A SPECIAL REPORT
Supply Chain Management

THE IRISH TIMES | irishtimes.com | Editor: Madeleine Lyons Phone: 01 675 8000 Fax: 01 675 8037 email: specialreports@irishtimes.com | FRIDAY, MARCH 26, 2010

Driving the enterprise to stay out in front

Aside from cutting costs, supply chain management can also increase revenue and attract customers, writes **Peter Cluskey**

Toyota workers at its Takaoka plant, Japan, in 2005: Toyota broke its own rules by becoming increasingly dependent on 'unfamiliar suppliers' Photograph: Junko Kimura/Getty Images

LEADING companies constantly reassess how they do business and where they can find a competitive edge. That's doubly true since the collapse of the global financial system – with the harsh lesson that efficiency is often the difference between success and failure.

As even market leaders grapple with seismic changes in terms of financial volatility, shifting demographics and evolving consumption patterns, the drive to future-proof has become the holy grail of business. Supply chain management (SCM) has emerged as perhaps the most effective means of staying ahead.

"While many western markets are ageing, the reverse is true in emerging markets such as Brazil, India and China," says Martin Christopher, emeritus professor of marketing and logistics at Cranfield School of Management in the UK and author of *Logistics and Supply Chain Management: Creating Value-Adding Networks*.

"The combined impact of altered population densities, the growth of discretionary spending power in the world's emerging markets, and rising transport and energy costs mean the centre of gravity of existing supply chains is changing dramatically.

"As a result, companies that aspire to be leaders in tomorrow's markets need to start now – today – to scope out the supply chain strategies that will work in a marketplace that may be vastly different from the one they serve today."

Closer to home, Edward Sweeney of the National Institute for Transport and Logistics at DIT puts that urgency in the context of the economic maelstrom in which Ireland has found itself for the past two years.

"Recent months have shown some modest signs of economic recovery and a return of business confidence," Sweeney says. "However, after the serious contraction of recent years, there is still a long way to go before sustainable economic growth becomes a reality.

"Stabilising the exchequer finances and creating a functioning banking sector are crucial in this regard. However, it is only through a return to successful export-driven growth that the situation can really be turned around. And supply chain management has a central role to play in achieving this."

Broadly speaking, SCM is about efficiency and therefore cost. Sweeney defines it as "the management of supply chain processes with a view to optimising total supply chain investment and cost, and meeting or exceeding customer service requirements in targeted markets or segments".

In an Irish context, meeting all the elements of Sweeney's definition successfully is particularly important for two key reasons: firstly, Ireland is one of the most open economies in the world; secondly, Ireland is at a disadvantage when it comes to transport costs as a result of its geographical location on the periphery of Europe.

These factors, says Sweeney, have "sharpened the focus of decision-makers on the need for robust approaches to supply chain design and management." Or as Prof Martin Christopher famously put it: "Supply chains compete . . . not companies."

And yet, as we've seen with the shock to Toyota's worldwide dominance in the automotive sector in recent months, even global leaders in SCM and innovation can lose the plot – and become so impressed by their own success the customer slips down the order of priorities.

James Womack, one of the authors of *The Machine That Changed the World*, which looks in detail at Toyota's innovations in manufacturing, traces the origin of the company's current travails back to 2002 – the point at which it set itself the target of raising its global market share from 11 per cent to 15 per cent.

That target, he maintains, was "totally irrelevant to the customer" and "just driven by ego". And interestingly, such rapid expansion, he says, "meant working with a lot of unfamiliar suppliers who didn't have a deep understanding of the Toyota culture".

Essentially, Toyota broke its own SCM rules by becoming increasingly dependent on suppliers with whom it did not have decades-long relationships and by not having enough senior engineers to monitor how effectively those suppliers were working.

The attitude of companies towards their supply chains has changed enormously, says Armin Samali, senior executive leading the Supply Chain Practice at Accenture Ireland.

"Companies used to look at the supply chain predominantly from an efficiency point of view," he says. "Now they look at it as a mechanism to grow revenue, increase competitiveness and attract customers – in addition to reducing costs.

"For example, if you're a sales person, all you care about is how much you sell; not how much it costs to manufacture what you sell. If you're in manufacturing, you only care about manufacturing at the lowest cost; not that you may be making lots of inventory that will end up sitting on a shelf. So the key performance indicators for how individual functions are measured can create a very sub-optimised process for an organisation.

"But if you look at this supply chain holistically, as an end-to-end process, you can substantially reduce the cost base of the organisation – as well as potentially improving its customer service.

"What's needed is full visibility: what does the customer require? On that basis, how much inventory do I need to keep? On that basis, how much do I need to manufacture? On that basis, what do I need to order from my suppliers. If all that is visible across the organisation, it can become a real competitive advantage."

The savings to companies who outsource their supply chains can be substantial, though they vary enormously, typically from 10 per cent to 40 per cent – depending on what's being outsourced.

But while cost and the capacity to innovate are important elements in convincing a company to outsource, what's paramount is quality of service, says Sean Darcy, managing director of global transport and logistics company DSV, whose Irish clients include household names from the car, retail, beverage and DIY sectors.

"Fundamentally, it's about quality of service," he says. "Unless we're delivering and picking products to a very high level of efficiency – 99.9 per cent and, in fact, 100 per cent for some customers – there won't be a conversation about cost because it will be irrelevant. So quality of service undoubtedly comes first."

In terms of the move towards outsourcing to China and the Far East, it's a trend that remains strong, Darcy acknowledges. That long supply chain, he says, poses "a daily challenge" in terms of putting in place the appropriate contracts for shipping, air freight and trucking companies, even for an experienced company with a global reach such as DSV.

And despite a new environmental emphasis on "near sourcing" to Eastern European countries, for instance, Rose McCarthy, supply chain director at SCM company SerCom Solutions – a wholly owned subsidiary of DCC – agrees with Darcy that the move to China and the Far East remains both noticeable and significant.

"I would say that apart from very bulky commodities, such as packaging, or perhaps customised commodities with a very quick time requirement, typically everyone is forced east in the end."

Why companies can no longer survive without this technology

Sophisticated supply chain technology is no longer a luxury – it is a necessity, writes **Barry McCall**


Edward Sweeney of the National Institute for Transport and Logistics

MOST COMPANIES of any reasonable size now have quite sophisticated enterprise resource planning (ERP) systems in place. This powerful technology allows a company to control, with a single system, almost all aspects of production, along with the background support activity such as accounts, payroll, sales and procurement. The chief benefits are increased efficiency and reduced wastage resulting in increased productivity and profitability.

However, there are now moves to extend these systems to cover all aspects of the supply chain from suppliers of raw materials and components to the distribution channel and on to the end customer.

"Almost all retailers, distributors and logistics companies already have the base ERP system in place – that is the engine that is making everything happen," says PwC director David McGee. "The next technological stage is twofold – using the technology to further optimise the supply chain itself and then using data mining techniques to optimise the route network."

Optimising the systems will involve incorporating new technologies such as voice picking, automated warehouses, GPS tracking and radio frequency identification (RFID). These technologies will allow a warehouse to be fully automated with a person using voice commands to get products from shelves with microchips on each pack to let the machinery know it is getting the right product or part.

"Data techniques means applying the skills learned over the last 20 years in analysing sales data and applying that to the supply chain transactions data, identifying opportunities for optimisation and reconfiguration. This leads to analysis of areas such as reverse logistics, optimum warehouse locations and load sharing, even with competitors," adds McGee.

"Organisations have invested in technology solutions to analyse their sales data," he says. "They now need to take those tools and techniques and apply them to the raw data coming off their supply chain ERP system. The resulting insight can lead to changes in cost and overall efficiency."

"SAP is a fabulous system and we work with our customers to customise its outputs to make the information that flows from it easier for them to use when managing the supply chain," says Sercom Solutions group head of business development Kevin Vaughan.

"We take the information feeds from the system and this will tell us what products are moving and what ones aren't. [This] gives everyone full visibility of what is happening at all times. For example, the supplier will know instantly when their customer takes delivery of an order."

"New technologies are perpetually defining the way supply chains evolve and organisations need to understand how technological innovations enable business processes," says Dave Kirwan of Accenture Ireland. "Because data is at the core of these processes, supply chain professionals must be able to analyse it, interpret it and act on it."

Technology is no longer a barrier to improving supply chains, he says. "The rapid advancement in capabilities and affordability of once expensive and leading-edge technologies makes the latest technology innovations relevant to all industries . . . Supply chain management-related technology can bring significant benefits across industries, and support Ireland's move towards greater competitiveness."

According to Edward Sweeney of the National Institute for Transport and Logistics: "The most significant developments have been in the area of extended enterprise systems which attempt to support the inter-firm integration of supply chain processes.

"The biggest challenge relates to a recognition that relatively advanced technology has become a given, and that creating innovative ICT strategies and implementing them superbly is where the potential lies."

The essence of SCM lies in the integration of supply chain processes and data, says Sweeney, and ICT has a key role to play as a facilitator of this integration. "Keeping abreast of the latest technological development is a challenge, particularly for SMEs," he says.

> "New technologies are beginning to shift power away from producers toward consumers, and to transform supply chains

"Armed with this knowledge, matching appropriate technological solutions with the operational priorities of companies is the key. To reap the maximum benefits of technology, it needs to be implemented as part of the wider strategic supply chain re-engineering process, rather than in the tactical and piecemeal fashion which was often the case historically."

Technological developments also have benefits for consumers. According to David McGee, sustainability in terms of a more optimised supply chain means less trucks, less fuel consumption, less pollution, less energy and better availability of products. "Whether in the physical or online world, consumers benefit through enhanced product availability, certainty of supply, increased range availability and reduced environmental impact," he says.

Dave Kirwan agrees. "New technologies are beginning to shift power away from producers toward consumers, and to transform supply chains into demand chains," he says. "Organisations are more demand-driven than ever. Businesses operate now in a much more complex ecosystem, where customers, suppliers, competitors and other producers are increasingly interconnected and interdependent."

New technologies, he says, reduce the cost of products and services through improved supply chain performance and efficiency gains. This contributes to improved response times to changes in consumer tastes and needs; helps new consumers enter the global marketplace; helps gather market information to support tailormade products and services; and reduces production and delivery cycles, improving store stock replenishment.

"Consumers get what they want, when they want it," he says.