



A Balanced Diet of Service, Capacity and Inventory



10%
increase in
product
availability



26%
decrease in
inventory



56%
decrease in
changeover
times



Customer Overview

On a mission to enrich life through food, our client is one of the UK's largest food businesses. Its 4000 employees deliver 20 iconic brands trusted and enjoyed by consumers across the UK, EU, USA and Australia.

Branded growth is at the core of our client's strategy, helping them identify and deliver insight-driven innovative products, and bring those brands to market with compelling marketing and superlative in-store execution.

Supply chain excellence is what makes branded growth possible, helping our client manage its network of 15 manufacturing and logistics sites and all the way back to suppliers and farmers. Sustained focus on supply chain efficiency, safety and agility deliver savings that can then be reinvested in growing the brands and reducing the environmental impact of operations.

In their quest to lead their industry in safety, sustainability, innovation and cost-effectiveness, they routinely grapple with several operational questions such as:

- How to create a consistent plan from S&OP to S&OE and into scheduling that delivers better plan visibility, stability and eliminates manual effort?
- How to balance minimum lot size requirements with stock level and investment requirements?
- How to empower planners and decision-makers with planning automation and management by exception?
- How to tie production planning decisions with key decision forums like S&OP?

Their recent ERP deployment wasn't able to give them the planning insights they had hoped for. They urgently needed a solution that could cope with the complexity of their business.

With Replan's AI driven planning technology, we could see how to achieve a better balance across our availability, inventory holding and OEE. It allowed us to make better supply chain decisions as well as giving better visibility across the complete planning horizon. We could also analyse new, complex scenarios in minutes. This is the solution we were looking for."

Head of Strategic Projects

Challenges

The route to supply chain planning excellence is characterized by several imperatives to be respected, and hurdles to be overcome:

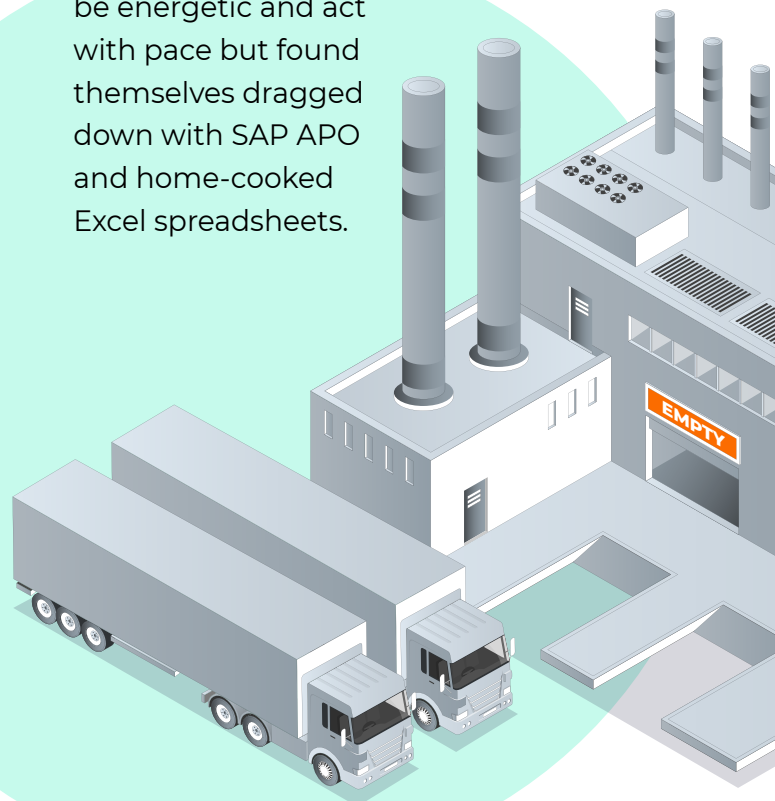
1 Product diversity: 20 brands and a wide assortment of products – dairy, desserts, baked goods, meat products, sauces and more – means managing a complex production chain with many different routings across fermenting, drying, roasting, baking, grilling, frying, freezing and packaging. This is difficult, if not impossible, to manually plan efficiently. Changes to plan are made without being able to accurately identify the implications on cost and service for the plan as a whole.

2 Focus on brand and in-store execution: Our client's highest priority is to protect and enhance their brands and reputation. This means an emphasis on food safety and product availability for flawless in-store execution. Food safety entails planning for factors such as allergens, cross contamination and positive release procedures. It includes robust traceability, segregation, product control, provenance and animal welfare all the way from suppliers. Product availability means ensuring on-time, on-quality, in-quantity delivery as promised.

3 Need for operational efficiency: Continuous investments in large CapEx items means high expectation for productivity and asset utilization. Average loss factor in the tactical horizon modelled in their SAP APO forced excess changeovers in the short term horizon because they

couldn't optimise sequences effectively. This further caused poor schedule adherence, plan instability, inaccurate procurement signals and an unreliable S&OP process. Narrow margins meant inventory levels had to be managed tightly to reduce waste. Planners were constantly firefighting with little time to actually plan.

4 Need to evaluate scenarios and trade-offs quickly: Being brand and in-store execution focused, our client's planning prioritised product availability over all else. The need for process efficiency meant Overall Equipment Efficiency (OEE) and Inventory levels had to be managed carefully too. Plans had to be balanced across multiple objectives. Agility being a core value, planners strived to be energetic and act with pace but found themselves dragged down with SAP APO and home-cooked Excel spreadsheets.



Solution

It was time to inject insight-driven innovation into not only product development but also the planning process. Planners needed a solution that could balance Service, Capacity and Inventory (SCI), run multiple scenarios and evaluate trade-offs quickly. After a rigorous evaluation process, our client picked Replan due to its ability to plan using complex changeover constraints in the tactical planning horizon, configure planning objectives and run multiple scenarios quickly, all of which were huge gaps in SAP APO's capability.

Replan models the complex realities and planning situations of F&B production facilities: individual pieces of equipment and their capacities, multi-level production processes, detailed changeover rules,

allergens and segregation rules, positive release requirements, demand satisfaction rules, inventory policies and more.

Intelligent algorithms can be configured to optimise business objectives around demand, inventory and capacity. Numerous scenarios across the entire planning horizon – from near-term planning to long-term strategy – can be run, analysed and compared to gain insights into the business.

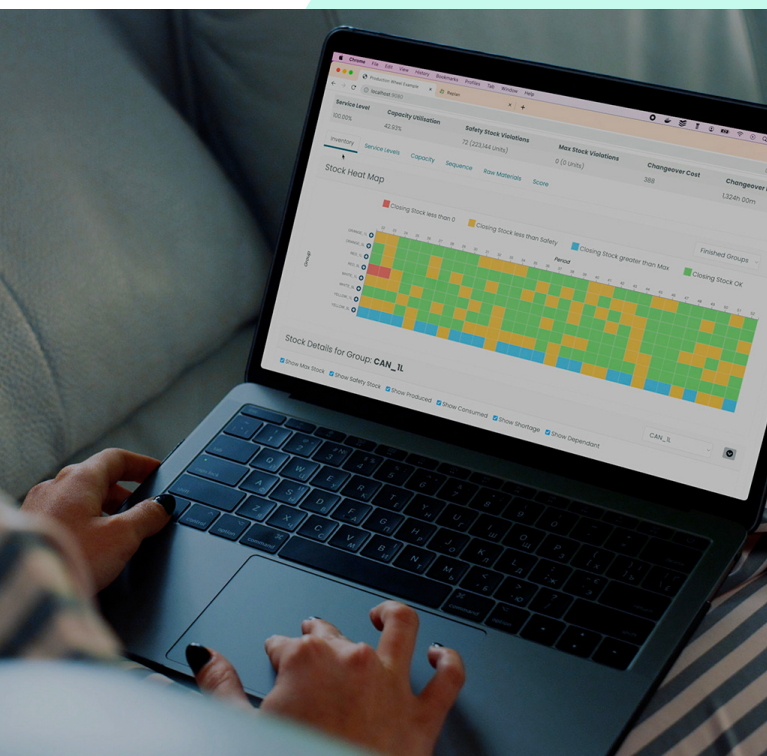
Replan's solution connects to the resident ERP, and feeds the S&OP process

Process

Replan deployed its solution across 1 complex Processing line and 4 Packing lines at the Knighton facility, and demonstrated results within 8 weeks.

Executed using Replan's standard deployment methodology and requiring only 1 FTE day per week from the customer, the process included such key tasks as:

- Review of current SAP APO inputs and planning process.
- Establish baseline metrics for Service, Capacity and Inventory (SCI).
- For numerous planning cycles, run and analyse two key scenarios:
 - Prioritise service, to mimic the intent to the APO baseline.
 - Balance objectives of service, cost and inventory, to reflect the art of the possible.
- Educate end-users and decision makers.



Results

With close collaboration, the project team demonstrated the power of Replan's intelligent algorithms and fast, repeatable scenario planning. In both Prioritise Service as well as Balance Objectives, the planning team observed significant improvements relative to APO.

- **10% increase** in product availability (Service)
- **26% decrease** in finished goods inventory (Inventory)
- **34% improvement** in OEE in the Balanced Objectives scenario, driven by:
 - **19% reduction** in capacity required (thus helping defer additional CapEx)
 - **57% reduction** in changeover hours
- Production planning time cut from **3 days to 30 minutes**
- **Improved** production plan stability resulting in more reliable procurement and logistics plans
- **Improved** S&OP

What was perhaps most important was that each scenario gave the planners alternatives and trade-offs, delivering insights in a matter of minutes.



Want to learn more? Email us to speak with one of our planning experts.



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