NTWIST

Case Study: Unlocking Hidden Capacity in Food Manufacturing: 29% Throughput Lift with Zero Infrastructure Change

Client Background

This case study focuses on a high-throughput facility operated by a global food manufacturer specializing in bakery ingredients and ready-to-use products. The site runs a multi-line production environment with variable demand, complex sequencing requirements, and tight delivery windows—making production predictability essential to profitability.

⚠ The Challenge

Excel-based schedules were built from idealized assumptions, ignoring live conditions like absenteeism, equipment status, or real changeover durations. Planners pushed to hit targets; operations resisted based on what was possible. Disruptions led to hours of manual replanning and growing mistrust.

Key issues included:
- No shared view of feasible daily output
- Static runtimes and sequencing logic
- Delayed response to production shocks
- Frequent OTIF misses and unplanned overtime

The site was operating below potential - with no clear way to recover lost capacity.

◈ The NTWIST Solution

NTWIST deployed a cloud-native scheduler that aligns production plans with floor-level constraints: current demand, WIP, labor, equipment, and procurement.

Execution data feeds back to refine runtime and changeover assumptions - continuously improving accuracy. This self-correcting loop ensures the system gets smarter with every cycle.

Planners use a drag-and-drop Gantt interface with sandbox testing and one-click publishing. No ERP modifications were needed, and rollout occurred in parallel with existing tools.

Deploying Without Downtime

NTWIST rolled out the scheduler in phases—starting with historical data to seed runtime models, then running live plans in parallel to existing tools. Planners tested the system side-by-side with Excel before going live. No disruption, no risk. Once adopted, the model began refining itself with every cycle.
The plant gained:

✔ Faster onboarding with minimal change management
✔ Trust in the system through side-by-side validation
✔ Smarter plans with every execution cycle

Line-Level Output Lift
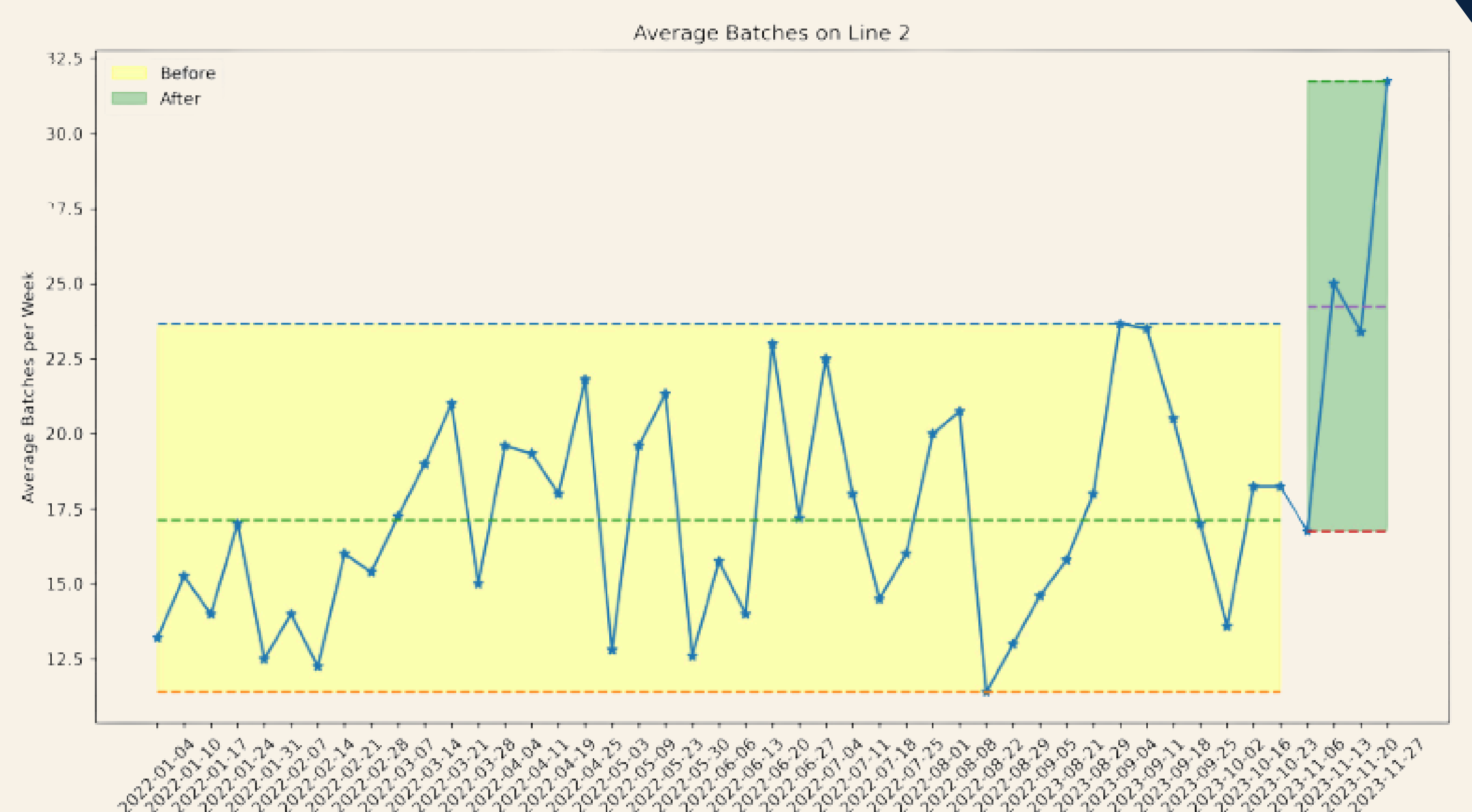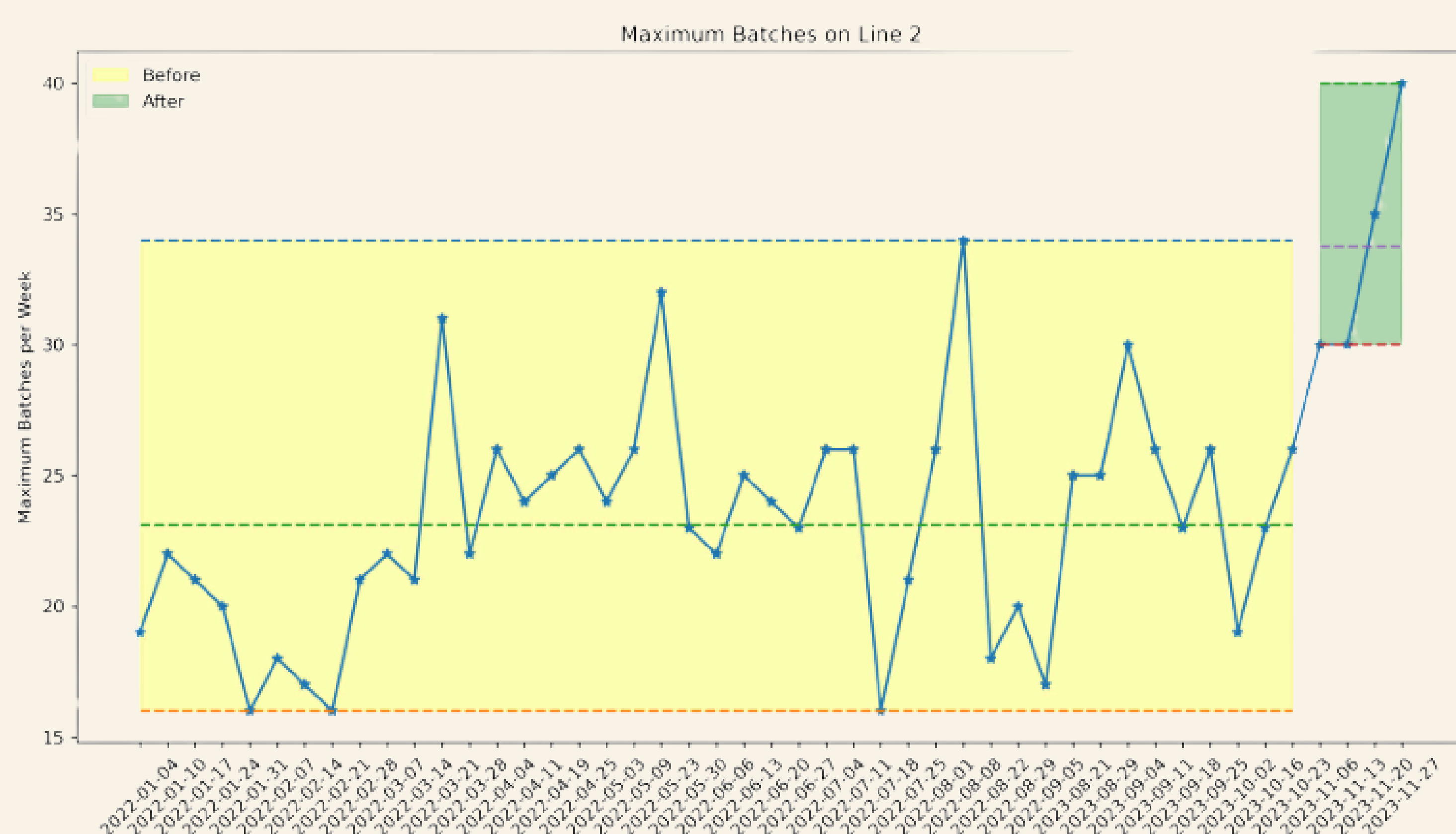
Production data shown above is adapted from a June 2024 NTWIST Steering Committee presentation delivered to the client.

The impact wasn't abstract - it showed up on the floor. After go-live, Line 2's throughput improved sharply across both average and peak output.
As the figure shows:
- Maximum weekly batches jumped from a typical range of 25–30 to nearly 40 batches/week
- Average weekly batches climbed from ~18 to over 30, sustained across multiple weeks

This wasn't the result of new equipment or headcount. The increase came from smarter sequencing, real-time feedback, and executable plans that aligned with floor reality.

What Changed

With NTWIST's real-time scheduling engine, the site moved from static planning to adaptive execution—delivering measurable, plant-level impact:

Faster Scheduling Cycles	**Increased Throughput**	**Higher OTIF Performance**	**ROI in Under 45 Days**
Weekly plans now take minutes - not hours - and reflect live floor constraints.	Line output jumped by 29% through smarter sequencing, not added equipment.	On-time, in-full delivery hit 95% with fewer escalations and fire drills.	Full payback realized within six weeks - no ERP changes, no disruption.

Powered by NTWIST's nScheduler - a real-time scheduling engine built to maximize throughput, adapt to change, and deliver executable plans from day one.