DHL

Delivered.

THE GLOBAL LOGISTICS MAGAZINE

ISSUE 02/2016

BUSINESS

BYTES AND MORTAR

How e-tailers and retailers are innovating in the battle for savvy shoppers

SOLUTIONS

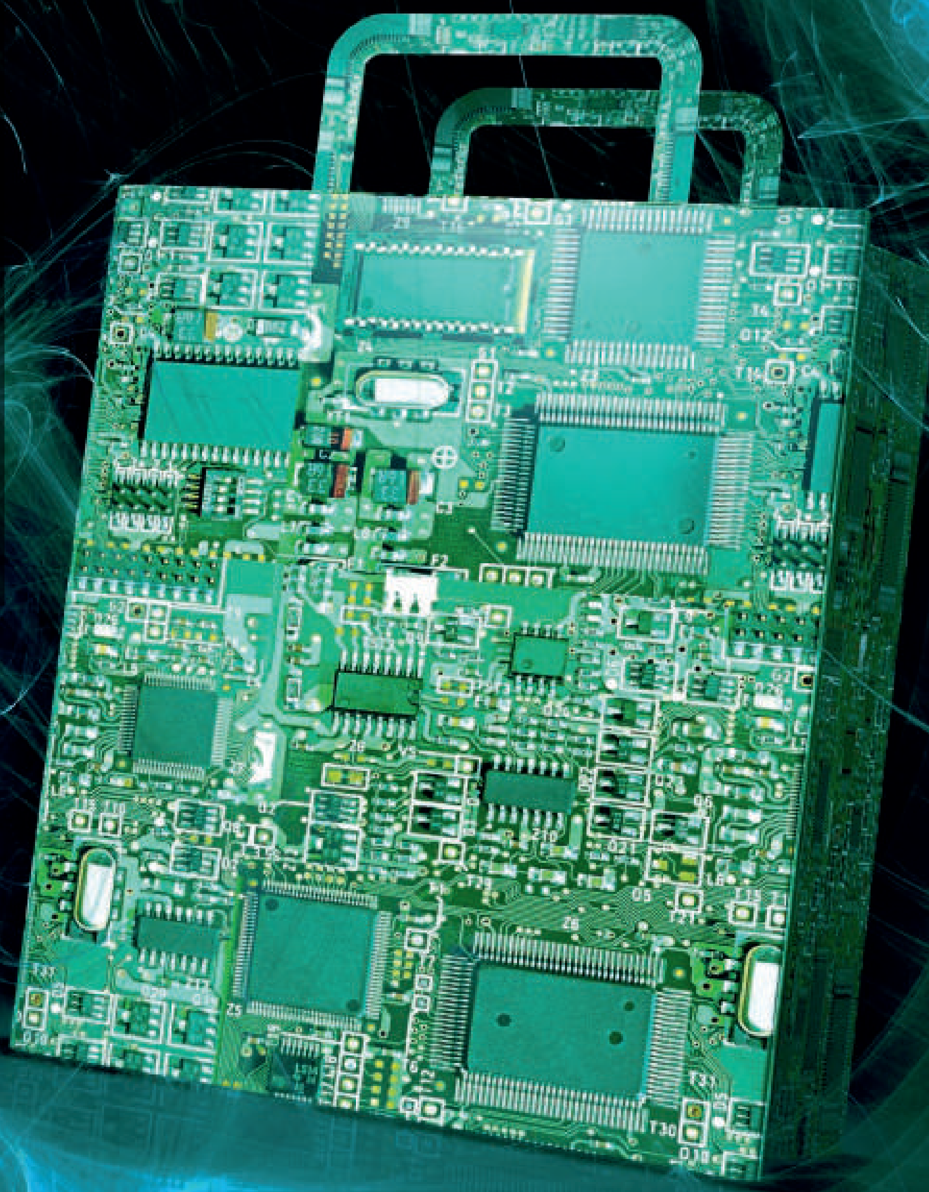
HAZARD WARNING

How to identify, manage and mitigate supply chain risk

VIEWPOINTS

GETTING EMOTIONAL

Find out why you need emotional intelligence to succeed



FOCUS

GETTING A HANDLE ON CONSUMER POWER

Why the tech sector is charged up to meet changing retail demand

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Cover photo: artpartner-images; Photos on this page: DHL, JGI/T. Grill/Blend Images LLC, dpa Picture-Alliance/AGF Creative/G. A. Ros, N. Bourquin/Onlab, P. Matthew

DEAR READER,

There was a time, not so long ago, when retailers had power over consumers. If the retailer didn't have a product in stock, the consumer would have to wait until it became available.

Not any more. We're now living in a fast-paced, 24-hour, e-commerce world where consumers don't have to wait. They simply click onto another seller's website instead.

The ultracompetitive technology sector with its fast product cycles knows this only too well. Yet as our focus article "All Power to the Consumer" highlights, keeping up with shoppers' demands for rapid delivery and easy returns of tech products requires innovative and ever-changing logistics solutions. We investigate how the industry stays ahead of the consumer curve.

Also this issue, acclaimed Miami-based tech entrepreneur Manuel Medina tells us why the business future is bright for Latin America; and we look at why Singapore – one of the world's most important hubs for logistics and commerce – has become a particularly vital location for technology supply chains.

Enjoy your read!

Sincerely,

Bill Meahl
Chief Commercial Officer, DHL

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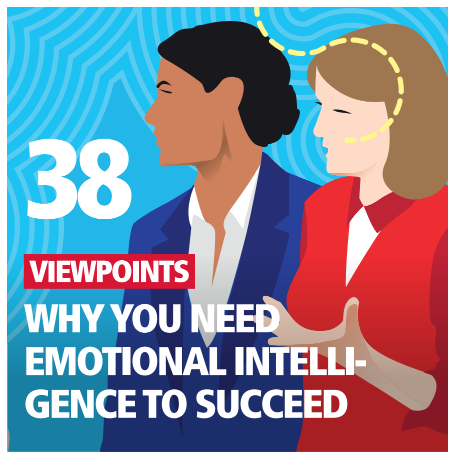

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WEB LINK VIDEO LINK

The icons above indicate additional online resources.

SOLUTIONS

VIEWPOINTS

A NOTE FROM THE EDITOR

Last autumn I had the pleasure of meeting the effervescent Melanie Irons at our DHL Innovation Center in Germany. A native of Tasmania, the island state in Australia, Mel helped tens of thousands of people by spontaneously reaching out and using the power of social media in the face of a major natural disaster. As her home island was being ravaged by raging wildfires, she decided to take action and became a vital link to a community under pressure.

Michelle Bach

Read more about Mel's story and "Tassie Fires" in "*Delivered.* gets social media savvy with Melanie Irons" on page 36.

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NEWS

BUILDING SUCCESS IN SINGAPORE

DHL Supply Chain has launched its $104 million (€95 million) Advanced Regional Center (ARC) in Singapore – a multiuser warehouse facility to further enhance its market leadership across healthcare, technology, manufacturing and aerospace industries, and grow its business in the region's emerging markets. ARC features an innovative multiclient automated storage and picking solution that uses 40 percent less space and delivers over 20 percent efficiency gains. The $8.65 million (€7.9 million) Multi-Shuttle Automation Solution is designed to address the limited availability and rising cost of labor and land.

The facility in Tampines LogisPark spans nearly 60,000 square meters, boasts a warehouse floor area of over 90,000 square meters and increases DHL's warehouse capacity in Singapore by 40 percent. In addition to a regional call center, an integrated transport hub, as well as the country and regional office, it also houses the Asia Pacific Innovation Center (APIC), the first Center of Excellence for innovative logistics services and solutions in the region.

You can read more about Singapore on page 30-32.

WIN!

We have 30 best-selling books from Travis Bradberry, President of TalentSmart – the world's leading provider of emotional intelligence tests and training – and co-author of "Why You Need Emotional Intelligence to Succeed" on page 38.
To be in with a chance of winning either "Emotional Intelligence 2.0" or "Leadership 2.0.," simply post Travis' article from www.delivered.dhl.com into your LinkedIn account and email the link to us at **delivered.magazine@dhl.com**.
The first 30 names from a prize draw will each win a book – so make sure to include your postal address in your email and tell us which title you would prefer to win. Good luck!

THE DRIVERLESS BUS: SLOWLY BUT SURELY?

The Netherlands has scored a world first with its trial of an electric, driverless shuttle bus on a stretch of public road. The $3.3 million (€3 million) WePod took six passengers – at just 5 miles per hour – on a 200-meter journey along the side of a lake in the Dutch town of Wageningen. The project comes as the Netherlands prepares to hold the first trials of driverless semitrucks at the port of Rotterdam. The aim is to use autonomous road trains to send cargo throughout Europe by 2019.

tinyurl.com/driverless-bus

APPOINTING THE FUTURE

It's a major regional logistics hub with global ambitions – and now the United Arab Emirates has seven women in cabinet posts after HH Sheikh Mohammed bin Rashid Al Maktoum, Vice President of the United Arab Emirates and Ruler of Dubai, appointed them in one of the biggest political changes in the UAE's history. The Emirates now have Ministers for Future, Happiness, and Tolerance, plus 22-year-old Rhodes Scholar Shamma Al Mazrui, who joins the cabinet as Minister for Youth. According to Sheikh Mohammed, this is part of preparing the UAE for the future. Future-proofing also includes a 300 billion dirhams ($81.5 billion) investment into various development projects to ensure a prosperous post-oil economy.

tinyurl.com/appointing-future

TOP MARKS

Deutsche Post DHL Group has been rated one of the world's "Climate A-List" companies in a leading global index. CDP – formerly the Carbon Disclosure Project – compiles data on companies worldwide to motivate them to maintain their commitment to climate protection. CDP awarded Deutsche Post DHL Group the highest Climate Score – 100 A – for its transparent reporting and performance.

DATA ALLOWANCE

Data about your supply chain can be a goldmine of information, allowing you to preempt the needs of your customers rather than reacting to situations as they occur. So it's pretty obvious companies will be using it to its full potential, right? Well, a recent Accenture survey found that only 17 percent of companies are analyzing and using this vital data to help forecast future demand, cut wastage and generally give themselves an edge over their competitors. Now a new DHL white paper, "The Predictive Enterprise: Where Data Science Meets Supply Chain," looks at the challenge of integrating supply chain analysis technologies into companies, exploring the steps necessary to turn them into true predictive supply chains – not just data-mining to analyze past market conditions, but using algorithms to tell them how they should plan for future needs.

You can download the white paper at:

www.dhl.com/predictive

$17 BILLION

The estimated worth of the used smartphone market in 2016

RALLYING SUPPORT

Software company Agheera, which supplies real-time tracking solutions and IT solutions to DHL, was able to demonstrate its services under the ultimate testing conditions: the 2016 Dakar Rally in South America. Agheera teamed up with German racing driver Ellen Lohr, who was part of the Mercedes Benz press team that accompanied the rally drivers for 16 days in January. Agheera tracked Lohr's car and recorded the distance she covered: 7000 miles (11,265 kilometers) through Argentina and Bolivia. A tracking journal and additional information can be found at:

www.agheera.com

THE STORY

DELIVERING ON THAILAND'S GROWING ONLINE SECTOR

The e-commerce market in Thailand is undergoing a revolution. It is expected to more than triple in size to $4.01billion (€3.6 billion) over the next four years. And the backbone to such growth is a good logistics system. With that in mind, DHL eCommerce is now providing end-to-end delivery service for Thai e-commerce merchants, offering next-day delivery to key urban centers, access to Cash on Delivery with daily remittance, an easy-to-use online portal for shipments and full tracking for consumers. New infrastructure in Thailand will include a 3,000-square-meter (32,291-square-foot) central distribution center in the capital Bangkok and a network of more than 20 depots throughout the country, which will double in number by next year. DHL will also expand its delivery fleet, primarily in two-wheel vehicles which can navigate the busy traffic in Thailand's major cities more efficiently. Thomas Kipp, DHL's eCommerce chief executive, said Thailand has "tremendous growth potential, fast e-commerce adoption and high smartphone penetration rates" and therefore was a natural fit to be the first Southeast Asian country to launch DHL's e-commerce domestic delivery service.

tinyurl.com/e-commerce-thai

Photos: DHL (2); Sonja Beyland; PR(2); Fotolia; Polaris/laif; shutterstock; REUTERS/Albert Gea

ESSENTIAL READING

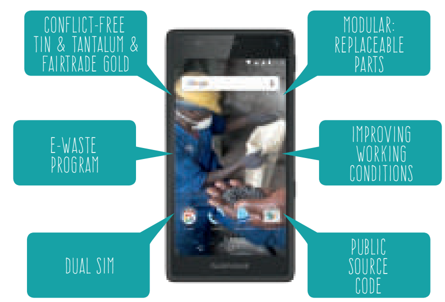
The new Corporate Responsibility Report from Deutsche Post DHL Group – entitled "essential" – was published in March, and provides an insight into how DPDHL combines bottomline business interests with a commitment to responsible business. The report is called "essential" because DPDHL recognizes the importance of corporate responsibility to its long-term business success; and it knows that its stakeholders expect it to adopt fair business practices, take a sustainable management approach and act with integrity in dealings with customers, employees, investors and business partners. Frank Appel, CEO of Deutsche Post DHL Group, says: "Our corporate strategy is built upon core principles of long-term growth and sustainability; with this as our guide, we remain truly well-equipped for continued growth and success. In a highly competitive market, it allows us to remain strong financially, maintain stability for us and our employees, and keep a steady eye on the interests of our stakeholders." **To download the report, please visit:**

tinyurl.com/cr-report-dpdhl

TAXI FOR TAKEOFF

We can all hail a cab via smartphone, but how about calling for a ride that flies? Chinese drone maker EHang says it is building the first "Autonomous Aerial Vehicle" for passengers. The all-electric 184 quadcopter (so called because it can take one passenger, has eight propellers and four arms) will have a range of about 10 miles and fly at 60 miles per hour. Passengers will summon the 184 via an app.

tinyurl.com/aerial-vehicle



GOOD CALL

The Fairphone, established in 2013, is a smartphone with a difference. Produced by an independent social enterprise in the Netherlands, its aim is to be a completely "fair" smartphone that increases transparency in the sourcing of raw materials, production, distribution, and recycling of electronics and – most importantly – transparency in labor conditions.
You can read more in DHL's Fair and Responsible Logistics report and download it at:

tinyurl.com/trend-res

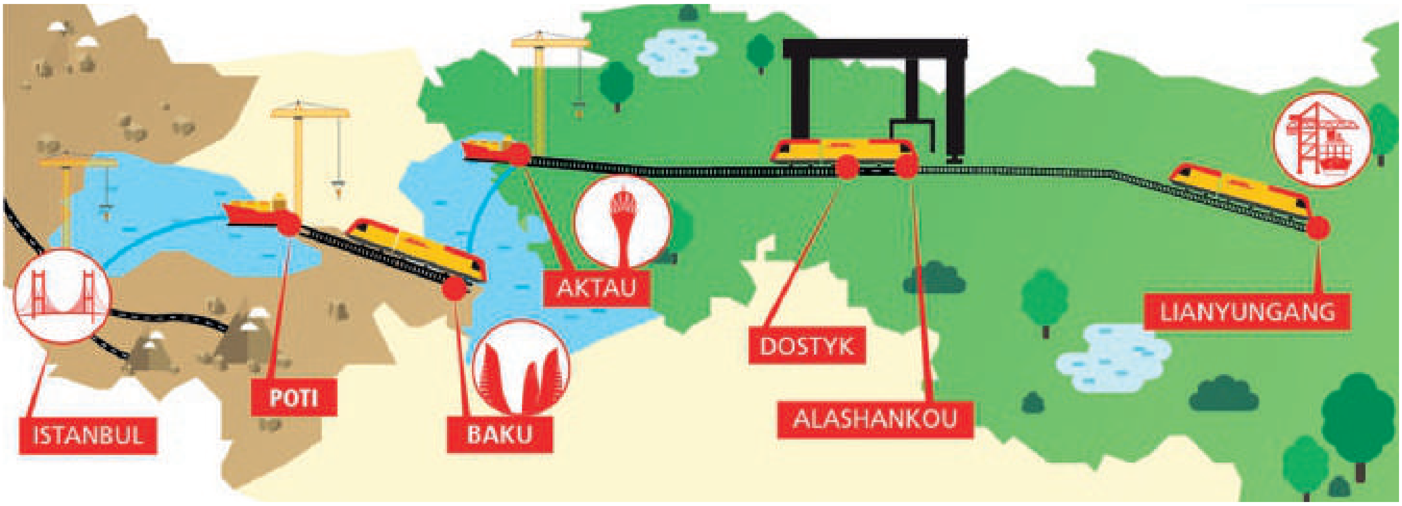
LIVING RESPONSIBILITY

GARD-ING AGAINST DISASTER

Deutsche Post DHL Group and the United Nations are celebrating 10 years of working together in a strategic partnership. Together with the UN Office for the Coordination of Humanitarian Affairs (UN OCHA) and the UN Development Programme (UNDP), the company has developed its Disaster Response Team (DRT) and Get Airports Ready for Disaster (GARD) programs. The GARD workshop helps airports and authorities prepare for natural disasters. Airport preparedness is a key plank of wider plans to deal with disasters – airports are a main access point for aid efforts, but they can become a bottleneck. Since its beginnings in 2009, the group's Get Airports Ready for Disaster (GARD) program has trained 600 people across 30 airports in 15 countries in identifying and dealing with such backlogs.

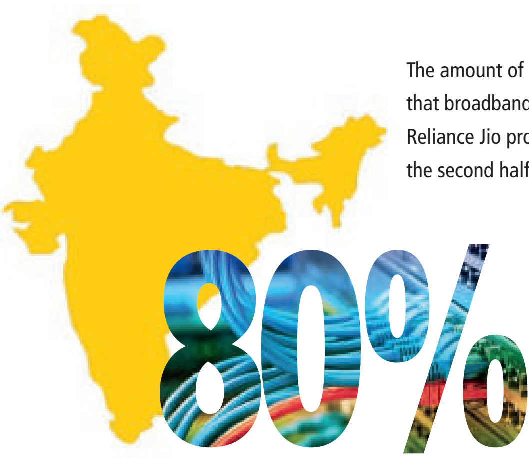
tinyurl.com/dpdhl-un

Photos: DHL (2); PR (3); mauritius images/imageBROKER/Guenter Fischer; Fotolia (3); Getty Images



ON THE RAILS

More than 2,000 years after the Far Eastern trade routes to Europe were first opened, a new Silk Road is taking shape with DHL Global Forwarding's plans for a southern rail corridor between China and Turkey. Freight is expected to take about 14 days to travel the route between Lianyungang in China and Turkey's economic center, Istanbul, crossing Kazakhstan, Azerbaijan and Georgia, as well as two legs by sea on its way. From there it can be forwarded by truck to any Turkish city. The creation of the rail corridor follows the signing of a memorandum of understanding between DHL and the Kazakhstan Railways-owned KTZ Express, which seeks to develop direct rail links from Asia to Europe and the Middle East. DHL has also worked closely with the rail companies and governments of China, Azerbaijan and Georgia to gain their support for the rail corridor. The route is at a critical point of the Silk Road Economic Belt, part of China's proposed "one belt, one road" initiative, which it estimates will generate more than $2.51 trillion (€2.35 trillion) in annual trade within the next 10 years.



The amount of coverage across India that broadband service company Reliance Jio promises to provide in the second half of 2016

MOBILES SIGNAL INDIAN ONLINE BOOM

India is one of the fastest-growing e-commerce markets in the Asia-Pacific region, worth $7 billion (€6.4 billion) in 2015, growing at more than 40 percent a year. This is according to leading technology advisory experts Gartner, who have produced a report detailing five key areas that Indian e-tailers should concentrate on to grow their sales. To download it, visit:

tinyurl.com/gartner-mobile

SOMETHING TO DECLARE

Internet shopping has opened up a global marketplace for goods, but there is still the sometimes tricky problem of navigating customs requirements. DHL Freight has introduced a new customs clearance service that makes it simpler for non-EU companies to import declarable goods into the European Union and, in turn, makes it more convenient for their customers. Consumers who buy goods online from companies that are based outside the European Union but use DHL Freight's new service now get their orders delivered to their homes rather than having to pick them up at the customs office and pay import tax onsite. Initially, the service is available for shipments coming into Europe via the Netherlands.

WOW

DHL is proud to be the Presenting and Official Logistics Partner of Exhibitionism – The Rolling Stones, a 50-year retrospective featuring more than 550 unique artefacts from the band's personal archives including guitars, costumes, personal diaries, stage props and poster and album cover artwork. Many of the exhibits have never before been shown in public.

The exhibition, which is spread across nine thematic galleries and over two floors, is on at the Saatchi Gallery, King's Road, London, until 4th September 2016.

THE ROLLING STONES EXHIBITIONISM DELIVERED BY DHL

www.stonesexhibitionism.com

ALL POWER TO THE CONSUMER

As far as the fast-moving technology industry is concerned, the consumer is king. Yet shoppers' constant demands – for multichannel retailing, ultraquick delivery, great aftermarket response and easy returns and repair – require innovative and ever-changing logistics solutions. So how easy is it for the sector to stay one step ahead of the tech consumer curve?

KEEPING WATCH:
Consumers have endless ways to research, test and buy electronic gadgets, whether online or via bricks-and-mortar stores.

Electronic goods retailing is getting complicated. Shoppers are becoming ever more demanding as digital channels bring the harsh glare of transparency to the buying experience. Consumers have endless ways to research, test and buy electronic gadgets, whether online or via bricks-and-mortar stores. They can compare product reviews, prices, delivery options and after-sales service on their mobiles, tablets and desktops. What's more, they'll discard in an instant those suppliers and brands that fail to pass muster.

The days when retailers laid out products on their shelves, folded their arms and waited for shoppers to take what they were offered have gone. Across the globe, consumer power is on the march. Take China, which has become a breeding ground for new ways to serve demanding tech shoppers, with online marketplaces such as Alibaba and smartphone brand Xiaomi, which has pioneered direct online sales. Meanwhile, India's retail scene is rapidly opening up (see box). The arrival of the empowered global consumer is transforming retail around the world.

This creates a huge challenge for logistics because shoppers want instant gratification, and if goods are out of stock, they won't wait. They expect their purchases to be delivered quickly, conveniently and to the handiest location for them. They expect free deliveries on high value goods with an easy system for returns as well as high standards of after-sales care.

$130 BILLION
The amount the e-commerce market in India is expected to reach by 2025

The technology industry is being radically shaken up by this move to extreme transparency and choice. Hundreds of new products are launched every year, from smartphones and tablets to phablets, laptops and desktops, and from large items such as TVs to ever-smaller goods such as smart watches and fitness trackers. The product cycle is fast and furious – take Samsung, for example, which is launching three or four new items every month; and the annual Apple iPhone launches are always a huge occasion in the retailing calendar.

Logistics has to adapt to these quick-fire product launches and the huge peaks and troughs in demand that they create. Apple sold 13 million iPhone 6s and its Plus phablet variant in the launch weekend across the U.S., Europe and China last September. That presented a massive logistical challenge.

E-commerce has exploded and, last year, online sales were expected to reach $1.672 trillion. In reality, shoppers are buying their electronic gadgets from a variety of sources: online retailers and resellers, physical stores, online marketplaces such as Amazon or Ebay and, in the case of Apple, directly from the manufacturer. Many tech manufacturers are looking to find the best strategy to meet the challenges of a multichannel sales approach. For instance, some – such as Huawei – have their own dedicated stores and product lines exclusively sold online.

Sales peaks

The logistics of supplying goods to retailers – business to business – which OEMs have traditionally undertaken is comparatively straightforward compared with delivering those goods directly to consumers. Last-mile delivery has a set of challenges all its own.

OEMs looking to get into direct selling are learning that e-commerce orders arrive 24/7, and peaks in demand can be very difficult to predict. Consumers demand a variety of shipping options, depending on the value of each product: high value goods can be sent express while lower value products such as accessories will need cheaper shipping – by post, for instance. Online selling requires shaping the transportation service to the demands of the consumers and also according to the value of the product.

Robert Mason, senior lecturer in logistics at Cardiff Business School, says a major issue for logistics is the growth of new sales peaks. Marketers try to exploit any peaks in the sales curve, whether they are established ones such as Christmas or newly created ones such as Black Friday. "Those peaks are becoming very significant marketing events," he says. "The issue is whether logistics can cope with the suddenness of those peaks while also being efficient day in, day out. That is a real tension that organizations dealing with omnichannel are wrestling with."

He adds that many manufacturers are uncertain about the future and how to plan their logistics for the next five years. "So when they are planning for new distribution centers, new locations, and new infrastructure, how much and where they put things – this is a big issue."

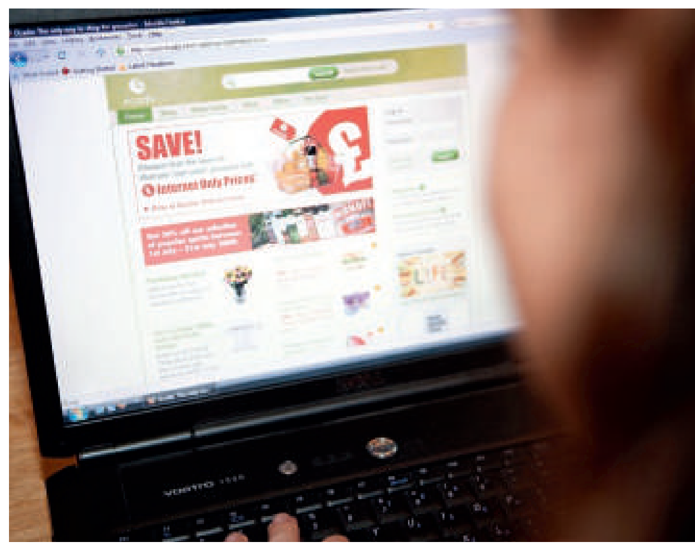
To keep up with consumers' expectation of a seamless shopping journey across different channels, retailers are moving to the omnichannel approach. Shoppers may research a product online and try it out in a physical store, but actually make the purchase anywhere along this journey or via a reseller, marketplace and through any device. This explosion of channels means that retailers need a clear view of where goods are in the supply chain so they can pick them, pack them and send them out, whether they are in a regional warehouse or the back of the nearest store. All that matters is keeping the customer satisfied.

This puts pressure on suppliers to ensure efficient logistics. Mirella Muller-Wuellenweber, Vice President Global Sales Development, DHL eCommerce, says that the likes of Amazon and its China rivals Alibaba and JD.com are leading the way in e-commerce. In China, many consumers are buying from overseas to ensure they get original high-quality consumer products like

"New sales peaks are becoming very significant marketing events. The issue is whether logistics can cope with the suddenness of those peaks while also being efficient day in, day out."

Robert Mason, senior lecturer in logistics at Cardiff Business School

SCREEN SAVER: Online shopping has massively increased in recent years.



KEEPING STOCK: Retailers need a clear view of where goods are in the supply chain, whether they are in a regional warehouse or the back of the nearest store.

Photos: JGI/Tom Grill/Blend Images LLC; UPI/laif; interTOPICS; Amin Akhtar/laif; Frederic MAIGROT/REA/laif; ullstein bild – Sawatzki; DHL cosmetics, baby care and fashion. Since the leading marketplaces Alibaba and JD.com have been enabling merchants to open online stores on their global websites without requiring local and legal presence in China, there has been enormous growth in cross-border commerce.

"It is about understanding consumer demands and behavior," says Muller-Wuellenweber, "Consumers order anytime 24/7, more and more from smartphones, and they choose their delivery partner based on the most convenient option for them. Also, positioning stock closer to the consumers is important to stay competitive."

BOXING CLEVER: E-fulfillment is a crucial link in the e-commerce chain.

Delivery options

So delivery options are increasing rapidly. Everything from cyclists to Uber taxis that drop off e-commerce goods are vying to ensure same-day delivery is possible at low prices. This process is transforming logistics. Instead of having a few large warehouses serving wide areas, e-commerce providers are looking to open smaller warehouses closer to their customers. For instance, last year, Amazon built a warehouse inside a Midtown Manhattan office tower. The rents may be high, but the locations are essential to get goods to people in a two to four-hour time window. DHL is also creating localized e-fulfillment centers, including in the U.S. (Columbus, Los Angeles), India (Delhi and Bangalore) and Mexico.

This process goes hand in glove with the development of "anticipatory logistics," where sellers anticipate the demand they expect from given regions and stock their warehouses accordingly.

Anticipatory logistics requires a good understanding of what customers are likely to order, and minimizing on the proportion of slow-selling products in stock. It requires a strong analysis of customer orders, and big data comes into play. The better you understand customer behavior, the more you can plan your logistics.

GOING THE LAST MILE IN INDIA

E-commerce is set to boom in India as the nation's 350 million Internet users and 250 smartphone owners discover the convenience and simplicity of buying online. India's e-commerce sales are predicted to increase ten-fold to $100 billion over the next five years, according to a study by KPMG, fueled by growing incomes as the country's GDP rises rapidly.

Even so, there are still significant challenges to be overcome for India's online retailers. There is suspicion of online credit card payments, so many orders are paid through cash on delivery. But cash handling is risky, while customers often don't have the cash to pay when the delivery arrives. There is also a high number of returns and the challenge, familiar in many markets, of making sure goods can be delivered at the convenience of consumers. That means creating networks of shops to act as distributors of goods and finding ways to create specific delivery times.

Blue Dart, Deutsche Post DHL's subsidiary in India, is looking to create solutions to the challenges facing the industry. Backed by a superior air network which provides high visibility and connects key metropolitan areas, Blue Dart is focused on increasing consumer convenience. Besides piloting mobile service centers, the country's first automated Parcel Locker was launched by Blue Dart recently. In addition, card on delivery payment solution has been developed beyond the predominant cash on delivery service.

Online retailing in India will need to solve the challenge of deliveries if it is to fulfill its promise.

www.bluedart.com

For instance, you need to know if sales of certain goods rise when it is raining and factor in seasonality and other influences on shopping behavior.

"It very much depends on the close interaction between the retailers and the logistics companies so that you can do something for the benefit of both," says Rob Siegers, President DHL Technology. "The retailer can do faster times and we have better capacity management."

DHL is offering a range of last-mile delivery options, such as locker boxes that can be attached to the consumers' front door so that products can be delivered or returned. Other options are being developed, such as MyWays, where individuals sign up to deliver packages. They'll get a message on their smartphone when they are near a destination asking them if they would take a package to a nearby address. And DHL is piloting deliveries to the trunk of people's cars, so they can receive goods wherever they are. Plus, on-demand deliveries, which can be booked in a given time slot, are part of its service.

As consumers become ever more demanding, logistics operations have to be ready to meet the challenge. The future is about creating a great customer experience supported by highly efficient and flexible supply chain solutions. Companies now have to find their ways to optimize their channel strategy – one that integrates traditional retail, marketplaces and their own direct-to-consumer solution. ■ *David Benady*

KEEPING CLOSE: Local warehouse locations are essential if goods are to be delivered in a two to four-hour time window.

3 QUESTIONS FOR

Rob Siegers, President Global Technology, DHL

1. How do technology companies stay ahead of the curve?

Technology manufacturers want to manage the customer experience directly and be able to serve them better. Manufacturers are looking to participate in the e-commerce boom with big global players such as Amazon; but they also want to be at the forefront of strong local marketplaces such as JD.com in China and Flipkart, Snapdeal and ShopClues in India.

2. What will be the biggest challenges in selling technology products to consumers and how will these be overcome?

Technology is a very dynamic market and nobody can serve it on their own. You will always have to look for partners as it is getting so complex and fast-moving. When working with partners – such as a logistics partner or distribution channel partners – you always need to be quick and transparent, and you need to find a really good integration with them. In omnichannel retailing, the big issues are managing visibility and communicating with customers. Another huge challenge will be dealing with last-mile deliveries. The aftermarket still has optimization potential in service levels to customers, repair efficiency and asset recovery. The supply chain solution has to consider product values, regulatory requirements and different return channels.

3. How will logistics evolve?

One thing that will happen is that, in e-commerce, there will be more decentralization of warehouses. Better visibility is also required to allow for needed agility in supply chains. If you always have the customer experience and customer convenience uppermost in mind, good logistics will follow – which means guaranteeing delivery times and making returns easier.

STATE OF THE UNION

With mergers and acquisitions activity continuing apace in the technology sector, it's vital for managers to remember that logistics is key to the entire M&A process.

Is 2016 going to be another big year for mergers and acquisitions (M&A) in the technology industry? If recent activity is anything to go by, it just could be.

$67 BILLION
Dell's buyout of data storage business EMC in 2015 – the biggest tech deal in history

Certainly there has been a wave of mergers and acquisitions sweeping the sector as its biggest players snap up rivals in a bid to boost market share, get hold of the latest patents and enter new regions and markets. For example, computer giant Dell announced last year that it was buying data storage business EMC for $67 billion – the biggest tech deal in history. Meanwhile, Nokia Networks has taken over Alcatel-Lucent and Telefónica has purchased E-Plus in Germany. According to Business Insider UK, 2014 witnessed $3.5 trillion of M&As – with $214 billion of that coming from the tech sector. In the second quarter of 2015 alone, aggregate value of disclosed-value deals hit $127.2 billion. "Is 'frenzy' too strong a word to describe tech M&A?" asked Ernst & Young's "First look" publication, a global technology M&A update. "Not when disclosed deal value for 2Q15 alone topped the full-year totals for four of the previous eight years!"

Activity is particularly intense in the semiconductor industry, where the giants of the sector are buying up smaller companies. German chip maker Infineon Technologies is acquiring International Rectifier Corp; NXP Semiconductors is buying Freescale and Intel is purchasing Altera, while Avago has bought Broadcom, signaling rapid consolidation in a fragmented sector.

Yet the success of these acquisitions depends on integrating often vastly different businesses and bringing together distinct corporate cultures, IT systems and supply chains. And, naturally, that is often easier said than done. The global nature of the tech industry's supply chains makes things extremely complicated, while widespread contract manufacturing and subcontracting adds to the complexity. So to make sure that technology mergers go smoothly, companies must have a clear long-term strategy for their fluid integration.

Key to delivering benefits to shareholders, customers and staff is integrating the supply chains without damaging customer service. A balance must be struck between cutting costs and removing duplication on the one hand and maintaining or improving the customer experience on the other. Customers can often suffer in mergers because of disruption to the supply chains; and it can undermine the logic of a merger if, as a result, they begin to seek alternative suppliers.

Integration

This means that once an acquisition is agreed, speed is of the essence. It is said that if you don't achieve cost synergies in the first 100 days after a merger, it is doubtful you will ever achieve them – and certainly integration should be completed within a year of the deal taking effect. Managers have to act fast to put in place an integration plan, preparing even before the ink is dry on the deal and using any information they have to forge a forward-thinking supply chain strategy.

Richard Wilding OBE, chair at the Centre for Logistics and Supply Chain Management at Cranfield School of Management in the U.K., says that this long-term vision is crucial. It is critical to have a clear idea of the business strategy that the merged company intends to pursue and to use that as the basis for creating the combined supply chain. Making sense of detailed data is essential for deciding how to bring about synergies. "Supply chain strategy requires four areas to be addressed," he says. "Supply chain processes, the supply chain infrastructure (e.g. network, equipment etc), the information systems (this can be IT systems but also the methods of moving and communicating information) and, finally, the organization and culture. The critical thing with mergers and acquisitions is to ensure alignment in the four areas as this then enables effective integration."

All the data about the supply chains should be brought together and analyzed to create an action plan, looking at everything from where most customers are located to the sizes of loads being dispatched. "The devil is in the detail," says Wilding. "You've got to make sure that you have done your homework, that you've done the analytics. You need people who really understand supply chain data and can use that to create good knowledge and data." Much rides on having a strong management structure in place to carry out supply chain integration. Some companies will have managers who have been through many such integrations; while others will be experiencing it for the first time. Having people with experience can be helpful in planning strategies.

The low-hanging fruits of cost synergies – those that are quickest and easiest – are usually in transportation and distribution centers. For example, if two distribution centers are nearby, it may be possible to close one and transfer operations to the other. However, there are often leases in place and employment contracts with staff to be honored. It is possible to ask a third-party logistics provider to take over the running of one of the distribution centers as they may be able to use up its capacity. Again, a detailed network analysis of the centers is required, looking at their layout and scale of operations to set up the best processes.

As ever, acknowledging the needs of different customers is key. The customers of one company might prioritize speed while those of another may prize handling a high volume of deliveries at short notice. A balance must be struck based on the relative importance of those needs.

Integration is a huge opportunity to improve the performance of both supply chains. "It's a unique chance to shape and redefine the supply chain," says Jan Thido Karlshaus, Chief Customer Officer, Global Technology Sector, DHL. "Yet many things can go wrong with complex integration, so keeping an eye on risk and mitigating it is key." He points to DHL's Resilience360 risk management tool, which can give full visibility of both supply chains and alert companies to risks in almost real time. DHL has extensive experience in integrating supply chains and a broad portfolio of tools to leverage in this context.

"Maybe in three years' time the supply chain will look different, so you need to take a view on short-term synergies and also on long-term supply chain optimization."

Jan Thido Karlshaus, Chief Customer Officer, Global Technology Sector, DHL

GOOD BUY: Semiconductor manufacturer Infineon Technologies is acquiring International Rectifier Corp, adding to its power management tech business.

Ultimately, the right balance needs to be struck between the needs of the customer, the search for cost savings and the risks the integration creates. And you have to be clear about your long-term objective. "If you add one and one it mustn't just lead to two," says Karlshaus. "You may want to create something bigger and develop a supply chain that is fit for the future. Maybe in three years' time the supply chain will look different, so you need to take a view on short-term synergies and also on long-term supply chain optimization." ■ *David Benady*

SMART THINKING

Tech entrepreneur Manuel Medina explains why Latin America is poised for a surge in big data, cyber security, mobility and other innovations.

Manuel "Manny" Medina is a futurist, not by trade but by practice. "I like to see where the future is going and step in front of it," he says, comparing this approach to stepping in front of a wave. So what does he see as the next big wave – from a business point of view – in the coming years? Actually, there are several. According to Medina, there's huge potential in big data, cyber security and mobility. "This is a wave that is actually bigger than the Internet," he says.

DISHING UP SUCCESS: Medina sees good prospects for countries such as Chile – whose ALMA observatory makes it a world leader in the field of astronomy.

And while Medina notes that the expansion of these next-generation technologies will be worldwide, they have particularly bright prospects for Latin America, a region that's dear to the heart of this Cuban-born businessman. "I'm a big fan of Colombia," he says, when asked to name his favorite Latin American countries in which to do business. "Colombia has a very fast-growing IT industry. It's extremely well connected, and it is very agreeable for business. I'm also a fan of Mexico, as well as Peru. Mexico has made a significant effort to open up its telecommunications industry." In 2014, Mexico reformed its telecommunications rules to promote competition in a market dominated by America Movil, a mobile and fixed-line services giant owned by Mexican billionaire Carlos Slim. The quasi monopoly was "a big detriment" to expanding high-tech services in Mexico. With the reform, America Movil had to sell assets, making room for more competition. "The willingness to open up is one of the biggest benefits for my industry," Medina says. "You can say the same thing for Colombia and Peru."

Medina is a voice to listen to when it comes to technology and Latin America because he has been plugged into the region's IT industry for decades. After being awarded a B.A. from Florida Atlantic University, he worked for a few years as a certified public accountant, then founded data services company Terremark in 1980, which expanded through the U.S. and to Asia, Europe, Latin America and the Middle East. The growth caught the eye of New York-based Verizon Communications, which bought the publicly traded company for $1.4 billion in 2011.

After his exit from Terremark, Medina founded the investment fund Medina Capital, with partners from his Terremark days, to invest in young technology companies. To date, these include names such as Cryptzone (cyber security), Brainspace (data analysis) and Booker (e-commerce platform for the services industry). While most of Medina Capital's investments were discovered in the U.S., one significant success originated in Latin America: Easy Solutions, an antifraud company founded in Colombia and which has expanded to more than 60 clients in Latin America, including big banks. Easy Solutions has also become extremely successful in the U.S. and has a significant number of clients in Europe and Japan. Indeed, its spectacular growth over the past three years has buoyed Medina's expectations about the region's prospects for IT entrepreneurs.

94.1
PERCENT
The percentage of Internet users in Latin America who are using social networks

Advantages and opportunities

Medina now expects similar success stories to emerge from Latin America in the near future. "One of the advantages of Latin America is that the cost of development is substantially less than in the U.S.," he says. "So you are able to have more brute force, more developers and a highly sophisticated workforce. All of those combinations have created a product set that is a big winner in the case of Easy Solutions." He expects his next business focus to be on Argentina. "It's a big breeding ground for this type of entrepreneurship, as is Colombia," he notes. "What excites me is to be able to promote, motivate and further foster the development of entrepreneurship in Latin America."

> *"I like to see where the future is going and step in front of it."*
>
> **Manuel D. Medina, Founder and Managing Partner of Medina Capital**

TECH HUB: Companies such as Huawei, the Chinese Telecommunications enterprise, see big sales growth in Latin America.

MANUEL MEDINA'S SEVEN KEYS TO SUCCESS

Medina frequently gives talks to aspiring entrepreneurs, and he has broken down his message into seven keys to success. A secret formula? No, he says. It's simple, and it's a way of life:

1. **Be positive**
2. **Keep your word**
3. **Keep fit**
4. **Keep informed**
5. **Keep a sense of humor**
6. **Keep humble and treat people well**
7. **Keep trying**

Of these, being positive is among the hardest. "There are people who are drama queens or kings, and people who are always positive. When you have a positive attitude, people and opportunities come to you," he says. "If you had an opportunity, would you bring it to somebody who is always down, or would you bring it to somebody who would say, 'Yes, wow, that is really great, let's go and get it'?" he says.

To sustain a positive attitude, he recommends meditation. But he warns that no matter what, bad things will happen. The key is "to analyze it and ask what you can learn from it," he says. "Without the bad you can't have the good. It is the yin and the yang. So take the bad not as, 'Oh my God, why me?' but as 'How do I take this and improve on it?'" Of course, luck can play a part in success. "I believe that the harder I work and the more that I prepare, the luckier I get," he says.

A big driver of Latin American growth in technology is an explosion in the use of social media and mobility in the region, thanks to a burgeoning middle class. While Latin American Internet penetration lags at 53 percent compared with some 90 percent in the U.S., the use of social media far surpasses that of the U.S. (over 90 percent compared to 65 percent). The main reason for this is that Latin American countries have been able to install "from scratch" all the wireless and other next-generation innovations for transporting data and didn't have to first rip out and replace legacy telecom infrastructure, as had to be done in the U.S. There is one big challenge for further expansion, however, says Medina. The region will need more access to "capital to be able to deploy these next generation and wireless networks in order for people to be able to transact business and download, etc., in the appropriate way." In that regard, there are better prospects for financing projects in Chile, Colombia and Peru, which, he believes, are countries that "have really gone out of their way

Photos: Martin Zabala/Xinhua Press/Corbis; Rahel Patrasso/Xinhua Press/Corbis to become business friendly. In those cases, you see significant advances in how they are changing their own internal infrastructure to make it very easy for people to conduct business."

On the "could do better" for business side, Medina says that Brazil still has a long way to go to improve its attractiveness for investors. While the country is trying to become business-friendly, he thinks that it is still much too bureaucratic. "It still hasn't fundamentally changed its infrastructure for those who want to create a new company or deliver something to Brazil, or export from it," he points out. Another area for improvement is Venezuela which, like much of the region, is suffering an economic contraction this year after a plunge in global oil and other commodity prices. "Venezuela has a long way to go before it brings back confidence for (companies) to be able to invest significant dollars there," says Medina.

30
PERCENT
The percentage of the population in Latin America now considered to be middle class

MIAMI: THE TECH HUB FOR LATIN AMERICA

Manny Medina is a big believer that Miami can become a technology hub for Latin America.

On the infrastructure side, he says, more than 90 percent of network traffic between Latin America and North America and Europe already comes through Miami. Plus, socially, the city's large Latino population makes it open to the region. "Miami has a friendly environment and a deep angel network," says Medina. "The level of innovation and companies that are coming here from Argentina, Colombia and Brazil is growing rapidly. There is no technology hub for Latin America. So Miami – naturally, geographically and traditionally – is the logical place."

Positive changes

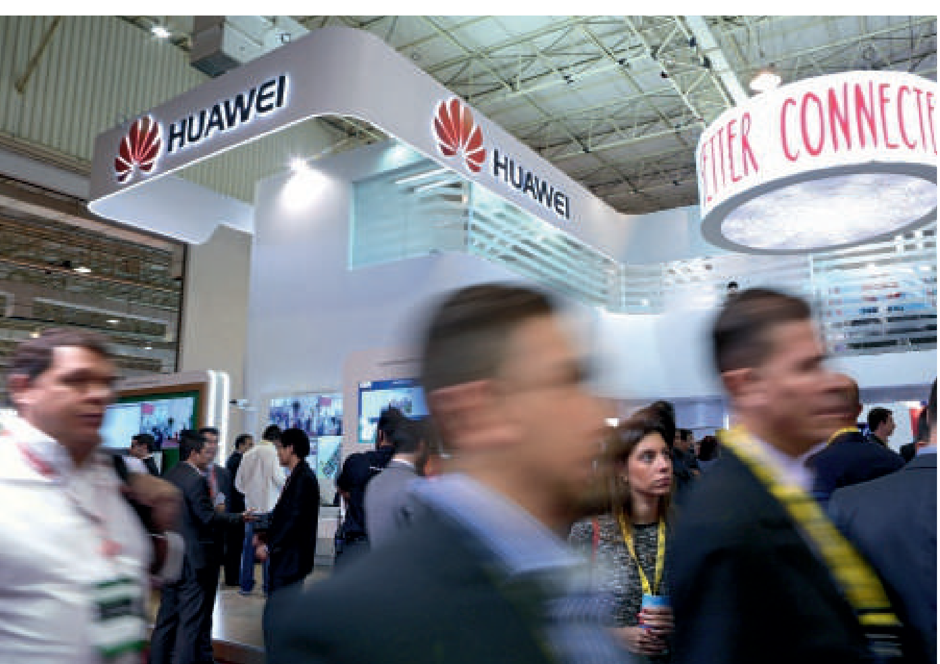
Argentina, on the other hand, appears to be on the mend after foreign investment was driven away by 12 years of populist rule. "I understand that the mood is changing there," says Medina. And [Mauricio] Macri coming in [as the new president] has, at least from the psychological point of view, given a lot of hope, particularly from the perspective of international investors. I think Argentina potentially could see a lot of significant positive changes."

On the product side, Medina sees huge potential in Latin America for cyber security as businesses and individuals continue to be targeted by fraudsters. Another area is big data. Yet growth in this technology will not only come from the traditional sectors, such as healthcare, finance, research and development. Industries such as agriculture, for example, will also benefit from it. "When you plant a seed today, there are sensors that, in real time, can tell you the exact condition of the soil, so you can drop the seed exactly where it should be," says Medina. "The production in those fields is significantly higher than those in 'traditional' fields."

Of course, for any entrepreneur in the region, challenges remain. One is the stigma of failure, says Medina. Whereas entrepreneurs in Europe and the U.S. can snap back from an unsuccessful venture, Latin Americans can get mired in bankruptcy courts. Another is education: much of the workforce "needs to be more highly trained when it comes to new technologies." Otherwise, Medina is optimistic about Latin America's future, even if there is political instability and bureaucratic pitfalls in some countries, and a commodity crisis hitting the region's economy. "This is a tough time, but it is a spot in time and I think it will change," he says.

And anyway, potential risks won't keep him on the entrepreneurial sidelines. "I love business," he says simply. "I love the challenges. I have been blessed with a career that, like everything else, has had incredible downs – and ups. But that is exactly what makes it so exciting." ■ *Charles Newbery*

ON THE MOVE: Growth in technology is being driven by the use of social media and mobility, thanks to a burgeoning middle class.



www.medinacapital.com

GETTING INTO REVERSE

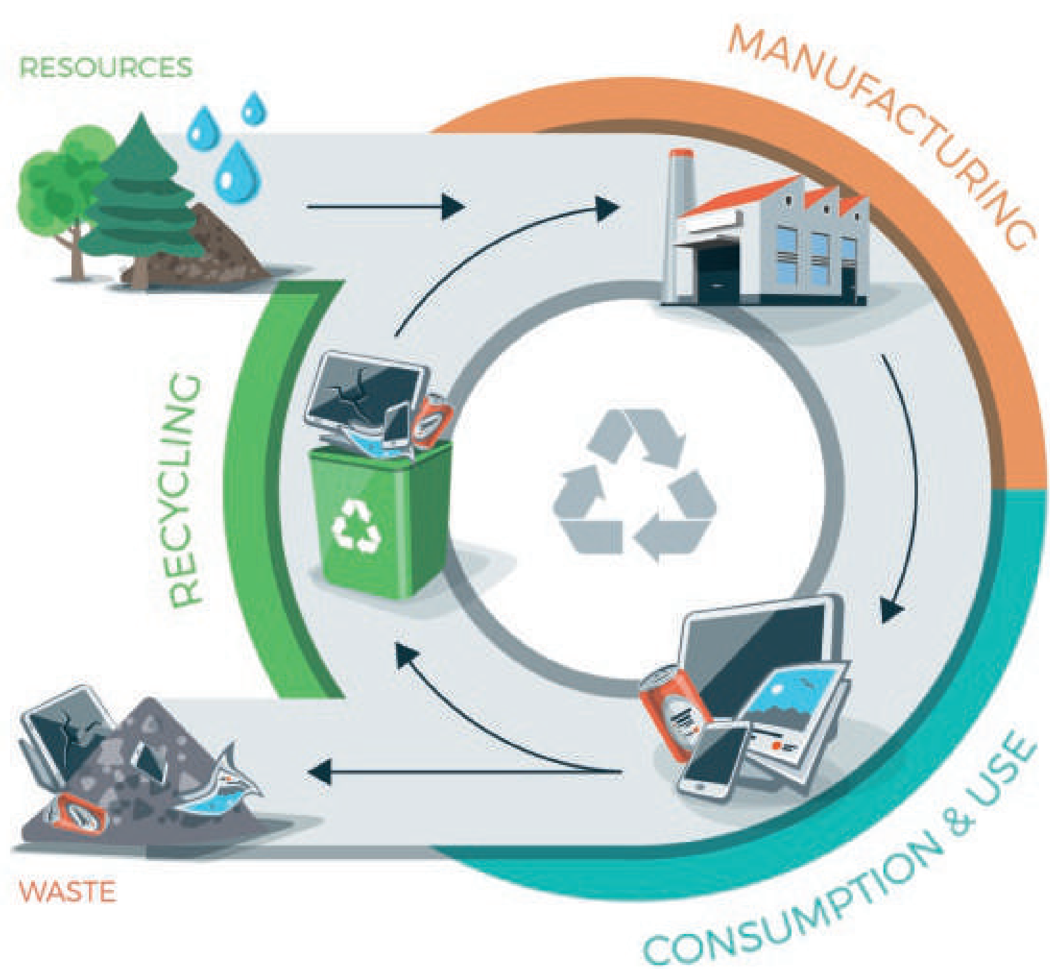
Companies increasingly want to recover products from customers. That calls for new logistics approaches.

Today's consumer lifestyle is supporting shorter product life, with fast replacement and disposal. Mobile phones are replaced after one or two years of usage, supported by related contracts and fast release of new product versions. But with limited resources, a new economic thinking is required: a shift from a linear to a circular economy. Within this concept, the journey from manufacturer to customer is becoming only the first of several loops in a product's lifecycle, as it returns for repair, upgrade, refurbishment, resale and ultimately for dismantling and recycling.

There are several factors driving this change. First of all, "Producer Responsibility" legislation, like the EU's WEEE directive, puts the onus on manufacturers to collect and responsibly dispose of their products at end of life. Secondly, there are new business models. The growing importance of service-based products, from aircraft engines rented by the hour to cloud-based

€1.8 TRILLION

The net benefit that could be achieved by the circular economy in Europe alone by 2030



computing, creates an incentive for manufacturers to find ways to extend service life and reduce the operating and maintenance costs of their products while they are in customers' hands. Finally, more companies are tackling the challenge of decoupling growth from resource use by incorporating "circular economy" ideas into their businesses.

Whatever the motivation, this changing relationship between manufacturers and their products has significant implications for logistics, calling for new reverse logistics capabilities that allow companies to recover products from customers. "In combining our logistics capabilities, sustainability expertise and engagement with our customers, DHL can play a major role in enabling a Circular Economy," confirms Katharina Tomoff, Vice President Shared Value at Deutsche Post DHL Group.

Reverse logistics is the topic of a new white paper developed by Cranfield University, U.K., in collaboration with DHL. It identifies that different categories of products will demand different reverse logistics models. At one end of the spectrum are high-volume products with a relatively low residual value, like mobile phones and other consumer electronic devices, where extended producer responsibility regulations are often the primary driver of the reverse logistics process. Here the challenge will be minimizing the cost of recovery.

At the other extreme are advanced industrial products, like medical or high-end ICT equipment, which are likely to retain significant value for manufacturers. Products in this category will use dedicated reverse logistics chains, with the manufacturer controlling the process from the end customer and sustaining product value by informed decisions regarding reuse, refurbishment, remanufacture or recycling.

Right first time

The report identifies several key success factors for reverse logistics. First, networks will need to be highly optimized to keep costs under control. Consolidating activities with competitors or service providers to maximize return volumes will be important, especially for items with low residual value. Networks will need to be adapted to suit the physical, market and regulatory requirements of different regions.

Second, transparency will be key to efficiency. Companies will need to consider reverse logistics requirements throughout their product design, manufacturing and marketing activities, for example. They'll need forecasting and inventory control systems for returning items so they can redeploy or resell them quickly.

Third, new sorting and next lifecycle capabilities will be needed to improve the reverse logistics flow. Finally, companies will need new partnerships. They can significantly benefit from collaboration with their logistics provider and companies across different industries to handle reverse product flows.

"Understanding the maturity of reverse logistics and related requirements is crucial for scaling up the circular economy solutions of companies across different industries," says Peter Ball, Professor of Operations Management, University of York, until recently with Cranfield University. To support companies in these efforts, the report includes a comprehensive Reverse Logistics Maturity Model, a self-assessment tool that allows them to evaluate the current maturity of their strategy, their tactical capabilities and performance across the full reverse logistics cycle. ■ *Jonathan Ward*

To download the white paper, please visit:

www.dpdhl.com/circulareconomy

To read more about the circular economy, please visit:

www.ellenmacarthurfoundation.org

CRANFIELD: SUSTAINABLE THINKING

Cranfield is a leading international contributor to global innovation. With its emphasis on the aerospace, agrifood, defense and security, environmental technology, leadership and management, manufacturing and transport systems sectors, it has changed the way society thinks, works and learns.

Sustainable manufacturing at Cranfield is concerned with developing sustainable solutions by adopting a systems approach.

Circular economy thinking is integrated within postgraduate design, technology and management programs, with academic leads in each case. As part of this work, Serhan Alshammari, researcher at Cranfield School of Aerospace Transport and Manufacturing, developed the Reverse Logistics Maturity Model.

www.cranfield.ac.uk

SIZING OPTIONS: In China, Sai Li ponders on whether to buy in store –or online.

BYTES AND MORTAR HIT THE ROAD – THE BATTLE FOR THE CONSUMER SHIFTS GEAR

Today's consumer wants it all – variety, fast delivery, low price, easy returns and much more. As e-commerce takes a bigger slice of the retail pie, the battle for the consumer is on. And logistics is taking center stage.

Friday lunchtime, Kunming, Yunnan province, China. Sai Li needs a new outfit for next Saturday's party. The 28-year-old project manager has already tried on quite a few chic things at a mall but wants to see what else is on offer, so she's busy surfing the web, comparing styles and prices, and picking up ideas for shoes and accessories to complete the look. Zooming in on three choices, Sai Li now needs to see who can deliver by Saturday morning.

Enter the savvy, omnichannel consumer. In retail, the consumer is king – and that consumer is increasingly engaged both in physical shops and online, wanting it all, anytime, without too much brand loyalty. So in the quest for that consumer's wallet, the big retailers and e-tailers have their work cut out for them.

A multitrillion dollar market

At stake is a global retail market that is estimated to reach $28.3 trillion by 2018, according to e-Marketer.

In 2014, e-commerce amounted to 5.9 percent of the total worldwide retail market, at $1.3 trillion. By 2018, it will have increased to 8.8 percent – and according to Accenture and AliResearch, the global cross-border e-commerce market alone could reach $1 trillion.

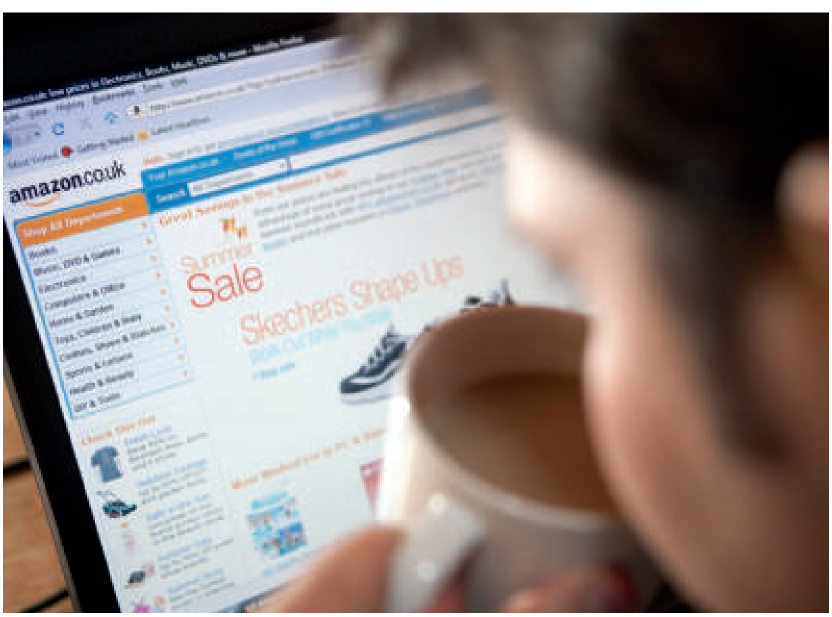
These are powerful numbers – and they indicate that the much-heralded demise of bricks and mortar isn't quite as far advanced as experts rushed to predict a decade ago. All players, including the very largest retailers, now carefully consider where to invest and how to innovate. As they compete to win in that multitrillion dollar marketplace, there is no time to stand still and it's no longer just about product, price, place and promotion. The battle for the consumer has also hit the road, with logistics becoming perhaps the most critical element.

Logistics as the key differentiator

According to several news outlets, the world's largest online retailer, Amazon, is planning to step up its logistics services. A recent report by Bloomberg says Amazon's "secret" Dragon Boat project aims to "automate the entire international supply chain and eliminate much of the legacy waste associated with document handling and freight booking." The plan, according to Bloomberg, is "to control the entire delivery process, from picking up the product at the factory to delivering it to the end customer – in the U.S."

$1 BILLION

The amount that Uber reportedly lost in China in 2015



Photos: Yereth Jansen; interTOPICS

Amazon's CFO Brian Olsavsky insists these initiatives are aimed at supplementing efforts by the company's existing logistics partners. Some analysts think otherwise and believe recent moves by Amazon suggest a different path – one where logistics is more than a sideline.

One such move is "Project Aerosmith," which saw the company partner with Air Transport Services out of DHL's former U.S. hub in Wilmington, Ohio, reportedly poised to operate some 20 leased jets in the U.S.

Another initiative has come via its China arm, Beijing Century Joyo Courier Service, which recently registered as an ocean forwarder with the Shanghai Shipping Exchange and made a similar registration with the U.S. Federal Maritime Commission.

Does it all make sense?

Dr. Michael Lierow, partner at management consultancy Oliver Wyman in Munich, sees Amazon's primary reason for starting up in logistics as wanting to control the whole supply chain from end to end, using its sophisticated data systems to do everything from predicting shopper behavior to last-mile delivery.

"Amazon is not really interested in becoming a logistics player, especially as there is a lot more money to be earned from their core business, e-commerce," he says. "However, in logistics terms, they might well consider building up or even buying a player for the last mile. They have the volume themselves, together with offering that service to sellers on their Marketplace, and when they go in, they go in big."

Not all experts agree this is a good idea. "Media and consumers drool over drone delivery and 3-D printing that will 'revolutionize' the logistics industry without knowing any of the economics," says one industry veteran, who believes Amazon would have a hard time running a profitable logistics operation. It takes more than a few assets to have the operational efficiency needed to be profitable in that space, he says, adding "to win with the consumer, you need outstanding expert logistics services, and those come at a certain price."

2012

AMAZON acquires Kiva, a robotics company, for $775 million

WALMART product assortment on Walmart.com grows to two million items

TARGET launches free Wi-Fi in all stores

WALMART launches "Walmart To Go," costing $10 regardless of order size

ZALANDO opens own, custom-designed logistics center in Erfurt, Germany

2013

TARGET introduces "Cartwheel," a first digital coupon app

TARGET opens fully automated distribution center in Texas

ALIBABA launches China Smart Logistics Network to build logistics platform and accelerate e-commerce in China

Retail goes digital – and stays firmly on the ground

While the world's largest e-tailer seems to be moving into logistics, retail giant Walmart, which has run a sleek logistics operation for decades, is poised to ramp up its e-commerce business as the key to capturing e-market share. The company will invest up to $1.5 billion in e-commerce capabilities in 2016 alone. It is creating a new group called Walmart Technology that merges its in-store systems with @WalmartLabs, its Silicon Valley-based digital tech unit, and is set to close some 269 stores across the globe, including its smaller Walmart Express stores, to direct more focus onto e-commerce.

Some experts believe Walmart will have a tough time catching up. The Wall Street Journal quoted Jim Davidson, head of marketing company Bronto, as saying: "There's a perception in the world that Walmart is playing catch-up to Target and Amazon, especially in e-commerce innovation." The competition is as "cutthroat" as between Ford Motor Co. and General Motors Co., he added.

Nikki Baird, Managing Partner at Retail Systems Research, sees it differently. "I was surprised at how harshly the market reacted to Walmart's announced investment plans for e-commerce, especially as some of those plans are to make closer connections between online and store," she said.

Walmart said the company was responding to rapidly changing shopping habits. "Around the world, we are seeing an emerging middle class and customers who are increasingly sophisticated about shopping where, how and when they want. We think Walmart is uniquely positioned to provide online and offline shopping, so we're investing to give our customers the seamless shopping experience they want."

Michael Lierow believes Walmart is more savvy today in e-commerce as it overcomes early missteps and is now significantly strengthening its digital offering.

Meanwhile others are rushing to catch up. U.S. retailer Target, having said last September that its tech infrastructure was not sufficient to handle demands created by its online business, has poached Amazon's chief supply chain officer, Arthur Valdez, in an apparent effort to manage its growing e-commerce business, indicating the importance attached to logistics in the omnichannel mix.

$482.1 BILLION

Walmart's 2016 fiscal year revenue

Sears meanwhile, with revenue losses of 9.8 percent (to $7.3 billion), believes companies such as Amazon or Uber are rewarded by financial markets even when losing money, making it difficult to compete.

Richard Wilding, Professor & Chair of Supply Chain Strategy at Cranfield School of Management, thinks the U.K., which has one of the most sophisticated retail and e-tail markets in the world, has much insight to offer. Here, click & collect (from store) is a very popular alternative to pure online shopping, as consumers still enjoy their trip to the shops, providing it's a convenient and hassle-free experience. Walmart has done well at merging bytes and mortar in this way for several years in the U.S., using its stores as hubs, close to customers, both for home delivery and click & collect with curbside pickups.

And just when you thought the battlelines were clear, Amazon goes bricks and mortar by opening – of all things – a bookstore. Amazon Books, in Seattle's upmarket University Village shopping mall, is planned to be the first in a chain of 400 retail shops.

It's all about delivery

Where the last mile is concerned, Amazon meanwhile has many smaller upstarts such as Uber biting at its heels in the U.S. In urban spaces, Uber has partnered with chat-based shopping assistant Operator to create UberRUSH, which could eventually enable it to offer one-hour delivery to businesses across the country.

Nikki Baird sees other challenges. "The delivery market gets more interesting every day," she says. "Seems like there's always another new company or new way of trying to cross that last mile between where the product is and where the customer wants to receive it."

"Third-party deliveries from Uber, lockers, drones, shared delivery services like Deliv... The only thing I'm not sure about is, especially for Uber and Uber-like mechanisms, who's liable for the product? If an Uber driver has a $1,000-TV in the back of their car and they get hit in a car accident, who's left holding the bag?"

2013

WALMART trials in-store lockers for pickup of online orders

TARGET launches program for consumers to choose and order items online and pick them up at nearby Target store in few hours

ZALANDO opens a logistics center in Mönchengladbach

AMAZON announces "Sunday Delivery" with U.S. Postal Service

ALIBABA announces plans to open bricks-and-mortar retail outlets with real estate company Dalian Wanda Group

2014

AMAZON offers "Sunday Delivery" in the U.K. via the Amazon Logistics service

DHL establishes 2,650 Packstations throughout Germany, allowing customers to receive and send shipments 24/7

TRUCKING ON:
Using its stores as hubs, Walmart offers home delivery and click & collect with curbside pickups.

Photo: REUTERS/Rick Wilking

The race for the Chinese market

The quest for the omnichannel consumer is of course global. And in the world's largest consumer market, China, the mighty Alibaba and its B2C online store Tmall seem to do extremely well – already owning some 58.6 percent of the country's e-commerce market in Q1 2015, according to iResearch.

As that market, according to KPMG, is worth around $550 billion and projected to be larger than that of the U.S., U.K., Japan, Germany and France combined by 2020, it is easy to see why many others want a slice of the pie – and logistics, especially the final mile, is part of the battle to get the largest helping.

Succeeding in the Chinese market is no piece of cake, however. Uber, which is now also making forays into providing logistics for retail/e-tail, recently

WALMART: SUCCESSFUL NETWORKING

Walmart might have started small – owner Sam Walton opened his first store in 1962 in Arkansas, U.S. – but it's currently the largest bricks-and-mortar retailer in the world. Even so, Walmart was initially slow to latch on to the possibilities of online shopping. That changed with the rise of Amazon and it now operates e-commerce sites in 11 different countries around the world. The company says that Walmart.com – its largest website, founded in 2000 for U.S. customers – "sees 45 million visits a month and is growing every year." Investment research provider Market Realist points out that a big plus for Walmart in the e-commerce space is that it "can use its retail network to ship directly from stores."

www.walmart.com

AMAZON announces "Same-Day" delivery expansion in the U.S.

AMAZON introduces "Prime Now" in the U.S.: one-hour delivery on tens of thousands of daily essentials

ALIBABA introduces Aliwangwang, an instant messaging tool between customer and online sellers that becomes the second-largest in China

DHL becomes the first company in Europe to use drones to make deliveries

ZALANDO expands mobile app to different European countries

TARGET invests so that store operations and e-commerce can integrate into "omnichannel" shopping

AMAZON unveils 8th Generation Fulfillment Center in Washington, featuring advanced Kiva robotics reported losses of around $1 billion in China as it struggles to compete against home-grown transport rival Didi Chuxing, backed by Alibaba. Amazon, too, is making moves into mainland China that could see it go head to head with Alibaba and others such as JD.com on global cross-border e-commerce.

The world's largest retailer, Walmart, saw its long-term e-commerce strategy for China pay off when it bought out Chinese e-commerce company Yihaodian in 2015, enabling it to combine local retail and e-tail experience with its global sourcing power and supply-chain strategies, going head to head with Alibaba on a wide array of goods, low prices and speedy delivery. While it might not have the market share of Alibaba or JD.com, Walmart is now China's largest omnichannel player, with more than 400 stores and its online channel Yihodian.

FAST-MOVING: Alibaba is China's biggest e-commerce player.

The road not yet traveled

So, where does it go from here? That is a much-talked-about topic among experts these days. Uber's Chinese foray might well turn into a cautionary tale, which backs up the view of some logistics industry experts who believe the innovative "Silicon Valley-type" companies may be biting off more than they can chew.

Cranfield's Richard Wilding, too, believes ventures such as Amazon Logistics are a gamble. "Critically it is all about building capability and infrastructure – for example, in some regions there are serious skills shortages within the logistics sector, a lack of drivers and shortages of warehouse personnel. Potentially Amazon could end up cannibalizing existing and established operations, resulting in no improvement in customer experience."

In a recent article, Carlos Cordón, Professor of Strategy and Supply Chain Management at IMD, the International Institute for Management Development, goes so far as to ask whether Amazon is a retailer or a logistics company. He believes the current moves will actually create a logistics industry that will be very different in a few years, with "big data" being used to transform existing companies.

The retail, e-tail and logistics industries are abuzz with views and opinions, as the big players themselves move ever more quickly to develop innovative approaches and solutions in their quest to win over the customer.

UBER: BIG WHEELS

Book-a-taxi-by-app firm Uber is beginning to position itself as a logistics player. After introducing UberRUSH bike couriers in New York in 2014, the company launched a rent-a-van service called UberCARGO in Hong Kong last year. Users call up a van on their smartphone app, which can be loaded with large items or business deliveries and tracked in real time.

www.uber.com

DHL New express helicopter service enhances connection between key financial centers in U.S. and U.K.

DHL partners with Amazon and Audi to launch pilot for car drop deliveries in Germany

TARGET plans to add RFID tags to its clothing to make it easier to track inventory

ALIBABA invests $118 million in SoftBank's robotics program

2015

DHL introduces parcel delivery boxes to apartment buildings in Germany

AMAZON joins Wearables market with app that allows shopping via Apple Watch on Amazon

WALMART launches an invitation-only "free-shipping" program for online sales costing $50 a year

The last word, of course, belongs to that customer. Sai Li in Kunming is one of them. A self-confessed shopping fan, she is a frequent visitor to the many malls in Kunming and her native Beijing, China's capital, while being equally enamored with making purchases online.

"I think we have the best of both worlds now," she says. "I love to meet my friends at the mall, have some tea and cake and browse, and at the same time it's cool that I can shop online from home and get everything I want delivered to me. What option I choose depends on my mood – and of course, the one who can offer me the greatest products and the best price, that's the one I buy from." ■ *Tony Greenway, Richard Reed*

As a long-lead magazine with limited available space, we will be capturing the key trends in omnichannel consumer, retail and e-tail in a series of articles throughout the year. Please visit tinyurl.com/bytes-and-mortar which provides a digest of all current developments in these fast-moving markets.

ALIBABA, TMALL & JD.COM: FINE CHINA

In China, e-commerce is huge. And it's only going one way: up. Indeed, when it comes to growth, China is expected to exceed $1 trillion in retail e-commerce sales by 2018 – more than 40 percent of the total worldwide.

In China, e-commerce players don't come any bigger than Alibaba and its B2C online store Tmall (which, as of 2014, was the seventh most-visited website in the country). Founded in 1999 by former teacher Jack Ma, Alibaba – dubbed "the world's greatest bazaar" by The Economist – reported record-breaking sales of $14.3 billion on China's 2015 Single's Day. In January of this year, it was said to have 407 million active users on its various marketplaces.

JD.com takes second place in the e-commerce battle behind Alibaba, launching its English website in 2012 (although then, the business was known as 360buy.com, only changing its name in 2013). In 2014 – the same year it marked the largest listing on the Nasdaq stock exchange – JD.com recorded a net revenue of $18.5 billion. Its total fulfilled orders in 2015 were 1.26 billion – up from 651.9 million in 2014. In March of this year, founder Richard Liu told the South China Morning Post that the company has 155 million annual active customers across its core businesses.

www.alibaba.com **www.tmall.com** **www.jd.com**

CUSTOMER SATISFACTION: Sai Li shops on her mobile for the greatest products – and the best price.

Photos: 2015 Bloomberg Finance LP; Yereth Jansen

ZALANDO opens tech hubs in Dublin and Helsinki

ALIBABA invests more than $100 million in Mei.com, focusing on flash sales of luxury and fashion goods

WALMART trials drive-through pickup as "Walmart Pickup-Grocery"

TARGET rolls out "Curbside" app in U.S., allowing consumers to shop from their smartphones and pick up in front of store

ZALANDO announces opening of first international satellite fulfillment center in Italy

WALMART launches "Walmart Pay" smartphone app

2016

WALMART unveils "supercenter" in Arkansas featuring new approaches to technologies, services and products

ROBOTS IN STORE?

Robot technology may soon be packing, picking and moving goods – and solving a looming labor shortage in the logistics industry.

There's a new challenge in store for the logistics and supply chain sector: as demand for deliveries rises, the work force in many markets is predicted to shrink and age. The solution? Robots may soon be standard in warehouses around the world.

E-commerce is growing at an extraordinary rate (an estimated 10 percent per year in the U.S., according to Forrester Research). Take the Chinese festival of Singles' Day which has become one of the biggest online shopping days in the world. In 2014, sales in Alibaba's sites Tmall and Taobao reached $9.3 billion. In 2015, that figure rocketed to over $14.3 billion. No wonder logistics firms are already running short of workers to pick, pack and move shipments.

In the future, the problem is likely to worsen: across the developed world, populations are slated to shrink and go gray, leaving the U.S. and other major economies with labor shortages in the millions of workers.

That's a problem robots might be able to solve, according to a white paper by DHL. Robots that work with human colleagues could help fill the gap between the required work force and the available labor pool and make logistics jobs physically easier, so employees can work into their 60s and beyond.

$1 BILLION

The amount the collaborative robotics sector is expected to reach by 2020. A collaborative robot works with and alongside a human operator

Flexible and low cost

Thus far, the use of robots in the logistics arena has been limited by the complexity of the work, because logistics robots must be able to handle a wide array of different parts in an infinite number of combinations. Robotic technology is beginning to catch up with the demand for machines flexible and low cost enough to work in the logistics and distribution environment. Recent advances are the result of three factors: a flood of government research funding, venture capital and significant investments from tech giants like Amazon and Google.

The attention and investment is toppling a series of key barriers. To be useful in logistics, robots must have "eyes" to see an object, "hands" to pick it up, "feet" so that they can move the object to another place and "brains" that coordinate all of these tasks. Cell phones and video game systems like Microsoft's Kinect have driven a tremendous drop in the costs of optical, tactile and motion sensors, giving robots "eyes." To solve the problem of "arms," several companies are working on robot arms that are less powerful or equipped with sensors to detect nearby humans, making them safer for people to work near or even with.

Technology similar to self-driving cars may soon power robots that can move safely in constantly shifting environments such as shipping warehouses or even perform last-mile deliveries straight to homes and offices, giving robots "feet." And, finally, robot designers are working to harness the computing power of the cloud to move computationally demanding tasks such as image processing off board, reducing the need for robots loaded down with advanced processors.

Another field attracting attention is the possibility of using robotic technology to enhance human performance rather than just supplement it. Exoskeletons – powered suits that give people power, strength and endurance that they would not normally have – could help prevent injuries or make it possible for older workers to perform physically strenuous tasks with less effort.

Improved service levels

Several companies are working on mobile robots that would cruise warehouses picking items just like a person would. The concept is scalable: if you have a small distribution center you could add robots one at a time as you grow, for example. And by automating smaller warehouses, companies would provide improved service levels by locating distribution centers closer to customers.

"Robots could pick easy items while humans pick the more complicated products or complete complex tasks."

A similar phenomenon could change the face of last-mile delivery. Not unlike drones, small robots could cruise city streets and sidewalks, bringing packages from warehouses or delivery hubs to customers autonomously.

When it comes to a fully-automated future, logistics professionals have a right to be skeptical. Robots have been hyped for decades, and for most of that time they've failed to deliver. But that's poised to change. As the study's authors wrote, "our children can't picture a world without computers and it is likely that their children will feel the same way about robots." Someday soon, warehouses and supply chains will see machines and humans working side by side to deliver goods faster and more economically. ■ *Andrew Curry*

To download the report, please visit:

www.dhl.com/trendresearch

Photos: PR; Simbe

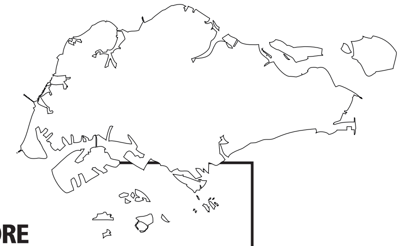
NO CITY LIMITS

Singapore is one of the world's most important hubs for logistics and commerce. It has every intention of keeping that role, says Lee Eng Keat of the country's Economic Development Board.

With 5.5 million people squeezed onto less than 720 square kilometers of land, Singapore has a global trade significance that belies its size. Today, the island city-state is the world's busiest ocean freight transshipment hub, handling about one-seventh of the world's container transshipment throughput and five percent of global container throughput. In 2015 it had the world's third-highest population density (after Macau and Monaco, and ahead of Hong Kong) and is in the top 10 countries in terms of per capita GDP.

Lee Eng Keat is Director, Logistics and Natural Resources at the Singapore Economic Development Board (EDB), the government agency charged with positioning Singapore as a global business center (and whose international advisory council board members include Frank Appel, CEO of Deutsche Post DHL Group). Eng Keat explains how Singapore's rise to prominence began in the early 19th century. It was then that the British colonial government of the time established a small entrepôt (transshipment port) on the island. As trade with Asia grew over the ensuing two centuries, Singapore's reputation as a trading post grew with it.

By 2014, the country's logistics sector was worth SG$26.9 billion ($18.9 billion) to its economy – around 7 percent of GDP – and it employed almost 200,000 people. In 2014, Singapore handled nearly 35 million TEU of containers. The country is connected by 200 shipping lines to 600 ports in 123 countries, with daily sailings to every major port in the world. Changi Airport is one of Asia's largest cargo airports and is served by over 6,500 weekly flights connecting to 280 cities in 60 countries, handling close to 2 million tons of cargo annually. Singapore also houses logistics centers for a number of major manufacturers, including Diageo, LVMH, Novartis and Siemens Medical Instruments.



SINGAPORE

Population: 5.54 million

GDP: $295.7 billion

World Economic Forum's Global Competitiveness Index: second place (out of 140 countries)

World Bank Group's Ease of Doing Business Index: first place (out of 189 countries)

DHL Global Connectedness Index: third place (out of 140 countries)

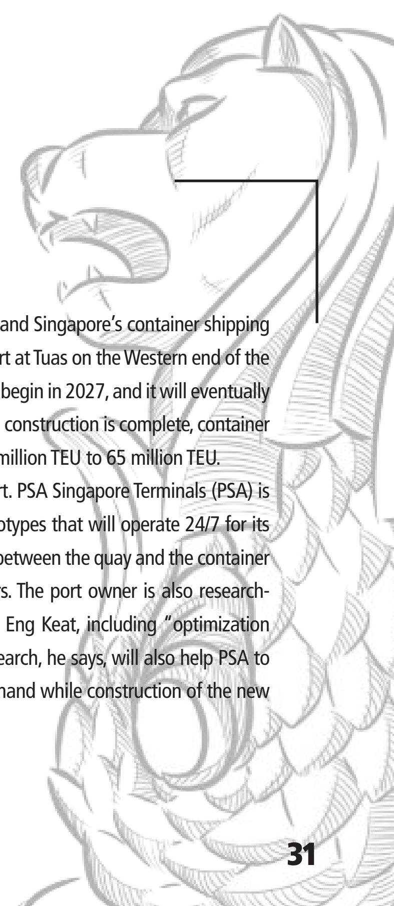
Location

The country's location is an important element in its success. Half the world's population lives in the Asia Pacific region, within a seven-hour flight radius of the country, and that includes many of the most important international markets. Geography is only part of the story, however. It also has a formidable reputation for efficiency. 90 percent of electronic customs permit applications are processed within 10 minutes, says Eng Keat, all physical cargo clears customs within 13 minutes, and 90 percent of it goes through in less than eight minutes.

The island has become a particularly important location for technology supply chains, says Eng Keat. This is partly because Singapore provides an effective gateway to the complex and varied Asian markets where high-tech companies source their components and, increasingly, find their customers. It's also because the country has significant high-tech manufacturing capabilities of its own. "There are 15 silicon IC wafer fabs, four compound semiconductor wafer fabs and three Micro-Electro-Mechanical Systems ("MEMS") wafer fabs here," he notes. Likewise, Singapore is home to many of the world's top contract companies for the design, assembly and testing of electronic products.

The country doesn't assume that its historical strengths will guarantee its future success, however. Eng Keat is at pains to point out the importance of Singapore's investments in infrastructure, innovation and talent, three areas where it sees continuing development playing a critical role in helping the country meet the evolving needs of global businesses.

In addition to long-term plans to significantly upgrade its airport and seaport capacities (see box "Building a New Megaport") Singapore is also investing in new inland logistics facilities. For example, JTC, a government-owned development agency, is building a new high-rise multitenanted logistics facility in the Gul area of the Jurong Industrial Estate. The first development of its type in the country, the new facility will include a multistory inland container depot, warehouses and a heavy vehicle park. "It will help reduce the transport cycle and boost efficiency," says Eng Keat. "And will especially benefit our small and medium-sized logistics companies." Colocation will also encourage collaboration across the value chain, he adds, further enhancing competitiveness for tenants.



$18.9 BILLION

The amount the logistics sector is worth to the Singapore economy

BUILDING A NEW MEGAPORT

Work is underway to relocate, consolidate and expand Singapore's container shipping operations with the construction of a huge new port at Tuas on the Western end of the island. Operation of the new facility is scheduled to begin in 2027, and it will eventually replace the city's current container terminals. When construction is complete, container capacity in Singapore will almost double, from 35 million TEU to 65 million TEU.

The new port won't just be big, it will also be smart. PSA Singapore Terminals (PSA) is developing Automated Guided Vehicle (AGV) prototypes that will operate 24/7 for its future container terminals, to transport containers between the quay and the container yard efficiently and reliably without human drivers. The port owner is also researching a range of other advanced approaches, says Eng Keat, including "optimization techniques and green port technologies." This research, he says, will also help PSA to increase productivity in the near term, to meet demand while construction of the new facilities continues.

LOADING BAY: Singapore is one of the world's most important logistics hubs.

A HUB FOR BUSINESS

Singapore's government places great emphasis on making the island state a good place to do business and the country was declared the world's easiest place to do business in a 2015 World Bank report. Singapore is in the global top three for oil refining, foreign exchange trading and casinos. It is the largest manufacturer of oil rigs and a significant producer of electronic components and high technology products. Competitive tax rates and a world-class education system play a part here, as does a strategic approach to the development of key business sectors. Singapore also prides itself on a strong regulatory framework for the protection of intellectual property rights; according to World Economic Forum rankings, it has the best IP protection in Asia, and the second best in the world.

It's an environment that has proved extremely attractive to technology-led businesses. In 2015, local and foreign owned companies invested SG$11.5 billion ($ 8.2 billion) in fixed assets – like offices, research laboratories and factories – creating an estimated 16,800 new jobs in the process. The electronics and chemicals industries are Singapore's biggest manufacturing investors, but the biotech sector is also growing fast, and more than 30 leading biomedical companies have established regional headquarters in the country.

PEOPLE POWER:
Singapore has the world's third-highest population density.

Forefront

Singapore is also emerging as a key center for logistics innovation. Institutions in the country are at the forefront of the development of advanced supply chain analytics, for example. "Singapore is at the forefront of the logistics industry and of strategic importance to DHL as evidenced by our recent investments. Located in close proximity to Changi Airport, our newly constructed 90,000-square-meter Advanced Regional Center (ARC) houses the Asia Pacific Innovation Center (DHL's first innovation center outside of Germany and the first dedicated center for innovative logistics services in the Asia Pacific region) and our first Centre of Excellence for Automation," says Oscar de Bok, CEO DHL Supply Chain Asia Pacific. "Within the facility we have also deployed a multicustomer automation solution, allowing more customers to benefit from these efficiency improvements. Innovation in supply chain automation is accelerating rapidly in Asia Pacific and we lead the industry in this field."

As the logistics industry becomes ever more demanding and technologically sophisticated, it needs more skilled people too. That's where Singapore's world-class education system aims to play a role. The logistics industry is a participating sector in the Singapore Workforce Development Agency (WDA) "SkillsFuture Earn and Learn Program," says Eng Keat, launched in March 2015, to provide "a head start for fresh polytechnic and Institute of Technical Education (ITE) graduates in their careers." The EDB has also worked with DHL to develop a program that identifies promising undergraduate talent for its consulting and commercial operations. ■ *Jonathan Ward*

tinyurl.com/logistics-and-scm

A CONNECTED CITY

Its role as a global logistics and manufacturing hub means that Singapore is already one of the most well-connected places in the world. More recently, however, the term has taken on an additional meaning with government efforts to make the island a leader in the exploitation of Internet-of-Things (IoT) technologies, big-data processing and artificial intelligence.

In 2014, Singapore launched its "Smart Nation" program, conceived, says Eng Keat, "to harness information and communications technology (ICT), networks and data to create innovations that impact the lifelong needs of our citizens." The program is making open and machine-readable data available to a number of partner organizations, so they can develop innovative solutions for a broad range of urban challenges, from transport optimization to payment systems. "With the Smart Nation program, Singapore is positioning itself as a living lab for global companies to innovate and grow new businesses that will capitalize on the growth of digitally connected cities globally," he explains.

Photos: dpa Picture-Alliance/AGF Creative/Guido Alberto Ros; Fotolia; Fotosearch; catchlights_sg/Getty Images

RISKY BUSINESS

Increased supply chain risks have been the major unintended consequence of two of the most significant business trends of recent decades: globalization and lean production. Now companies are fighting back with new ways of identifying, managing and mitigating risks.

Flooding at a single automotive plant in Thailand in 2011 led to 29 separate production disruptions around the world. Last year, delays at ports on the US west coast resulted in $7 billion in lost sales and additional transport costs for retailers. Driven by the quest for lower manufacturing costs or access to specialist capabilities, companies are increasingly likely to source materials and components from around the world. Yet this has greatly increased the number of potential points of weakness in their supply chains, especially as some key production sites are now located in regions more vulnerable to natural disasters.

As supply chains have increased their exposure to risk, they've increased their vulnerability, too. Short product lifecycles and the desire to conserve working capital encourage companies to keep inventories and buffer stocks as low as they possibly can. This is an approach central to the Japanese "just-in-time" philosophy. When supply chains are running smoothly, this way of working has been incredibly successful, cutting manufacturing costs, improving companies' ability to respond to market shifts and simplifying quality control. But when problems do occur, there is far less slack available in these lean, tight supply chains, leaving companies with less time to react before the impact of problems reaches their customers.

Another significant issue is lack of transparency. Companies don't always know the routes and transport modes their suppliers use, where products are along these routes or where suppliers get their own components and materials from. When Toyota was forced to rebuild its supply chain after the 2011 Tohoku earthquake, managers were surprised to discover just how many parts relied on the same few suppliers far upstream. "We thought [our supply chain] was pyramid-shaped, but it turned out to be barrel-shaped," said one official.

For a while, it looked as if supply chain vulnerability might threaten to undo some of the key advantages of globalization and lean manufacturing. Today, that seems less likely. Increasing recognition of the importance of supply chain risk is driving a revolution in its management. The latest report in DHL's InsightOn: series takes an in-depth look at the nature of that revolution.

Risk response

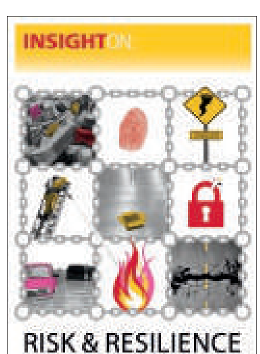
InsightOn: Risk and Resilience examines how the type and severity of the risks faced by companies are changing, mapping the risk landscape and its impact on different industry sectors, including automotive, engineering and manufacturing, energy, life sciences and technology. It then looks at the new tools of supply chain risk management: how big data, smart software and advanced analytics are helping companies to find and fix the weak points in their networks and how leading companies are improving their planning, preparation, prevention and risk response processes to boost resilience and keep costs under control.

Detailed case examples show how these approaches are being applied today in some of the world's most demanding and risky supply chains, highlighting the key role of collaborative approaches and new partnerships in the creation of risk-tolerant supply networks.

Finally, the report examines the economics of resilience: the growing body of evidence that shows companies that take a proactive approach to supply chain risk can avoid these downsides and also benefit in other ways; plus the skills, tools, processes and cultures they develop mean they are exceptionally well-positioned to seize emerging opportunities for competitive advantage, wherever they occur. ■ *Jonathan Ward*

$7 BILLION

The amount retailers lost in sales and additional transport costs in 2015 because of delays at U.S. west coast ports



To download the report, please visit:

tinyurl.com/resilience-dhl

Photos: Tian fei gz/Imaginechina/laif; DHL

A PLATFORM TO INSPIRE, CONNECT AND ENGAGE

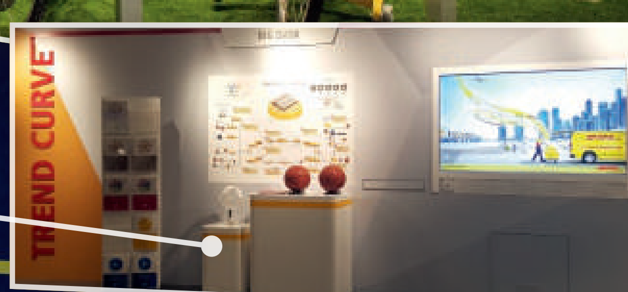
DHL has now opened its Asia Pacific Innovation Center (APIC) in Singapore to offer a visionary view of the logistics world and develop innovative solutions to meet evolving supply chain needs.

The multimillion dollar facility — located within the $113million (€104 million) DHL Supply Chain Advanced Regional Center (ARC) at Singapore's Tampines LogisPark — is the first dedicated center for innovative logistics services in the Asia Pacific region.

APIC showcases the latest in logistics trends, innovative solutions and futuristic technologies and serves as a regional platform for collaborative innovation between DHL, customers, industry partners and independent experts. It will also drive the company's Trend Research initiatives, focusing on emerging trends in Asian logistics and economic activity.

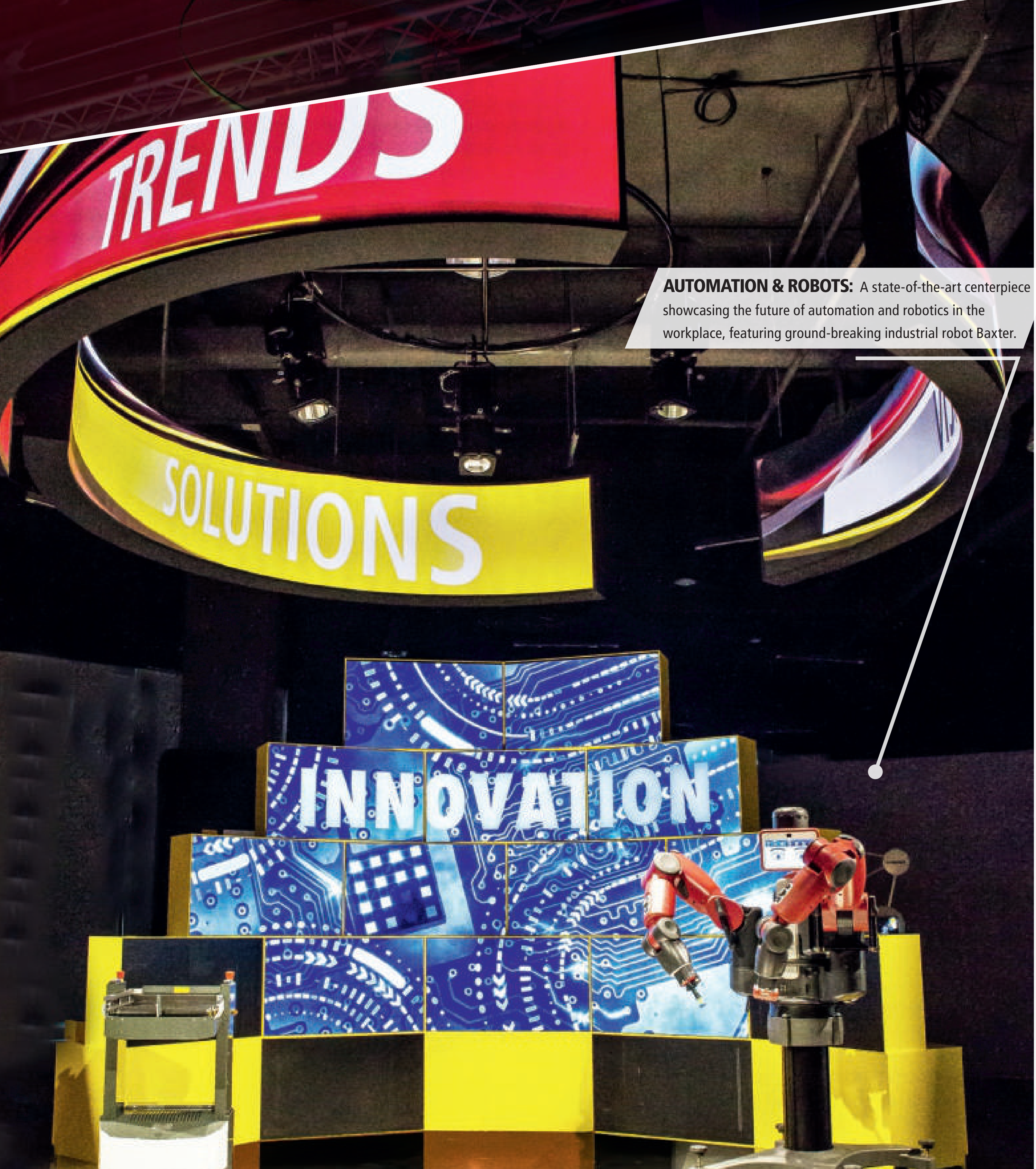
To visit APIC and experience a tour or workshop customized to your demands, please contact us at apic@dhl.com

PROGRAMS & PROTOTYPES: Explore logistics-transforming technologies such as vehicles from DHL's GoGreen program and state-of-the-art prototypes.



TREND CURVE: Discover new industry trends and explore their use in logistics.

tinyurl.com/apic-dhl



AUTOMATION & ROBOTS: A state-of-the-art centerpiece showcasing the future of automation and robotics in the workplace, featuring ground-breaking industrial robot Baxter.

SOLUTION SPHERE: Experience Deutsche Post DHL Group's innovative capabilities and solutions.

Photos: DHL (5); ullstein bild - Ulrich Baumgarten

DELIVERED. GETS SOCIAL MEDIA SAVVY WITH...

MELANIE IRONS

During the Tasmanian bush fires of 2013, Melanie Irons created a Facebook page that – by sharing information and solving problems – became a social media lifeline for those caught up in the ensuing chaos.

Melanie Irons knows all about the power of social media. In January 2013, she had planned to have a quiet five days away from her Tasmania-based personal training and health coaching business to put the finishing touches to her PhD.

That, however, was the week the most devastating Tasmanian bush fires since 1967 began – and, by the end of it, Mel's life had changed irrevocably. Tasmania, an Australian island state with a population of half a million, had just had its hottest day on record when the major fires started. They were lethal, burning for more than four months, destroying property, infrastructure, businesses, cutting off power and isolating communities.

"On that first day, I was at home watching the news and keeping an eye on developments on social media," says Mel. "Although the fires were some way from where I was and I wasn't directly affected by them, I still felt connected to the community affected and my heart went out to everyone who was suffering."

Melanie felt powerless and wanted to do something – anything – to help those in need. So she rang her local radio station and announced on the air that she had just created a Facebook page called "Tassie Fires – We Can Help." The idea was that people could use the page for information or post messages on it if they needed anything – and Mel would try to coordinate a response.

Soon after getting the page up and running, Mel was at the center of a social media storm and was getting so many messages and requests – including information about missing persons and offers of help or donations from individuals and organizations – that she couldn't even leave her computer to take a shower. She barely ate or slept.

When she first started the page, Mel had no real idea of what she was getting herself into. "I was utterly blown away," she remembers. "Within an hour, I had 3000 people following the page. The level of traffic was insane. At its peak there were nearly 21,000 people following the page, and nearly 3 million unique visitors saw content from the page within the first 12 months." Since the fires, Mel has been helped by 13 local businesses to launch a website that will work hand in hand with the Facebook page for future disaster events (www.tassiefireswecanhelp.com).

These days, Melanie works part-time as a social media consultant, sharing her experiences with businesses and organizations, and is modest about her achievements. "It's nice that people appreciate what I did, but I was just directing traffic," she says. "Without the community response, I would have been powerless."

Did you use social media before "Tassie Fires"?
I had very little experience of it and no experience of emergency management. As a personal trainer, however, I am used to managing crowds, motivating people and thinking critically. My studies at uni also certainly helped me to have many of the right "soft skills" for that role.

3000
The number of people following Mel's "Tassie Fires" page just one hour after its launch

What made you think that social media could help in this situation?
I'd noticed people posting messages like: "I'm going to go to this place to help" or "I'm out searching for this person – has anyone seen them?" I realized that if they all started to help they could cause a huge burden on the emergency services. It needed someone to organize and coordinate a response at a distance.

You've said "almost anything I needed I got when I asked for it on social media." Such as?
Well, there was an oyster farm that was without electricity and set to lose 100 million individual animals. The loss of this hatchery would have directly impacted more than 200 families around Australia. I put the word out that I needed three massive generators, some electrical engineers and electricians and some boats. And I needed them now. And those specific requests got filled quickly and helped to save the hatchery. The ability of the people was extraordinary. It made me realize the power of crowdsourcing.

What do you say to people who dismiss social media as "trivia"?
I think it's totally understandable. If you'd asked me three years ago, I would have said the same. So we do need social media evangelists who can help change the minds of skeptics – or the people who are "digital immigrants." I have to say after my experience that it's very short-sighted not to recognize that social media can be a powerful tool, and that the pros most definitely outweigh the cons.

Do you meet organizations who use social media well – and those who use it badly?
Yes. To use social media effectively an organization needs excellent communicators, a lot of time and a lot of resources. When I make recommendations to them, some say: "That's great, Mel, but we just don't have the manpower." It's still a relatively new space for a lot of them. I'd like to see a greater use of volunteers in all areas of emergency management, not just for operational roles.

What's your main message about social media?
It's about communicating – and listening. There are plenty of companies who don't use it quickly enough and suffer the consequences. So being incredibly rapid and having good communicators can be a godsend. ■

Tony Greenway

tinyurl.com/del-mel-irons

Photo: Peter Mathew

WHY YOU NEED EMOTIONAL INTELLIGENCE TO SUCCEED

Emotional intelligence is responsible for 58 percent of your performance, so what are you doing to improve yours?

When the concept of emotional intelligence was introduced to the masses, it served as the missing link in a peculiar finding: people with average IQs outperform those with the highest IQs 70 percent of the time. This anomaly threw a massive wrench into what many people had always assumed was the sole source of success – IQ. Decades of research now point to emotional intelligence as the critical factor that sets star performers apart from the rest of the pack.

Emotional intelligence is the "something" in each of us that is a bit intangible. It affects how we manage behavior, navigate social complexities, and make personal decisions that achieve positive results. Emotional intelligence consists of four core skills that pair up under two primary competencies: personal competence and social competence.

Personal competence comprises your self-awareness and self-management skills, which focus more on you individually than on your interactions with other people. Personal competence is your ability to stay aware of your emotions and manage your behavior and tendencies.

- Self-awareness is your ability to accurately perceive your emotions and stay aware of them as they happen.
- Self-management is your ability to use awareness of your emotions to stay flexible and positively direct your behavior.

Social competence is made up of your social awareness and relationship management skills; social competence is your ability to understand other people's moods, behavior, and motives to respond effectively and improve the quality of your relationships.

- Social awareness is your ability to accurately pick up on emotions in other people and understand what is really going on.
- Relationship management is your ability to use awareness of your emotions and the others' emotions to manage interactions successfully.

90

PERCENT

The number of top performers who are high in emotional intelligence

Emotional intelligence, IQ, and personality are different.

Emotional intelligence taps into a fundamental element of human behavior that is distinct from your intellect. There is no known connection between IQ and emotional intelligence; you simply can't predict emotional intelligence based on how smart someone is. Intelligence is your ability to learn, and it's the same at age 15 as it is at age 50. Emotional intelligence, on the other hand, is a flexible set of skills that can be acquired and improved with practice. Although some people are naturally more emotionally intelligent than others, you can develop high emotional intelligence even if you aren't born with it.

Personality is the final piece of the puzzle. It's the stable "style" that defines each of us. Personality is the result of hard-wired preferences, such as the inclination toward introversion or extroversion. However, like IQ, personality can't be used to predict emotional intelligence. Also, like IQ, personality is stable over a lifetime and doesn't change. IQ, emotional intelligence, and personality each cover unique ground and help to explain what makes a person tick.

Emotional intelligence predicts performance.

How much of an impact does emotional intelligence have on your professional success? The short answer is: a lot! It's a powerful way to focus your energy in one direction with a tremendous result. Talent Smart tested emotional intelligence alongside 33 other important workplace skills, and found that emotional intelligence is the strongest predictor of performance, explaining a full 58 percent of success in all types of jobs.

Your emotional intelligence is the foundation for a host of critical skills – it impacts most everything you do and say each day.

Of all the people we've studied at work, we've found that 90 percent of top performers are also high in emotional intelligence. On the flip side, just 20 percent of bottom performers are high in emotional intelligence. You can be a top performer without emotional intelligence, but the chances are slim.

Naturally, people with a high degree of emotional intelligence make more money – an average of $29,000 more per year than people with a low degree of emotional intelligence. The link between emotional intelligence and earnings is so direct that every point increase in emotional intelligence adds $1,300 to an annual salary. These findings hold true for people in all industries, at all levels, in every region of the world. We haven't yet been able to find a job in which performance and pay aren't tied closely to emotional intelligence.

You can increase your emotional intelligence.

The communication between your emotional and rational "brains" is the physical source of emotional intelligence. The pathway for emotional intelligence starts in the brain, at the spinal cord. Your primary senses enter here and must travel to the front of your brain before you can think rationally about your experience. However, first they travel through the limbic system, the place where emotions are generated. So, we have an emotional reaction to events before our rational mind is able to engage. Emotional intelligence requires effective communication between the rational and emotional centers of the brain.

Plasticity is the term neurologists use to describe the brain's ability to change. As you discover and practice new emotional intelligence skills, the billions of microscopic neurons lining the road between the rational and emotional centers of your brain branch off small "arms" (much like a tree) to reach out to the other cells. A single cell can grow 15,000 connections with its neighbors. This chain reaction of growth ensures it's easier to kick a new behavior into action in the future.

As you train your brain by repeatedly practicing new emotionally intelligent behaviors, your brain builds the pathways needed to make them into habits. Before long, you begin responding to your surroundings with emotional intelligence without even having to think about it. And just as your brain reinforces the use of new behaviors, the connections supporting old, destructive behaviors will die off as you learn to limit your use of them. ■ *Travis Bradberry*

TRAVIS BRADBERRY

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For details of how to win a copy of Emotional Intelligence 2.0, see page 4.

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Illustration; Nicolas Bourquin/Onlab; Photo: PR

tinyurl.com/del-emotional-intelligence

MANAGING THE UNKNOWN:

How We Should Tackle Risk in Global Supply Chains

AN ESSAY BY ANDREAS WIELAND

Andreas Wieland is an Asst. Professor of Supply Chain Management at the Department of Operations Management, Copenhagen Business School. His research interests include strategies to manage risk by increasing the robustness of global end-to-end supply chain systems.

Early approaches to managing risk in supply chains were based on enterprise risk management tools – tools that had been developed for a system called the "company." These tools often contained risk categories relating to operational and financial circumstances within the company. Moreover, these tools were easily scalable, as they allowed the inclusion of additional risk categories. It comes as no surprise, therefore, that the notion of risks further upstream and downstream in the supply chain has led risk managers to include new categories such as "supplier insolvency," "supplier quality" or "defects of supplied parts (per million)." The inclusion of such categories that represent risk sources outside of their own companies has certainly been a great achievement. But, as I will argue, this is not enough to shift from a company view towards a supply chain view that has been shown to enable value creation.

1. Managing risk beyond the own company.

The "company" and "supply chain" views are fundamentally different – so it is thus not possible to simply assume that approaches that are suitable for one system are also suitable for another. A company can sometimes be a relatively large system; however, it is usually centrally controlled, has relatively well-defined boundaries and its processes and organizational structure can, at least in principle, be mapped. This is usually not the case for end-to-end supply chain systems. Not only are supply chains, by involving different organizational cultures, languages, locations etc., far more complex and dynamic than companies, but companies often do not even have access to the suppliers of their own direct suppliers – not to mention all the different raw materials suppliers further upstream.

For example, if 30,000 parts are needed to build a car – many of them coming from different suppliers and suppliers' suppliers – it should become obvious that the scalability of traditional risk management tools becomes quickly limited. Identifying and assessing all types of risks from all suppliers, all suppliers' suppliers and finally all raw materials suppliers is simply impossible! Plus, doing this is also not always reasonable: many of the supply chain disruptions that happened in recent years were, in fact, caused by risks that had not appeared on risk category lists. Could we really imagine that a volcano eruption in Iceland

Illustration: André Gottschalk

would halt Europe's air traffic, for example? Or that a Tsunami in Japan would cause a nuclear accident? I certainly did not and I doubt that having tried to identify even more risk causes to add to the list would have helped much.

2. Increasing the robustness of the supply chain.

But what would have helped in these cases if the old approach of optimizing the list of potential risk causes fails? Instead of looking at the causes of risk it would be better to focus on the systemic characteristics of the supply chain system in order for it to be robust if something bad happens – irrespective of its cause! The harmful thing for Japanese car manufacturers after the 2011 earthquake was not that it was an earthquake that had happened. It was that many of their redundant suppliers were located in the same region. Worse, even the non-Japanese plants of these companies were affected, as they had failed to make the supply chains of different regions independent. These companies also realized that they did not hold enough inventories for important components – ones that could not be built in other places. From a cost perspective, it might make sense to centralize warehouse capacity; but to increase the robustness of your supply chain, a certain amount of redundancy makes a lot of sense. (We should not forget, however, that two redundant suppliers for the same materials often supply from the same sub-suppliers, which can create a false security.)

It's not just the design of your supply chain that can help your company become more robust. It's also the design of your product. Avoiding materials that can only be supplied from certain regions, such as rare-earth materials, or suppliers of non-standardized parts, can help to reduce or even ward off certain types of risk. Modular product design can help to at least semi-finish a product and to add missing modules at a later stage when they become available again. Such systemic solutions help companies cope with risk in the supply chain without paying too much attention on the exact causes of risk.

3. Prerequisites of a robust supply chain.

As we have seen, there are potential ways to increase the robustness of a supply chain, i.e. its ability to avoid and resist risk. But why are some companies more successful in implementing these than others? Our research [1] clearly shows that both intra-organizational and interorganizational factors affect the supply chain's robustness.

Intra-organizational factors include:

1. Leadership commitment. Investing in robustness pays out only when a risk occurs, i.e. in the long term. In the short term, investments might have a negative impact on cost-based or profit-based KPIs. Therefore, a supply chain can only become robust if the C-level (those highest in senior management) acknowledges its importance.
2. Human capital. Coping with supply chain risk is not only a top-down approach. Companies need skilled SCM talent – people who are aware of potential disruptions, experienced in identifying problems and know how to solve them.
3. Relationship magnitude. To reduce risk in the supply chain, strong relationships between different departments within a company can be crucial. This helps to exchange relevant information about ongoing or future problems. For example, Ericsson restructured its organizational chart to foster internal relationships after a major supply chain disruption in 2000.
4. Risk management orientation. Another factor that can create additional robustness is a risk-oriented culture throughout the entire company. This can involve processes to learn from previous disruptions and processes to proactively implement solutions.

Interorganizational factors include:

5. Node criticality. Some elements of the supply chain make it typically more vulnerable than others. This is, for example, the case for suppliers who deliver several key components or own centralized distribution centers. Identifying critical nodes and redesigning the network is, thus, a good strategy to reduce vulnerabilities.
6. Bargaining power. Some nodes in the supply chain have a stronger power position than others, e.g. single suppliers of a key component, or buyers of complex components such as those in the car industry. Such companies should use their power to ensure that the entire supply chain becomes robust, e.g. by forcing partners to implement risk-mitigating procedures.
7. Visibility. Shortly after the 2013 Rana Plaza tragedy, some Western fashion retailers did not even know that their shirts had been produced in the collapsed Bangladeshi plant. Yet companies such as Switcher, with their Respect Code solution, demonstrate that end-to-end visibility is, in fact, possible all along the supply chain.
8. Network complexity. Recent research clearly demonstrates that a high complexity of the supply chain can increase the frequency of disruptions. Companies should thus try to reduce the number of direct suppliers, the number of supply chain tiers and the geographical spread of their supply base. ■

[1] Durach, C.F., Wieland, A. & Machuca, J.A.D. (2015). Antecedents and Dimensions of Supply Chain Robustness: A Systematic Literature Review. International Journal of Physical Distribution & Logistics Management, 45 (1/2), 118–137.

WHAT´S THE STORY, MR FORONI?

KEEPING FORMULA E ON TRACK

Massimo Foroni heads the DHL team responsible for transporting cars, batteries, spare parts and support vehicles to Formula E races around the world.

Transporting state-of-the-art racing cars to high-profile motorsport events around the world sounds exciting. It is exciting. But it's high-pressure, too, because, whatever happens, the cars have to be at the race on time – so it means we have to plan in minute detail to be ready for any eventuality.

Before we became the official logistics partner for the Formula E Championship, we already had a lot of motorsport experience with Formula 1 and GP2, for instance. The difference with Formula E, – apart from the fact that it's the world's first fully electric series – is that the races take place around city centers. In Monaco, they are used to racing cars through the streets. But take Moscow, which, for the 2014-2015 season, hosted a race last June. It was an entirely new experience for them, so there can be many delays until the organizers and officials are ready. And anytime anyone touches one of our containers, our team has to be there.

The first ever Formula E race was held in 2014 in Beijing and that presented us with some big challenges: complex customs in a country with a high level of security – plus, in downtown Beijing, trucks can only drive at night. Another complication, wherever our destination, is that the lithium-ion batteries for the cars, which weigh 355 kilograms net, are volatile and sometimes must travel by air. So my team – who have a wide experience of motorsport logistics – have to make sure that everything is transported safely, which is a specialist business. Another challenge is monitoring our carbon footprint. Where we can, we try to avoid flying and prefer ocean or, where possible, rail. The downside with transporting by rail is the constant vibration, as the equipment we transport can be quite delicate.

I love motorsport but the nature of the job means I'm usually working during an event. Although, last year – in Punta del Este, Uruguay – I got to see a race for the first time! Very exciting! For me, the best part of this job is seeing so many different places and cultures, and our involvement with Formula E is so new and collaborative. We think and work as one team. ■ *Tony Greenway*

tinyurl.com/dhl-formula-e

FACT: A race takes more than fast cars. DHL also – moves medical vehicles and broadcasting equipment by air, as well as containers of racing-related freight by ocean routes.

40 Number of fully electric, state-of-the-art cars DHL transports to Formula E races around the world

Photos: DHL (4); 2015 Kay-Paris Fernandes

A "DHL" shirt by Vetements opened the Spring/Summer 2016 runway show of the French fashion house in Paris. The fashion label is worn by the likes of Rihanna and Kanye West. The shirt – which has featured in *Vogue, In Style* and the UK's *Daily Telegraph* (which called it "fashion's latest cult item") – has been a big seller, and stocks have almost sold out.


8th September 2014
New York Fashion Week
Francesca Liberatore international debut
13-minute show
12 weeks to create
402 pencil sketches
21 hours hand stitching
42 outfits
40 matching accessories
Exported by DHL
Inspiration – 'Avian Forms'
(no birds were harmed in the making of this collection)
These are the details that make up one
great moment of thousands
As Official Logistics Partner we know:
Great is in the detail
dhl.com/InMotion
FASHION WEEK
DHL
Official Logistics Partner