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# CASE STUDY

Enhancing Operational Efficiency through AGV Innovation

### **About Eastman Chemical**

Eastman Chemical Company is a global specialty chemical company that produces a wide range of products for various industries. Headquartered in Kingsport, Tennessee, Eastman operates in multiple segments, including additives and functional products, advanced materials, chemicals, and fibers.

The company's diverse product portfolio includes chemicals used in the production of adhesives, coatings, plastics, and fibers. Eastman Chemical is known for its innovation in developing specialty materials and solutions for applications in transportation, construction, healthcare, and consumer goods.

Eastman places a strong emphasis on sustainability and corporate responsibility, aiming to create value through sustainable practices and products. The company is committed to reducing its environmental impact, promoting safety, and fostering a positive social impact in the communities where it operates.

# **Background**

More than 15 years ago, the company embarked on a journey to overhaul its operational processes by introducing Automated Guided Vehicles (AGVs). The decision was a proactive response to the labor-intensive nature of existing manual transport methods. Recognizing the need to adapt to changing logistics paradigms, a recent decision to upgrade the AGV system was rooted in a meticulous evaluation of the value proposition. This assessment intricately weighed the reliability of suppliers against the broader cost considerations, reflecting a commitment to enduring efficiency.

# Challenge

The implementation phase presented a unique set of challenges, chief among them being the seamless transition from the existing AGV fleet to the upgraded units. To navigate this complexity, the company strategically opted for a "hard cutover" approach. This method temporarily disabled the legacy AGV fleet, creating a brief window for the integration of the new units without the risk of simultaneous operation. This deliberate strategy effectively mitigated potential integration hurdles and ensured a smooth, disruption-free process.

## **Solution**

The integration process was a carefully orchestrated operation, with the "hard cutover" strategy proving instrumental in minimizing disruptions. During this phase, the company disabled the old AGV fleet five days prior to the introduction of the new units. Customizations were minimal, with the notable addition of signal lighting (blue light) to enhance pedestrian safety. Moreover, the upgrade went beyond a mere technological facelift; it included the strategic addition of an extra AGV to cater to the escalating demand for product movement.



#### **Results**

The AGV implementation yielded significant and tangible results, notably evidenced by a robust Return on Investment (ROI). Key performance metrics demonstrated a marked improvement, with the new AGVs contributing an additional two hours of operational service per day compared to their predecessors. Employee responses were overwhelmingly positive, reflecting the tangible enhancements in operational efficiency and productivity. The company's partnership with JBT Automated Systems emerged as a pivotal factor in the success of this endeavor. JBT representatives exhibited exceptional responsiveness, knowledge, and courtesy throughout the implementation process, solidifying JBT's standing as an AGV industry leader.

This case study illuminates a significant transformation in the company's logistics operations, providing a detailed account of the nuanced AGV integration process and the resulting benefits. At the heart of this remarkable progress lies the instrumental and successful partnership with JBT Automated Systems.







