

Stephen Moorhouse: "Retailers want 75% of shelf-life, so building up inventory isn't the answer to availability problems. It's also very expensive!"



## Forecasting: where art meets science

BY ELAINE WATSON

The difference between 'JIT' (just in time) and 'JTFL' (just too f\*\*king late), as some manufacturers politely refer to their supply chain planning systems, can be depressingly small.

However, if any manufacturer is going to match supply and demand without carrying too much stock on the one hand or shorting customers on the other, Coca-Cola is it.

Come Christmas, a new product launch or an unexpected bout of blistering sunshine, however, and the best-laid plans can still go down the plughole, admits Stephen Moorhouse, vice president of operations at Coca-Cola Enterprises (CCE). "At the end of the day, forecasting is an art as well as a science, so you are never going to get it exactly right. The skill is having the flexibility in your operation to respond rapidly to changed circumstances, which is what we aim for."

Typically, hot spells or events like the World Cup can add 20% to sales, says Moorhouse. Couple that with the company's biggest launch for 20 years (Coke Zero) and you get an idea of the kind of flexibility that was required over the summer, he points out. "Just because the product isn't going to go out of date in a couple of days doesn't mean you can afford to hold piles of stock just in case. It ties up working capital. Besides, retailers want 75% of shelf-life, so building up inventory isn't the answer to perfect availability. It's also very expensive!"

### One touch replenishment

Typically, just over 50% of products from the Sidcup manufacturing facility (pictured) go directly to customer depots. However, given that not every Coke manufacturing plant

produces all of its brands, goods are also moved internally through the Coca-Cola network and consolidated so that customers receive mixed loads with the full range of products that they have ordered.

Orders are allocated through the company's central IT system, which uses a series of complex algorithms to work out the most efficient means of producing and transporting them at any given time, says Moorhouse. "Say a customer wants 15 pallets of cans, four pallets of two-litre PET bottles, and some mixed pallets. One facility won't necessarily be able to meet that, so the system costs out all the various options and works out how to meet that order at the lowest cost."

Moorhouse has adopted a similar philosophy to Tesco when it comes to running the supply chain: "he who leaves the fewest fingertips [on the product] ultimately wins". This means retail-ready solutions all round: from wheeled

merchandising units to pallets that can be rolled straight on to the shopfloor but take up no more room on a truck than standard pallets.

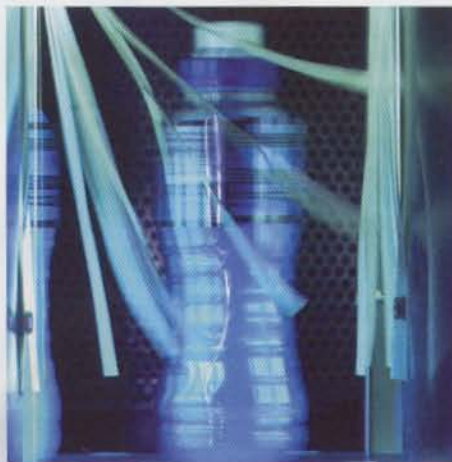
He is also a firm believer in techniques such as vendor-managed inventory (VMI), whereby suppliers manage stock levels within their customers' depots (within closely defined parameters), and collaborative promotional planning. This not only ensures that both parties are singing from the same hymn sheet in the run up to a major event such as the launch of a new product, but also eliminates the inevitable mudslinging that follows a cock up ('you said 12,000 cases ... no, you said 10,000' etc).

### It's good to talk

This sort of collaboration with customers downstream has also been extended to suppliers and haulage partners upstream, he adds. "Take cans. They are delivered into our sites from Eddie Stobart, and then the same trucks might then exit the facilities with full truck loads of finished product. You have to look at the entire supply chain from raw materials procurement to getting the product on to the shelf at the store if you are going to optimise it."

UK supermarkets such as Tesco and Asda are both extremely adept at thinking about the supply chain holistically, says Moorhouse, who spent nine years with Coca-Cola bottling in Asia and the US and three years in the shipping industry in Singapore and Papua New Guinea before joining CCE GB in 2001.

"I know this has become a cliché, but the people that have successfully transformed their supply chains have been those that have stopped thinking in silos and viewing each part of the operation [forecasting, purchasing,



manufacturing, warehousing, transport] separately, and instead tried to take cost out of the whole supply chain. People are almost afraid of UK retailers because they can be so demanding, but being demanding is a good thing."

It was a willingness to try and optimise the end-to-end supply chain that led to a factory gate pricing trial with Tesco that lasted for a full 15 months before they threw in the towel last Christmas, he reveals. "We effectively treated Tesco as a haulage provider. At one point up to 50% of Tesco's volume was supplied on a factory gate pricing basis. However, there were availability issues and it was actually Tesco's commercial team that said, 'we don't think this is working'. So it was mutually agreed to stop."

### Network investment

The manufacturing plant at Sidcup, one of six in the CCE GB network (the others are in East Kilbride, Milton Keynes, Edmonton, Colwall and Wakefield), produces more than 800M drinks a year from nine production lines and employs more than 350 people. The range includes 330ml, 250ml and 150ml cans, 500ml PET, 200ml and 275ml glass bottles, the aseptic 250ml and 500ml PET plus two squash lines that can make one, two and three litre bottles. It also produces Soda Stream bottles, albeit in tiny quantities.

The site services up to 160 heavy goods vehicles a day, as well as operating a fleet of up to 22 local delivery vehicles from a 9,000 pallet warehouse, says Moorhouse, who has been allocated a cool \$25M a year from 2007 to 2009 to spend on 'network investment' and driving operational efficiencies.

A hefty chunk of that has been pumped into a \$10.5M process area and aseptic filling line at Sidcup, which has enabled CCE to bring the production of Powerade in-house, a 25,200 pallet high-rise warehouse at Edmonton, and various other initiatives across the network such as the introduction of wheeled merchandising units for cans at the Wakefield plant.

Next year, CCE will invest in a \$7M new production line at Edmonton to produce Oasis, which has been growing at 21% year-on-year, and is currently only produced at Wakefield,

says Moorhouse. At Sidcup, the raw materials warehouse is also being updated, along with the filler for 150ml cans.

### Green machine

Rising labour and energy costs mean that a continuous improvement culture is vital in order to stay afloat, never mind get ahead, says Moorhouse. "We've been looking closely at line utilisation, machine effectiveness and changeover times, particularly on the small can lines."

Like many manufacturers, CCE is also running feasibility studies into the viability of generating its own power through wind turbines or other means as its energy bill continues to rise, says Moorhouse. "We're seeing 20% increases in electricity costs year-on-year, which really is very difficult to sustain, even if you are constantly improving efficiency. Basically, we all have to start treating energy as a scarce resource."

CCE has seen a step change in performance after introducing strict new monitoring regimes for water and energy and a 'purge' on waste usage across all manufacturing sites, reducing water usage by 19%, energy usage by 12%, and waste going to landfill by a whopping 68% in the last three years, he claims. "Something like 86% of waste from all of our factories is now collected for recycling as we have improved waste segregation techniques. We now separate out metals, plastics and cardboard at all manufacturing sites for recycling and use plastic re-usable cores on reels of film."

Blow-moulding plastic bottles on site and dry-sterilising them instead of buying bottles in and having to rinse them before use has also helped reduce water usage significantly, he says.

Savings have also been made through reducing the weight of bottles and cans by almost a third, making changes to the plastic bottle manufacturing process, monitoring leakage on compressed air systems and introducing controls enabling pumps to run with less power and less frequently.

Crucially, he says, "we investigate anything and everything that could drive efficiency. Just because we've always done something a certain way doesn't mean that it's the only way to do it."



The new aseptic filling line at Sidcup has been in commercial production since April