

Transforming Plant Data to Accelerate Industrial AI

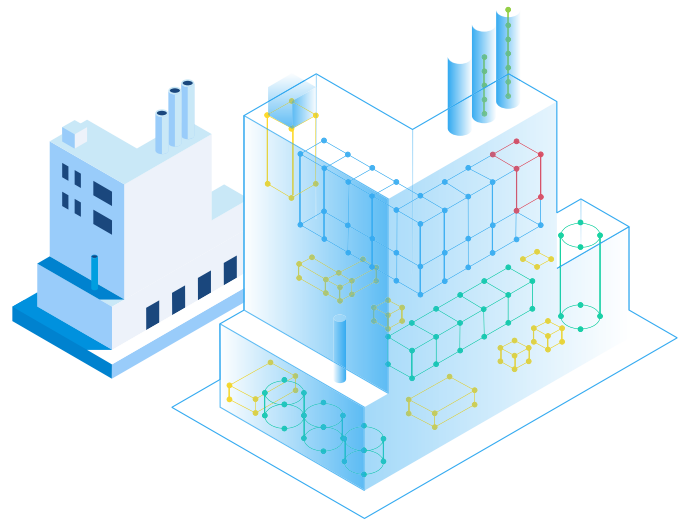
For data-driven manufacturers who need to optimize their facilities, Factory BUILD provides a real-time, contextualized data foundation on which they can build scalable data products.

FEATURE

Environment Builder

Create a **Digital Twin of the entire factory through an intuitive drag-and-drop interface**. Get a holistic view of the multi-layered interdependencies across assets, lines, and processes, allowing you to take actionable insights.

- **Specify time offsets between machines**, which allows for a more accurate representation of their place in the line.
- **Create lines and pipelines** that are workspace-bound, which allows for faster iteration.
- **Work in a dynamic environment** without waiting for data sets to become available.



1. A Manufacturing Data Platform that Delivers Scalable Results

In order to drive scalable business impact in manufacturing, shop floor data must be contextualized and standardized for a deeper understanding, leading to improved analysis and decision making. Factory BUILD creates the framework for data products that deliver actionable insights:

- **A common data foundation with contextualized data is the most scalable approach to structuring data.** Building bespoke applications tailored to address specific business needs or problems requires structuring data for each and every workload. This traditional method of building-from-scratch is time-intensive and becomes unscalable.
- **Digital Twins combine advanced modeling with AI/machine learning to create a dynamic virtual representation of the entire plant.** This gives you a holistic view of the multi-layered interdependencies across assets, lines, and processes, allowing you to take actionable insights.
- **Templating is an easy-to-use interface that requires a simple update to tables.** Reducing the burden on data engineers, data analysis can be democratized across the organization and amplify scalability.

2. Agile Decision Making through Real-time Data Streaming

Real-time data analytics plays a critical role in manufacturing by enabling effective decision making to predict and prevent downtime. By monitoring production in real time, rather than waiting until the end of a day to run a batch job, manufacturers can predict when maintenance or adjustments are needed, mitigating unexpected failures.

- › **Real-time data streaming enables immediate action and faster decision making**, which is crucial in manufacturing as downtime often leads to large revenue loss or even safety risk.
- › **Factory BUILD automatically blends data so that all data is a hot path**, allowing you to analyze data in real time, rather than waiting to run a batch job at the end of the day. Traditional data processing maintains separate pipelines for hot and cold data, which can lead to data redundancy and complicate overall data governance.
- › **By automatically converting raw data into contextualized data that's ready for analysis**, the data pipeline also accommodates late, missing, and out-of-order data in real time through Pipeline Builder, Sight Machine's specialized ETL for manufacturing.

FEATURE

Pipeline Builder

Automatically convert raw data in various formats and from various sources into a real-time data stream. Accommodate for late, missing, and out-of-order data in real time.

- › **Critical to real-time data processing, Stateful Processing retains knowledge of previous records** and makes calculations (and recalculations) to the existing state accordingly, as new data arrives.
- › **As late or out-of-order data come in, data models are refreshed in real time** (hot path), without the need to rerun through a batch process (cold path).

