Supply chain standard: Tooled up to optimize

The economy may be improving, albeit slowly, but will "lean and mean" remain the order of the day?

Once upon a time "safety stock" was sacrosanct: retailers maintained burgeoning back rooms at every store stacked with boxes to keep the shelves filled, while many a production manager always ordered a few more than were strictly needed of whatever, to avoid stock outs that would bring the line to a standstill.

Twenty years ago "just-in-time" manufacturing appeared as the latest cost-effective solution with supplies pushed back up the pipeline and stockholdings measured in days or even hours rather than weeks or months. Automotive plants may have been "lean and mean" but the cost to their component suppliers included lorry-loads of parts circling the factory ready to be called in at a moment's notice to deliver what was required.

In contrast, during retail's boom years over-stocks were regarded as a small price to pay for offering the customer a wide selection, in all sizes, shapes and colours, at all times: the markdowns were high, but then so too were the profits.

Today it is all rather different. Destocking occurred on a massive scale in 2008/9 as retailers struggled to cut costs, but the shelves stayed reasonably full and customers seem to have adapted to any loss in availability or choice with few complaints.

So, perhaps it is not surprising, that one of retail IT's growth areas is for tools to help keep inventory levels low and to more exactly match demand to supply to keep the shelves reasonably well filled but prevent those stock rooms from once again burgeoning. Such systems are often offered on a software-as-a-service basis and have at their heart powerful number-crunchers that really can track every SKU at every store location to produce the best solution.

Companies like mail order specialist Newitts and retail chain Pets at Home, for example, are among customers for AGR's Inventory Optimiser application which is producing savings of up to 20 per cent or more in stockholding without loss of sales. The application can juggle sales and stock levels to predict potential stock-outs, factor in lead times for replenishment and keep safety stocks to an absolute minimum, thus reducing stock investment and improving cash flow and profitability.

"Because it sits on top of an existing ERP system it is quick to install and is about a fifth of the price of anything similar so is not expensive," says UK marketing manager Melissa Cupis. "Consultants don't want to touch it as it is too quick and easy to implement."

Certainly, with an entry level price of pound 20,000-pound 30,000 and retailers publicly admitting to 15 per cent reductions in stock-holding as a result, it is not surprising that interest in the product - originally developed for Baugur in Iceland - is growing.

Swiss analytics specialist, SAF - now 70 per cent owned by SAP - is equally bullish about its stock optimisation tool, and, like AGR, is also turning attention to the UK retail market. Its "OutOfShelfDetection" product looks at single sales transactions for each SKU and then forecasts likely out-of-stocks based on a combination of historic and current sales patterns, with exception alerts issued to managers as required.

The system is rules-driven so can be adapted to meet changing trading circumstances and also claims to be easy to install.

Such "optimisation" tools are not new. SAF has been working with Metro in Germany since 1998, for example. What is new is that these number crunchers are now scaleable. Ten years ago a raft of "optimisation" products appeared on the market. There were "price optimisers", "markdown optimisers", "space optimisers" and numerous others.

Many were provided by small start-up companies who would take a sample of the relevant retail data - covering maybe half-a-dozen products - and run local store trials proving that the tool would cut stock-outs and improve performance.

Unfortunately these small-scale trials were great as demonstrations but virtually impossible to roll out to every line in a 50,000 SKU store as the numbers were simply too large to be crunched.

They also tended to exist in isolation: as Hamish Brewer, president and ceo of JDA Software has said: "These tools provided little integration with the supply chain: price optimisation tools, for example, looked at price but not cost so might match selling price to demand but not to profitability."

Today, technology has moved on, computing power increased and hosted operations are more acceptable. Retailers - like all businesses - are looking for quick wins from IT and that means tools that are quick and easy to install and rapidly produce quantifiable benefits. Ten years ago optimisation tools promised much but delivered comparatively little: today they might just help speed the recovery.