Delivered.

THE GLOBAL LOGISTICS MAGAZINE

ISSUE 03/2013

BUSINESS

Supplying sustainably

Learn about new strategies from leaders in retail

BUSINESS

State of America

Discover the bright spots amid gridlock and gloom

SOLUTIONS

Innovation's end?

Optimists versus pessimists – your guide to the innovation debate

COVER STORY

COLD CHAIN REACTION

Changes in healthcare call for a new approach to temperature control

Dear reader,

We are nearly halfway through 2013 and it still appears too soon to make any real predictions on how the year will turn out. The global economy shows some signs of slowdown, and even growth regions like Asia no longer seem quite as vibrant. On the other hand, numbers from Africa and Latin America offer signs of hope.

In recent years, all eyes have been on emerging markets, regions promising great growth opportunities. But this issue of *Delivered.* takes a closer look at the United States. Why?

The United States remains a vital market for companies worldwide and for the health of the global economy. The state of this country's economy dictates the state of the world. At Deutsche Post DHL we see the United States as a very important market to be in. Our CEO, Frank Appel, will emphasize this when he travels there in June this year, meeting with business leaders, inaugurating the expansion of our Express Hub in Cincinnati, Ohio, and engaging in dialog on e-commerce, an ever more important element of global growth.

This month, *Delivered.* also focuses on life sciences and healthcare. Few industries can more easily claim to be instrumental in improving people's lives and delivering health across the globe. We look at some critical challenges the industry currently faces and how logistics can provide answers.

Sincerely,

Bill Meahl
Chief Commercial Officer, DHL

04 **NEWS**

08 **FOCUS: LIFE SCIENCES & HEALTHCARE**

08 **New treatments for the cold chain** Temperature-controlled transportation

14 **Chances growing in Mexico's medical devices market** New opportunities in healthcare

17 **New regulatory requirements** EU GDP guidelines published

18 **Keeping everything cool** Introducing DHL THERMONET

19 **When every second counts** Specialty courier services

20 **BUSINESS**

20 **America: keeping up with business** Identifying the bright spots

24 **The fine art of relocation** Challenges of working overseas

26 **Sense and sustainability** Retail supply chain strategies

27 **The challenge of supplying the wide world of Walmart** Interview with Walmart Asia CEO Scott Price

28 **The Unilever Sustainable Living Plan** Essay by Gail Klintworth, CSO Unilever

30 **SOLUTIONS**

30 **A European hub for technology** Logistics center at Beringe

32 **Same-day: a game changer?** Retail's new frontier

33 **Coping with complexity** On the volatility of tech

33 **To catch a supply chain thief** Taking advantage of TAPA

34 **Has innovation had its day?** Optimists versus pessimists

36 **VIEWPOINTS**

36 ***Delivered.* takes off with…** Tewolde Gebremariam, CEO Ethiopian Airlines

38 **What's the story, Mr. Goodwin?** Polar expedition leads to meeting with Prince

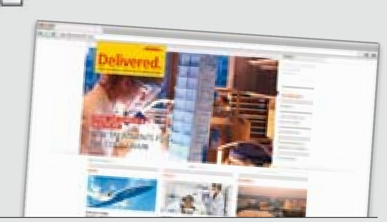
39 **Imprint**

Cover photo: Holger Winkler/Corbis
This page: Thomas Ernsting/laif, Getty Images, Asmelash Birhane, DHL

WEB LINK VIDEO LINK QR CODE

The icons to the left indicate additional online resources. To get more information or view a video, type the link into your browser or scan the QR code.

www.**delivered**.dhl.com
ONLINE



Our cover story, digitally delivered
www.delivered.dhl.com/lifescience-healthcare

NEWS

Dreamliner returns to the skies

New lithium-ion batteries mean the world's most advanced commercial aircraft is fit to fly once more.

In April, Ethiopian Airlines became the first commercial airline to put the Boeing 787 Dreamliner back into service. All 787s had been grounded in January due to battery malfunctions that saw one Dreamliner catch fire in the United States.
Teams of Boeing engineers worked hard to solve the problem and have fitted new lithium-ion batteries to the aircraft, which are used to power the brakes and lights when the plane is on the ground and its engines are not running. With the retrofitting concluded by mid-May, the worldwide fleet of Dreamliners is now ready for take-off again.
Randy Tinseth, Vice President of Marketing at Boeing Commercial Airplanes, was on board that first 787 flight from Addis Ababa to Nairobi and later noted that it was the most special flight for him.
Tewolde Gebremariam, CEO of Ethiopian Airlines, who flew with him, said "we are excited to resume our service with the Dreamliners. During the five months our four Dreamliners were in service, we were very pleased with their performance, and the feedback from our passengers has been overwhelmingly positive."
Wall Street also appeared to welcome the resumption of service, with the stock rising, which confirmed optimism over Boeing's ability to deliver on a backlog of plane orders. Meanwhile, Boeing has already revealed its next innovation, the blueprint for the world's longest-range passenger jet, the 777X, an upgrade of the 777 wide-body jet designed for ultra long-haul.

50
DREAMLINERS
have been delivered by Boeing up to now

See how Boeing helps to achieve Ethiopian Airlines' global goals as *Delivered.* takes off with Tewolde Gebremariam on page 36

Photos: Boeing, Getty Images, dpa/pa, Marcus Gloger/dpa/pa, Achim Kleuker/BPK © The Estate of Jörg Immendorff, Courtesy Galerie Michael Werner Märkisch Wilmersdorf, Köln & New York

FULFILLING PROMISES FOR VETS AND PETS

IDEXX, a U.S.-based leader in diagnostics and information technology for animal health, has strategically positioned a new reference laboratory close to DHL's main European Express Hub in Leipzig. This enables IDEXX to expand its offering across mainland Europe and allows the company to deliver laboratory results more quickly to European customers – by 8 a.m. the next day. IDEXX serves more than 50,000 veterinary practices worldwide with 60 global locations. Central to its business are special medical consulting services, diagnostic tests, panels, and profiles to detect disease states and conditions. Samples are generally sent from veterinary practices throughout the world to IDEXX laboratories, where tests are performed by specialists using state-of-the-art technology. As test results need to be shared quickly, speedy diagnosis is required, as is the shipment of samples intended for testing under temperature-controlled conditions.

WITH AUGMENTED-REALITY EYEWEAR, GOOGLE'S PROJECT "GLASS" COMBINES TECHNOLOGY WITH VISION. TO GOOGLE SOMETHING, JUST SAY IT OUT LOUD. THE ANSWER IS IN FRONT OF YOUR NOSE.

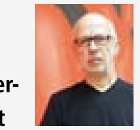
google.com/glass/start

NEW GATEWAY TO SAUDI ARABIA

DHL Express is developing a new 10,000-square-meter gateway at King Fahd International Airport in Dammam. Phase one of the state-of-the art facility is operational and meets the growing demands of international shipping customers in Saudi Arabia. It will be linked to all major DHL Express distribution hubs around the world, including the new regional hub in Bahrain and the new DHL Express North Asia Hub in Shanghai, China.

THE STORY

MOVING ART FOR **IMMENDORFF**



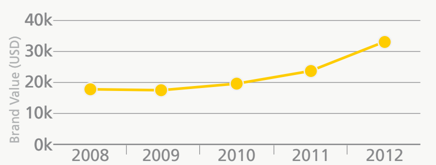
Recently, 74 pieces by late German artist Jörg Immendorff were scheduled to travel from Austria to an exhibition in Germany. The 500-kilometer journey in winter presented a number of challenges. With snow falling, some of the large, delicate paintings needed to be specially protected with soft foam and a special tarpaulin. Moreover, the artwork had to be transported under strictly controlled humidity and temperature conditions. DHL Arts, a unit of Trade Fairs & Events, used the company's SmartSensor GSM transponder to monitor the environment, registering any shocks, as well as the trucks' geo-location in real time, ensuring their precious cargo reached its destination safely and in perfect condition. Immendorff, who died in 2007 of amyotrophic lateral sclerosis (ALS), known in the United States as Lou Gehrig's disease, in 2004 launched the Immendorff Initiative in support of ALS research in Germany.

More info on Immendorf and the exhibition in Aschaffenburg:

tinyurl.com/Immendorff

SAMSUNG MOVES INTO TOP TEN

1	Coca-Cola	+8%	$77,839 million
2	Apple	+129%	$76,568 million
3	IBM	+8%	$77,532 million
4	Google	+26%	$69,726 million
5	Microsoft	+2%	$57,853 million
6	GE	+2%	$43,682 million
7	McDonald's	+13%	$40,062 million
8	intel	+12%	$39,385 million
9	SAMSUNG	+40%	$32,893 million
10	TOYOTA	+9%	$32,280 million



Samsung Electronics has become one of the world's top ten brands, according to consultancy Interbrand. Every year, Interbrand releases a list of what it considers the world's top brands, based on business performance, financial worth, and the value of a name. Moving up from 17th place, the South Korean electronics giant now joins names like Coca-Cola, Google, Intel, and one of their biggest technology market rivals, Apple.

interbrand.com

FLUID OPTIONS WITH DHL FLEXITANK

A new shipping system for liquids will see DHL customers able to ship more – and go greener. DHL's new Flexitank now provides a cost-effective and environmentally friendly way to ship bulk, non-hazardous liquids. Using a multi-layered bladder system that carries 24,000 liters and fits into a standard ocean-going container, the system can be used for everything from consumer beverages to bio fuels. It is also recyclable so customers only pay for shipping one way and avoid expensive cleaning costs. Using Flexitank also cuts down shipping weight and saves tons of carbon emissions.

LIQUID SOLUTION: Flexitank's 24,000-liter bladder system can be used to transport anything from bio fuel to beverages.

TECH WINS F1 AFTER INFINITI RED BULL RACING'S WIN IN BAHRAIN, GILL JONES MADE F1 HISTORY AS THE FIRST FEMALE MEMBER OF A TEAM'S TECHNICAL STAFF TO JOIN WORLD CHAMPION VETTEL ON THE PODIUM.

dhl.com/f1

LIVING RESPONSIBILITY

16 % MORE EFFICIENCY

In 2012, Deutsche Post DHL increased CO2 efficiency by 16% compared to 2007. The modernization of DHL's aircraft fleet was key. Other measures, such as efficient building technologies and the growth of its fleet of environmentally friendly vehicles, also contributed.

By 2020, the company aims to improve CO_2 efficiency by 30%. The Deutsche Post DHL Corporate Responsibility Report covers strategy, stakeholder dialog, and compliance and can be downloaded at:

tinyurl.com/DHL-Responsibility

Photos: James Moy/dpa/pa, Getty Images, DHL, Daimler (2)

CALENDAR
EVENTS AROUND THE WORLD

JUNE 17–23

Paris Air Show The 50th Paris Air Show at Le Bourget exhibition center will bring together industry players from across the globe to showcase the latest aviation innovations.
www.salon-du-bourget.fr

JULY 26–28

Formula 1® Hungarian Grand Prix, Budapest
The Hungarian Grand Prix, held annually at the notoriously twisty Hungaroring, has been part of the Formula 1® circuit since 1986.
www.formula1.com

SEPTEMBER 4–6

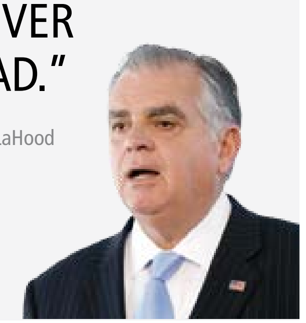
ICIF China 2013, Shanghai
Founded in 1992, the biennial International Chemical Industry Fair (ICIF China) has become the largest and most authoritative event in China's petroleum and chemical industry.
www.icif.org.cn/en

RAY LAHOOD STEPS DOWN

U.S. Secretary of Transportation Ray LaHood recently announced he was stepping down from "the best job he ever had." President Obama has nominated Anthony Foxx, Mayor of Charlotte, N.C. as his successor.

"THIS WAS THE BEST JOB I EVER HAD."

Ray LaHood



MERCEDES-BENZ DELIVERS STANDARD-SETTING NEW S-CLASS

Intelligent Drive, Efficient Technology and Essence of Luxury – these three pillars are what Mercedes-Benz aims to deliver with its new S-Class – calling it "the best automobile in the world."

"The task was not safety or esthetics, performance or efficiency, comfort or dynamics. Instead, in every dimension our claim was: the best or nothing," says Dr. Dieter Zetsche, CEO of Daimler and Head of Mercedes-Benz Cars.

The new S-Class sets standards with smart technology, increasing driving safety with "eyes" that have a 360-degree view and a night view assistant that uses an infrared camera to detect pedestrians or animals on unlit streets. It is also 20% more fuel efficient than its predecessor and the first car to only use LED for lighting. In addition, the luxurious interior features massage seats that recline to a 43-degree angle and an entertainment system that can be operated via smart phone. A DHL freighter delivered a model of the S-Class to its world premiere in Hamburg on May 15.

For details on the Mercedes-Benz S-Class go to:

tinyurl.com/MB-S-class

FOCUS:
LIFE SCIENCES
AND HEALTHCARE

New treatments for the cold chain

To deal with a business environment that is changing at a feverish pace, the life sciences and healthcare sector is looking at new remedies for temperature control.

When German drug manufacturer Bayer patented Aspirin in 1900, it would have struggled to comprehend the reach of the drug in the 21st century. Shelved early in production due to fears of side effects, then dogged by patent disputes, Aspirin has emerged as a global superdrug. Today, consumption of Aspirin and its generics amounts to more than 120 billion tablets a year, distributed by global supply chains under strict regulatory controls.

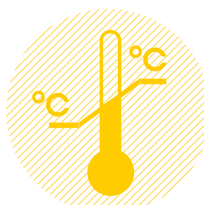
And Aspirin is, of course, only one of many products in the life sciences and healthcare (LSH) sector, which today is continually facing significant and specific challenges to its business and therefore also its supply chain. The patent cliff, where big pharma companies are seeing patents expire on some of their best-selling drugs, will open up new generic drug manufacture. This will have a major impact on the industry. As Maura Musciacco, Senior Analyst at Datamonitor Healthcare reports, these changes have sparked "a high degree of concern for branded pharma, given that this loss in sales will almost offset the net positive growth."

In addition, changing demographics and the global economy are both affecting the demand for drugs and LSH products. For example, an emerging middle class means India is growing as a consumer of LSH goods, and is now in the top ten countries of healthcare spend per capita. Research and development of new drugs for conditions such as diabetes, cancer, and Alzheimer's are fueling change, too, since an aging global population is susceptible to such illnesses. For example, Pfizer's new cancer treatment Bosulif is expected to reach peak global sales of $341 million in 2016.

REGULATING TEMPERATURE

Just as significant as these changes in the LSH sector is the challenge of a growing reliance on the cold chain and on managing temperatures throughout the logistics cycle. Changes in drug composition – products having larger molecular structures or being biotech-engineered – make them more susceptible to temperature and humidity. Regulatory requirements worldwide put more and more emphasis on temperature control compliance and monitoring. Pressure is increasing to ensure "ship to label," where regulatory authorities require proof that products have not only been stored at the temperature stated on the label, but also kept within a temperature range during transportation.

It is more and more challenging for pharmaceutical companies to transport such products economically. Products that now require "controlled room temperature" (CRT), or the broad range control, may formerly have shipped as general cargo, since the products were deemed to be very stable. New regulation is demanding new handling practices.



COLD CHAIN: Even established trade lanes can present challenges to life sciences and healthcare companies. Recent market reports show cold chain growth in the United States and EU at 19%, in Asia at 50% and in the rest of the world at 33%.
Source: www.lifescienceleader.com/magazine/past-issues3/item/3704-future-challenges-of-the-biopharma-cold-chain

MEETING END-TO-END COLD CHAIN DEMANDS

Establishing temperature control and compliance at every stage of the transportation cycle beyond the warehouse is vital. In a recent report, Steve Todd, Senior Good Distribution Practice (GDP) Inspector for the U.K.'s medical regulatory body MHRA, outlined the importance of complete awareness during the whole journey of a product. "The transportation arrangements from one location to another should be regarded as an extension of the storage activities, and distributors are expected to treat each journey as unique, with the length and complexity, as well as any seasonal variations, being considered when choosing the packing method and mode of distribution."

RESEARCH: The drug business is risky. For example, only one out of every 10,000 compounds that are discovered actually becomes a drug approved for sale. It takes about seven to ten years, and only three out of every 20 approved drugs bring in sufficient revenue to cover their development costs.

Photos: previous leaf: Thomas Ernsting/laif; this leaf: Oliver Killig dpa/pa, Getty Images

THE NEW TREND OF TEMPERATURE MAPPING

Fulfilling this requirement involves a thorough analysis of all transportation modes, and an assessment of whether further temperature control management is necessary. Temperature profiling or mapping is a growing trend whereby companies assess each link of the supply chain journey for temperature control. The data amassed en route during the research, carried out over a year to allow for seasonal variations, can be used for solutions such as developing unique thermal packaging, or learning the specific location in an aircraft's hold that will maintain the required temperature during flight.

This process can inform how to handle the shipment. But there is also an increasing demand to track the shipment at every stage with built-in temperature monitoring. This can be achieved by RFID sensors embedded in packaging that upload information to a web portal at checkpoints along the way. The information can let logistics providers and manufacturers identify changes in temperature, light exposure, and vibration.

For an even sharper picture, some logistics providers, such as DHL, are looking at real-time tracking via cellular mobile and GPS communications. This, however, involves a complicated approval process.

> "THE TRANSPORTATION ARRANGEMENTS SHOULD BE REGARDED AS AN EXTENSION OF THE STORAGE ACTIVITIES, AND DISTRIBUTORS ARE EXPECTED TO TREAT EACH JOURNEY AS UNIQUE."
>
> Steve Todd, Senior Good Distribution Practice (GDP) Inspector for the U.K.'s medical regulatory body MHRA

TRACKING: Falsified and counterfeit medicines are a major threat to public health and safety. Improvements to track-and-trace technology is one way in which the pharmaceutical industry is looking to clamp down on the trade in counterfeit medicines.

Laura Ackermann, VP, Global Head Life Sciences Network & Operations Air Freight, who is supervising the operational launch of DHL's new temperature-control product THERMONET, has ambitions to acquire this holy grail of cold chain management. "We are looking at various options for real-time tracking," she says. "But the biggest challenge is that, just like cellphones, this type of device does need to be turned off during flight. The challenge is that we need approvals airline by airline. There are a few devices that do have approvals for various airlines, but it's not an across-the-board product offering at the moment. But it's certainly where I see the industry going."

Whether the data is relayed in real time or uploaded at regular intervals, temperature checks can be performed at two levels. Ambient temperature – a reading of the environment outside the packaging – is taken by conventional sensors, while near-product temperatures can be established by inserting a probe into the outer packaging.

All this requires a logistics services provider with a powerful network and both the finances and the will to make a strategic investment in LSH supply chains. Logistics companies are striving to offer the perfect delivery conditions for LSH producers in a rapidly changing environment. Only a few, however, are able to comprehensively deliver what is required.

BUILDING AN LSH-SPECIFIC INFRASTRUCTURE

In making sure its warehouses and supply chain were set to comply with LSH Good Distribution Practice, DHL has led the way. Angelos Orfanos, DHL Global Head Life Sciences & Healthcare, emphasizes how the company built its future LSH plan on globalization. "We took globalization as a key element of how we prepare ourselves for the future. That means resources, infrastructure, processes, and of course highly trained and sector-competent people. We need to be ahead of the curve, anticipating changes in the market. So if a customer says, I want to sell into Korea and I need to move my pharmaceuticals under specialized handling conditions, we need to have that in place."

DHL has built an LSH-specific infrastructure that is scalable to evolving global demands. Its LSH network includes 102 life sciences grade warehouses and 24 clinical depots, four regional hubs, and more than 30 life sciences competence centers strategically positioned around the world and specifically designed to meet cold chain requirements. It recently added a $46-million, 19,000-square-meter, custom-built facility to its portfolio in Sydney. The new depot has over 3,000 square meters of dedicated temperature-controlled space.

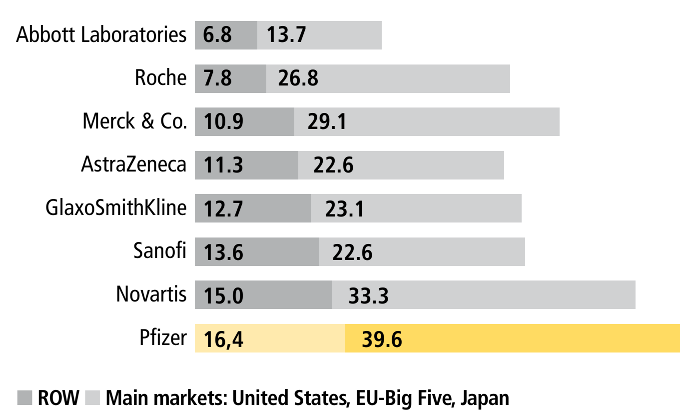
To cope with the end-to-end requirements, the company is this year making a bigger investment in launching its new product THERMONET. This will create a new standard in the handling of air-freight transportation of temperature-controlled goods, says Orfanos.

Integral to the development of THERMONET was DHL Global Forwarding's acquisition of LifeConEx, which became an additional key component in its temperature-control capability. LifeConEx was formerly a joint venture between the logistics company and Lufthansa, and focused exclusively on temperature-controlled pharmaceutical and LSH products. Now aspects of the LifeConEx IT system named LifeTrack, designed specifically for LSH use and with compliance firmly in mind, are being integrated into DHL's network. This has afforded a whole new level of visibility specific to LSH and temperature-control management of air-freight shipments.

Wherever the shipment is going, visibility, compliance, care, and control are vital. The emerging importance of cold chain and temperature management shows how much has changed in the distribution of medical products – even for a drug as commonplace as Aspirin. — ***Mark Espiner***

Photos: Simon Jarratt/Corbis, DHL

PRESCRIPTION SALES
2011 (U.S.$ BILLIONS)



Source: Datamonitor. Note: EU Big Five refers to France, Germany, Italy, Spain, and the U.K.

THREE QUESTIONS FOR

Angelos Orfanos

DHL GLOBAL HEAD
LIFE SCIENCES & HEALTHCARE

"IN LIFE SCIENCES AND HEALTHCARE THE COLD CHAIN IS ON EVERYONE'S AGENDA"

How have you prepared for the changes taking place in the life sciences and healthcare sector today?
We talked to our customers about what was changing and we took globalization as a key element of how we should prepare ourselves for the future. That meant having resources, infrastructure, processes, and competent people in those markets ahead of the curve and almost coinciding with changes in the market. Our anticipation of globalization told us to start building a global footprint. Today we have 150 life sciences facilities around the world, among them 30 life science competency centers in Global Forwarding, three European GDP compliant cross-docks in Freight, 24 clinical trial depots and four regional life sciences hubs.

What mechanisms do you have to be able to respond to your customers' needs?
First and foremost we host life sciences-specific customer events, which are organized around the idea that they are learning events. We invite customers to join a workshop environment on relevant topics they select and tell us what their needs are. We always like to say to our customers we are not here to sell to you, we are here to work for you. We host more than 20 such events each year where we have our experts sitting with customers, talking, mapping, and dialoging around what they need to help them to be successful. Additionally we have annual customer surveys to collect feedback from our customers and utilize a First Choice process improvement program to respond to needs. We have a sector steering committee to evaluate customer demand and direct resources to meet it.

A vital element of LSH logistics is cold chain management. What challenges does that bring?
The cold chain is on everyone's agenda to ensure that products are safe for consumption, and there are many new challenges as resourcing and distribution are globalized. In addition to a strict regulatory environment for temperature compliance and new products that are more susceptible to temperature, an infrastructure is needed to enable new market entry and store or transport these products. The industry is also experiencing a lot of cost pressure and can't readily afford to replace, discard, or absorb losses because of quality hold-ups due to temperature control. The cold chain in LSH is critical to our customers and their customers.

CHANCES GROWING IN MEXICO'S MEDICAL DEVICES MARKET

IMPROVED HEALTHCARE COVERAGE among the Mexican population requires changing supply chains, especially for remote regions.

Mexico's internal demand for medical products is forecasted to have a compounded annual growth rate of 5.2% by 2020. Manufacturers have an opportunity to reconsider their supply chains as they learn to adapt to the challenges of this rapid expansion.

Mexico has become a global leader in medical device manufacturing, in large part due to its geographic location adjacent to a U.S. market worth $120 billion, according to the business intelligence company Espicom. In addition, Mexico offers investors the benefit of a large domestic market for medical devices. A Competitive Alternatives Study conducted by KPMG in 2010 concluded that manufacturing in Mexico offers a cost advantage of over 20%, and close to four times the after-tax profit, compared to manufacturing in the United States.

Initially, Mexico's medical device industry received a huge boost in the 1990s due to the adoption of the North American Free Trade Agreement (NAFTA) in 1994 and the devaluation of the peso. As a result, medical equipment and components could be imported from the United States or Canada to Mexico duty-free, processed and assembled into products, and re-exported back to the United States or Canada tax-free. The growing demand for healthcare services and the availability of a skilled workforce made Mexico highly attractive to importers, exporters, and investors.

Since 1998, many U.S. medical device manufacturers have shifted their operations to Mexico. The combination of cost competitiveness, a highly skilled workforce, and effective intellectual property protection laws has prompted many U.S. medical device technology companies to relocate and expand to Mexico.

Today, with over 65 plants providing more than 35,000 jobs, the Mexican state of Baja California has the largest concentration of medical device companies in Latin America, as stated in the database of Maquila Reference. Two-thirds of the plants operate in controlled environments – according to NAPS most have class 10,000 or class 100,000 clean rooms. With the majority of these companies headquartered in the United States, Mexico exports 92% of the medical devices it produces to this country. Other large markets include the Netherlands, Germany, Belgium and Columbia.

SECOND LARGEST MEDICAL EQUIPMENT MARKET IN THE AMERICAS

Locally, Mexico's healthcare industry has seen a rapid annual growth rate in the past ten years. The country has an expected CAGR of 5.2% by 2020. This growth

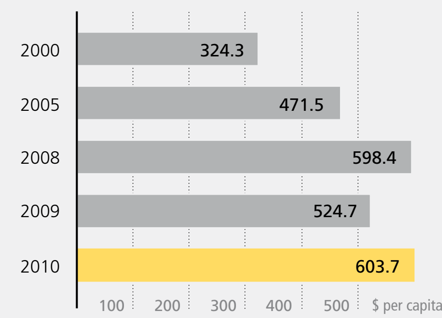
Photos: Getty Images (2)

THE CHANGING LANDSCAPE OF MEXICAN HEALTHCARE

THE IMPACT OF SEGURO POPULAR

SEGURO POPULAR OR "POPULAR INSURANCE" is a healthcare scheme providing coverage to Mexico's uninsured. Since 2004, Seguro Popular has brought health cover to more than 45 million previously uninsured Mexicans, many of them in remote, rural regions.

HEALTH EXPENDITURES



Source: World Bank

DHL IN MEXICO

4 HUBS
6 GATEWAYS
112 WAREHOUSES
231 DISTRIBUTION CENTERS AND DELIVERY OFFICES

TWO TRENDS HAVE A DIRECT EFFECT ON THE MEDICAL DEVICES INDUSTRY IN MEXICO

THE AGEING of Mexico's population and a sharp rise in chronic, non-transmissible diseases place higher demands on the healthcare system. At the same time, healthcare coverage among the population has expanded, especially in remote regions.

STAKEHOLDERS in Mexico's healthcare system are seeking new supply chain solutions to meet the challenges of a changing landscape: cost-efficient deliveries to hospitals, additional services, such as kitting and consignment stock, and reduction in product inventories.

1,000

NEW HEALTHCARE FACILITIES HAVE BEEN BUILT. State healthcare spending is creating a growth environment. Spending rose 130% from 2000 to 2010, mostly due to public funding of Seguro Popular after 2004 and massive investments in creating and modernizing healthcare facilities.

$3.4 BILLION

WAS THE VALUE OF MEXICO'S MEDICAL DEVICES MARKET IN 2011. 3PL providers offer economies of scale and more frequent remote-area delivery based on shared services. Device manufacturers are adopting just-in-time models that support the use of a 3PL provider so that manufacturers can focus on manufacturing.

23 PERCENT

IS THE MARGIN BY WHICH PRODUCTION IN MEXICO IS CHEAPER THAN IN THE UNITED STATES. The combination of cost-effective manufacturing and the growing right-shoring trend is helping to fuel the development of Mexico as a production center for many U.S. and international medical device manufacturers.

has been fueled by a sharp increase in the number of foreign companies manufacturing medical devices in the country and by a higher national demand for healthcare services following the implementation of the government's Seguro Popular ("Popular Insurance") National Health Program.

With the Seguro Popular in place since 2004, healthcare coverage among Mexican citizens has expanded from five million to more than 50 million, with particular growth observed in remote regions. But this universal health coverage places higher demands on the healthcare system and supply chains. Goods are increasingly being distributed to remote areas that are far from urban distribution centers. Once it was enough for manufacturers to deliver to a government warehouse in a major city or town; now delivery is directly to the hospital or clinic. This changes the supply chain, increasing emphasis on ordering, timelines, and inventory control as well as moving many products from bulk to parcel deliveries.

Furthermore, market dynamics have impacted the need for customized services such as kitting consumable sterile products. These products and instruments must be delivered with the correct documentation, properly packaged and transported, and in the correct size – or range of sizes – for a specifically scheduled surgery. Each customer's requirements are different, often resulting in a tailored service.

Medical device customers also expect other value-added services, such as inspection and labeling. Managing different requirements, from small remote hospitals with low product usage of a large range of products to large city hospitals which specialize in certain surgical procedures, can be a challenge to manufacturers that have a traditional supply chain.

MANUFACTURERS OUTSOURCE TO 3PLS

Manufacturers are increasingly opting to manage relationships with the end customer themselves and leave the distribution activities to an outsourced third-party logistics provider (3PL) that can infuse best practices from the healthcare industry as well as other sectors such as automotive, technology, or consumer. This includes warehousing, inventory management, information systems, transportation, optimization services, and product compliance, which are often provided by 3PLs as a one-stop shop. For some companies, shared services among multiple manufacturers can help save up to 30% in freight costs and provide the added benefits of improved end-to-end visibility, comprehensive auditing, and full regulatory compliance.

By utilizing the 3PL's Vendor Managed Inventory (VMI) service, often referred to as consignment stock management, the manufacturer manages inventories, ensuring a high degree of communication and executing the most effective flow of products. Furthermore, 3PLs support medical device manufacturers and healthcare providers with their inventory management. Another key area is transport consolidation in both freight and parcel. Third-party logistics providers are able to consolidate goods across a range of products or modes of delivery. This offers economies of scale, higher service levels, and more frequent delivery to remote regions or sites.

"Mexico's medical device industry is undergoing a transformation as it adapts to the new realities of the country's healthcare landscape, which include rapid expansion of care, rising cost pressures, and escalating service demands in all customer segments. As a result, the current supply chain model is strained," says Jose Antonio Garcia, Senior Director Operations at DHL Supply Chain. "That doesn't mean the model is broken, though. Based on our experience, research, and knowledge of the industry, we believe that if medical device manufacturers approach the current situation strategically, they will not only meet the challenges and capitalize on growth opportunities of the new Mexican healthcare environment, but they will be better positioned to deliver value to the medical system." — ***Anthony Haywood***

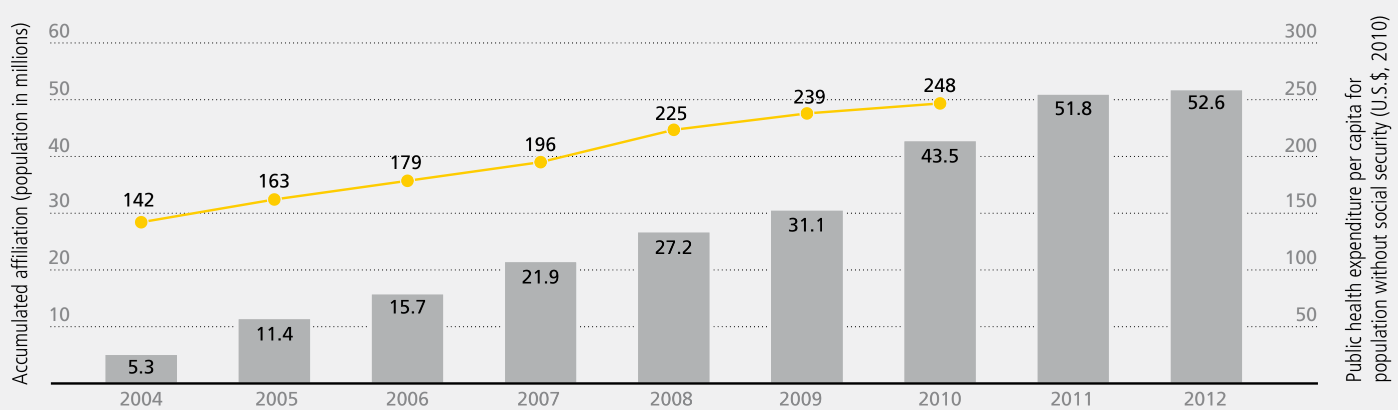
DYNAMIC OPPORTUNITIES

Mexico offers a dynamic opportunity for medical devices. In recent years, the Mexican healthcare system has undergone major transformation, placing increasing demand on the medical devices supply chain. The need for manufacturers to rethink their supply chains in light of these new market dynamics is explored in a new white paper from DHL Supply Chain.

More information on the medical devices market in Mexico:

tinyurl.com/DHL-Mexico

EVOLUTION OF ENROLLMENT
IN SEGURO POPULAR, MEXICO 2004–2012



NEW REGULATORY REQUIREMENTS

After years of consultation, the EU has finally published its new Good Distribution Practice guidelines for medicinal products. The implications are far-reaching for life sciences and healthcare customers worldwide.

In March 2013, the European Commission published *New Guidelines on Good Distribution Practice (GDP) for Medicinal Products for Human Use*. These new guidelines replace those originally established 19 years ago and are largely a reiteration of the European directives issued over the last 11 years and more recent guidelines like the *MHRA Orange Guide* of 2007.

This has many implications for life science companies, not just in Europe but also in countries that supply into the EU. Ultimately, in 2013, there will be more focus on regulatory and trade compliance for the transportation and storage of medicines as there are further European guidelines going through consultation for active pharmaceutical ingredients; plus more international guidelines such as China's new Good Supply Practices come into effect on June 1 this year.

MEDICINES AND MEDICAL DEVICES: the market in the EU is strictly regulated.

GUIDELINES BY CHAPTER

The new guidelines; chapters are becoming aligned with EU Good Manufacturing Practices (GMP) and the ten new GDP chapters follow a similar structure. Chapter one on "Quality Management" places an emphasis on some new areas to EU GDP – "Deviation Reporting," "CAPA" (Corrective Action, Preventive Action), "Change Control," and "Quality Risk Management" (QRM). These have all been Prime Quality Elements within DHL's Quality System for several years.

Chapter two clarifies in detail the role of the "Responsible Person," plus expectations concerning training and hygiene. Chapter three on "Premises & Equipment" covers topics such as temperature mapping, and the qualification and validation of computer equipment. DHL has a lead in this area, as outlined in "Distribution Management Systems" in the book *Validating Pharmaceutical Systems* (edited by John Andrews, 2006.)

Two other chapters worthy of mention are chapter seven on "Outsourced Activities" and the need for GDP audits to be undertaken and chapter nine on "Transportation." It is the new guidelines on transportation that are likely to attract most attention in terms of how regulators and the industry apply the new guidelines. These include:

- the shipping of medicines as described by manufacturers or on the outer packaging, a risk-based approach, and investigating of temperature excursions
- dedicated vehicles should be used where possible (and procedures must be in place for the use of non-dedicated vehicles)
- the duration of temporary storage while awaiting the next stage of transportation should be minimized

DHL has been preparing for these updated GDP guidelines by aligning with customers and associations in the consultative process. DHL has also been investing in sector-specific processes, people, capabilities, and GDP-compliant certified infrastructure, including an expanding competency center network to support THERMONET, DHL's new cold chain standard air-freight solution.

"The updated GDP requirements are detailed in DHL's own GDP guidelines for handling biological medical devices and pharmaceutical products within contract logistics operations," explains Mike Meakin, VP Global Quality Regulatory & Compliance, Life Sciences & Healthcare, DHL Supply Chain. "We call this our 'Yellow Book' and publish it annually. It also features the GDP requirements of countries around the world – invaluable information that we are able to share with our customers." — ***Tony Greenway***

Revised rules on the distribution of medicinal products in the EU:

tinyurl.com/EU-MedDistr

Photos: Michael Bahlo/Keystone

KEEPING EVERYTHING COOL

DHL THERMONET is a comprehensive new service offering higher visibility and greater control in the delicate transport of temperature-sensitive products.

HIGH VISIBILITY: Medical products require special handling throughout the entire supply chain.

Providing life-saving medical products is a big responsibility. When it comes to getting them to the people who need them most, producers and logistics providers are faced with the challenge of ensuring product integrity, regulatory compliance, and timely distribution at optimal total cost.

"When temperature-sensitive products move through an airport with potentially limited temperature-controlled facilities and handling capabilities, customers' products are at risk," says Laura Ackermann, VP, Global Head Life Sciences Network & Operations Air Freight. While thermal packaging plays an important role in managing the risk of temperature excursion, being able to track logistical events as well as monitor the temperature of these sensitive products in near real time to enable intervention – where and when needed – is a significant advantage.

DHL THERMONET is the new addition to DHL's temperature management services, and is complemented by the high-end LifeConEx service. Learn more at:

tinyurl.com/DHL-Temp

To this end, DHL has just launched DHL THERMONET to create a new standard of temperature management in air freight. This unique end-to-end service integrates proprietary SmartSensor technologies with transportation, packaging, and intervention capabilities to streamline the shipping process, and ensures product and cold chain integrity is maintained throughout the logistics cycle. Utilizing the IT platform LifeTrack to upload relevant data, DHL THERMONET offers higher visibility and more control.

SMART SENSORS

The integrated SmartSensor device is an in-house development from DHL's Solutions & Innovation division. The technology provides visibility to the shipment via an RFID sensor and also monitors the ambient temperature while in transit. As an optional service, measuring near-product temperature of the goods during transport is available, utilizing the SmartSensor XP (external probe) technology. Near-product temperature data enables more targeted intervention.

The temperature data collected by the SmartSensors is uploaded to a web portal at predefined checkpoints between each shipment's origin and destination, and is linked directly to logistics events. Visibility of the ambient temperature gives insight into how the goods are being managed on the ground and in the air. "Consolidation of these individual shipment journeys will allow DHL a much more consultative approach to risk management, packaging, and product integrity on our customers' behalf," explains Ackermann. "The life sciences-specific and 21 CFR Part 11 compliant LifeTrack IT platform serves as the backbone for operational shipment management and provides a single data source for all logistical and temperature data."

CONSISTENCY IN COMPLIANCE

Alongside the SmartSensor technology, a Good Distribution Practice (GDP) compliant quality management system is integral to DHL THERMONET. "One of the biggest advantages we provide is the consistency in service in compliance with international life sciences industry regulations and guidelines," says Ackermann. "We are leveraging our existing network of life sciences competence centers; the focus is on providing the correct infrastructure to handle the shipments and having trained and certified staff at all of these locations. The goal is to have the entire network operate to a standardized and audited GDP-compliant process."

"We are currently focusing on our base of over 30 life sciences competence centers around the globe, where we are implementing the DHL THERMONET standard," explains Ackermann. "We will continue rolling out DHL THERMONET, targeting 60 stations by the end of 2014." Further network expansion is planned. — ***Tong-Jin Smith***

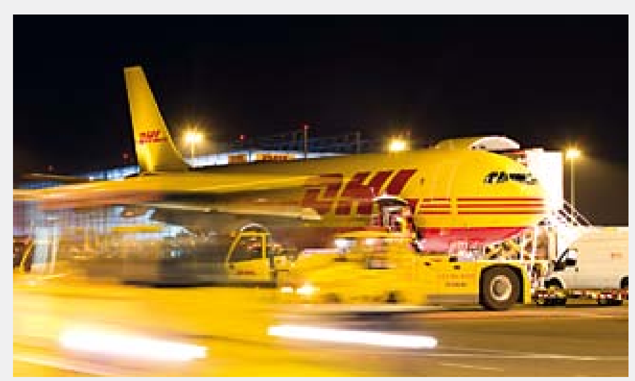
Photos: Oliver Killig/dpa/pa, Hub/laif, Christoph Busse/transit

THREE NEW REFINEMENTS TO TEMPERATURE CONTROL

1 REGULATORY Increasingly, regulatory authorities require shippers of temperature-sensitive medicines to "ship to label." If a product's label says "keep at 2 to 30 degrees Celsius," authorities want proof that it was kept within that range during transportation and storage. DHL is utilizing its in-house airline capacities to provide a service that will allow very limited temperature excursions for such products on its owned and operated aircrafts, focusing on routes between Leipzig or Brussels and Cincinnati, India into Europe and the U.S., and from Miami to Panama.

2 UNDERSTANDING THE AIRCRAFT ENVIRONMENT DHL has developed this new, cost-effective option for its LSH customers as an alternative to commercial airline capacity for temperature-controlled freight. To minimize temperature exposures, DHL is engaged in on-going temperature mapping of its intercontinental aircraft fleet to understand how the temperature fluctuates within the aircraft compartments so that the best position for a specific shipment can be selected to maintain the desired temperature range.

3 PROCESS CONTROL In addition, to absolutely minimize any outside exposures of products to temperatures on the airport tarmac, the ground handling process is fully managed by DHL from receipt of the shipment through aircraft loading/unloading at the hubs and delivery at the destination airport. Tarmac times can therefore be minimized: from the moment a shipment leaves the controlled warehouse until take-off is typically under 45 minutes, while unloading can be completed in less than 30 minutes.



WHEN EVERY SECOND COUNTS

It was a life or death situation: a cancer patient in Singapore had received a five-day dose of chemotherapy within just five hours. In urgent need of treatment, her doctors found an experimental antidote at a pharmaceutical company 15,516 kilometers away in the U.S. state of Maryland. If delivered to Singapore within 48 hours, the lethal overdose could be counteracted.

Only a specialty courier service with a global network can deliver in time and manage all the paperwork to prevent a hold up. Finding the best solution for each and every shipment, specialty couriers coordinate flight schedules with commercial airlines and track weather and traffic conditions en route, so that time-sensitive shipments can be on the next flight out and reach their destination on time.

In the case of the experimental antidote, agents at DHL Same Day Americas in Baltimore used their up-to-the-minute routing and information systems to find the best route and the best courier to meet the deadline. They contacted their Singapore office and sent documents ahead for customs clearance. Constantly monitoring the shipment and keeping the customer informed every step of the way, the antidote reached the patient in time.

But specialty couriers are not limited to emergency deliveries. They also support clinical trials in medical research. "We have been developing specific solutions with our customers for 30 years," says Matt Daniels, Vice President and General Manager DHL Same Day Americas. Understanding the special requirements of clinical trial logistics, the organization offers weekend pick-up and delivery, temperature monitoring, refrigerant checking and replenishment, as well as specific customs clearance and documentation services as part of an individual solution tailored to the needs of each customer.

By leveraging the market leading DHL Express network in a "hybrid" set up, the service can be very cost competitive compared to courier pure plays. "For instance, Same Day Americas will pick up a shipment at any time of the day 24/7 and then go to our DHL Express network for the transit," explains Daniels. "What sets us apart is that every shipment is handled separately to ensure we deliver on the minute." — ***Tong-Jin Smith***

SPECIAL DELIVERY: Every Same Day Americas shipment is handled separately to ensure timely delivery.

Photos: Getty Images (3)

America: keeping up with business

Despite economic uncertainty and political obstacles, the United States remains a land of opportunity in areas such as e-commerce and manufacturing.

Look at the United States today and it's easy to come away confused. Washington is stuck in gridlock as politicians struggle to agree on even the smallest matters of fiscal policy. The result: a stalemate that analysts say is costing the world's biggest economy dearly in terms of growth and jobs.

Yet, look beyond the D.C. Beltway, and a different picture emerges. While it may not be a vision of vigorous health, there are bright spots. After years of decline, the housing market is picking up. Shale gas is fuelling an energy revolution and contributing to hopes of a revival in U.S.-based manufacturing. Wall Street is perkier than it has been for years; Silicon Valley is as inventive, and disruptive, as ever.

Analysts remain concerned that the United States has yet to acquire the "escape velocity" needed to power decisively out of recession. Josh Feinman, Chief Global Economist at Deutsche Asset & Wealth Management, a unit of Deutsche Bank, says not too much should be read into stronger growth at the start of the year as "we still believe that fiscal contraction will dampen activity this year." However, he does not believe that the United States is headed for a more enduring slowdown. After a "speed bump" he reckons the "pace of activity will actually get stronger later this year and into 2014."

The chief executives of some U.S. blue chip companies are also cautiously optimistic. Doug Oberhelman, CEO Caterpillar, has talked of a "spotty situation" around the world with some good opportunities in the United States, the Middle East, and Latin America tempered by a slowdown in China. Commenting around his group's earnings figures in April, he talked of a "feeling that we're maybe a little better off this spring than we have been the last two." His counterpart Andrew Liveris, CEO at Dow Chemical, remarking on his group's first quarter earnings, said that "we've seen a stable economy starting to appear in front of us."

"2013 WILL BE A MAKE-OR-BREAK YEAR. FOR THE U.S., IT MEANS PULLING TOGETHER IN THE NATIONAL INTEREST AND AVOIDING FURTHER AVOIDABLE POLICY MISTAKES."

Christine Lagarde, Managing Director IMF

With such mixed messages it's no surprise that even expert observers are equivocal. Christine Lagarde, Managing Director of the International Monetary Fund, told journalists in April on the eve of the IMF spring meetings that while the United States "is picking up a bit," any recovery was likely to be tempered by the automatic cuts in federal spending – the so-called sequestration – resulting from political stand-off. In April the IMF revised down its forecast for U.S. growth in 2013 to 1.9%. Olivier Blanchard, Chief Economist at IMF said that had the United States not embarked on fiscal tightening "growth would probably be between 1.5 and 2% higher."

It is a view reflected in the business world. "The current situation in the United States has definitely put uncertainty into the business community that is slowing down some investment," says Ian Clough, CEO DHL Express USA. But he also notes positive developments, "particularly at the level of small businesses." American small and medium-sized companies, especially, are moving to boost their international business – a development that in turn is driving activity at DHL Express USA. "Undoubtedly we have grown faster than the market and taken market share," says Clough. One reason might be customers of DHL Express in the United States have access to a very special offer: all the group's employees have been trained as "international specialists" as part of a program that underscores the division's global outlook. The program – which distinguishes DHL Express USA from more domestically focused rivals – means every member of staff is equipped to serve the international business needs of customers.

BAROMETER OF BUSINESS ACTIVITY

A good way of finding out what is really happening on the ground is to take a look at the logistics sector, which functions as a barometer of business activity. In the United States today, the logistics sector projects an interesting, at times complex picture of an economy that is rebounding – albeit in the face of strong, politically driven headwinds at home and abroad as well as fundamental structural changes.

It is a time when many big corporations refrain from investing, while smaller American firms look for growth through increased international trade – particularly through fast-paced growth in e-commerce. It is a post-recession environment where businesses are searching for new strategies and trying to cut costs, such as by rationalizing and optimizing supply chains. And it is a world that anticipates considerable benefits if plans to create huge international free trade zones – one across the Pacific, the other across the Atlantic – are realized.

In terms of new business development, e-commerce is leading the way. Lee Spratt, CEO DHL Global Mail, Americas, believes that e-commerce is recording ten to 15% growth in business within the Untied States, and as much as 20% growth in the rest of the world. "E-tailers are trying to expand everywhere," he says. U.S. businesses were once happy to focus on the big domestic market, with the more adventurous looking to Canada and Latin America. Now they see that they can sell to customers pretty much anywhere in the world. All they need is an Internet connection to transact the sale – and someone to get the product to the customer.

The importance of international trade to the U.S. economy is huge, according to the U.S. Chamber of Commerce. "Outside our borders are markets that represent 80% of the world's purchasing power," noted John Murphy, the chamber's Vice President for International Affairs, in a speech in May. "One in three manufacturing jobs depends on exports."

Greater international activity by American companies has boosted business at DHL Express USA, says Clough. The business division is "purely internationally focused," he says. "We've invested a lot into making everyone in our business an international specialist who can provide exact information about shipping globally. If an employee doesn't know the answer at once, he or she knows someone who does." The international expertise of DHL has been noted by the U.S. government, which has partnered with Express to support a Department of Commerce drive to boost

ONLINE RETAIL LEADS THE WAY

Thanks to e-commerce, U.S. businesses can now sell to the world. The Internet allows retailers to expand away from traditional bricks-and-mortar operations and reach out to an international market. With annual growth rates of 20%, this is one of the most dynamic areas of the retail economy.

See InsightOn: E-commerce & Collaboration:

tinyurl.com/DHLInsightOn

exports. "As a result of all this we noticed a marked increase in outbound traffic," says Clough.

But while e-commerce is boosting SMEs, many bigger companies are still struggling. "We are not seeing the growth we expected," says Reg Kenney, President of DHL Engineering and Manufacturing Sector. Among some major industrial groups – and the customers they in turn serve – there is a wariness about committing to investments in big-ticket items at a time of political uncertainty and a patchy global economy.

BIG COMPANIES INCREASING FOCUS ON AFTERMARKET

One area in which Kenney and his team see big companies focusing on more is aftermarket services. The aftermarket includes all of the "return" processes as defined by the Supply Chain Council's supply chain model. One interesting aftermarket service is warranty management, which contains most types of returns – a simple return, return/repair, exchange return, advance-exchange return, and the lease or loan of specialty and limited-quantity parts.

Kenney says once these would have made up between eight and 15% of a company's revenue; now managements are targeting 20–25%, or more in some instances. The aftermarket is increasing in priority partly because of additional revenue opportunities, but it also impacts cash flow and shareholder value.

"The aftermarket is becoming key," Kenney says. To address this, DHL has developed its MRO – Maintenance, Repair, and Overhaul – program through which customers are offered comprehensive aftermarket services. DHL is not limiting its interest in aftermarket to Engineering & Manufacturing, as other sectors are seeing similar interest from customers. These include automotive, technology, energy, and life sciences, especially medical diagnostic and surgical equipment.

Scott Sureddin, COO DHL/Exel Supply Chain Americas, says that implementing MRO is transformational as it has "a wide impact in the customer's organization". This requires good and comprehensive communication with all those involved. Total implementation of an MRO process can take between six and 18 months.

NEAR-SHORING TREND

Another area in which corporate America is looking to fundamentally change the way it does business is in near-shoring. Rising production costs in parts of Asia and a wish to shorten supply chains – whether for reasons of security or to respond more quickly to market developments – are driving businesses to shift manufacturing back closer to home, notes Christoph Remund, CEO DHL Global Forwarding USA.

Automotive and technology companies are particularly keen, he adds. Often the operation concerned is "traditional" assembly line work that – once systems are established – is not complicated to run. However, the potential knock-on benefits and opportunities of near-shoring are considerable, notes Remund. When a primary facility relocates, then associated secondary and tertiary suppliers often follow.

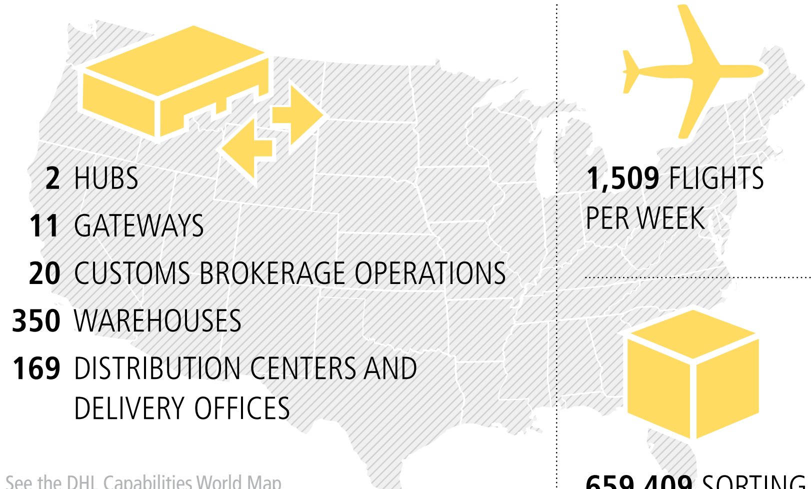
But all this comes with lots of associated challenges, from re-organizing shipments of raw materials to negotiating new customs and tax systems. "Often customers know they want to do it, but have not yet figured out how," says Remund. "We basically help customers so they do not have to bother with the details in sourcing raw materials and compliance."

The focus on Mexico comes after years in which America's southern neighbor was bypassed in favor of cheaper locations in Asia. Now it is part of a deeper engagement with Latin America, home to some of the world's emerging high growth economies.

This sits within the bigger context of U.S. policymakers' efforts to seal big free trade deals with the European Union and with a clutch of Asian economies across the Pacific. For U.S. business this would open up huge new opportunities. In e-commerce alone, says Spratt, a trans-Atlantic deal "will greatly enhance" business, particularly in higher value products. It would also be an example of business and politics coming together to deliver wider economic benefits. — ***Frederick Schulenburg***

Photos: Bill Pugliano/Getty Images, Macduff Everton/Corbis, DHL

DHL IN THE UNITED STATES



2 HUBS
11 GATEWAYS
20 CUSTOMS BROKERAGE OPERATIONS
350 WAREHOUSES
169 DISTRIBUTION CENTERS AND DELIVERY OFFICES

1,509 FLIGHTS PER WEEK

659,409 SORTING CAPABILITIES PER BUSINESS DAY

See the DHL Capabilities World Map for more on DHL in the United States:

tinyurl.com/DHLMap-USA

DHL Express's Certified International Specialist program recognized as best in class at training and development awards:

tinyurl.com/DHL-CIS

THE FINE ART OF RELOCATION

Global mobility is on the rise. Moving to another culture can be a formidable challenge both for employees and their families, and for the companies that send them overseas. But benefits and mind-broadening abound.

With the world more interconnected than ever before and global business environments increasingly complex, international experience is "more frequently becoming a prerequisite" for top-level executive jobs, according to Mansour Javidan, Dean of Research at international business school Thunderbird's Global Mindset Institute.

Multinational operations are managed from multiple global locations and executives based in the parent country, as well as at international locations, may frequently be offered the opportunity to relocate overseas for extended periods of time. In many cases, managers even complete multiple stints abroad, as time spent overseas develops their ability to manage complex, interconnected operations – a skill which, according to recruiters and human-resources executives, can't just be developed back home or in one brief foreign assignment.

On the corporate side, organizations can use workforce mobility to achieve both immediate and long-term business objectives by developing the next generation of global leaders. The Dow Chemical Company, for instance, with 188 production sites in 36 countries, has a highly selective two-month HR International Exposure Assignment Program designed to develop its young talent. Another benefit: as candidates work abroad, they gain real-life exposure to the company's global organization and structure.

With more chief executives requesting a headquarters team with practical business skills, from finding local partners to anticipating customer preferences, in almost any part of the world, global relocations are on the increase. A 2012 survey conducted by employee relocation specialist Cartus Corporation, over the last ten years, finds companies have consistently predicted an increase in mobility – no matter what the economic climate. And risen it has. In 2012, 74 % of respondents reported that their overall relocation activity expanded over the two previous years. Almost two-thirds are projecting that global moves will further increase over the next two years with the main drivers for growing mobility being expansion into emerging markets, mergers and acquisitions, as well as talent management.

74%

of respondents reported in 2012 that their overall relocation activity had increased over the previous two years; a significant increase compared to 2010 (47%).

MASTERING A NEW LANGUAGE

Working in a country with an unfamiliar culture and different language presents some obvious challenges. Adjusting to different attitudes toward time and punctuality can be just as difficult as mastering a foreign tongue or finding a new home for the family and an appropriate school for the children. This is where HR can step in and soften the landing – with the help of a professional relocation agency. For example, Siemens, with 370,000 employees in more than 190 countries, supports its expats with a comprehensive program, including language courses prior to departure for the entire family, specialized intercultural training, and an orientation week at the new location ahead of the assignment. "The feedback we get from our delegates is consistently positive," says Ekkehard Wirth, responsible for expat management.

When Swede Bo Stagman, Global Strategic Sourcing Manager of Ericsson Business Innovation AB, was relocated to Brazil with his family, Ericsson provided them with a language trainer who came to their home. The results were astonishing. "My son was only a year old when we first moved to Brazil, and was speaking Portuguese before he learned to speak Swedish." And 12-year-old daughter Jasmine returned to Sweden trilingual, speaking Swedish, Portuguese, and – thanks to her international school – English.

Among the rich cultural experiences Stagman had while living in South America was the realization of differences in the concepts of time and processes. Whereas in most European countries punctuality is expected, being late is considered the norm in Brazil. In trying to understand these differences, Stagman gained a cultural insight: "Since earliest times, man's survival has depended on farming. Whereas people living in warmer climates might harvest up to four crops a year, here in northern Europe we had one chance to get it right. I believe that can influence a culture's sense of urgency."

The practical implications of doing business in a foreign country may also differ. In the United States, for example, managers are often given authority to make decisions themselves. In other countries, such as Germany, business structures are hierarchical and decisions are usually passed down by top management.

Illustration: Nadine Pfeifer

On doing business in the Middle East, David Wilson, Senior Vice President Global and European Sales at DHL Express says, "It's all about relationship and negotiation. In fact, I sometimes think the negotiation process in the Middle East is more important than the end price." With nine relocations behind him to places like Saudi Arabia and Singapore, Wilson knows what he is talking about.

OPPORTUNITIES FOR KNOWLEDGE TRANSFER

As challenging as cultural differences may be at first, they also present an opportunity to learn and expand one's knowledge and insight, while at the same time opening opportunities for knowledge transfer within a global environment. According to the Global Mindset Institute, successful expats share three common traits: solid knowledge of the workings of international business and a capacity to quickly absorb information; openness to different cultures and a knack for adapting to new customs and mores; as well as the ability to bring people together and create alliances across cultural or political borders.

Globetrotting managers can gain a distinct business and personal edge by making the most of their international assignments – the trick is in ensuring the obvious challenges and pitfalls of relocating abroad are managed and the benefits are maximized. "It's always a great adventure to discover a new culture," says Wilson. "I am particularly pleased about the diversity of friends my kids have." At the same time, he and his wife are careful to celebrate traditional holidays so that their four children have a sense of their roots. — ***Tong-Jin Smith***

HOW TO MAKE A **SOFT LANDING**

A global move is not about going it alone. Companies usually help soften the landing with insider tips or structured forums where expats can share experiences. Before making a global move, employees and their families should explore networking opportunities in the guest location. Many cities have well-established expatriate communities. Sporting or interest-based activities are ways to meet people, as is volunteer work, which can help give the relocation meaning. Platforms such as **meetup.com** offer a host of meetings and special interest groups, as does global expat forum InterNations **internations.org** and the Expat Info Desk **expatinfodesk.com.** Spouses and partners ineligible for local employment might join professional clubs or business associations. Building contacts can help lessen the sting of putting their own careers on hold. And anyone with a child or a dog is guaranteed to meet people.

CONSCIOUS CONSUMPTION: more and more shoppers are looking for regional products delivered to supermarket shelves through sustainable supply chains.

SENSE AND SUSTAINABILITY

In an era of increasing complexity, sustainable supply chain practices simply make good business sense.

In the globalized environment, outsourcing production steps and international procurement make tracking, tracing, and monitoring production and products ever more difficult. As a consequence, three major factors characterize supply chains: increased complexity, decreased access to information, and a greater need for higher quality at higher speed – all at a lower cost. In addition, producers, suppliers, and retailers need to manage logistics globally.

As technical tools allow for more transparency in the supply chain, compliance with national and international standards can be seen as an opportunity. The same is true for increased efficiency and sustainability, which can lead to more supply chain resilience and become a competitive advantage for retailers and producers, who focus on balancing costs while prioritizing growth and customer service.

SUCCESSFUL PLAN FOR SUSTAINABLE LIVING

In line with these current trends in supply chain management, multinational consumer goods producers such as Unilever are discovering that sustainability makes business sense. Since the inception of its high-profile Sustainable Living Plan in 2008, the company has cut more than one million tons of CO$_2$ from its manufacturing and logistics operations, and saved operating costs of $395 million while growing sales by 26%. Unilever now also buys all its palm oil from certified sustainable sources and is looking to expand this sourcing practice to other raw materials, including fruits and vegetables.

54%

of member companies of the United Nations Global Compact have already achieved supply chain sustainability

Concerns over new transportation legislation and turning sustainable practices into further margin enhancement are factors that affect both retailers and producers. In retail, additional issues are emerging for supply chain managers, such as multichannel operations, the expansion of global sourcing, and the shift from stores toward online platforms.

For global retailers like Walmart, who sell a wide range of products in stores and online, sourcing for different markets means adapting to local customer demands while upholding international sustainability standards. Combining both aspects has become a source of innovation for the company, resulting in different initiatives such as the reduction of packaging used for produce or the use of unused shipping capacities to deliver international brands to customers in Japan. In addition, Walmart has discovered that sourcing directly from farms contributes to building strong, reliable, and safe food supply chains, while reducing costs and supporting local farmers and communities in creating a stable infrastructure. — ***Tong-Jin Smith***

Photo: DHL; illustration: Bernd Schifferdecker

THE CHALLENGE OF SUPPLYING THE WIDE WORLD OF WALMART

SCOTT PRICE

is President and CEO, Walmart Asia. He assumed the role in 2009 and has responsibility for the company's current operations in Asia.

The world's largest retailer offers everything from apples to auto parts. Scott Price discusses the supply chain in terms of quality, costs, and ethics.

With goods produced, transported, and sold globally what are the major challenges faced by retailers today?

Helping people live better is something that's been core to our mission ("Save money live better"). The goal of our Ethical Sourcing program is to positively impact global supply chain practices by raising our own standards and by sharing our experience, knowledge, and ideas.

One of the pillars is food supply. Let me share a recent experience from India, where ensuring cost-effective temperature compliance for chilled and frozen foods during transportation can be a challenge. Responding to this difficulty, we began using pre-chilled ice packs in shipper boxes along with dry ice, saving money and at the same time, ensuring a safe food supply.

Let me give you another example from Japan. Not too long ago, we put in place a 'non-tray packaging initiative' in Seiyu stores. Chicken and pork are now vacuum-packed in production areas and shipped directly rather than stopping at interim processing factories for traditional repacking. Through the elimination of this step, Walmart Japan cumulatively saved more than 22 tons of trays and wraps in just one year.

What effect does local sourcing have on product availability, quality, and safety in China and India?

In markets like China and India, consumption behaviors don't just change from country to country but in fact from province to province and state to state. Being able to offer customers localized offerings is absolutely key to success.

A total of 75% of what we sell in Japan, 90% in India, and 95% in China is sourced locally, in-country. This has dual benefits: we are able to build connections with our customers by offering products which are locally relevant. Second, local sourcing benefits local communities, businesses, and people.

Furthermore, we firmly believe that we can help address the problem of food security by buying products directly from farmers and providing them with the education and resources to increase yields and ensure food safety. In Japan, we already engage with over 13,000 farmers and source 36% of all produce sold in our Japanese stores through our Direct Farm program. In India, we're already working with over 9,000 farmers and by 2016, this number will grow to 35,000, with 50% of these projected to be women. In China, we've been running our Direct Farm program since 2007, and engage regularly with thousands of farmers across the country.

How does increased consumer awareness influence the development of retail supply chains?

In markets like China and India, consumers' main concerns are food safety and affordable prices. So when we look at our supply chain in these markets, we look at how to improve core efficiencies and to integrate them into a developing national supply chain infrastructure. We take a farm-to-fork approach to food safety, realizing that risk needs to be controlled at every stage of the supply chain. A recent development has been the rollout of a new mobile laboratory covering 70 stores in Guangdong province. What we've done is outfit customized vans with highly advanced food safety inspection technology and specialists, who literally drive from store to store bringing capabilities with them that previously only existed in laboratories that were often far from store locations. At the same time, we've re-launched food safety policies and processes on iPads to help associates see positive references first-hand. These are the types of innovations that fast-track information flow across the supply chain and bring ultimate benefits to the consumers.

More about Walmart's environmental sustainability at:

tinyurl.com/DHL-Walmart

WALMART AT A GLANCE

Walmart was founded in 1962 by Sam Walton; the first store opened in Rogers, Arkansas. Today, Walmart operates more than 10,700 stores in 27 countries. For the fiscal year ended January 2013, Walmart increased net sales by 5% to $466.1 billion. Walmart employs 2.2 million people around the world – 1.4 million in the United States alone.

THE UNILEVER SUSTAINABLE LIVING PLAN

"OUR SUSTAINABLE LIVING JOURNEY HAS ALSO STRENGTHENED OUR BELIEF IN COLLABORATION – WE HAVE ALWAYS SEEN THE ADDED VALUE IN PARTNERSHIP AND SHARED RESPONSIBILITY, AND MANY OF THESE ISSUES NEED MULTI-SECTORIAL SOLUTIONS."

AN ESSAY BY GAIL KLINTWORTH

Gail Klintworth is Chief Sustainability Officer of Unilever. She is responsible for driving the Unilever Sustainable Living Plan which aims to double the business turnover by 2020 whilst halving the environmental impacts across the value chain.

At Unilever, we want to make sustainable living commonplace.

This is an ambitious corporate purpose, which is aligned to an equally ambitious corporate vision to double the size of our business, while reducing our environmental impact and increasing our positive social impact.

Embarking on this type of journey is not new to us. We are a company that has been focused on making lives better since the days of our founders. Strong values inspired them to make innovative products that addressed the big social issues of their time: they made cleanliness commonplace by launching affordable bar soaps such as Sunlight and Lifebuoy, they made good nutrition accessible by offering a cheaper, healthier alternative to butter, they looked for opportunities to build a responsible business through meeting the everyday needs of ordinary people. The same values which guided them are just as important now, for us, as we look to the future.

The future that we see today is certainly a different world from that of our fathers. Global population growth is accelerating; while a billion people struggle with being overweight or obese, another billion goes to bed hungry every night; we are exploiting the world's natural resources much faster than it can replenish itself; and on a positive note, we have discovered digital technology, which is empowering us to lead and make change faster and more efficiently than ever before.

So for us, in the middle of the challenges, we see the opportunities to do good while continuing to drive business growth. We are clear about the future trends and are making it our responsibility to try to get to the future first; using our business as a force for positive change, helping to shape the future.

TRIPLE OBJECTIVE

Three years ago, we launched the Unilever Sustainable Living Plan to support our new corporate vision and purpose. Our Sustainable Living Plan sets out three big bold objectives. The first of these is to help at least a billion people to take action to improve their health and hygiene. The second objective is to halve the environmental footprint across all of our products. And the third is to enhance the livelihoods of hundreds of thousands of people in our supply chain. So far, by integrating the Unilever Sustainable Living Plan into the heart of our business, we are delivering good progress, not just in terms of the objectives of the plan, but also in line with our growth ambition.

As one of the world's largest purchasers of palm oil, we announced our Sustainable Sourcing target of 100% certified sustainable palm oil covered by GreenPalm Certificates by the end of 2012, three years ahead of schedule. For many years, we have been actively involved in trying to break the link between palm oil and deforestation, which led us to start developing Good Agricultural Practice Guidelines for oil palm in the mid-1990s, as part of the Unilever Sustainable Agriculture Program.

With the support of global partners such as WWF and members of our supply chain, by the end of 2012, we achieved our 100% sustainable palm oil covered by GreenPalm Certificates target. We have now set a new target of purchasing all our palm oil from traceable sources by 2020.

Our Sustainable Sourcing approach has also been extended to other raw materials, including our fruits and vegetables. In France in 2012, we launched Knorr's new Tomato and Mascarpone soup carrying the label "Made with sustainably grown tomatoes." To reach this point, we have been working with tomato suppliers for the last 15 years.

In addition, we have committed to reduce greenhouse gas emission from our transportation, with a target to deliver 40% improvement in CO_2 efficiency by 2020. Through our Ultralogistik control tower organization, we are able to coordinate our transport activities more efficiently.

Part-funded by the EU's program for logistics operators committed to the sustainable transport of goods across Europe, we are now creating regional distribution hubs as part of the Ultralogistik program. These hubs will improve operational efficiency and reduce total distance traveled by 175 million kilometers in Europe alone from 2013 to 2015. In Poland, we have been able to save over €50 million since we established Ultralogistik tower operations in the country in 2007.

OVERCOMING OBSTACLES

However, despite our various achievements, the process of bringing Sustainable Living to life has not been without its challenges. The earliest of these was making the business case for increased investments in the light of prevailing global economic and political volatility and uncertainty. But we are pleased to be able to say that we have continued to overcome this obstacle by delivering results – increased social impact, reduced cost, improved corporate reputation, and overall business growth.

Our Sustainable Living journey has also strengthened our belief in collaboration – we have always seen the added value in partnership and shared responsibility, and many of these issues need multi-sectorial solutions. Partnerships have enabled us to achieve much more and reach further. And that is why, while we focus on delivering on our commitments to grow responsibly, we will continue to reach out across organizations and industries to bring more players on board in making sustainable living commonplace.

Reducing greenhouse gas emissions is a central target in Unilever's high-profile Sustainable Living Plan, which has introduced a raft of eco-efficiency programs. Learn more about the program:

tinyurl.com/DHL-Unilever

UNILEVER AT A GLANCE

Unilever is one of the world's top three food firms and the world's second largest packaged consumer goods company. With 400 brands spanning 14 categories of home, personal care, and food product, no other company touches so many people's lives in so many different ways. On any given day, two billion people use Unilever products sold in more than 190 countries.

In 2011 the company's worldwide turnover was €46.5 billion. Underlying sales growth in 2011 was 6.5%, with emerging markets accounting for nearly 55% of the business. More than 171,000 people work for Unilever. The number of women in senior positions rose from 23% in 2007 to 28% in 2011.

Illustration: Bernd Schifferdecker; photo: Getty Images

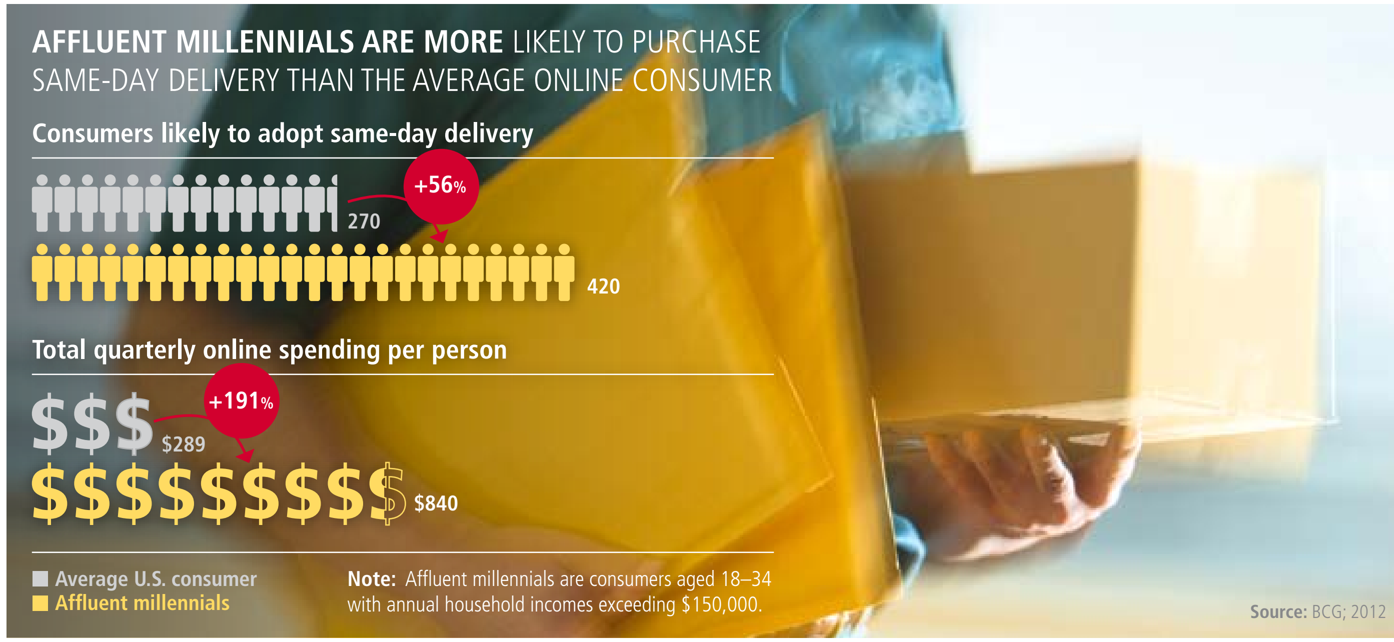
A European hub for technology

Miles of aisles at Beringe, Netherlands, location of DHL Supply Chain's European logistics center for technology customers. Four buildings and a floor space of around 112,000 square meters – equivalent to 22 football fields – house the most modern material-handling machinery available, around 900 employees, and enough state-of the-art IT to manage it all.

Learn more about DHL services for technology customers at:

tinyurl.com/DHL-beringe

Photo: Dirk Krüll



SAME-DAY: A GAME CHANGER?

Traditional retailers, Internet e-tailers, and a variety of hybrid and specialized startups are all lining up to offer same-day delivery services to online shoppers – the great new game of the retail sector.

No gift for tonight's birthday party, but too busy to go to the mall? No problem. Same-day delivery has become a new business opportunity for the logistics industry, and an arena of competition for retail. Traditional retailers like Walmart and Nordstrom, as well as web companies and startups like eBay, Google, and Shutl are offering the service in a growing number of cities around the world.

This is widely viewed as a response to online giant Amazon, which ships certain items same-day, not just in ten U.S. metropolitan regions but also in eight cities in China. The company plans to extend the service, but as long as most of Amazon's goods take at least two days to ship, its competitors see same-day services as an opportunity to make a mark.

eBay, for instance, is exploring same-day delivery in San Francisco and New York with merchandise from stores such as Macy's, Home Depot, and Radio Shack. Shutl, which has been offering same-day delivery in the U.K. for three years, will shortly be launching the service in the United States, while Zipments, Instacart, Postmates, and other startups are entering the fray. Google is also piloting a same-day delivery service through couriers to collect products from stores like Walgreens and Staples then deliver them to shoppers.

"THE CHALLENGE IS TO UNDERSTAND THE IMPORTANCE SAME-DAY HAS IN THE OVERALL MIX OF DELIVERY SERVICE OPTIONS."

Thomas Kipp, CEO DHL Global Mail

In Korea, Tesco and Samsung have taken virtual shopping to the next level with their grocery store chain HomePlus, which opened a virtual supermarket at a Seoul subway station offering some 500 products. Customers can order using a smartphone app which scans the related QR codes, and get their items delivered on the same day.

IRONING OUT THE WRINKLES

"I think the challenge is to understand consumer preferences and the importance same-day has in the overall mix of delivery service options", says Thomas Kipp, CEO DHL Global Mail. "Same-day sounds good, but it's still early days. There are a number of wrinkles that providers must iron out. For example, if you deliver to the doorstep, the receiver will still need to be at home or have an arrangement with the delivery agent for the shipment to be deposited elsewhere."

These services in the United States add around $8 to $15 to a product's price tag. Most analysts believe that hardly covers the extra costs for the e-tailer providing the service. Another wrinkle is if consumers want same-day delivery – or are willing to pay for it. In a recent survey of U.S. consumers by the Boston Consulting Group only 9% cited same-day delivery as a reason for them to shop more online, while almost three-quarters voted for free delivery and half named lower prices. However, the survey found that affluent urbanites aged 18 to 34 are very interested in same-day delivery. These consumers make up only 2% of the market, but their online spending is about twice the average. — ***Kathrin Werner***

COPING WITH COMPLEXITY

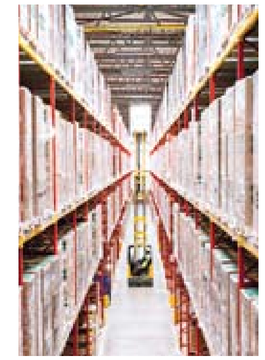
The volatility of the technology sector is being met with increasingly clever strategies.

Technology may be rooted in hard data and scientific facts, but sometimes it would take a fortune-teller to forecast the sector's notoriously complicated supply chain needs. A number of factors contribute to the complexity. Consumers' high expectations for increased speed, low prices, and easy returns, for instance, all potentially play a role in supply chain turmoil. And in many cases, traditional players are losing ground due to the proliferation of new market entrants. To keep up, suppliers must find ways to position themselves and their supply chains to survive within a business environment that is increasingly beyond their control. Effectively addressing these pressures can determine the ultimate success – or failure – of businesses in the technology industry.

Japan's Fujitsu, with customers in more than a hundred countries, is one technology company thriving within these circumstances. It handles high market demands for up to 650,000 cellphones a month. But volumes are often volatile and subject to release dates, seasonal buy-cycles, and unpredictable customer demands. This puts strain on the company's fixed supply chain costs and retail quality requirements.

WAREHOUSE FLEXIBILIZATION

To adapt to these fluctuations, Fujitsu outsourced its warehouse operations entirely to its logistics provider. The provider implemented a warehouse "flexibilization" solution that enabled Fujitsu to maximize output at peak times with eight pre-assembly and packaging lines available for 24x7 operations. On the other side, short-term, on-demand resource planning makes it also possible for Fujitsu to scale down operations when necessary. As a result of this flexibility and continuous process improvements, Fujitsu has more than doubled the warehouse's production in just one year while significantly reducing costs, specifically for fixed labor.



WAREHOUSES are an important factor in the supply chain. Co-location can help when volumes decrease and the workforce is volatile.

Learn more about DHL warehousing and distribution operations:

tinyurl.com/DHL-Distrib

Companies can also benefit from sophisticated postponement solutions through which semi-finished, standard products are co-located in a single location, with final assembly or customization performed only as customer orders come in.

JUST-IN-TIME MANUFACTURING

Dell's "built-to-order" model is one example of such a postponement solution that met with great success for many years, and has spurred other companies to adopt similar "just-in-time" manufacturing styles. These days integrated solutions that include both warehousing and value-added technical services or postponement solutions are often offered by logistics providers. These providers can assist in enhancing flexibility by taking over entire processes such as packaging, customization, configuration, kitting, and light assembly.

According to Jan Thido Karlshaus, VP Strategy and Business Development, Global Technology, DHL, "The benefits of a flexible supply chain and integrated solutions can be significant. Achieving them, however, often is a big challenge." A big challenge, indeed – but one well worth the effort to take on. Within this ever-evolving sector, ultimately the most successful companies will be those that place nearly as much importance on innovating their supply chains as they do on innovating their product offerings.

TO CATCH A SUPPLY CHAIN THIEF

Industry experts estimate that worldwide theft from supply chains costs businesses up to $39 billion per year. In Europe alone, losses amount to nearly $10.5 billion annually. Ensuring package security throughout the logistics cycle is vital.

In 1997, security professionals and global logistics experts joined forces to create the Technology Asset Protection Association (TAPA), now known as the Transported Asset Protection Association, an independent certification program. TAPA has developed global industry standards for supply chain security, helping member companies reduce losses by up to 40%.

"TAPA gives you the tools to calculate risk in your supply chain," says Thorsten Neumann, Chairman TAPA EMEA. Usually, a manufacturer conducts site visits to verify risks. The certification process requires independent audits as facilities are required to prove that risk-reduction measures are in place. A long-standing TAPA member, DHL recognizes the impact certification has on supply chain security. Recently, the Panama Hub of DHL Express became the company's 200th facility with TAPA certification. "This is an achievement for us and means that DHL has by far the largest number of TAPA 'A' facilities in the industry," comments Adrian Whelan, Global Head of Security. — ***Tong-Jin Smith***

Photo: Getty Images, DHL (2)

HAS INNOVATION HAD ITS DAY?

We might be living in an age of technological marvels, but some experts are arguing that scientific research is slowing down and truly game-changing breakthroughs are a thing of the past. Innovation optimists, on the other hand, say that reports of its death have been greatly exaggerated.

In an age of flying robots and smartphone apps that check your pulse, it's hard to imagine that some people argue innovation is grinding to a halt. Yet a debate rages about the well-being of the world's innovation labs. A recent article in *The Economist* even asked the question: "Is innovation dead?"

There are those who think it may be. For example, Robert Gordon, an economist at Northwestern University, believes innovation is, if not dead, at least running out of steam. He contends that the world has already benefitted from the fundamental and game-changing innovations of electrical power, automobiles, and telephony.

Andre Geim is another. The Nobel Prize winner says a lack of investment means basic scientific research is slowing. Whereas the second half of the twentieth century was packed with technological advances, lasers, the moon race, computers, microchips, cellphones, and the Internet, to name just a few, the last two decades have seen no major "disruptive" technologies (apart from the advent of social media). This leaves scientists to tinker with technologies that are only a derivative of what already exists.

BOOMING MARKETPLACE OF IDEAS

Bill Meahl, Chief Commercial Officer, DHL, has no such concerns. Innovation, he says, is not just alive – it's kicking, too. New trends emerge almost every day and at times it can be a struggle to keep up. It's also important to realize that not all innovation needs to be as major as the invention of the World Wide Web. "Sometimes it can be something simple, yet have a tremendous global impact," he argues.

"The humble shipping container, invented 75 years ago, had an immediate impact on transportation of goods everywhere and is still in use at the forefront of logistics." Indeed, innovation optimists see the idea pool getting larger and more diverse (think crowdsourcing), with trends such as social networking and a shift of economic activity toward developing countries leading to a boom in the marketplace of ideas. Steven Johnson, author of *Where Good Ideas Come From: The Natural History of Innovation*, puts it this way: "An idea is a network… Chance favors the connected mind."

"LEADERS MUST HARD-CODE INNOVATION INTO THE DNA OF AN ORGANIZATION"

Soumitra Dutta,
Cornell University

For information on DHL's Innovation Day 2013:
tinyurl.com/DHL-InnovDay

ACTIVE INNOVATION: The Virgin Galactic space line opens up a tourist market in outer space.

Innovation yay-sayers also point to the way that bottom-up technologies are giving established product lines a run for their money, such as the free navigation apps for smartphones that are putting pressure on traditional navigation product makers.

Yet perhaps the main proof that game-changing innovation abounds comes disguised as simple ideas or indeed new applications of existing ideas. Think of the solar cookers used in rural areas where no electricity is available, or a new technology being developed for cleaning wastewater with soybean oil.

KEEP IT SIMPLE

Richard Branson, the British entrepreneur, whose latest venture is Virgin Galactic, the world's first commercial space line, seems to share a fondness for simple ideas. He has warned against complexity and said, "There are many simple solutions to problems out there, just waiting to be solved by the next big thing in business… don't try to reinvent the wheel." Companies are major players in keeping innovation alive, and R&D spending by companies has continued to rise, up nearly 10% in 2011. Touche Tohmatsu, Global CEO Deloitte, put it this way in an article for the World Economic Forum: "Real opportunity exists for organizations to step up and create the conditions and commitment needed to encourage and foster innovation… There's a tremendous upside if we get this right: we can better retain talent, remain more competitive in the future, and more positively affect society."

To make the most of bright ideas, companies must instill in their organization a "culture" of innovation, says Soumitra Dutta, Dean of the Samuel Curtis Johnson Graduate School of Management at Cornell University and author of *Innovating at the Top: How Global CEOs Drive Innovation for Growth and Profit.*

Dutta argues that leaders in a company – whether small or large – must allow employees at all levels to question an approach or strategy and challenge the status quo. They should be encouraged to experiment and learn to associate seemingly unrelated points. "If you look at the behavior traits of innovators, you will see that these are people who observe their environments frequently. They don't hesitate to ask questions and they are people who seek advice or mentorship. Leaders must hard-code innovation into the DNA of an organization," says Dutta.

3D PRINTERS, such as the one designed by MakerBot CEO Bre Pettis, could potentially change product development and manufacturing.

Photo: Virgin Galactic, Cornell University, MakerBot (3)

MAJOR NEW TRENDS

If that happens, innovation is inevitable. Some of it will be small – but some of it will be seismic. "There are big trends and major innovations coming," says Meahl, "some of which have the power to fundamentally change how we consume and transport in the near future."

"Take 3D printing for example. This is a tremendously exciting technology that has the potential to change supply chains as we know them. Imagine how the world could change if customers were able to print their spare parts by themselves; or if consumers were able to customize their products via computer and print their individual goods at home."

Innovations and trends that make things easier for the customer are certainly what concern the teams at DHL. For example, Dr. Clemens Beckmann, EVP Innovation BRIEF, and his team are systematically analyzing adjacent markets and their trends, according to customer demands, in order to derive potential business models. If these business models prove attractive based on the assets of Deutsche Post, the team then prepares potential products and services. For example, after a study of the adjacent mobility market, the decision was taken to create ADAC Postbus – a Germany-wide bus network – as a first step into the mobility segment.

And at DHL's Innovation Center, Steffen Frankenberg, VP Product Development, helps test new business ideas and develop them into market-ready products and services, such as a new supply chain risk-management dashboard currently in pilot stage for a major customer. The tool will help the company to visualize and monitor risk to the supply chain in order to avoid disruptions and make its supply chain more resilient. — ***Rhea Wessel***

VIEWPOINTS

DELIVERED. TAKES OFF WITH…

Tewolde Gebremariam

Photos: Asmelash Birhane, Mauritius Images

Talk about rising through the ranks. Tewolde Gebremariam began his career with Ethiopian Airlines as a Transportation Agent at Addis Ababa Airport. He's now the high-flying CEO of this equally high-flying company.

Under Tewolde Gebremariam's leadership, Ethiopian Airlines – a 67-year-old company that's 100% owned by the Ethiopian government – has become a truly international carrier.

Gebremariam took over as CEO in January 2011. In November 2012 he was presented with the African CEO of the Year award at the Africa CEO Forum in Geneva. The following month he was named African Business Leader of the Year by the Corporate Council on Africa (CCA) at a ceremony in Washington DC attended by more than 300 U.S. and African business leaders, ambassadors, and government officials.

"I started with the airline at age 18, right from my first year in university," says Gebremariam. "Over the last 28 years I've risen from the bottom rung to where I am today and I've seen a lot of changes along the way."

Ethiopian Airlines has been doing remarkable business in a challenging climate. While many carriers are losing money, the company is bucking the trend with impressive growth. Providing services to 70 destinations on four continents, it's also the first African airline to fly the Boeing 787 Dreamliner.

Did you expect to win African CEO of the Year and African Business Leader of the Year?
Well, you know, it was nice to have the recognition after our successes. But I didn't know the awards would be given to us! Honestly speaking, I was just attending the ceremonies like any other CEO.

What is your proudest achievement?
The main one is being both the fastest growing and the most profitable airline in Africa. Usually, profitability and growth don't go together. Fast growth eats up profits because it requires investment, so managing both is quite an achievement. Our acquisition of the Dreamliner has also opened a new chapter for us.

What has been the biggest factor in the success of Ethiopian Airlines?
The high dedication and hard-working nature of our employees. We employ more than 7,000 people. They love the airline and have dedicated their lives to it and work so hard beyond the call of duty. Most don't feel that it's a "job," actually – they feel they have a "mission" to take the airline to greater heights. Also, there is a very strong leadership team with a very prudent management style. Lastly, I would mention sound corporate governance. There is a very clear separation of roles between ownership and management.

TEWOLDE GEBREMARIAM began his career at Ethiopian Airlines in 1985. He has a degree in economics from Addis Ababa University and an MBA from the U.K.'s Open University. Married and a father of five children, Tewolde lives in Addis Ababa.

Learn more about world-class African air transport services for both passengers and cargo at:

ethiopianairlines.com

How would you characterize the aviation industry at present?
It's a challenging time for airlines with skyrocketing oil prices and a slow-down in demand, particularly in Europe, because of the financial crisis. At Ethiopian Airlines, it's also been a time of investment in fleet, infrastructure, human resources development, and communications technology. So, externally, high oil prices pushing up cost and economic crisis pushing down revenues in an internal environment of massive investment for growth makes a perfect storm and tough time for us.

What challenges are facing African aviation?
The main one is a lack of common continental aviation policy co-ordination, resulting in an unfair market share of non-African carriers operating in Africa. That has to change. Other challenges include poor aviation infrastructure, high taxation, and other charges.

Africa is emerging as an economic powerhouse. How do you see its future – and that of the African aviation industry?
The continent is growing very fast. We have an abundance of natural resources, particularly oil and minerals, and more than 60% of global uncultivated arable land, so we're attracting investment in agribusiness too. In a nutshell, Africa is today where the Asian Tigers were in the 1990s. It will attract growth in terms of GDP, economic development, and disposable income. Africa has everything to offer to the rest of the world. It's an opportune time for the continent – and, in turn, that confidence will translate to the African aviation industry.

Do you think African people find a joy in life that those in the West have largely forgotten?
It's very interesting. You're absolutely right. For example, 85% of Africans – average Africans, the man on the street – believe that they have a better future. They are very hopeful, optimistic people.

How do you relax on your days off?
Ummm… well, to be honest with you I don't have days off! It's a seven-day-a-week role. I find everything I do interesting and I love my job. In fact, if I'm working, I'm relaxed. — ***Tony Greenway***

WHAT'S THE STORY, MR. GOODWIN?

"AFTER THE EXPEDITION'S SUCCESSFUL COMPLETION, I WAS INVITED TO AN IMPORTANT MEETING..."

BEN GOODWIN, Operations Manager DHL Global Forwarding, Freight, talks to His Royal Highness The Prince of Wales at Clarence House in London.

Icy excursion: In the Footsteps of Legends Antarctic Expedition

His Royal Highness The Prince of Wales and guests

Discover more about the Iceland Antarctic Expedition and the aims of the Iceland Foods Charitable Foundation at:

tinyurl.com/GoodCauses

EXPEDITION TO CLARENCE HOUSE

Ben Goodwin, Operations Manager DHL Global Forwarding, Freight, met His Royal Highness The Prince of Wales after providing logistics support for an expedition to the South Pole with the British retailer, Iceland.

It was a very great honor to find myself on an otherwise ordinary day last December, being introduced to His Royal Highness The Prince of Wales.

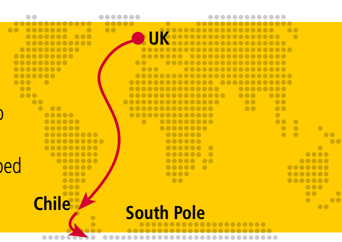
How did it come about that I was afforded this privilege? Well, DHL looks after the logistics and supply chain for Iceland, a U.K. frozen foods chain, and Iceland CEO Malcolm Walker took part in the Iceland-sponsored In The Footsteps of Legends Antarctic Expedition. This journey followed Robert F. Scott's doomed 1911–12 South Pole expedition to raise funds for Alzheimer's Research U.K. and the veteran's organization Walking With The Wounded.

Scott's expedition was a logistical nightmare: the supply depots did not contain adequate supplies. But for this one DHL needed only 18 days to shift the necessary supplies from North Wales to the tip of South America, where Walker's team picked them up.

After the expedition's successful completion, Walker invited me along to an important meeting, to thank us for DHL's help. And it was at Clarence House, London residence of The Prince of Wales, that I shook hands with the heir to the British throne. After delivering for a customer in unique circumstances and helping to support two worthy causes, this was a truly proud moment for me.

IN THE FOOTSTEPS OF LEGENDS

The journey involved picking up the load, a large wooden crate, from Deeside, North Wales, and flying it to Santiago, Chile. It was then trucked 3,000 km to Punta Arenas and shipped to the expedition's starting point.



18 DAYS

Goodwin managed to get Walker's **large wooden crate** from the team's base in Deeside to the Antarctic in just 18 days.

£2 MILLION

for **Alzheimer's Research U.K.** and **Walking With The Wounded.**

PUBLISHED BY
DEUTSCHE POST
DHL HEADQUARTERS

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Commercial Register No.:
Registration court Bonn
HRB 6792
Turnover Tax ID No.:
DE 169838187

Editorial Production:
Axel Springer
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Art Direction:
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Printing:
Firmengruppe APPL,
sellier druck, Angerstraße 54,
85354 Freising

Paper:
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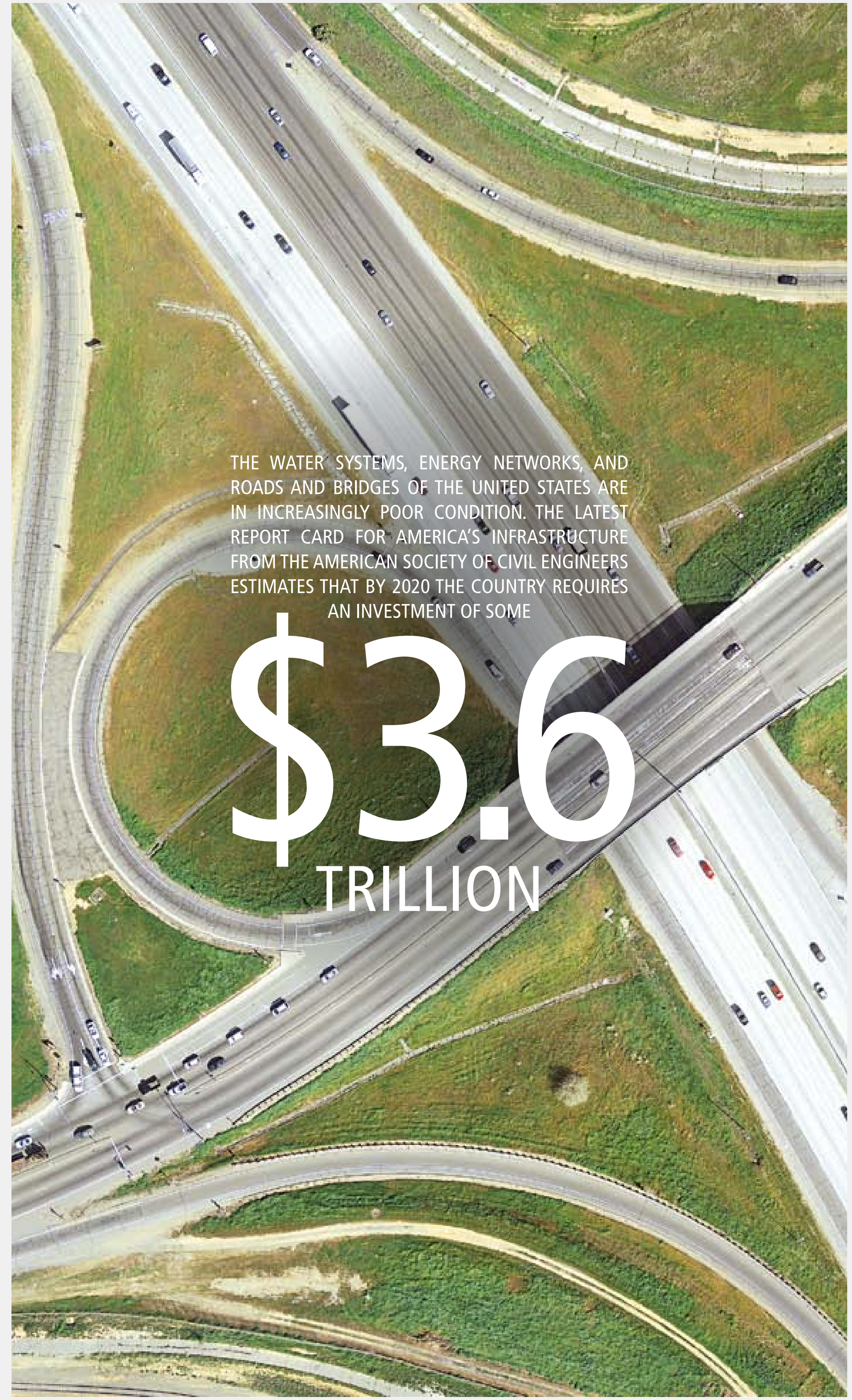
RECYCLED
Paper made from recycled material
FSC™ C004592

Photos: Arthur Edwards, Courtesy of The Sun; Getty Images (3)



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