Delivered.
THE GLOBAL LOGISTICS MAGAZINE

ISSUE 03/2014

BUSINESS
Big data gets bigger
Ways you can make the most of this vital resource

SOLUTIONS
Multimodal mix
Road, air, sea, rail – how do you strike the right balance?

VIEWPOINTS
Sir Richard Branson
Virgin’s founder on innovation, success, and the “B Team”

NEW FORMULA FOR PHARMA
Life sciences and healthcare looks beyond its traditional strengths
Dear reader,

Regulation, cost pressures, new growth markets – these are just a few of the topics we will discuss with industry leaders at DHL’s 14th annual Life Sciences and Healthcare conference in Shanghai this month.

In our industry focus, Delivered. takes you up close to what occupies the minds of senior executives in the sector.

Dr. K. Anji Reddy, the founder of Dr. Reddy’s Laboratories, was one of the architects of the modern drug industry in India, and Dr. Ravi Prakash Mathur, Dr. Reddy’s SCM Director – Head of Logistics, shares with us how the company drives success in the ever-evolving pharmaceutical sector.

Sir Richard Branson is considered to be one of the world’s most successful entrepreneurs, and perhaps one of the most envied too as he manages to run his international businesses, innovative ventures, and social responsibility projects from the comfort of his own Caribbean island. Busy or not, Sir Richard found time to share with Delivered. what spurs him on and what is next on his agenda.

As Virgin Galactic is about to introduce us to the concept of space tourism, futurists and thought leaders believe planetary living is also within our reach – and MIT has even planned an interplanetary supply chain. Delivered. gives you a glimpse of what these supply chains may look like, and what it takes to transport supplies in this most challenging of environments.

Please join us as we venture into space – quite possibly logistics’ final frontier.

Sincerely,

Bill Meahl
Chief Commercial Officer, DHL
A logistics milestone in the MENA region

Opening of the largest DHL Express ground operations facility in the Middle East gives MENA businesses a boost

With the economy of the United Arab Emirates growing from strength to strength, the need for world-class logistics solutions connecting the region with the rest of the world is increasing. DHL Express’s decision to build a new logistics center in Dubai will go a long way to meet that need. The new ground operations facility is just minutes from the heart of Dubai in the Meydan Racecourse district, a prime business location. As it begins operations, it is the largest DHL Express center for ground operations in the Middle East and North Africa, connecting the region to DHL’s global network and providing improved transit times and performance. Covering a land area of 17,265 square meters, the Dubai facility combines an indoor sorting and loading area as well as a new country office for DHL Express UAE. Worth an estimated $27 million and built in partnership with MGE Middle East General Enterprise L.L.C, it boasts state-of-the-art features, best-in-class handling processes using the latest automatic handling equipment, and the latest communications technology. The new facility prides itself as an environmentally responsible development. In keeping with this concept, it is designed with energy efficient management systems and supply chain equipment. With its central location in Dubai, the new DHL Express UAE Country Office and ground operations facility will better connect to customers and will be able to offer faster transit times, earlier deliveries, later pick-ups, and faster access to international markets for companies doing business in the region.

GREAT THINGS AHEAD FOR AFRICA

Africa’s economies are developing fast. Commercial opportunities abound and more and more companies are looking to invest in its diverse markets. The International Monetary Fund predicts an economic growth rate of 2.8% in 2014 and IATA estimates that Africa will be the fastest growing region globally over the next four years. While advancements in manufacturing, e-commerce, technology, construction, and services have contributed to the positive trade forecast, it is the entrepreneurial spirit of Africa’s SMEs that is likely to be a major engine of future growth. Some of the continent’s fastest growing markets include Ethiopia, Ghana, and Nigeria. After rebasining its GDP to include previously unaccounted industries such as telecoms and IT, Nigeria has moved past Nigeria in the November issue of Delivered.

“AFRICA IS NOT ONLY THE LAST FRONTIER BUT POSSIBLY THE BIGGEST FRONTIER FOR BUSINESS.”

— Ken Allen, CEO DHL Express Sub-Saharan Africa commented, “We have a firm belief that Africa is delivering on its obvious promise and have continued with expansion plans throughout Sub-Saharan Africa, investing heavily in facilities and increasing our vehicle and aviation fleet.”

— Look out for an in-depth country report on Nigeria in the November issue of Delivered.

South Africa to become Africa’s largest economy, with a GDP totaling $509.9 billion. Charles Brewer, managing director DHL Express Sub-Saharan Africa commented, “We have a firm belief that Africa is delivering on its obvious promise and have continued with expansion plans throughout Sub-Saharan Africa, investing heavily in facilities and increasing our vehicle and aviation fleet.”

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A long-term investment in new technologies and fuel concepts is part of the DHL climate protection program, GoGreen. That commitment includes the company’s fleet of alternative vehicles expanded to 10,500, including electric, bio fuel, gas, ethanol, and dual fuel. Electric vehicles like the Renault Kangoo Z.E., currently making deliveries across Europe, are particularly suitable for urban areas, where their CO₂ efficiency is at its greatest.

PRINTING A NEW ARM

The first thing 16-year-old Daniel did after receiving a prosthetic arm was to eat a chocolate brownie. Feeding himself had not been possible since losing both his arms in a bomb blast two years earlier in war-torn South Sudan. Daniel’s life was saved by soldiers who took him to hospital, but it was the new arm that gave him back his hope and independence. The prostheses were the first of its kind, created on-site at the refugee camp where Daniel was living, using 3D printing technology. The idea was the brainchild of California-based Not Impossible Labs, who crowd-sourced innovators from around the world, including the inventor of the Robohand, to develop the 3D printable prostheses.

After successfully printing and fitting an arm for Daniel in November 2013, the project began training locals to print and fit additional hands and arms for the many other amputees. It’s part of a larger project undertaken by Not Impossible Labs to resolve healthcare issues using low-cost, do-it-yourself solutions to enable high-tech devices to reach people in need.

“We’re hopeful that others around the globe will utilize the power of this new technology for similar beginnings,” said Not Impossible founder Mick Ebeling. The prostheses’ specifications are free and open source, enabling production by anyone, anywhere — changing lives for Daniel and others like him around the world.

Learn more about Not Impossible Labs at: www.notimpossiblelabs.com/
Amazon Dash

E-tail versus retail continues: Dash, a handheld gadget created to simplify food shopping, makes online purchases even easier. The customer simply scans barcodes or speaks into a microphone to create a shopping list for Amazon Fresh, the e-tailer’s food delivery service.

Improved tracking for ocean shipments

Position tracking and temperature control capabilities for shipments by sea are getting better. With DHL Global Forwarding’s Ocean Secure service, customers can now access real-time information on the location and condition of their sensitive cargo and take remedial action when necessary.

Strategy 2020 outlines DPDHL priorities

With Strategy 2020, Deutsche Post DHL has outlined the Group’s strategic priorities for the coming years and set ambitious financial targets. Strategy 2020 builds on the company’s core strengths while emphasizing organic expansion in emerging markets and e-commerce logistics. It aims for sustainable profitable growth, with the goal of becoming the leading force in the logistics industry.

FIVE NEW AIRPLANES

Five new Boeing 737-400 aircraft are to be added to the DHL network, fleet serving the Americas, providing more fuel-efficient planes better suited for inter-regional routes. Part of a multi-year service agreement between U.S. cargo carrier Southern Air and DHL, the new fuel-efficient planes will fly routes on rapidly growing trade lanes from Caracas, Venezuela to Barbados, Trinidad and Tobago, Bogota, Colombia, and Panama. In the U.S., the new aircraft will add flights from Cincinnati to Philadelphia, Hartford, and St. Louis.

Crowdfunding a cure

With average annual healthcare costs in the United States at $8,000 per capita, crowdfunding sites such as Kickstarter, GoFundMe, and Giving Forward have become a go-to resource for many patients. Launched several years ago as a means of garnering financial backing for projects ranging from movies to unusual inventions, such sites now also see some patients and their families turning to crowdfunding to cover medical costs. And it seems to be working, replacing old-fashioned fundraisers like bake sales. In 2012, the most common request for funding on GoFundMe was medically based, with one cancer patient raising over $144,000 in donations.

Safe for packages

DHL’s new Secure Package Box will allow customers to take delivery of items even when not at home. The box comes in various sizes and formats, costing from $13.00, and is installed outside the house. It can only be accessed by the owner and designated DHL couriers. So far, more than 500 boxes have been tested in two pilot cities in Germany – Bonn and Ingolstadt – with a nationwide rollout taking place in May this year. The Secure Package Box ensures DHL customers receive their parcels safely and on time, and couriers don’t need to make return trips, which can drive up the total cost of last mile deliveries.

big pharma battles neglected tropical diseases

The World Health Organization’s ambitious program to control or eradicate 10 out of 17 of the world’s most devastating neglected tropical diseases (NTDs) by 2020 has brought together some of the world’s leading pharmaceutical companies, including GlaxoSmithKline, Merck KGaA, and Johnson & Johnson. The NTDs targeted affect more than one billion people worldwide and are endemic in 149 countries. By controlling and preventing the transmission of diseases such as soil-transmitted helminthiasis (STH), otherwise known as intestinal worms, the program aims to improve the quality of life of those affected and contribute to the overall development of an area by removing illness as an obstacle to future success. The Children Without Worms project has allowed countries to significantly improve their outreach for treating STH, while also providing the education necessary to help prevent more cases in the future.

“The support of Johnson & Johnson has been fundamental in improving the health of our children,” said Dr. Martha Reyes, Director, National Immunization Program, Nicaragua, where they are now able to reach all children through age 12.

In 2010, Johnson & Johnson increased its commitment from 25 million to 200 million annual doses of Vermox for the treatment of STH in school-age children. While GlaxoSmithKline donates 800 million albendazole doses annually, both to treat STH infection in school-age children and for the elimination of lymphatic filariasis (LF), more commonly known as elephantiasis. DHL is working with the WHO, the pharmaceutical industry, and organizations on the ground to ensure the donated drugs are delivered through an effective end-to-end supply chain.

Building a better box

The humble shipping container has been a huge boon to global trade since its invention in 1956, but as so often, there’s always room for improvement. The European Commission is looking at the advantages of making containers out of carbon-fiber composites. Lighter and easier to use, a carbon-fiber container would prove cheaper than its steel equivalent after just 120,000 kilometers – it could even be designed to fold flat when empty and would improve security as the material can be more easily scanned.

Crowdfunding a cure: It doesn’t cost the world to save the planet

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New lease on life sciences

The world’s healthcare requirements are changing, and the life sciences industry needs to supplement traditional strengths in research and innovation with a transformation in the way products are made, sold, and delivered.
It is also a tribute to the continuing innovation of the research community. Ten of the new products launched last year work in ways that no drug has before. Worldwide, 70% of the 5,000 or so new molecules currently in clinical trials have the potential to become “first-in-class” medicines. Around one-third of recent drug launches are biopharmaceutical products, complex molecules engineered from living cells rather than simpler chemical building blocks. Forecasts suggest that by 2018 half of the top 100 pharmaceutical products will be biologically based.

Inventing new drugs is difficult. A single approved medicine can take up to 15 years to develop and can cost more than $1.2 billion. For pharmaceutical companies, however, that challenge is increasingly being compounded by difficulties in getting their products to the right patients at the right time, and at the right price.

Meanwhile, time is running out for older, established products. When patent protection on big-selling drugs expires, competitors rush generic alternatives to market at lower prices, causing the value of sales to drop by 70% or more. In the United States, generic medicines accounted for less than half of all prescriptions in 2000; by 2012 it was 84%. In that year alone, patent expiry is estimated to have cost the industry $58 billion in sales, and another $230 billion is at risk between now and 2018 as more products reach the end of their patents.

Customers are putting pressure on prices, too. As populations age, disease profiles change, and sophisticated new treatments become available, the cost of healthcare is rising. According to OECD forecasts, if left unchecked, demand for health-related spending in developed economies is set to rise from 6% of GDP today to 14% by 2060. Governments, healthcare providers, and individuals are pursuing policies to contain this growth wherever possible, which in turn puts increasing pressure on the healthcare industry to demonstrate the cost-effectiveness of its offerings.

The industry’s established manufacturing and supply chain methods don’t stand up to that scrutiny. High inventories and expensive transportation can help shield customers from the effects of long cycle times and inflexible manufacturing processes, but they also add costs that the industry can no longer afford.

Frustratingly, for manufacturers and patients alike, the industry’s high-cost supply chains aren’t preventing serious service issues from occurring. According to U.S. Food and Drug Administration (FDA) figures, American hospitals and pharmacies are currently experiencing around a hundred drugs shortages. Supply problems have many root causes, from lack of appropriate manufacturing facilities to problems obtaining raw materials. Advanced biopharmaceutical products are notoriously tricky to produce, with low yields and constrained production capacity. Quality problems are becoming increasingly significant, too, particularly as regulators around the world become stricter in their scrutiny oversight and will readily shut down production facilities or recall products that don’t meet the necessary standards.

Market access challenges are even more significant in the developing world where demand for healthcare products is exploding. The market for pharmaceutical products in BRIC economies rose by 22% in 2011, for example, almost nine times the global average. However, as a fraction of GDP, healthcare spending in emerging economies is still one-third of that in rich countries. The difference in absolute terms is even starker: per capita healthcare spending in Germany is more than $4,000, compared with around $130 in India and less than $100 in many African countries. Factor in the vast size of emerging regions, and it becomes clear that the healthcare industry must find new ways of doing business if it is to serve these markets effectively.

Low-cost generic medicines selling in Asia at one or two cents a dose may seem far removed from advanced biopharmaceuticals at $1,000 or more, but the cost of making and distributing either of these products forms a much higher fraction of the final selling price than it does with traditional patent medicines. This is forcing healthcare companies to reassess their manufacturing supply chains and delivery models. The change is already underway, and over time it is likely to be as fundamental as anything the industry has faced before.
to embrace not just the overall supply chain but also that they have their supply chains under control from Orfanos. “As more countries adopt stringent regulations and transportation, and that is increasingly the temperature and humidity requirements during storage," says Orfanos. "Manufacturers are now looking to get that connection back.”

In some cases, this requirement is driving structural changes in the industry as companies move from tiered supply chains to direct-distribution models. Such models can also offer cost benefits, for example by improving product visibility in the supply chain and allowing inventory levels to be reduced from months down to weeks or even days.

To balance the benefits of direct control against the costs of implementation, manufacturers are increasingly outsourcing both the execution of their supply chains and the ownership of the necessary assets to third-party service providers. As a natural extension of this approach, they are also exploring the use of shared-service models, which offer additional benefits in terms of efficiency and flexibility. "We began to see a strong growth in interest in shared services during the 2008 recession," says Orfanos. “Initially, companies were interested in turning the fixed cost of logistics into an infrastructure variable cost but over time they’ve begun to see real benefits in adopting shared facilities, particularly in emerging markets where they don’t have the secure volumes to justify dedicated assets.”

"The forces driving life science companies to think harder about their logistics and distribution models are only likely to intensify in years to come. The emergence of autologous cell therapies, produced by genetically modifying the patient’s own cells, will demand fast, efficient, and fully traceable round-trip logistics between patients and manufacturing sites. Regulators in even the most remote emerging markets will soon demand the same safety and security standards as the developed world. For healthcare players, the supply chain is becoming every bit as important as the research pipeline." — Jonathan Ward

California, which will begin to phase in new rules as of 2015, healthcare regulators around the world are starting to require electronic tracking or “e-pedigree” systems that allow individual product batches to be traced from manufacturer to patient.

There are also potential commercial benefits from greater control over the downstream supply chain. “Using wholesalers or distributors to move products to market can simplify distribution, but it also creates a disconnect between life science companies and the healthcare professionals and patients who are their customers,” says Orfanos. “Manufacturers are now looking to make that connection back.”

WHAT HAS BEEN THE IMPACT OF NEW REGULATIONS SUCH AS THE EUROPEAN GOOD DISTRIBUTION PRACTICE GUIDELINES?

Quality and compliance is always a critical priority for both science supply chains and the industry as whole, together with logistics suppliers like DHL, who are continually reviewing, updating, and auditing its processes and quality management systems to ensure they are aligned with the relevant regulations. Last year’s changes in Europe certainly led to a spike in such activity, but that’s only part of an ongoing process. Equally important for many of our customers is the way that a number of emerging markets are quickly adopting similar strict logistics and distribution standards.

How is DHL’s life science companies and healthcare markets evolving to help meet the needs of the industry? Our extensive (and rapidly growing) dedicated life sciences infrastructure serves huge and fast growing dedicated life science supply chains typically required tightly controlled transportation, handling, and storage, but those requirements are always a critical priority for both science supply chains and the industry as whole, together with logistics suppliers like DHL, who are continually reviewing, updating, and auditing its processes and quality management systems to ensure they are aligned with the relevant regulations. Last year’s changes in Europe certainly led to a spike in such activity, but that’s only part of an ongoing process. Equally important for many of our customers is the way that a number of emerging markets are quickly adopting similar strict logistics and distribution standards.

WHAT ARE THE MAIN LOGISTICS CHALLENGES THAT YOUR LIFE SCIENCE AND HEALTHCARE CLIENTS FACE TODAY?

Our customers are managing starkly opposed pressures. On one side, the entire industry is becoming increasingly cost sensitive due to rising competition and tighter regulatory constraints in established markets and the need to serve huge and fast growing emerging economies where individual spending power is much lower. On the other, complexity is rising fast as supply chains get longer and more elaborate and new products are introduced. Medical products have always required tightly controlled transportation, handling, and storage, but those requirements are growing in a smaller, more connected world, offering opportunities and challenges. "We began to see a strong growth in interest in shared services during the 2008 recession," says Orfanos. “Initially, companies were interested in turning the fixed cost of logistics into an infrastructure variable cost but over time they’ve begun to see real benefits in adopting shared facilities, particularly in emerging markets where they don’t have the secure volumes to justify dedicated assets.” In light of increasing cost pressure and regulation, life sciences and healthcare companies are demonstrating resilience and reinvention. According to Deloitte’s 2014 outlook for the sector, drivers for growth include technological advances and product innovation. Yet companies are also faced with four issues offering both challenges and opportunities:

Healthcare reforms
Regulatory compliance is a critical issue, particularly in emerging markets in Asia and Latin America. Non-compliance can expose an organization to revenue losses, reputational risks, and can raise patient safety issues, even in criminal sanctions. These may include government policies and mandates, drug safety, counterfeiting, information society and privacy, intellectual property protection, corruption, MA&V, and other third-party risks.

Innovation and value
Turning innovation into commercial products is a major challenge. Many innovations require expertise in a number of scientific disciplines. Consequently, today’s innovations require collaboration and cooperation – both characteristics of new risk-sharing business models in the sector. Increasingly, large and small companies are engaging in joint ventures, partnerships, and acquisitions to fulfill their objectives.

"QUALITY AND COMPLIANCE IS ALWAYS A CRITICAL PRIORITY FOR LIFE SCIENCE SUPPLY CHAINS"
TO THE PHARMACY AND BEYOND

The life sciences industry remained highly insured for longer than most others, but changes in the sector are now driving rapid growth in outsourcing right across the value chain.

The high development costs and tightly regulated environment of the healthcare sector have, historically, encouraged companies to keep much of the value chain in-house. But many of the forces shaping the sector today make outsourcing a compelling proposition. Volatile demand means it is harder to keep wholly-owned production and distribution assets profitably busy. More activity is moving to lower-cost regions, and life science players are increasingly letting partners in contract manufacturing organisations (CMOs) take on the costs and risks of building and running networks in them. The business is getting more diverse and specialized, too, forcing players to ask themselves whether they can justify the cost of their own facilities, or whether they should leave some things to others with advantages in know-how or scale.

Logistics and distribution activities are a key area of outsourcing growth in life sciences, as companies move into new markets and seek to improve the cost-effectiveness and flexibility of their downstream supply chains. But the evolution of outsourcing in the sector has been shaped by the relative scarcity of suppliers that can operate to the right technical, regulatory and quality standards. “Even in Europe, we’ve seen different markets adopt logistics outsourcing at different speeds,” says Dr. Eddy De Vita, CEO Italy and Sector Leader Life Sciences and Healthcare Europe at DHL Supply Chain. “In Italy, a few local players saw the opportunity and invested in the right capabilities some time ago, and now the pharmaceuticals market is basically 100% outsourced. In Germany, by contrast, there wasn’t the same network of suppliers, and so companies kept more of their logistics in-house for longer.”

The move to outsourced logistics now has considerable momentum, however. Industry magazine Pharmaceutical Commerce estimates that the sector will spend $5.3 billion on cold chain logistics services alone in 2014, along with almost $3 billion on logistics to support clinical trials. And it isn’t just shipping and storage that are being outsourced. “We are carrying out more value-added services for our clients’,” says De Vita. “From packaging in our own GMP-certified facilities to handling invoices and sales orders.”

Changes in healthcare technology will serve to further increase the demand for highly sophisticated logistics capabilities. Emerging genetic and cell therapies will require fast, precise two-way connections between patients and manufacturing sites, for example. Service models are changing, too. “Patients are increasingly accessing treatments in their own homes,” notes De Vita. “That’s already requiring us to extend controlled transportation to thousands of new locations.” — Jonathan Ward

NEW MEDICINE. LSH companies are no longer holding so much of the value chain in house.
“A RESPONSIVE AND AGILE SUPPLY CHAIN HELPS AN ORGANIZATION TO ACHIEVE EFFICIENCIES IN ITS OWN SYSTEMS AND MEET CUSTOMER DEMANDS”

EXECUTIVE VIEW

REDDY’S FOR TAKEOFF

Like any pharma company operating in a global marketplace, Indian-based Dr. Reddy’s Laboratories needs to run a highly optimized, highly effective supply chain. Dr. Ravi Prakash Mathur explains how Dr. Reddy’s meets its current supply chain demands – and the challenges it can expect in the future.

Last year, Dr. K. Anji Reddy, the founder of Dr. Reddy’s Laboratories, hailed as one of the creators of the modern drug industry in India, passed away, aged 72. The company he built up and left behind – a 30-year-old integrated global pharmaceutical business headquartered in Hyderabad – has been a big success story. This is a trusted brand that generated consolidated revenues of $2.23 billion in 2012/2013, while featuring on the Forbes Asia Fab 50 list of the top companies in the region.

The accolades don’t stop there. In 2012, Dr. Reddy’s Laboratories was recognized as one of India’s Best Managed Boards in a study by the Economic Times and Hay Group, and named Best Company in an Emerging Market at the 9th Annual Scrip Awards ceremony in London in 2013. Earlier this year, Dr. K. Anji Reddy was posthumously conferred the Hall of Fame Award at CNBC-TV18’s India Business Leader Awards. It was a fitting tribute to a remarkable man. “In improving access to affordable, high quality medicines and in innovation, his contributions have been extraordinary,” said his son, Satish Reddy, MD and COO of the company. Dr. K. Anji Reddy had the courage, expertise and vision to strive for excellence so that his company could be “committed to providing affordable and innovative medicines for healthier lives.” Over the decades, reliable logistics have played a central role in helping make that vision a reality.

Dr. Ravi Prakash Mathur, SCM Director - Head of Logistics, is part of the team seeking to uphold Dr. Reddy’s legacy and drive the company towards future success. In the complex and constantly evolving world of pharmaceuticals, with its unblinking focus on product sensitivity and on-time delivery, this isn’t always easy. Yet Dr. Reddy’s Laboratories has never been afraid of a logistical challenge.

In looking to expand overseas, for example, it became a pioneer among Indian companies. Currently, Dr. Reddy’s Laboratories has manufacturing facilities in India, Mexico, and the UK, technology development centers in India, the Netherlands, and the UK, plus two plants in the USA. Through its three businesses – Global Generics, Pharmaceutical Services and Active Ingredients (PSAI), and Proprietary Products – the company offers a wide portfolio of products and services including Active Pharmaceutical Ingredients (APIs), Custom Pharmaceutical services (CPS), Generics, Biosimilars, differentiated formulations, and New Chemical Entities (NCEs).

Each business has its own unique supply chain requirement but all need to be responsive and agile. “A responsive and agile supply chain helps an organization to achieve efficiencies in its own systems and meet customer demands,” says Mathur. “In addition to the customer expectations across all regions it is also an integral requirement of all manufacturing organizations.”

17 THOUSAND staff and associates are employed by Dr. Reddy’s worldwide.
Mathur says that regulation is one of the most problematic areas for any pharma company to deal with – and it’s going to become more complex in the years ahead. “In pharma, we have to constantly watch out for regulatory changes,” he says. “The pharmaceutical industry directly impacts people’s health and thus is a highly regulated industry. Quality norms are getting stricter by the day. Commitment on safety, and environmental protection is also of utmost importance. We at Dr. Reddy’s not only meet standards and meet those requirements but also go beyond. Quality, benefits and safety including reliable storage and supply, are integral to our drugs. All our products meet regulatory and safety approvals.”

For Dr. Reddy’s Laboratories, a highly optimized, highly effective supply chain is its mission critical. To that end, it has been designed to be replenishment-driven and has several stellar features which have enabled it to power an efficient supply chain system. “That system assesses inventory at every supply chain node and enables transfer of consumption data, in order to supply inventory on the basis of most recent consumption,” says Mathur. “It truncates replenishment time and refills inventory as frequently as possible from the previous node to consumption points. It maintains buffer inventories at every supply chain node to meet immediate demand. This is a very different paradigm from the conventional forecasting-based system. As far as the generic business is concerned, Dr. Reddy’s supply chain is based on very many things which include navigating through a complex network of regulatory bodies, like customs and health regulators, operators of ports and airports, and third party logistics service providers.” His team oversees all of this, while giving utmost priority to preserving product quality, complying to regulatory norms during international transit, and ensuring supply chain integrity. Since the launch of new products is an integral part of Dr. Reddy’s business model, it’s vital that Mathur and his team are aware of each region’s different regulatory requirements.

Mathur oversees logistics for Dr. Reddy’s Global Generics business and, in theory, his team’s job is simple; to ensure their medicines reach patients across the globe on time. Yet its active pharmaceutical ingredients, finished dosage forms, and biological products are marketed to over 100 countries with regulatory requirements throughout the globe on time. Yet its active pharmaceutical ingredients, finished dosage forms, and biological products are marketed to over 100 countries with regulatory requirements throughout the globe on time. Yet its active pharmaceutical ingredients, finished dosage forms, and biological products are marketed to over 100 countries with regulatory requirements throughout the globe on time. Yet its active pharmaceutical ingredients, finished dosage forms, and biological products are marketed to over 100 countries with regulatory requirements throughout the globe on time. 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Yet its active pharmaceutical ingredients, finished dosage forms, and biological products are marketed to over 100 countries with regulatory requirements throughout the globe on time. Yet its active pharmaceutical ingredients, finished dosage forms, and biological products are marketed to over 100 countries with regulatory requirements throughout the global landscape. Looking to the future, Mathur knows there will be further supply chain challenges. The secret is to be agile enough to respond to them. “Changes in technology, regulatory environment, and competitive landscape lead to changes in any value chain,” he says. “And when these changes happen, one has to recognize the new fulcrum point of the value chain and respond accordingly.” He believes that the secret of good supply chain management is having an understanding of the ecosystem of international logistics and the knowledge of how to leverage it. “One needs to create and nurture relationships with the service providers that can bring solutions to the table and thereby create value for the organization,” he says. “For this, one also needs a good understanding of your own organization’s strategy and mission. Ability to put into place systems and processes is also important.”

DHL’s business relationship with Dr. Reddy’s has existed since 2004, and often includes the transportation of both time-critical shipments and products that have to be launched in global markets. “The company has a sharp awareness for our requirements,” says Mathur. “The quality and efficacy of our medicines must be 100% and that includes the absolute reliability of storage and transportation.”

With such a demanding role in the company, Mathur insists he is not particularly driven in his personal life. Away from work, he meditates to de-stress. “I believe meditation can help you not only relax but can also help you reconsolidate your energies,” he says. That’s just as well, because he needs all the energy he can get for the job he does, which, luckily, is one he loves. “My job gives me the opportunity to develop and implement new solutions that the organization can leverage,” he says. “It is exciting to explore new methodologies, processes, and technologies that can lead to meaningful change.” It’s a sentiment that Dr. K. Anji Reddy would wholeheartedly agree with. — Tony Greenway
Big data: Fuel for the digital age

With the quantity of data exploding – it’s predicted to hit 40,000 exabytes by 2020 (one exabyte is the equivalent of one billion gigabytes) – the question for business leaders in every sector is how best to exploit this seemingly endless resource to create competitive advantage.

These days, retail companies are going further – combining sales data with information about customers’ online behavior in order to anticipate demand. The online retailer, Amazon, for instance, recently patented a technique called “anticipatory shipping,” a method to start delivering packages even before customers click “buy.” Based on a customer’s previous orders, product searches, wish lists, returns, and how long their cursor hovers over an item, Amazon plans to box and have ready to ship products it expects customers will want, but haven’t yet ordered. The packages could wait at the shoppers’ hubs or on trucks until an order arrives.

In the same way, manufacturers with multiple sites around the world can launch a service to accurately plan procurement in their supply chains by combining their own tracking data with regional sales of end-products, returns, and repairs. According to a study by the McKinsey Global Institute, manufacturers store more data than any other sector – close to two exabytes of new data was stored in 2010 alone. “This sector generates data from a multitude of sources, from instrumented production machinery (process control), to supply chain management systems, and systems that monitor the performance of products that have already been sold.”

In supply chains, however, big data applications are not yet common, says Lora Cecere, founder of consulting firm Supply Chain Insights. “The traditional supply chain is invested in transactional data,” she says, “they are just starting to think about this whole world of unstructured data.”

Combining data from different sources holds huge potential. Companies can overlay the geographies of suppliers and distribution centers with statistics on tornadoes, floods, earthquakes, and other natural disasters, and then use predictive analytics to calculate the probabilities of such disasters occurring at each site. The results can help companies devise better business continuity plans, minimizing their supply chains’ exposure to these risks.

In fact, by exploiting the possibilities opened up by big data, supply chain risk management can be taken even further. Using a continuous stream of data from blogs, social media, and news sites, companies can track a wide variety of developments – from power outages to industrial action – in real time, across their entire supply chain. DHL’s new tool, Resilience360, does just that, making it possible to identify all sorts of potential sources of disruption and quickly put in place effective contingency plans.

On the other hand, by combining data from various sources – operational metrics on deliveries and service quality, complaints to customer services, and comments posted on social media sites – companies can spot problems early on and take corrective action. “By setting up listening posts to monitor customer sentiments, which is the mining of unstructured text, companies can improve brand protection and reduce the time to respond to any problems,” says Cecere.

And as more and more everyday devices are connected to the web, data from the Internet of Things can be used to create new revenue opportunities for businesses. In Japan, Toyota plans to launch a service that uses information on vehicle locations and speeds, road conditions, and other parameters collected and stored via the telematics in cars. Combined with other information, it will help local governments improve traffic flow, provide mapping services, and support relief and aid services in the event of a disaster.

According to Cecere, supply chain and logistics managers “can learn a lot about the commercial benefits from what other types of companies are doing with big data, how they are using different types of data that is coming at them at high velocity.”

Big data is an opportunity for competitive advantage just waiting to be tapped. — Tom Harbert

REFINING CRUDE

If raw data is like crude oil, then it must be refined to produce the kind of fuel that will power the digital economy. With the volume of data doubling every two years, the challenge for companies is not just how to process it all, but how to find and exploit the information within.

In his trend report, “Big Data in Logistics,” author Markus Kückelhaus explains how the logistics industry can extract information and predict the ways that produce competitive advantages and, in some cases, create entirely new revenue sources. With examples of best practice from other sectors, he shows the change of mindset that is required.

Mobile phone operator Telefónica, for example, has a huge amount of data from the digital trails left by its subscriber base. The company realized that, when the data is anonymized and aggregated, it can be used to gain insights into how segments of the population behave collectively, and that this information can, in turn, be of value to other businesses.

Every company today owns a lot of data. The key is to find ways of creating additional value from these information assets.

For a copy of the trend report, go to:

tinyurl.com/DHL-bigdata
COULD “NO DATA” BE THE NEXT BIG THING?

Amid growing unease around the commercial gathering of personal information, collecting less data—or even no data at all—is starting to be seen as a possible competitive advantage.

Today’s technology enables businesses to collect personal data from customers on an unprecedented scale. This is big data at the personal level—and it could be worth $1 trillion by 2020 in Europe alone, according to the Boston Consulting Group. But unease about the amount of private information shared online is mounting and, as a result, a new market in products and services that help protect privacy is emerging. Tools such as privacycore help consumers estimate the privacy risk of using a website based on how it handles personal and tracking data. Consumers can even block brands they don’t trust from gathering data about them, using services like Ghostery. Devices such as Safeplug allow users to browse the Internet in private by routing all traffic through an anonymous network. The search engine DuckDuckgo does not send users’ search terms to other sites, thus preventing what it calls “search leakage.” And for smartphone users wishing to prevent third parties following or eavesdropping on them, there is the Blackphone, unveiled in February this year.

It’s clear there is growing demand among consumers for more control over how their data is collected and used. This fact is not surprising. Digital footprints reveal not just search terms, IP addresses, names, phone numbers, and residential addresses, but also spending habits, lifestyles, preferences—and those of friends. It is now almost impossible to say which information is collected by whom or how it is used.

According to a survey conducted by the Pew Research Center, 86% of Internet users report that they have tried to remove or mask their online actions, while only 37% believed it was possible to do so. Research by Ipsos Mori, in the UK, reveals that the number of Internet users that trust companies with their personal information online is falling year on year, and a hefty 45% of respondents say they do not trust companies with any personal data. This lack of trust will take its toll on online businesses, unless something is done.

In the aftermath of the U.S. National Security Agency’s data gathering scandal, tech firms like Apple rushed to reassure consumers that their business does not depend on collecting personal data—effectively distancing themselves from the likes of Facebook and Google. One of Europe’s biggest retailers, Sonae, in Portugal, recently surprised industry observers by announcing that they would give back to their customers the data collected through their loyalty card program. In this environment, could collecting no data be a viable option, possibly even a competitive advantage?

Could firms that actually forgo the collection of personal data altogether, while still providing an excellent service to consumers, also be winners in the big data game? — Janet Anderson

THE LONG HAUL

Private companies are already involved in resupplying the International Space Station. Now, logistics researchers are developing solutions for the Moon and Mars.

Think your supply chain is difficult? Try supplying life-saving equipment over a 54-million-kilometer voyage between two moving planetary bodies. Plus, your vehicle must carry all fuel onboard, and can’t stop for repairs along the way.

To prepare for manned missions to Mars or a return to the Moon, researchers at the Massachusetts Institute of Technology have developed an interplanetary supply chain management architecture for space exploration. Lead researcher Olivier de Weck says the team developed the SpaceNet software to model the flow of vehicles, crew, and cargo from the ground through space to orbit or a planetary surface.

Supply chain optimization is essential when it costs $15,000 per kilogram to push a payload into geosynchronous orbit, and an estimated $41,000 per kilogram to land cargo on the Moon. Long-range military operations and supply chains for remote areas such as NASA’s Arctic base gave some initial insights. The researchers created a network of space logistics spanning Earth, the Moon, and Mars, as well as Lagrangian points—locations where the offsetting gravity between planetary bodies makes it easier to park spacecraft.

From the research, two key elements emerged: repositioning and refueling. Creating a depot at the Earth-Moon Lagrangian point would allow spacecraft headed to the Moon or Mars to take on supplies en route. Similarly, flexible refueling strategies could reduce launch weight and cost and reduce safety risks.

The team has also developed a container that searches its own contents via RFID, helping astronauts to find critical items stored onboard. On the International Space Station (ISS), misplaced supplies have shut down space walks for several days. Being able to find items you need is vital when there is no way you can easily send for replacements.

The ISS relies on manned and unmanned capsules for resupply missions. Along with the space agencies from Europe, Japan, and Russia, two private sector companies operate supply craft. One of these, SpaceX, is using the ISS as training for an even more ambitious project—the establishment of a permanent human settlement on Mars. SpaceX’s founder, Elon Musk, thinks that humans could become multi-planetary by 2025.

And Musk is not alone. The Mars One mission is already selecting from thousands of applicants who are willing to make the one-way journey to the Red Planet, and live there for the rest of their lives. — Gary Wollenhaupt
With the demise of the U.S. Space Shuttle program, the International Space Station some 380 kilometers above the Earth relies on manned and unmanned capsules for resupply missions. Over the course of a year about 9,000 kilograms of cargo is delivered to the ISS at 60-90 day intervals. During the average six-month deployment, the complement of six astronauts relies on these resupply missions for everything from breakfast food to spare parts to gear for the next science experiment. Also, each year about 2,000 kilograms of cargo head back to the surface, everything from trash to scientific samples. Planning for a resupply mission takes up to a year, with every square centimeter and gram accounted for in the cargo ship. Mission planners ensure potentially dangerous cargo is kept separate, and also ensure cargo is packed to withstand the extreme temperature and g-forces inherent in space flight.

Learn more about supplies into space at:

www.spacex.com
HOW TO HANDLE THE BIG BANG

The phenomenon known as “big-bang disrupter syndrome” has become an unpredictable but game-changing fact of life in the retail and consumer goods sectors. Here are some strategies for dealing with the new uncertainty.

Worldwide PC sales fell by 10% in 2013 – the biggest fall on record. According to computer industry analysts IDC, 2014 could see a further fall of 6%, taking PC sales back to 2008 levels. The cause? Searing sales of smartphones and tablet computers such as Apple’s iPhone and iPad. “While the PC still remains the primary computing device, PC usage is nonetheless declining each year as more devices become available,” explains Jay Chou, Senior Research Analyst at IDC.

The meteoric rise of the smartphone and tablet computer is just the latest manifestation of what’s been called “big-bang disrupter syndrome,” as Larry Downes and Paul F. Nunes termed this phenomenon in a Harvard Business Review article in March 2013. Simply put, big-bang disrupters are innovations which reframe product categories and markets almost overnight, powered to dominance by consumers abruptly changing their previous product preferences. As with the fabled flutter of a butterfly’s wing that becomes a hurricane, small shifts can quickly become mass movements. In short, instead of incremental product evolution, they abruptly redefine the realm of the possible – leaving retailers and consumer goods manufacturers struggling to catch up.

Adding to the challenge is a digitally empowered, global middle class that is able to spot, evaluate, and make the move to disruptive products faster than ever before. From Amazon.com to TripAdvisor, consumers are interacting directly with each other to recommend new products and services, leaving traditional marketing channels such as advertising and retail sales-people increasingly frozen out of the loop.

For businesses looking at how best to respond to such disruption, the dangers are obvious. Consider Microsoft’s recent $900 million write-down of its inventory of Surface RT tablet computers. At such rapid inflection points, in short, no one wants to be left holding inventory that consumers don’t want to buy. So what is the alternative? A report published by DHL Supply Chain, entitled “Consumer as Disruptor,” points to several promising anti-disrupter strategies – including postponement, flexible shared networks, and tailored sourcing. “Retailers and consumer goods manufacturers are rethinking their supply chains with an eye towards building a portfolio of options, risk tolerances, and capabilities,” notes report author Lisa Harrington, a lecturer in supply chain management at the University of Maryland’s Robert H. Smith School of Business. In this new, disrupter-prone era, she adds, “...they know they must create a supply chain that is fit for purpose.” Tailored sourcing, for instance, sees low-cost and efficient sourcing for the high-certainty portion of product demand separated from the more flexible, higher-cost sourcing that is used to service less certain portions. Shared networks, meanwhile, see consumer goods manufacturers recognize that individually delivering to retailers is not a strategic competitive differentiator and that sharing delivery networks cuts costs for all.

Postponement, finally, delays final product differentiator decision until closer to the point of sale, positioning inventory where it is most flexible, reducing both inventory levels and the risk of obsolescence. “In situations where demand is building strongly, positioning inventory more centrally can help manufacturers and retailers respond to demand more nimbly as it arises,” observes Richard Wilding, Professor of supply chain strategy at the Cranfield School of Management. In the short term, big-bang disrupters, the consumer marketplace is changing rapidly, and supply chains must adapt. – Malcolm Wheatley

Finally full steam ahead in the Gulf?

With national rail projects across the Gulf States starting to take shape, the long-awaited plans for a connected railways project across all states and beyond look set to materialize, unlocking the potential for freight traffic and multimodal options.

I n 1908, the Kingdom of Saudi Arabia welcomed its first train. The Hejaz Railway was a narrow gauge railway (1,090 mm/3 ft 7 1⁄2 in. track gauge) that connected Damasco to Medina. “The plan was to connect Constantinople, the capital of the Ottoman Empire, with Mecca, Island’s holiest city. World War One intervened and the railway was shut down in 1915. Exactly a century later, Saudi Arabia and its fellow Gulf Cooperation Countries (GCC) first approved a feasibility study for a railway project linking Bahrain, Kuwait, Oman, Qatar, Saudi Arabia and the United Arab Emirates (UAE).”

After several years of shifting deadlines since 2008, it now looks like the project is coming to life, with designs for a 1,217-kilometer-long network due to be completed and construction to start in late 2014 or early 2015. According to Dr. Ramiz Al Assar, Resident Advisor from the World Bank to the GCC Secretariat General, the nearly $200 billion network of national rail networks across the Gulf States is due to be completed by 2018, will link major industrial zones, cities, and ports in the UAE, and eventually connect with the GCC and Saudi Arabia, which already operates a railway network with a total length of some 1,830 kilometers, extending from its oil-rich Eastern Province to the capital, Riyadh, has already laid the first 120 kilometers of the GCC network. – Michelle Bach
MASTERING MULTIMODAL

Air freight or ocean? Rail or road? The right multimodal mix can cut costs, help to reduce inventories, increase responsiveness, and lower carbon emissions. The question is, which mix is the right one?

Globalization has left businesses with a headache: ever-longer and more complex supply chains, full of inventory. Ocean freight may be cheap, in short, but it slows responsiveness. Air freight is fast, but costly. Road freight provides door-to-door flexibility, but carries a penalty in terms of both carbon emissions and cost. Rail freight, meanwhile, offers lower costs and lower carbon emissions, but only between fixed points.

Smart strategies for integrating the right transport modes together within a single multimodal framework, reckon experts, can not only save companies up to 80% in cost but also deliver on other important strategic objectives. A shift to multimodal can reduce or even eliminate warehousing, by using ocean freight legs as “floating warehouses in transit,” as well as cut carbon emissions and improve responsiveness.

“Finding the right mix for a business is a very individual process,” says Joachim Kochsiek, expert for multimodal logistics at Fraunhofer Institute for Material Flow and Logistics. “There is no hard and fast ‘right’ answer. Getting the right mix between multimodal solutions depends on many factors – such as the product in question, the volume and frequency of shipments, the distance traveled, and more.”

Conducting an in-depth, individual analysis is essential. “In addition to the basics of cost and speed, shippers consider reliability, predictability of lead times, and overall ease of use when working with the ‘best mix of modes,’” says Richard Stewart, professor of logistics at the University of Wisconsin at Superior. Risk and reliability play a part too, as does carbon reduction when compared to sea or rail, or even eliminate warehousing, by using ocean freight legs as “floating warehouses in transit,” as well as cut carbon emissions and improve responsiveness.

As companies pull the right multimodal mix, shifts in freight patterns can be seen right across the United States, Europe, and Asia. Consumer goods and electronics, for instance, which once relied almost exclusively on air in order to get products into customers’ hands faster, now commonly go multimodal using rail or sea as markets are saturated and prices of goods have dropped. On the other hand, time can also be the primary factor for mode selection. During highly orchestrated global launches, the latest must-have tech gadgets are shipped on high-priority consignments by air to destinations around the globe, as consumers line up around the block, prepared to pay premium pricing up around the block, prepared to pay premium pricing.

“Multimodal is more than about connecting the different transport modes to leverage the individual strengths for a customer. Focus is on making the entire shipping process from booking to billing consistent, as simple as possible for the customer from every origin to every destination, no matter the transport mode, for B2B and B2C, shipments profiles. Customers deserve reliable lead times, full shipment visibility, a proactive customer service, and easy pricing rounding up a truly multimodal service,” says Thomas Kowitzki, head of product development at DHL Freight. “And that’s precisely what we offer. "Multimodal is more than about connecting the different transport modes to leverage the individual strengths for a customer. Focus is on making the entire shipping process from booking to billing consistent, as simple as possible for the customer from every origin to every destination, no matter the transport mode, for B2B and B2C, shipments profiles. Customers deserve reliable lead times, full shipment visibility, a proactive customer service, and easy pricing rounding up a truly multimodal service, “ says Thomas Kowitzki, head of product development at DHL Freight. “And that’s precisely what we offer. “Using ocean freight to feed a de-coupling point such as a warehouse, and then air freight for the final leg to the customer, combines cost savings with agility and responsiveness – but only if the de-coupling point doesn’t add dislocation and disruption,” he notes. DHL’s Selmoni concurs. “Shippers now expect to book their freight on a single interface, and get clear alerts about problems, and GPS location devices to support businesses in planning and organizing inter-modal transports. And as rail begins to displace road freight in the multimodal mix, carriers are starting to deliver solutions that meet shippers’ needs in a rail freight environment.

“We’ve developed autonomous temperature-controlled containers that can guarantee consignment temperatures from -25°C to 25°C – ideal for all kind of temperature-sensitive goods such as high-tech, perishables, or pharmaceuticals,” says Bruno Selmoni, head of road freight and multimodal for Asia Pacific at DHL Global Forwarding. “The containers are also equipped to be monitored for vibration levels, as well as with anti-tampering devices that instantly send alerts about problems, and GPS location devices to provide tracking information. ‘Companies are seeing that multimodal can offer more than meets the eye,’” he observes.

That said, points out Richard Wilding, professor of supply chain strategy at Cranfield University’s School of Management, while multimodal approaches can successfully create more resilient supply chains, it’s vital for businesses to understand not only the full risk profile involved in going multimodal, but also the correspondingly cost-to-serve implied by a multimodal transport solution. “Using ocean freight to feed a de-coupling point such as a warehouse, and then air freight for the final leg to the customer, combines cost savings with agility and responsiveness – but only if the de-coupling point doesn’t add dislocation and disruption,” he notes. DHL’s Selmoni concurs. “Shippers now expect to book their freight on a single interface, and get clear alerts about problems, and GPS location devices to support businesses in planning and organizing inter-modal transports. And as rail begins to displace road freight in the multimodal mix, carriers are starting to deliver solutions that meet shippers’ needs in a rail freight environment.”
B-EYOND THE BOTTOM LINE

The “B Team,” a group of globally renowned business leaders dedicated to making business work better for both people and the planet, are presenting an initiative aimed at fundamentally altering the way companies go about things.

Can business save the world? Not on its own, but it can certainly be an engine of change for the better. That at least is the view of a group of globally renowned business leaders and policy-makers brought together by serial entrepreneur Sir Richard Branson and Jochen Zeitz, former Chief Executive of sports goods company Puma, with the aim of making business “work better” – the B Team.

The team – whose members include Ratan Tata, Unilever Chief Executive Paul Polman, former Irish President Mary Robinson, and Muhammad Yunus, the microfinance pioneer and Nobel laureate – is the advance party for “Plan B,” an initiative aimed at fundamentally altering the way companies go about their business, putting their activities on a more sustainable footing that benefits both the planet and its people and not just the bottom line.

“We are at a critical crossroads,” explains Zeitz. “While business is responsible for many of the problems we see in the world today, business can also play a large role in developing and driving the solutions for many of these problems.” Among the problems the group cites are resource scarcity, climate change, and growing inequalities that, combined, will “undoubtedly fuel unprecedented levels of volatility and uncertainty.”

A further problem is that much of the business community does not realize this as it is mired in short-term thinking and chasing of immediate profits. That is where the B Team comes in, an accelerator of possible solutions and a means of spreading the word and responsibility, even if only to present themselves as a “better”, more humane outfit? Cynics might add that while undoubtedly many corporate types have their hearts in the right place, priorities are quickly established when it comes to the bottom line. Not so, claims Huffington. She cites the example of the coffee chain Starbucks which came under pressure from some shareholders to trim healthcare benefits, a demand it resisted on the grounds that they actually made commercial sense in terms of reducing longer-term costs as workers were healthier, productivity higher, and retention rates were better.

Kathy Calvin Chief executive of the United Nations Foundation, the wing of the U.N. that coordinates work with other international bodies, also considers it “old-fashioned” to think in terms of trade-offs between profits and principles. She sees business as an effective agent for policy change, as there is “a shift from rhetoric to action.” One reason is government, whose scope for maneuver has become more limited as public coffers thin out and fundamental issues of contention, such as climate change, are mired by a lack of necessary international agreement. Opinion polls surveys, such as the Edelman Trust Barometer run by the eponymous public relations group, rank business ahead of government in terms of popular trust, and note that the gap is increasing, despite the impact of recent scandals on the reputation of the corporate sector. Entrepreneurs such as Bill Gates lead approval rankings. Business leaders and entrepreneurs, Calvin says, are in a position to change their own operations and then share their experiences with others. And this is not happening in a vacuum. Right now, she adds, there is “lots of debate” at the U.N. about a development framework for the next 15 years, which will be called the Sustainable Development Goals following on from the Millennium Development Goals that shaped policy from 2001 until today. “We need the voice of business. It needs to be at the center of it,” she told French television.

However, speaking out on issues that touch on politics and policy has often been something that businesses struggle with. Sir Richard Branson acknowledged this, and says that the B Team aims to address it with public encouragement for those who do put their head above the parapet. Most recently, he praised Apple boss Tim Cook for refusing to be cowed by a climate change skeptic think tank and shareholder in the computer company, which had attacked the group’s sustainability program. Cook stood his ground, telling his critics to “get out of the stock.”

The B Team also singles out certain non-members for praise. For example, it recently cited Swedish home interior group Ikea as an inspiration for its drive to promote sustainability across its operations. The overall aim is to change behavior by example and encouragement – effectively deploying peer pressure. This is an approach that has been successfully employed by Bill Gates and legendary investor Warren Buffett with the Giving Pledge, under which the extremely wealthy agree to donate half their fortunes to charitable causes.

For Jochen Zeitz, this is where leadership is key. If they can get the next generation of corporate leaders to sign up for Plan B – recent new supporters include Blake Mycoskie of Toms shoes – then they can “ignite a movement” for change. “If we are successful,” he says, “Plan B will grow to include thousands of business leaders who are advancing it with their own companies, ultimately creating a fundamental shift in the way business is conducted.” — Fred Schuenenberg
The word “can’t” obviously doesn’t figure in Sir Richard Branson’s vocabulary. When he has an idea he is passionate about — and he has many — he does everything in his might to turn it into a reality. His tenacious, go-getting attitude, coupled with his legendary laid-back nature, has made him one of the world’s most successful, unflappable, and instantly recognisable entrepreneurs.

But then the self-made Branson has always had an unshakeable belief in himself and a superhuman drive to see things through. It’s a powerful combination that has impelled him from Blackheath, in South London (where he was born 63 years ago), to Necker, his own private island in the Caribbean.

Yet Branson is dyslexic and, as a pupil at the independent Stowe School in the leafy county of Buckinghamshire, U.K., was no one’s idea of an academic success. Nevertheless, his optimism, single-minded motivation, flair for business, love of a challenge, and eye for a good idea was obvious to all. On his last day the Headmaster, Bob Drayson, told him: “I predict you will either go to prison or become a millionaire.” Drayson was right on the first count (at 20, Branson was jailed for a night on suspicion of tax evasion), although he seriously underestimated his former pupil on the second. Millionaire? Try billionaire. In fact, last year, Forbes put Branson’s fortune at US$5 billion.

Famously, Branson began his first venture in his teens. Not having a phone, he would amass piles of loose change and use a public phone box to make business calls. By the age of 17 he had begun his own magazine (which he christened The Student); at 20, Branson was jailed for a night on suspicion of tax evasion; although he seriously underestimated his former pupil whom I trust and whose opinions I value. We’ll be surrounded by a fantastic group of people at Virgin. I’m incredibly lucky to have friends, family, and colleagues. I’m always open to new ideas and proposals — whether they come from you or elsewhere — and we’ll always work through ideas together and if we all really believe in something, we’ll make it happen. You can’t expect other people to get enthusiastic about your idea if you’re not passionate and excited about it yourself. You can’t always work through ideas together and if we all really believe in something, we’ll make it happen. You can’t expect other people to get enthusiastic about your idea if you’re not passionate and excited about it yourself.

Over the last 40 years, Branson has been busy turning his brand into a global phenomenon. He went on to start Virgin Records and founded the Virgin Group, created the Virgin Atlantic airline, Virgin Mobile and, more recently, Virgin Galactic, which he plans will become a space tourism company. He was awarded his knighthood for services to entrepreneurship in 1999, has had cameo roles in movies, broken records crossing the Atlantic by boat and the Pacific by balloon, and is a philanthropist who has pledged to give half his fortune away to good causes. Plus, he co-founded The B Team (see p. 30-31), a not-for-profit initiative formed by a global group of leaders to create a future where business is a “driving force for social, environmental and economic benefit.”

What’s more, unlike the average business person, he’s done it all without wearing a tie. He LOATHES them. “I often have a pair of scissors in my top pocket to go cutting peoples ties off,” he admitted in one of his blogs. “Find your nearest pair of scissors and cut your tie off. Or better still, cut your friend’s tie off! They’ll thank you for it when the ideas start flowing...”

What has been your business philosophy over the years?

It’s always been ‘Screw it, let’s do it!’ and looking back this has helped give me the push to make many business decisions over the years. I think people are often too afraid to take risks. There are plenty of entrepreneurs out there with great ideas but it’s taking the leap to make a go of it that takes a large amount of courage.

You are always described as a ‘maverick’? Do you see yourself that way? What sets you apart from other entrepreneurs?

Leaving school at 16, the early years at student magazine, and establishing our music business cemented my reputation as a maverick. I have never really seen myself that way, more someone who follows their passions and interests. A lot of our businesses have been founded out of a personal interest I had and a belief that we could make people’s lives better. I think I am like many entrepreneurs who have that sense of fearlessness and put in the same huge amount of hard work as I did.

Where do you get your ideas from – and how do you know which ones to trust and follow... and which ones to forget?

Ideas can come from anywhere and I think you should always be open to this. The same goes for advice – make sure you listen to every little bit of advice you’re given, particularly when it comes from your friends, family, and colleagues. I’m incredibly lucky to be surrounded by a fantastic group of people at Virgin whom I trust and whose opinions I value. We’ll always work through ideas together and if we all really believe in something, we’ll make it happen. You can’t expect other people to get enthusiastic about your idea if you’re not passionate and excited about it yourself.

Do you believe you can be truly innovative without taking risks? What are some of the biggest risks you have taken in your career in order to be innovative?

There is a curiosity along with a determination and drive that’s ingrained in entrepreneurs, and I think it’s the attitude that comes with risk-takers that makes them innovative.

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Delivered, Unites with... Sir Richard Branson

Follow Sir Richard Branson’s Blog at Virgin: http://www.virgin.com/richardbranson

Photo: Virgin
Leaving school aged 16 to start Student Magazine was a risk – I made the decision not to go down the traditional career path. However, saying that, I think entrepreneurshipism is much more accessible today which is fantastic to see. I suppose Virgin Atlantic could be classed as a bit of a risk. Industry experts didn't think that a company like Virgin with a background in music could make it work or saw us as any sort of competition. It was our unique take on travel and an ‘outsiders’ perspective which brought about our success, and it’s for this reason Virgin Atlantic will always hold a soft spot in my heart.

What was your reasoning behind the creation of The B Team?

The B Team was formed to help encourage doing business for the wellbeing of people and the planet. All the members of the team are committed to this mission and we’ll be working in our own organisations, as well as in partnership with others, to try our very best to achieve it.

How easy or difficult was it for you to persuade business and political leaders to join The B Team – and what effect is it having?

Doing business sustainably is something all members of The B Team feel strongly about. We’re a group with a unified approach and shared ambitions to change the way we do business.

I think public figures should use their influence for the greater good and hope to make the world aware of the changes that can be made – we want to encourage businesses to follow suit and for their competitors to take note. We are all working inside our own companies and organisations to meet these commitments and at the same time we are forming partnerships and solutions around our ‘challenges’ since we announced them last June.

What is the latest news from Virgin Galactic? Are you still on target to launch this year?

I will give a cautiously optimistic yes to the second part of that question! While it is true that we are tantalisingly close to the finishing line and have made fantastically good progress, particularly over the last 12 months with three flawless, supersonic powered flights, we have a few more tests to go and safety will always be paramount. This is without doubt the most challenging but also the most fabulous project we’ve ever embarked upon at Virgin and I’m both enormously proud of what we have achieved and increasingly excited about the prospect of experiencing the wonder of space for myself. It promises to be a great year as we complete the test flight programme and move to our wonderful HQ at Spaceport America in New Mexico in readiness for launch of the world’s first commercial spaceline.

Do you think future planetary living is possible?

I’m starting to believe anything is possible. Years ago I never thought I would be in the position to offer people the experience of space travel and now it seems that this is just around the corner. We’ve started exploring the opportunities in getting to space and the next natural progression is staying put up there. This won’t happen overnight but I think over the next 20 years if we can get enough people wanting to fly to space, this will give us the financial resources to do even bigger things.

Do you think you will be the first person to cross the Atlantic in a plane?

It is definitely one step at a time with space travel – but that’s not to say that we don’t have lots of big ambitions and dreams for the future! We are already developing a second space vehicle which will launch small satellites rather than people, but using the same air-launched system which will increase the frequency and flexibility of launch dramatically while at the same time significantly reducing cost. The small satellite manufacturers and users have been crying out for a better launch system for years and success in this area will have the potential bring some incredible ideas to reality – space-based solar energy and cheap global internet access to name but two! Longer term we are looking at how we can use our experience of operating and building winged human spacecraft to take people and cargo long-haul, transcontinental flights via space, dramatically reducing both journey times and environmental impact.

You have so many business and philanthropic interests. Can you ever turn the phone and email off and relax – and if so how do you like to let off steam?

It’s a tricky question as I always end up adding to the list and suddenly I’ve got a huge party on my hands! If I’m limited to five then I think I would have to be Archbishop Tutu and Nelson Mandela for his wisdom and humour, Chris Parks, the ultimate adventurer, and Amelia Earhart, the first woman to cross the Atlantic in a plane.

Who would your top five dinner guests be if you could have anyone sitting around your table? Either currently or people from history?

It’s a tricky question as I always end up adding to the list and suddenly I’ve got a huge party on my hands! If I’m limited to five then I think I would have to be Archbishop Tutu and Nelson Mandela for his wisdom and humour, Chris Parks, the ultimate adventurer, and Amelia Earhart, the first woman to cross the Atlantic in a plane.

Are you entering a team at the first Formula E racing series. What are your expectations for Formula E and for the Virgin Racing Team?

Virgin has a history in pioneering new ways of doing things, not just because of a sense of adventure, but also to find better ways of doing things. Formula E is exactly that. It promises to be a compelling series, not just for fans but also for the technological fallout that will drive innovation – the ambition of the champion-ships is to have a real impact on the global environment, transport and energy systems.

The Formula E Series will be incredibly exciting. I love that we will be racing around city centre streets and that fans can influence the race via social media – I am expecting a lot of spectators, plenty of fun, and some sparks flying.

We have winning expectations for the Virgin Racing Team. Our aim is to create the best team to put us at the forefront of this unique and environmentally friendly racing series. We have got some great announcements coming up over the next few months, so watch this space. — Tony Greenway
NEXT-SHORING: A CEO’S GUIDE

A term used to describe the return of manufacturing to developed markets as wages rise in emerging ones today’s manufacturing strategies need to concentrate on what’s coming next.

Evolving demand from new markets places a premium on the ability to adapt products to different regions. Meanwhile, emerging technologies that could disrupt costs and processes are making new supply ecosystems a differentiator. Accordingly, a next-shoring perspective emphasizes two forms of proximity: to demand, and to innovation.

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ECONOMIC FUNDAMENTALS

The case for next-shoring starts with the economic fundamentals of demand (as local factors are growing increasingly important) and supply (as the dynamics of labor and energy costs evolve).

Most demand is local. More than two-thirds of global manufacturing activity takes place in industries that tend to locate close to where their products are sold. This simple fact helps explain why manufacturing output and employment have recently risen, both in mature economies and in emerging markets such as China. Emerging markets’ share of global demand is also climbing, from roughly 40% in 2008 to an expected 66% by 2025. As that share rises, the diversity of needs it reflects leads to fragmentation. In the automobile industry, 90% of recent capital expenditures have involved product derivatives worldwide and capacity expansions in new markets.

Labor costs become less important. Rapid wage growth in China hasn’t choked off manufacturing expansion there. True, in a few labor-intensive, trade-oriented industries such as apparel, labor-cost changes often tip the balance in locating production. But higher wages in China are also increasing demand patterns rather than energy concerns in placing footprints.

And energy costs, too? Partly because of lower natural-gas prices, the McKinsey Global Institute (MGI) estimates that by 2020, lower cost energy could boost U.S. GDP by $400 billion to $700 billion. And energy storage technologies, especially lithium-ion batteries and fuel cells, are becoming more capable and less costly. As advances continue, more companies may be able to focus on local demand patterns rather than energy concerns in placing their geographic bets.

TECHNOLOGY DISRUPTION AHEAD

At the same time, advanced robotics, 3-D printers, and the large-scale digitization of operations are poised to alter fundamental assumptions about manufacturing costs and footprints.

Advanced robotics: cheaper, more proficient robots are another reason companies may locate more manufacturing closer to major demand markets, both in developed countries and in developing nations, where robots could bridge shortages of some production skills. MGI research suggests that 15% to 25% of the tasks carried out by industrial workers in developed countries and 5% to 15% of those in developing countries could be automated by 2025.

3-D printing: cheaper 3-D printing is already allowing some companies to accelerate product development. Soon, targeted usage of in-house printers will enable new supply-chain models that, in some cases, may replace traditional parts suppliers. The equivalent of copy or print shops may emerge to manufacture items based on customers’ design specifications.

Digitized operations: cloud computing, mobile communications, advanced analytics, and the Internet of Things—the growing collection of sensors and actuators embedded in products and equipment—are starting to combine in powerful ways. Increasingly, products can communicate: with each other, with robots and advanced machines inside factories, and with customers and suppliers. Manufacturers will have an unprecedented global view into who makes what, where, and how well, enabling some to buy and sell underused production lines “by the hour.”

NEXT-SHRING

In developing and emerging markets alike, both proximity to demand and proximity to innovation will be critical. Next-shoring isn’t about the shift of manufacturing from one place to another but about adapting to and preparing for the changing nature of manufacturing everywhere.

Optimizing location decisions: new products, market segments, and consumer preferences are exacerbating perennial risks such as variations in seasonal demand, wages, and exchange rates, boosting uncertainty. Operational agility—the ability to adapt design, production, and supply chains rapidly to fluctuating conditions while preserving economies of scale—will thus carry an even greater premium.

This essay has been adapted from “Next-shoring: A CEO’s guide,” by Katy George, Sree Ramaswamy, and Lou Rassey, McKinsey Quarterly, January 2014. To learn more on the future of manufacturing, go to tinyurl.com/Dhl-guide
Food expert Lynne Waite brings a unique flair and 25 years of experience in the catering business to DHL Supply Chain.

It might surprise a few people, but DHL is more than just a logistics provider. At DHL Supply Chain for example, we cater for passengers on planes and trains, providing food and amenities. We constantly seek out new opportunities and challenge ourselves to create menus that enhance the passenger experience.

After gathering over 25 years’ experience in the catering industry in the public and private sectors, I now head up the team that provides food on British Airways short- and medium-haul flights as well as United/Continental long-haul flights from London Heathrow Airport, and Virgin Trains on the UK’s West Coast Main Line.

In this role, I find and present new and innovative foods for our seasonal menus; source products from producers, manufacturers or caterers, survey supplier production sites, and assure that all safety standards are met. I also regularly participate in “food safaris” to stay on top of hot trends like street food, home-grown edibles, gluten-free foods, and nut and grain milks versus soy varieties.

What I’ve found is that travelers don’t usually consider how their meals are delivered, but they do care whether the food excites them – what it looks and tastes like. Food is not an exact science and peoples’ passion over it never ceases to amaze me. To nurture that passion, we listen to what people say, delve deeply into customer demographics, and then create options that delight our customers’ diners in a way that makes them want to come back for more.

It’s all about the final customer; if I can find the right match with the right products to suit their needs, then my job is an easy one!

**CATERING AT HIGH ALTITUDE**

Passengers’ perceptions of saltiness and sweetness drop by around 30% at high altitude. The decreased humidity in the cabin also dries out the nose and dulls the olfactory sensors essential for tasting the full flavor of an ingredient or dish.

3.5 MILLION MEALS AND 10 MILLION SNACKS DELIVERED BY DHL PER ANNUM

4,000 trolleys and 1,000 oven racks prepared by DHL daily

**WHAT’S THE STORY, MS. WAITE?**

“FOOD IS NOT AN EXACT SCIENCE AND PEOPLES’ PASSION OVER IT NEVER CEASES TO AMAZE ME.”
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