vivix
vidros planos

Customer Background

VIVIX is one of the most modern flat glass plants in the world. Producing around 900 tons of float glass per day in its 90 thousand square meter facility, the company has secured a unique position as the only glass company in Brazil with its own solar plant to supply energy for the glass production facility and its own raw material processing plant. Utilizing a "mine-to-line" method, VIVIX aims to ensure the consistent production of high-quality glass.

Company Profile

Name Vivix Vidros Planos
Industry Glass Manufacturing
Headquarters Goiana, Pernambuco, Brazil
Website vivix.com.br

In 2021, VIVIX established an Industrial Transformation department to reduce operational costs, increase the industrial teams' productivity, and improve resilience to global changes by becoming a more data-driven organization. The committee documented initial use cases—from digitizing engineering checklists and real-time temperature regulation to asset maintenance—and began to evaluate the people, process, and technology that would be required to achieve their digital transformation goals.

To scale, the committee recognized the importance of building a solid foundation for its data architecture and information for industrial processes. In 2022, VIVIX turned to Amazon Web Services (AWS) and HighByte to build their data foundation using the Industrial Data Fabric architectural pattern.

> *"The digital transformation journey at VIVIX has been inspiring to be a part of. Aristóteles and the team at VIVIX have built a culture that is innovative, data driven, and collaborative. They understood from the start that their system architecture would be foundational to achieving their goals, which has given them a unique advantage to rolling out new use cases with speed and scale."*

John Harrington Chief Product Officer at HighByte

CHALLENGE

- Merging, normalizing, standardizing, and contextualizing operations data to better predict, schedule, and complete asset maintenance.
- Overcoming challenges related to scalability, data integration, and data product development within Mendix, the company's application development platform.
- Balancing cost efficiency and performance while restructuring their data architecture for future growth.

APPROACH

- Deploy HighByte Intelligence Hub in the corporate data center to curate, orchestrate, and model data from OPC servers, SQL servers, and other industrial sources at the edge before publishing payloads into the AWS ecosystem.
- Build a highly scalable Industrial Data Fabric architecture using the Intelligence Hub as the DataOps layer and Amazon S3 as the centralized cloud data store.
- Host the Intelligence Hub in the AWS cloud to streamline integrations and transformations between various cloud-based services, including Amazon Bedrock, Snowflake, and business intelligence applications like Mendix.
- Leverage Amazon Bedrock and Mendix to build GenAI agents for maintenance teams.

BENEFITS

- Reduced unscheduled downtime.
- Increased asset lifespan and reduced maintenance costs.
- Reduced operating costs.
- Improved collaboration between people, departments, and systems.
- Accelerated time-to-experience for new data products and apps.
- Reduced development and maintenance costs.
- Addressed larger organizational goals without sacrificing the quality of their material or production efficiency.

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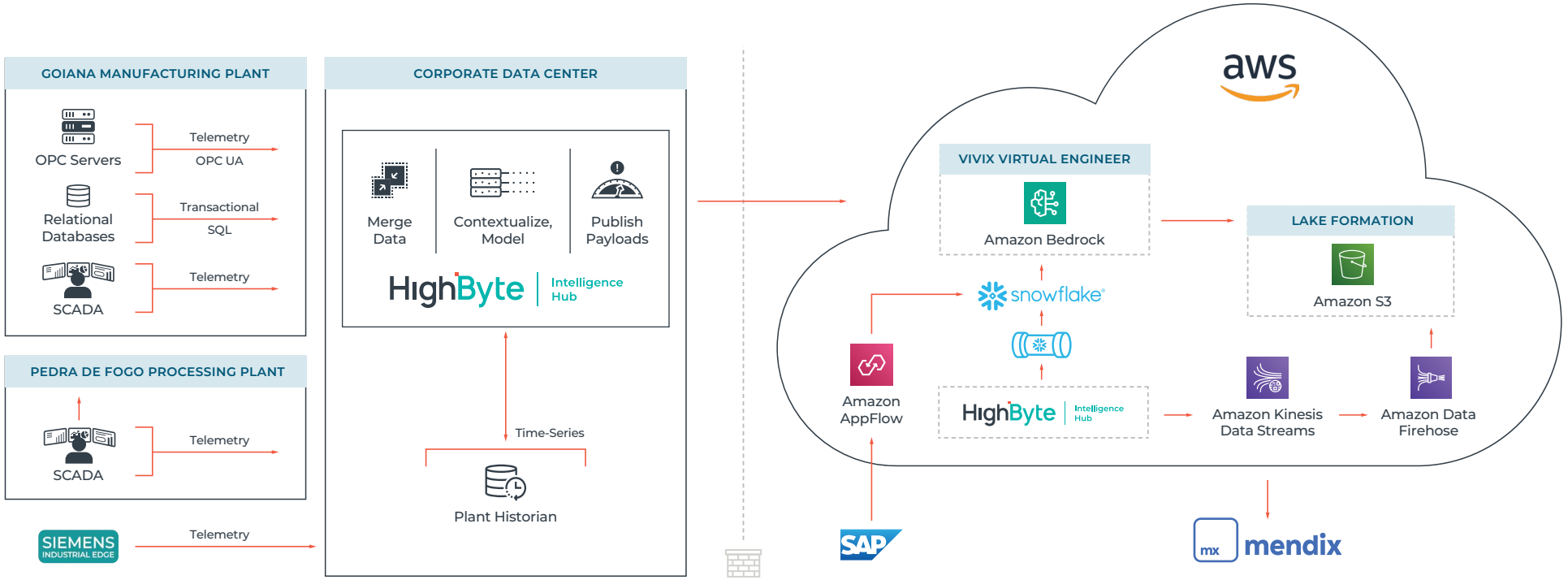
VIVIX Reference Architecture



"HighByte Intelligence Hub provides an agile solution for industrial data integration. It has fundamentally changed our approach to the way we architect and use data in our plant. With the Intelligence Hub, we've built a digital infrastructure that enables us to improve operational efficiency and make data-driven decisions for the consistent production of high-quality glass. The low-code approach is key. We're excited by the innovation coming out of HighByte and the impact it will have on our business."

Aristóteles Terceiro Neto Industrial Transformation Manager at VIVIX

WHAT'S NEXT

- Accelerate adoption of both Machine Learning (ML) and Generative AI to rapidly develop AI products with Mendix and Snowflake.
- Use a loop of "autonomous agents" that allows the model to decide in real time which data sources to consult, which tools to use to process the information, and how to perform the tasks in an orchestrated manner.
- Build a VIVIX Virtual Engineer to reduce customer response time from days/weeks to minutes when a quality incident is reported and decrease the time spent searching for and interpreting information by 90%.

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 analytics. Learn more at **highbyte.com**.

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