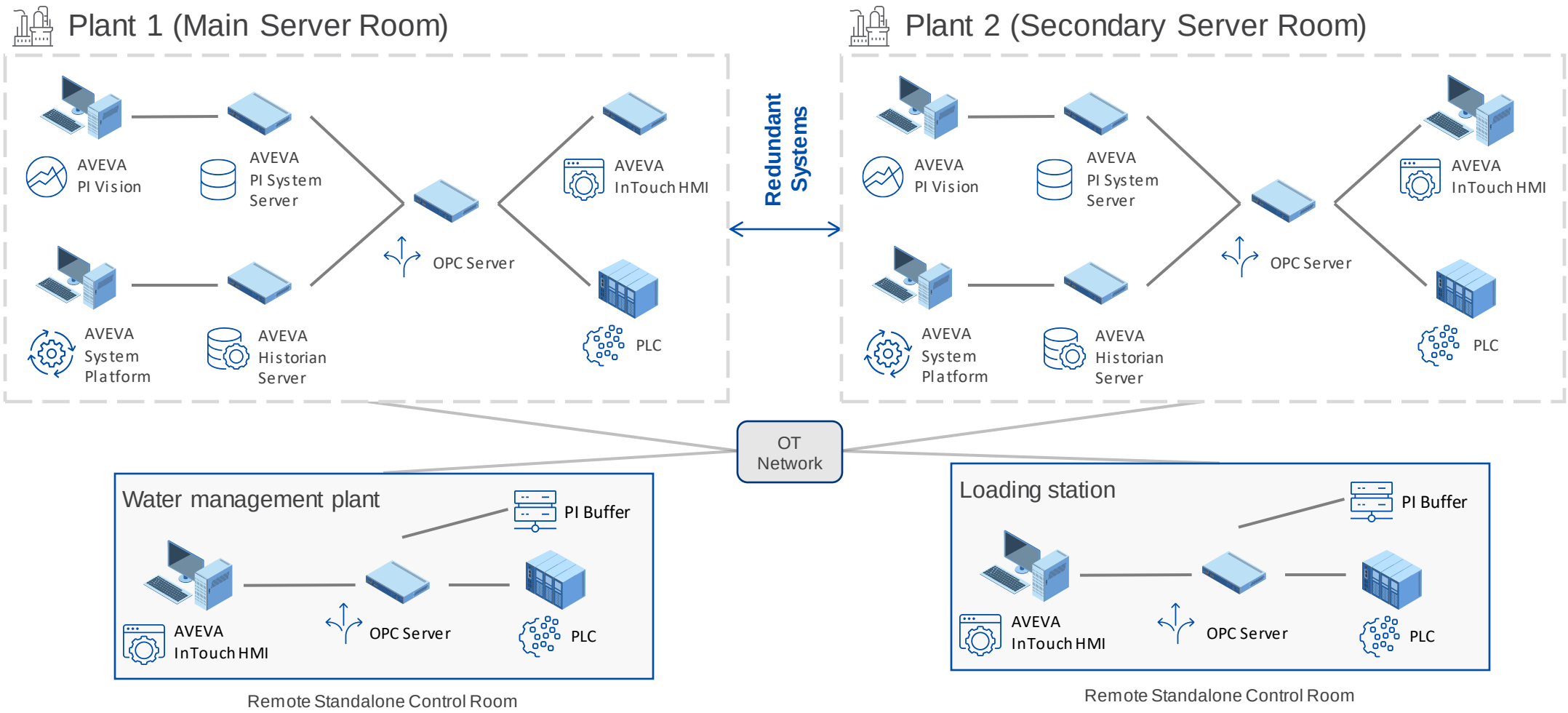
Temporal Data



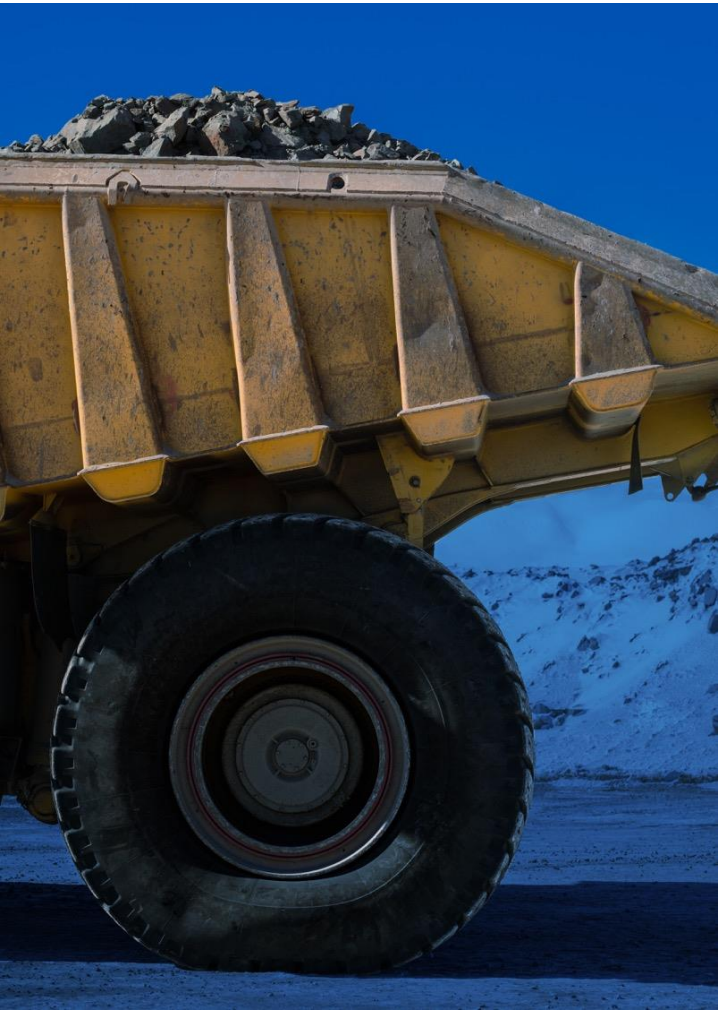
Structured Data



Control Rooms (AVEVA Operations Control + PI System)



Increase Critical Equipment Reliability



Using AVEVA Predictive Analytics to benefit

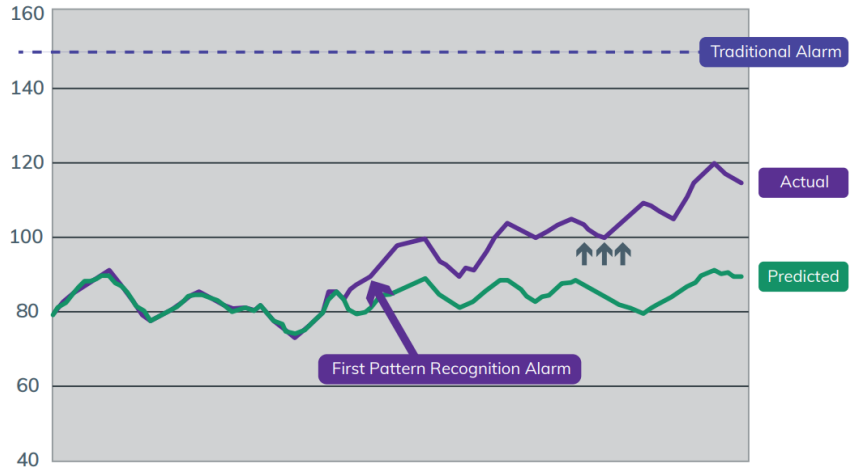
- Maintenance / Reliability engineers
- Operators

Started with pilot project

- Able to verify that the tool would have detected the failure in previous breakdown
- 3 assets monitored
- Analyzed the result with users

Current deployment

- Production rollout
- Phase One: 10 assets (50 models)
  - Coarse tailing pumps
  - AG Mill



Improve Production Traceability

Identified areas of need

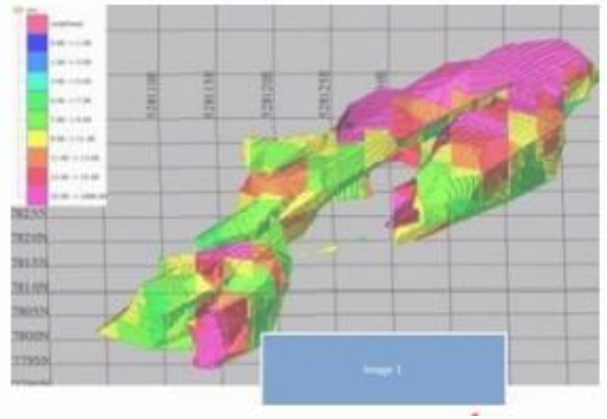
- Track material quality over the process
- Live inventory of stock piles
- Quality manifest of loaded material in train

How we think it would improve traceability

- Summary view of what is in the pipeline
- History of mineral resources extracted
- Robust source of production information to further enhance reporting

Path forward

- Evaluating AVEVA Production Management



PERFORMANCE	INVENTORY	SUSTAINABILITY
Delay Accounting	Inventory Management	WAGES Loss Accounting
Production Reporting	Grade Control & Tracking	Incident Management
Knowledge Management	Material Accounting	Environmental Reporting

Increase Pit to Port Visibility

Identified areas of need

- Have a unified view of different systems (structured data, temporal data and CAD drawings)
- Show operations control and predictive maintenance data in context

How we think it would increase pit to port visibility

- Help the business react to production events
- Bring global view to managers
- Make data more accessible to other users

Path forward

- Evaluating AVEVA Unified Operations Center

Roadmap

Main challenge: Reducing reaction time from event to resolution

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

Challenge

- Reducing reaction time from event to resolution
- Evolve data foundation and improve robustness
- Users need a real-time view of the operation

Solution

- Implement tools to follow asset health in real-time
- Organize a solid data architecture
- Improve visibility of operations from top to bottom

Results

- Independent control rooms with a centralized data center
- Robust temporal and structured data architecture
- Real-time asset analysis tools
- Unified data visualization tools

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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