

OCTOBER 25, 2023

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

AVEVA World

Yans Côté

System Administrator, Business Intelligence, Quebec Iron Ore

Nicolas Toupin

Programmer, Business Intelligence, Quebec Iron Ore



MINERAI DE FER QUÉBEC
QUEBEC IRON ORE

AVEVA



Yans Côté

System Administrator, Application Services

- Based in Quebec, Canada
- Operations Manager, Pulp and Paper
- Manages the AVEVA PI system



Nicolas Toupin

Programmer, Application Services

- Based in Quebec, Canada
- Technical degree in industrial engineering, bachelor degree in electrical engineering
- 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

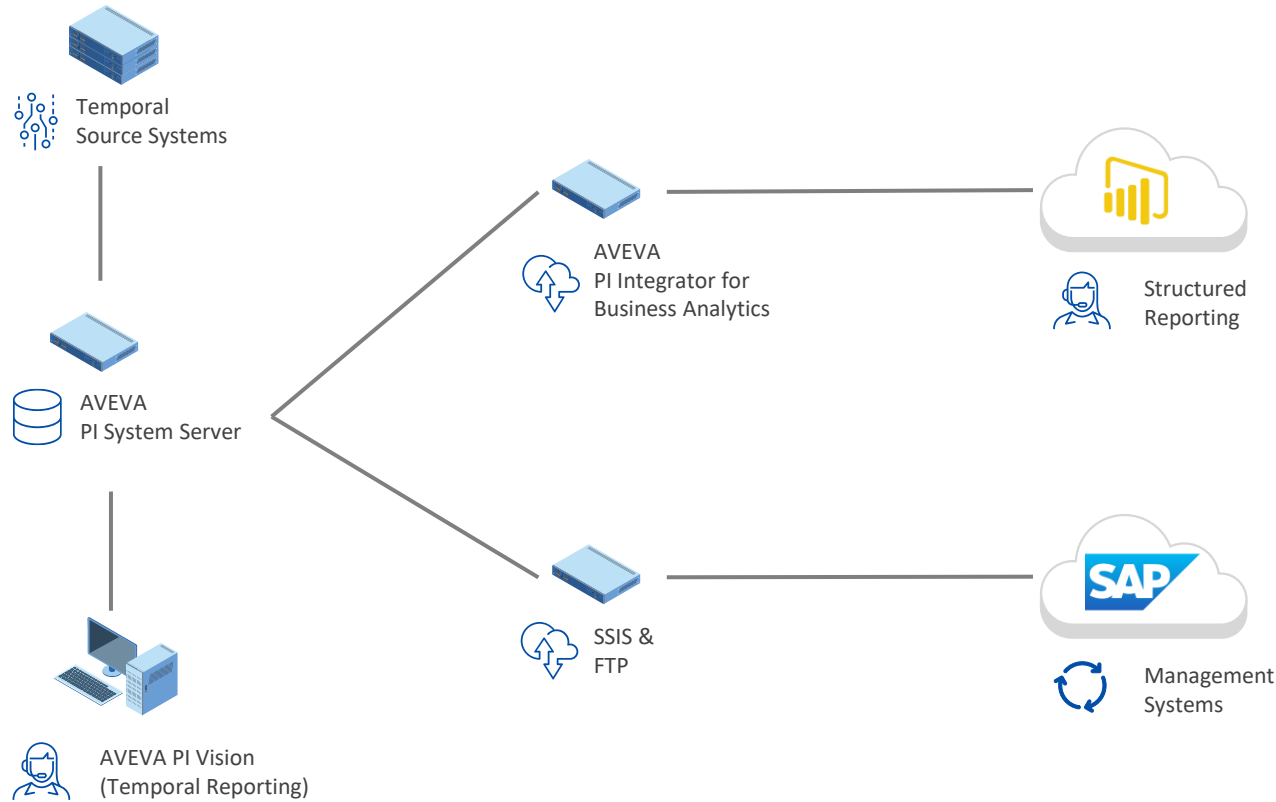


Main challenge: Share process data with management and reporting systems

- 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.



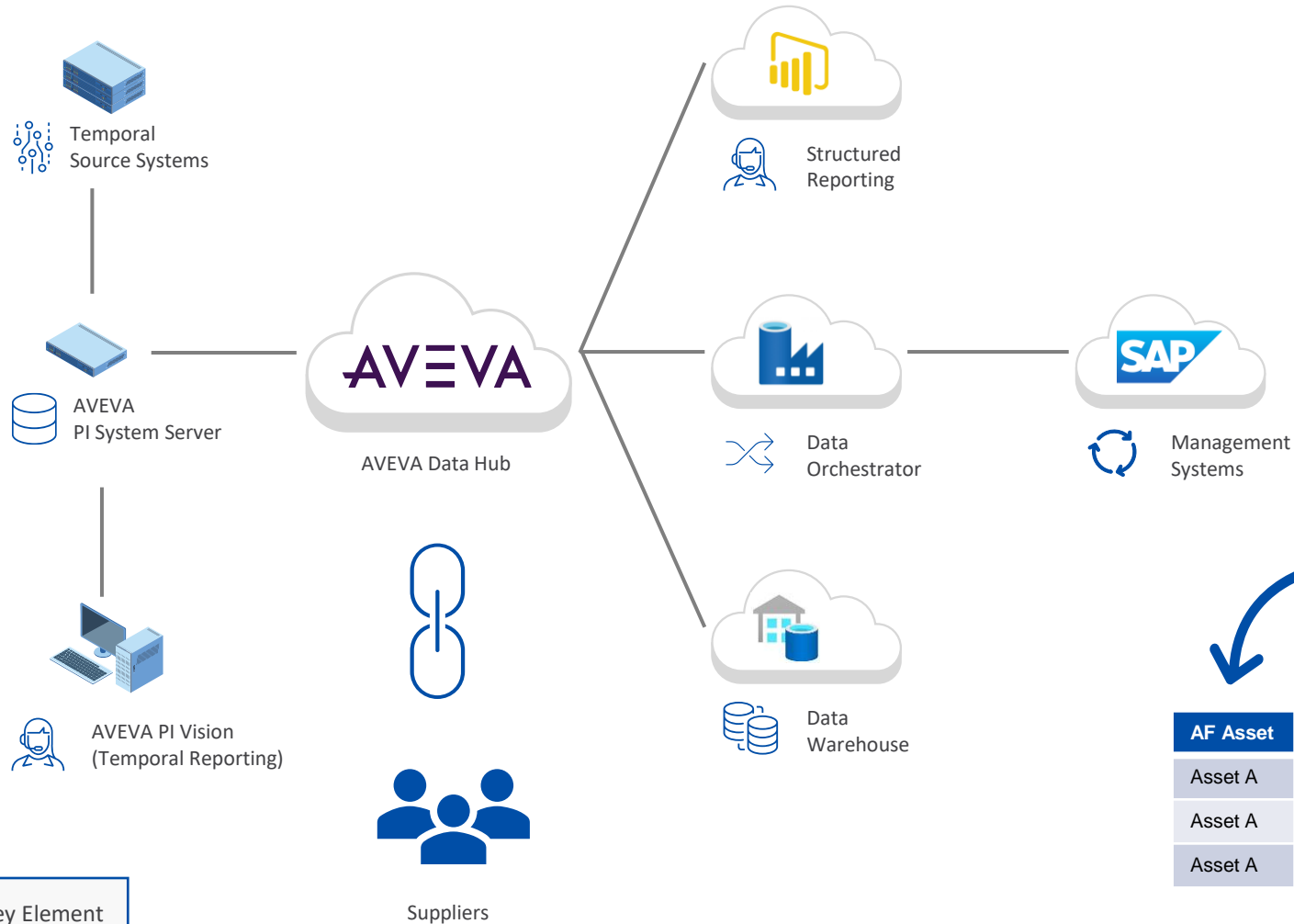
Solution architecture (Previous)



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.

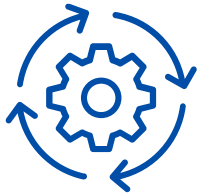
AF Asset	AF Attribute	Timestamp	Value
Asset A	Attribute 1	2023-01-01 01:12	12.34
Asset A	Attribute 1	2023-01-01 01:13	13.36
Asset A	Attribute 1	2023-01-01 01:14	14.58

AF Asset	Timestamp	Attribute 1	Attribute 2	Attribute 3
Asset A	2023-01-01 01:12	12.34	78.87	1130.7
Asset A	2023-01-01 01:13	13.36	79.54	1130.8
Asset A	2023-01-01 01:14	14.58	80.67	1130.9



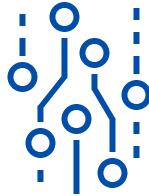
Roadmap

Main challenge: Reducing reaction time from event to resolution



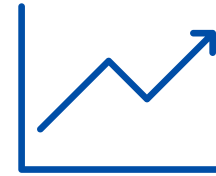
Reliable
HMI/SCADA

**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



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!

This presentation may include predictions, estimates, intentions, beliefs and other statements that are or may be construed as being forward-looking. While these forward-looking statements represent our current judgment on what the future holds, they are subject to risks and uncertainties that could result in actual outcomes differing materially from those projected in these statements. No statement contained herein constitutes a commitment by AVEVA to perform any particular action or to deliver any particular product or product features. Readers are cautioned not to place undue reliance on these forward-looking statements, which reflect our opinions only as of the date of this presentation.

The Company shall not be obliged to disclose any revision to these forward-looking statements to reflect events or circumstances occurring after the date on which they are made or to reflect the occurrence of future events.

 [linkedin.com/company/aveva](https://www.linkedin.com/company/aveva)

 [@avevagroup](https://twitter.com/avevagroup)

ABOUT AVEVA

AVEVA is a world leader in industrial software, providing engineering and operational solutions across multiple industries, including oil and gas, chemical, pharmaceutical, power and utilities, marine, renewables, and food and beverage. Our agnostic and open architecture helps organizations design, build, operate, maintain and optimize the complete lifecycle of complex industrial assets, from production plants and offshore platforms to manufactured consumer goods.

Over 20,000 enterprises in over 100 countries rely on AVEVA to help them deliver life's essentials: safe and reliable energy, food, medicines, infrastructure and more. By connecting people with trusted information and AI-enriched insights, AVEVA enables teams to engineer efficiently and optimize operations, driving growth and sustainability.

Named as one of the world's most innovative companies, AVEVA supports customers with open solutions and the expertise of more than 6,400 employees, 5,000 partners and 5,700 certified developers. The company is headquartered in Cambridge, UK.

Learn more at www.aveva.com