COMMAND CENTER
CASE STUDY

A consumer packaged goods client needed to expand production of one of its key product lines but faced significant challenges with material waste and process reliability. Without visibility into the root causes of these issues, expansion was not viable. Interstates partnered with the client to consolidate and analyze data across the production process, helping identify critical inefficiencies and optimize operations through a solution called Command Center. The analytics-driven approach reduced material waste and laid the foundation for scaling the solution across additional facilities.

Unlocking Value Through Analytics

This project demonstrated the transformative impact of digital tools without requiring any new hardware. Through Command Center, Interstates implemented advanced data collection and visualization, allowing the client's teams to make faster, more informed decisions. A representative of the client explains, "Interstates helped us connect the wheels, the gearbox, and the engine all together into one data lake. This allowed us to tune the process like a race car – faster, better, and closer to perfect performance."

Outcomes:

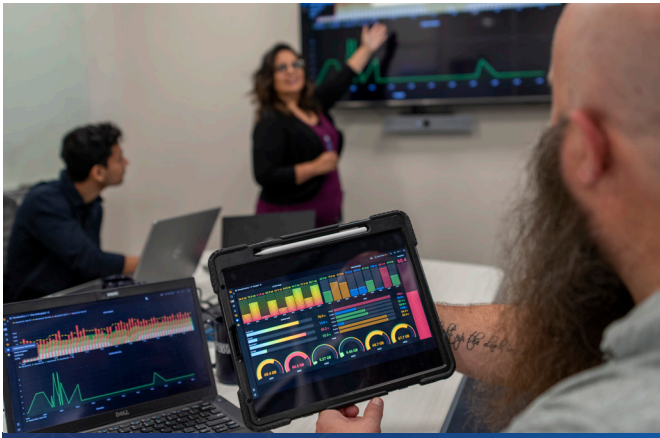|			
Achieved a 17% reduction in material utilization	Delivered a two-year improvement plan in just 13 months	Enabled expansion of the production line by reducing waste	Solution now being replicated at additional facilities

![Interstates logo]

712.722.1662 | www.interstates.com | f in ⊙

A centralized command center landing page now serves as the primary hub for operations. From this interface, users can quickly access high-level KPIs and navigate to specific sections of the production line. Integrated links connect directly to detailed Grafana and Power BI dashboards, allowing users to drill down into each area for deeper insights and analysis. The representative notes, "The visualization was the point where we started to drive improvements. It wasn't about eliminating breakdowns. It was about tuning performance to get closer to the ideal state."

| **End-to-end data consolidation:** A three-month effort established a unified data pipeline, capturing detailed inputs at each decision point.

| **High-resolution data capture:** Leveraging advanced tools, Interstates collected millisecond-level process data to pinpoint subtle inefficiencies.

| **Visualization and accessibility:** Using Grafana dashboards, the client's operators and leaders gained real-time visibility into performance and could act immediately on any deviations.

| **Collaborative development:** Interstates worked closely with the client's production and maintenance teams to align goals, validate findings, and refine improvements throughout the project phases.

A dashboard developed for a specific area of the overall process. This dashboard helps provide insights to raw materials as they enter the first phase of the making process.

Challenges

1	**High material waste:** Sensitive formulas and raw material variations were causing frustrating and frequent deviations.
2	**Limited traceability:** Without consolidated data, the root causes of reliability issues were difficult to identify.
3	**Unplanned downtime:** Variations in materials and equipment conditions without knowing where or why they occurred led to extra cleaning, rework, and delays.
4	**Scaling limitations:** Extra waste and inefficiencies threatened the viability of the client expanding its production capabilities.

Solution

Interstates partnered with the client to deliver a data-driven solution that improved reliability and reduced waste without changing or adding hardware. The solution, Command Center, provided an in-depth visualization tool dedicated to specific production lines and a centralized virtual hub, integrating data from multiple sources and formats into a single, user-friendly web application. This platform enables teams to efficiently monitor and manage production, quality, maintenance, logistics, and other critical operations from one unified interface.

INTERSTATES

Results

The Command Center analytics solution delivered measurable improvements and accelerated the client's operational goals. The client will now be able to access real-time data, trends, and visualizations for each stage of the production line. These insights will enhance their understanding of individual processes, enabling data-driven adjustments that optimize efficiency and overall production performance.
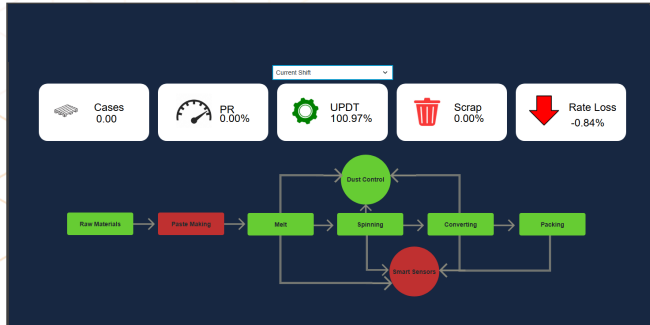
This is the Command Center home page, where users login to see high-level KPIs, then be able to dive into specific areas of the process that may not be performing up to par.

| 17% reduction in material utilization, exceeding original targets
| Faster execution, achieving a two-year improvement plan in just 13 months
| Improved reliability, reducing unplanned downtime and manual intervention
| Replicability, with the model now being applied to additional business units and sites

Going Forward

Building on this project's success, the client is expanding the analytics solution to additional sites and exploring global rollout. New facilities are being onboarded over the next 18 to 24 months, with the system extending from raw materials through packaging. Future initiatives may also incorporate AI and machine learning to enable closed-loop automation. "This is a foundation for digital transformation that goes beyond dashboards," the representative says. "It positions us for the next phase of winning through advanced analytics."