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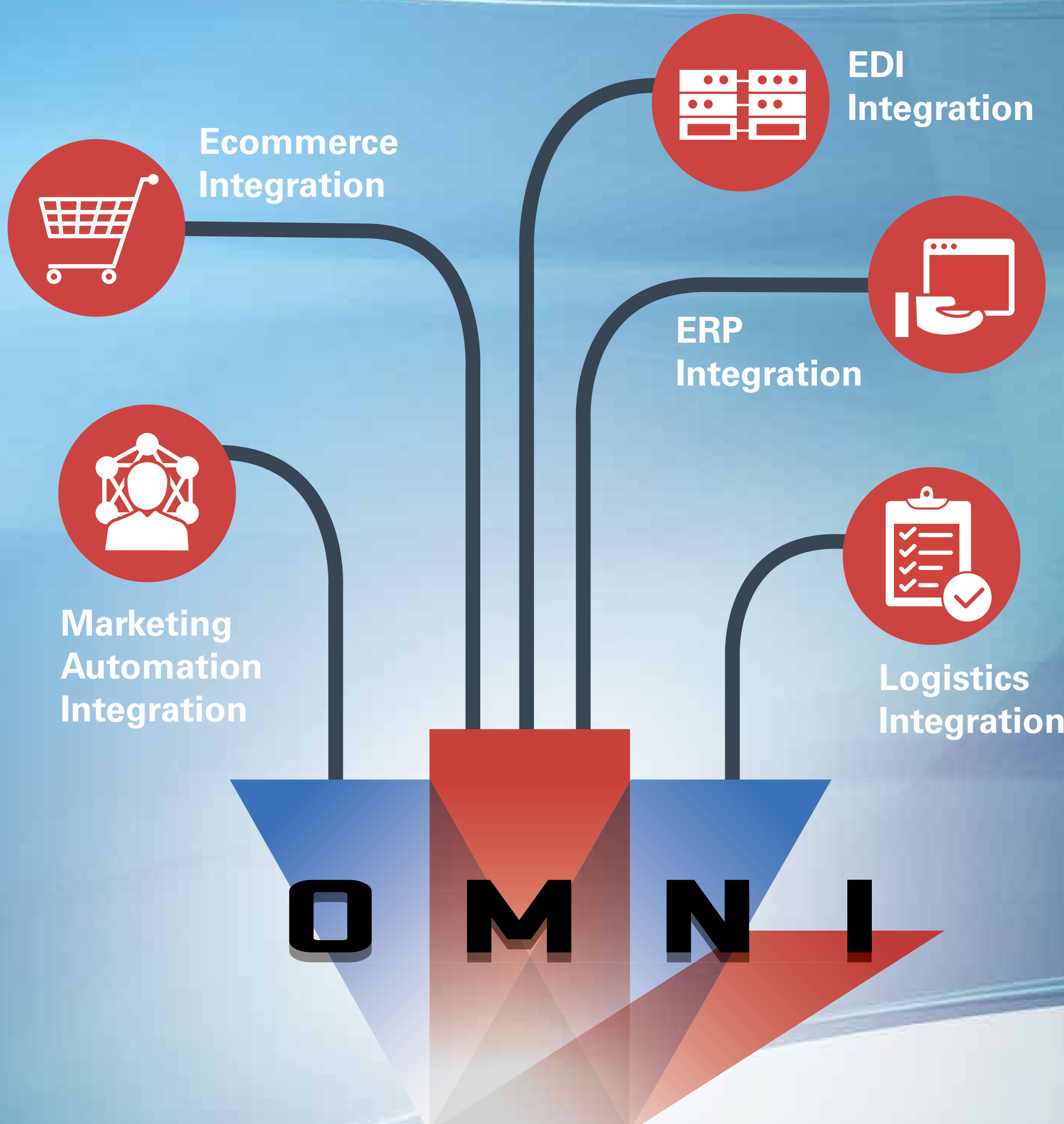
SUPPLY CHAIN STRATEGIES

ONE PLATFORM FOR OMNI-CHANNEL

DATA MOVEMENT



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SUPPLY CHAIN STRATEGIES

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Getty Images

Audi Q3 cars await loading on to ships from a port in Barcelona

Chain reaction can supply demand

An efficient supply chain can add value, enabling a company to develop products and services, as well as enter new markets, in a digital age

OVERVIEW
WILL WATERS

Ten to fifteen years ago, supply chain representation at board level was highly unusual, although this has changed rapidly over the last decade, accelerating with the evolution of e-commerce.

While a study in 2006 by Vlerick Business School indicated that only around a quarter of supply chain leaders were on the boards of businesses, research by Cranfield School of Management and EFESO Consulting found that by 2012 well over half the companies it surveyed globally had placed their most senior supply chain executive on the board of the business unit.

A follow-up study this year is set to update these findings and Professor Alan Waller, vice president for supply chain innovation at EFESO Consulting, expects the figure will now be substantially higher, perhaps 60 to 70 per cent.

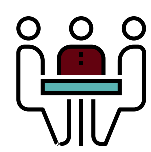
This increased focus within the boardroom on the supply chain is due to a number of developments, but notably globalisation, which has increased the length and complexity of supply chains as well as their relative cost within most businesses, and the development of e-retail, multichannel and omnichannel retailing.

Perry Watts, chief executive for UK and Ireland at DHL Supply Chain, says lean processes in manufacturing and inventory management that demand a highly visible, controlled and agile supply chain have also contributed.

Historically, companies tended to think of supply chain principally as an internal cost, with its function and expertise divided across manufacturing, procurement, merchandising and sales, and the traditional physical logistics activities.

But those departments had priorities that often conflicted, creating cost within the business, Mr Watts notes. Today's supply chain is designed to unite these functions in a coherent, business-wide process.

Companies now tend to think in terms of the extended or end-to-end supply chain, including suppliers and suppliers' suppliers, customers and customers' customers. "So if a company wants to optimise supply chain performance, it has to look at the performance of its suppliers, its channels to market, its logistics service providers, the outsourced manufacturing, near-shoring, far-shoring or whatever it might be," says Professor Waller.



60-70%
of supply chain executives are now on their company's board

Source: EFESO Consulting 2016

And supply chain is also now increasingly seen as something that can add value, not just cost, enabling the company to develop new propositions for the customer, reach into new markets with existing products and into existing markets with new products – a tool for marketing, he says.

Professor Waller stresses the importance of the integration of supply chain with business strategy "and that is the role of the board", he says.

Speed and service levels delivered by a company's supply chain can materially affect sales performance, adds Mr Watts, with the internet encouraging customer experience – good or bad – to be widely communicated.

The success of, and competition from, highly visible and influential companies such as Amazon have also further increased this focus on the supply chain, to the extent that few companies internationally can now fail to recognise its competitive value and importance.

Richard Wilding, professor of supply chain strategy at Cranfield School of Management, says the "revolution" in omnichannel retailing in the last two-and-a-half years means that, in retail, it is now the supply chains of companies that are competing.

"Having the product is like a qualifier, but it is the whole 'service surround' – the demand fulfilment part of the operation – that is becoming increasingly important. And that, of course, is totally supply chain dependent," he says. But companies offering free delivery and returns can haemorrhage money without a supply chain director in the boardroom who truly understands the cost to serve a customer, he notes.

The effects are also spreading beyond retail throughout business, Professor Wilding says, with consumer-facing companies passing on their customers' demands and expectations to their own suppliers, "creating a trickle-up effect within the supply chain".

With business leaders increasingly recognising supply chain management as critical to delivering the business mission and maintaining or achieving competitive advantage, those with the necessary supply chain skillset are increasingly in demand.

On top of the technical skills that were traditionally part of the career track of supply chain professionals, such as inventory management or warehouse management, relational skills – the ability to manage relationships – are a new focus area for Cranfield, as supply chain management becomes more and more about "the management of relationships of all the various stakeholders in order to create value and reduce cost", says Professor Wilding.

Today's supply chain directors also need to think business first, supply chain second; be aligned with corporate strategy; be commercially astute; and demonstrate leadership. International experience is also increasingly important, as is breadth – experience in other parts of the organisation, he notes.

They also need to learn to speak "the language of profit", says Professor Wilding, something that is essential for communications within the C-suite, but also vital to get the necessary buy-in throughout the business, enabling the implementation of the supply chain strategy.

Indeed, the Cranfield-EFESO study found that around half of companies' supply chain strategies are never fully implemented, even when the discipline has representation within the boardroom.

Meanwhile, other organisations may be slower to adapt to a more supply chain- orientated approach. "Each company is different and needs to assess what will maintain its competitive advantage," DHL Supply Chain's Mr Watts concludes.

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Robots are picking for retail winners

Meeting and extending customer expectations relies heavily on the efficiency of automated systems in warehouses where robots speed the accurate delivery of goods

WAREHOUSE AUTOMATION
DAN BARNES

Prototype of a Hitachi dual-arm robot for distribution warehouses, which can autonomously move to a particular shelf and sort products

In the 1984 film *Terminator*, Arnold Schwarzenegger's eponymous robot was a poor shopper, requesting items not yet invented and getting combative with the staff.

In 2016 robots are more tailored to picking through the apples at a supermarket for a customer's weekly shop. However, rather than pottering about the high street, they are found in out-of-town warehouses. On an industrial scale they are transforming the way people buy groceries, which is at the cutting edge of warehouse automation.

"We deliver to our customers in one-hour slots with 95 per cent on-time accuracy and 99 per cent order accuracy," says Paul Clarke, head of technology at online retailer Ocado. "Our whole business is clocked to the beat of that one-hour delivery drum, all the way back to the goods being delivered by our suppliers."

In the 2016 annual report for the material handling industry (MHI), published by consultancy Deloitte and trade association MHI, robotics and automation were cited by most respondents (51 per cent) to research as a technology that can be a source of either disruption or competitive advantage.

The shift to online purchasing for goods of every sort has transformed the operational demands placed upon warehouses. Smaller, more frequent orders are being placed requiring a high level of efficiency and little room for error.

"It leads firms to intensify in the locations they have," says Alan Holland, director for Greater London at property investment and development company Segro. "They are often carrying fast-moving, high-value goods. The challenge is how to intensify to get more productivity from the square footage or more multiple usages from the same location. It throws up some interesting options as to how firms can intensify."

There is some disparity in the capability firms have in automating to intensify. A few big names are leading the field, but many firms are unable to keep pace. In the Deloitte/MHI report, 74 per cent of firms reported that they did not expect to have robotics and automation introduced into their supply chain for six or more years.

"Amazon has created a marketplace where people buy things online and expect it the next day without paying for that service," says Eric Carter, solutions architect at Indigo Software, a warehouse management software provider. "Lots of the small and medium-sized enterprises in this space frankly have processes in the warehouse that look like anarchy masquerading as flexibility."

> By having a lot of robots running around at high speed, you can have the goods delivered to individual warehouse operators

Those firms able to leverage efficiency are using it as a competitive differentiator. The need for speed saw retailer Argos launch a same-day delivery service in October 2015. Amazon, which bought warehouse robotics firm Kiva Systems in 2012 for $775 million to acquire its small and speedy robot inventory, also expanded its service offering in October 2015 to include fresh food deliveries to areas of London.

Richard Kirker, solution manager at software giant SAP, says: "As volumes and fulfilment promises go up, the need for accuracy and efficiency increases, which requires some degree of system support in varying degrees of automation."

Amazon's acquisition of Kiva, which developed autonomous mobile warehouse shelves that could be transported in their entirety, highlights the importance that technology plays in establishing a unique differentiation.

In August 2014, stock analyst James Tracey of broker Redburn downgraded the stock of Ocado from buy to sell, noting he had only identified a single patent that it owned, with much of its technology provided by third parties. He suggested its warehouse capabilities could, therefore, be replicated by other firms and the firm's share price subsequently fell.

Ocado reported it had 14 patents pending at the time and the firm was gearing up to revolutionise its warehouse technology in 2015. By the time it announced its annual results in February 2016, it had filed 73 patent applications.

"As a disruptor in the retail sector, there was no template for building our first automated warehouse back in 2002," says Ocado's Mr Clarke. "Our business is all about making the process of shopping for groceries online as simple and convenient as possible for our customers.

"But that simplicity belies the truth about the level of complexity, data, algorithms, machine-learning and software that lie below the surface of the huge technology iceberg that powers our business. Almost all this Aladdin's cave of technology and software is built in-house by our own engineers."

The firm originally wrote all its software in-house, but bought hardware from materials handling equipment suppliers that had to be adapted to suit the purpose of grocery fulfilment, which is typically more demanding than other warehousing requirements. It then upgraded those systems as specialist technology became available and ultimately designed the technology itself.

It worked with product design and development firm Cambridge Consultants to develop a 4G wireless platform that could control 1,000 robots working within 50 metres of a base station.

"The concept was to create a system which had stacks of crates, one on top of the other, put within a metal grid structure and with a swarm of robots moving around on the upper surface of that grid to go and fetch items," says Tim Ensor, head of connected devices at Cambridge Consultants. "By having a lot of robots running around at high speed, you can have the goods delivered to individual warehouse operators."

It is not only the hardware that firms are getting smarter at. By automating the management process and identification of problems, firms can begin to apply the operators to tackle issues that are beyond machines so automation is applied most effectively.

"We believe there is great benefit in automating the exceptions management process," says Indigo Software's Mr Carter. "We see 2,000 orders picked on a daily basis in numerous sites of our network and half a dozen of those will have a problem. There might be a stock issue, an individual picker issue or a break in the process where the front office point-of-sale system and the back-office system have been allowed to get out of step for whatever reason."

With orders accepted via every channel, from voice to online portals, and across wholesale and retail businesses, and with suppliers providing the other side of the business with data along the same basis, the systems needed to control the automated process must be incredibly robust.

Shane Finlay, head of digital for retail in the UK and Ireland at SAP, says: "With the latest technology innovations retailers can see goods across all touchpoints and assemble orders from multiple locations. For instance, Walmart tracks goods in transit, across multiple time zones, during peak trading events like Black Friday, in order to monitor demand and reroute goods accordingly. This is something Amazon and eBay have been doing for years, but has been adopted by bricks-and-mortar businesses."

The cost of investing in technology, particularly as some firms see a widening gap between their own capabilities and those that have already invested in digital automation, means there is likely to be consolidation of one sort or another. While competition will prevent partnerships between some players – and most firms have pushed beyond their initial product range – the requirement for a business model that scales, but duplicates costs, will mean utility models of warehousing and delivery are likely to be considered.

Mr Carter cites a number of providers in London that supply hotels and restaurants in the centre of the capital with very high-end products, and are consolidating their delivery through third parties.

He says: "There is an opportunity for not just one player in the market, but multiple players to invest in a completely new way of managing their supply chain."

This has already begun to take root in some areas of business. Ocado began providing facilities for supermarket Morrisons in 2014 and this model is expected to deliver further growth for the firm, offering diversity in revenue stream by tapping into a different market share. Mr Clarke argues that his firm's two existing grocery fulfilment centres are the largest and most evolved of their kind in the world.

"We are now developing the Ocado Smart Platform to provide large bricks-and-mortar grocery retailers around the world with a shortcut to moving online, just as we did for Morrisons in 2014," he says. "This has required us to develop our own highly modular and scalable hardware platform for building these automated facilities. So now we are leading the evolution of the all the technology, software and hardware, ourselves."

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5 SUPPLY CHAIN TECHNOLOGIES TO WATCH

01 WIRELESS AND MOBILE TECH

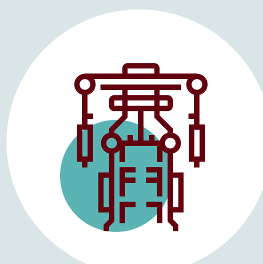
The ubiquity of mobile handsets creates a range control and data options for warehouse operators, which would have required specialist hardware several years ago. In addition the capacity to control hardware has been drastically improved within the warehouse.

02 AUTONOMOUS VEHICLES

Mechanising the movement of items offers a considerable reduction in error rate and cost. This encompasses not only land-based vehicles but drones, which Amazon in particular has been championing as the delivery mechanisms of the future.

03 SMARTER ROBOTICS

With more flexible and mobile picking and sorting mechanisms, warehouses can reduce the level of manual intervention needed. Designing the movement paths for picking items efficiently can cut the time taken on each order by seconds, creating a highly scalable infrastructure.



04 THE INTERNET OF THINGS

Putting more devices online gives greater potential for automation and management. Their interconnectivity means that tracking where, what and how a piece of equipment or a package is doing can create a more valuable picture of a firm's operations and efficiency.

05 IMPACT OF ANALYTICS

From the Tesco Club Card to Amazon's targeted recommendations, the retail space has long dominated the crunching of customer data to improve sales and customer service levels. When combined with warehouse automation, firms can further improve service.

Argos employee monitors goods on an automated production line at the retailer's distribution centre in Staffordshire

Hi-tech software to win back customers

Consumers have high expectations around product availability and the online experience so retailers must develop an efficient, visible supply chain to meet these needs

DELIVERY

LEO KING

Amazon's efficiency and scale have made it such a force that competing has not been an easy task for even the largest retailers.

The vast marketplace company has significantly heightened what web shoppers demand, in terms of product availability and ease of purchase, and has a powerful position in what Capgemini and online retail industry association IMRG have calculated as a £114-billion UK online market.

Amazon's slick warehouse processes, stock control and delivery have given it a major edge. Customers want regular updates on their orders and the company does exactly that. Recently, it stepped up its game by offering same-day delivery on many products.

The sophistication of even Amazon's largest competitors is much more mixed. In the lead up to Christmas, 48 per cent of online shoppers said their deliveries from various companies were late or never arrived, according to research by software firms JDA and Centiro. The frustration is driving them to take their business elsewhere.

Retailers are turning to sophisticated technology in order to tackle these problems and regain a foothold against their rivals. Supply chain modelling tools allow them to test different supply chain set-ups, and to optimise for fast-changing customer and manufacturer expectations.

Among the more advanced companies, Argos and Homebase, which have complex supply chains consisting of tens of thousands of products, use such tools to test supply and distribution modifications before they roll them out.

Many businesses combine this modelling with demand forecasting software, in order to predict when stock is needed, and to cut their dead inventory. Walmart, the world's largest retailer, has invested heavily here, improving its forecasting and even analysing social media so it can hold more relevant product levels in each store.

At the same time, the supermarket chain has used the systems to reduce its out-of-stock products in store by 16 per cent. This is particularly important given that an unavailability of products is the top reason for losing customers at nearly half of bricks-and-mortar retailers, according to research by Planet Retail and Wipro.

Careful management of the supply chain is also highly important in fashion, where product lines are switched rapidly. At online retailer Asos, where annual sales crossed the £1-billion mark last year, a full suite of customer demand forecasting, inventory tracking and sales software is being rolled out to support international expansion.

Meanwhile, clothes retailer Zara predicts demand at each store to inform its own production and to line up twice-weekly shop deliveries. By stocking limited quantities of each product in store, it has the ability simultaneously to maintain an image of exclusivity and frequently switch to new clothing lines.

All of this planning only represents half the high-tech change. During actual manufacturing and distribution, real-time tracking of goods is essential for businesses in knowing where their products are. Source tagging, in which an item is fitted with an electronic label or radio-frequency identification tag, feeds into software that shows accurate levels of inventory.

Food company Del Monte has implemented the technology for a real-time view of products across its entire supply chain, through air, sea and road networks. It also uses the data to inform modelling of future distribution.

> Companies must consider investing in supply chain modelling, forecasting, tracking and improved delivery wherever they recognise realistic competitive gain

For retailers, similar tracking initiatives exist, but they become more complex when both stores and online operations are involved. Research by JDA and PwC found globally three- quarters of chains still run the operations separately, hindering their total view of stock. Companies such as John Lewis and Home Depot have merged the two.

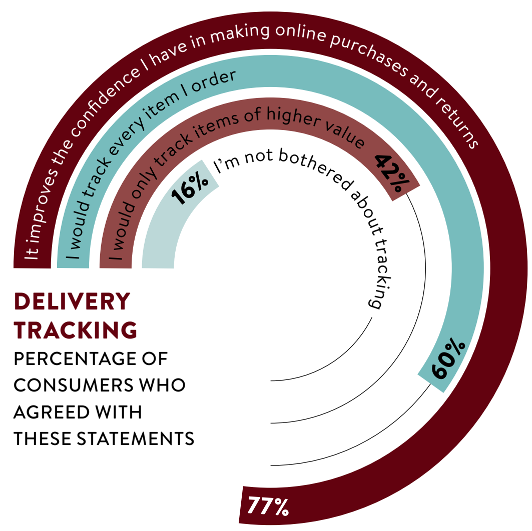
The need for efficient product movement to stores and customers' homes is prompting additional investment, and the delivery business itself is improving this transport "last mile". UPS has invested heavily to provide exact information on where every parcel is on a journey and DHL is using artificial intelligence to improve its processes. Even Google has its own fast-delivery service in parts of the United States.

Online retailers are experimenting with offering their own forms of getting products to customers. Argos draws from its new end-to-end sophistication – warehouse automation, forecasting and a real-time visibility of stock – to offer same and next-day delivery.

Not all store chains will aim to steal Amazon's market share, but many would be wise to ask themselves how important it is to compete with each other using fast delivery. If they pursue this route, according to Planet Retail, they need to have well-placed warehouses and stores, smart product tracking, and to consider working with shuttle delivery firms and local locker companies to draw closer to customers.

Whatever the size of retailer, having access to real-time actionable information across their entire supply chain creates the basis for more flexible, reliable and integrated web and store services, and it helps keep customers in the loop.

In order to exist alongside firms with the scale of Amazon and Walmart, companies must consider investing in supply chain modelling, forecasting, tracking and improved delivery wherever they recognise realistic competitive gain. Their sales will depend on it.



Source: Royal Mail 2015

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COMMERCIAL FEATURE

BIG DATA, BIG DECISIONS: GETTING IT RIGHT

Over the last few years, interest in supply chain analytics has increased among manufacturers and logistics firms. But few are reaping the benefits of this important element of the big data revolution. So what is the hidden potential and how can organisations exploit it?

QUINTIQ

Big data analytics has permeated every aspect of business life with all sectors affected by a technology that is revolutionising the way in which companies understand their customers' behaviour and adapt their operations accordingly. The market intelligence service IDC forecasts the big data technology and services market growing at a CAGR of 23.1 per cent between 2014 and 2019 with annual spending reaching $48.6 billion in 2019.

According to research from the Massachusetts Institute of Technology, companies that use it enjoy productivity and profitability that is 5 to 6 per cent higher than that of their peers.

For many, though, the way big data is being used means it still isn't providing business leaders with all the insights and useful information that it could do. A report by Bain & Company found that only 4 per cent of companies are using it properly.

Certainly this is true for many players managing complex supply chains, according to Rob van Egmond, chief executive of Quintiq, a leading provider of supply chain planning and optimisation software. He has encountered too many business leaders who are looking at analytics back to front, focussing on the huge quantities of data available rather than thinking about what they want to achieve with it.

"We're educating companies, helping them to understand that the key to success is not about processing, or even analysing, large volumes of data," he says. "Business leaders need to start using analytics technology not just to learn, see or understand, but to make better decisions. We say that it's not about big data; it's about big decisions. When you focus on overcoming business challenges, you can analyse the relevant data to produce the necessary insights, giving your decisions a much stronger foundation.

> "We say that it's not about big data; it's about big decisions

"Used properly, analytics allows you to model what is actually happening in the supply chain. Real-time operational data allows you to make decisions and plans based on the current reality, rather than just the assumptions or observations of people within the company."

This holistic overview allows for better decision-making. For example, managers can decide whether to accept an order or not and avoid either taking one that the company cannot fulfil, thereby damaging its reputation, or refusing one which it could, in fact, handle – a decision that could result in lost revenue.

Very importantly, it can also be used to forecast demand and other factors. "Supply chain management is all about making predictions and then making the right decisions based on what you've predicted," says Mr van Egmond. "Getting this right means that you'll be able to run a lean and effective organisation."

In a recent survey of Quintiq's customers, nearly three quarters of respondents agreed that supply chain analytics' value lies in its ability to deliver increasingly accurate demand forecasts. Those forecasts are accurate because of a deep, wide understanding of the data, and it's increasingly accurate thanks to the application of machine-learning, which increases the system's understanding over time.

As "now culture" becomes the norm, customers expect to be able to place an order in the morning and receive their goods that same day. Mr van Egmond points to how supply chain analytics, combined with optimisation, is improving the reliability and profitability of same-day delivery for Quintiq's customers in retail.

"For same-day delivery to be good business, retailers need to understand precisely when and where demand will come from and how they can meet it," he says. "You can then steer your customer – with dynamic pricing – towards that time of day at which you know that you can deliver efficiently on an optimal route. Supply chain analytics combined with real-time optimisation is essential as the supply chain speeds up and there's less time for discussion or typical human decision-making processes."

Founded in 1997 by five computer programmers, Quintiq has grown rapidly and today global organisations across 80 countries use the company's services to plan and optimise their workforce, logistics and production. In postal logistics, it supports the distribution of more than a million parcels worldwide every day.

A key element of its philosophy is Quintiq's single platform. "We've seen too many products in the analytics sector that either focus on the manufacturing or the logistics and leave it up to the company to somehow integrate the two," says Mr van Egmond. Built to fit any business model, the Quintiq platform covers both manufacturing and logistics, supporting business leaders in making decisions that benefit the business as a whole.

RIGHT
Rob van Egmond
Chief executive
Quintiq

Exciting new developments include the use of artificial intelligence and machine-learning, both of which are offering continuous improvements on the shop floor as well as predictions into what might happen to a supply chain in the future. With analytics, companies will soon offer differential and thus individualised pricing, Mr van Egmond believes.

"When you book a flight, you notice a variation in prices and this, of course, depends on demand. The same idea can also offer real advantages to businesses," he says. "For instance, whether it's manufacturing or logistics, you can reduce your price when demand is low and increase it when demand picks up. You might offer a customer a lower price if they can wait a few days for their order to be delivered because you know you'll have capacity to spare then. But you can only do this if you have an accurate view of your supply chain and know how the market is going to behave."

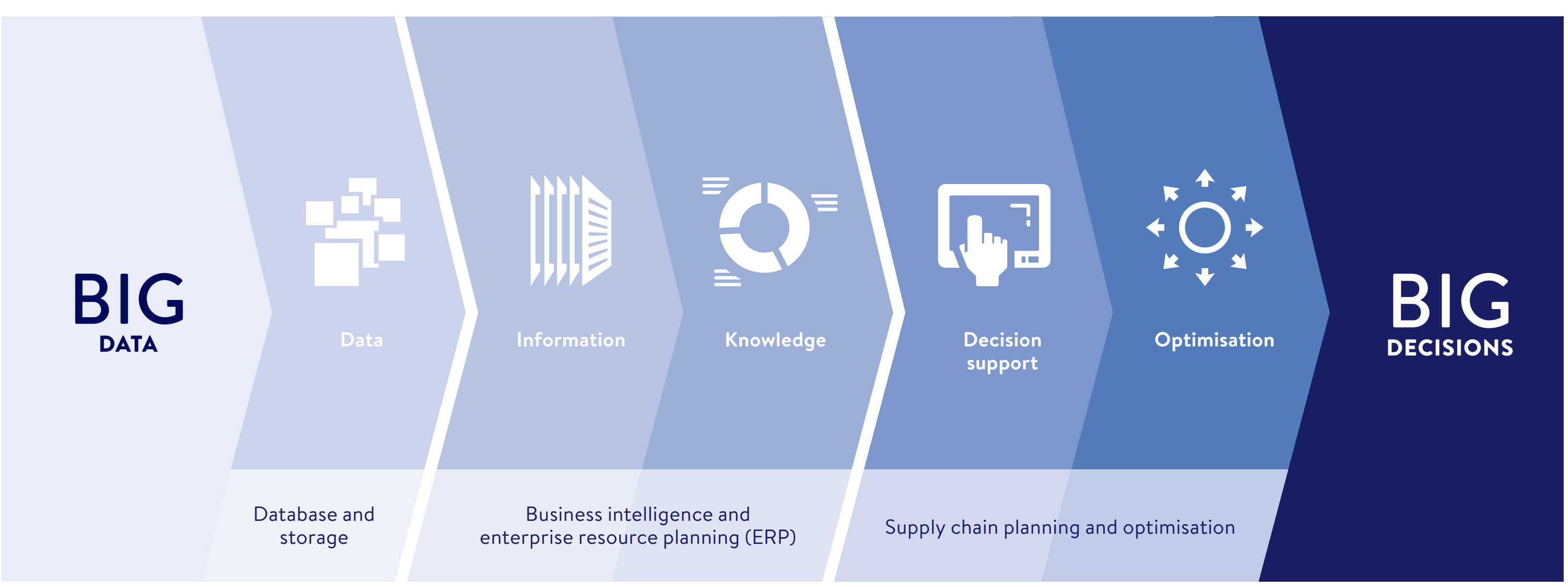
Not only does effective supply chain analytics offer significant competitive advantages, but implementing it is cheaper and faster than many enterprise resource planning suites. The majority of customers can start by simply looking at the bottlenecks in their supply chain and benefit by initially focusing resources on these, says Mr van Egmond. The benefits, he explains, can be realised within a two-to-three-month time frame.

"We find that with a lot of customers, these savings can then be used to finance future investment and improvements," he says. "Used correctly, supply chain management analytics offers companies huge benefits both now – and in the future."

For more information please visit www.quintiq.com

DECISION VALUE SPECTRUM

Source: Quintiq



The Decision Value Spectrum illustrates the journey from big data to big decisions. Starting from static data storage, you then employ business intelligence or ERP to turn meaningless data into information and knowledge. As you move into decision support and real-time optimisation with a supply chain planning and optimisation solution, you get the insights necessary to make big decisions

Serving up a fresh new delivery of ideas

Supply chain supremo Roger Hassan opens the lid on HelloFresh and the success of the food box company that delivers fine dining to customers' doors

INTERVIEW
EDWIN SMITH

Roger Hassan reels off the factors that make managing a supply chain particularly difficult – high growth, short shelf life, short lead times, high volatility – and immediately it becomes apparent that he has his work cut out. Because he and his employers, the fast-growing food delivery startup HelloFresh, have to deal with them all.

Not that this has hampered the company's progress. Since it was founded in 2011, the Berlin-based business has been backed by Rocket Internet, the venture builder run by the Samwer brothers, and last year closed a funding round that valued it at €2.6 billion, securing its status as one of Europe's "unicorns".

As you would expect, with numbers like that, growth is strong. Half-yearly results published in 2015 showed the number of meals served had mushroomed by 355 per cent to 18.2 million and revenue was up by 408 per cent to €112.5 million, compared with the equivalent six-month period in the previous year. The company says it is on track to record annual revenues of €566 million this year.

Partnerships with high-profile chefs such as Jamie Oliver across the company's seven markets have helped to boost its profile. But primarily, Mr Hassan, who is vice president of global supply chain, puts the success of HelloFresh down to the fundamental promise the company makes to provide its customers with "the opportunity to enjoy wholesome home-cooked meals with no planning, no shopping and no hassle required". Something it does through a "soft subscription" model that sees it send boxes of high-quality ingredients accompanied with recipe cards, direct to people's front doors.

ROGER HASSAN
VICE PRESIDENT
GLOBAL SUPPLY CHAIN, **HELLOFRESH**

> So if we order 10,000 red peppers, we need 10,000 red peppers – we don't want 9,999, we don't need 10,001

The company's website says: "Behind the scenes, a huge data-driven technology platform puts us in the prime position for disrupting the food supply chain and for fundamentally changing the way consumers shop for food." This, for Mr Hassan, was the main draw and the reason he joined the business in 2014 with responsibility for overseeing the global supply chain.

"In my teens I worked at the very bottom level in packing houses," he says. "That ignited my interest in things that go in behind the scenes and all of the work that has to go on before the point of sale."

From there he took up posts at Next, Sainsbury's "in the very early days of their e-commerce solutions, working on their first dark store – with a limited amount of success" and the Hovis division of Premier Foods, "which was a great education – it's a highly perishable product with short lead times so if you don't get it right, it goes in the bin".

There was a stint at an international consulting company based in the Netherlands before he returned home to work at Royal Mail. "This was just around the time that they were focusing on privatisation," says Mr Hassan. "So the task was to turn some of the most challenging parts of the business from loss making to profitable. The rise of e-commerce and home delivery channels were definitely making their mark but, when I joined, they were still convinced they were a letters business doing a bit of parcels.

"By the end of my two-and-a-half years there, they had become a parcels business doing a bit of letters. That was increasing revenue, but it was also increasing strain on the network that wasn't designed to carry that product."

Then, in 2014, Mr Hassan was approached by Thomas Griesel, one of HelloFresh's two co-founders, who persuaded him to take on a new challenge. "I'd spent a number of years in existing companies trying to re-engineer existing processes," says Mr Hassan. "With Royal Mail I'd even gone so far as being part of a group of people who had come in to shut down parts of the business, close down sites and rationalise the network. So being given the opportunity to take a blank piece of paper and build something, where you could be opening and creating something, that was a significant draw."

Now he says the supply chain he has had helped to shape is built on the foundation of the company's recipes. They are carefully engineered to be nutritious, easy to make at home and, crucially, to suit the tastes of each market. But because of the company's business model, they must also be made up of elements that can be procured, assembled and shipped at scale. This is where the company's suppliers play a crucial role.

Mr Hassan explains that the relationships that HelloFresh has with its suppliers differs significantly from the equivalent arrangements between producers and larger, or more traditional, retailers. "If we were an Ocado and making an order for red peppers, for example, we'd order a certain number of kilos or


HelloFresh

5 SUPPLY CHAIN DISASTERS

01 YODEL'S BLACK FRIDAY
The parcel delivery company was thrown into chaos in 2014 when higher than anticipated order volumes caused by Black Friday overwhelmed its warehouses. The backlog meant Yodel had to suspend the pick-up of new orders from its clients and consumers' deliveries were delayed by up to three days in the lead up to Christmas.

02 TARGET MISSES THE MARK
A pink Barbie-branded toy car for toddlers caused a pile-up in Target's supply chain when the American retailer embarked on its first international expansion in 2013. Mismatched barcodes were among the failings that led to the car and other products causing warehouse backlogs which left empty shelves in many of Target's 124 Canadian stores.

03 TURBULENCE FOR BOEING
By changing the assembly process and the supply chain at the same time, Boeing hoped it could reduce development time of its 787 Dreamliner from four to six years and knock down costs from $10 billion to $6 billion. However, the move delayed the project by three years – it eventually came to market in 2011 – and resulted in billions of dollars in extra costs.

04 HERSHEY'S HALLOWEEN NIGHTMARE
Concerns arose in September 1999 when it emerged that new order-taking and distribution systems would prevent the candy maker from delivering on orders worth $100 million during one of its key times of the year. This preceded a 25 per cent decline in the company's share price over the course of just a few months.

05 DENVER AIRPORT'S BAGGAGE
A new, highly automated, baggage handling system was beset with errors as underground tunnels that would house the conveyors were built before the main contractor had been appointed. Tracks were jammed, baggage delivered to the wrong destination or damaged in transit. A public relations fiasco followed and the system was completely closed down in 2005.


HelloFresh

pallets. But when HelloFresh places and order with a supplier, we know exactly how many we need because that's the number that has already been ordered and paid for by our customers," he says.

"So if we order 10,000 red peppers, we need 10,000 red peppers – we don't want 9,999, we don't need 10,001. That can be very hard for our suppliers to get their heads round."

But for those suppliers that do manage to attune themselves with the HelloFresh business model, the benefits are clear. The company places a provisional order with its suppliers ten weeks ahead of delivery. The actual quantities required may vary by 20 per cent from this initial estimate, but suppliers will be told exactly how much the order is for one week before it's due.

For small companies who would either have to guesstimate the rate of their growth or heavily discount their wares in order to get a foothold with large, powerful retailers, the benefits are clear. "We're working more on a partnership basis, rather than a transactional one," says Mr Hassan. "That allows us to work in a much more collaborative way – and it's the only way we can stay flexible and meet the demands of our consumers."

The next stage in the process is production, which Mr Hassan says has more in common with an automotive assembly line than the type of "picking" process generally employed by the online arm of supermarkets. Ingredients are packed into boxes and prepared for delivery – the final stage in the supply chain.

In the Netherlands, a dense population and a relatively small area combine to mean the company is able to complete its orders with its own fleet of vehicles. However, in a larger and more sparsely populated market, like some parts of the United States, HelloFresh calls on delivery companies such as UPS to help with shipping.

Mr Hassan says that the relative simplicity of the HelloFresh supply chain, which basically includes three steps – growing, production and delivery – gives the company a huge advantage over supermarkets that might take eight to ten days and incur a significant amount of wastage in getting its products from farm to fork. But that doesn't mean the company is about to rest on its laurels.

Up until now, one of the strengths of HelloFresh has been the discovery element of the customer experience. "People get stuck in a rut," he says. "The statistics are something like the average UK household has access to 6,500 recipes, but recycles the same 11 week on week. Part of what our consumers like is that they don't have to think about it. But that's not great for every consumer."

As a result, the business is taking steps to build a greater degree of customisation into its platform, allowing those who enjoy the lucky-dip approach to continue doing so, but also offering the chance to set a "taste profile" or avoid certain ingredients altogether.

Of course, this means the way the supply chain works has to change. "Every decision we make in supply chain has to be with an eye on the future. We're always looking for solutions that are as flexible as possible that don't require huge amounts of fixed infrastructure, inflated costs or overheads, so we can modify and adapt alongside the innovation of the product," says Mr Hassan.

> We're always looking for solutions that are as flexible as possible that don't require huge amounts of fixed infrastructure, inflated costs or overheads

Looking to the future, he doesn't identify any "bonkers or unusual game-changers" that will transform the HelloFresh supply chain. However, he does single out delivery and the way companies such as Deliveroo and Instacart are refining the "last mile" part of the supply chain.

"There's a lot of interesting innovation," he says. "People used to just think of supply chain logistics as a burden on an organisation – a necessary evil. But we don't think about it like that. If you do it well, you can add to the customer experience and do something other people aren't – that gives you an advantage."

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COMMERCIAL FEATURE

SUPPLY CHAIN CONNECTIVITY: TOGETHER IS SMART

Unlike Greta Garbo, no supply chain manager wants to be alone. They need to be informed, connected and accessible – in every way, anywhere, all the time. Together is good

C.H. ROBINSON
»Accelerate Your Advantage

Driving desired levels of supply chain connectivity in the digital age is data – big data. As evidenced in annual *Third-Party Logistics Study*, both shippers (97 per cent) and third-party logistics providers or 3PLs (93 per cent) feel strongly that improved, data-driven decision-making is essential to future success.

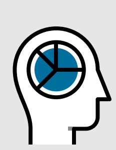
THE DATA

Arguably, better data has long driven incremental improvements in reliability, efficiency and reporting. However, for supply chain management, big data is a different beast, explains Jeroen Eijsink, European president at leading freight forwarder C.H. Robinson. "When business leaders or data management professionals talk about big data, they often lay the emphasis on volume, but there is so much more to it than that," says Mr Eijsink.

"Big data impacts our reaction time, and supports greater agility and integration. It can unlock significant value through transparency and deliver precisely tailored services. Its sophisticated analytics substantially improve decision-making, minimise risks and unearth hidden insights. In the right hands and minds, big data isn't just big, it's clever."

For supply chain management, the main benefit of big data analytics is customer service. Even the best managers cannot hope to keep up with all the sources of their goods, much less factor in best prices, locations and shipping speeds, while staying abreast of standard needs and special orders. The C.H. Robinson internally developed, global technology platform Navisphere® provides that information in an easy-to-use format.

84% of executives working in supply chain or logistics think that big data will have a significant impact on their company's performance



2in3 supply chain executives are currently implementing or considering big data projects

THE PLATFORM

Navisphere® is a single-instance global platform. That means everyone, everywhere is working on the same file at the same time. It doesn't matter how or where freight is being moved, in any or all of more than 100 countries. Everything is on one system and visibility is global.

By merging and optimising delivery networks, Navisphere® can translate this mass of global data into actionable intelligence. Its analytics offer the advantage of being able to assess all shipping modes and regions in a single tool – no more stitching together numbers and trying to compare different metrics.

Furthermore, because Navisphere® is able to manage any kind of shipment in all geographies, there are no boundaries to the savings strategies possible for customers. Some of the best logisticians in the world are on the platform to identify opportunities for supply chain improvement.

With Navisphere®, planning and routing, pick-up and delivery dates, real-time tracking and tracing of inventory in motion are just the beginning. Mr Eijsink says: "With greater visibility, you'll see how different events affect your supply chain. You'll know the cost of pallets, unloading and detention. When a truck is late because the product isn't ready, you'll identify an efficiency issue to correct. You'll know when delays result in expedited shipping. This kind of knowledge at your fingertips gives you the competitive advantage you need."

THE PEOPLE

Of course, without the right human resource in the equation, data and systems alone cannot guarantee quality of service.

Every day, more than 110,000 companies around the world connect to the C.H. Robinson network, generating more than 6.5 million customer interactions, whether via e-mail, phone, text or Instant Messenger. To service that level of connectivity calls for motivated, multilingual and customer-focused employees, who can apply local knowledge and expertise to every transport challenge, and build strong, personalised relationships.

Joined-up people, make for joined-up thinking. Mr Eijsink concludes: "We believe in the mantra 'Let smart people take smart decisions' and Navisphere® is here to help us help you. We are in supply chain management together – and together is smart."

For more information please visit www.chrobinson.com or email info-europe@chrobinson.com

Map the supply chain and wat

Managing the many risk factors that have the potential to disrupt a supply chain is no easy task, but a strategic ap

RISK MANAGEMENT
JIM McCLELLAND

Heading into the British summer, record highs might be fun for weather forecasts, but not for risk ratings. The bad news for supply chains is that 2016 has started historically badly.

Latest numbers from the Chartered Institute of Procurement & Supply (CIPS) show the level of international supply chain risk rising to 79.8, which is the joint highest recorded figure for a first quarter since the *CIPS Risk Index* launched in 1995.

Repeated natural disasters lie behind this unwanted upward trend and supply chain management is becoming increasingly aware of climate resilience scenarios. Environmental risks range from sudden disruption via extreme weather events, to creeping effects of soil erosion. Regulatory compliance and corporate responsibility targets are also considerations.

Managing these multiple risk factors starts with collecting the necessary data, says Dexter Galvin, head of the Carbon Disclosure Project's supply chain programme. "We've seen a rapid rise in buyers tackling environmental risk in supply chains. Through CDP, 89 companies with combined annual spend of over $2.7 trillion are requesting environmental data from suppliers. Many are using their spending power to drive direct action. For example, L'Oréal have demanded their top 300 suppliers have emissions reductions targets in place by 2020."

Rising equally rapidly up the risk agenda are ethical concerns. Heightened investor, activist, media and public scrutiny is focusing hard on human rights issues, with length and complexity of supply chains no excuse.

The food and fashion industries have already been put on notice, following high-profile supply chain management failures, including the market-cratering horsemeat scandal in Europe and the fatal Rana Plaza textile factory collapse in Bangladesh. For the UK, the prime catalyst of ethical change at present is a landmark piece of legislation – the Modern Slavery Act 2015. Its introduction in England and Wales last October means any business with turnover greater than £36 million is now required by law to make an annual declaration.

The risk is real. The 2016 *Global Slavery Index* from the Walk Free Foundation estimates 45.8 million people in modern slavery across 167 countries worldwide. According to the International Labour Organization, some 21 million are thought to be victims of forced labour operations.

Research conducted jointly by the Ashridge Centre for Business and Sustainability at Hult International Business School and the Ethical Trading Initiative found 71 per cent of companies admit likelihood of modern slavery in their supply chains.

For organisations tackling this supply chain pandemic, the temperature is very much set at the top, according to Quintin Lake, research fellow at Hult International Business School and co-author of the Ashridge slavery report. "Addressing modern slavery is a leadership issue," he says. "There was clear evidence that companies with leaders, who provide strong vision and support, as well as a pathway of accountability, are able to make more progress than those who do not."

While reputational risk is a clear corporate driver in addressing modern slavery, respondents were still keen to place humans first and centre in the human rights debate, says Mr Lake. "Risk to their reputations was agreed by 92 per cent of retailers and suppliers surveyed as the main factor driving them, though companies interviewed all felt addressing risk to workers was significant too. Most felt that mitigating risks to workers was ultimately mitigating risk to the business," he says.

Often described as game-changing, the Modern Slavery Act has been the subject of strong media and industry attention in the UK. There still appears though to be a degree of ignorance and inactivity. The primary reason for apparent hesitation and inertia on the part of business has simply been shock, suggests Professor Jacqueline Glass, chair of architecture and sustainable construction at Loughborough University, and leader of the Action Programme on Responsible and Ethical Sourcing.

"Companies were just not ready to react and mobilise appropriately when the legislation took hold. It wasn't in their management systems, their processes weren't ready to be aligned and their people weren't trained," she says. "It's been like a shock reverberating through company structures and people, but the pace is picking up now."

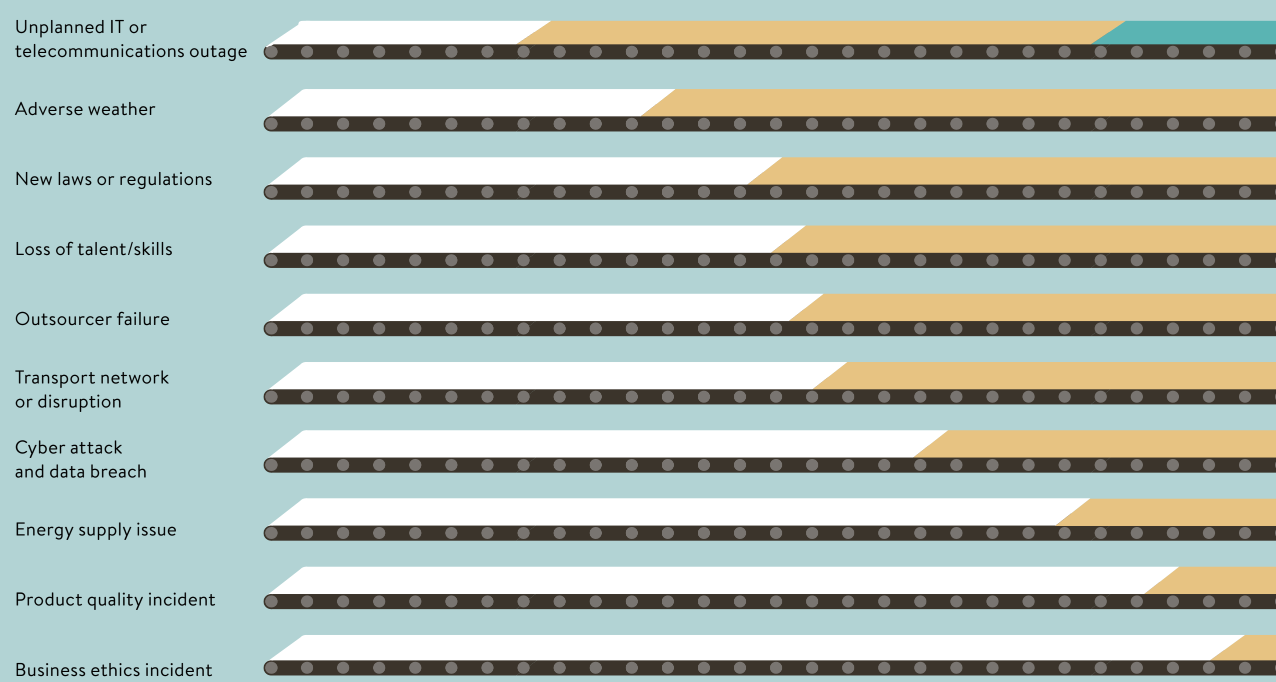
A new international standard for sustainable procurement, ISO 20400, is due to be published in 2017 and there is further cause for optimism going forward, according to Shaun McCarthy, director of action sustainability and former chairman of Olympic assurance body, the Commission for a Sustainable London 2012.

"I am also very pleased to see the Institute of Human Rights and Business has taken up the challenge by promoting a permanent, global body to provide oversight to these issues. Although London 2012 did some great work in this area, they did not

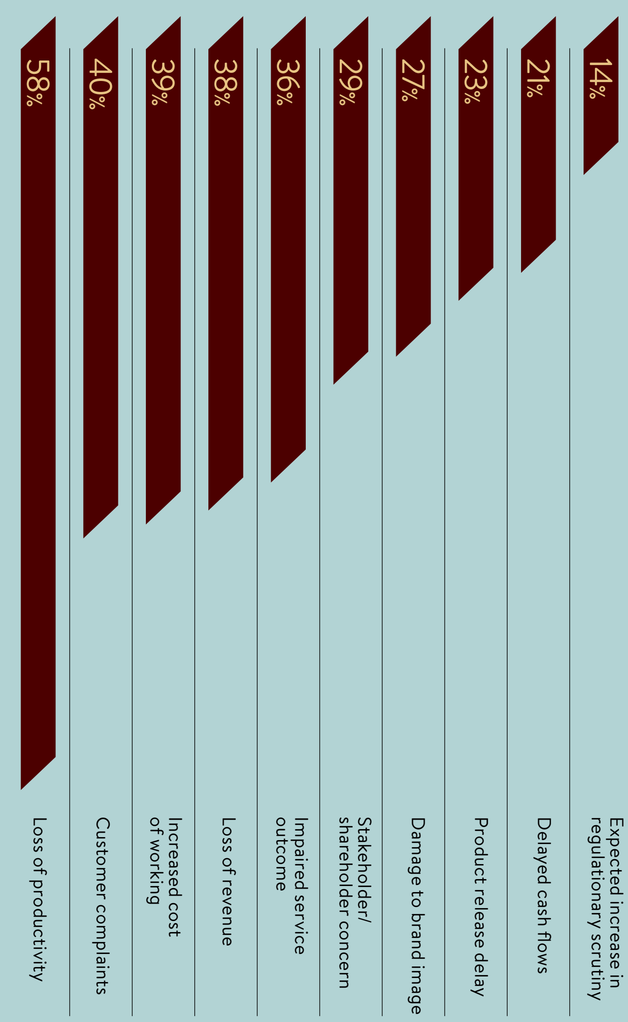
RISKY BUSINESS: IDENTIFYING DISRUPTI

TOP 10 CAUSES AND IMPACTS OF SUPPLY CHAIN DISRUPTION

Relative proportion of survey respondents



TOP 10 CONSEQUENCES OF SUPPLY CHAIN DISRUPTION



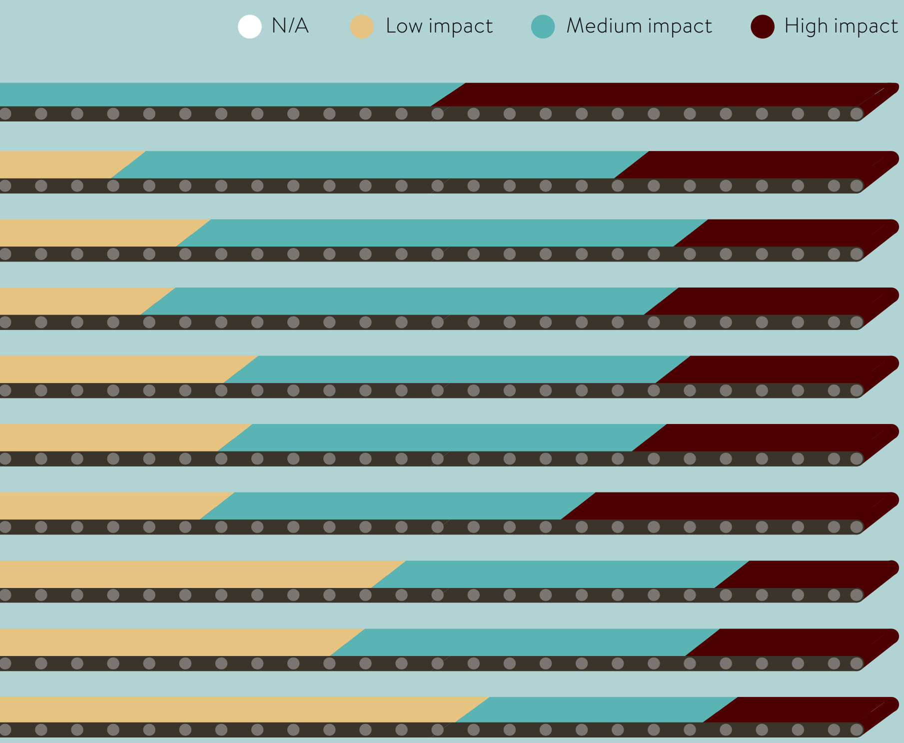
PREFERRED RISK MITIGATION STRATEGIES

Source: Business Continuity Institute 2015

ch out for turns in the road

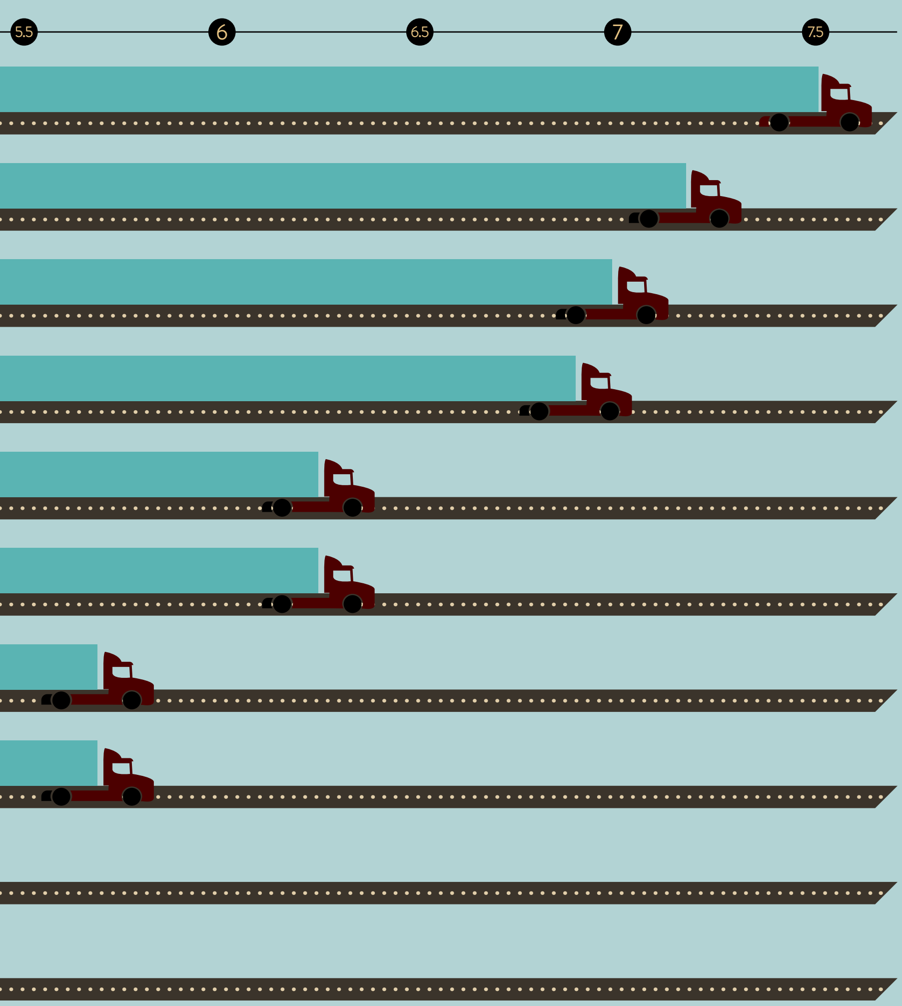
proach can mitigate the impact of natural and man-made calamities

ON IN THE SUPPLY CHAIN



Source: Business Continuity Institute 2015

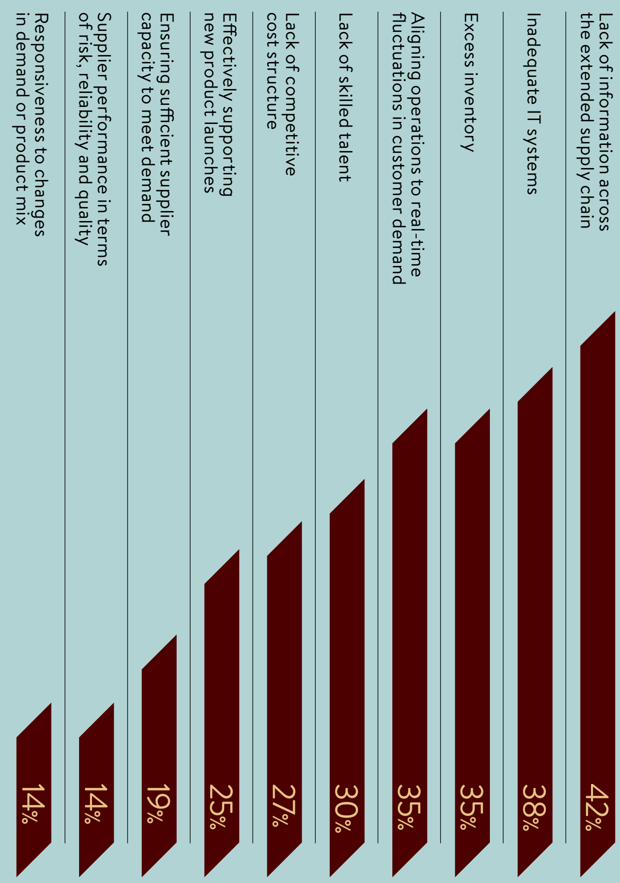
Preference on a scale of one to ten (ten being most preferred)



Source: UPS 2014

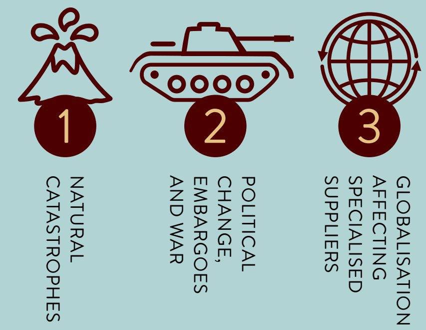
TOP 10 CHALLENGES FOR THE SUPPLY CHAIN

Global survey of senior executives in manufacturing



Source: KPMG 2015

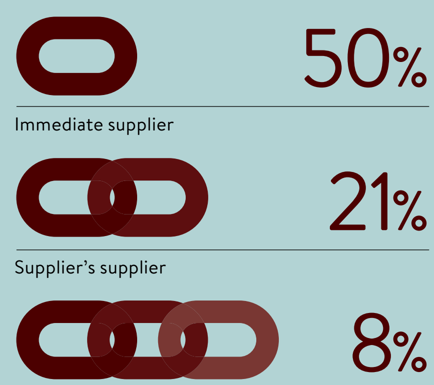
MOST FEARED RISKS



Source: Allianz 2015

ORIGINS OF SUPPLY CHAIN DISRUPTION

Percentage of survey respondents



Source: Business Continuity Institute 2015

adequately address workers' rights in the supply chain," he says.

For Ian Nicholson, managing director of ethical sourcing consultancy Responsible Solutions, a big bonus of the Act's focus on data gathering has been the boost given to supply chain mapping. "Ethics are in the spotlight and a big driver for traceability, but supply chain mapping brings many other benefits. For instance, while you might think having three or four sources of a product provides some security of supply, mapping may show that all of these suppliers are actually buying from the same factory," he says.

"The simple truth is that without proper supply chain mapping, no risk assessment can be adequately made and no resilience planning suitably thorough. If you don't know where all your raw materials come from, how can you fully manage the risks?"

By no means all risks are external. According to Richard Wilding, professor of supply chain strategy at Cranfield School of Management, once companies start looking in the mirror, they soon realise the true value of a strategic and holistic approach.

"For a successful supply chain strategy to be developed, it has to be integrated into the competitive strategy of the business," says Professor Wilding. "Companies need to create a supply chain risk management culture that requires everybody in the organisation, no matter what their function, to consider how any change they make is going to impact both upstream and downstream."

Changes with consequences could be anything from switching country of supply for material sourcing, to revising payment terms for suppliers. Even incentivising sales staff differently could trigger a spike in activity with supply chain implications.

> "Without proper supply chain mapping, no risk assessment can be adequately made and no resilience planning suitably thorough

Unlike random risks, which are typically down to unpredictable external factors such as earthquakes, uncertainty generated internally within an organisation is labelled by Professor Wilding as institutionalised risk. Poor management of such risk, typified by forecasting misreads and knee-jerk overcorrection, can ultimately give rise to what is known as the bullwhip effect, where cumulative impact downstream is violent and destructive.

Soberingly, the cause of such supply chain risk is sometimes none other than the manager. Professor Wilding concludes: "Really interesting research a number of years ago looked at the behaviour of managers in the supply chain, just on inventory control. One of the findings was that 23 per cent of managers create chaos through their decision-making. What we are talking about here is deterministic chaos and this resulted in costs 500 per cent above the optimal."

Faced with chaos, challenges and even criticism, the supply chain risk manager might be left feeling in need of a lift. The good news is that a global survey by Accenture found 76 per cent of senior executives consider supply chain risk management a priority, with more than half planning to increase investment by over 20 per cent. Almost all reported healthy returns. Summed up by the title of the Accenture megatrends report, *Don't Play it Safe When it Comes to Supply Chain Risk Management*, their takeaway is this – positivity pays.

COMMERCIAL FEATURE

COLLABORATION: FUTURE IS FULLY LINKED

Collaboration is the word on everyone's lips – not surprisingly, since companies face an unprecedented range of challenges in their supply chain, from cost management and climate change to the Modern Slavery Act, which lie outside their direct control

Decades of outsourcing and offshoring in search of ever-greater efficiency means the elongated supply chains companies depend upon are more fragile and opaque than ever before.

Cutting the carbon in the products you offer, securing your brand's reputation against child labour, reducing costs, or ensuring timely supply of a key commodity like rice or cocoa can only be achieved through close collaboration along the supply chain.

This is what Martin Chilcott, founder and chief executive of 2degrees, calls the "collaboration imperative". As he puts it: "With all these unprecedented pressures, large-scale collaboration really is a necessity for companies wanting to survive and thrive in 21st century. We really are in this together."

CHALLENGE

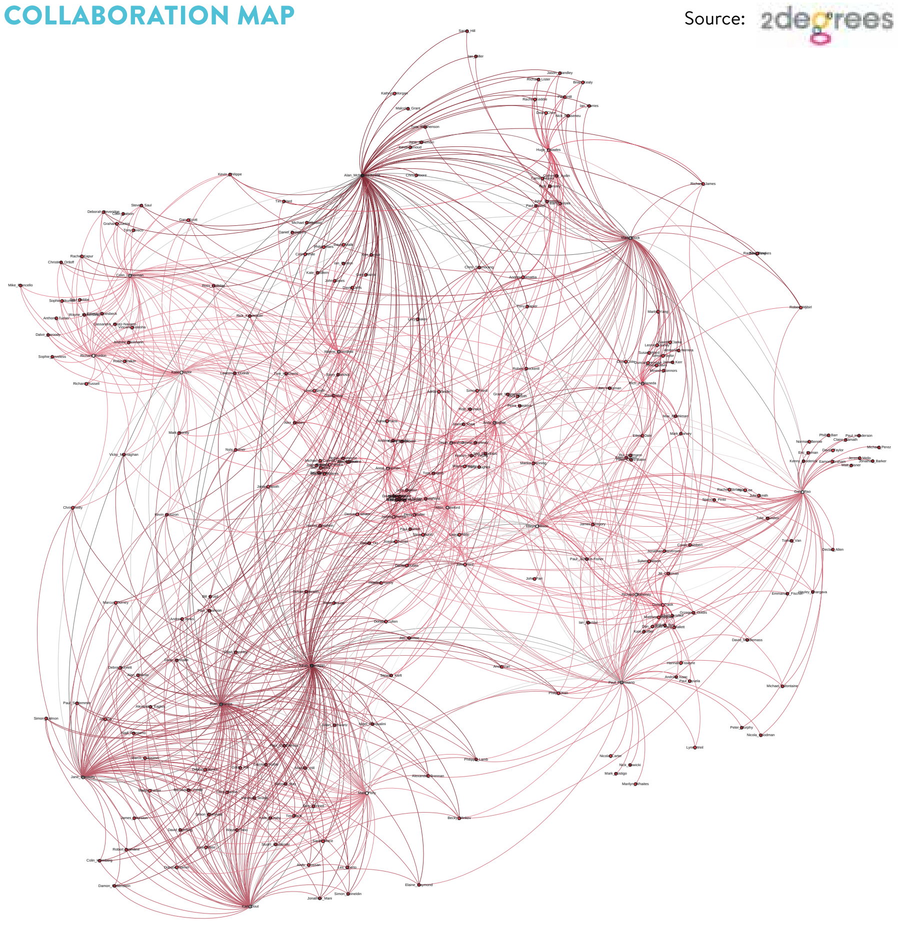
Traditionally, the problem with collaboration has been that it proved very expensive with anything more than just a few strategic partners. This was because it involved being face to face. As a result, what passed for collaboration really only amounted to the odd quarterly meeting with a fraction of the supply chain and a website that pushed out policies to the rest.

However, technology is changing all that. Digital technologies and collaboration platforms such as 2degrees are enabling companies to work closely with thousands of their suppliers at a depth that was previously impossible. Crucially, they also allow those suppliers to work with each other, unlocking knowledge and capability long hidden in silos up and down value chains.

> Digital technologies and collaboration platforms such as 2degrees are enabling companies to work closely with thousands of their suppliers at a depth that was previously impossible

COLLABORATION MAP

Source: 2degrees



Operational Savings: This illustration captures two months of discussion on a 2degrees platform about energy metering, with each point representing a person and each line an interaction. Three individuals, each from different suppliers, posted case studies which then generated a cluster of discussions. One individual in this illustration went on to use the peer insight they gained to build a successful business case for a new energy-monitoring and targeting system, which is already enabling operational savings of more than **€280,000** a year in energy reductions

With a network of more than 50,000 professionals, 2degrees is at the forefront of this digital platform development and, according to Mr Chilcott, the technology is making a whole new world of collaboration available to business.

"Large-scale supplier-to-supplier collaboration, with operational managers from different organisations working together to solve problems, share best practice and find solutions, is now possible," he says. "This is what we call 'fully linked collaboration'."

Stateside Food's chief engineer Rick Lloyd has experienced fully linked collaboration first hand as part of Asda's supply base on the digital platform 2degrees runs for food and drink processors and manufacturers. "I now know that I can contact my opposites in big companies and ask them a question and they'll answer it. There are no longer inter-company silos; the exchange has wiped that out – it's a phenomenal tool," he says.

DIGITAL SOLUTION

There are three underlying factors that determine why the use of digital platforms is the only option for collaboration – scale, complexity and speed. In terms of scale, the total number of suppliers to a major brand can run into tens of thousands, with the volume of stock keeping units in a grocery store exceeding 100,000. No face-to-face programme could effectively reach a supplier base that big. Labyrinthine complexity also makes digital the only option.

The tragedy of the Rana Plaza factory collapse and scandal of the horsemeat debacle both exposed the degree to which supply chains involve a tangled web of contracting, recontracting and subcontracting arrangements. Traceability depends on data.

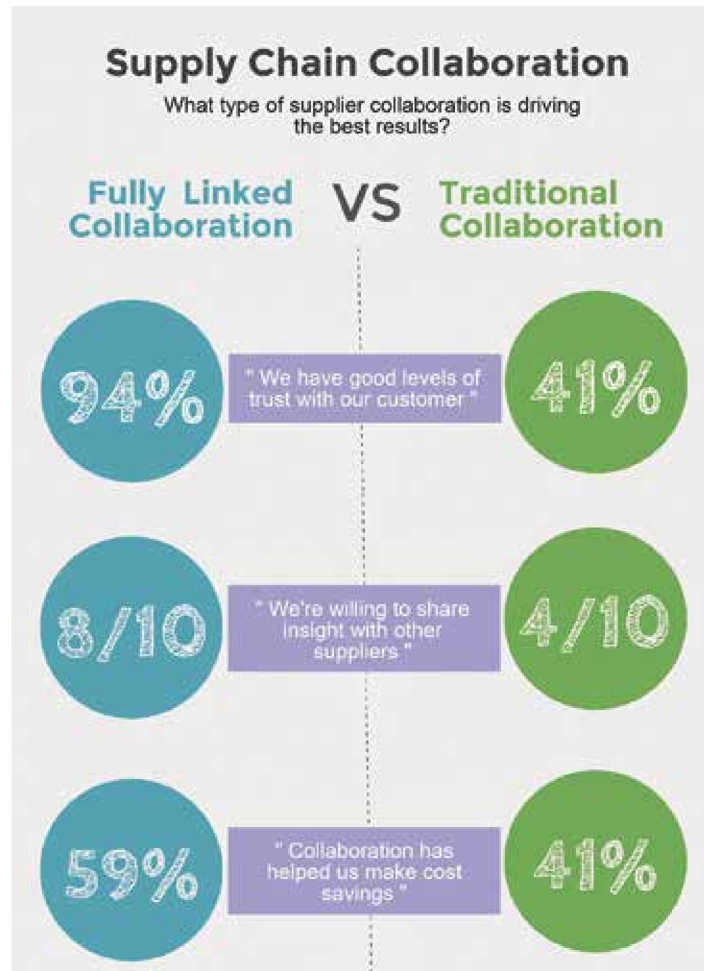
Finally, there is the speed at which everything happens. How rapidly decisions are made and swiftly markets change now demands agility. However, while the technology is vital, it is not sufficient on its own, argues Mr Chilcott.

"It is not just a matter of applying digital technology. We need a new mindset too. We must step away from the very limited 'command and control' approach that we used in the past, and adopt a more open, collaborative, empowering culture," he says.

"In many cases, the suppliers themselves have the answers and simply need to be allowed and enabled to work with each other. Seeing a supply base as an ecosystem to be supported in this way liberates the creative potential for interaction and innovation."

COLLABORATION IN ACTION

For the industry leaders, collaboration is seen as a strategic function and the kinds of organisations that are leading the way in the use of the platform are major fast-moving consumer goods and food companies such as Unilever, retailers like Asda-Walmart and Kingfisher, banks like RBS, and pharmaceutical giants such as GSK.



Source: 2degrees survey 2015

When you get into the detail, it is the individuals who are working together. As Professor Richard Wilding, chair of supply chain strategy at Cranfield School of Management, explains: "2degrees platforms enhance levels of relationship management through greater social interaction. The sharing of ideas freely between all stakeholders drives innovation, which in turn maximises value in the final marketplace at less cost to the supply chain as a whole."

On issues such as energy, waste or health and safety, operational managers from different companies are asking each other for insight and advice. Bringing as many as 1,500 specialists together at a time creates a phenomenal human resource for problem-solving, with hundreds of thousands of exchanges of knowledge taking place. Whether discussing how to use a particular technology, engage a colleague or build a business case, it is this collaboration at a practical level that delivers tangible benefits, creates value and makes sustainable business happen.

It is also these sorts of exchanges that have led to investments being made. In one community of more than 300 companies, for example, 2degrees estimates they are generating close to €100 million in operational savings that have been directly supported and accelerated by fully linked collaboration.

So the future of supply chains is digital and fully linked. As can be seen with disruptive market innovators such as Uber and Airbnb, the digital era of business has arrived and is here to stay. Once the tech is out there, there is no going back. The secret is to embrace the change, Mr Chilcott concludes.

"It is all about getting the tech to work for you, rather than against you; to help you gain competitive advantage, not lose it; enhance reputation, not risk it. The adversarial approach to supplier management is history. You can't coerce your suppliers, not for long anyway, and you can't audit them into submission and compliance. The old ways are dead, killed by digital. The future is fully linked collaboration."

To find out more about 2degrees supply chain collaboration solutions and the digital platforms available, visit www.2degreesnetwork.com

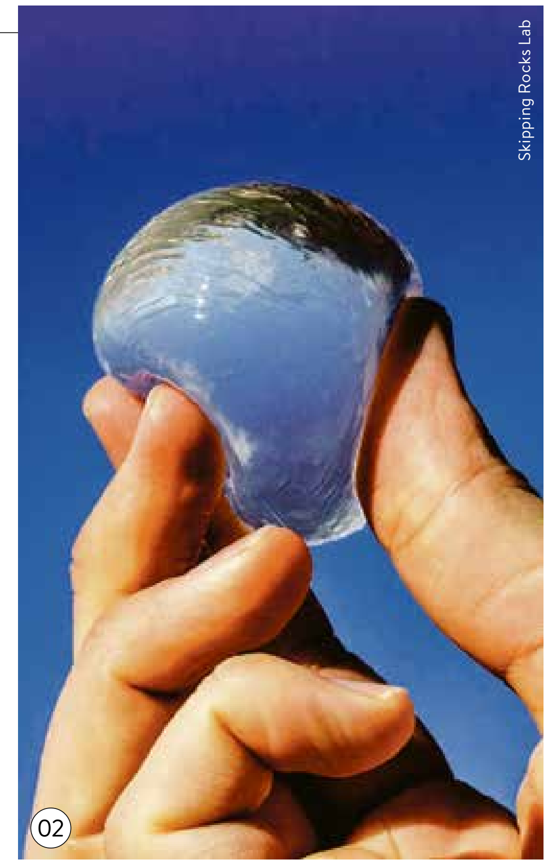
FOOD PACKAGING

DAN MATTHEWS

Screaming from the shelf: 'I'm sustainable'

Packaging must fulfil a number of requirements, not least to preserve and protect the product, but it must also be sustainable in a carbon-conscious world

Saltwater Brewery



Skipping Rocks Lab

01
Saltwater Brewery's edible six-pack rings, made with by-products of the beer-making process

02
Ooho! by Skipping Rocks Lab, an edible alternative to the plastic water bottle, made from seaweed

The future of food packaging is guided by a few potent impulses. One is the expectation that it meets modern environmental norms. Another is global dictates slapped on businesses to reduce climate change. A third is the need to innovate, creating packaging that appeals to consumers while preserving food until it's consumed. A fourth, in an increasingly competitive world market, is keeping costs down.

Accommodating all these elements is no easy task, especially when the brief for what makes a truly sustainable product is getting longer by the day. It used to be easy: do you sell drinks? Put them in aluminum or glass. Food? Then it's paper or cardboard. These are four of the most widely recycled materials, so businesses delegated responsibility to consumers. Problem solved.

But now a big green magnifying glass is sweeping over the entire supply chain. Brands are de facto responsible for ethics in a process that starts with a field and ends with a fork. Where do you get your materials from? How are they manufactured? How are they shipped? Who's working at the factory? It all counts.

"The trend right now is an holistic approach to sustainability, looking at the impact that innovations can have across the entire supply chain, rather than focusing only on developments within individual products," says Fiacre O'Donnell, head of strategic development at glass manufacturer Encirc.

"It's no longer enough to use recycled materials if the lorries bringing those resources to site are only half full or the manufacturing methods leave a huge carbon footprint. For true innovation to take place, every element of a supply chain and its bearing on the end-goal must be considered."

Phil Wild, chief executive of British master papermaker James Cropper, adds: "There are two sides to the coin that must be considered – the sustainability of the products used for packaging in the first place and what happens to them after use.

"Paper is often a go-to choice for sustainable packaging because it can be recycled and reused many times. However, in the food industry, health and hygiene regulations must also be considered. This presents its own challenges, so innovation is crucial."

From a consumer-facing standpoint, the drive to bring packaging into the 21st century is more carrot than stick. People don't have time to research which companies have the cleanest supply chain, but when businesses shout loudly about good practice, sales go up.

In fact, it's a golden chance to generate buzz completely out of kilter with the size of the brand. Ever heard of the Saltwater Brewery in Florida? Me neither. Yet it has just scored a global marketing slam dunk with the invention of new six-pack rings.

The rings are not made from plastic, which as we know ends up in the sea to be gobbled up by hapless turtles, birds and fish, but a combination of barley and wheat that are by-products from the brewing process. They are not just biodegradable, they're edible.

A film explaining the invention was posted on the video-sharing platform Vimeo. In three weeks it accumulated 82,000 views. Type "edible six pack" into Google and Saltwater Brewery is all you get back. It's the kind of marketing that takes businesses into the stratosphere.

Other organisations have captured varying amounts of positive press with their efforts to create edible or biodegradable products. Ooho!, from Skipping Rocks Lab, is a seaweed alternative to plastic bottles. In 2012 UK manufacturer Pepceuticals won a contract to develop an edible coating for meat, while Monosol, also based in the UK, has created a packaging film that dissolves harmlessly in water.

Gillian Hopkinson, senior lecturer in marketing at Lancaster University Management School, says there is scepticism around these innovations that befits truly "out there" ideas, but this is healthy, and nevertheless it's where the food and drink sector is headed.

"I think that we will see substantial growth in the area of edible and/or biodegradable packaging as creative thinking, technological knowledge and consumer insight combine to bring in effective packaging," she says.

In a humbler example, Dr Hopkinson points to pouches as a simple solution that has removed a lot of excess weight from packaging. First seen in Ella's Kitchen baby foods some ten years ago, they are popping up everywhere in food and non-food products.

Pouches are popular because the benefits are easy to understand. It's like double-strength cordials, which offer a simple equation: double the strength, halve the amount required to make a drink. Future innovations will need to mimic this simplicity to gain mass-market appeal.

"The crucial aspect of pouches is that consumers 'get it'," she says. "Shopping and storage at home become easier and there is less packaging to dispose of either through recycling or in the bin. So, the next generation of packaging must make sense for consumers."

Aleyn Smith-Gillespie, associate director at the Carbon Trust, has seen plenty of activity in the innovation space, with companies approaching the problem of waste from several different angles.

"There are also quite a lot of companies looking at using more biodegradable or compostable packaging options made from organic materials," he says. "But some companies are looking to make packaging more durable, rather than more easily disposed of, so that it can be returned and reused, or given a second life.

"We are starting to see increased use of novel materials such as bioplastics, which can be part of more circular approach to product packaging. Braskem in Brazil makes biopolyethylene from sugar cane which has identical properties and uses to polyethylene made from fossil fuels.

"Recent work we did with Polythene UK found that the carbon emissions absorbed from the atmosphere during the growing of the sugar cane can be greater than the emissions from manufacturing and transporting the biopolyethylene created, which means it is inherently carbon neutral. It is also fully recyclable."

If the price is right, then innovations like this will be no-brainers for buyers in years to come. With the developed world increasingly concerned for the continued health of the planet, this future can't come quick enough, says Dr James Cronin, lecturer in branding at Lancaster University Management School.

"Producers are expected to not just focus on packaging that preserves and communicates, they must also consider the impact it has on the world. As landfills swell, resources deplete and environments are degraded, the only option for a manageable future is sustainable packaging as a critical part of value-added practice," he concludes.

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INCENTIVES FOR SUSTAINABLE SUPPLY CHAINS					
	32% Eliminating supply chain risks	**23%** Reputational concerns	**18%** Finding supply chain opportunities	**13%** Cost reduction	**15%** Other

Labels should no longe

Incorrect labelling can cost companies dear both financially and labels more informative, accurate and smarter

LABELLING

SIMON BROOKE

ByBox

Correct labelling is vital for successful supply chain management – and yet it's often fraught with problems. According to a survey published in December by Loftware, the enterprise labelling solutions provider, nearly half of those companies asked (47 per cent) experienced significant and costly disruption to their manufacturing process because of their labelling procedures.

"Leaders in supply chain management are often aware of only a subset of a growing number of labelling demands that can impact their global operations. The set of stakeholders is diverse," says Josh Roffman, Loftware's vice president of product management. "Each of these groups has their own perspective and set of priorities as it relates to labelling."

The good news is that labelling has become one of the fastest-growing, most innovative parts of supply chain management. New technology in particular is creating more accurate and increasingly informative labelling products that can be deployed evermore rapidly.

"When label printing in the enterprise supply chain goes wrong, the consequences are not only financial," says Richard Hughes-Rowlands, product manager at Zebra Technologies, which creates tracking technology. "Misplaced shipments and delays also mean dissatisfied customers." He sees more businesses turning to cloud label printing as a solution. "Those that have implemented it have realised significant savings and made their supply chain more agile, responsive and competitive," he adds.

> With increasingly complex supply chains, correct labelling is vital

Walid Darghouth, Perfect Package solution director at Dassault Systèmes, says: "New markets, new variants and new pack sizes create the need to develop artwork faster, and this puts enormous pressure on product copy, translations and regulations. The current artwork supply chain is highly fragmented, leading to increasing errors. In fact, these errors drive 51 per cent of product recalls, often costing millions of dollars each."

Dassault Systèmes' Perfect Package allows packaged goods companies to improve the quality of their artwork by reducing costs. Many or-

CASE STUDY: CHOICE MEATS

Choice Meats

Blackpool-based fresh and cooked meat supplier Choice Meats delivers around 160 orders a day to more than 400 trade customers across north-west England.

Operating the business efficiently requires a well-run order management and labelling system. For years the business labelled orders using printers attached to two large weighing scales, but this was creating a bottleneck.

"They were big, bulky machines that couldn't easily be moved around the warehouse, so constant trips were being made back and forth between the goods for dispatch and the printer, costing a lot of time," says Paul Fleetwood, office manager at Choice Meats. "As we continued to expand, it became clear that we needed to upgrade our capabilities to keep pace with the number of orders we were handling each day."

To address these issues, the business upgraded to four Brother TD-2120N professional industrial label printers. The units weigh just 1.3kg and can print 5.6cm-wide adhesive labels at speeds of up to 15cm per second.

Mr Fleetwood says: "The Brother units have solved both of the issues we had when using the scales. They're able to store all of our customer information, so operators can simply type a four-digit code into the touchscreen display and the printer will prepare a label including the customer's name and address along with the order date, a Julian encoded packing date and our logo.

"While they operate independently most of the time, which was a key concern for us, they also work hand-in-glove with our PC-based customer database, so adding new customers or updating details is a quick and simple operation."

r be a sticky problem

in terms of reputation, but new technologies are making

Engineer scanning a Thinventory™-enabled barcode label to track the item through the whole supply chain

ganisations still manage their copy in word documents or spreadsheets that are scattered around the company and this makes producing new artwork difficult. By managing the process centrally, including copy development, translation and artwork creation process, Perfect Package integrates the copy management and artwork creation process, enabling companies to create new label designs in just 24 hours.

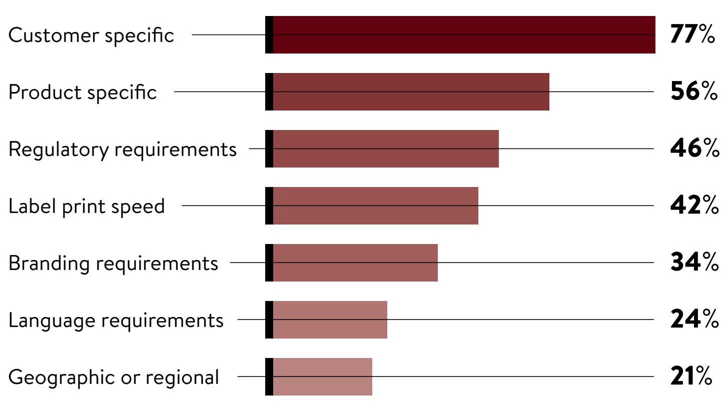
A product called Thinventory, developed by tech company ByBox, provides labelling in which SKU (stock keeping unit) codes are captured at the point of dispatch so the relevant items can be traced live online through picking, packing and distribution, as well as returns and repairs if necessary.

"Any supply chain consists of a number of key players – manufacturers, suppliers, warehouse operators, distribution providers, technicians, end-users – and so on. Each system requires its own label. Technology tends to get smaller every year, so over time it was becoming physically impossible to fix all the labels from all systems on to the packaging," says Stuart Miller, chief executive and co-founder of ByBox. "We introduced Thinventory to sit across the entire supply chain and run it not only with one label, but one single barcode on that label."

The challenge of accommodating a number of barcode labels, relating to information such as quantity and serial or batch number was addressed in August when some of the UK's largest retailers and suppliers, including Boots, Morrisons and Nestlé, launched a new initiative to use barcodes provided by GS1 UK, the supply chain standards organisation, to develop a set of industry standards for inbound logistics.

MOST DIFFICULT BARCODE LABELLING REQUIREMENTS

SURVEY OF FOOD AND BEVERAGE COMPANIES

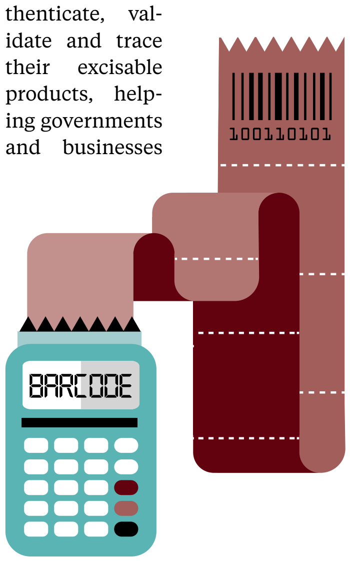


Source: Loftware

"As these organisations pass the use of GS1 barcodes on product labels down through their supply chain, it's only a matter of time before having GS1 barcode support within warehouse operations becomes essential," says Karl Blakesley, marketing consultant at OrderWise Business Management Software, a GS1 UK industry partner.

Labelling technology can also now protect goods. Shockwatch labels contain a tiny glass device filled with liquid. If a package is subject to excess impact during transit, the liquid turns bright red. Tiltwatch performs a similar role for packages that should be kept upright.

It's estimated that one in every ten cigarettes in the world is illegally produced, while in 2014 illicit spirits were estimated to cost governments around $1,020 billion in lost revenue. To solve this growing problem De La Rue, the world's largest commercial banknote printer and passport manufacturer, has developed a unique global tracking code called DLR Certify. It enables its customers to authenticate, validate and trace their excisable products, helping governments and businesses to ensure the correct level of revenue has been paid and that products are genuine.



"Companies don't fully understand the scale and nature of the security issues they face in the supply chain," says Andrew Gilbert, business development manager for authentication and traceability at De La Rue. "From overproduction, to diversion, to sales through non-licensed producers or even smuggling, the range of threats in the supply chain continues to diversify."

So far labelling has been a case of applying an authentication feature on to an item, to confirm it is a genuine product belonging to a particular brand. This can address the issue of counterfeiting. However, in today's globally connected and complex supply chain, opportunities for interference, tampering and diversion into unauthorised markets are rife, particularly where there are large price and tax differentials, says Mr Gilbert.

"Faced with this set of challenges, a more sophisticated approach to tackling illicit trade is required, addressing the three pillars of track and trace, verification, and authentication," he says.

With increasingly complex supply chains, correct labelling is vital. "The need to meet customer and regulatory requirements can be either a burden or a source of competitive advantage. The easier it is to quickly make label changes, the more able companies are to respond to the demands of customers and regulators," Lofware's Mr Roffman concludes.

New technologies entering the market mean companies have a greater range of options than ever before to ensure their labelling meets these challenges.

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OPINION COLUMN

If a strike is coming, workers know it first

Consider a new way to forecast risk in an era of accelerating supply chain disruption

HEATHER FRANZESE

Executive director
GWS Labor Link

"For over a century, sentinel species such as the canary in the coal mine and Japanese dancing cats that signalled mercury-contaminated fish have been warning us of danger just in time to act.

Supply chain disruptions are accelerating and their causes multiplying, from natural disasters and terrorism, to more predictable events such as a strike by workers, factory fire or building collapse.

In 2015, labour protests in Chinese factories doubled to 2,774, setting a monthly record of more than 400 events in December. According to the World Economic Forum (WEF), this type of conflict and unrest is second only to natural disasters among the top causes of disruption.

With these events piling up, so are the costs. Accenture estimates a 7 per cent average dip in the share price of companies that experience supply chain disruption. Some companies have calculated losses from such disruptions at 5 per cent of annual revenue, says WEF. Many companies are unsure how to even calculate such catastrophic losses.

> "The advantage of mobile over more traditional employee opinion surveys is precious time

How can you respond faster by knowing more? What cats and canaries can we count on to offer an early-warning system in today's complex supply chains? The answer is not a cat or a canary; it's our own species. If a strike is planned in a factory, workers know it first.

The question is how to get this information quickly to executive dashboards. Conveniently, mobile penetration hit 92 per cent in the developing world in 2015, according to the International Telecommunication Union. That means every worker holds a transformative tool to capture real-time data from an opaque supply chain with still-too-much invisibility.

Laborlink is translating this worker voice tool into reliable and actionable analytics. In a Laborlink mobile survey of 37,000 workers in 56 Chinese factories, 26 per cent responded "no" or "not sure" when asked "Would you recommend this factory as a good place to work?" This variation of the common business metric net promoter score is a timely indicator of satisfaction and, more importantly, a potential leading indicator of willingness to strike.

This data tracks with Gallup's *State of the Global Workplace* annual statistics showing 26 per cent of Chinese manufacturing workers to be "actively disengaged". That's the segment at greatest risk of going on strike.

The same is true for safety risks. While not every factory worker understands the various threats to their workplace safety, safety catastrophes that cause the most disruption can often be anticipated. Workers at Rana Plaza saw cracks in the walls days before the factory collapsed. Timely mobile intelligence to buyers showing red flags on a key indicator – the percentage of workers who feel safe at the factory – could have made a difference.

The advantage of mobile over more traditional employee opinion surveys is precious time. An annual poll could be nine months too late. Whereas key indicators from monthly pulse checks can be integrated into your current risk management systems and score cards.

Leading companies such as Disney, Cisco, Vodafone and Marks & Spencer are already using this technology in their own vendors and contract manufacturers to quantify the real risks in their supply chain. These companies know that workers are the canary in the coal mine of today's supply chain."

Flexible agreements allow supply to flow

An unambiguous and workable contract, which enables a supplier to deliver on their promises, is an essential link in any successful supply chain

CONTRACTS

NICK MARTINDALE

Any successful business relationship is the result of negotiation between one party in need of products or services and another looking to supply them, with the outcome usually represented in some form of legally binding contract.

The exact nature of both the negotiation and the contract will depend on just what is being bought and how important it is to the buying organisation, but there are a range of elements which might need to be thought about.

Price is clearly an important constituent, particularly in cases where items can be sourced from a range of suppliers. "Leveraging buying power to secure the lowest price in a marketplace is entirely valid for many scenarios, for example when buying generic, non-differentiated products or services from competitive markets where there are many providers and it is easy to switch," says Jonathan O'Brien, chief executive of Positive Purchasing.

Where there are fewer suppliers or capacity is limited, however, price becomes less of a factor, he adds, and can even result in situations where buyers have to compete to make themselves attractive to the supplier. "This could be by promising additional business, paying promptly or investing in relationship building," he says.

When it comes to negotiating around cost, it's a good idea to never reveal your budget upfront, advises Kevin McLoughlin, director of procurement at Opus Energy. "If you confirm you have £x to spend, you shouldn't be surprised to receive bids, offers and quotes slightly higher than that," he says. "In rare cases, a supplier may legitimately need to know how much you're prepared to spend and in these circumstances a range of scenarios should be presented."

Online auctions can be a useful way of finding the lowest price a market can offer, Mr McLoughlin adds, although he also warns this can run the risk of suppliers having to cut corners to meet the price they have offered.

Price, however, is by no means the only element that should be reflected in a negotiation or contract. It's also important to be clear about service levels, particularly around quality of products and services as well as distribution requirements, says Martin Hudson, head of procurement at Pelican Procurement Services.

> Most contracts now include clauses about sustainability and making sure goods are sourced in a responsible manner

"Clauses must be included in the contract to protect the client in case of product supply issues," he says. "For example, if the supplier has not forecast correctly and runs out of stock, a substitute product must be provided of the same or better quality at the agreed contract price."

Contract length and scale are important too and buying organisations need to be sure they do not restrict the market. "Markets can be diverse and what is attractive to one supplier may be a no-go to another," says Simon Whalley, senior manager in Deloitte's supply chain team. "For example, longer, larger-value contracts are generally more attractive to suppliers. However, larger contracts can limit the market, as they require services and scale beyond some niche suppliers. A buyer should invest the time to understand the market so as to get the best deal from it."

Most contracts now include clauses about sustainability and making sure goods are sourced in a responsible manner. "We're seeing a real shift in what is a considered a contractually good-quality product," says Nigel Stansfield, chief supply chain officer at carpet tile manufacturer Interface. "Solid sustainability credentials are no longer a nice-to-have, but a necessity. In fact, it's likely we'll see official regulations and guidelines established for this in the near future."

This is especially the case where items are being sourced overseas from low-cost countries in particular. Here, discussions and contracts need to tackle the issue of working conditions, including forced labour following the introduction of the Modern Slavery Act in 2015.

"It is not enough to include an anti-slavery clause within a commercial contract," says Jayne Hussey, partner at law firm Mills & Reeve. "Factory visits at the start of a relationship and regularly thereafter are essential to ensuring a low-risk supply chain. These should be conducted both overseas and in the UK where particular industries, such as agriculture, can be susceptible to forced labour." She also suggests, before signing any contract, requesting information from suppliers on how they source their own materials and detect exploitation in their supply chain.

There can be other challenges associated with negotiating with overseas businesses or subsidiaries of UK firms, including cultural differences. "For example, when dealing with a Chinese supplier, you may think that you are negotiating on

> Many people think a good contract screws the other party down and is something to bash them over the head with

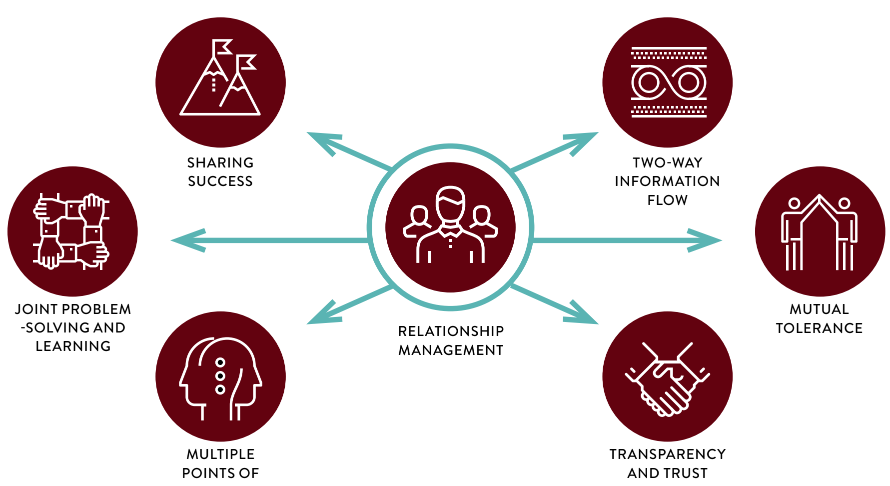
price when in actual fact you're negotiating on quality," Roy Williams, managing director at Vendigital, points out. "In pushing for an incremental reduction in unit price, the supplier could perceive this as a request to reduce the specification or change the manufacturing process used to make the product."

Any contract needs to be flexible enough to adapt to changing circumstances, too, says Lucy Larkin, managing director in Accenture's retail practice. "There are often unplanned events," she says. "It's worthwhile looking at this upfront to determine what these might be, and to build a mechanism into the contract that addresses actions and commercials for unplanned situations." It's also important there is an exit plan built into the contract, setting out clearly how this would happen in practice, she adds.

Contracts need to give suppliers the flexibility to operate their part of the deal as they see fit, without tying them to onerous service-level agreements. "It's crucial that goals are aligned between all parties in order to incentivise continuous improvement and co-operation on both sides," says Henry Stannard, associate partner at OC&C Strategy Consultants. "This is most easily done by rewarding outcomes in contracts rather than simply paying for inputs." He gives the example of incentivising a facilities management provider to achieve certain levels of cleanliness, rather than specifying the number of times they must clean it.

In fact, contracts should ideally be little more than a guide to what is required from both parties, says Gerard Chick, chief knowledge officer at Optimum Procurement Group. "Many people think a good contract screws the other party down and is something to bash them over the head with," he says. "A good contract helps both parties meet their obligations and is an exit through the project or delivery of a good. Smart people understand this and produce contracts that are workable, succinct and clear."

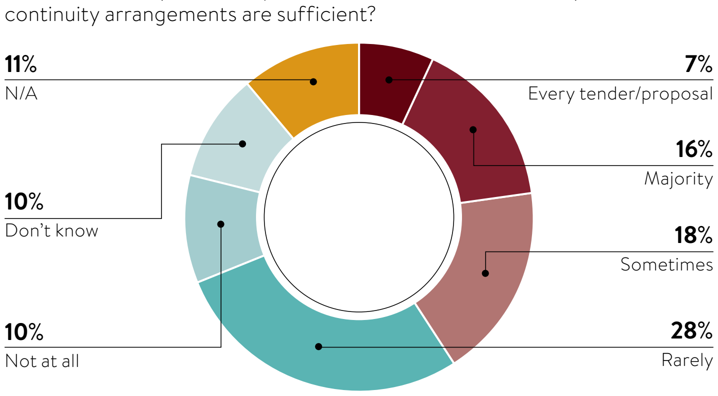
KEY COMPONENTS OF GOOD SUPPLY CHAIN RELATIONSHIP MANAGEMENT



Source: British Institute for Facilities Management 2015

BUSINESS CONTINUITY DISCUSSIONS IN THE SUPPLY CHAIN

How often have you had to provide assurance to clients that your business continuity arrangements are sufficient?



Source: Business Continuity Institute 2015

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COMMERCIAL FEATURE

TELEMATICS: TAKE THE FAST LANE TO BETTER RETURN ON INVESTMENT

Telematics offers significant benefits to organisations of all types – but only if they know how to use it effectively

MiX | TELEMATICS
MOBILE INFORMATION EXCHANGE

As telematics continues to revolutionise supply management and distribution, the European market, which is the most advanced in the world, is set to enjoy a compound annual growth rate of 15 per cent over the next five years, according to research consultancy Frost & Sullivan.

Against a background of rapid growth, companies are increasingly looking to use telematics to do more than simply manage their assets. Instead, some have begun to use the technology to optimise the services they provide to their own customers.

Forward-looking companies are, for instance, auditing their individual systems in a more coherent, co-ordinated way that combines both the output and intelligence garnered from different systems to enable managers to make better informed decisions.

They can do this, among other ways, by linking vehicle management and activity management information to what is going on elsewhere within the business. But they also need to define their target return on investment (ROI), argues Marc Trollet, managing director of MiX Telematics Europe, a leading global provider of fleet management, driver safety and vehicle tracking solutions.

"Most companies don't have the time and resources to collect and analyse reams of telematics data, and to try and turn it into actionable information they can use to make impactful decisions," he says. "They need to be clear about how they're going to use this data, and to have well-defined goals and milestones that can be used to measure progress towards those goals."

Stephen Ash, operations manager of Sheffield City Council, a MiX Telematics customer, says: "We've been able to optimise our routes, save time, save on fuel costs and deliver better customer service. I'm confident we'll continue to see a growing number of benefits as time goes on, but we're happy with what we've achieved so far and we're now looking at other ways in which MiX Telematics can help us."

It's not just in the UK that MiX Telematics Europe is providing cutting-edge solutions. A top field and service maintenance company in France has reduced overtime claims by more than 80 per cent demonstrating an ROI ratio of one to twenty.

In Eastern Europe, one of MiX Telematics' customers recently won an award in 2015 from the European Transport Safety Council after implementing outstanding measures to improve road safety at work.

In Belgium, a leading public transport provider working with one of MiX's channel partners has enjoyed not only efficiency and fuel improvements, but also drastically reduced the number of injury claims by close to 70 per cent due to safer driving practices and increased passenger comfort.

MiX Telematics, which celebrates its 30th anniversary this year and now has offices in South Africa, the United States, Brazil, Australia and the UAE, as well as the UK, was founded to help companies to set and achieve these goals, and get proper ROI.

"Working across a wide variety of industries in multiple countries around the world means we have the understanding and expertise to support our clients as they learn how to really get the most out of their vehicles and drivers. Significantly, our truly worldwide profile means that we are almost unique in being able to support the largest multinational organisations through our global footprint," says Mr Trollet.

The company is often brought in to handle every aspect of the introduction and management of a telematics programme. For example, work councils and trade unions will always need to be involved in the rollout of any new systems that directly affect their members. Telematics is no different and the MiX team of consultants act as intermediaries. They'll explain how the system works and the benefits that it can offer to drivers.

Similarly, drivers' workshops are used to engage and influence company drivers' attitudes and behaviours. They'll consider issues such as fuel consumption and carbon emissions as well as customer service and road safety.

Based on an implementation process, which included intensive consultation, MiX Telematics helped Martin Brower, the restaurant chain logistics service provider, to set new driver behavioural targets, resulting in fuel savings of up to 10 per cent, reduced risk of accidents by 70 per cent and a cut of 15 per cent in wear and tear across its fleet. Similarly, since it introduced MiX Telematics systems in 2008, Go-Ahead London has seen an improvement in fuel performance of 12 per cent.

"Getting drivers engaged in a process of continuous improvement boosts accountability and delivers tangible business benefits," says Mr Trollet. "At MiX, our training programmes feature a mix of presentations, demonstrations and interactive sessions. We teach customers to use the system themselves so they can extract the information they need."

MiX Telematics professional services give users the power to modify reports to create the format that works for them. With their advanced business intelligence tools, MiX consultants guide their clients so they can create actionable intelligence.

"We provide solutions for multiple industries, and we've set up integration platforms and have specialists who are expert in meeting the different needs of each of those industries," says Mr Trollet. "Our flexible API [application programming interface] platform also offers customers the capability to extract their data and utilise it within their own systems or those of their partners. We offer a consultancy service to assist with integrating our solution with other applications."

Paul Birkbeck, general manager of transport provider GBA Services Ltd, says: "We selected MiX Telematics in 2015 to replace our existing supplier because MiX offers a personal service that focuses on helping us build a solution rather than merely selling us a product.

"We're working with them to design and implement a temperature management solution that monitors and measures high-value cold-chain goods being transported across Europe. Their proactive approach to looking at our business and how we can add value together is refreshing and innovative."

As well as setting up their telematics systems, organisations from around the world are also using MiX, which currently has more than 560,000 subscribers in 113 countries, to ensure they see continual improvement once those systems are in place. Its embedded consultancy service has been designed for organisations that want long-term support with their telematics data management.

"Successfully implementing a telematics system requires experience, industry know-how and a robust project plan," Mr Trollet concludes. "Our team of project managers have developed an industry-leading implementation project plan that ensures companies achieve the ROI they're looking for, and the project is delivered on time and to budget. That's why more companies are working with MiX Telematics and why MiX's customers are continuously asking for more going forward."

> "We have the understanding and expertise to support our clients as they learn how to really get the most out of their vehicles and drivers

TOP 5 TYPICAL BENEFITS OF WORKING WITH MiX TELEMATICS

10-15% increase in fuel efficiency

15% reduction in wear and tear

50-70% improvement in accident rate

10-15% reduction in vehicle fleet size

80% reduction in overtime claims

For more infomation please visit mixtelematics.co.uk

COMMERCIAL FEATURE

THE BRAVE NEW WORLD OF FULFILMENT: WHO'LL BE THE WINNERS AND THE LOSERS?

As they evolve to meet the increasing demands of their customers, retailers and logistics companies are in danger of focusing on the wrong issues. ***Niklas Hedin****, chief executive of Centiro, the leading innovator in cloud-based transport, logistics and delivery management solutions, looks at what is needed to drive customer engagement and loyalty*

centiro®
PEOPLE-DRIVEN LOGISTICS SOFTWARE

Online sales are growing massively. In the UK alone they exceeded £100 billion in 2014 for the first time. But despite this impressive growth, retailers and logistics companies are still struggling to understand how their customers think and what exactly they expect after they've clicked the "buy now" button.

One thing is clear, though, that this rise in online sales has been matched by an increase in expectations among customers as they become less willing to tolerate problems and difficulties with deliveries. And when these glitches do occur, they don't differentiate between retailers and the companies that are supposed to be delivering their purchases. A recent survey revealed that 84 per cent of consumers still hold the retailer rather than the delivery company responsible for any problems.

If you're buying a rug online, for example, it's pretty likely that you've spent quite a bit of time and effort on your research, comparing patterns and prices, among other things. You're really looking forward to laying it out for the first time in your living room. It's very annoying then if your rug doesn't arrive when you expect it to, even if the delay is only a matter of days. The power of keeping (or breaking) a promise is huge. Even a slight delay means the delivery promise is broken.

A failure to recognise that customer expectations are constantly increasing and they therefore need to up their game accordingly by improving the reliability, flexibility and convenience of the service they offer, means many retailers, already struggling with squeezed margins, will find themselves under greater pressure than ever.

But as well as threats, this brave new world offers opportunities for forward-thinking retailers. Those that can meet and even exceed the demands of customers can gain a competitive advantage and increase margins as well as their market share. So, how do they do this?

Flexibility is the key differentiator for customers. Research published last year by YouGov reveals that convenience rather than just choice is also increasingly important. It showed that 20 per cent of adults in the UK believe the most important thing for them is to be able to change the delivery date or time slot for an order after it has already been dispatched. According to a further 7 per cent, it's important to be able to change the delivery destination after they've placed an order.

Offering this kind of flexibility can create a positive customer experience, encourage loyalty and provide the retailer with a growing wallet share. Retailers should consider providing their customers with one option that can be adapted according to their individual requirements.

Given that customers do not differentiate between the company they're buying a product from and the company that delivers it, retailers need to seize control of the entire delivery experience and reclaim more responsibility from the carrier for ensuring goods are delivered on time, to the correct location and in perfect condition. Retailers need to mix and match new carriers, to create a consistent user experience and to have complete visibility into delivery networks.

River Island, for example, offers flexibility with its "click and don't collect" option. Customers can have an item delivered to their homes if they're no longer able to collect it from a store. Retailers could also offer the reverse – if a customer waiting at home for an order suddenly decides they have to go out, they should also be able to opt to collect it from a store instead.

Retailers need to provide clear, usable information about costs and other delivery options on their websites. Customers will not devote time and energy to clicking through a series of different screens and inputting extensive information. Neither will they navigate complex menus – they'll simply abort or cancel their order and shop elsewhere. On the other hand, make the customer journey simple, speedy and intuitive, and you're already well on your way to engaging them and earning their loyalty.

You could, for instance, show them a range of pricing options that is clear and simple. These options could include same-day rather than standard delivery or a change of delivery address at the last minute. Retailers need to be ready to offer innovative and more flexible delivery options.

They also need to change fundamentally the way they think about returns. Rather than being seen merely as a cost-recovery exercise, an excellent returns system can enhance the customer experience and act as a way of rewarding loyal or affluent customers. Meanwhile, retailers can cut costs by limiting their returns service to less attractive customers, those who regularly return items and buy less.

ABOVE RIGHT
Niklas Hedin
Chief executive
Centiro

Finally, retailers need to exploit the full potential of technology. Mobile can, for instance, make payment easier for customers as well as providing them with real-time delivery information. Having paid for an item with your phone, the courier can track your location and arrange where to deliver it to you.

Meanwhile, big data is about to revolutionise the area of supply chain and last-mile delivery. With predictive analytics, retailers can identify where problems are likely to occur so they can take corrective action quickly and manage customer expectations. Using the information already available in delivery networks, combining it with unstructured data such as social media or weather, means old problems can be solved in new ways.

Not only can retailers service customers better, when applied on a strategic level, this means utilising inventory and existing infrastructure, such as stores, warehouses and other assets in the network, to achieve serious innovation to deal with both customer service, margin and capital binding. In today's world, identifying technology is not the challenge – pragmatic leadership and vision are.

As online shopping powers ahead, the increasingly high expectations of customers can seem daunting. However, those retailers that are willing to take their game to the next level, to recognise and utilise effectively the tools that are already available to them, will see consumers coming back time and again.

Source: *JDA & Centiro Customer Pulse Report 2015*

> "Retailers need to seize control of the entire delivery experience and reclaim more responsibility from the carrier

For more information please visit www.centiro.com

Can you ever wish for many happy returns?

Dealing with returns can be a logistical headache and can hit profits hard, but a clear strategy can help ease the pain


Shutterstock

RETURNS
CHARLES ORTON-JONES

Like a video game where each level is harder than the last, the final stage of the supply chain is the ultimate test – the boss level. The last leg when customers receive their goods has more challenges, more variables and more unknowns than any other area of logistics. Get it wrong and customers cry blue murder.

Needless to say, it's the moment when retailers most often come a cropper.

Take an issue like returns. It's chaos. A survey for the BBC in May revealed the scale of the problem. Two-thirds of customers buying women's clothes in the past six months had returned at least one garment. Some are taking advantage of free returns to order multiple versions of the same item to see which fits better. A study for Barclaycard shows six in ten retailers had suffered from this rate of return and three in ten say returns hit profits.

Retailers have divided strategies on how to cope with returns. Some 30 per cent advocate charge for delivery to offset the costs, compared with 20 per cent who increase the price of items to cover the cost of returns. The optimum strategy just isn't clear.

And that's just one sub-set of the fulfilment challenge. There are new concepts such as ultra-fast delivery to make life complicated. Amazon Prime Now and Shutl are offering delivery in 90 to 120 minutes. Food service Deliveroo is proving how potent this is by offering to courier meals from restaurants to the consumer's door for a flat rate of £2.50. Last year investors valued Deliveroo at $600 million – a recognition of how disruptive ultra-fast delivery could be in logistics.

So how can companies upgrade their post-sale systems? The obvious place to start is to ensure delivery systems are integrated with ordering. Too obvious? Not at all, says David Hallam, director of Orderwise, which creates software to handle sales ordering and processing.

"Often businesses rely on staff having to manually rekey information into external courier platforms in order to get the required information across to their delivery service of choice," he says. "This is not only incredibly inefficient, but also raises the risk of mistakes being made when details are transferred, which could lead to further costs being incurred down the line."

Technology is not always the answer. When it comes to improving customer satisfaction, there's a simpler method than algorithms and radio-frequency identification trackers.

As Stuart Godman, chief strategy officer of logistics operator DX, points out, retailers can impress buyers with better communication. "For example, if a large or heavy item, such as a sofa, shed or wardrobe, requires a two-man service in order for it to be safely and successfully delivered, this needs to be offered and explained to the customer. After all, customers who are left to shift a bathroom suite from the kerbside, simply because they didn't understand why a two-man service would have been most appropriate, are unlikely to be satisfied with their shopping experience," he says.

> Post-sale fulfilment is such a fast-changing industry there's no one-size-fits-all solution to anything

With more information customers may change their delivery options. Dominic Regan, senior director for Oracle's value chain education portfolio, has studied retailer profitability and points out that the most effective method of delivery is to do many deliveries in a single journey. The trick is to get customers to consent.

And they may do, if they understand what is going on. "By having this understanding, it is possible to offer incentives to customers allowing delivery teams to preplan deliveries," says Mr Regan. "For example, by offering two-day delivery or three-day delivery for free, or a chargeable next-day delivery, consumers feel they are in control of the process and subsequently may be inclined to pay for a delivery to be made at a convenient time."

The eternal question of outsourcing is ongoing. There are ferocious advocates on both sides. Innoverne is a business-to-business (B2B) automotive tool hire firm, which uses UPS contract logistics facility in Coventry. This handles returns, turning them round for resale within hours. For Innoverne, it's an economic, all-in-one solution.

Yet when the internet laundry business ZipJet founded in 2014, it decided to keep all logistics in-house. It now serves 25,000 customers this way. ZipJet co-founder Florian Färber says: "While tempting, outsourcing logistics is rarely the cost-effective solution. In fact, outsourcing logistics often incurs an array of additional costs that eat into your margin.

"At ZipJet, logistics insourcing allows us to tightly monitor and continually improve on efficiency. In both London and Berlin, we rely on our own fleet. This will be the case as we expand into Paris, as we see this as the best way to deliver cost effectively while maintaining a firm grip on customer experience."

Ultimately, post-sale fulfilment is such a fast-changing industry there's no one-size-fits-all solution to anything.

Even that accursed returns policy will require a number of things to be considered. First, is free delivery really cost effective? Collect Plus survey numbers show 74 per cent would be less likely to buy if charged for returns.

Real-world behaviour may vary from survey data. Multivariate testing will expose what shoppers really think. Scott Slinn, head of supply chain solutions at BT Expedite, says the only way to know is to run the numbers. "In the fashion world, free delivery is an excuse for customers to buy multiple items to pick and choose at home," he says. "I think it's worth doing the analysis to determine the impact of forcing the customer to pay for returns. Will this reduce sales and by how much? Will this decrease returns and by how much? It's analysis worth doing."

Oracle's Mr Regan says it may be worthwhile to offer customers a discount for hanging on to products they want to return. For high-value B2B orders this makes sense.

Data gathering can reduce returns. Eric Fergusson, director of retail services at big data consultancy eCommera, says: "Establish effective data capture on cause of returns so that you can track, for instance, how many returns are due to the product not meeting expectation of size, colour, feature or dimension, which can then be addressed online." The supply chain can't exist in isolation.

Post-sales logistics will never be "solved". If anything, it's getting harder and harder to meet expectations. But with a few changes to strategy a lot can be accomplished.

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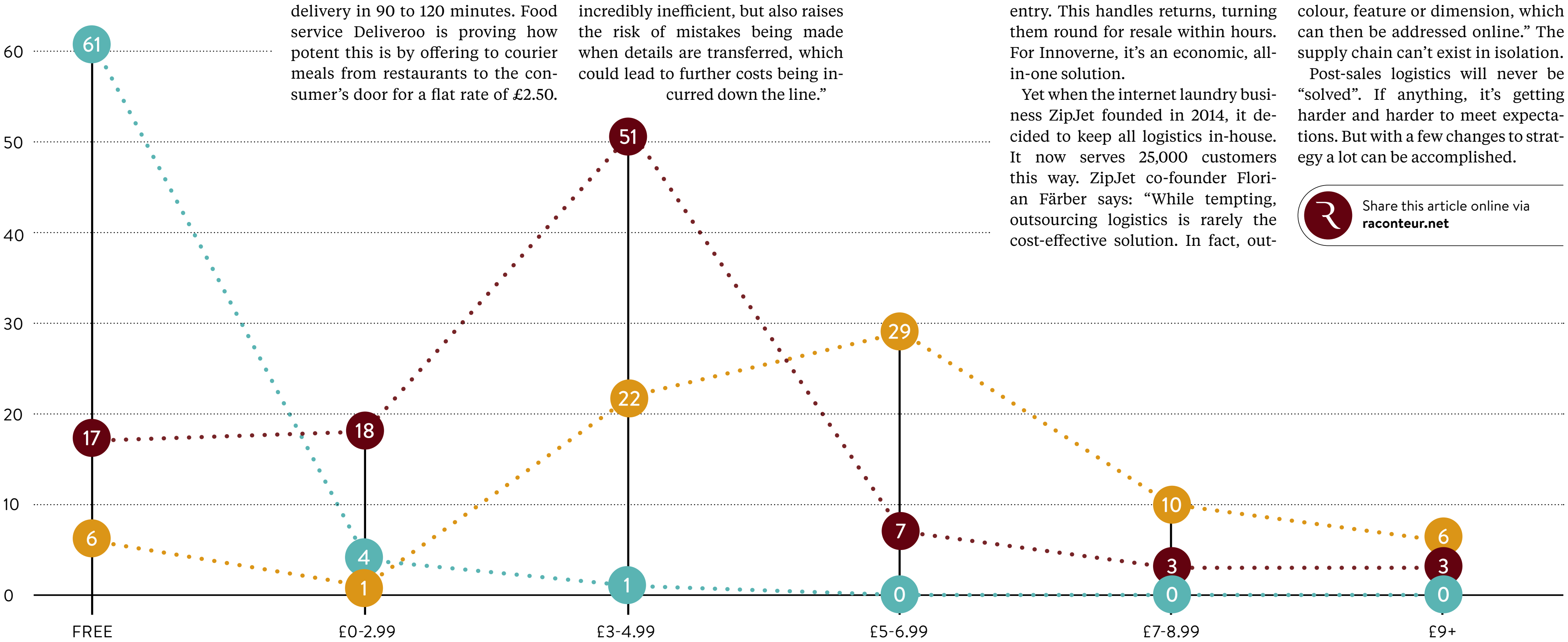
DELIVERY COSTS
BY METHOD

Percentage of UK retailers that charge the following

- Standard delivery
- Next-day delivery
- Click and collect



Source: Ampersand Commerce 2016