

# Delivered.

The Global Logistics Magazine

ISSUE 01/2021

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China's burgeoning economy and its bounce back from the pandemic

## SOLUTIONS

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**Dear Reader,**

There's every reason to be optimistic that 2021 will be a better year than 2020. Still, COVID-19 continues to dominate the global agenda, and this issue of *Delivered.* reflects that fact.

One thing all businesses have in common at the moment – whatever their sector – is mitigating the impact of the pandemic. For many companies, not least in the engineering and manufacturing sectors, the key focus is squarely on ensuring the security of supply chains. But as our **Sector Focus** article asks: Might they find a silver lining to this crisis? Could it offer players an opportunity to make significant supply chain improvements that could ultimately transform their processes, and actually create opportunities in their post-COVID-19 future?

Some businesses have dealt with the pandemic better than others. But so have some countries. Take China. In 2020, its GDP plunged and its future looked uncertain. Yet by the end of the year, China had the virus largely contained and recovered its footing, and is now back on its growth trajectory. How did it achieve this turnaround? You can find out in our **Country Focus**.

Finally, I would also like to draw your attention to a topic that is very important to me. **Cold chain, hot topic** takes a look at how we at DHL are supporting the largest vaccine distribution campaign in history and playing our part in bringing the coronavirus pandemic to an end.

I hope you will find the articles in this issue both informative and helpful.

On a very sad note, however, we are sorry to inform you that our highly respected Editor-in-Chief, Michelle Bach, has passed away. She was the heart and soul of *Delivered.*, and her keen mind, boundless energy, infectious enthusiasm and careful attention to all aspects of the magazine will be much missed.

Sincerely,

A handwritten signature in blue ink that reads "Katja Busch". The signature is fluid and cursive.

Katja Busch  
Chief Commercial Officer, DHL

## STRENGTHENING THE GLOBAL AVIATION NETWORK

DHL Express has placed an order for an additional eight new Boeing 777 freighters. The world's largest and most capable twin-engine freighter, the B777 supports future growth while providing outstanding reliability. Furthermore, the new aircraft contribute to the DPDHL Group's sustainability goals due to their fuel-efficient technology, reducing carbon emissions by 18% compared with the legendary B747-400s they replace. "Although the current health crisis has pushed pause on several areas of life, global trade did not stand still," says John Pearson, CEO, DHL Express. "With the order of eight new wide-body freighter aircraft, we are underlining our conviction that e-commerce is an enduring megatrend."

 [bit.ly/newexpresswings](https://bit.ly/newexpresswings)



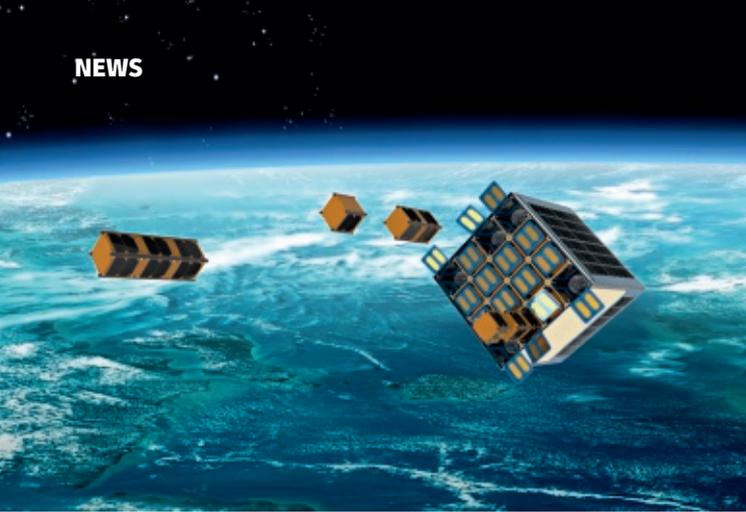
## SOLAR ENERGY DOESN'T COST THE EARTH

The argument made by some people against renewables such as solar and wind has long been one of cost. But new data reveals the price of solar energy has dropped by 89% and that of wind by 70% over the past 10 years. The figures from Our World in Data, in partnership with Oxford University, show power from solar panels to be the cheapest of all the options they considered, with the price plummeting from \$359 per megawatt hour to just \$40. In comparison, at \$109, the price of coal-generated power has barely moved.

## NEW GENERATION OF FORECOURTS

With the advent of electric cars, travel infrastructure has to change too. While the mileage range is growing, drivers will still need to recharge en route occasionally. The U.K., for example, has banned new petrol and diesel cars from 2030. Its first electric charging forecourt, in Braintree, Essex, shows how this new landscape might look. The forecourt has 36 chargers, some of which can add up to 200 miles (322 kilometers) of range in just 20 minutes. But it has to offer more, given motorists will need to spend longer there. So it also features shops and cafes, as well as an airport-style lounge and meeting pods, all with superfast Wi-Fi.





**SPACE ODYSSEY**

DHL Global Forwarding has boldly gone to a new frontier: space. Alongside DHL Customer Solutions & Innovation, the air and ocean freight specialist has partnered with space company D-Orbit to provide logistics for the launch of its ION Satellite Carrier from Cape Canaveral in the U.S. The ION is a cargo vehicle for microsattellites, able to deploy them into precise orbits. DHL transported the ION from D-Orbit's headquarters in Milan, Italy, to Miami by air, and then to Cape Canaveral by road. Tens of thousands of low- and medium-Earth-orbit satellites are due to be launched over the next few years, with linked "constellations" providing services from internet connection to data collection.

 [bit.ly/dhlspacelogistics](http://bit.ly/dhlspacelogistics)

**SALOODO! GOES WORLDWIDE**

Logistics startup Saloodo! is to expand its digital road freight platform worldwide. Launched in Germany by DHL Freight in 2017, Saloodo! was initially made available in several European countries before expanding into the emerging markets of the Middle East and Africa. The platform enables shippers and carriers to connect seamlessly and is especially useful for small- and medium-sized companies, which may have irregular freight requirements and no permanent logistics partner. Its single platform provides fast and clear price comparisons, direct access to transport providers and real-time progress reports and notifications. The service is now available on four continents and in more than 50 countries.

 [www.saloodo.com](http://www.saloodo.com)



**NEW INDUSTRY STANDARD IN ECOMMERCE**

DHL Supply Chain has started to offer online retailers access to its European network of 30 DHL e-fulfillment centers. These strategically located sites, in close proximity to major urban centers and parcel hubs, provide specialization in processing, picking, packing and shipping online orders. "Typically, small and medium-sized shops lack the capacity to be present in each European country, which keeps them distanced from consumers and markets. Even larger retailers find maintaining that kind of presence is often financially heavy from a cash flow perspective or not cost-effective. In response, we are now offering vendors and online shops a multiuser network solution," explains Hendrik Venter, CEO DHL Supply Chain MLEMEA.

 [bit.ly/supplychainstandard](http://bit.ly/supplychainstandard)



**PRINTING IMPRESSES**

Imagine being able to 3D-print a house in under a day. That's just what entrepreneur Alex Le Roux has done, earning him a place on Forbes' influential 30 Under

30 Manufacturing & Industry list for 2021. Le Roux's company Icon has raised \$44 million and is helping NASA work out how to build structures on the moon. Its 12-foot-tall (3.6-meter-tall) Vulcan printer has already made several concrete homes in the U.S. and is producing the world's first 3D-printed community for low-income families in Mexico.



**Virgin Hyperloop chief Josh Giegel and his director of passenger experience Sara Luchian became the first two human passengers to travel in a hyperloop pod. Their 15-second journey along Virgin's 1640-foot (500-meter) test track in the Nevada desert reached a speed of 107 mph (172 kph).**

## ISLAND MEETS RENEWABLES TARGET

Tasmania now runs on 100% renewable energy after a 29th wind turbine went online on the Australian island-state's west coast, allowing it to meet its target of



becoming fully self-sufficient two years ahead of schedule. The island will have access to 10,471 gigawatt hours of renewable generating capacity, well above its yearly requirements, when two further turbines begin operation. By 2018-2019, 90% of Tasmania's power was coming from hydroelectrics, and the turbines have allowed it to reach that 100% goal.

## SHARP VISION FOR ROBOTS

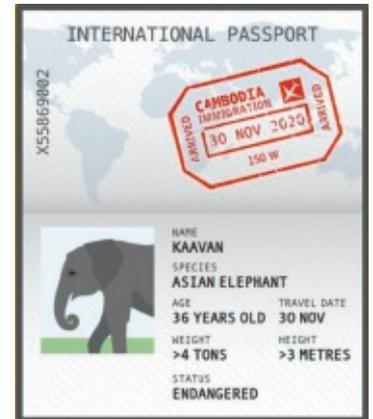
Bratislava-based Photoneo has developed the sharpest eyes for industrial robots in the world. Its award-winning MotionCam-3D is a high-resolution 3D scanner that is able to capture fast-moving objects. According to CEO Jan Zizka, the scanner can inspect objects moving as fast as 140 kph (87 mph), a useful advantage in e-commerce and logistics for object sorting and autonomous delivery systems. The camera can also help in food processing and waste sorting, as well as harvesting in agriculture.



## CARBON CONUNDRUM

Deutsche Post DHL Group, together with Smart Freight Centre, a non-profit organization dedicated to sustainable freight, is advocating a new pathway to freight decarbonization: carbon insetting. A jointly developed white paper, "Carbon Insets for the Logistics Sector," recommends this innovative approach for allocating funds to decarbonization projects in the logistics industry. By unlocking this vital resource, a significant lever would be created to support the technological shift toward greener logistics. Ample solutions already exist, such as sustainable fuel, fleet renewal, engine retrofitting and efficiency projects. These investments would not only be a highly efficient way to decarbonize the transport sector, but also result in structural improvements to the entire logistics supply chain in the long run.

 [bit.ly/carboninsetting](https://bit.ly/carboninsetting)



## I SEE AN ELEPHANT FLY

Left in chains at Pakistan's Marghazar Zoo after his partner died in 2012, he became known as the "world's loneliest elephant." But now, 35-year-old Asian elephant Kaavan has a new home at a Cambodian wildlife sanctuary – thanks to some careful logistics. The operation to transport a 4-ton pachyderm on a journey of nearly 4,000 kilometers came after months of planning by animal welfare group Four Paws, veterinary specialists and DHL Global Forwarding. The seven-hour flight was temperature-controlled with vets on hand to ensure Kaavan remained comfortable in his specially made crate. After acclimatization in smaller enclosures, Kaavan was released into the 33,000-acre Kulen-Promtep reserve – with three female elephants for company.

 [bit.ly/loneliestelephant](https://bit.ly/loneliestelephant)

# \$1.5 TRILLION

**The estimated total addressable market for autonomous aircraft by 2040, according to a report by Morgan Stanley Research. Although urban air mobility is still in its infancy, researchers believe autonomous aircraft could become common, benefiting a wide range of sectors.**



# ENGINEERING SUPPLY CHAINS IN A TIME OF FLUX

The transition to effective supply chains necessitated by COVID-19 disruption will continue to require flexible, inventive solutions to overcome immediate challenges and point the way to long-term change.



# 6.6 TRILLION

The dollar value of the e-commerce sector for B2B customers

No industry has escaped the impact of the coronavirus crisis, but each sector has faced its own unique set of problems. For engineering and manufacturing companies, the first waves of the pandemic forced a rapid reconfiguration of operations on the ground. Factory staff can't work from home, so companies had to make their facilities safe for employees. They have modified their processes, adapted shopfloor layouts and introduced new protective measures, all with remarkable speed.

Today, amid large-scale vaccination programs, engineering companies are turning their attention to the post-pandemic environment. That may be the catalyst for another wave of change, with the focus shifting from the safeguarding of employees to the protection of the business.

Nobody knows how long major economies will take to recover from last year's unprecedented fall in output. But businesses that have already spent heavily to survive the first year of the crisis now face

the prospect of a slow climb back to pre-pandemic levels of output.

Eric Gantier, President, Global Engineering, Manufacturing and Energy Sector, DHL, says that companies face three key challenges over the coming months: they must keep supplying and supporting their products; they must control their costs; and they must respond to shifts in customer behavior. All those things, he adds, have implications for the

design and operation of supply chains. "The pandemic caused a huge amount of disruption, with shortages of critical components, or inventory stranded in the wrong places,"

he says. "Right now, the supply chain is at the top of the agenda for our customers. That means supply chain leaders are under pressure to get things right, but they also have opportunities to make the changes that could transform their performance."

Through conversations with dozens of leading players across the sector, Gantier and his team have identified half a dozen big opportunities for engineering, manufacturing and energy sector companies



**FACTORY SETTING:**  
Companies have had to rethink the way their manufacturing facilities work.



to achieve significant improvements to their supply chains and logistics processes.

## 1. Accelerate your digital transformation

The crisis forced everybody to embrace digital tools, as video calls replaced face-to-face meetings and people shifted to remote working models where the roles allowed. But most companies also had ambitious digital plans before the coronavirus, recognizing the power of automation and seamless information flows to streamline processes and improve efficiency.

Supply chains are ideal candidates for digitalization. Technology can give companies the visibility they need to improve planning, monitor execution and keep customers informed. Nevertheless, the complex nature of supply chains, with multiple participants and moving parts spread around the world, makes it harder to build those digital links. With limited resources and other challenges to tackle, companies might be tempted to delay their supply chain digitalization projects.

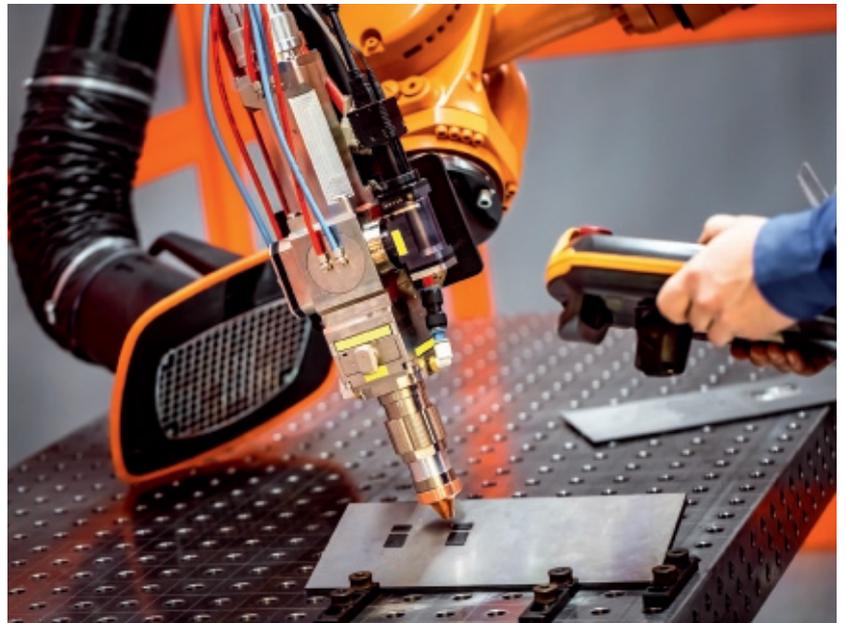
They should resist that temptation, says Gantier. “Digitalization is a key enabler for the new generation of fast, flexible and cost-effective supply chains. Accurate, timely information helps companies to optimize their existing supply chain operations, and the insights derived from good data unlock most of the improvement opportunities we have identified for our customers.”

## 2. Know and manage your supplier footprint

Supply disruptions related to the pandemic have made companies think harder about supply chain risk. Sourcing critical components from a single supplier, or sourcing multiple components from suppliers concentrated in a single region, can leave companies with no room for maneuver when problems occur.

To manage and mitigate such risks, companies first need to understand them. That requires systematic analysis of an organization’s supply base in order to understand its risk exposure and the potential impact of disruptive events. And because supply chain problems can emerge very rapidly, companies need robust monitoring/early-warning systems too. Smart digital risk management tools, including DHL’s own Resilience360 platform, can help out, says Gantier, by tracking events in near real time and alerting companies to incidents that could affect their supply chain operations.

One of the best ways to reduce the risks associated with concentrated supplier footprints is to diversify. Sourcing critical components from multiple suppliers in different regions significantly lessens the impact of any single disruptive event. This trend was already underway before the crisis, notes Gantier, with a third



### LASER-FOCUSED:

Accelerating digital transformation can help manufacturers improve their planning and execution.

of companies looking to diversify their supply base as a hedge against rising tariffs and trade tensions. The post-pandemic quest for resilient supply chains is only likely to accelerate such moves.

## 3. Build flexible warehouse networks

The storage and distribution of finished goods, spares and service parts is a significant challenge for many engineering-based businesses. Portfolios of complex products create the need for extensive inventories, while customers demand high levels of availability and responsiveness to keep business-critical equipment working. The best way to keep service levels up and transport costs down is to store parts close to the end user, but that can lead to extensive networks of costly – and often inefficient – warehouses.

“An engineering or manufacturing player doesn’t want to own lots of warehouses,” says Gantier, “They’re expensive assets, and it’s always difficult to ensure you have the right capacity in the right place to best serve your customers.” Increasingly, he says, companies are pursuing a more flexible option: leasing warehouse capacity from an external provider,

“2020 will have been the first year that online sales accounted for more than half the B2B market.”

**Eric Gantier, President, Global Engineering, Manufacturing and Energy Sector, DHL**



**ON CALL:**

There has been an uptick in video meetings during the pandemic.

which can also provide the skills and resources necessary for efficient operation.

Since the start of the pandemic, he adds, DHL has gone one step further and bought warehouse facilities from customers and incorporated them into its own network.

**4. Optimize your inventory**

Warehouses are expensive to own and run, but the real cost of service parts networks is the inventory inside them. That’s especially true of inventory that isn’t earning its keep, including obsolete parts, parts you don’t know you have, high stocks of rarely purchased items and parts that aren’t where customers want them.



Managing inventory in a smarter way can generate significant savings, and this is an area where digital tools can make a big difference. “With today’s data mining and predictive analytics techniques, companies can really get their inventories under control,” says

Gantier. “These systems can help companies find customers for end-of-life parts, set safety stock levels and choose the best place in the network to store every part.”

**5. Get your supply chain management costs under control**

With resources depleted after a year of lockdowns and slowdowns, cost and cash management are

going to be top priorities for companies in the coming months. Under pressure to reduce costs wherever they can, supply chain and logistics functions will be looking for tactical opportunities to make savings on everyday expenditures such as packaging and freight costs.

The challenge for many organizations, says Gantier, is balancing savings benefits against the work required to find and secure the best prices. “Buying freight on the spot market can be a very efficient way to access the best cost option for a one-off or low-frequency shipment,” he says. “But each purchase from a new supplier creates additional work downstream to manage invoices, arrange payment and audit the whole transaction to ensure the agreed terms have been met.”

This, however, is another area where new digital tools are helping to streamline the process. The development of blockchain-based, digital freight marketplaces, for example, now allows companies to make one-off transactions in a secure, traceable environment, with all the relevant documentation and transaction data generated automatically at the click of a button.

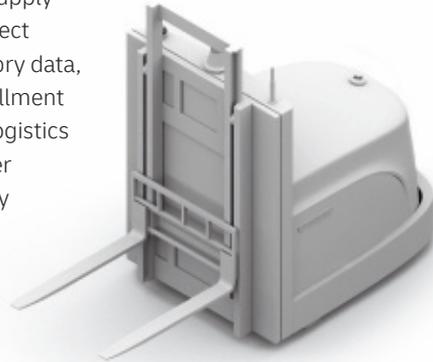
An even more powerful way to simplify logistics purchasing is to outsource the whole process to specialists. The use of lead logistics partner (LLP) arrangements, in which a third-party organization takes over the management of the end-to-end logistics process, has been increasing in many sectors over recent years. Gantier notes that a growing number of engineering and manufacturing players are adopting the approach as they review their post-pandemic supply chain strategies.

**6. Embrace the power of e-commerce**

Engineering and manufacturing companies have traditionally been cautious about e-commerce, relying on their field sales forces, dealers and distributor networks to handle the sale and support of complex products. As coronavirus restrictions closed other routes to market, online sales become the only option for many. “The year 2020 will have been the first in which online sales accounted for more than half the B2B market,” says Gantier. “E-commerce for business customers is now a \$6.6 trillion sector.”

The trend is unlikely to reverse after the pandemic. Customers of all kinds appreciate the speed and

simplicity of online purchasing, but they expect delivery to be equally quick and convenient. “A successful e-commerce strategy requires strong capabilities behind the scenes,” says Gantier. Those capabilities also span the entire supply chain, including software to connect storefronts with real-time inventory data, responsive warehousing and fulfillment services, and smart multimodal logistics systems. The ability to offer higher levels of convenience and visibility is becoming more important in other parts of the industry too, he adds, citing the example of apps that allow customers to track the minute-by-minute progress of service technicians or urgent parts deliveries.



### From recovery to sustainable growth

Improvements to supply chains and logistics processes will help companies meet their immediate-term operational and commercial challenges, but they also have an important longer-term role, says Gantier. “We will be dealing with the fallout from the COVID-19 crisis for some time to come, but engineering companies are also preparing for other big changes, especially climate change and the transition to a net-zero economy. Supply chain capabilities honed during this crisis will also help organizations to address those challenges.” ■ **Jonathan Ward**

#### SMART IDEA:

A successful e-commerce strategy requires strong capabilities behind-the-scenes, such as automated warehousing.

## 3 QUESTIONS FOR...

### 1. After all the challenges of 2020, how are your customers preparing for the coming year?

The coronavirus situation affected different parts of the sector in very different ways. Some of our customers experienced record levels of demand last year, while others faced extremely difficult commercial conditions. Whatever their starting point, however, companies in the sector are now making the transition from crisis to recovery mode, with the knowledge that the return to any form of normality may take some considerable time.

### 2. What are the implications of the post-crisis transition for supply chains and logistics activities?

The pandemic put supply chains under great pressure, as companies were forced to react to manufacturing and logistics disruption on a global scale. Our customers want to ramp up their resilience and responsiveness; but in difficult economic conditions, they also need to keep a very close eye on costs.

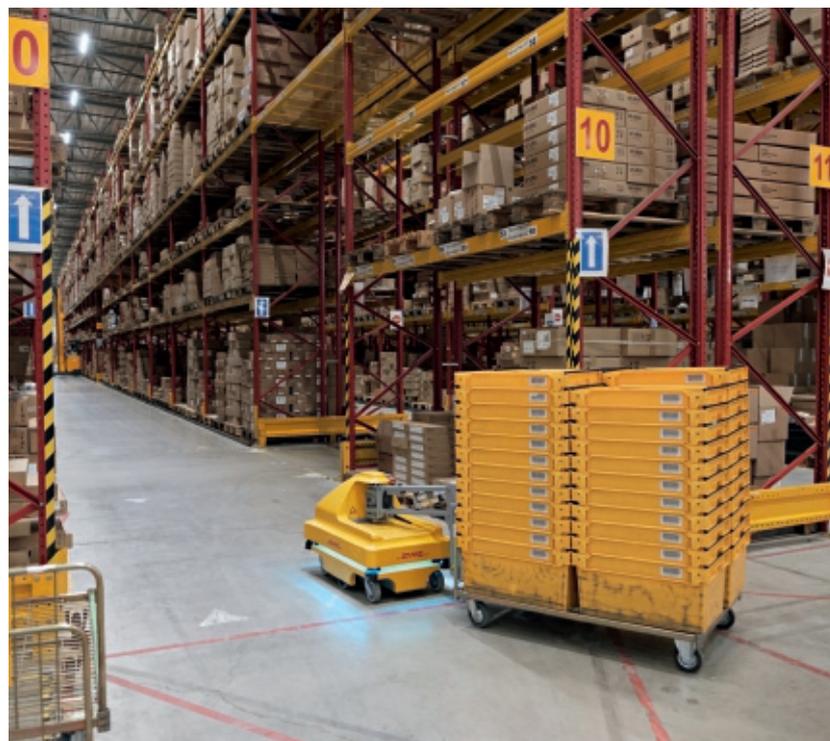
Many senior supply chain leaders see this time as an opportunity to make bold moves that could unlock significant improvements in performance. Supply chain issues are at the top of the agenda today, and companies are ready to consider strategic changes; the introduction of new technologies; and alternative approaches to the design, management and operation of their networks.

### 3. Has the virus changed your customers' business forever?

The engineering, manufacturing and energy sectors have been around for a long time, and they have been through difficult periods before. Our customers provide products and services that underpin the global economy, and that isn't going to change. At the same time, the crisis certainly accelerated some of the major ongoing trends, including digitization and the growth of e-commerce in the B2B sector. Those changes are likely to be permanent.

**ERIC GANTIER**  
President,  
Global Engineering,  
Manufacturing and  
Energy Sector, DHL

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# COMING BACK GREENER

The coronavirus crisis could have stalled global efforts to fight climate change. Instead, it looks set to accelerate them.

In 2019, if you asked any top executive to list the most important long-term challenges facing their organization, there was a good chance that climate change would be near the top. For much of 2020, business leaders had other things vying for their attention, like keeping their people safe and their operations running in the midst of an unprecedented health crisis.

Yet despite the urgency of the response to the coronavirus pandemic, environmental sustainability has maintained its place on the agenda. Between March and June last year, at the height of the crisis in Europe and the Americas, 201 companies signed up to the Science Based Targets initiative (SBTi), committing themselves to long-term emissions reductions. By the end of the year, more than 360 organizations had joined the initiative's most ambitious tier, aiming to cut their emissions at the pace necessary to limit global temperature increases to 1.5 C.

Those pledges will have implications far beyond the participants themselves. Companies committing themselves to the scheme must agree to reductions not only in their direct emissions, but also in those generated by their products in use and by their upstream supply chains. Over time, that will require thousands of suppliers and partner organizations to measure, track and reduce their own environmental impact.

Governments are ramping up their own sustainability commitments too. The EU has linked 30% of its proposed €750 billion coronavirus recovery plan to green initiatives. In September, China's President Xi Jinping told the U.N. that his country would strive to be carbon neutral by 2060. The following month, Japan made a formal commitment to a 2050 net-zero ambition. And new U.S. President Joe Biden has begun to reverse many of his predecessor's policies on the environment; one of his first actions was to rejoin the Paris Agreement on climate change.

## Big changes, small steps

In their response to the COVID-19 crisis, companies have demonstrated rapid change on a scale that few would have believed possible. The transition to an environmentally sustainable, carbon-neutral business

model will occur at a less frenetic pace, but the degree of transformation required will be significantly greater for many players.

Engineering, manufacturing and energy companies will participate in the transition on two separate fronts. First and foremost, they will play a vital facilitating role, developing the technologies and building the infrastructure that will make the net-zero world a reality. At the same time, however, companies will need to adapt their own operations to increase efficiency, consume fewer resources and eliminate waste and pollution.

## Strategic shifts

Each part of that equation will require large-scale innovation and big strategic moves. Manufacturers of heavy trucks and construction equipment will need to find alternative ways to power their products, expanding the capabilities of battery-electric systems, or developing machines that run on hydrogen or bio-based fuels. Energy players will need to scale up the production and distribution infrastructure needed to keep those products running.

Energy-intensive manufacturing operations will need to change too. Producers of basic and raw materials such as iron and chemicals will need to switch to low-carbon fuels where they can, and invest in large-scale carbon capture and storage technologies to handle the emissions that remain.

But alongside these radical shifts, the energy transition will also depend on thousands of smaller changes in the way companies manage their businesses and run their operations. Much of that will be gritty, detailed work. Purchasing teams will need to quantify precisely the carbon footprint of the products and services they buy from suppliers. Offices, shops and factories will require low-energy lighting and efficient insulation. Factory managers will have to adjust their processes to maximize yield while minimizing energy consumption. The development of smart electricity grids and dynamic pricing will encourage companies to work more flexibly, matching their energy use to times when excess renewable production makes power cheap, or even free.

360+

The number of organizations that joined the SBTi's most ambitious tier by the end of 2020

This part of the energy transition won't rely as much on big investments in innovative technologies. But it will require a major mindset shift. Companies will need to train their staff to make informed decisions around energy use and resource consumption. They will have to provide the analytical tools and data necessary to make those decisions. And they will need to adapt their metrics, targets and incentives so that carbon reduction becomes a priority for the whole organization.

### Transition in motion

Logistics and transportation activities are a significant source of carbon emissions for any company that makes or distributes products, or supports them in the field. And like every other aspect of business, the development of carbon-neutral supply chains will involve a combination of big innovations and detailed operational changes. Shifts in logistics are already under way – for example, with the rapid growth in using electric vehicles for last-mile deliveries in urban areas – but companies can do a lot to improve the sustainability of their supply chains without waiting for the rollout of hydrogen trucks or biofuels in aviation.

Eric Gantier, President, Global Engineering, Manufacturing and Energy Sector, DHL, says that sustainability issues are an increasingly important topic for many of his customers. DHL already produces detailed reports on logistics emissions for some major companies in the sector, he notes.

Understanding the carbon impact of their logistics activities helps companies make informed decisions about transport modes, sourcing locations or inventory distribution. But new technology is also helping DHL customers make the detailed choices that can drive down emissions every day. “In aftersales service and support, engineers might cover large distances traveling between customers’ sites,” says Gantier. “These companies are starting to use carbon-focused route planning tools, such as DHL’s Greenplan, which can dynamically find the most fuel- and time-efficient route between destinations, taking real-time traffic conditions into account.

“Low-carbon supply chains used to be a talking point, something for the future,” concludes Gantier, “but now a growing number of our customers are actively considering these issues when they make decisions about logistics services.” ■ **Jonathan Ward**

# 30%

The share of the EU's €750 billion coronavirus recovery plan linked to green initiatives





## COLD CHAIN, HOT TOPIC

As large-scale COVID-19 vaccination programs began, attention turned to the challenges of distribution and delivery. Katja Busch, Chief Commercial Officer at DHL, tells *Delivered.* how the company is supporting the roll-out of the largest vaccination campaign in history.

**T**he coronavirus pandemic forced governments, organizations and individuals to act in ways that would have been inconceivable just a year ago. Amid the unprecedented global response to the crisis, no sector has responded more decisively than the life sciences industry. Research teams and pharmaceutical manufacturers developed, tested and industrialized new vaccines at 10 times the normal speed for such products.

Now the world faces a new challenge: distributing those vaccines quickly and safely to billions of people. In a white paper published last year, DHL calculated that transporting the estimated 10 billion doses required over the next two years will involve up to 200,000 pallets shipments and 15,000 flights.

Additionally, almost all vaccines require stringent temperature control throughout the supply chain.

Storing and transporting these products is a highly specialized process. Some vaccines must be kept in ultra-cold freezers until needed, then transported in cooling boxes packed with dry ice or special freezing blocks. The white paper's authors estimate that 15 million such boxes will be needed in the supply chain, together with the necessary infrastructure to load and replenish dry ice.

*Delivered.* asked Katja Busch, DHL's Chief Commercial Officer, how the company has been gearing up to play its role in the global vaccine campaign.

### **When did DHL begin to make preparations for a possible vaccine roll-out?**

This is something we have been thinking about since the very start of the pandemic. The first question, of course, was whether and by when pharma com-

# 150

Number of new specialized freezers across DHL's European network

### **IN TRANSIT:**

DHL's global air network allows medical goods to be moved from country to country in up to 24 hours.



panies would be able to develop a vaccine. By the beginning of summer 2020, early success in vaccine development seemed like a realistic possibility, so we started to look at what it would take to manage distribution, amid uncertainties about requirements such as temperature ranges.

One thing became clear very quickly: this is one of the biggest challenges the logistics industry has ever faced. Success depends on effective collaboration between the pharma industry, governments, NGOs and logistics providers globally. It is vital that we work together to find the best solutions. We have been having those conversations every day for many months and are now supporting numerous governments in their fight against the pandemic.

### **What steps has DHL taken to prepare its own networks for the vaccines?**

Transporting vaccines is already everyday business for us. We operate one of the largest life sciences logistics networks in the world. And we have 9,000 certified experts working at hundreds of sites where we deal with these products on a daily basis. One big issue with the new vaccines is that the manufacturers don't have the stability data that they would have for more established products. That means the conditions for transport and storage are very strict, and for the first vaccines it means using ultra-low temperatures. We are used to those requirements in special circumstances, such as clinical trials logistics, but not for large-scale distribution.

So the first action we needed to take was to increase our ultra-cold freezer capacity. In Europe, for example, we have secured more than 150 new specialized freezers for our network.

### **How do you manage onward distribution to end users?**

For that part of the process, planning is key. You need dry ice to keep the product frozen in transit, so you need to ensure that enough of it is available at the right place and the right time. And there are other important considerations, such as regulatory limits on the quantity of dry ice that can be carried in an aircraft.

Then, when the vaccine arrives at the point of use, it needs to be thawed and prepared for administration within a narrow time window. That means you need to coordinate the logistics with the clinical facilities at the destination, and with the delivery of all the essential ancillaries, such as syringes and gloves. For every pallet of vaccine you ship, you need a truckload of ancillary products. And after the vaccine has been delivered, you will want to recover the specialized packaging for reuse. There are a lot of transportation flows that need to be coordinated very well.

### **Do you have the capabilities in place to manage those flows?**

Fortunately, this is an area where we have already made significant investments to meet the needs of our life sciences customers. We have a supply chain control tower, for example, which allows us to track every shipment and see exactly where it is at any point in time. And for the past year and half we have been using new sensor technology that monitors the temperature and other critical characteristics of each load and transmits the data to our central IoT platform in Germany. So we can track every shipment, and confirm that it has remained at the required temperature.

Then there is the strength of our global air network. DHL Express and DHL Global Forwarding began distribution in mid-December, delivering the first batches of the COVID-19 vaccine to Israel. By early January, more than 50 DHL Express flights had carried vaccine shipments across Europe and beyond. In Europe, our strong presence allows us to move medical goods from country to country within up to 24 hours.

### **The developed world already has a lot of sophisticated healthcare logistics infrastructure, but how will vaccines be distributed in developing regions?**

That is a really important question, and the answer is complex. For our white paper, we calculated that 25 countries with a total population of 2.5 billion people currently have the necessary infrastructure for distribution at ultra-low temperatures.

Over time, however, we expect the transport conditions to become less stringent. The manufacturers will obtain more stability data about their products, which may allow a relaxation of temperature limits. And there are other vaccines on the way that can be stored and transported at +2 C to +8 C. Many countries already have cold chains in place for those temperatures. They use them for existing vaccines, and for other products such as flowers or fresh fruit. We estimate that 60 countries with a combined population of five billion already have those facilities today. There will still be gaps, of course, and filling those gaps will require investment by governments, NGOs and the international community.

### **Is the world ready to take on that task?**

I believe it is, and we are well on our way. This is a once in a lifetime challenge for our industry, and there is tremendous willingness among all players to work together and find collaborative, creative solutions. ■ **Jonathan Ward**

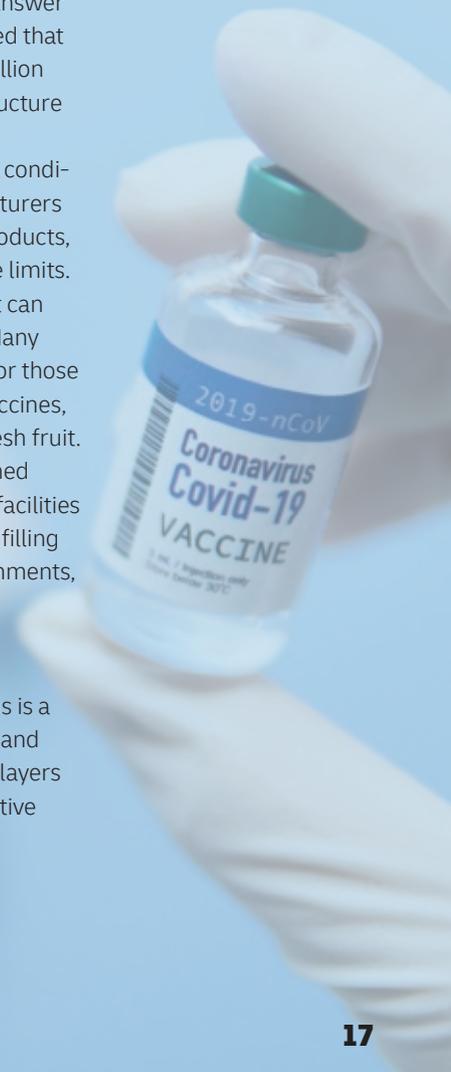
To download the white paper, visit:



[www.dhl.com/pandemic-resilience](http://www.dhl.com/pandemic-resilience)

# 10 BILLION

Estimated number of COVID-19 vaccine doses required over the next two years





# CHINA'S ROAD TO RECOVERY

Despite the ravages of COVID-19 in 2020, China managed to turn around its lockdown-hit markets to lead global economic recovery. The country now remains on track to become the largest economy in the world.

**A**t the close of 2019, China was continuing its historic transition from being a super-high-growth, emerging market to a mature, established economy. At the time, even with some deceleration, the Chinese economy was still expanding at a 6.1% annual clip, a figure that well outstripped that of most other nations. The country was internationalizing rapidly via the Belt and Road Initiative (BRI), and per capita disposable income was continuing to rise – all while showing resilience in the face of the trade war with the U.S.

Then, at the end of the year, a novel coronavirus emerged in Wuhan that proverbially knocked all the pieces off of the table. In early 2020, China's urban centers became bona fide ghost towns as factories, stores and schools across the country were shut

down. The national economy virtually ground to a halt to combat the spread of COVID-19. GDP plunged a record 6.8%, industrial output plummeted, and the future seemed more uncertain than it had been for decades.

## A rapid reopening and recovery

Nevertheless, China did not wallow in the depths of economic despair for long. In fact, in a matter of mere months after the initial outbreak in Wuhan, China was taking fast strides towards recovery.

Once the new corona variant was identified and acknowledged, “the government took the pandemic very seriously ... and had a strict, coordinated, nationwide approach,” explains Mark Tanner, founder of Shanghai-based consumer research firm China



**SHINING EXAMPLE:**

China's economy made a quick bounce back after a record fall in growth.

**CURBING COVID:**

Strict testing regimes were rolled out to control outbreaks in China's cities.



Skinny. "When there was an outbreak, even if it involved a dozen people, cities of millions were tested within days."

During the height of China's initial wave of COVID-19 in 2020, work in most factories across the country ground to a halt. In January and February, motor vehicle manufacturing fell nearly 32% year over year, while machinery, textiles and foods fell 28%, 27%, and 18% respectively, according to China's National Bureau of Statistics.

Haishan Wu, a researcher at WeBank who uses anonymized geolocation data from smart devices and satellite imagery to track human mobility and economic vitality, says that China was experiencing just 24% of its usual activity two weeks after Chinese New Year in 2020. But by March, this number was already up to 75% – and in some prime cities in the coastal provinces of Zhejiang, Jiangsu and Guangdong, it topped 90%.

Data collected by Bloomberg and the Johns Hopkins Bloomberg School of Public Health indicate that China had the lowest rate of COVID-19 cases and deaths of the major economies, and the second lowest unemployment rate, in the second half of 2020.

The impact of successfully controlling the COVID-19 situation has had a direct impact on China's

economy, which grew more than expected last year even as the rest of the world was upended by the coronavirus pandemic.

Figures released by the National Bureau of Statistics of China (NBS) for 2020 anticipate a 2.3% increase in GDP growth compared with last year. As Bloomberg News comments, this represents China's slowest annual growth rate in decades – not since 1976 has the Chinese economy performed worse, when its GDP shrunk by 1.6% amid social and economic unrest.

Nevertheless, according to the NBS, it would appear that the Chinese economy's rate of growth is accelerating. After a decrease of 6.8% in the year-on-year GDP in the first quarter of 2020, the values for the subsequent quarters of last year rose to 3.2% in the second, 4.9% for the third and finished off with 6.5% in the fourth.

The International Monetary Fund's (IMF) estimates project that China's GDP will have been the only economy to have experienced any growth in 2020. And within an anticipated 5.5% expansion in the world economy in 2021, the IMF foresees an increase in China of 8.1%, comfortably outstripping GDP growth in the advanced economies.

"China has been very successful in containing the pandemic and that has played a very important role

**\$535**  
**BILLION**

The value of China's trade surplus in 2020

# 2028

The year when China is predicted to become the world's largest economy

in bringing back activity much more quickly,” says Gita Gopinath, IMF Economic Counselor and Director, Research Department. “There’s been effective policy support provided both in terms of fiscal policy and monetary policy, and China’s exports have also gone up in this environment. And indeed, it is one of those economies that’s returning to the prepandemic projected level in the fourth quarter of 2020, well ahead of other major economies.”

China’s advantageous trade surplus doubtless assisted in the remarkable economic growth during the pandemic year. According to data released by the General Administration of Customs (GAC), China’s foreign trade rose 1.5% to \$4.65 trillion in 2020. In the same period, its exports amounted to \$2.59 trillion, while imports slid by 1.1% to \$2.06 trillion. This led to a trade surplus in 2020 of \$535 billion – 27% more than the previous year, and its highest ratio since 2015, China Global Television Network (CGTN) reports.

## Quick bounce back

This rapid recovery may have a significant geo-economic impact for China. While the U.S. economy is expected to have contracted by 3.5% year on year in 2020, the Centre for Economics and Business Research is now predicting that China will move past the U.S. to become the world’s largest economy by 2028 – five years sooner than their previous estimate – and more than triple in size by 2035. Experts expect that this progress will not be deterred by recent new outbreaks of COVID-19 in some provinces. The BBC reports that, according to Yue Su, principal economist for the Economist Intelligence Unit: “This momentum will continue, although the current COVID-19 outbreak in a couple

of provinces in northern China might temporarily cause fluctuation.”

Manufacturing, healthcare and hi-tech are among the sectors that have put China on the path to recovery. And while retail sales declined overall by 3.9%, e-commerce continued to boom. China leads the recovery in the worldwide auto industry. In January, motor vehicle sales increased by 30% year on year – the 10th month of gains, according to data from the China Association of Automobile Manufacturers.

## Changing behaviors

In many ways, COVID-19 has expedited technological developments and social shifts that were already in progress. Going out to the stores to shop was already becoming a thing of the past. But with hundreds of millions of people trying to stay home as much as possible, e-commerce boomed and consumer habits were further pushed towards online consumption.

“With continued globalization and the COVID-19 pandemic driving consumers to shop online like never before – especially during mega shopping days such as ‘Double 11 Shopping Festival’ – sales numbers hit a new high,” says Dong Ming Wu, CEO, DHL Express China. “The sales boom demonstrates China’s sustainable consumption power. Shopping online is not a new thing in China, but COVID-19 has changed the way people live, work and shop.”

Wu believes that China is affording us a glimpse of a global future of consumption, in which multichannel shopping that allows customers to do research online and buy or try things out in an online store will be on the rise. Livestream retail – conducted through live, high-energy video to promote products, answer questions and close sales – is also gaining in popularity.

## Full steam ahead

In launching its Belt and Road Initiative in 2013, China sought to bolster its participation in the next phase of globalization with an enhanced network of land- and sea-based trade corridors and manufacturing zones around the world. With 140 countries signed on and projects in the works in all corners of the globe, the BRI was running at full steam before the COVID-19 pandemic hit.

As the world began shutting down, so too did development on the BRI. Major projects in Pakistan, Cambodia and Myanmar, to name just a few, were halted in their tracks. Nevertheless, these disruptions proved to be temporary and, across the BRI, work has begun again.

One of the biggest bright spots for the project is its signature trans-Eurasian rail network, which now connects dozens of cities in China with Europe and the Middle East.

### BEARING FRUIT:

Selling oranges through a livestream retail platform.





**ALWAYS MOVING:** Freight trains played an important role in helping stabilize supply chains.

“Passenger flights being grounded took away a lot of capacity on air freight,” says Steve Huang, CEO, DHL Global Forwarding Greater China. “Some of the cargo just cannot afford the transit time of ocean freight. Then ocean freight also cut down capacity, increased transit times and had more blank sailings, so a lot of volume went to rail.”

By the end of 2020, the BRI’s rail network was booming, Huang points out, with 12,400 trains having traversed the expanse between East and West.

“They anticipate this will grow further. And now they are looking for connections,” Huang says.

### Health benefits

Another way that the BRI had a major impact on transport and the economy throughout the COVID-19 pandemic was through the inception of what Chinese President Xi Jinping called the “Health Silk Road.” This is essentially the utilization of the network to manufacture and transport medical supplies more readily and effectively around the world, making China a global healthcare leader in the process.

“Globalization for China is a fixed path,” Huang says. “They will keep pushing on it. They have to diversify the market more because of the tariffs from the U.S. government. I think they will further enhance their Belt and Road Initiative.”

China will continue its international progress in 2021 with more BRI partnerships and pilot free trade zones and ports. The rail and road connection to Southeast Asia, one of the major missing links of the BRI and a key part of China’s 14th five-year plan,

is set to kick off next year. This new corridor will extend down from Kunming in the Yunnan province through Laos, Myanmar and Thailand.

“To expand opening up, China is taking actions to further facilitate foreign trade,” Wu explains. “For example, it is making constant efforts to support new international patterns in free trade ports and pilot free trade zones.”

Although the global economy is still struggling to overcome setbacks due to the pandemic, China appears to be in pole position for recovery. “The coming year is looking more positive for China than any other major market,” Tanner says. “Not only has the virus been largely contained, but consumers are also feeling positive about it as a result.” ■

**Wade Shepard, Christine Madden**



### CHINA

**Population:** 1.398 billion (2019 mid-year est.)

**GDP:** \$14,342,903.01 million (2019)

**World Economic Forum’s Global Competitiveness Report 2019:** 28th out of 141

**World Bank Group’s Ease of Doing Business Index 2020:** 31st out of 190

**DHL Global Connectedness Index 2020:** 70th out of 169

**ENGINE FOR GROWTH:**

A freight train bound for Europe leaves Wuhan.



# ON THE RIGHT TRACK

As global air and ocean shipping lines went down during the COVID-19 pandemic, businesses turned to rail to keep supply chains between China and Europe open.

In 2020, global logistics were flipped upside down. Formerly fast and convenient modes of transport were hit by a lack of capacity, causing prices to go through the roof, while usually cheap and reliable shipping strategies became mired in extended and unpredictable lead times. As countries shut down their economies to combat the pandemic, and the world's air and sea cargo lines became severely disrupted, the New Silk Road with its rail connections kicked in as the popular alternative.

China-Europe rail services, in particular, experienced an explosion in volume throughout the COVID-19 pandemic, thrusting them into the global forefront of logistics options – an unprecedented position of relevance.

“What happened last year was really unexpected,” says Thomas Kowitzki, Head of Chinarail, Multimodal Europe, DHL Global Forwarding. “From March onward, our time to shine came for rail. We really saw a record number of trains all year.”

## Ahead of schedule

The China-Europe rail services arose out of a need for a middle-ground solution between fast but expensive air freight and slow but cheap ocean freight. Throughout the first decade of the 2000s, various logistics operators had been experimenting with innovative nonstop rail links between China and Europe along what was then called the Second Eurasian Continental Bridge, a multinational project to create a corresponding rail-driven transport corridor to the Trans-Siberian Express. But it wasn't until 2013 that regular services were readily established. Since then, with the inception of China's Silk Road Economic Belt, these transcontinental rail offerings have grown into a full-fledged, 30+ line network connecting more than a dozen cities in China with counterparts in Europe, giving customers from almost all industry sectors a way to ship their goods faster than sea and at a fraction of the cost of air from China to Europe and vice versa.

While volumes were rapidly rising from the outset, nobody could have foreseen the drastic increase that happened in 2020. Some 12,400 cargo trains traversed the Eurasian landmass in 2020, explains Kowitzki, moving over 1 million TEU (twenty-foot equivalent units) between two of the planet's most dynamic economies – an almost 50% year-on-year rise from 650,000 TEU in 2019. In November 2020 alone, the number of China-Europe freight trains reached 1,238, up 64% year on year, to transport 115,000 TEU, up 73% from the previous year, the Belt and Road Portal reports. According to Martin Holst-Mikkelsen, Head of Europe Ocean Freight at

Flexport, Asia-Europe rail volumes now command 5%-6% of the region's total transport capacity.

## A welcome alternative

The reasons for this boom in trans-Eurasian rail are directly related to other modes of transport being hamstrung by issues resulting from the COVID-19 pandemic.

"With the bulk of many passenger air fleets being grounded due to travel restrictions and falling demand, capacity was extremely restricted and costs were exploding everywhere," Kowitzki says.

Consequently, explains David Smrkovsky, a former global logistics manager at HP and Foxconn, upward of 60% of the air cargo capacity between China and Europe and 80% between China and the U.S. went offline as the coronavirus pandemic shifted into high gear in the spring. Accordingly, prices rose exponentially and transit times often tripled.

This forced droves of customers to pivot to alternative shipping methods, and trans-Eurasian rail was where many of them turned. "Normally, the rail option between China and Europe is around eight times cheaper than air," Kowitzki comments. "Today, it's become an outright bargain."

As with air cargo, the situation wasn't looking very bright for ocean freight, either. A decrease in demand and an unprecedented dearth of containers led to a situation in which many ocean lines carried out more and more blank sailings – canceling stops and even entire routes.

This led to a scenario in which ocean shipping not only had longer lead times but also became more unpredictable, driving more shippers to try out trans-Eurasian rail, the schedules of which have remained intact – in fact, capacities even grew to meet increasing demand. Rail rates have usually been only twice as expensive as sea transport between China and Europe – often a negligible difference when looking at the value of the products being shipped – and the added bonus of reliable 23- to 25-day delivery times have enticed many to make the change.

Container shortages in China also became an issue for rail in autumn 2020, but this did not detract from the very real benefits. "Rail has shown its value in 2020 and helped to keep supply chains running. While the sudden spike in volume also created some challenges due to equipment shortages, border delays and weather conditions, the bottom line is that rail went through with flying colors," Kowitzki says.

## The drivers

While the China-Europe rail network has been handling increased volumes in its usual sectors –

technology, engineering and manufacturing, automotive and consumer goods – it has also become an ideal choice for the rapid transport of medical goods needed in the fight against COVID-19 – which President Xi Jinping has dubbed the "Health Silk Road."

These medical supplies are in large part being transported by rail. China's foreign ministry claims that more than 27,000 tons of medical equipment, including masks and protective suits, have so far been thus conveyed to Europe – a 41% increase over 2019.

## On track to the future

But can the growth of rail be sustained far into the future? Kowitzki says yes: "People who never thought about rail are now trying it and realizing, hold on, it works. This pandemic has helped customers get away from doubt over whether it would really be a viable option for them. Now that they know it works, they will have a completely different starting point than they did before."

One of the main arguments for the long-term growth of trans-Eurasian rail is that it is among the least environmentally damaging forms of long-distance cargo transport. This is important, as many of the world's governments are putting more emphasis on cleaner forms of transportation. The European Commission's Green Deal, for example, heavily promotes the increased use of rail, and announced 2021 as the Year of Rail.

Once criticized as a vanity project that wouldn't have much of an impact on global freight transport, trans-Eurasian rail became a lifeline for many companies during the COVID-19 pandemic. As air and sea cargo capacities dwindled, it was the train that held the logistics map together. ■ **Wade Shepard**

# 30+

The number of rail lines connecting China with Europe

### CHECK RAIL:

Verifying supplies on a China-Europe freight train, an important part of the Belt and Road Initiative.



# SOLUTIONS

## IN THE ZONE

**A** paradigm shift at work: a CEO without their own office, peaceful quiet zones, dedicated spaces for collaborating and a kitchen stocked with healthy goodies and good coffee... Welcome to New Work!

Physical changes to an office space can radically improve well-being, boost productivity and promote cooperation. What's more, teaming those changes with new, agile ways of working – remote work and home office, for example – gives employees the necessary freedom to thrive.

DHL Consulting launched its colorful new premises in Bonn, Germany, in 2019. Just ahead

of the COVID-19 pandemic, as it turned out, which brought massive changes to the world of work globally.

The physical transformation was driven by a shift in mindset. With trust and collaboration defined as the main goals, agile working was introduced and the workspace was redesigned to enable maximum flexibility and foster well-being.

The office features 182 flexible seating options across different zones: from silent work and meeting rooms to open spaces for collaboration, and booking enabled via a smart digital solution. ■



### HEART SPACE:

Here, the whole team comes together for celebrations, updates and virtual meetings that connect them with colleagues in the Americas and Asia-Pacific offices.



**COLLABORATION:**

In collaboration zones, like the Shipping Container, the environment is designed to encourage teams to brainstorm ideas and tackle projects with zeal.

**OPEN SPACES:**

Here, anyone can find a permanent spot for the day. With all the necessary tech in place, anyone can plug in and start working right away.



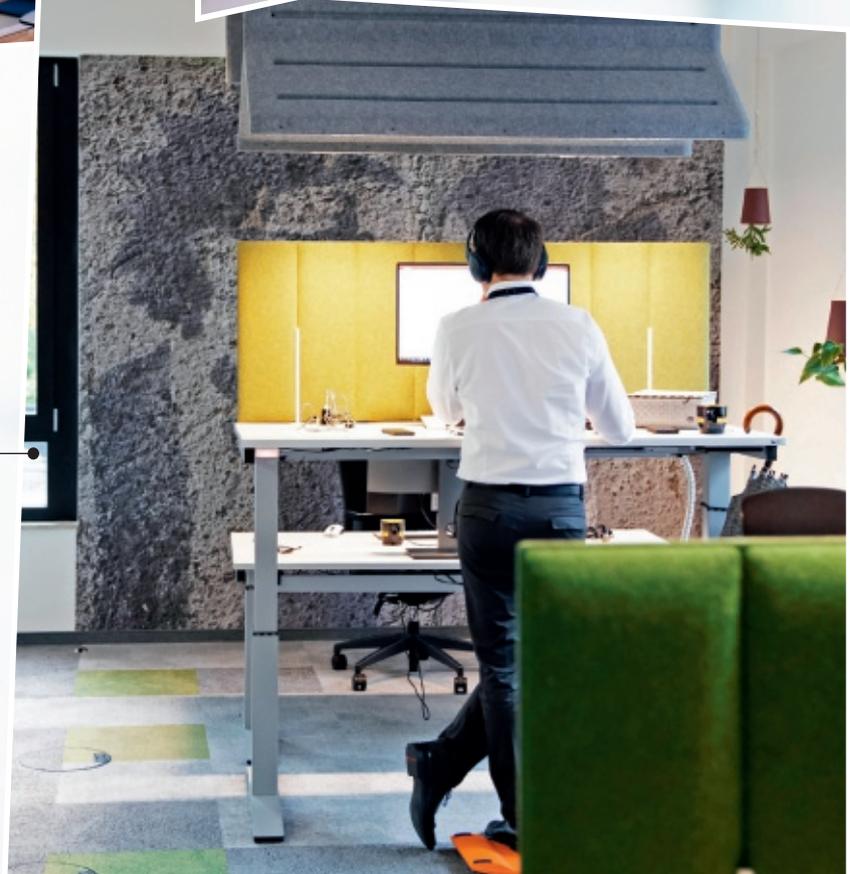
**MEETING ROOMS:**

The Red Carpet and other meeting rooms are used for team meetings, workshops and client presentations. Cutting-edge technology, ambient lighting and a range of seating options ensure teams can stay productive and comfortable, even during longer meetings.



**SILENT WORK:**

The Park is one of the distraction-free spaces that invite employees to focus on deep work, with designs specially created to promote an air of calm.



To learn more, please visit  
New Work at DHL Consulting:

 [dhl-consulting.com/new-work](https://dhl-consulting.com/new-work)

 [bit.ly/dhlconsultingoffice](https://bit.ly/dhlconsultingoffice)

# REMOTE CONTROL

Last year presented businesses with unprecedented challenges, and 2021 looks set to move at an accelerated pace for many. How can managers motivate themselves and their teams to keep up, keep busy and deliver?

**T**he global pandemic was a vivid reminder that any crisis – however catastrophic – can also be an opportunity.

Large swathes of employees were suddenly working exclusively from home, meetings were abruptly moved online, travel to see customers or expand horizons was suspended and plans were put on hold.

A new reality was biting – and, in large part, businesses responded with an agility and resourcefulness that surprised many, often even the companies themselves. Changes in work practices that had been thought and talked about for months – or years – but were regarded as potentially difficult, suddenly became very possible indeed.

## Working around lockdown

While some employees are moving or will move back to the office, at least part time, it seems unlikely that we will see a return to old-style, traditional office working, which, even before COVID-19, was changing fast.

It's vital that businesses – and their managers – maintain that level of innovation and creativity as the global economy continues to work around lockdown measures, which are likely to continue well into 2021.

Professor Karan Sonpar, who teaches organizational behavior at the School of Business at University College, Dublin, believes that coping well with the aftermath of the pandemic will be crucial.

## Feel-good focus

“From a personnel and HR standpoint, the main challenges will be dealing with the mental health and well-being of employees post a traumatic event that has led to increasingly difficult work conditions and changing expectations on how work is done,” he says. Managers must be “alert, empathetic and sensitive to the trauma individuals have faced due to the pandemic.”

But according to Sonpar, perhaps the most important thing managers can do is to look after their

own as well as their team's mental health.

“It's lonely at the top, and we may be underestimating how difficult this crisis continues to be for executives who are required to steer their ship in these turbulent conditions,” Sonpar says.

It helps, he says, to try to cultivate a Zen-like attitude.

“The biggest challenge is managing one's own emotions and mindset. Every individual is different and must find their own North Star, their own calling that keeps them energized and focused. But if it could be boiled down to one practice, I would argue it would be keeping a positive mindset and not being scared.”

Experts emphasize the continuing need for regular communication. “Executives and managers need to avoid the extremes of ‘happy talk’ or ‘project fear’ and instead communicate frequently even if this involves conveying incomplete information,” says Sonpar.

“Nobody expects executives to have all the answers,” he adds. “What people do expect, however, is that executives are visible and modeling expected behaviors. Being present and available for one-on-one meetings, even digitally, is one of the best things managers can do at the moment.”

## Click and connect

Barbara Gerstenberger, head of the Working Life Unit at Eurofound, the European Foundation for the Improvement of Working and Living Conditions, agrees that it is important to continue to check in regularly with colleagues one-to-one in order to replace those informal conversations you have when people come to your office or sit at the same table at lunch. But, she warns, there are limits to what can be done remotely.

“We discussed simulating a shared workspace through being connected in a meeting app like MS Teams while working away on our individual tasks,” says Gerstenberger. “But the reaction was unanimous: You cannot fool yourself that this is a replacement for sharing an actual building.”



Deirdre Mortell is CEO of Rethink Ireland, an organization that provides cash grants and business support to social innovation projects in Ireland. The company has 39 staff in four urban centers: Dublin, Cork, Wexford and Galway. “Now, they have adjusted to working from home,” she says, “and most would like to work from home 40-60% of the time but come to the office a few days a week too. I predict that is where we will end up.”

Mortell introduced anonymous staff surveys to track staff morale and gauge their comfort levels with different initiatives. This, she says, was enormously helpful.

Fun strategies to help teams stay upbeat and productive are also still relevant. Keeping community and culture programs going in the remote workplace, such as by hosting virtual quizzes, cocktail hours, family fun days or virtual pet parades, can help hugely, even when some staff have returned to the office, either part- or full-time.

Onboarding new colleagues needs a different approach now too – especially as: “Companies can

also expect a high turnover of personnel to competitors as soon as the economy kick-starts,” according to Sonpar.

Forty-nine percent of Rethink Ireland’s staff have joined the organization since April 2020. “Systems and processes for joining, induction and boarding have to be much tighter, if done remotely,” advises Mortell. She and her team introduced a buddy system for all new staff, so they have someone specific, at their level, to call if they are lost and just don’t know what to do. “We emphasize that there is no such thing as a stupid question,” she says.

For Jason Rout, Business Director Industry at global facility management services Atalian Servest, improvements made in the company’s communications systems during the pandemic have proved invaluable.

“Once the first lockdown lifted, we continued with these processes, and they remain in place now. My team now communicates better than ever and has developed a greater level of collaboration, which is ultimately benefiting our clients too.” ■ **Cathy Dillon**

# VIEWPOINTS



*Delivered. explores the lunar surface with...*

# MICHAEL PROVENZANO

There are numerous challenges involved in the design of moon exploration vehicles, says the Director of Planetary Mobility at space tech company Astrobotic. But there are incredible opportunities too.

**M**ichael Provenzano is certain that there must be life on another planet. In fact, proving that we're not alone in the universe is one of his driving passions. "Imagine how big that discovery would be!" he says. "Although it's not the only reason I'm excited about working in the space industry."

Provenzano's fascination with space started after graduation when he watched the TV series "Cosmos," hosted by astrophysicist Neil deGrasse Tyson. "I was looking to do something impactful," he says. "Space was becoming an industry with the likes of SpaceX and Blue Origin, so I figured it must have a need for business people. I thought: 'Maybe there's something I can contribute that will be good for the human race.'"

A former Poets&Quants' Best & Brightest MBA, Provenzano worked for a spell at Boeing on its Space Launch System, and started his own business based on space transportation. In 2017 he joined Astrobotic, a company that develops space robotics technology for lunar and planetary missions, and seeks to make space accessible to the world with a line of payload-delivering lunar landers and rovers. "By offering prices that are more affordable than traditional space missions, we're bringing down entry barriers for any scientific group that wants to engage with the moon," he explains. "That includes international space agencies, universities and companies. We want to become a logistics service that carries unique goods to the surface of the moon." For example, in 2023, Astrobotic will be delivering NASA's water-hunting rover, VIPER, to the South Pole of the moon on its Griffin lunar lander.

As director of Astrobotic's Planetary Mobility team, Provenzano leads a group of engineers who are developing the world's first and smallest commercial lunar rover, the CubeRover, along with medium and large lunar rovers MoonRanger and Polaris. "We work out what cool capabilities they should have," he says. "Do we want them to be autonomous, or be able to survive lunar night temperatures? Do we need to make them bigger so they can go over obstacles, or down into pits or caves to search for resources?"

The CubeRover is now being tested at NASA's Kennedy Space Center, and the hope is that it could reach the lunar surface in 2023 – although that's still to be confirmed. The big question is: After the moon, where will its next mission be? Mars? "If we can find resources on the moon to convert into rocket fuel, we can go further into the solar system," says Provenzano. "So, Mars? Absolutely! And why stop there ...?"

**1**

The number of lunar days that the first version of the CubeRover can spend on the surface of the moon. One lunar day is around 14 Earth days

**199+**  
**MILLION**

The dollar value of the contract awarded to Astrobotic to deliver NASA's water-hunting rover, VIPER, to the south pole of the moon

### What will the CubeRover be doing?

If you're a scientific group that wants to go to the moon, for example, to learn more about where resources are located, you don't need to put your technology on to a giant platform. You can put it on a small rover. The CubeRover streams live data and images and – if required – can be fitted with robotic arms and drills to take scientific samples.

### How big is it?

Our CubeRovers come in different sizes, but the smallest is the size of a shoebox. It's controlled from Earth in Astrobotic's mission-control room in Pittsburgh, Pennsylvania, by trained personnel, and our customers can tell us where to direct it. The rovers are battery-powered and fitted with solar panels, so they can recharge during the mission with energy from the sun.

### What's been your biggest design challenge?

The CubeRover is so small that it can heat up and cool down much more quickly than traditional planetary rovers. It gets really cold on the trip to the moon, and then really hot when it lands on the surface – and it's hard to design for extreme temperatures. Also, the CubeRover has to be able to survive vibrations during launch.

### What will your bigger rovers, Polaris and MoonRanger, be doing?

The bigger rovers are needed to cope with rockier terrain. Polaris is about the size of a golf cart and is useful for carrying bigger instruments such as heavy drills or sampling tools. Meanwhile, MoonRanger is a collaboration between Astrobotic and Carnegie Mellon University and will fly to the moon in 2022. It can drive at relatively high speed and is completely autonomous, so it will go off on its own to look for resources outside of the lander's Wi-Fi range.

### Could you see lunar rover technologies being used on Earth in some way?

I often think about that. Elements of our technologies could be used in sectors such as mining or for military applications. But, truthfully, they're better reserved for space.

### How did you get involved in DHL's MoonBox project?

We talked to DHL because we want to be a logistics provider too – but in space! The idea is that people can put mementos – such as a photo, a ring or an heirloom – into a DHL MoonBox, which we then deliver to the moon in a MoonPod. We have cameras on our lander which will take a picture of the MoonPod sitting on the lunar surface. We thought it was a good way to give regular people a chance to interact with the moon. ■ **Tony Greenway**



# THE END OF WINNING

Ultimately, we are all losers. But we can learn how to lose, and love to lose. And as losers, the future belongs to us. In his essay, business leader and enthusiastic loser Tim Leberecht tells us how.



## TIM LEBERECHT

Tim Leberecht is the co-founder of the House of Beautiful Business, a global platform and community to make humans more human and business more beautiful. He is also the author of “The Business Romantic” (2015) and the upcoming book “The Losing Proposition.”



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**F**rom our earliest days, we are told that there is no good alternative to winning. As kids, we compete for attention in our families, for grades and friends at school, and for victories in sports. Later, as we enter the world of work, we learn we must succeed, or aim for success – which is just winning by a slightly more polite name. Management literature is full of instructions for “how to win a customer,” “how to win a pitch,” or “how to win in the stock market.”

For decades, we’ve been narrowing the space in which people can lose without social stigma. The result is a society that views the “art of the deal” as the highest art of all, where the winners are the best dealmakers, and everybody gets only what they pay for. We have normalized a transactional, zero-sum view of the world.

## Losing as our new modus operandi

COVID-19 has served as a stark reminder that, ultimately, we are all losers. It has brought social and actual death to the center of our societies, along with economic damage on a scale many of us had not seen before.

More than one in six young people are out of work due to COVID-19. Young women have been hit especially hard. One in five has stopped work since the onset of the pandemic. Will these jobs ever come back? Who knows, especially given that automation may replace up to 50% of workers in the next two decades.

It is fair to assume that, going forward, losing will become our new modus operandi.

We’re going to lose the stability of full-time employment; we’re going to lose the promise of linear, progressive careers; we’re

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going to lose status, authority and control in superflexible, hybrid workplaces, and in increasingly flat, networked organizations.

We will see many jobs disappear and employment cycles shorten. Many of us will find ourselves at a disadvantage competing for maximum efficiency with ever-smarter machines. Machines simply stop functioning; they can fail, but they never lose.

And yet, as we face losing on a massive scale, we can re-engineer our society to accommodate us, the losers, and be proud of it. The first good news is that we have a policy instrument to address not winning, or at least not right this minute (or before we were even born): universal basic income.

### Strategies for losers: universal basic income

Universal basic income (UBI) means that every citizen, regardless of his or her economic situation, receives the same minimum amount from the state to secure their livelihood.

UBI is not the great equalizer, but it might serve as a great humanizer, by decoupling our societal value and our self-esteem from our economic value, by making the idea of competition less consequential, and less existential. Research shows that people are more inclined to work when their essential needs are taken care of.

“In a world of true abundance, you shouldn’t have to work to justify your life,” as the writer Sam Harris once put it.

With UBI, we can still compete, but it matters less whether we win or lose. Which, in effect, is mostly good news for losers. With UBI, losing is no longer taboo.

### Another strategy for losers: melancholy

UBI may be an effective policy response, but let’s face it, losing is personal. And if we truly want to nurture a culture of losing, it must start with each of us.

Losing makes us human. Losing makes us us.

This is a rather melancholic posture, and melancholy is alien to a business world dominated by assertiveness and swift action. Melancholic leaders or workers are considered losers! And that’s actually a fair assessment. Because melancholy is the awareness that things are futile, “utterly meaningless!” And, at the same time, melancholy mourns a past that no longer is, yearns for something that matters, something that brings us alive.

Unlike cynicism, melancholy grants us dignity and authorship; it allows us to live in sorrow and use it as material for new creations. Cynicism is a destructive force; melancholy, creative. Cynicism dehumanizes; melancholy humanizes.

It is precisely because the big picture is so pointless that melancholics find the little things so endearing. Small is beautiful. Only with the humility of melancholy can we build beautiful businesses.

Or, in the words of Fernando Pessoa, the melancholic Portuguese writer: “Every gesture is a revolutionary act.”

Let’s start this business revolution with more beautiful gestures.

### And finally, ritual

Last year, in a coffee shop in Bernal Heights, a neighborhood of San Francisco, I met Caroline, a self-proclaimed “book doula.” Her job is to help (prospective) authors bring a book into the world. The book doula assists those who are “pregnant with an idea” (who “have a book in them”), develop it, and finally put it on paper. It is work more similar to that of a therapist than that of a ghostwriter.

I met with Caroline to discuss my book project, which at that point was nothing more than a fleeting hunch. Caroline immediately asked the right, probing questions, from a publisher’s and reader’s perspective.

So I was all the more surprised when she, at some point in our conversation – I forgot how it came up – told me about her side job. She is a deathbed singer: a member of a choir that sings the last songs to dying people shortly before they take their last breath. She says she is “summoned” three or four times a month, and her choir goes to the hospital or the home of the dying person and sings only for them.

Sometimes the dying still have the strength to tell the singers the songs they would love to hear, but more often than not the choirmaster has to make that choice. The repertoire of the choir is large and ranges from Schumann’s Lieder to Sinatra’s “My Way.” It is not an easy job, Caroline admitted, and the singers need a good deal of emotional resilience.

The book doula becoming a death doula: It’s rituals like these that help us cope with loss. In fact, any ritual marks the passage from something we leave behind to something new into which we enter.

A humane society is one where we can lose without being losers. A humane company makes losing part of its strategy. A humane person loses with dignity and class, and helps others lose when there is nothing to gain.

Universal basic income, melancholy and ritual. At the societal, organizational and individual level, we have the means to learn how to lose, to learn how to love to lose. To nurture a culture of losing. To change the nature of the game. And no longer play only to win.

All strategies for losers have one thing in common: Only when we are humbled by defeat, when we cede control, when our hearts break, when we lose ourselves, can we do what these crazy times demand of us – and give it all. ■

## → THE DEBATE ←

# NO GOING BACK?

As consumers stayed home and took to online shopping in unprecedented numbers, the COVID-19 pandemic accelerated the pace of e-commerce exponentially in many countries. So will this period transform retail forever?

**Lee Spratt:** With the rise of e-commerce, the retail sector has evolved over the last decade to meet consumers' changing needs. And in response to the COVID-19 pandemic, digital buying became, for many consumers, their safest and preferred option to obtain the goods and essentials they were seeking, thus fast-tracking e-commerce growth.

According to a study by McKinsey, e-commerce penetration in the U.S. jumped from 16% in 2019 to 33% in July 2020 – a decade of growth in two quarters.

The pandemic ushered in a new era for retail e-commerce, which will never return to its pre-pandemic sales levels. This is evident in U.S. consumer surveys that show that two-thirds of shoppers have tried new ways of shopping in 2020, and they plan to continue doing so.

As we hit the one-year mark of the global outbreak, many consumers have had long enough to permanently change their buying habits, allowing e-commerce to be part of their everyday lives in the future.

The COVID-19 pandemic expanded the number of active e-commerce shoppers, and lured individuals who had never shopped online before to try e-commerce for the first time during lockdowns. Occasional online shoppers also increased the frequency of and expanded their shopping into more online categories. With the experience of convenience, safety and other online shopping benefits, such as buy online and pick up in-store, shopping exclusively in brick-and-mortar stores will for many be a thing of the past.

For retailers, the pandemic forced businesses to prioritize e-commerce and place it at the top of their business agenda – making it a matter of survival. Those retailers with the greatest ability to be agile, innovate and adopt or strengthen their omnichannel approach

are those who will survive in the long term. Therefore, this period will not mark the end of retail but will instead establish a retail model transformation, in which physical stores and online shopping will not be considered a separate but rather a complementary, integrated retail concept. With this new model, the role of stores and malls is likely to change. They will become centers for social interaction as well as showrooms used to market a product, while the inventory is located elsewhere.

What does a retail transformation mean for logistics? In 2020, logistics operators worldwide made significant infrastructure investments to handle the elevated number of business-to-consumer (B2C) packages. For example, in 2020, DHL eCommerce Solutions in the U.S. invested \$30 million to expand key distribution centers in Atlanta and Los Angeles, adding temporary space in major markets and more automation across the U.S. network. This resulted in higher efficiency gains in processing parcels and a better delivery experience, which enables further e-commerce growth. With the growth in parcel volumes, we are likely to see delivery models evolving too, as better inventory management and fulfillment capabilities optimize end-to-end delivery efficiency.

In summary, I believe that we have seen a fast acceleration of trends that we've been observing in the past years, leading to a fundamental transformation of the retail sector.



**Lee Spratt** is CEO for DHL eCommerce Solutions Americas. He oversees the Americas operation, which encompasses 20 distribution centers and three corporate offices in the United States and Canada. Before his current role at DHL, he held several leadership positions focused on the U.S. domestic market and upper management positions in e-commerce software and telecommunications companies.

**T**he coronavirus pandemic hasn't just changed the way we live. It's also changed the way we buy. Online shopping has thrived, because customers have found it to be easy, convenient and – crucially – safe.

In reality, of course, e-tail was already big business, with many millions of purchases being made online every day. Indeed, the unstoppable rise of e-commerce had been felt on the main street for years, with both new and long-established

names forced to close their brick-and-mortar stores. Still, has the pandemic changed the nature of shopping again – and this time irrevocably? In this installment of The Debate, Lee Spratt, CEO, DHL eCommerce Solutions, Americas, and Jens Torchalla, partner at management consulting firm Oliver Wyman, discuss what the retail landscape will look like going forward. Is this the beginning of a shopping revolution? And, if so, which retailers will be equipped to thrive and survive in this new environment? ■

**Jens Torchalla:** The COVID-19 pandemic triggered a surge in e-commerce, as many people bought groceries and other goods online for the first time. But will customers continue their new habits after the crisis? Or will they go back to brick-and-mortar retail?

We think retail is changing for good. The shifts in habits have not come out of the blue but are instead accelerations of transformations that were already beginning in many segments. However, this does not mean the end of physical retail. The pandemic has shown that people want to – indeed, are desperate to – get out and consume in a sociable environment once they have the opportunity again. So, while a significant and growing share of purchases will remain in e-commerce, the retailers that thrive in the future will be those that combine digital and physical shopping in a multichannel experience. In order to be successful, such an experience must be inspiring and fun, while also safe and efficient.

The pandemic's impact on various retail segments has differed hugely since early 2020. Department stores and fashion retailers with physical stores, for example, have been hit extremely hard by lockdowns and restrictions. But many DIY and grocery stores have thrived: People are eating at home instead of in canteens and restaurants and buying more garden and home leisure equipment.

A key success factor for retailers at the beginning of the pandemic was their readiness for the new era. Businesses that were prepared for increasing online baskets, and that set up digital and e-commerce ecosystems for seamless fulfilment and customer service, benefited – or, at least, slowed the bleeding of revenues. Retailers will only thrive

in the new environment if they invest in people, IT and other capabilities. Consumers will expect a greater variety of delivery and pickup options, including click-and-collect and ship-from-store fulfillment. Retailers in segments such as grocery, fashion, electronics and DIY will have to invest in their in-store experience and features such as endless aisles – in-store kiosks that let customers order products that are out of stock or not sold in-store and have them shipped to their homes. Live-shopping interfaces, which combine reviews, recommendations and digital purchases, will be increasingly important in segments such as fashion, beauty, and apparel. Customer service will need to operate across these multiple channels.

Players able to offer their customers an integrated omnichannel experience will continue to attract customers to their stores – as well as their online shops and marketplaces – even as competition grows from online conglomerates.

The necessary investments will only be possible if retailers become more efficient throughout their organizations: at headquarters, in all operations, along their supply chains, and in stores. It requires significant change in culture and management behavior to adapt to future requirements and become faster in realizing the transformation.

**Jens Torchalla** is a partner in Oliver Wyman's retail and consumer goods practice and leads the Munich office of Oliver Wyman. With a wide range of experience in the areas of format development, category management, purchasing, sales, operations and supply chain management, Jens also specializes in holistic transformation programs in the retail industry across Western Europe and Central and Eastern Europe.

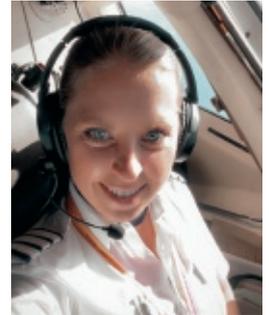


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WHAT'S THE STORY, MS. FRIEDRICH?

# MY HIGH-FLYING CAREER

Maria Friedrich is a DHL pilot flying freight to destinations across Europe. She explains why she's happiest in the air, and how she kick-started an eye-catching way for the company to support Breast Cancer Awareness.



**B**ecoming a pilot was always my plan. I remember when I was three: We flew to Florida and the crew invited me on to the flight deck. I thought: "This is what I want to do." My first job was working as a Lufthansa flight attendant for six years. That was cool, and I enjoyed seeing the world for free. But after two years, I thought: "I need to start my pilot training." I worked hard and, in 2011, managed to finish my qualifications within 20 months.

I love flying. The first time I took the controls it felt ... right. Personally, I can't imagine sitting in an office. When you fly, every day is different, and the feeling you get when you take off and land is just unbelievable. You do have to be able to handle all kinds of situations, though. Once, I remember, one lady even gave birth on board! But I don't get stressed. I'm a laid-back person.

Now I'm a first officer based in Leipzig, Germany, working for DHL Air to fly freight across Europe on Boeing 757 aircraft. It's just me and the captain, and we fly to some of my favorite destinations, such as Casablanca and Riga. My next career wish would be to fly a Boeing 767 and gain long-haul experience. And, of course, every pilot's dream is to become a captain.

In 2019, I was talking to a DHL friend and colleague, Jennifer Platt, about what the company could do to promote Breast Cancer Awareness. The next thing we knew, we had management support to have five of our 757s specially liveried with a giant pink ribbon – the campaign's symbol – for October Breast Cancer Awareness Month. We flew these planes to destinations across Europe. Our colleagues at DHL Air loved the idea. Next year, it would be great to get support from DHL teams right across the world.

I love this job. Sometimes I can't believe I'm doing it. Maybe I don't fit the pilot stereotype – I'm small and blonde – but I hope I can motivate other girls and young women to aim high and follow their career dreams. ■ **As told to Tony Greenway**



**FACT:** Captains of commercial aircraft need to have flown at least 1,500 hours. Maria believes it will take her between three and eight years to reach this position

**250+** The number of aircraft in the DHL fleet

**500+** The number of airports served by DHL Express worldwide



# 3.5 MILLION

The number of data points used in the DHL Global Connectedness Index 2020, released in December 2020. This new report, created in partnership with NYU Stern School of Business, is the first comprehensive assessment of globalization during the spreading COVID-19 pandemic. It tracks international flows of trade, capital, information and people across 169 countries and territories that, taken together, account for 99% of the world's GDP and 98% of its population. You can access the report and further information at:



[www.dhl.com/gci](http://www.dhl.com/gci)



# HELPING DJAMAL HASN'T ONLY HELPED DJAMAL.

Since 2015, our GoTeach programme has smoothed the path into our society for refugees from around the world. Djamal Mansouri is just one of over 14,800 people who have arrived in the country and joined our company.

[dpdhl.com/refugee-aid](https://dpdhl.com/refugee-aid)

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