A transformative business intelligence solution

Enabling growth and flexibility with customizable data science tools for ASTA Brazil

> **"The new system has completely transformed how we handle data. We're no longer stuck in a rigid framework—we can adapt quickly, experiment with different analyses, and pull insights that help us make better, faster decisions."**

Luis Tadeau Marson, ASTA Brazil

For rapidly growing manufacturing companies, staying competitive in a data-driven industry where every decision could impact productivity and profitability is a major challenge. Rigid data management systems confine them, impeding their ability to adapt swiftly and make informed, data-driven decisions. This is why companies need a solution that is flexible, customizable, and capable of evolving alongside their business.

ASTA (also known as PPE Fios Esmaltados) is a producer of winding wires, offering a line of electric wires and cables for the generation of electromagnetic fields. The company also provides solutions for auto parts, hermetic motors, home appliances, electronics, generators, lighting, meters, motors, traction motors, and transformers. With factories in Cerquilho-SP and Três Corações-MG, the company, a part of the ASTA Energy Transmission Components, is internationally recognized and has made continuous investments in technology and know-how since 1945.

The company was looking for a flexible solution that would allow them to harness data science at their fingertips, empowering them to drive innovation within their operations and allow the team to engage directly with data analysis and generate valuable insights on their own terms. T-Systems' tailored business intelligence (BI) solution was designed to not only meet, but also exceed these requirements.

At a glance

- Lacked a flexible, customizable data system to quickly adapt to evolving business needs and integrate new data sources to monitor process quality
- Existing rigid BI systems restricted the ability to perform in-house data analysis and required costly external support
- Implementation of an open, scalable BI solution with user-friendly dashboards
- Empowering the customer to independently perform data science and tailor analyses
- Data-driven decisions enhanced agility and reduced costs

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Reference in detail

Customer pain points

Manufacturing environments are dynamic, with frequent updates to equipment, sensors, and data sources. The existing system at ASTA Brazil struggled to keep pace with these changes, making it challenging to integrate new data streams and derive valuable insights to monitor and improve process quality.

Additionally, the previous business intelligence (BI) and data systems were rigid, restricting the customization of reports and analyses based on evolving business needs. As a result, the company often had to rely on external support for even minor modifications, which proved to be both costly and time-consuming.

The internal team lacked the autonomy to perform advanced data analysis independently and often depended on external data scientists. This reliance led to delays, increased costs, and frequently resulted in missed opportunities for operational improvements. Furthermore, limited visibility into key performance indicators (KPIs) hindered their ability to make timely, data-driven, strategic decisions. Consequently, the company sought a flexible system to streamline insights and ensure they had the right data at the right time.

How T-Systems solved it

To address the frustrations associated with "black box" systems, T-Systems proposed a solution that emphasizes transparency and flexibility. A critical component of this solution was an open, scalable platform.

T-Systems designed an open architecture system that seamlessly integrates with ASTA's existing infrastructure, offering the flexibility to add new data sources as necessary. This platform was built to adapt to rapid changes in equipment and data streams, ensuring it is future-ready.

The first was developed at the PLC level of the machines, where a part of the solution for acquiring data from the PLC was coded. The second part is a configuration platform to decode the PLCs and their variables and store them in a database.

The third part is the provision of a solution for creating dashboards in an easy, intuitive way. The interactive dashboards and analysis panels could be customized to meet their specific operational needs. Users could filter, sort, and visualize data in real time without requiring technical expertise. The team had the ability to modify these panels to reflect their unique KPIs and operational metrics, creating a personalized data experience.

Additionally, the robust and user-friendly analytics suite empowered the internal team to perform data science and business intelligence tasks independently. This capability also allowed them to explore trends, generate forecasts, and conduct advanced analyses in-house without the need for external data consultants. Moreover, the BI solution automated data reporting, significantly reducing the time required to transform the data captured into actionable insights. The management could easily access real-time reports on productivity, quality metrics, and financial indicators, enabling them to make informed decisions more quickly.

Business impact

The solution had a profound impact, driving significant improvements throughout the organization. With the flexibility to add new equipment and data streams, the customer could quickly adapt their analyses to changing operational needs. This capability allowed them to promptly capture and act on new insights, enhancing efficiency and agility. In cases of deviations, the customer could take quick and effective action to avoid production losses or drops in product quality, machine breakdowns, or even accidents.

The ability to create customized dashboards and generate actionable insights provided the management with a clearer understanding of the operational health of the organization. With real-time access to KPI-based dashboards, they could make swift, data-informed decisions that boosted productivity and profitability. More importantly, with the client's team being empowered to perform data analysis independently, they no longer needed to rely on expensive external consultants. This reduced the overhead costs and gave the customer greater control over their data analysis pipeline.

From a sustainability perspective, the solution reduces the wastage of direct raw materials, which are basically copper-based mineral resources and varnish-based chemical products. It also helps conserve energy and secondary resources used in production for the customer.

The solution's open architecture enabled ASTA Brazil to scale and integrate additional data sources as they expanded, making the system future-ready and protecting the BI investment. In the long run, this adaptability ensures that the solution could evolve alongside the company, aligning with the company's growth trajectory.

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