

When lean could mean green

Really putting customers first could radically change the supply chain, reports Simon Caulkin

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As the Safeway takeover underlines, retailing seems to be about relentlessly increasing size (stores, businesses), increasing centralisation (purchasing, merchandising, IT) and increasing distance (from the consumer and supplier).

Big, centralised and distant makes up a powerful business model - for the stores - although, as Professor Michael Porter recently pointed out, not powerful enough to bring UK prices down to levels enjoyed by other advanced economies. Yet for all the 'choice' and utility they bring, it's hard for consumers to love the major supermarket and other retail chains.

Indeed, although they use them (there's not much choice), they don't like them. Small stores don't have what you want while large ones are time-wasting and stressful. Chains squeeze out specialised shops and make all high streets alike.

Regional differences in produce are ironed out; the requirement for huge volumes of standardised items disqualifies small local suppliers from supply chains through which 75 per cent of the nation's food passes. Quantity trumps quality. The countryside too is pushed towards the same uniformity. The model is environmentally dubious and in the larger context unsustainable.

There are business drawbacks too. Big stores and distribution centres are massively expensive to build and run. The logistics challenge is immense - before arriving on a supermarket shelf a fast-moving product will have taken up to two months shuffling through dozens of intermediary processes, with most of that time in warehouses.

Each step, every day, the transport, handling and warehouse operation adds direct and indirect cost (not least a huge management overhead to track it). And there are still stock-outs, when despite all the computer power and management hours devoted to planning, supply and orders get out of synch.

But now imagine an alternative. There'd still be some large out-of-town stores, but high-street shops would be small and stocked with products chosen for the locality (that is, by customers). If what you fancied wasn't on the shelves, you'd order it for collection or delivery later in the day.

The store would be constantly replenished, either from the larger store or by local, small-scale suppliers - in fact, the 'store' might not even be a Tesco, Sainsbury or Morrison-style retailer at all, but an entirely new 'bundler' of products, service and advice in entirely new product constellations. In this environment, specialists might thrive and big, centralised and distant would mutate into small, simple and locally responsive. And pigs might fly?

It would be hard with today's assets and infrastructure, concedes Dan Jones, professor of management at Cardiff Business School and head of the newly-launched Lean Enterprise Academy.

But Jones, author with Jim Womack of *Lean Thinking* and *The Machine That Changed the World*, believes that 'big, centralised and distant' (his terms) effectively mark the end of the current line of development.

'Lean has taken off in a big way,' says Jones. 'That battle is effectively won.' But while applying the lean techniques of streamlining processes to eliminate waste is satisfyingly intuitive and generates quick initial business gains, its profounder benefits, involving work across whole supply chains, are much harder to achieve. Toyota has spent more than 30 years working jointly with suppliers to reach its mastery - and it's still working on it.

Even then, notes Jones, lean is still about producing things along a supply chain - improving the infrastructure that's already here. Instead, he proposes going a crucial step further to treat consumption itself as a process.

Rethinking the economy back from the customer leads to some startling conclusions. 'We have the wrong assets in the wrong place, not necessarily being operated by the right people,' says Jones. A good example is a traditional hub-and-spoke airline, which may make sense for the operator but none at all for the majority of passengers wanting to make a point-to-point journey.

Today's supermarket supply-chain may also be destined for the dustbin of history. Its assets (like most others) were designed for a world of mass production and mass consumption which the next dimension of lean will render obsolete.

Adapting the Toyota Production System to Tesco - 'at least two years ahead of the other chains' - has confirmed that the key to infallible availability on supermarket shelves is not massive warehouses and huge amounts of stock, but replenishment little and often, produced just as the customer wants it.

This is widely assumed to be impossible because demand is hard to predict. But actually, Jones points out, this is nonsense. People eat the same amount every week: it's the system that destabilises demand patterns, by promotions in the shops and because suppliers fail to share information. Taking the 'noise' out of the system is the first step to smoothing demand and also production.

Besides giving customers what they want, such a model would be radically more economical. As well as smaller stores, it would require less of everything: handling, transport, stock and warehouses to store it in. Because producers respond directly to 'pull' from consumers, they no longer need massive computer systems to schedule and forecast. The way is opened up to use small local suppliers rather than the giants.

A model such as this poses large implications at every level. 'Who coordinates and leads the value stream?' says Jones. 'It might be Tesco or Toyota, but it could be a different entity using different assets.' Who does what would also be up for grabs. So, especially, would location. 'We're beginning to understand that moving a facility to China when you depend on responsiveness doesn't make sense,' says Jones. Rather, the logic of location is to produce everything as close to the customer as possible.

The repercussions may go still further. Working back from customer needs, some companies are exploring the idea of charging for use rather than ownership. An example is aero-engines, where Rolls-Royce pioneered the concept of 'power-by-the-hour' as early as the 1960s. By giving suppliers incentives to recycle, this opens the possibility of

closed material loops, feeding into and reinforcing other economy gains.

These things don't happen overnight. But the outline is beginning to emerge, and the lesson is unmistakable. Lean is an idea whose time has come. Simple, small and local is better business than big, centralised and distant, as well as more sustainable. Far from being enemies, the two go together. Ironically, 'Lean doesn't come from green,' notes Jones. 'But there are very strong green implications. They are entirely compatible.'

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