

# **DHL EXPRESS**NETWORK MANAGEMENT

**GLOBAL FOCUS** 







t's interesting how many company names are acronyms of three letters. There is a satisfying symmetry in the way these letters look and sound: more often than not, their origins are lost and the acronym achieves a powerful brand status in its own right. In the case of DHL, the initials represent its three founders—Dalsey, Hillblom and Lynn of San Francisco—who came up with a revolutionary new concept in logistics and launched the world's first genuine intercontinental express delivery service in 1969.

Today, DHL is recognised by businesses and householders around the world and leads the market for international express delivery services. Synonymous with service and reliability, it is a truly global organisation with an air and road network spanning more than 220 countries and territories in all corners of the world. "In fact," says Joerg Andriof, global head of Network Management, "DHL Express services can be bought in more countries than Coca-Cola or McDonald's. And our air fleet is currently comparable in size to Lufthansa, and larger than British Airways'."

The latest chapter in the story of this remarkable brand began in 2002 when Deutsche Post, the rapidly expanding German postal services company, acquired 100 per cent of DHL shares. Retaining its formidable brand name and cultural identity, it was the German company's first foray into the international express business.

The final step in the brand development took place in 2009 when Deutsche Post restructured its extensive business,



### **DHL EXPRESS NETWORK MANAGEMENT**

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DHL operates "Around the World Service" with Southern Air's Boeing 777 Freighter

integrating and bringing together the many businesses it had either launched or acquired since its privatisation in 1990, and rebranding them to incorporate the DHL identity. Today the group is known as Deutsche Post DHL, which better expresses the breadth of the organisation and its global reach.

Internally, Deutsche Post DHL now has four divisions. Mail is Deutsche Post's original core business and

the DHL Express division is essentially the original DHL business. The third division, DHL Supply Chain, is the old Exel Logistics, which became part of Deutsche Post in 2005. And finally DHL Global Forwarding, Freight stemmed from a range of companies including the well-known Danzas Group.

In spite of its excellent brand reputation and global reach, DHL Express has not been without its challenges, and the last few years have been ones of internal change and improvement. "DHL Express has always

**Year Deutsche Post acquired** 

all DHL shares

Southern Air is proud to support DHL's new round-the world service connecting Hong Kong, Los Angeles and Leipzig, Germany daily. Thanks to a new fleet of Southern Air 777 long-haul freighters, the new route shaves a day off shipments from Asia Pacific and the US West Coast and lowers fuel costs by as much as 25 percent, and extends cargo pick-up times for US suppliers shipping to Europe. As the world's only aircraft, crew, maintenance and insurance (ACMI) provider of 777 freighters, Southern Air is offering its customers the most versatile, efficient and environmentally friendly cargo solutions in the industry. Southern Air supports DHL's GoGreen environmental protection program, which offers customers innovative, sustainable solutions.

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Worker at the DHL Hub, Leipzig

been a successful international business, but it was never a very profitable one," Andriof says. A quick look at the history of DHL Express illustrates one of the difficulties it encountered.

The company began as an international express organisation and did so by overcoming many of the previously held beliefs about logistics, creating a new set of standards and business procedures. Developing a global network across many countries, it has always had a decentralised management structure.

By contrast, the major competitors in the market, such as FedEx and UPS, originated as regional parcel service providers in the US, building up large delivery fleets. From this solid foundation they then began to widen their horizons and expand into an international express sector.

DHL's growth took place in reverse order. "Having developed a very strong base in the international express business, we then decided to expand into the domestic parcel delivery sector in countries like the US, the UK. France and China." he continues. "This was not successful, and was not delivering profitable growth for the international express business."

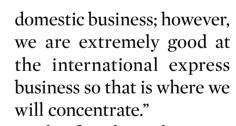


Final checks before push-back and departure

Express embarked on a restructuring of the business at the end of 2008, beginning with a withdrawal from domestic delivery services within the US (to focus on international delivery) and followed by an in-depth examination of the nature of the business. "We asked, for example, do we need innovations?" Andriof explains. "The answer was that while we do have small innovations, While recognizing the company has the nature of the business is the same as it to focus on its core competencies, DHL was 40 years ago. The real improvements

in profitability are likely to be achieved through business excellence: things like bringing the costs down, improving the IT systems, streamlining and standardising processes and creating a core discipline throughout the operation."

The strategy to emerge from this process is called Focus, and it drives improvement today. Focus is articulated in four pillars: motivated people, great service quality, loyal customer, and profitable network. "This is not a big long-term plan to build a shiny future," he continues. "The aim is to focus on what we're good at and improve that, and deliver real value. We were not good at the



The first logical step to increase profitability and bring the company back to its core area of excellence

was to divest the non-profit making domestic express services. Interestingly, not all the domestic services were loss making, so the company has retained profitable services in India and other countries such as Australia, Germany and Russia. However, others have been sold off. Customers in many of DHL's operating areas will continue to see the familiar yellow and red liveried

**Number of DHL Express** 

global air hubs

"THE AIM IS TO FOCUS ON WHAT WE'RE GOOD AT AND IMPROVE THAT, AND DELIVER **REAL VALUE**"

vans collecting and delivering parcels, but these packages are in transit between international destinations and not within the home country.

"We also restructured our global and regional head offices," Andriof says. Over the last few years, the turnaround has been impressive: from loss making business into significant profitable growth (almost €1 billion in EBIT in 2011), and the improvements delivered by the ongoing drive for business excellence continue to become apparent. "We continue to operate as a very decentralised, matrix organisation. In fact I head up one of the very few functions that is centralised in planning, but decentralized in execution. However, all those who report

to me sit in the regions and I travel to them. The business doesn't come to me."

Andriof heads up the DHL Express global network, and is responsible for its planning and day-to-day operations. It's not difficult to see why this position should require a central identity: the sheer size, scale and complexity of the network requires a consistent overview and direction.

The global logistics network closely resembles a backbone with a complex and interconnecting nervous system radiating out to the customer. The backbone of the network consists of long-haul intercontinental flights linking three global air hubs located in Cincinnati in the US, Leipzig in Europe, and Hong Kong in the

# "IN ALL, WE OPERATE OVER 700 NETWORK FLIGHTS A DAY AROUND THE GLOBE. TO DO THIS WE ARE CURRENTLY OPERATING A FLEET OF OVER 250 AIRCRAFT"

Far East. Over 100 aircraft, including new Boeing 777 freighters, shuttle exclusively between these hubs. Smaller aircraft then radiate out like the spokes on a wheel to 15 regional hubs which then serve over 500 local airports.

"In all, we operate over 700 network flights a day around the globe. To do this we are currently operating a fleet of over

250 aircraft, 40 per cent of which we own or have on long-term contracts. The rest are on a mixture of short-term and mid-term lease and they operate on a dedicated basis for us," explains Andriof. "On top of that we manage more than 2,000 flights on which we buy capacity from the major airlines so that we can put Express cargo into the belly of scheduled passenger or cargo airlines. This combination of capacity gives us great flexibility."

Flexibility is one of the foundations of DHL's ability to deliver a reliable and efficient express service. If, for example, there is an unexpected increase in demand that can't be met with the regular fleet capacity, then extra space can be found at short notice by negotiating with an airline partner. This flexibility has been achieved over many years, and is managed through close long-term relationships with more than 300 carriers and national airlines.

For DHL, maintaining a close relationship with its hub airports is crucial to ensuring continued excellence of service. Candace McGraw is CEO of Kenton County Airport Board at Cincinnati/Northern Kentucky International Airport (CVG), and has witnessed the many benefits that the airport's partnership with DHL has



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performance rating less then 'Excellent' by the US Post Office.

In addition, Kalitta currently operates four B747-400Fs on an ACMI basis for DHL, logging in excess of 20,000 flight hours in 20II over DHL's extensive international route structure. Fortunately, Kalitta's strong reliability and ondemand flexibility have proven to be a perfect fit with DHL's global time-definite requirements and we are honored to be part of its team. Kalitta Air looks forward to continuing to provide DHL and our other customers with the high level of service they expect and deserve.

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Monitoring shipments at Leipzig

brought. "We have established a very good partnership with DHL," she says. "They account for about 40 per cent of our landed weight here now, so they're a huge partner for us and we want to do everything we can to help them grow and prosper here."

DHL is currently embarking upon a \$47 million investment into expanding its package sorting facility at CVG, and has been considering other opportunities, too. "We have a lot of land here that's ripe for development and we have been talking to DHL about some end-of-runway development opportunities to establish

complementary businesses that will help them grow their business here at the airport," says McGraw.

The two organisations also work together on issues such as the environment. "For example, DHL has a state-of-the-art de-icing system that ties to our own system to reclaim all the spent glycol, which we then treat. We're also going to be rehabilitating some of our facilities and we thought if we can team together at that time looking at certain sustainability initiatives, we can probably achieve greater 'bang for our buck'." It's a mutually beneficial relationship, she says,

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DHL transport vehicle

very much a partnership.

Alongside the air network, DHL Express has an extensive collection and delivery network that reaches out by road to customers in all four of the operating regions—the Americas, Europe including Russia and Turkey, the Middle East and Africa, and Asia. The service is delivered by a fleet of more than 30,000 vehicles that shuttle between the customer and the local DHL service station facility. Here, pick-ups are consolidated and then transferred by truck to the airport Gateway, and deliveries are sorted and loaded into the vans.

This delivery service plays a vital role in DHL's brand awareness and is important from both the customer loyalty and service excellence perspectives. "In most normal business environments the customer interface is generally with the commercial team," Andriof explains. "In our business, that primary interface is our operational people, the drivers who pick up or deliver to the door." As the public face of DHL, the drivers tend to leave the greatest lasting impressions on the customer. For this reason, collections and deliveries are made primarily by DHL's own personnel, while the truck transfer from the service station to the airport can be safely outsourced to other local logistics partners.

The DHL training programme is the foundation upon which DHL builds company-wide excellence in customer service. "One of the unique elements of our training programme, which helps us standardise everything we do across the business, is that the course material is the



Overlooking DHL aircraft at Leipzig

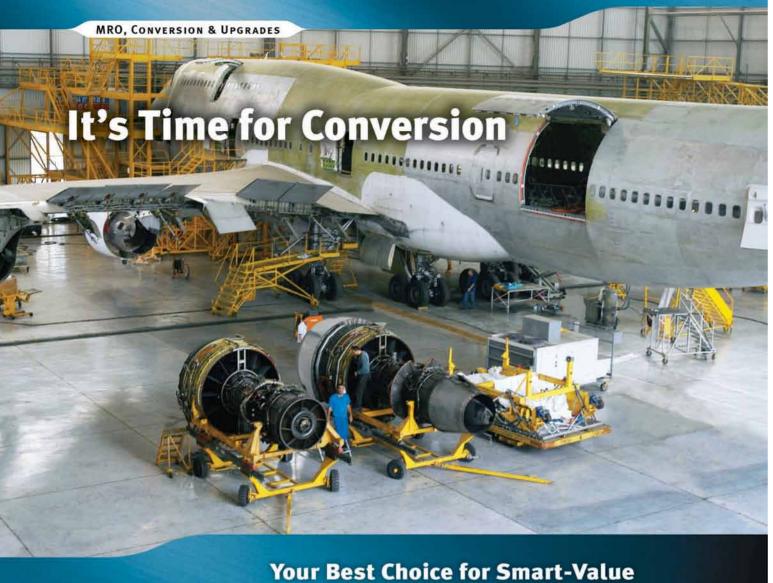
same for everyone regardless of where they're working around the globe. It's just translated into and presented in the local language," Andriof says.

"We have roughly 100,000 people globally and we train every one of them through our Certified International Specialist programme," he continues. The training is designed to give the staff all the necessary skills and tools to perform well and do justice International Specialist, staff then have to the brand. While reinforcing corporate best practice across the business, it also has to be engaging and fun. "They even carry a passport which is stamped as they pass the

test for each element." This initial training includes the history of DHL and a corporate overview of the business. The training then hones in on the country in which the person is working, and then focuses in more closely on to the details of the operational role, including specific processes and applicable aspects of management.

After qualifying as a Certified access to a wide range of further training courses, all of them designed and delivered in-house using modern motivational learning techniques.

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The BEDEK Aviation Group is the senior group of Israel Aerospace Industries (IAI) and one of the six groups, has more than 3,000 skilled engineers, technicians and supporting personnel in its four specialized divisions located at the Ben-Gurion International Airport, Israel. Being one of the largest one-stop maintenance centers in the world, BEDEK is licensed by virtually all major civil aviation authorities, including the US Federal Aviation Administration (FAA), European Aviation Safety Agency (EASA) and the Civil Aviation Authority of Israel (CAAI).

BEDEK provides under one roof, comprehensive maintenance services for aircraft, engines and components, including heavy maintenance, modifications, upgrades, conversions and development programs, all at minimum down time. BEDEK's extensive, modern facilities provide the full spectrum of maintenance and overhaul services, handling both wide-body and narrowbody aircraft, 160 of them annually, including Airbus, Boeing, and Lockheed aircraft. BEDEK's world-leadership position in passenger to cargo conversions of the B747, B767, and B737 families of aircraft is based on its ability to provide customers with the full spectrum of services. BEDEK is a leading worldwide cargo conversion house with more than thirty-five (35) years of experience (More than 160 different aircraft redelivered). The growing list of BEDEK's satisfied customers around the world testifies to its commitment to excellence.

BEDEK has developed, received STCs (Supplemental Type Certificates) and produced an extensive line of passenger to Special Freighter conversions. Since the modifications these freighters have accumulated more than 2 (two)

million flying hours with no ADs issued (relating to BEDEK's conversion).

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- 737-400BDSF certified in 2009
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- 767-300BDSF certified in 2009
- 747-400BDSF from PAX and from Combi certified in 2006

BEDEK is experienced at Design-to-Cost and Design-to-Weight efforts. All of BEDEK's conversions have met its customer's design weight goals.

As part of the conversion to cargo aircraft, IAI provide aircraft operating weights upgrade – MTOW. MLW and MZFW.

BEDEK also has been involved for over 30 years in the design, development and implementation of air refueling solutions on various platforms (B707, Cl30, IL78 and B767) and has successfully delivered more than 35 tankers in a wide variety of configurations to more than I2 Air Forces world wide, including the Israeli Air Force. Other BEDEK military conversions include SIGINT, COMINT, ELINT and AEW among others.

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Standardisation across the business is reinforced continuously. At its heart lies the company-wide IT system which was in place before the company became part of Deutsche Post, but continues to be developed both in-house and with major IT partners. The system automates all transactions that take place worldwide, monitors performance, tracks every package in transit and enforces standard business rules. "There will always be human error, that's inevitable. But if you can standardise and automate processes and procedures then the likelihood of error is much smaller," Andriof explains. "And by implementing this system at a global level, we can be sure everybody in the organisation is heading in the same direction, achieving

the same targets and abiding by the same business rules."

These business rules are enshrined in a set of Global Standard Operating Procedures (GSOPs) which encompass all major business processes. The GSOPs are documented and monitored online. "They're what we call our 'Idiot's Guides' which provide a handy pocket overview. And we have staff who look at those processes and make sure they are properly implemented." Staff working in Germany, for example, can transfer to Hong Kong, and know exactly what to do, how to do it, and what is required of them.

The IT system also interlinks with the systems of the various carrier and airline partners, a level of integration that is both

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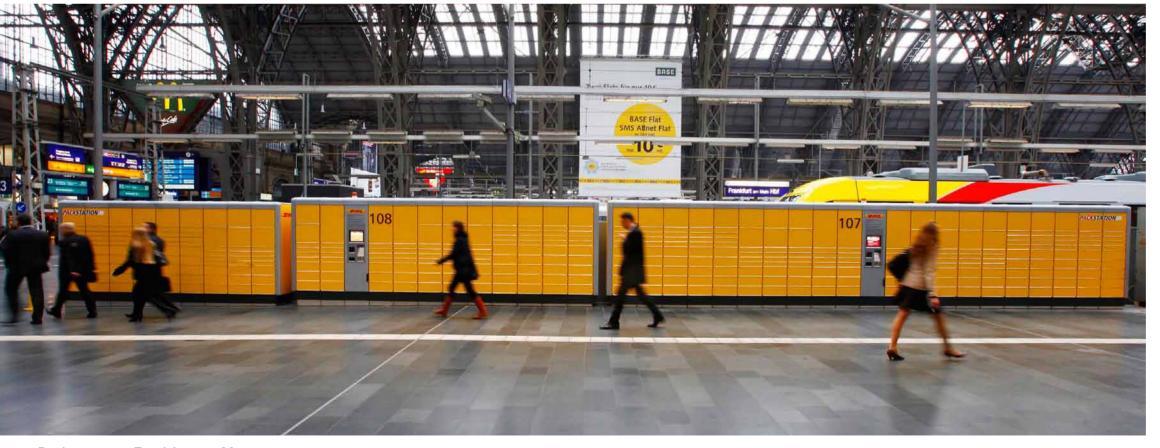
complex and time consuming to set up. However, it delivers accurate and essential data to the DHL system, right down to the details of exactly where a container is loaded into the hold of an aircraft and the identity of its contents. This in turn assists with planning for forward movements, and keeps the customers informed of the location of their package.

Development of the IT system is an ongoing process, and the latest addition

is a capacity management tool, which will assist with management of the fleet. "We manage our fleet very carefully and one of the reasons is to increase utilisation as much as possible," Andriof explains. "An aircraft can only deliver maximum value when it's flying as many hours as possible and when it is full."

The first step in planning and managing capacity is to predict how many shipments are likely to be moved between the different locations in the network. This is done by the DHL forecasting system. Then, the entire supply chain can be planned in advance, including scheduling shipments for specific flights. However, this process is far more significant than simply cost cutting: it's all about ensuring the business is able to deliver the service it has promised to the customer, and about building customer loyalty.

Delivering great service quality is one of the four key elements of the Focus strategy, and an imperative in everything DHL's staff do. However, with a logistics network of this size and complexity, this can be quite a challenge. It is inevitable that issues will creep in regardless of the standardised IT driven processes, and problems will occur. An aircraft may develop a fault or be delayed due to bad weather, for example. "Our customers understand this," Andriof says. "The important thing is not that we



Packstation in Frankfurt am Main

have a problem, but how we handle it. If we have promised to deliver in two days then we have to do it, there's no excuse. So if we have an aircraft grounded for any reason, the first thing we aim to do in many markets is to pick up the phone and talk to the customer. We then look for the fastest alternative pick-up that will deliver those packages on time, or perhaps very slightly later. And this might be spare capacity of

our own, or with one of our partner airlines. We find that it's by keeping the customer informed, and working quickly to find a solution to the problem, that we develop customer lovalty."

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Shipments being sorted



Workers in action at the Leipzig Hub

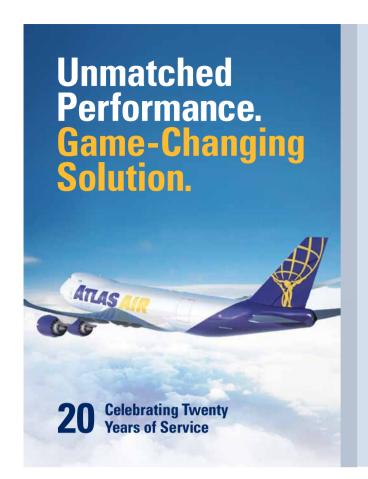
company has four global quality control centres located in Bonn, Leipzig, Cincinnati and Singapore, which monitor shipments in real time from pick-up to final delivery. Within each of the four regions, there is also a network for further quality control centres and these are manned 24/7 by a service quality team who monitor the shipment movements, identify delays or breakdowns in the supply chain, source solutions to the problem and offer those solutions to the customer.

The centres are equipped with large screens and media walls displaying in real time all the traffic in their catchment area. The displays are simple and effective and follow a standard traffic logic. When a flight is on time it appears green on the

screen. If there is a short delay the flight goes yellow, and once the delay reaches an hour or more it goes red. This simplicity and accuracy is only possible because the displays are powered by the company's IT system which houses continuously updated information about the location and content of every shipment along with its predicted location. If the two diverge then there could be a problem.

A very complex set of operational definitions also reside within the system, and these are unique for each location. For example, part of the delay calculation might include the amount of time it takes to transport a shipment to the airport, load it into a container and deliver it across the airport and into the aircraft. Each airport

### **DHL EXPRESS NETWORK MANAGEMENT**



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is different, and DHL agrees a unique set of operating criteria with every one of its operating partners, and these are embedded into the IT system.

The service quality teams not only find solutions for delays as and when they occur, but they continuously monitor the company's performance for large customers, and also for new customers during the two or three month period while they are being implemented into the system. "Once everything is working well for new customers, and they are integrated

into the system as a standard process, they then become the responsibility of the customer service desk, which manages the relationship on a day-to-day basis," Andriof says.

The company has a reputation for delivering this level of service not only in stable and prosperous regions, but also in some of the world's most troubled places including Afghanistan, Syria, Bahrain and Algeria. "We try to remain there as long as possible so that we can continue delivering a reliable service for our customers. But we have rules in place to judge how long we can continue to operate without jeopardising the safety of our employees. And our top priority is always our employees' welfare."

Under these difficult circumstances,



**DHL** Brussels sorting unit

security, which has become a primary concern for governments, logistics companies and their customers, becomes even more critical. DHL has globally embedded a raft of thorough security measures, including investing heavily in scanners at each of its facilities. "Security is one of our few global functions. It's only by enforcing a global set of standards that we co-ordinate security across the organisation." With the direction, drive and investment coming from the corporate level, the company has ensured that it has installed the right competence and expertise within the regions to carry the initiatives forward.

The world is also prone to natural and man-made disasters, and these are a good test of character, stamina and staff morale.

"You probably remember the earthquake and tsunami in Japan last year. On the Monday following the disaster our people were in the office very early in the morning, cleaning everything, and taking care of our first flight and the delivery to our customers," Andriof says. The company runs a crisis command centre at its head office in Bonn, from where it monitors world events and how they may impact on global operations, shipments and employees. And in times of crisis, the quality control centres also take on some of the crisis management role. Whenever disaster strikes, though, it's not only the business DHL takes care of. The company also marshals its logistics capabilities to bring in essential first aid and disaster relief supplies. In the case of the Japanese tsunami, for example, "we put on extra charter flights to bring water and food into the region."

Having refocused the global operation on the core international express delivery business, DHL continues to deliver improvements in customer service and operational efficiency. With the four pillars of the Focus strategy guiding future development, best practice across the company is being achieved through standardisation of operational procedures, company-wide training and staff motivation.

For more information about DHL Express Network Management visit: www.dhl.com/en/express





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