

SUPPLY CHAIN **FLEXIBILITY** FOR THE AUTOMOTIVE INDUSTRY



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AN INDUSTRY IN FLUX

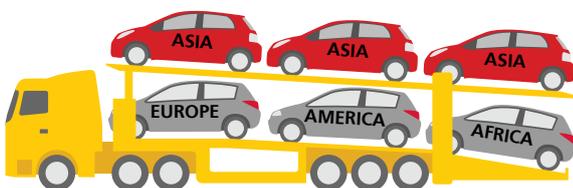
The automotive industry is facing many challenges. An increasing demand for innovative technology, the need to reduce fuel cost and improve safety, rising oil prices and a volatile economic climate all combine to make the market turbulent. With these challenges come equally large opportunities. You will need agility and innovation to compete effectively in this rapidly evolving landscape.

Innovative technology becomes increasingly important as manufacturers continually aim to reduce vehicle incidents and minimize driver error. Devices, such as rear view cameras and inflatable seatbelts enable companies to lead and differentiate. The prospect of driverless cars – as well as wireless vehicle to vehicle communication – could well herald the most significant shift in the market since the invention of the combustion engine.



VEHICLE TO VEHICLE COMMUNICATION TECHNOLOGY HAS THE POTENTIAL TO **REDUCE 79%** OF TARGET VEHICLE CRASHES ON THE ROAD

The opportunity in emerging markets is enormous. Some of these countries have their own automotive giants. They are penetrating traditional markets through acquisition, while placing demands on overseas suppliers to support local operations. With flexibility, reach and local knowledge you can effectively exploit these opportunities.



ASIA NOW PRODUCES 50% OF ALL WORLD VEHICLES
ASIA 40.6M · EUROPE 21.1M · AMERICA 17.6M · AFRICA 0.6M

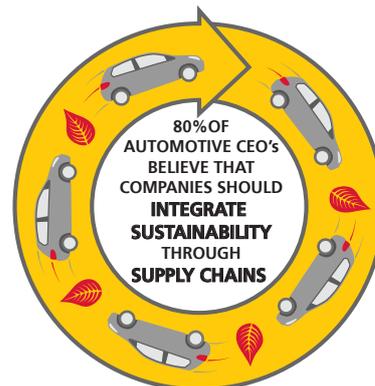
The world's ongoing urbanization will have implications on the concept of vehicle 'ownership'. With fifty per cent of all people now living in cities, different mobility services such as 'timeshare' models, 'Zip Cars' and enhanced public transport are emerging. They question the traditional idea of owning a car.



68% OF AUTOMOTIVE CEOs THINK MEGA CITY MOBILITY SERVICES IN EMERGING MARKETS

WILL GROW

Consumers and companies are expecting vehicles to become more fuel efficient and less damaging to the environment. This is boosting the popularity of electric, hybrid and hydrogen fuel cell solutions. Your corporate reputation may depend on demonstrating environmental credentials across the entire production cycle.



SUPPLY CHAIN CHALLENGES

With the automotive industry continually evolving, logistics can be complex. Automotive companies need to rethink their supply chain strategies in order to exploit new market opportunities, reduce costs and maintain competitive advantage.

Efficiency

An assembly plant can cost up to half a billion euros, which puts immense pressure on the manufacturer to get the absolute maximum from its investment. For optimal utilization, the raw materials and components must be available to the plant in close co-ordination with the production schedule. The development of 'build-to-order' or 'just in time' systems also demand a more flexible production environment and more responsive supply chains.

Emerging markets and globalization

China's ascendancy to become the largest market – and Russia's growing eminence in Europe – is presenting challenges through inadequate transport infrastructures and economic uncertainty. Building new assembly plants in these regions and integrating them into the global production network is necessary. Providing the right kind of logistical support will be vital. As components more often come from further away, managing their journey to the plant is critical. Cross-border transport and customs clearance add another layer of complexity to be addressed.

Collaboration

One increasingly popular way to lower costs and minimize risk is through collaboration. Many of the industry's biggest names form alliances to work together, particularly across supply chains, procurement and development.

Talent

Finding the right people is key to a successful supply chain. Skilled engineers often move to align with industry demands. Finding talent can get difficult in some areas. Managing an evolving supply chain will demand employees of the highest quality with the appropriate technical knowledge and experience.

Sustainability

Companies want to reduce carbon emissions across the manufacturing lifecycle, not just in the finished product. Together with their providers, they develop embedded sustainability programs and reduce the carbon footprint in day to day operations across the entire supply chain.



AUTOMOTIVE SUB-SECTORS AND THEIR SUPPLY CHAIN DYNAMICS

Passenger vehicles

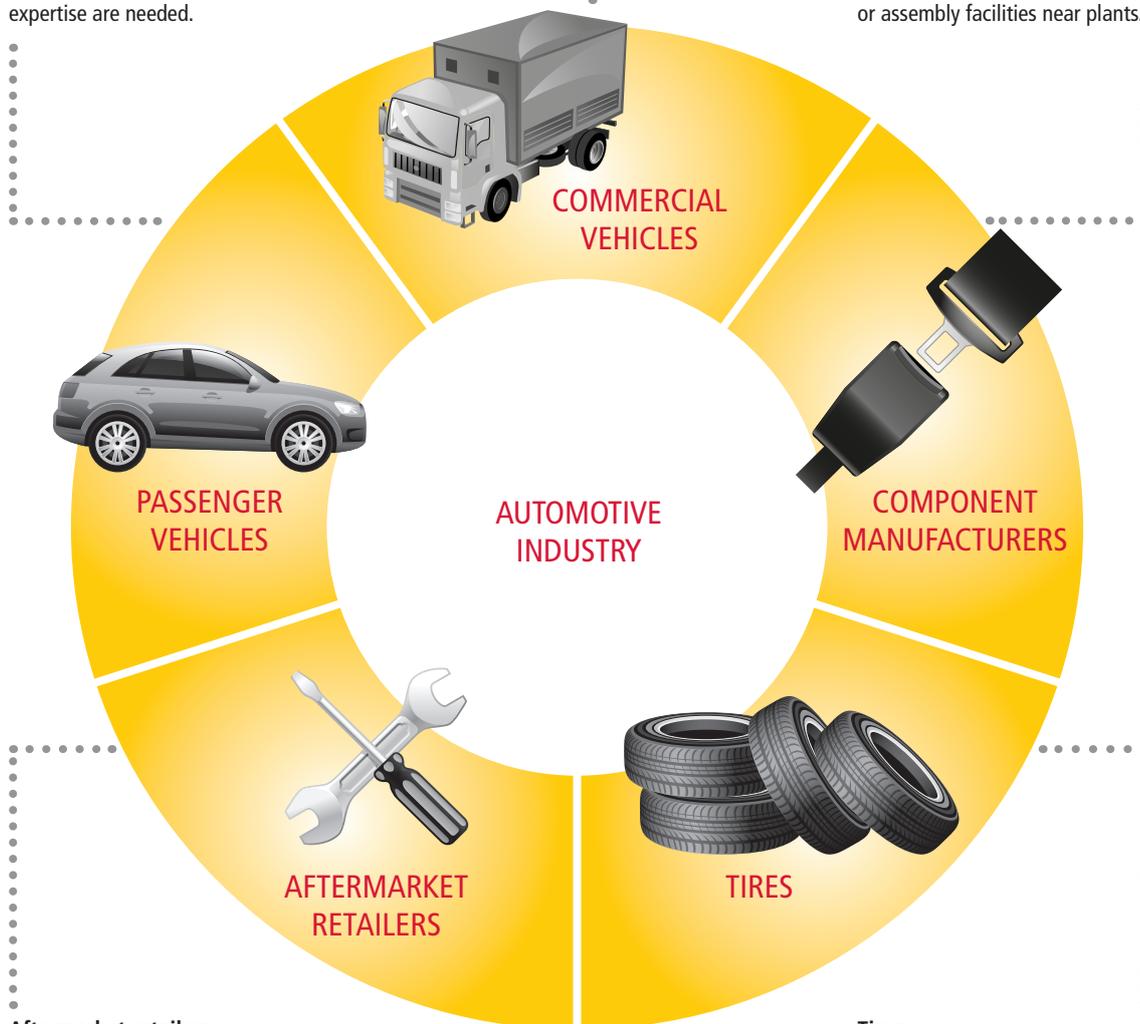
Brand building is increasingly important due to growing competition and more price-sensitive buyers. Car ownership increases. Substitutes, such as public transport, are likely to offer a threat to car makers. Alternative fuel technologies are driving innovation. Global reach and local expertise are needed.

Commercial vehicles

Increased concern for sustainability means companies have to improve fuel efficiency and lower CO₂ emissions. Importance of collaboration with Original Equipment Manufacturers (OEMs) and customers to co-engineer new vehicle technologies.

Component manufacturers

Growing importance of technology in vehicles impacts automotive supply chains. Customers specify options at the dealer or through the internet which shapes production planning. Vehicle manufacturers want suppliers to invest in logistics or assembly facilities near plants.



Aftermarket retailers

OEMs are experiencing an increasingly competitive after sales environment. Non-franchise workshops, anti-competitive legislation, low cost imports and non-genuine components are eating into share of the market. Requests for replacement parts and servicing vehicles must be dealt with immediately to maintain customer satisfaction.

Tires

Demand for tires is affected by uncertain economical times. Tire brand strength plays a role in reducing manufacturer buyer power. Innovation is important to get customers' attention. Environmental requirements have become more stringent over time.

OUR SUPPLY CHAIN OFFERING

We provide innovative solutions that help you simplify your operations, minimize risk and achieve competitive advantage.

Manufacturing vehicles for global markets demands a global approach, investing in local skills and resources while carefully maintaining quality, capacity and control. Working in partnership with your logistics provider should help you streamline operations, reduce risk and maximize productivity to keep pace with demand. Our offering is designed precisely to meet your needs, creating a sophisticated supply chain that will bring benefits throughout the entire lifecycle of your products and services.

With some of the world's best logistics planning experience, our teams and consultants fine-tune your operations, from component supply for manufacture, to vehicle delivery, to aftermarket services delivering consumer support.

Automotive materials and components often come from multiple, dispersed suppliers. Our inbound to manufacturing solutions support flexible, dynamic production, matching supply to constantly varying demand. Competitive procurement keeps costs under control, providing continuity of supply and reducing costly delays.

We excel in the challenges of overseas operations, bringing order and control to complex operational movements. From meeting excise and importation regulations to providing local supplier parks, our systems ensure that stock is tracked, tagged, stored and delivered to the lines at the optimum moment for production.

Finished vehicle storage and delivery demands secure resources and experienced personnel. Fleet inspection and quality checks are second nature, while our advanced transportation logistics eliminate costly, inefficient routing.

Automotive brands are built on positive consumer experience. We keep dealer networks supplied with aftermarket components, providing a capacity for urgent same-day and overnight response. Where recall or inspection is required, we can support your network, ensuring delivery of a fast, effective, proportionate response.

From planning to sourcing, manufacturing to storage, distribution to returns, we offer solutions across your entire automotive supply chain to help streamline your business, allowing you to stay one step ahead.



SUPPLY CHAIN SOLUTIONS FOR AN EVOLVING AUTOMOTIVE INDUSTRY



PLAN

Laying the foundation



Supply Chain Planning

- **Supply Chain Consulting (SCC)**
By understanding and anticipating your business and logistics needs in an ever-changing environment, our dedicated teams of supply chain consultants are a reliable source of expertise. We provide you with advisory and/or consulting services, for example an in-depth analysis of all network flows and supply chain processes across your organization in order to re-engineer and develop an optimized supply chain.
- **Lead Logistics Provider (LLP)**
We build performance driven partnerships with our customers. As a single logistics partner, we take over responsibility and accountability for the design, management and optimization of end-to-end supply chains.

SOURCE

Getting the materials you need



Inbound Logistics

- **Inbound to Manufacturing**
We take responsibility for optimizing all inbound transportation. We collect the right components from multiple suppliers at the right time giving you the confidence that deliveries will be in synch with your production schedule. Components from optimized supplier collection vehicles are split and forwarded to multiple delivery locations in consolidated loads to minimize cost and smooth the flow of inbound parts.
- **Procurement Services**
We provide sourcing and procurement services, leveraging economies of scale to drive down costs and improve margins. From the initial consulting and demand planning, to negotiation, buying, tracking receiving and incoming inspection.
- **Packaging Services**
We ensure your packaging solutions are reducing costs and increasing efficiency. You only pay for use of the packaging when it is en route. We design the network to support all packaging needs in order to maintain cost effective return solutions on your behalf.

MAKE

Manufacturing the product



Manufacturing Logistics

- **Inbound to Manufacturing – On Site and Off Site**
We receive the shipment at dock, tag it, log it and store it. When the requirement comes in from the production line, the right component can be sent quickly. We manage the material flow from the receiving dock to production line. This optimizes plant usage and increases efficiency.
- **Supplier Park**
We help you to reduce costs by bringing everything as close to the plant as possible. We manage the materials flow between those suppliers and the plant as efficiently as possible. We offer a fully integrated solution including value add delivery concepts such as sequencing, Kanban, kitting and even sub-assembly.
- **Vendor Managed Inventory (VMI)**
We manage your suppliers' performance level and make sure that stock is available and maintained at agreed optimal level against your sales forecast.

DELIVER

Getting it where it needs to be



Distribution Logistics

- **Finished Vehicles**
We store your finished vehicles safely in compounds tailored to your needs, deliver them to where and when they are needed, plan delivery routes and track vehicles, and maintain and inspect fleet vehicles.
- **Tires – Warehousing and Distribution**
We guarantee overnight delivery from the distribution centre to the fitters. Our flexible and responsive supply system helps fitters cope with the peaks and troughs in tire demand without burdening them with excess inventory.
- **Battery Logistics**
We have designed special packaging which makes the return of hazardous components, such as lithium batteries, safe and simple. We control the whole logistics process including order, exception and data management via our Automotive Control Tower, ensuring each individual battery can be tracked throughout the supply chain.

RETURN

Receiving support when it's needed



Aftermarket Logistics

- **Aftermarket Services**
We have extensive experience in service parts logistics, providing distribution centers and dealers with tailor-made delivery services, including same-day, overnight and next day delivery. Our customers benefit from high parts availability, inventory optimization and increased delivery accuracy and reliability.
- **Reverse Logistics**
By managing returns effectively, we help to recapture value and reduce write-offs. We design, plan and implement reverse supply chains that leverage the latest technologies to maximize the value of returned assets and increase profitability.
- **Recall Solutions**
We provide a seamless customer experience for large scale recall of defective or inadequate goods with speed, flexibility, control and professionalism, while adhering to statutory regulatory protocols.

Our core logistics services: Warehousing, Transportation, Value Added Services, Management Services

OUR SUPPLY CHAIN SERVICES

Continuously improving, our wide-ranging solutions help organizations to address their most complex, pressing operational needs from transportation to management services.

Warehousing services

Creating and operating customized warehouse solutions that deliver bottom-line benefits is at the heart of all our solutions. For example, sharing warehousing, equipment, labor and transportation with other organizations adds business benefits. Deal effectively with demand peaks and troughs with our shared-user campuses and distribution networks.

When scale or complexity demands a dedicated solution, look no further than DHL for bespoke design, innovative planning and state-of-the-art operation and management. Our accuracy and visibility enables us to respond quickly to any disruption ensuring the best warehouse functionality.

Transportation services

Transporting products can easily consume more than half of your total logistics costs. Don't let shipping and freight expenses compromise your profits. By increasing visibility our transport management solutions put you firmly back in control. Using the most efficient mix of carriers and fleet resources, we optimize all movements, safeguarding service levels while minimizing costs. Our services are carrier neutral and include carrier management, domestic and international transport, customs clearance as well as cross docking and special project coordination.

Value added services

Reduce costs, reduce inventories, and better match supply with demand. Our value added services leverage smart integration of warehousing and dispatch solutions. Sub-assembly, packaging services, customization, postponement, kitting, sequencing and pre-retail activities are ways our team can improve the performance of your supply chain.



Management services

Labor management – labor represents 50% to 60% of typical distribution costs. Our labor solutions help you manage these costs and improve the capabilities of your human capital through training and development. Our approach combines labor management technology, engineered productivity standards, comprehensive operating practices and performance recognition. Our scale allows us to bring qualified resources to the task just when you need them most.

IT management – whether you require a new solution from scratch or integration into your existing system, we design and implement our solutions to match your needs. We bring consistent, high-quality, cost-effective IT services to your supply chain. Through experience working with every system in the business (Oracle, Red Prairie, SAP, Manhattan etc.), we understand how to optimize IT solutions and consistently review and deploy new capabilities as they come on to the market.

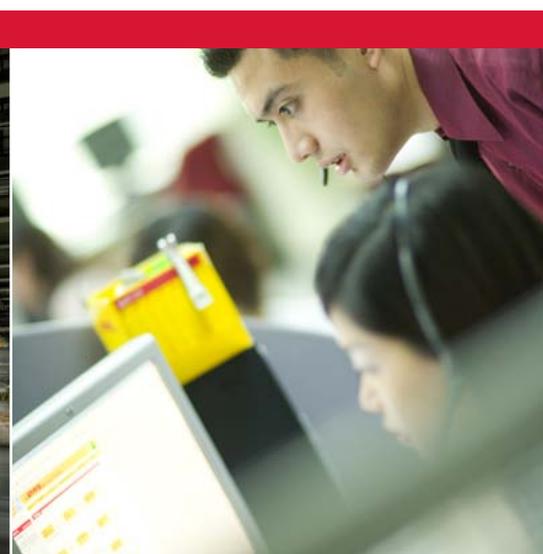
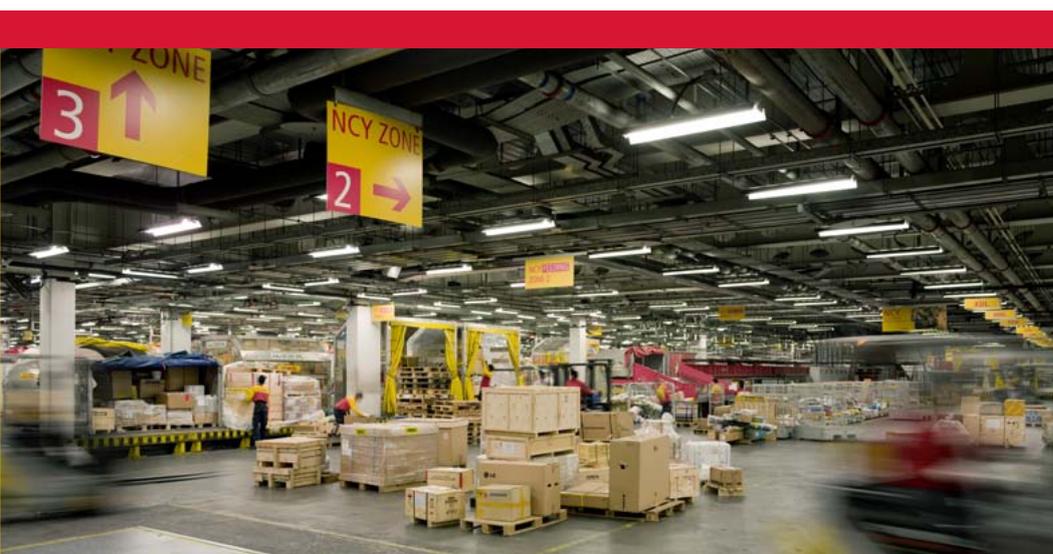
Business continuity management – if your supply chain is disrupted by a natural disaster or other destructive event it could have devastating consequences. We can help you create a robust business continuity management (BCM) strategy. We undertake pre-emptive continuity planning to identify the risks in your supply chain and put strong measures in place to mitigate them. You can be sure that there is a backup plan for whatever may arise.

Real estate management – a well-executed real estate strategy can make significant contributions toward achieving your operational and financial budgets. Real estate plays a vital role in supply chain strategies, as nearly every warehousing or distribution centre decision features a real estate component. We are able to mobilize local expertise around the world for the benefit of customers. We bundle real estate and logistics services to offer a single-sourced solution that reduces end-to-end supply chain costs, minimizes risks and improves efficiency.

Case Study: In-plant logistics

“Volkswagen Slovakia is becoming the benchmark in logistics processes including in-house logistics operations and, considering the forthcoming challenges related to new product launches and increasing production, we require partners that are the best amongst the best.”

Head of Logistics, Volkswagen Slovakia



OUR UNIQUE CAPABILITIES

DHL Supply Chain has a 40 year track-record of running world-class supply chains for many of the automotive industry's most innovative and successful businesses. Automotive customers continue to partner with us for many reasons.

Industry expertise

DHL Supply Chain is one of the leading contract logistics providers for the automotive industry with 230 operations around the world. By working closely with our customers, our 15,000+ automotive supply chain experts have developed flexible, efficient solutions that increase productivity and drive efficiency across the entire production driven supply chain. We also encourage the sharing of best practice through our global community of automotive customers and supply chain experts.

Case Study: Battery logistics

Electric engines bring up a new issue: how to replace used batteries? For Renault's new Z.E. (Zero Emissions) vehicle, the solution was DHL. We control the whole logistics process including order, exception and data management via our Automotive Control Tower, ensuring each individual battery can be tracked throughout the supply chain. To manage this sensitive and particular kind of logistics – these batteries weigh between 112 kg and 335 kg and have non-standard dimensions – our staff have been specially trained on battery handling and trucks are adapted to the load with specific rails and equipment.

Simplification

Our strength is built upon our ability to create collaborative solutions between manufacturers and tier suppliers which make your supply chains more agile and allow you to focus on core business objectives. This reduces operating and capital costs and simplifies your operation.

Commitment to excellence

DHL is the first choice for continuous improvement and operational excellence. Our proven tools and techniques can be applied at every level to identify process gaps and waste, take appropriate action, measure results, and achieve true breakthrough performance. For us, quality assurance and process improvement are more than merely exceeding standards, regulations and directives. They're about seizing every possible opportunity to raise the bar. Through a structured and systematic approach, we continuously improve standards and customer satisfaction.

Global footprint

With our unrivaled global capability and experience in emerging markets, we can help you access new growth opportunities and low cost operations across Supply Chain, Express, Freight and Global Forwarding. With local expertise in over 220 countries and territories, combined with our financial strength, we have the flexibility to scale up or down to meet requirements or overcome disruptions.



Green logistics

The transport sector currently represents 14% of global carbon emissions. As the first logistics company to establish carbon efficiency targets – with targets to reduce carbon emissions by 30% by 2020 – we are at the forefront of green innovation. We will help you enhance your brand reputation and bottom line while decreasing your impact on the environment. Our GoGreen initiatives enable customers to offset handling and transport costs against climate protection projects. By harnessing the benefits of aerodynamic design, we have created the revolutionary Teardrop Trailer.

We also combine alternative fuels, state-of-the-art telematic systems and hybrid and electric vehicles, with simple and immediate solutions such as maximum speed reduction.

Health and safety

We help you to meet high standards on health, safety and security through extensive training and timely monitoring. We offer consulting and advice on global safety regulations accomplished by in-depth audit processes and regular inspections of our sites. Achieve a lower frequency of workplace injuries, reduce equipment failures and prevent business disruptions. Our satellite and video technology ensures vehicle, driver and load security.

Innovation

Innovation is at the heart of everything we do. To get things moving quickly, our dedicated Solutions & Innovations team work closely with customers to develop ground-breaking new solutions, such as re-usable, customizable packaging and lithium ion battery logistics. In addition, the DHL Innovation Centre brings together leading academic, industrial and technological specialists to speed up the delivery of new vehicles, such as the Teardrop Trailer, from prototyping to market launch.

Case Study: A Lead Logistics Provider strategy

Jaguar Land Rover (JLR) has pulled together its entire inbound network and integrated it under the control of DHL Supply Chain. We manage transport, stock handling and line feeding at three separate plants across the UK. We are also responsible for 85% of global inbound freight with a common service for the three plants through shipments that hinge across three principal European crossdocks. It is a total, accountable supply chain from start to finish, where JLR can understand cost while driving and sharing best practices across all JLR plants.

Automotive Logistics, July 2012

END TO END SUCCESS

We have outlined the challenges facing the automotive industry and detailed our portfolio of supply chain solutions and services. What makes DHL Supply Chain the perfect fit to address your challenges?

Innovate faster

DHL Supply Chain removes the complexities of automotive logistics. We free your teams to focus on creative, profitable innovation. You can exploit enhanced safety technology and cleaner fuels while developing new vehicles or component parts that match the evolving demands of the market. Seize competitive advantage and valuable market share by getting to market first.

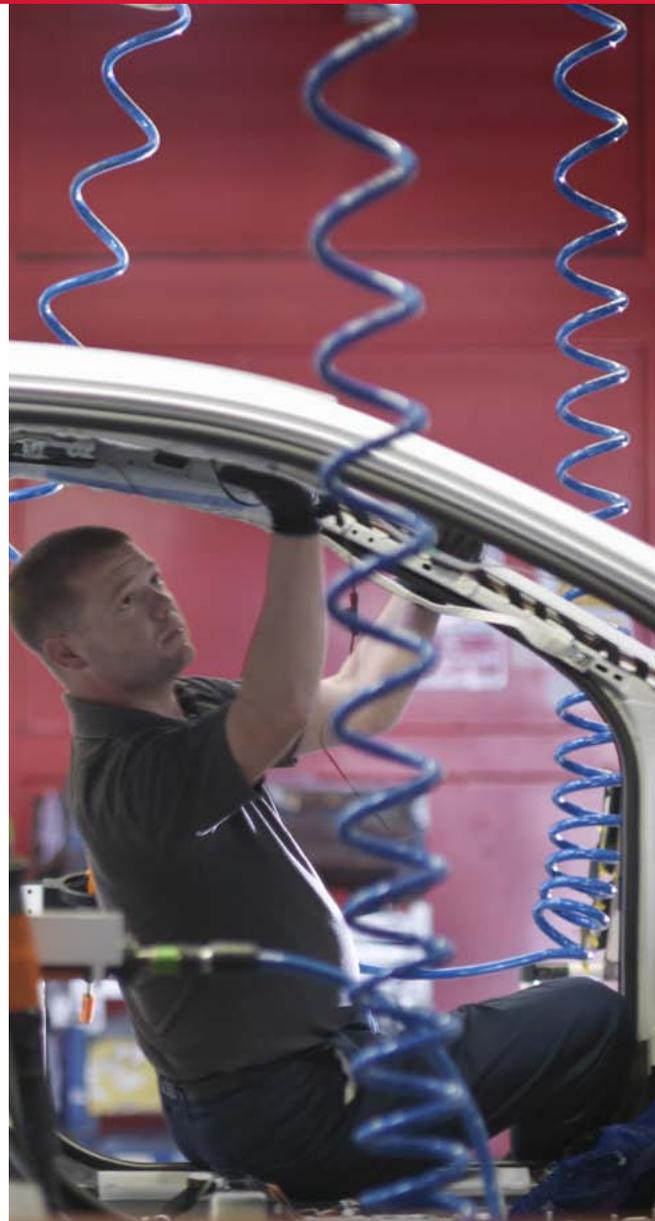
Procure more competitively

In today's volatile global economies, maintaining trustworthy and secure supply chains is critical. DHL Supply Chain can help you optimize your procurement strategy and buying operations across the board – and across borders. Plan component and raw material purchases from approved suppliers with confidence. Secure competitive market pricing supported by the appropriate guarantees for quality and supply levels. Operate integrated, collaborative multi-partner supply chains.

Manufacture, distribute and support vehicles for less

Operating more efficiently means operating more profitably. Trust DHL Supply Chain to prevent costly, frustrating manufacturing delays. Schedule, control and fine-tune production quickly with best-in-class inbound to manufacturing support. Outsource non-core processes and operations. Leverage the distribution economies of scale that are only possible with an experienced global logistics partner. Provide unmatched levels of support across every territory. Earn a reputation for customer service that defines a brand leader.

DHL Supply Chain supports more than 230 leading automotive operations globally, including 13 of the world's top 15 automotive manufacturers and suppliers. Our skills, resources and experience will take your business forward as you rise to meet the new challenges that are shaping the market.



DHL at a glance

DHL is the global market leader in the logistics industry and “The Logistics company for the world”. DHL commits its expertise in international express, air and ocean freight, road and rail transportation, contract logistics and international mail services to its customers.

THE LOGISTICS COMPANY FOR THE WORLD

A global network composed of more than 220 countries and territories and about 275,000 employees worldwide offers customers superior service quality and local knowledge to satisfy their supply chain requirements. DHL embraces its social responsibility by supporting climate protection, disaster management and education.

DHL is part of Deutsche Post DHL. The Group generated revenue of more than € 53 billion in 2011.

DHL SUPPLY CHAIN

As the world’s leading contract logistics provider we create competitive advantage for our customers by delivering exceptional operational service and innovative solutions across the supply chain.

Comprising a global network of 125,000 dedicated employees, in more than 60 countries, DHL Supply Chain provides the best supply chain solutions across a number of industry sectors including automotive, consumer, chemicals, energy, engineering & manufacturing, life sciences & healthcare, retail, and technology.

As the most trusted operator in the logistics industry, DHL Supply Chain delivers on promises.

Deutsche Post DHL

 Die Post für Deutschland	 The Logistics Company for the World
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EXPRESS	GLOBAL FORWARDING, FREIGHT	AIR and Ocean Freight	SUPPLY CHAIN
 International Express	 Road Freight	 Air and Ocean Freight	 Contract Logistics & Business Process Outsourcing

Facts & figures DPDHL

- Exchange: DAX
- Ticker symbol: DPW
- Fiscal year end: December
- Revenue in 2011: € 53 billion
- Sector: Logistics
- Modern postal system founded: 1490
- Went public: 2000
- CEO: Frank Appel
- Head Office: Bonn, Germany
- Employees: Approx. 470,000
- Sales in 220 countries and territories
- 120,000 destinations worldwide

Facts & figures DHL Supply Chain

- Market leader in contract logistics with 8.3% market share
- Revenue SUPPLY CHAIN 2011: € 13.2 billion
- Approx. 125,000 dedicated employees
- Present in more than 60 countries
- >2,000 customers across all vertical markets
- 2,400 terminals, warehouses, offices
- ~23,000,000 m² of storage area

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