Delivered.

THE GLOBAL LOGISTICS MAGAZINE

ISSUE 02/2013

SOLUTIONS

Tactics for transformation

How you can survive and thrive in changing markets

BUSINESS

Making the most of CSR

You can do well by doing good

FOCU

Learning from Caterpillar

All you need to know about global reach and people power



COVER STORY

INDUSTRIAL EVOLUTION

Can logistics help shape Engineering and Manufacturing?



Dear reader.

The first quarter of 2013 has brought us a raft of interesting global events – among them a change in Chinese leadership, a second term for the US president, continued unrest in some parts of the Arab world, David Cameron's call for referendum on Europe, and the Dow Jones at a surprising all-time high. The economic climate remains volatile, as a look at some key industry sectors confirms. The automotive industry is slowing down and technology companies are looking at ways to differentiate or drive turnarounds in a rapidly changing market. Engineering and Manufacturing, our focus sector in this issue, is perhaps more diverse, operating in many segments, each involving some unique challenges that we can all learn from.

Managers need to remain alert and agile to win during these times when volatility reigns and change seems the only constant.

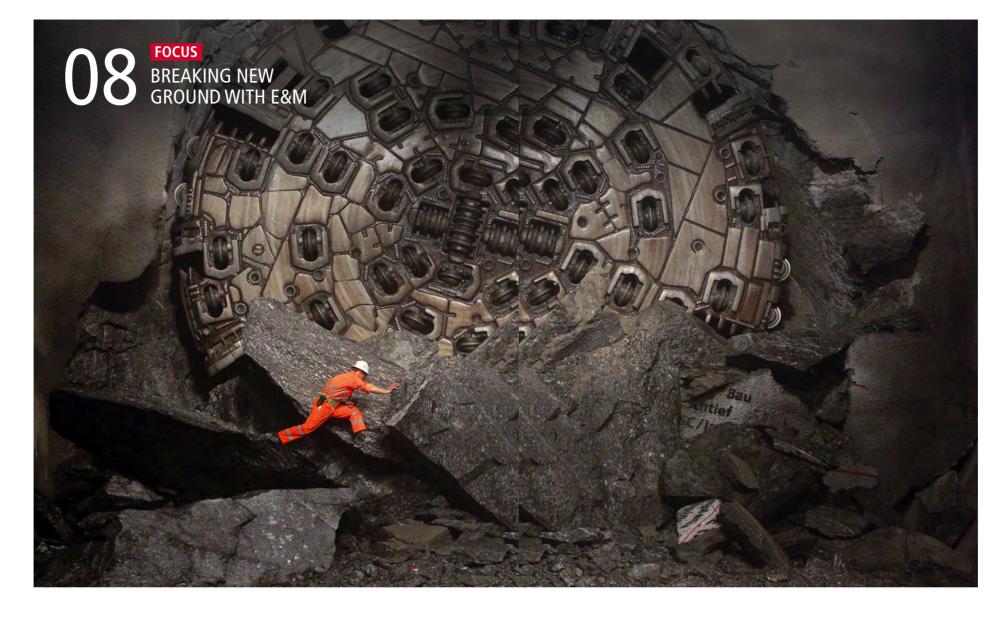
This issue of Delivered. may not offer all the answers but we do offer insight from several business and thought leaders -Caterpillar's Ed O'Neil for example, who discusses why people power is so important during global expansion, and Ron Ashkenas from Schaffer Consulting, who offers three strategies against complexity. Social entrepreneur Simon Berry and DPDHL's Christof Ehrhart meanwhile explain how businesses can do well by doing good - for the environment, people, and the planet.

Enjoy your read!

Sincerely,

Bier Meall

Bill Meahl Chief Commercial Officer, DHL



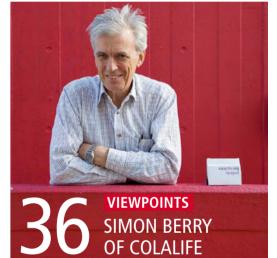


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CSR considered as pragmatic

New Triple-E container ships

Simplicity expert Ron Ashkenas

Three strategies against

New efficiences for the NHS

It's faster, more cost-effective, and environmentally friendly. Combining the use of ocean and air freight services allows customers to optimize their supply chains. Happily for customers on the Asia-Africa trade lane, DHL has made its SEAIR service available in eight new African destinations, including Luanda in Angola, Abidjan on the Ivory Coast, and Kinshasa in the Democratic Republic of Congo. The service will see shipments mainly forwarded through Dubai, then flown into pre-booked air cargo space on to Africa. "With 26 destinations in Africa now connecting to as many as 41 points of origin in Asia, DHL offers more than a thousand point pairs across the two continents," says Kelvin Leung, CEO Asia Pacific, DHL Global Forwarding.

What this means is a high-quality service operating at a level of reliability that is assured through DHL's

DHL SEAIR is a powerful combination of air and ocean freight services. This solution has attractive time-saving and cost benefits. Find out

tinyurl.com/DHLafas



excellent alternative during peak seasons when traffic is congested. "Trade between Asia and Africa rose more than 400 percent in the past decade," says Leung. "Maintaining this momentum is key. The need for speedy and cost-effective connectivity between the two

vast network of offices and operations, expert staff,

ers will also be able to rely on stable supply chains

throughout the year; the SEAIR service is also an

pre-determined routes and secure handling. Custom-

On average, the DHL SEAIR service is up to 50 percent faster than ocean freight and offers savings of up to 60 percent when compared to standard air freight. It is also the more environmentally friendly option as sea going transport saves fuel and causes a lot less CO, emissions.

regions has never been greater."

GOGREEN PROGRAM PUSHES THE ENVELOPE

Every day, companies all over the world send out millions of letters and documents.

And even though sustainability is increasingly important to them, they may not always have considered the carbon footprint of these routine, everyday activities. This year, DHL Express is extending a carbon-neutral offer to anyone using the DHL Express Envelopes - and it's free of charge.

The service is now available to customers in 110 countries. Urgent non-dutiable documents weighing up to 300 grams will hit the road in recyclable packaging. Then, after calculating the CO₂ emissions that the journey of the envelope creates, DHL will offset the carbon impact by investing in climate protection projects.

"By offering carbon-neutral shipping we are building once again on DHL's industry leadership in environmental sustainability," says Roland Thomas, Vice President Service Quality & Customer Operations. It's all

part of the GoGreen program, the environmental agenda set by DHL's parent company, Deutsche Post DHL. GoGreen aims to cut emissions across the group by 30 percent by 2020. By 2011, there was already an improvement of 10 percent - one year ahead of schedule.







MARCH 25

SECURED

AIR FREIGHT SECURITY

AS OF MARCH 25, 2013, ONLY GOODS FROM CERTIFIED KNOWN CONSIGNORS CAN TRAVEL WORLDWIDE WITHOUT A PHYSICAL SECURITY CHECK.

NEW OFFICE FOR KAZAKHSTAN

Strategically connected to the key logistics hubs of Europe, Russia, and Asia, it's also the location of DHL Freight's new office.

Situated at the crossroads of two major transport routes in the former capital Almaty, the office opens up further road freight options, aids economic development, and ensures faster delivery times, says Stefano Arganese, CEO, DHL Freight for Central Eastern Europe.



DHL FREIGHT IN ALMATY offers a range of logistics options including container services

THE STORY

JENNIFER LOPEZ: THRONE TOURS THE WORLD



going anywhere without her new throne

If anyone should be sitting on a plush red throne, it's J.Lo.

This dancing queen is well known as a woman who gets what she wants. So when Jennifer Lopez saw a chair she loved in a Turkish hotel during her world tour, she just had to have it. The actress and singer, whose list of dressing room musthaves includes baked cookies, roses. and perfumed candles, ordered a similar seat from Turkish set and interiors designer Safak Çak. The awesome armchair. 195 centimeters tall and 85 centimeters wide, was modified for Lopez and journeyed from Istanbul to Melbourne in time for her to pose on it for the press. Later, the throne joined her on stage for seven more shows. Its next stop was Puerto Rico. It's DHL Express that has been

making sure the sumptuous seat gets to the party on time. Cak, who's also worked with Beyoncé Knowles and Paris Hilton, was only too happy to see his creation getting the DHL service it deserved. "It is a great pleasure to work with a company that employs

DANCING QUEEN Her Dance Again World Tour earned more than \$52 million.

wonderful people who

are experts in their

fields," he said.

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ACTIVE APPS: BOOKING IN A MOBILE WORLD

It's the new fast-moving frontier in information technology and it is changing the way we do business. No wonder company heads are dreaming up clever and innovative ways for their staff and clients to use mobile technology. A June 2012 survey of 250 CEOs by consulting firm McKinsey found that almost all those surveyed - a whopping 95 percent – planned to introduce at least 25 mobile applications, or apps, to their businesses within the next two years.

Deploying mobile applications is often seen as technologically complex, requiring significant changes to existing systems. But mobile technology can make things easier and bring real value.

With the DHL ACTIVEBOOKING app, customers can manage European road deliveries even if they're on the road themselves. The app is free and based on DHL's online Intraship platform. It allows registered users to create standardized freight shipments using their mobile devices when they're out of the office.

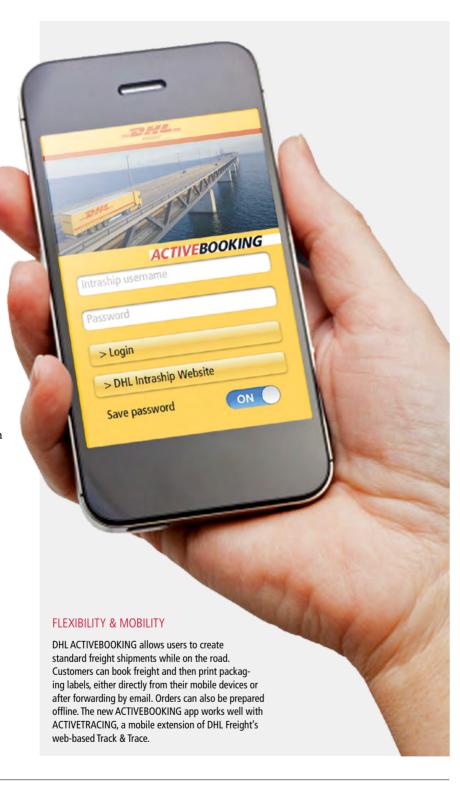
"Customers expect mobile solutions and flexible services," notes Henning Goldmann, Senior Vice President Business Process Management, DHL Freight. And this particular app "is a major benefit for companies which manage just a handful of shipments every day, particularly small and medium enterprises."



ACTIVEBOOKING APP: operating on iOS and Android smartphones.







lower costs. No wonder DHL Express new Mercedes Benz Sprinter 316 NGT ogy" and the vans use either natural

natural-gas-powered vehicles in operation mitment to the environment. The new vans **CALENDAR EVENTS AROUND THE WORLD**

JUNE 11-12

Miami. DHL's 13th annual Life Sciences & Healthcare Conference brings together leading companies in pharma, medical devices & clinical trials from around the world to share best practices and exchange views and knowledge on global and local supply chain challenges during two days packed with specialist workshops and plenary sessions. tinyurl.com/DHL-lshc

JUNE

11-12

Paris. Now in its 16th year, the Automotive News Europe Congress remains the most important Englishlanguage automotive conference in Europe.

www.ane-congress.com

JUNE 18-20

Shanghai. The third DHL Global Technology Conference offers a platform for knowledge sharing among key decision-makers and industry experts.

tinvurl.com/DHL-tc2013 tinyurl.com/DHL-tcLinkedin

US AND EU START FREE TRADE TALKS

The United States and European Union aim to finalize a vast transatlantic trade and investment partnership by 2014. The agreement is expected to boost economic growth and spur job creation on both sides of the Atlantic.



"A THRIVING TRANS-ATLANTIC MARKET-PLACE WILL BRING **BENEFITS BEYOND**

THE BORDERS OF EUROPE AND AMERICA. IT WILL ULTIMATELY DRIVE TRADE AND GROWTH IN EMERGING MARKETS AND REVITALIZE THE ENTIRE GLOBAL TRADING SYSTEM."

Frank Appel, CEO Deutsche Post DHL

COMMISSION PROPOSES MODIFICATIONS TO **EUROPEAN EMISSIONS TRADING SCHEME**

sion proposed several changes to the European Emissions Trading Scheme (EU ETS). Faced with a decreasing CO₂ allowance price, the Commission proposes to postpone the auctioning of 900 million allowances until the end of the Emissions Trading Scheme (2019–20). The proposal is generally referred to as "backloading" allowances. Some consider this a necessary measure to support emissions reduction initiatives (which risk not materializing if the carbon price is too low), whereas others consider backloading an unjustified regulatory intervention in a system that was designed as a market mechanism. However, proposing to intervene midway in a system for which the rules were set long ago seems to erode the fundamental principle of regulatory predictability. The institutional process has started but is already taking far more time than initially envisaged by the Commission.

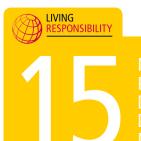
In November 2012, the European Commis-

ternational credits, and introducing a price management system for CO, allowances. The next step will be a formal stakeholder consultation, which the Commission is intending to launch.

The last proposal to modify the EU ETS concerns a "stop-the-clock" for aviation. As a result of opposition by third countries (threatening to retaliate against European carriers or manufacturers) and progress achieved at a November meeting of the International Civil Aviation Organization (ICAO), the Commission is proposing that intercontinental flights in 2012 are excluded from the obligation to comply with the EU ETS. The Commission will evaluate after the ICAO General Assembly in September/October 2013 whether further adaptations should be proposed. The "stop-the-clock" will allow ICAO to come up with a global mechanism and/or framework for aviation emissions. It also avoids a potential trade conflict that was



The backloading proposal was followed by a wider report on the carbon market that includes options for more fundamental reform of the EU ETS. The Commission proposes the structural reform start as from 2016/17. The options include: increasing the EU reduction target to 30 percent in 2020, increasing the annual emissions reduction factor, permanently withdrawing a number of allowances, extending ETS to other sectors not yet included, limiting access to inlikely to arise from May 2013 when airlines would have had to surrender allowances for 2012 emissions and no global ICAO agreement could have been reached. DHL has always been in favor of emissions trading as the most cost-effective market-based instrument to address aviation emissions, but has favored a solution at global level. DHL's fleet investments into the B777, B767, and A300-600 make it well prepared for a market-based instrument to address aviation emissions.



DELIVERED TO **DHL EXPRESS IN**

Fewer emissions, reduced noise, and Mexico was happy to take delivery of 15 vans. NGT stands for "natural gas technolgas or gasoline. They are also the first in Mexico and assist the company's comare just part of a \$10.5 million revamp of DHL's Mexican fleet.





wo anecdotes, 130 years apart, illustrate the evolution of Engineering and Manufacturing (E&M) business models and supply chain processes, while the end goal has remained the same - maximum competitive focus. In 1879, Siemens received an order for "lighting machines" from the port of Shanghai. The German company delivered a 10-horsepower generator for port lighting, which enabled loading, unloading, and stowing operations to take place round the clock.

Today China is an incredibly important market for companies such as Siemens as for other customers in the E&M sector. And when the German port of Bremerhaven needed to increase its capacity, the new gantry cranes arrived fully assembled - from Shanghai.

This comparison illustrates how global supply processes and relationships in the heavy machinery sector have evolved from fairly simple supply chains to complex networks – a change that is still evolving as new "management technologies" are also being developed in parallel. Up to the end of the 1990s, European and American companies in the E&M Sector mostly manufactured products and goods for customers in industrialized countries, with relatively less focus on emerging economies. Since the primary growth markets are now in those same emerging economies, the more simple supply chains of the past have been largely replaced by continuously evolving and increasingly more complex global networks.

And the next stage of evolution has already begun. As costs and risks have become ever more complex, the industry is reducing the proportion of inhouse manufacturing and production. Manufacturers



MOVING MOUNTAINS: A huge excavator shovels coal at the Jaenschwalde open-cast mine near Cottbus in eastern Germany. It can be tricky for mining companies to remain nimble and flexible in a time of increasingly complex challenges.

"ANY COMPANY THAT DOES NOT PAY ATTENTION TO ITS SUPPLY CHAIN MANAGEMENT MAY NOT SURVIVE, AND IT CERTAINLY WON'T PROSPER. SUPPLY CHAIN MANAGEMENT CAN LEAD TO PROFITABILITY, LOWER COSTS, AND

GREATER AGILITY." Nada Sanders, Ernst & Young

are now shifting more and more production (and its related risks) to 1st and 2nd tier suppliers. They also depend on 3PL companies, such as DHL, which provide their supply chain expertise. Those providers who can integrate supply-chain know-how with customers' business requirements have the possibility of becoming trusted partners who improve the process of manufacturing. In addition to offering a variety of capabilities, strong 3PL providers have the capacity to integrate with lower levels of product suppliers.

ERA OF TRULY GLOBAL MANUFACTURING

The E&M Sector is set to experience outstanding growth. According to MRSC Business Research, the turnover for aerospace and defense, construction equipment, industrial equipment, and non-energy mining is likely to soar from €5.2 trillion in 2012 to €7.7 trillion by 2015. A survey by McKinsey on the future of industrial production suggests that large and complex capital goods might make up around 17 percent of worldwide industrial production. McKinsey expects an "era of truly global manufacturing, marked by highly agile, networked enterprises."

NEW POWER GENERA-

TION: One of two gas turbines

recently installed by Siemens

during modernization of the Kirishi power station in Russia.

Worldwide industrial energy

use will grow by about 30% by

2040. Growing demand in turn

raises the need for new power-

generating equipment.

Against this background, supply chain operations have evolved from being merely a "necessary evil" to a key factor in achieving competitive success - every bit as important as product or price. "Any company that does not pay attention to its supply chain management might not survive, and it certainly won't prosper," says Nada R. Sanders, an advisor with consultancy Ernst&Young. Supply chain management can "lead to profitability, lower costs, and greater agility." Mistakes are no longer allowed. Business today is going to manright place at the right time – with reliability, visibility, flexibility, and efficiency also viewed as essential measures of success.

ufacturers who are able to get the right product to the

LOGISTICS AS PROCESS ENABLER

For logistics companies, this means evolving to meet these new changing needs. They must cope with many new interfaces and complex global processes. Supply chain service providers are now taking on more of the "enabling" processes for customers, via operational tools such as control towers and order/shipment visibility and tracking, and strategically positioning both production and repair parts.

Challenges can be significant and occur with minimal advance warning. Caterpillar, for example, had to respond quickly when a recent surge in oil prices resulted in the need for many new production sites around the world, typically in hard-to-reach locations. In just two years the company had to double the number of its massive "797" dump trucks in operation at Canada's Alberta oil sands (to over 200 units). That meant moving huge quantities of out-of-gauge goods (OOG) to the remote Canadian wilderness (see page 14 for more on Caterpillar).









HEAVY LIFTING: An Airbus A380 fuselage section is loaded at the French port of St. Nazaire (left), while a full-scale model of an Airbus component leaves the harbor at Langon, France (above). The commercial aircraft sector is experiencing a long and unprecedented up-cycle.

The estimated size of the global engineering and manufacturing market in 2011. The fastest growing region is Asia Pacific. Source: DHL

And the situation is still evolving. "Thanks to the strong development of emerging markets, completely new freight passageways are appearing on our world map, passages between Asia and Africa, between Asia and South America, and within Asia. The expected relative weight of the flow of goods between the continents will shift considerably," confirms Heiko von der Gracht, Director of the Center for Futures Studies and Knowledge Management at the European Business School in a study for consultancy firm of PricewaterhouseCoopers.

TRENDS IN ENGINEERING AND MANUFACTURING

In preparation, companies such as DHL have started to undertake extensive research into the future needs of companies looking for strategic competitive advantage. In the E&M Sector, solutions have started to reach a high degree of consistent alignment - that is, economies of scale - allowing DHL to anticipate needs of customers and subsectors, such as aerospace. The company's E&M regards aerospace and aviation as a priority subsector. This is due to a large-scale, available and addressable market, which is a significant opportunity for both DHL shareholders and the aerospace customers.

The main trend for aerospace and aviation is a rising demand for capacity in both passenger and air cargo. More complex changes in aircraft manufacturing are being implemented by both, Boeing and Airbus, as well as many of their suppliers. As the first aircraft which is largely produced and assembled by lower tier suppliers, Boeing's new 787 Dreamliner is a challenge for its entire supply chain. Additionally, Airbus is moving some production operations to China and the USA, which also requires new logistics solutions. So, in the constant struggle of companies to improve competitiveness, outsourcing logistics is a key technique for reducing non-core management complexity.

This situation also applies to other subsectors of E&M. For example, manufacturers of industrial and construction equipment have started to evolve into business models which align with those in the aerospace subsector, as noted above.

Even though the E&M sector has come a long way, there remain some internal, non-core processes which are not always easy to standardize. Instead of

building up internal logistics divisions and also having to compete for talent in this area, E&M companies can concentrate on their core products and services. Logistics operations are transitioned to a trusted partner-provider as soon as they have defined and agreed service requirements and terms.

The competitiveness of many E&M customers is impacted by both governance of internal processes and geographical alignment. An example is the US manufacturer, Emerson Electric Company. Emerson recognized that it had supply-chain misalignments and unnecessary costs created by a decentralized process for Latin American distribution. Each unit of the company managed its own shipping. After a DHL-assisted reorganization, Emerson Electric now bundles shipments from its various production units in Asia, Europe, and the United States and transports them to a central logistics hub in Panama's Colon Free Trade Zone. From there, finished and semi-finished goods are distributed around South America, substantially cutting the cost of warehousing, transportation, and carrying inventory.

The process was set up with a cross-divisional alignment of DHL's business units. It draws on calculated analysis to resolve conflicting priorities related to high capital costs versus high-value stock inventories versus the need to respond quickly to customer orders. "We help customers define where they keep inventory and how much they keep," explains President Reg Kenney, a task that is best accomplished when processing experts team up with experts in DHL's divisions.

The result doesn't have to be as game-changing as the installation of a generator to power light bulbs in the port of Shanghai some 130 years ago - but it can be. — Henning Hinze

THE FUTURE LOOKS BRIGHT **GROWTH FORECAST IN E&M SUB SECTORS**



BILLION

The world market for mining equipment is projected to climb 8.5% annually through 2015 to \$92 billion.



Demand for power drives demand for generation. About 40% of industrial demand



34,000

next two decades, according to market forecasts.

THREE **QUESTIONS FOR**

Reg Kenney PRESIDENT DHI. ENGINEERING & MANUFACTURING



"FOR ME. CUSTOMER ALWAYS STARTS WITH A CAPITAL C"

What are the unique challenges facing **Engineering &** Manufacturing customers? They must sustain high levels of competitiveness while overcoming two main challenges, expanding into new geographies and increasing penetration of "aftermarket services". These require a comprehensive transportation network with a wide range of options for both shipping and INCOTERMS, strategically located warehousing facilities, extensive geographical access, and Customs expertise.

What special solutions have been developed for the E&M sector?

We have strong solutions - such as: strategically located "Control Towers" with visibility and "Best-Fit" mode selection;

a China outbound network, with supplier shipments by rail to consolidation points and subsequent intercontinental shipments by Ocean or Air Freight or Express; a Latin America distribution hub in Panama which reduces inventory, delivery times, and costs.

What is your USP?

Customer for me always starts with a capital C. We have maintained long and loyal Customer relationships, with some existing since the Napoleonic era, and several others sustained since early 20th century. Our Customer Management Teams are highly skilled, with in-depth knowledge of their Customer's strategic direction and logistics needs. This enables us to move forward with Customers in a way that our competition cannot



PERCENT

growth is driven by electricity.

AIRCRAFT

Will be produced for the commercial sector over the



EXECUTIVE VIEW

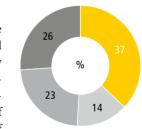
MAKING TRACKS WITH CATERPILLAR

Ed O'Neil, Head of Logistics at Caterpillar, explains the supply chain challenges being tackled by the heavy equipment giant, and points to the importance of people power in the company's relentless expansion.

hen Ed O'Neil is not managing logistics for Caterpillar, he is out on the water engaging in his favorite pastime, wakeboarding. "I love to fly through the air behind a boat," he says, "even if the landings are not always good."

An inelegant landing is something that the vice president of Caterpillar Logistics Inc. and general manager at Caterpillar Inc. can allow himself only in his time off. Managing global logistics in the twenty-first century is a challenging business, and at Caterpillar O'Neil heads operations that involve both some of the world's most complex supply chains and some of its most remote and difficult locations. Caterpillar Inc. is the world's leading manufacturer of construction and mining equipment, diesel and natural gas engines, industrial gas turbines, and diesel-electric locomotives. In 2012, Caterpillar Inc.'s sales and revenues totaled \$65,875 billion.

O'Neil's responsibilities include the design, procurement, and overall running and efficiency of Caterpillar's logistics operations and networks worldwide. Inbound, this involves moving material and components around globally within Caterpillar's vast network of suppliers and manufacturing sites. Outbound, Caterpillar's finished products must be delivered safely, cost-effectively, and on time to its dealers around the world. CATERPILLAR'S SALES BY REGION Q3 2012



■ North America ■ Latin America ■ EMEA ■ Asia Pacific

Total Sales: \$16,445 million

Source: Caterpil

"I love the way our products look," O'Neil explains. "But in my world it's about moving a lot of big, ugly iron. Our largest tonnage is on the outbound side with break-bulk and railroad shipments. For example, when we ship our largest mining truck out of the North American facility across the world to places such as Indonesia or Australia, it weighs the equivalent of two fully fueled 747 jumbo jets."

THE IMPORTANCE OF VISIBILITY

If the sheer bulk and weight of products and components in the engineering and manufacturing sector present enormous logistical challenges, so too does the complexity of the supply chain. "The main challenge in the industry is how to achieve the right balance in a company's sourcing, manufacturing, and distribution strategy. We're always striving to improve product cost structure through reduced supply chain variability, minimum transit inventories, achieving higher velocity, and above all by creating a high degree of visibility in our shipments."

Achieving this visibility, O'Neil says, is crucial. DHL alone handles over 400 inbound and outbound air shipments every day. Then there are land and sea shipments worldwide.

"We employ advanced global materials management software for EDI, which allows us globally to



HEAVILY INTO CHINA: Rows of imported Caterpillar excavators wait at the Port of Lianyungang in Jiangsu province (top and bottom right), while a driver clambers into his dump truck at a Chinese gold mine (bottom left).

track and book material with high accuracy in our network. Regionally - in the Americas, Asia, and in Europe – we also deploy 'control towers' over the top of the network."

Typically, a control tower takes in the strategic design of a supply chain. It not only tracks costs but also proactively adapts the supply chain in response to anticipated changes in the market to make sure it still meets the company's strategy. And it manages all of the operational aspects of this supply chain on a day-to-day basis. This offers a highly effective means of bundling technologies, efficient processes, and people together in a single hub to achieve visibility. Two of Caterpillar's control towers, O'Neil explains, are managed solely by DHL.

On the technological front, Caterpillar is also pursuing a strategy of consolidating and standardizing its systems based on SAP. This is greatly benefiting the operations and after-sales service side of the business, he says, where the company is able to leverage the broad and highly effective dealer network established over its 88-year history. Caterpillar, says O'Neil, is a recognized industry leader in terms of its after-

Having the right technologies in place is important, but these technologies must be augmented by close collaboration and the alignment of processes. Caterpillar's collaboration, O'Neil explains, goes in two clear directions. One leads outside the company to partners such as DHL, with whom Caterpillar seeks

to leverage close relationships in order to create an optimum network. In another direction, collaboration is driven vigorously inside Caterpillar itself. For O'Neil, the challenge is achieving alignment - the perfect balance between being a product-driven organization and using company-wide advantages of scale from a logistics perspective to arrive at effectively priced products.

Caterpillar has certainly positioned itself as a highly product-driven company. This extends from design and the procurement of material and components through to manufacture of a finished product. "But there must also be the capability to deliver this product cost-effectively to wherever it needs to go."

"In my world," O'Neil continues, "distance is an enemy. I'm moving material all over the globe, so I need to leverage the best possible cost structure and velocity in terms of effectively consolidating and deconsolidating material. The question is, 'How can I create the big pipes that are flowing globally and fill these as effectively as possible?"

EVOLVING TO MEET GROWTH

With Caterpillar's current rapid expansion, leveraging scale in logistics - while reaping the rewards of being a product-driven organization - is likely to become even more crucial. The company has a footprint on six continents and is driving significant growth in Southeast Asia, China, India, Australia, and Central and South America. Caterpillar finds itself facing a challenge that many other companies would envy: how to evolve and develop a logistics network to meet the necessary increases in capacity and capability stemming from this growth.

"Expansion means bringing new capabilities and processes into a region," O'Neil explains. "This can be done either through strategic partners such as DHL, or by performing the strategic functions within Caterpillar." Continuing to develop data and analytics

'A CHALLENGE IN THE WORLD **ECONOMY IS MAKING SURE** WE HAVE THE **BEST PEOPLE** TO SUPPORT WHERE WE'RE GOING."

Ed O'Neil

tools will be one part of the solution. Having talented people in place with a deep understanding of logistics and the industry will be another. "A challenge in the world economy is making sure we have the best people to support where we're going."

In a labor market that is characterized by high demand worldwide for skilled engineers and logistics people, Caterpillar is committed to growing and refining the skills of its existing talent. One aspect of what O'Neil calls the company's "multi-tiered approach" is a "Cat University," which has integrated a number of supply chain and logistics elements into its courses for employees.

CONTINUED DEVELOPMENT OF GLOBAL RELATIONSHIPS

"Another tier is our continuing recruitment and retention of talented people across the world," says O'Neil. Caterpillar is well positioned to attract the best and the brightest. In 2012, Human Resources Executive Online rated the company 16th among the world's top 50 companies on the criteria of best HR practices.

"And then there's our continued development of global relationships with key universities. This goes beyond the recruitment element. We drive collaboration by engaging back with the universities to help them design programs that meet the demands of logistics today and tomorrow. We're doing this right around the globe - in the United States as well as in places like China and India."

Over the past decade or more Caterpillar has successfully extended its footprint worldwide, including in India, China, and Southeast Asia. While expansion, especially into regions such as these, inevitably brings new challenges, Caterpillar sees the journey ahead of itself and understands how critical it is to be well positioned in terms of technologies, partners, processes, and people. The company's customer base has long been global. "Now," says Ed O'Neil, "our whole business is global." — Anthony Haywood

CORPORATE STRUCTURE & KEY FIGURES

Caterpillar Inc. Headquarters Peoria, Illinois.

Caterpillar Logistics Inc. (Cat Logistics) 100%-owned subsidiary of Caterpillar Inc., headquarters in Morton, Illinois. Provides supply chain solutions and services to Caterpillar Inc.

employees in Q4, 2012

Neovia Logistics Services LLC (formerly Caterpillar Logistics Services LLC) Provides full logistics and aerospace service parts, Caterpillar retains a 35% interest

in Neovia (65% stake owned by Platinum Equity).

Offices & facilities: More than 500 locations in 52 countries Consolidated sales & revenue (2012): \$65,875 billion Consolidated operating profit (2012): \$5,681 billion

Learn more about the global operations of the Caterpillar group at:



CATERPILLAR AT A GLANCE:

services to third parties in sectors including automotive, industrial consumer durables, technology, electronics, and manufacturing.



ON TOPIC **GLOBAL AIRCRAFT FLEET** FORECAST 2010-2030 Middle East, Africa 2010 2030 Market Outlook Boeing 2011

In its 21st annual Business Aviation Outlook. Honeywell forecasts nearly 10,000 new business jet deliveries worth about \$250 billion from 2012 to 2022. Honeywell found that

a new business jet over the next five years. About 20 percent of those planned to purchase by 2013, with a similar proportion planning 2014 and 2015 purchases.

GLOBAL PASSENGER NUMBERS WILL EXPAND BY

FROM 2012 TO 2016, WITH 3.6

BILLION PASSENGERS BY 2016.

Source: IATA

TRUST IS EVERYTHING

The skies may be their business, but aerospace manufacturers leave nothing to chance with their supply chains

ard times in aviation? In recent years, the whole airline industry has faced considerable changes in its operating environment. Economic crises, natural disasters, and volatile energy prices are affecting the airlines' business models.

Aerospace manufacturers are adapting to evolving market realities with significant investments in new materials and more efficient aircraft. And they've remained successful, in part with innovative new designs for aircraft that are quieter and lighter - and, perhaps most importantly, require 15 to 25 percent less fuel.

Still, while prospects for aircraft manufacturers look generally positive, (particularly given the volatility that airlines are facing) these companies certainly have their own set of unique challenges. They must

"WE TAKE **INDUSTRY REQUIREMENTS SERIOUSLY AND COLLABORATE** WITH OUR **AVIATION** PARTNERS TO ADAPT OUR OFFERING."

Marja-Liisa Turtianen

reckon with countless suppliers, intricate technical requirements and business models that can promise economic success only in the long term. Unsurprisingly, the resulting tight development and production scheduling requires more effective logistics.

MINIMIZING RISK OF PRODUCTION DISRUPTION

To thrive amid these pressures, leading aircraft manufacturers are looking toward their supply chains to stabilize production times, which can in turn deliver a distinct strategic advantage. Some manufacturers, for example, have started dual-sourcing critical parts to minimize the risk of production disruptions.

Another supply chain strategy is to establish a real partnership with a logistics service provider. This means tighter cooperation, exchange of strategic planning and information, and a mutually beneficial, long-term commitment.

WIN-WIN SITUATION FOR ALL PARTIES

Developing the trust that's needed for this kind of relationship is essential, and not usually possible in the short term, but the pay-off is well worth the effort and the patience. After all, as DHL's Head of Aerospace & Aviation Marja-Liisa Turtiainen says, "Within the aviation industry, nothing works without trust."

"We take industry requirements seriously," she adds, "and collaborate with our aviation partners to adapt and innovate our offering so it meets their needs."

The result? A win-win situation for all parties, which doesn't take a rocket (or aerospace, as the case may be) engineer to appreciate.

MRO: MAINTENANCE, REPAIR - AND OPPORTUNITY

Sometimes the best place to save money can be hidden in plain sight. Maintenance, repair, and operations (MRO) activities are often neglected in the quest to sharpen up business performance. But there is usually plenty of room for improvement. The MRO supply chain primarily deals with supporting maintenance activities (including supply of parts and products) for customers – typically of an industrial nature, but MRO has a value in every manufacturing and asset-intensive sector. Costs associated with MRO supply chains are often hidden. According to recent independent research, for every \$1 spent on acquiring MRO goods, an extra \$0.80 is needed to get that part where it needs to go. And keeping spare parts in inventory can pile on an additional \$0.25. That means 16 percent of the cost of goods sold relates to MRO, and MRO transactions can account for more than 60 percent of all corporate requisitions.

Complex MRO supply chains often suffer from lack of control and poor synchronization between parties. Most businesses focus

on improvements that directly affect output (that is, goods that are sold). Activities that support output, such as MRO, can be forgotten or missed. Ownership of the MRO challenge in an organization can also impact negatively, with true MRO costs spread across many functions.

Resulting neglect can mean inefficient maintenance-related activities becoming business critical, as well as impacting customer service levels. It's easy to see that there is real value to be realized by ensuring maintenance engineers have the parts they need, when and where they need them, at a cost and service level that is controlled and visible.

DHL has been providing MRO services for over a decade, mainly in the energy sector. But businesses in the engineering and manufacturing, consumer, and automotive industries are also waking up to the fact that there could be value realized in the support processes. DHL's specialists work with customers to find the simplest, most efficient solution to complex MRO challenges. And MRO becomes a money-saver, not merely an afterthought.



TOOLS FOR THE JOB: Having the right equipment and parts on-site for repair saves time, money, and space. MRO operations are of paramount importance for industrial customers.



The National Health Service is a cherished institution. But financing the NHS has always been a challenge, and the UK economy is troubled. Today, as an austerity program aims to restore health to public finances, the need to improve NHS efficiency has never been more acute. New supply chain solutions may be the answer.

hen Paul Ranson started his new job in early 2012, he brought something of a revolution. The new Head of Procurement arrived at the South East Coast Ambulance Service as it underwent sweeping change. Created by a merger of three ambulance services serving 4.5 million people in southern England, SECAMB was in the process of rearranging its operations to create a new system of ambulance bases dispersed across 12,000 square kilometers.

The new arrangement aimed to enable ambulance teams to meet tight response times for emergency calls. But it also created logistical difficulties in ensuring that vehicles were stocked with necessary consumables, that orders were processed in time, and that replacements were transported to the 120 "response points" where the units were stationed. Drawing on

previous experience at a big London hospital, Ranson turned to NHS Supply Chain, a private logistics and procurement organization which operates a government contract managed by the Department of Health.

ONE-STOP-SHOP SYSTEM BOOSTS EFFICIENCY

Over the last year, NHS Supply Chain – a unit of DHL – has set about reorganizing SECAMB's back-office operations, introducing a "one-stop-shop" system for purchasing, ordering, and delivery. The system "is now a lot more efficient," says Ranson. Unnecessary duplication in suppliers has been eliminated. So has paperwork, as employees use handheld digital devices to enter orders. The change has brought considerable savings – £250,000 off SECAMB's budget.

Ranson's initiative is just one part of an innovative project within England's National Health Service to boost efficiency and savings for Europe's biggest public healthcare provider. For years, the UK government has tried to control NHS costs, turning increasingly to the private sector for solutions.

The NHS is a cherished institution in the UK where healthcare ranks ahead of other voter concerns. But NHS financing has been a challenge for governments ever since the service was established in 1948. Now, as a Conservative-led coalition struggles to drive through an austerity program aimed at restoring health to public finances, the need to control NHS costs and improve efficiency is ever more acute.

The NHS spends around £18 billion per annum on products, goods, and services out of an NHS budget of £100 billion. NHS Chief Executive David Nicholson estimated that £1.2 billion could be saved through better procurement, and a 2011 report by the National Audit Office identified scores of inefficiencies across the NHS. It was to address these that in 2006 DHL was awarded a ten-year contract to procure and supply goods and NHS Supply Chain was cre-

ated. Previously the job, which covers anything from replenishing stocks of surgical gloves to buying MRI scanners, had been carried out by NHS agencies.

"The rationale is to drive more value from procurement and the supply chain," says Nick Gerrard, CEO NHS Supply Chain. The company would take on the risk of investing in things not core to the NHS, such as distribution centers, allowing the health service to concentrate on its clinical responsibilities.

NEW SCALE OF OPERATIONS

DHL had worked with the NHS before, but this was a new scale of operations. Some 1,600 people who had worked in NHS procurement and logistics agencies were taken on. Today the 2,400-strong workforce handles some 4.6 million orders a year from seven distribution centers, and works with 850 suppliers and a catalog of 600,000 products. Sales have also risen from £800 million to £2 billion. And it all runs online, with NHS staff making orders directly via handheld devices.

"Public sector procurement is complex," says Gerrard. "We develop expertise in particular categories – from gloves to orthopedic joints – and then remove duplication by offering one contact point." Combining procurement and logistics eliminates further costs. All this requires close cooperation with the NHS. "We do a lot of consultation," says Gerrard.

The company is already halfway to its target of delivering £1 billion in savings to the NHS within ten years. But there is no room for complacency. NHS officials are watching progress and have flagged up the scope for further savings – something NHS Supply Chain says it is working on. "It is a learning experience for the public and private sector," says Gerrard.

For DHL, the novelty is a business model going beyond its traditional expertise and into procurement and the selling of products as well as the maintenance of capital medical equipment. The next step, says Gerrard, is capital planning. NHS Supply Chain is facilitating a £300 million Capital Fund on behalf of the Department of Health that delivers an average saving of 14 percent on a range of capital medical equipment.

This is all part of a deeper relationship, which Gerrard sees developing over years, and which could hold lessons for governments and business in other countries. The scope of business will also grow. As the UK population ages, officials anticipate more demand for patient care in the community. This will increase the importance of logistics. NHS Supply Chain already provides services to some 200,000 patients in the community, and is developing new products and services in this area.

Another novelty is the bottom line. There is a profit cap on the company's returns. "You genuinely see that you can make a positive contribution to British society," Gerrard concludes. "That is quite powerful for all our 2,400 people." — *Frederick Schulenburg*



"THE RATIONALE
IS TO DRIVE
MORE
VALUE FROM
PROCUREMENT
AND THE
SUPPLY CHAIN."

Nick Gerrard, CEO NHS Supply Chain

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REACH OUT FOR THE GLOBAL WIN!

DHL research shows that small and medium-sized enterprises are more successful when they enter the global market.

mall and medium-sized enterprises are the backbone of every national economy. They stimulate growth and, being more flexible than big corporations, adapt quickly to a market's changing demands. As a result, they drive innovation and also make a significant contribution to export and trade figures. In fact, small and medium-sized enterprises, or SMEs, typically employ between 35 and 45 percent of the workforce and contribute between 30 and 40 percent of national added value. But there's one thing even

added value. But there's one thing even many SMEs may not know: the SMEs doing the best this century are those that are working internationally – as a recent study commissioned by DHL shows.



SUCCESS: International trade and cooperation have become key drivers of small business success.

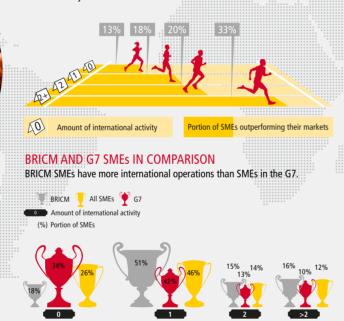
INTERNATIONALIZATION

DRIVER FOR BUSINESS PERFORMANCE

Developed-world SMEs lag behind emerging-market SMEs in terms of internationalization. BRICM SMEs placed more emphasis on logistics as a positive influence, suggesting they rely more on efficient transportation and customs processes, but also that they see logistics as a competitive differentiator.

RICM SMF

The more international business activities a BRICM SME has, the more likely it is to be successful.



INFRASTRUCTURE

Better-performing SMEs employ over 50 people. This underscores the importance of resources for international growth.

YEAR OLD

AND YOUNGER SMES ARE MORE GLOBAL THAN OLDER ONES.

Small and medium-sized businesses in developing markets such as Brazil, Russia, India, China, and Mexico (the BRICM countries) tend to be more international than those in developed countries. Around one-quarter of SMEs in BRICM are "born global," a phenomenon related to the fact that consumers in G7 countries still have significantly more spending power. Such SMEs use modern communications and logistics services to get to the world's biggest consumer markets from the beginning. And SMEs founded in the last five years are even more likely to be born that way. That's also why BRICM SMEs place more importance on logistics. Inefficient public infrastructure is a significant challenge as they look to trade internationally. So logistics becomes a fundamental part of their service, with high-quality services giving them an edge over the competition.

LOPERCENT

OF SMES TRADING INTERNATIONALLY SIGNIFICANTLY OUTPERFORM THEIR MARKETS, IN CONTRAST TO 13 PERCENT OF THOSE OPERATING ONLY IN THEIR HOME COUNTRY.

Why? Some think successful, international SMEs are taking lessons they've learned elsewhere and bringing them home. Some think it's because competing across borders forces the company to sharpen up internal processes, which benefits overall performance. Others suspect international SMEs are simply more ambitious. Whatever the reason, more than one-third of businesses surveyed for DHL saw international expansion as part of their plan for long-term growth. Opportunities for product diversification and new knowledge gained by working internationally were a big part of that, according to the SMEs. All of which shows that international trade and cooperation are key drivers of any SME's success.



ANNUAL TURNOVER IS THE UPPER LIMIT FOR A COMPANY TO BE CONSIDERED AN SME.

The majority of the best-performing SMEs in BRICM nations say they will grow their exports in the near future. In fact, the majority of BRICM's best-performing SMEs already do a lot of export business with developed G7 countries, which suggests that in the future they're going to be well positioned in an increasingly globalized market. "There are clearly still some remaining hurdles for small businesses with global aspirations, but we are delighted to see that more and more SMEs are looking at the fantastic opportunity that international trade represents," says Ken Allen, CEO DHL Express.

410 MANAGERS

WERE SURVEYED. MANY SEE PROBLEMS WITH A LACK OF COMMUNICATION.

It's not all good news. The study found that as SMEs increasingly look beyond their own backyards, they also face some major challenges. Many surveyed said that a lack of communication and information about markets and customers was still a big problem – one that might be remedied by collaboration with a globally savvy logistics provider. Another issue was the lack of information on SMEs themselves as a group. Despite their major contributions to their national economies, SMEs may find this information gap means that their interests are not always adequately represented.



ABOUT THE SURVEY

The "International Competitiveness of SMEs" study is a macroeconomic analysis and survey of 410 SME directors in G7 and BRICM economies. It was conducted between September and November 2012. Small and medium-sized enterprises (or SMEs) are companies with between 10 and 249 employees, and an annual turnover of less than €50 million.



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n a world where natural resources are becoming scarce, social issues are on the rise, and reputation has become a key factor for business, corporate social responsibility (CSR) is a popular catchphrase. Considered greenwashing by some and idealism by others, CSR has in recent years evolved from a defensive policy for companies to give back to society through philanthropic engagement into a pragmatic business strategy driving innovation, brand differentiation, and long-term return on investment.

Well-managed CSR can create sustainable social value and reduce a company's negative environmental impact for example, while supporting its business objectives, reducing operating costs, and enhancing relationships with key stakeholders and customers. And although CSR is not going to prevent demographic change or reverse the greenhouse effect, companies can, by being responsible, benefit both themselves and society.

"Looking to the future, we need a purpose-driven, principle-based approach to CSR, in which business seeks to identify and tackle the root causes of our present unsustainability and irresponsibility, typically through innovating business models, revolutionizing their processes, products, and services, and lobbying for progressive national and international policies," explains Wayne Visser, founder of the knowledge incubator CSR International. In other words, the future belongs to companies that create shared value, as Michael Porter and Mark Kramer, founders of the non-profit consultancy Foundation Strategy Group (FSG), would say. Traditional corporate engagement with society has been rooted in a trade-off mentality



"IN THE FUTURE,
CSR WILL NO
LONGER MEAN
DOING WELL
AND THEN
DOING GOOD,
BUT DOING
WELL BY DOING
GOOD."
Christof Ehrhart

fueled by the idea that businesses should contribute to social and environmental causes to bolster their reputation. But creating shared value (CSV) is not about trade-offs. Instead of looking at societal engagement and environmental issues as a cost of doing business, CSV – or transformative CSR – is about developing a competitive advantage.

"As such, the driver is corporate strategy – not reputation," says Valerie Bockstette, Director at FSG. "Engagement is not seen as a costly redistribution of profit but rather as an investment with a return expectation. It is not about a CSR department managing an array of projects developed to meet stakeholder expectations or garner a nice headline, but about the entire business innovating to address societal challenges."

RESPONSIBLE PRACTICES, BETTER PERFORMANCE

Studies show that companies with responsible business practices tend to demonstrate a better financial performance than less sustainable competitors. An analysis by the University of Cologne shows that investments in companies rated best-in-class according to their environmental, social, and governance practices, tend to outperform companies rated lower on sustainability by up to 8 percent.

"With the limitation of resources and a change in values, companies have to revise unsustainable business models and live up to their responsibility," says Christof Ehrhart, Head of Corporate Communications and Corporate Responsibility at Deutsche Post DHL. "In the past, it may have been enough to adhere to codes and laws. Nowadays though you need additional activities to help solve social and environmental

DOING WELL BY DOING GOOD

Transformative corporate social responsibility in the logistics sector creates social value to the benefit of companies, customers, and the environment. What's not to like?

HELPING TO DEAL WITH DISASTER – DPDHL AND THE UNITED NATIONS

Deutsche Post DHL's disaster management program GoHelp is an initiative very close to the heart of everyone involved, and the basis for a longstanding public-private partnership (PPP) with the United Nations. Using its core competence in logistics, its global network, and the know-how of its employees, DHL focuses on all phases

of disaster management – preparedness, response, and recovery. The company works with the UN Development Program (UNDP) to prepare airports for disaster response through its program Get Airports Ready for Disaster (GARD), and with the Office for the Coordination of Humanitarian Affairs (UNOCHA) by providing Disaster Response

Teams (DRTs) after natural catastrophes. "Working directly with the United Nations is the best way to deliver on short notice," says Christof Ehrhart. "Our strategic partnership is not about giving money, but about bringing in our expertise in the right way to develop knowledge and build sustainable partnership networks."

issues. In the future, it will no longer mean doing well and then doing good, but doing well by doing good."

Accordingly, CSR experts predict that, as social and environmental problems become increasingly complex, companies will have to move beyond global standards such as the UN Global Compact or ISO 14001 and develop products and processes which meet demands creatively and sustainably. One example is M-Pesa, developed by Vodafone to allow the world's unbanked to perform basic financial transactions with cell phones. At the same time, offering less ethical products and services will no longer be an option. Wal-Mart, for example, voluntarily limits the company to the use of organic cotton, forcing its customers to do the same.

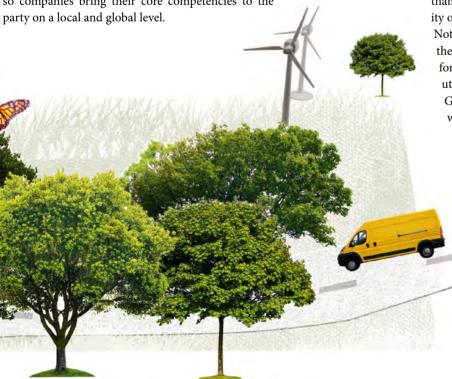
Progressive companies will also be required to demonstrate full life-cycle management of their products, in particular committing to zero waste, CO2 neutrality, and water-neutral production, with mandated take-back schemes for most products. Thus Nike has started to reduce its environmental impact by applying "considered design" principles, such as substantially reducing the amount of toxic solvent adhesives that factory workers and waterways have to cope with. Over 130 Unilever factories worldwide send zero waste to landfill, while at the same time saving money to invest in the business.

But dealing with all these challenges is not something companies will have to do alone. Cross-sector partnerships will be at the heart of future CSR approaches. No single player will have all the solutions, so companies bring their core competencies to the



OP DHL recognizes and embraces its responsibility to make a positive contribution to society and the environmen To find out more, visit:





In the wake of climate change, a main concern for business is streamlining processes for supply chain decarbonization - something sought not only by investors, but also by increasingly carbonconscious consumers. They are forcing retailers and distributors to re-examine their sourcing decisions, and this challenges logistics providers to reduce their environmental impact while creating individual yet scalable solutions for their customers. "After all, logistics is responsible for 12 to 14 percent of the global carbon footprint," says Ehrhart. "Not surprisingly, the majority of customers ask for measures of sustainability, which is why the logistics industry sees its responsibility as an opportunity."

MAKING MEANINGFUL CHANGES

The sector has accordingly started targeting substantial reductions in CO2 emissions and transportation costs, making meaningful changes in operational efficiency and new technology. One lever is the deployment of green vehicles in urban areas, while aerodynamic technologies, such as those supported by the USEPA SmartWay program, are seen in fleets throughout the business. Other measures include optimizing network logistics, implementing green building technologies, and sustainable packaging initiatives. Cross-sector partnerships are being formed to develop sustainable warehouse designs or strategies for reducing waste levels.

Green logistics is a trend. According to DHL's Green Trends Survey it is already important to more than 60 percent of logistics customers, while a majority of end customers is willing to pay premium prices. Not surprisingly, CO2-neutral services are one of the fastest growing products in the business. DHL, for example, through its GoGreen program, contributes to climate protection projects for every GO-GREEN parcel delivered by Deutsche Post DHL worldwide.

"To offer credible green logistics, you need to calculate exactly how big the carbon footprint of each delivery is, and you need the proper tools and methods to do it," explains Ehrhart. "We believe that it will be necessary to quantify distinct emissions for a sustainable reporting as well as in fulfilling the extremely high expectations of a postmodern economy." And how much does that cost? "At Deutsche Post DHL Corporate Responsibility is intrinsically embedded in our company strategy, which makes it impossible to identify a specific cost of CO2 neutralization," says Ehrhart. That's transformative CSR at work. — Tong-Jin Smith



SIZE DOES MATTER

Container ships are big – and they're about to get bigger. Ten ultra-large vessels will join the world's fleet this year. But is the extra capacity really needed in today's volatile economy? And what is super slow steaming?

y the end of 2013, the largest container ship in the world will be Maersk's Triple E. The three Es stand for economy of scale, energy-efficient, and environmentally improved. Ten of these ships will be launched in 2013, and another ten by 2015. They will be 400 meters long and 59 meters wide. To put that in perspective, imagine a building 20 stories high, as wide as an eight-lane highway, and almost as long as the Empire State Building. One of these behemoths could carry over 746 million bananas - enough for every single person in Europe to have one. A train loaded with all 14,770 containers from one of these ships would be 88 kilometers long.

Impressive numbers, but they come with a few caveats. The size of the ships will limit the routes. With a draft of 14.5 meters, they will be too big to use any port in the Americas or pass through the Panama Canal. And once the mammoth container ships do dock, the question is then how to deal with the monsters.

CHALLENGING PORT INFRASTRUCTURE

Larger ships have better economies of scale, which helps bring down overall transportation costs. However, they could create operational and infrastructure challenges on the landside. If port operators don't improve their infrastructure and intermodal connections, Triple E vessels will not be able to call at them - and this would have farreaching consequences for global flow of goods.

For now, the ultra-large container ships will be used on the Asia-to-Europe route involving Chinese ports such as Shanghai, Ningbo, and Hong Kong, already fitted with the cranes and moorings needed to cope with the massive ships. In Europe, the ships could dock at Rotterdam or Felixstowe. In Germany, Wilhelmshaven and Bremerhaven could handle loading and off-loading, and Hamburg is increasing capacity.

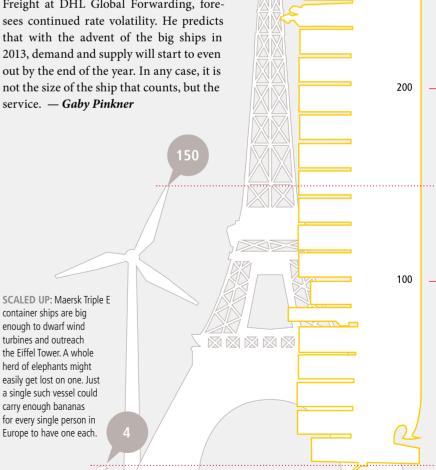
It is a drastic shift. Moving from a delivery time of just a few days to an average of 25 days from China to Europe is not an easy transition. With air freight, a customer knows the exact time his goods are going to arrive. With ocean freight, a storm out at sea can knock a ship off schedule

by days. Many customers looking to cut costs are willing to make the switch. What they ask for in return is predictability and reliability. Ironically, slow steaming can actually help.

SLOW STEAMING CREATES SAVINGS

Super-slow steaming means bringing the speed down from around 20 to 15 knots. This creates savings for carriers, but can damage the engines of older vessels. The new big ships can cruise at lower speeds without damaging their engines. Slow steaming is also more environmentally friendly, reducing CO2 emissions by more than 50 percent per container.

But whether or not ocean freight's future is green, the bottom line remains. Andreas Bödeker, Head of Global Ocean Freight at DHL Global Forwarding, foresees continued rate volatility. He predicts that with the advent of the big ships in 2013, demand and supply will start to even out by the end of the year. In any case, it is not the size of the ship that counts, but the



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THREE STRATEGIES AGAINST COMPLEXITY

Managers cause complexity, which means they can also do something about it.



AN ESSAY BY **RON ASHKENAS**

Senior Partner, Schaffer Consulting (Stamford, Ct.) and Executive in Residence at the Haas Business School of UC Berkeley

arge organizations have always been complex. But in recent years, with the advent of globalization and the **L**acceleration of new technologies, this complexity has multiplied. Many managers have become frustrated with how difficult it has become to achieve results.

Several years ago, seeing many of our consulting clients struggling with this increasing complexity, we developed an online questionnaire to help them identify where it was coming from in their organization. We recently analyzed the responses to this survey from 1,400 managers across ten different companies.

The surprising result of this analysis was that the most significant source of perceived complexity was the managers' own behavior. They said that much of it is caused by lack of transparency between units, poor planning and strategy, and weak management disciplines.

Of course, much of this complexity-causing behavior resulted from well-meaning actions intended to deal with a fast-paced environment. As one manager put it, "We need to respond to our customers so quickly that we don't have time to make sure what we're doing is consistent with corporate standards or will work for other business units. We end up supporting hundreds of product variants, billing codes, and legacy technologies."

The good news is that if managers cause complexity, then they can also do something about it. Here are three strategies to help:

STRATEGY #1: ELIMINATE COMPLEXITY BUILD-UP

Almost everyone in an organization can identify examples of seemingly unnecessary complexity - inefficient meetings, redundant approvals, time-wasting emails. This was continually confirmed in our survey responses with examples such as, "more administration paperwork that ticks boxes but does not move delivery forward."

In most cases these examples reflect patterns accumulated over years as structures have shifted, processes evolved, and product portfolios proliferated. The simplest way to tackle complexity build-up is to regularly question procedures or behaviors to see if they still make sense.

The life insurance division of Zurich Financial Services offers a good example. Several years ago, the head of the business, Paul van de Geijn, and his team developed a concerted simplification effort known as "Make Life EaZy." It was launched at a workshop where Zurich Life managers from 15 countries were given five minutes to fill in their home country's application form for the simplest type of life insurance. Not one could complete it in the allotted time.

Van de Geijn commissioned a team of "Make Life EaZy" consultants, who flew from country to country to facilitate simplification projects, report best practices, and measure progress. They also identified and trained local staff as "EaZy Challengers" who could engage customers, distributors, and employees to identify opportunities to simplify products and services. Sales in Zurich's European Life business grew significantly, and van de Geijn's successor made "Make Life EaZy" an ongoing part of his management process.

STRATEGY #2: USE SEMI-STRUCTURES TO GET THINGS DONE

The survey showed that poor collaboration between units is a major complexity driver. As one manager said, "We have products that need to be tailored to our customers' requirements but too often fail to respond because people are not prepared to deal with a myriad of approvals."

It's understandable that managers don't want to collaborate across silos when they perceive it will be frustrating and unproductive. Nor do they want to "reorganize" since moving the boxes around often just makes things worse. An alternative is to utilize what we call "semi-structures" temporary work groups charged with solving specific problems quickly.

One of our clients was recently forced to make a significant headcount reduction. Past reductions had failed to deliver expected benefits due to unclear target setting and uneven execution. Too often, unintended consequences were discovered after commitments had been made, and managers were allowed to backtrack.

So this time the CEO tasked a cross-divisional group to work with their finance and HR officers, and deliver commitments within four months for over a billion dollars in savings. This team received some minimum guidelines, but otherwise was authorized to work independently and develop what it felt to be the best overall solution. The team sought input from managers known to advocate radically streamlined operations, worked to simplify processes that cut across units, and phased reductions to mitigate performance risks. This cross-silo "semi-structure" allowed the organization to reach decisions more quickly than before. Separations proceeded largely according to plan, with minimal disruptions to results even though they were among the most aggressive in the company's history.

STRATEGY #3: FAST-PACED, RAPID-CYCLE EXPERIMENTS

Too often we see organizations implement broad changes without first exploring their consequences. This can mean major initiatives failing to reach their objectives and often creates even more complexity. An alternative to this "big bet" approach, where tremendous resources are poured

into one particular way forward, is to create settings where teams can conduct fast, low-risk, and low-cost experiments

Take global adhesives company Avery Dennison. Faced with the need to ramp up top-line revenue, President (now CEO) Dean Scarborough decided that instead of a big, company-wide "program," each division would conduct focused, 100-day experiments to capture revenue from specific opportunities with their own products and markets. One divisional team figured out how to take a taping product for builders and repurpose it for retail, and generated a first sale to a major chain within 100 days. The team then built on this success to create a new, ongoing revenue stream. Over the next two years, hundreds of rapid results teams were formed and generated millions in new revenue. They also learned how to get things done across functional boundaries.



MUCH OF THIS COMPLEXITY-CAUSING BEHAVIOR RESULTED FROM WELL-MEANING ACTIONS INTENDED TO DEAL WITH A FAST-PACED ENVIRONMENT."

Scoping these projects so teams could quickly experiment with new ideas not only allowed them to create momentum with a first success, but also to deliver the insights needed to scale new ideas to the entire organization. And they eliminated complexity, because they were designed to work within the environment where they were developed.

No manager intends to make things more complex. But unless managers make the conscious decision to work differently - and employ the kinds of strategies described here - they run the risk of doing so anyway.

Searching for simplicity? Read more on the HBR blog network:



blogs.hbr.org/ashkenas



Tucking into transformation

New markets require new strategies and new ways of thinking, which is why transformational services have become critically important to some companies – and the third party-logistics providers who serve them.

Right now, the business world is not always turning as it should. Economic volatility has caused unrest in global markets; and when the market environment changes, businesses must adapt in order to cope. Put simply, unstable and unpredictable conditions require a new, creative way of thinking if businesses and their logistics providers are to produce higher returns while reducing costs.

Squaring this circle isn't easy, but it can be done through the transformation of traditional business operations. This fundamental change is no longer simply a nicety in some markets – it's a necessity.

Currently, the third-party logistics (3PL) market is facing particularly acute challenges. For logistics providers in the United Kingdom, for example, globalization has turned 3PL into a fragmented industry, one where innovation – a critical driver of growth, differentiation, and profitability – becomes ever more difficult. The economic crisis only makes a tough situation worse. "The continuing economic climate is providing the logistics industry with challenges," noted Rob Riddleston, Head of Transport and Logistics at Barclays, at the launch of Barclays' H1 UK Logistics Confidence Index in July 2012. "While some recog-

nize the need to innovate, the day-to-day pressures make this difficult to achieve."

For customers of logistics providers, meanwhile, the global financial squeeze fuels the need to drive growth while shrinking margins. For these customers, then, process improvements, added technology, and better services from their logistics providers is no longer enough. In a saturated or new and unexplored market, companies require something more from their 3PLs – something which gives them the edge over the competition: a new product or service idea that, when implemented, makes a significant impact by simplifying, automating, generating value, or reducing costs. They expect something transformational.

TRANSFORMING BUSINESS

Fortunately, the implementation of transformational services is a win-win for both companies and the logistics providers who serve them. Logistics providers may find the best route to growth is through diversification of traditional product offers and services; so, by offering ways to transform their customers' businesses, 3PL providers can start to transform their own and open up markets that would not necessarily be "natural" areas for a supply chain outsource company. The benefits to the customers of 3PLs are rather more obvious. In the UK, organizations facing different sets of challenges have recently needed to transform their operations, and have done so by re-thinking their traditional supply chains in close collaboration with their logistics provider.

British Airways, for instance, needed a more flexible approach to food and beverage provisioning on its flights. And communications operator Telefónica UK wanted to ensure that its retailers received best-in-class

of logistics operators will be implementing new, innovative supply-chain solutions over the next six months, with a further 19 percent actively reviewing options, according to The Barclays and Grant Thornton UK Logistics Confidence Index for HZ 2012.

support as part of the company's distribution channel, while receiving reverse logistics services for recycling and repairs of mobile devices.

DIFFERENT MINDSET

In both cases a different business mindset was required – one which didn't simply and traditionally view the respective supply chains in isolation. So, BA transferred its in-flight supply from a catering company and put it into the hands of DHL for domestic and short-haul flights from Heathrow, opening up engagement with multiple food providers to acquire the best products at the most competitive prices, reduce costs, and improve customer experience.

DHL also works with Telefónica, owners of the O2 brand, to provide customized services to ensure that the company can quickly bring its product and service ideas to market – and, crucially, meet the demands that such services can require in a 24/7 world of instant consumer engagement.

Yet it's not simply commercial organizations that benefit from transformational services. In the UK's public sector, city councils have long wanted to reduce commercial traffic into urban centers, although this has proven difficult in a world where companies insist on frequent deliveries, regardless of cost and carbon footprint.

However, some councils have been taking advantage of DHL's consolidation service, which analyzes traffic flow, considers companies that could share vehicles, and challenges the way they service their needs, implementing improved supply chains through the use of data-driven consolidation centers.

UNLOCKING OPPORTUNITY

Effective implementation of transformational services requires close collaboration between logistics provider and customer. To help deliver transformational programs to its own customers, DHL set up a Specialist Services division in January 2012 with approximately 2,000 staff. Taking a consultative approach, it works with customers to identify and address the needs of their end users, then creates the appropriate solutions.

"Much of our focus around transformation is helping our customers approach the market in a new way and become true leaders in where they want to play," says Paul Richardson, Managing Director of Specialist Services at DHL Supply Chain UK. "It's a different approach that helped us with BA, Telefónica, and with our work in city centers, and starts when we go to customers and spend a day listening to their problems. Then we begin building a transformation program that helps them see what could be done. They may not know of an opportunity that could transform their business, and our job is to try and unlock what that could be." — *Tony Greenway*



Photos: British Airways Mauritius

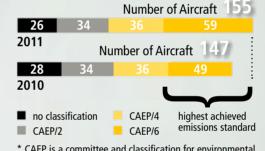


1.62 billion tons*2 **Truck emissions in Europe** Around a quarter of these emissions comes from empty runs

DHL is investing constantly in more efficient, newer, and quieter aircraft, which use less fuel, fly more

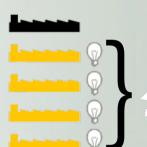
quietly, and emit lower levels of air pollutants.*3

Jet aircraft by nitrous oxide (NOx) emission standards



* CAEP is a committee and classification for environmental

Warehouse lighting accounts for up to of a company's energy consumption



According to a survey, this many consumers would pay a higher price for green products:*4

Malaysia



higher share performance for companies with best performance in the field of sustainability.



The consumer goods industry uses of packaging per year*2 million tons









trees felled for



^{*1} Corporate Responsibility Report 2011, page 48; *2 Delivering Tomorrow, Towards Sustainable Logistics, page 8–9; *3 Delivering Tomorrow, Towards Sustainable Logistics, page 56; *4 Delivering Tomorrow, Towards Sustainable Logistics, page 78; Infographic: G+J Corporate Editors GmbH

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AUTOMOTIVE TAKES OFF AT END-OF-RUNWAY

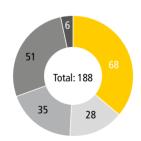
Automotive supplier DENSO wanted to expand European operations, and found the answer at DHL Supply Chain's End-of-Runway site in Leipzig.

t may be called the aftermarket, but it can't be run on an afterthought. Rapid and flexible delivery times as well as proximity to dealers and distributors are at the top of any automotive supplier's mind. So, when DENSO Europe BV, the European headquarters of global automotive supplier DENSO Corporation, decided to expand its operations, it gave the decision a lot of thought. It found the answer in Leipzig, Germany. Or more specifically, at the End-of-Runway site of DHL Supply Chain in Leipzig.

DENSO has become the first customer for End-of-Runway, which is located in close proximity to the Express Hub. The solution encompasses warehousing and freight transport services as well as domestic and international express deliveries. End-of-Runway is a global logistics solution targeted particularly at customers in the life sciences and healthcare, automotive, technology, and engineering and manufacturing sectors. In Leipzig it can combine not only express and road freight services, but also storage, screening, distribution and repairs, all at one location.

It's a solution well tuned to aftermarket companies, says Pascal Kemps, Sub Sector Head Passenger Vehicles. "The aftermarket in western Europe is fairly

DENSO'S GLOBAL PRESENCE



■ Japan ■ North America ■ Europe ■ Asia-Oceania ■ Others

Consolidated subsidiaries, March 31, 2012

Source: Denso

mature and highly competitive. That means as a supplier you have to keep customers loyal to dealers and repair shops. And that requires being able to deliver your products quickly," says Kemps.

DHL Supply Chain provides DENSO with stock-keeping, picking, and a range of shipping boxes. The warehouse is replenished from DENSO's distribution center in Amsterdam. Automotive parts distributors can now place orders with DENSO up to seven hours later, and receive the parts earlier the next day.

DENSO will also have access to DHL's Integrated Solutions Center in Leipzig, with a supply chain warehouse boasting 15,000 square meters of high-end storage space. An adjacent Technical Services Workshop offers value-added services such as DHL's integrated Return & Repair service for faulty parts.

The service was rolled out in February and was at full capacity in March. DENSO will first use End-of-Runway to service dealers in Germany, then gradually expand to surrounding countries. And the agreement includes pay-per-use pricing: the automotive supplier only pays for the capacity its shipments require.

DENSO hopes more flexibility will lead to an increase in its aftermarket business. Customers will become accustomed to being able to place orders later and still count on early, next-day delivery. But it's not just flexibility for DENSO's customers; DENSO itself can now select from a grid of overnight delivery times to fit its own corporate cycles.

UAE CONNECTS THE DOTS

The United Arab Emirates (UAE) is becoming one of the world's busiest logistics hubs, making the most of a prime location on the global map and serving two billion potential customers in four time zones.

edicated to steering its economies away from dependence on oil, the UAE's most recent infrastructure projects include a nationwide rail system, expected to be operational by 2014, and the December 2012 opening of the \$7.2 billion Khalifa Port.

"This flagship project strengthens our progress and will also contribute to the continuation of the high rate of growth witnessed by the UAE," President His Highness Sheikh Khalifa bin Zayed Al Nahyan said at the inauguration.

Together with the already bustling port and free zone at Jebel Ali in Dubai and the adjacent vast new Khalifa Industrial Zone Abu Dhabi (Kizad), the new port is expected to increase the UAE's international trade volume significantly. According to a Frost & Sullivan study, the UAE's logistics market, currently representing around 2.5 percent of the nation's total GDP, should sustain a compound annual growth rate of 8 percent, reaching revenues of \$10.06 billion by 2015 and an estimated \$16 billion by 2020 from just \$6.35 billion in 2009. The DHL Global Connectedness Index 2012 ranks the UAE No.23 – just three places behind the United States in the global flow of trade, capital, information, and people – making it the most connected country in the Arab world.

Further testament to this connectedness is the recently launched airport and logistics hub Dubai World Central, which takes advantage of Jebel Ali Port, seamlessly connecting to its Al Maktoum International Airport through the dedicated Dubai Logis-





THE UAE IS THE MOST CONNECTED COUNTRY in the Arab World, according to the DHL Global Connectedness Index 2012.

tics Corridor. With a single custom-bonded zone and direct access to the major trans-emirate road networks, DWC is a truly multimodal logistics platform providing unprecedented levels of connectivity, speed, and efficiency. An area of 140 square kilometers has been designated to create a self-sustained economic zone to support a multitude of activities including logistics, aviation, commercial, and other businesses around a world-class airport with a planned annual capacity of 12 million tons of cargo and 160 million passengers.

With the freight forwarding segment the strongest contributor to logistics, earning 63.1 percent of the revenue, it is no surprise that on the World Bank's global Doing Business list the UAE ranks No.5 in trading across borders. Located in close proximity to the high-growth economies of India and China, the UAE imports around 60 percent of its products from these countries, mostly transiting through the Dubai borders.

Taking advantage of the UAE's strategic position, DHL Express just broke ground on its largest operations facility in the Middle East at Dubai's Meydan Racecourse district. Expected to be operational before the end of 2014, the new center will cover more than 17,000 square meters – approximately the size of three football fields – which includes 7,300 square meters of indoor sorting and loading area. It will further enhance the company's performance in the region, due to its strategic location in Dubai and state-of-the-art features and handling processes.

Find out more about Dubai's DWC airport at



HOW TO KEEP THINGS COOL IN CARACAS



Vaccines, insulin, and other drugs – the list of medications that must be stored at specific temperatures to remain effective is a long one. Distribution chains are seldom simple and vary hugely. Temperature-controlled supply chains are particularly important in tropical countries, where medicines are exposed to higher temperatures.

The distribution chain may involve a number of storage and transit locations, including airports and docks, and a variety of transportation methods. So global logistics service providers have to build up and maintain cool-store networks all over the world for clients who operate globally in the life science and healthcare sectors.

Recently, DHL Freight, Global Forwarding began operating a new cool store at Caracas airport in Venezuela. Equipped with the most modern technology, the new facility can keep up to 120 pallets at the correct temperature.

Simon Berry had a logistics problem: how to distribute medicines to poor people in remote places. His solution? To piggyback Coca-Cola's delivery network. He's now the head of a charity that's doing exactly that.

imon Berry was working on a project in Zambia in the late 1980s when he had "a penny drop moment." He was in a remote area where children were dying of minor conditions such as dehydration from diarrhea. These tragedies were easily preventable, but simple medicines were not reaching the people who needed them. Yet Coca-Cola was available even in the most remote places. Simon realized that if Coca-Cola's logistics network was that effective, it could also be used to deliver essential medicines. The trouble was he couldn't get anyone's attention.

"But then," he says, "four years ago, I decided to share the idea on Facebook." This time it took off thanks to thousands of online supporters. Simon is now CEO ColaLife, a charity working in developing countries to bring Coca-Cola, its bottlers, and others together to open their distribution channels to "social products." A pilot program with anti-diarrhea medicines is underway in Zambia.

"We don't want to get medicine to the end user in a philanthropic, aid-driven way. We want to do it in a sustainable way. We're making a product available in the private sector, which creates jobs - and saves lives."

Why did no one think of piggybacking onto Coca-Cola's distribution network before?

People think Coca-Cola has an amazing distribution system. But actually they just manage an amazing distribution system. They'll get their product to, say, district centers in Zambia and then the independent private sector takes over: entrepreneurs on bicycles or horses and carts or small trucks. So, with Coca-Cola's permission and the support of their bottler in Zambia - SABMiller - we're using Coca-Cola wholesalers as pick-up points for our anti-diarrhea kit. The key is to get wholesalers to agree to take on our product as well. Plus, we've asked the people who need these kits which retailers they would like to buy them from - and then recruited those retailers and trained them to explain how the medicine should be used. They're the ones who buy the commodity from

SIMON BERRY. **CEO COLALIFE**

Berry was born in Bath in the United Kingdom, At university he decided to work in the economic development sector. Fron 1986-89 he managed institutional development in northern Zambia for the UK government He has won a number of awards in social enterprise and open innovation.

So this is a private enterprise initiative?

Yes. It creates work for wholesalers and the entrepreneurs who transport and profit from it. Consumers will be healthier and their children will be able to get to school. It's a win-win. We've priced the kit at a level which people said they could afford: about one dollar.

How easy was it to get Coca-Cola on board?

I got nowhere at first. Then, four years ago, during our Facebook campaign, BBC Radio 4 did a piece about the idea and spoke to Coca-Cola's global head of stakeholder relations who said, "We'd like to talk more about this." Our relationship developed from there. They've given us a lot of insight into their business.

Do you transport medicines in the crates with the Coca-Cola bottles?

My wife, Jane, had the idea of utilizing the unused spaces between the bottles. We created a plastic wedge-shaped container called an AidPod that fits into those spaces and carries the kits. It's taken on a life of its own (and has been nominated for the Design Museum's Designs of the Year 2013). That it also fits into Coca-Cola crates is almost subsidiary now.

As with any emerging market, Coca-Cola is always trying to ensure that they get their product to every store shelf possible. While they take on this daily challenge, we are still piggybacking on Coca-Cola's processes and their infrastructure, but our medicine isn't going into Coca-Cola crates very often.

How much did you know about logistics at the beginning of all this?

Nothing, but in a way that's helpful because you ask lots of stupid questions. You're allowed to. And those stupid questions take you in directions even the professionals wouldn't have thought of. Now we've designed an end-to-end delivery system and have a value chain that works at every step.

What's driving you?

The fact that children in developing countries are 20 times more likely to die before the age of five than children in developed countries, and their second biggest killer is diarrhea. We want ColaLife to have a significant impact on child mortality. We've sold a huge number of kits. Now we want other established big players to see what we're doing and incorporate the principles into their own programs, and health organizations to recognize small retailers in remote communities as legitimate channels for the delivery of medicine. — *Tony Greenway*



Find out more about AidPods at:



the Coca-Cola wholesaler.

WHAT'S THE STORY, MR. AMATSU?



Catwalk: Fashion changes fast, and it's important to see the actual clothes.

More about Amatsu's collection at Mercedes-Benz Fashion Week Berlin at:



tinyurl.com/DHL-yuamatsu



TOKYO TO BERLIN AT THE SPEED OF YELLOW

Japanese designer Yu Amatsu took his collection to Berlin this season, with DHL helping his label, A Degree Fahrenheit, to raise European temperatures.

New York.

My own collection on the catwalk at Mercedes-Benz Fashion Week Berlin – what an amazing feeling!

Last year I was honored to receive the DHL Designer Award at Mercedes-Benz Fashion Week Tokyo. With the shipping credit DHL awarded to me, I was able to get my collection to the fashion crowd in Berlin. This was inspiring and I made many great contacts with industry insiders and trendsetters from all over the world.

DHL is a global logistics company and that's a symbol for my work: Logistics is essential for fashion. Fashion changes very fast, and it's not only necessary to transport concepts, images, and data,

but also the actual clothes. It is crucial that buyers and media at the key shows have access to these clothes, to see and touch them to have a sensory impression. My own design process starts when I've got the cloth in my hand. We shouldn't be too theoretical, we need concrete things and the logistics companies make it possible.

This was my first time showing my collection outside Japan. The Brandenburg Gate was a great venue and the whole event was extremely well organized. I am very thankful for the opportunity and I was thrilled to be there. My immediate focus is now on showing at home at Mercedes-Benz Fashion Week Tokyo!

YU AMATSU'S RUNWAY SUCCESS wins **GEN ART** Avant-Garde Award two years running in

chosen for Shinmai Creator's Project 2009, presents debut

collection 2010.



represents Japan at the Shanghai Expo 2010.



receives DHL Designer Award at at Mercedes **Benz Fashion Week** Tokyo in March 2012.

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BUSINESS

THE CHALLENGES OF SUSTAINABLE **SUPPLY CHAINS**



Best of logistics ONLINE



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