CUSTOMER PRESENTATION BRIEF
As presented at the 2015 Users Conference

OSIsoft.

SUMMARY

Barrick Gold

Industry

Mining, Metals, Metallurgy, Gold

Business Value

- Enterprise Visibility
- Process Optimization
- IT Standardization
- Energy Optimization
- Water Optimization
- Key Performance Indicators (KPIs)
- Stockholder Reporting

PI System™ Components

- PI Server™
  - Data Archive
  - Asset Framework (AF)
- PI Vision[1]
- PI Integrator for Esri ArcGIS
- Enterprise Agreement (EA)

An Enterprise Agreement (EA) For Barrick Gold: Timing Is Everything

Faced with a downturn in gold prices and rising exploration costs, Barrick Gold, like others in the industry, was under pressure to reduce operational costs. Barrick believed the best way to do that was to improve its utilization of operations and business data. A team inside Barrick believed that by signing an Enterprise Agreement (EA) with OSIsoft and better leveraging their existing PI System™, the company could improve utilization of corporate data and dramatically reduce operational costs. But signing an EA would require a large, unbudgeted, capital expenditure at a time when the company was focused on cutting costs.

The gold industry as a whole has been under increased financial pressure the last several years. In 2002, the price of gold began to steadily increase but, in 2012, prices took a sharp downturn and have continued declining since then. In addition, costs for gold companies have increased. “[Gold] is a non-renewable resource, for every ounce we produce we have to find another ounce or eventually we’d be out of business,” says Iain Allen of Barrick Gold. But, industry data shows that historically the cost for locating new gold reserves has increased with less gold being found. “We are spending more and more money to find fewer and fewer ounces of gold,” says Allen. In addition, the life cycle to bring new reserves online is very long, it takes ten years minimum to move from discovery to production. With gold prices declining and costs increasing, Barrick, like other gold manufacturers, was under pressure to reduce operational costs to stay viable.

Barrick believed one of the best ways to reduce costs was to better leverage its operations and business data to improve operational excellence, better utilize its assets and people, and improve corporate visibility. As part of this effort, in 2014, Barrick launched a corporate wide project to standardize KPI reporting for its mines which encompassed standardizing everything from how the mines collected their data to how they evaluate performance. Iain Allen and a small team from Barrick believed that standardizing and expanding Barrick’s use of the PI System by signing an EA with OSIsoft would be the best way to meet the company’s goals for operational excellence, while also helping with the current KPI initiative. But an EA would require a capital expenditure. “We needed to justify a significant capital expenditure that was not in the budget in a time when the company was talking about cutting costs not spending more money. Jobs were being lost, budgets were being cut and we were going to ask them to spend money that wasn’t even in the budget,” says Allen. “We knew we needed a rock solid business case.”

The team began by doing an internal evaluation of PI System usage throughout Barrick. Barrick has been an OSIsoft customer since 1998 but each mine had implemented the PI System on its own at different times. As a result there was no standardization on deployment, data collection, naming, software versions, usage,

etc. which would make replicating successes from one mine to another difficult. The team also discovered that very few people in the company were formally trained on the software. An EA would help address all these issues. The team also realized that the PI System was being underutilized. “If we [could] get an EA, we [could] not just put plant data in [the] PI [System], we [could] put all data in [the] PI [System] – our mobile equipment data, our fleet management data, our maintenance data, fuel system data – it can all go in [the} PI [System],” says Allen. “It’s auditable, it’s reliable, it’s always going to be there, it’s a historian so we can go back in time if we need to, we can analyze trends. – that makes the whole operational reporting approach much more effective.”

To further justify the capital expenditure, the team reached out throughout Barrick and found existing PI System users who had reduced costs for their mines. They then analyzed how applicable those improvements would be to other mines in Barrick and how much money that could save the company overall. The team also consulted with departments that weren’t using the PI System on how costs could be reduced in their areas if better data was available. The result was a comprehensive business case that showed how Barrick could potentially save millions each month by improving mine efficiency, improving water management, reducing energy costs, reducing IT costs, and simplifying stakeholder reporting through better utilization of data with the PI System.

On December 1, 2014, one month before the end of the company’s fiscal year, the team presented their business case for the EA and got approval for the expenditure. While only a few months into the EA agreement, Barrick is already seeing both benefits and future potential from the agreement. “[We’re] using OSIsoft, using the EA, to get off to a running start,” says Allen. The company began by standardizing its deployment of the PI System, training personnel, and extending the PI System throughout Barrick which, as of Mr. Allen’s presentation, was nearly complete. The new standardization is already reducing the burden on the IT department while making data more widely available throughout Barrick. The company is now focusing on optimizing energy usage and improving mine water management. The EA has also given Barrick new ways to view and leverage data. For example, Barrick is currently working on building Asset Framework (AF) models for its various operational areas and supporting functions which will standardize data, improve reporting, and provide new analysis options. The company has also begun integrating its PI System data with its Esri® ArcGIS®. “The potential is enormous,” says Allen “The spatial component is huge for us. If you think about water management, energy management, you can put it on a map – it’s going to mean so much more to people to see it in that context.” While still in the early days of its EA, Barrick sees huge potential for the EA and the PI System. The company has already outlined next phase projects including process optimization, Condition Based Maintenance, and improving supplier collaboration with PI Cloud Connect as well as and potential future projects such as collecting data from its drones.

“If you optimize your plants you will save money. To optimize them you have to manage them, to manage them you need to measure them – that means you need [the] PI [System].”

– Iain Allen
Senior Manager - Mining Information Technology

[1] PI Coresight was renamed to PI Vision in 2017

Allen, Iain. *An Enterprise Agreement (EA) For Barrick Gold: Timing Is Everything.* OSIsoft.com. 28 April 2015. Web. 30 June 2015. <http://www.osisoft.com/Templates/item-abstract.aspx?id=12340>.