



Customer Background

Plains All American Pipeline is one of the largest midstream energy companies in North America with roughly 4,000 employees and operations across the U.S. and Canada. The company manages more than 18,000 miles of pipeline, 72 million barrels of crude storage capacity, and rail, marine, and trucking assets.

Plains operated a complex mix of point-to-point integrations inherited from years of acquisitions. There was not a consistent approach to collecting or delivering data across the organization. Key systems, including measurement, regulatory reporting platforms, and cloud analytics tools, each relied on custom connections to source data.

As Plains expanded its enterprise reporting and AI initiatives, it needed a better way to manage and analyze Electronic Flow Measurement (EFM) data.

“We had a lot of point-to-point integrations across our environment, and over time they became difficult to support and troubleshoot. HighByte Intelligence Hub gave us a standardized way to scale those integrations while reducing maintenance and making it easier to support future AI use cases.”

Juan Yactayo Principal Architect, Systems and Applications at Plains

Company Profile

Name Plains

Industry Midstream Energy

Headquarters Houston, TX USA

Website plains.com

CHALLENGE

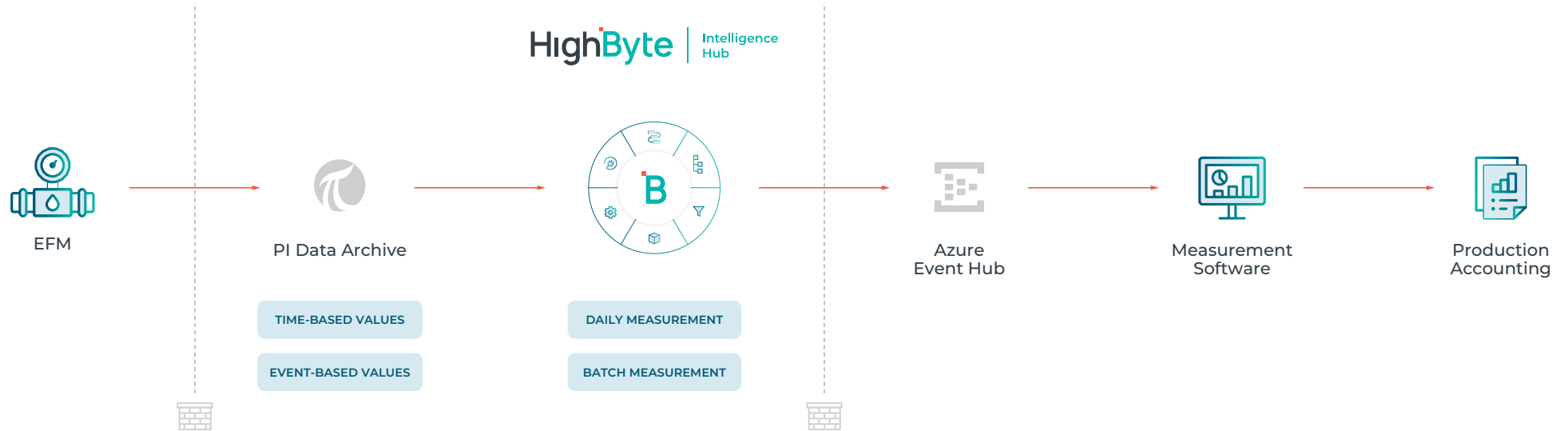
- Supporting numerous point-to-point integrations across acquired assets without a standardized approach to data collection or delivery.
- Managing a fragmented integration architecture that was costly to maintain and difficult to troubleshoot.
- No consistent way to support both daily measurement tickets and batch (event-based) tickets, each with different data structures and regulatory requirements.
- Missing a scalable solution to deliver audit-ready data to downstream systems, including measurement software and production accounting, while also feeding cloud AI platforms like Microsoft Fabric.

APPROACH

- Worked with **Streamline Control** to deploy HighByte Intelligence Hub as a centralized data integration layer, beginning with a proof of concept on a single EFM meter before scaling to the full fleet.
- Collected EFM meter data from AVEVA PI System, modeled each meter as an asset, and published structured data to Azure Event Hubs for measurement, production accounting, and analytics.
- Supported both daily and batch measurement workflows using time-based and event-based data pipelines to meet regulatory requirements.
- Automated meter onboarding by detecting new EFM meters created in PI Asset Framework and adding them to HighByte Intelligence Hub pipelines without manual configuration.
- Implemented duplicate record detection and automated error handling to ensure data quality and support compliance audit requirements.

BENEFITS

- Replaced fragmented point-to-point integrations with a single, reusable data layer for measurement, regulatory reporting, and cloud analytics.
- Scaled from one proof of concept to 1,400+ EFM meters in a matter of days, well ahead of the project timeline.
- Eliminated manual meter onboarding by automatically incorporating new EFM meters created in PI Asset Framework into existing data pipelines.
- Improved data quality with automated duplicate detection and error handling, creating reliable, audit-ready records across EFM meters.
- Reduced integration maintenance by consolidating multiple data flows into a centralized, scalable framework.
- Enabled cloud analytics and AI initiatives by delivering clean, contextualized operational data from PI System to Microsoft Fabric.
- Simplified regulatory compliance with API MPMS Chapter 21 through structured audit trails, event logging, and data quality monitoring.



“Streamline Control worked with Plains to scale to over 1,400 EFM meters in a matter of days, well ahead of schedule — something we honestly didn't expect to achieve that quickly. That's a testament to HighByte's support and how intuitive the Intelligence Hub is to configure.”

Matthew Vana Director of Historians and Business Intelligence at Streamline Control

WHAT'S NEXT

- Extend HighByte to additional data sources, building toward a broader enterprise data integration layer that covers more of the asset base.
- Consolidate remaining point-to-point integrations into the standardized HighByte framework to further reduce maintenance overhead.
- Continue growing the number of AI and analytics use cases powered by the centralized data foundation, including expanded use of Microsoft Fabric.

About HighByte

HighByte is an industrial software company addressing the data architecture and integration challenges faced by global manufacturers as they digitally transform. HighByte Intelligence Hub, the company's proven Industrial DataOps software, provides modeled, ready-to-use data to the Cloud using a codeless interface to speed integration time and accelerate AI use cases. Learn more at highbyte.com.



Watch [Plains' Full Session On-Demand](#).