

CARGO: THE AMBITION OF THE PARIS AIRPORTS



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AUGUSTIN de ROMANET

Chairman & Chief Executive Officer

"THERE ARE NO MAJOR AIRPORTS WITHOUT MAJOR CARGO ACTIVITY"



"Air cargo plays a fundamental role in preserving an airport's equilibrium. Regardless of whether it is carried in the holds of passenger aircraft or by dedicated cargo aircraft, cargo activity sets the pace for airport life. Paris-Charles de Gaulle Airport is today in the global top ten for cargo. This industry is of significant importance to the airport and, more broadly speaking, to the economic attractiveness of France. The cargo activity accounts for approximately 40,000 jobs at the airport, which benefits from a catchment area with an estimated 25 million inhabitants within a 200-kilometre radius.

Its cargo services and infrastructure offering is part and parcel of the

competitiveness of the Paris region's industrial fabric and the attraction of new businesses. As an integrator of solutions, Groupe ADP unites the cargo ecosystem (airlines, forwarding agents, handling agents and ground handlers, integrators and express carriers) in order to foster growth for all.

As such, our ambition for cargo is to establish the European leadership of Paris-Charles de Gaulle in the coming years. Developing cargo activity is one of the pillars in our Connect 2020 strategic plan which, in particular, includes creating an additional 100,000 sqm of cargo facilities between 2016 and 2020 to support our customers' growth."

GROUPE ADP HOSTS AIR CARGO FORUM 2016

The 28th Air Cargo Forum will be held at the Porte de Versailles Exhibition Centre in Paris, from 26 to 28 October 2016.

This major event, organised every two years by **TIACA** (The International Air Cargo Association), the main international association of air cargo professionals, is the largest global gathering of industry stakeholders (airlines, airports, forwarding agents, handling agents, integrators, express carriers, shippers, etc.).

Co-hosting the Paris event with Air France Cargo, Groupe ADP has formed a French village around a shared Groupe ADP/Air France Cargo stand.

Air Cargo Forum 2016, which is expected to welcome over 200 exhibitors and 3,000 visitors, is based on the **theme:** "An open sky to innovation".

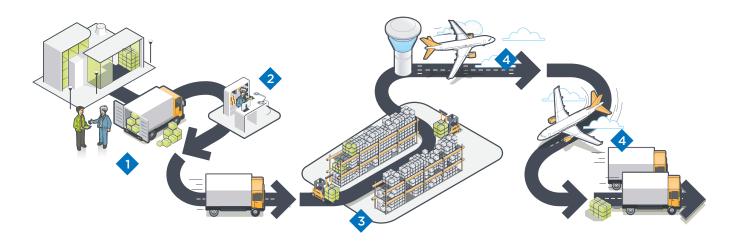


THE AIR CARGO CHAIN: AN OVERVIEW

- Shipper
 Produces the good for export or imports then
- Forwarding agent
 Organises transport, including
 handling of documentation
 and regulations
- 43 Handler
 Assists the airline or the forwarding agent (assembly of pallets, handling etc)
- Airline
 Transports the goods

Air cargo operations are structured around a chain of stakeholders. At the start of the transport operation, there is the ordering party, or **shipper**, who has goods to be transported from one place to another. The shipper very rarely deals directly with the carrier (the airline, in the case of air cargo); they generally use a **forwarding agent** (formerly known as a freight broker). The role of the latter is to

coordinate the entire transport chain and to act as an intermediary for the **handler** and the carrier. As an airline service provider, the handler receives the cargo and performs handling operations (unloading, storage, packaging in preparation for loading on board an aircraft). Finally, the **carrier** (the airline, in this case) transports the goods to the final destination.



THE GLOBAL CARGO MARKET



The value of goods carried in aircraft holds each day worldwide



Cargo (the collective term used to refer to freight and the carriage of mail) is a vital activity for the global economy. According to data from the International Air Transport Association (IATA), goods carried in aircraft holds represent 2% of freight tonnages (across all modes of transport) but 35% in value, ie \$18.6 billion per day on average. High-value goods such as electronics or pharmaceuticals require air transport, which is much faster than by land or sea.

This cyclical activity depends on the state of the economy. Between 2003 and 2013, the volume of tonnages (measured per kilometre transported) worldwide rose at an average rate of 2.6% per year, but there are significant disparities depending on geographical areas: Europe, which accounts for a fifth of the global cargo market, experienced a reduction in its tonnages at the start of the 2010s following the 2009 financial crisis, and is still struggling to regain its pre-crisis level of economic activity.

Ranked ninth in the world according to the Airports Council International (ACI) ranking, Paris-Charles de Gaulle Airport represents a little more than 2 million tonnes transported.

World air cargo (freight and mail) will grow 4.7% per year through 2033 RTKs in billions 800 History Forecast 600 400 2.6% growth per vear 200 0 2008 2013 2023 2028 2033 2018 Average annual growth, 2013-2033 • High 5.5% Base 4.7% Low 4.0%

Source: Boeing World Air Cargo Forecast 2014-2015

The world's top fifteen cargo airports in 2015 (in thousands of tonnes)		
1.	Hong Kong	4,460 t
2.	Memphis	4,290 t
3.	Shanghai Pudong	3,275 t
4.	Anchorage	2,630 t
5.	Seoul Incheon	2,595 t
6.	Dubai	2,506 t
7.	Louisville	2,350 t
8.	Tokyo Narita	2,122 t
9.	Paris-CDG	2,090 t
10.	Frankfurt	2,076 t
11.	Taipei	2,021 t
12.	Miami	2,005 t
13.	Los Angeles	1,938 t
14.	Beijing	1,889 t
15.	Singapore	1,887 t

Source: ACI Europe Statistics 2015



Last year, cargo traffic increased by 2.2% worldwide, but forecasts by the American aircraft manufacturer Boeing suggest that the global cargo market will benefit from more sustained annual growth in the future: 4.7% on average between 2014 and 2030; this should lead to a twofold increase in global tonnage by 2033. This growth will be driven primarily by Asia, emerging countries in Africa and Latin America. Asia-Pacific airlines already account for 39% of global air cargo.

For the last decade, there has been a movement fuelled by the quest for greater competitiveness; major airlines are increasingly using the holds of "passenger" aircraft to replace all-cargo flights.

Currently, approximately 60% of cargo is already carried by passenger aircraft and this proportion is expected to increase.



AVERAGE ANNUAL GROWTH

in tonnages throughout the world forecast for 2015-2030.



PARIS-CHARLES DE GAULLE: EUROPE'S LEADING CARGO AIRPORT

The bulk of Paris Aéroport's cargo activity is based at Paris-Charles de Gaulle. With **2.1 million tonnes of freight and mail handled in 2015** (up 1.2 % compared to 2014), the airport is ranked ninth in the world for cargo and, more importantly, it is ranked number one in Europe, according to Airports Council International (ACI).

With regard to cargo activity, competition between airports has been heating up since 2010.

Paris-Charles de Gaulle offers undeniable advantages, starting with its geographical location, which is less than a two-hour flight away from most major European cities. It offers a catchment area of 25 million inhabitants within a 200-km radius of the airport. Furthermore, the Paris cluster is able to offer an annual cargo handling capacity of up to 3.6 million tonnes of goods spread over a dedicated cargo area of 300 hectares.

The airport is host to three major hubs (Air France Cargo, FedEx and La Poste) and serves 12 of the 14 biggest names in cargo, including DHL, DB Schenker, Kuehne+Nagel, WFS and UPS. In 2015, it welcomed three new allcargo airlines, increasing the number to 17.

Paris-Charles de Gaulle functions as a veritable crossroads that captures 90% of the air cargo transported in France (see illustration) and generates more than 40,000 jobs, 15,000 of which are direct jobs.



2.1

MILLION TONNES of cargo transported at Paris-Charles de Gaulle in 2015.



25

MILLION CONSUMERS in the catchment area within a 200-km radius.



FRANCE'S AIR CARGO CROSSROADS HOME TO A TRIPLE HUB









CUSTOMS: "PROTECTING CITIZENS, SUPPORTING BUSINESSES," AN ADMINISTRATION AT THE CORE OF THE REGULATION OF TRADE

Under the responsibility of the Inter-regional Directorate of Customs, the customs officials in charge of the control of freight are at the heart of the international flows of goods and at the forefront in enhancing the attractiveness of the Paris airports.

Locally, the economic action poles of Roissy-Fret and Orly are working alongside operators by providing them with support in regulatory matters, but also in advising them on the formalities to be carried out for the entry and exit of goods.

Customs is anticipating the logistical developments by participating actively in the dematerialisation schemes or the trials that prefigure the customs clearance of tomorrow, in line with the new EU Customs Code. Thus, it offers express and postal freight operators the centralisation of their customs clearance at Paris Charles de Gaulle Airport. It is also piloting the "e-freight" project at Roissy, designed to reduce the use of paper in the air cargo supply chain. It is working alongside businesses for the awarding of the European "Authorised Economic Operator" (AEO) label, as well as being heavily involved, since 2011, in the development of the Cargo Information Network (CIN).



CUSTOMS OFFICIALS

spread over the 9 cargo areas at Paris-Charles de Gaulle, in order to be as close as possible to the flow of goods.

24/7

at Paris-Charles de Gaulle Airport, they operate 24/7 for customs clearance.



FRANCK GOLDNADEL,

Executive Director of Groupe ADP, Director of Airport operations and Managing Director of Paris-Charles de Gaulle Airport

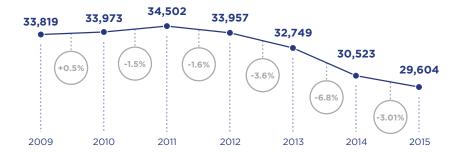
"My goal, and that of the teams working at our airports on a daily basis, is to improve the economic and operational efficiency of cargo in Paris. Serving all-cargo airlines remains one of our key strategic priorities, but in a context where there is stiffer competition between airlines, and passenger routes are increasingly difficult to make profitable, combining cargo-passenger transport may become a decisive profit driver for our major customers."

CHANGE IN CARGO TRAFFIC AT PARIS-CHARLES DE GAULLE



Cargo tonnages in volume (in millions of tonnes)

Reflecting the economic crisis in the early 2010s, cargo volumes fell for three consecutive years. However, since 2014, the return to growth has been confirmed, thanks, in part, to the efforts made to increase the airport's competitiveness.



All-cargo aircraft movements (in thousands)

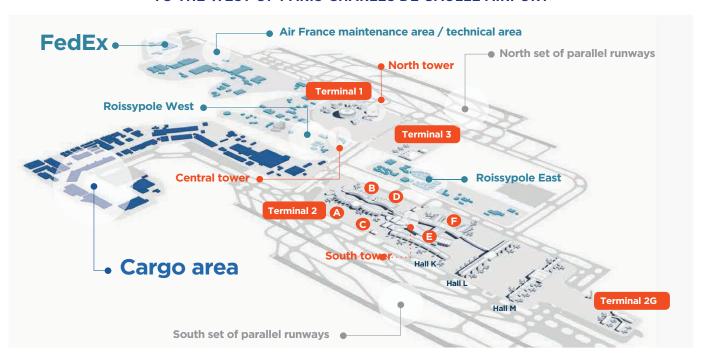
The observed decline in the movements of all-cargo aircraft is part of a fundamental trend which has seen cargo traffic gradually migrate towards passenger aircraft, whose holds are able to accommodate more and more goods, allowing carriers to achieve significant cost reductions.







ALL CARGO ACTIVITY IS LOCATED TO THE WEST OF PARIS-CHARLES DE GAULLE AIRPORT



CARGO AT PARIS-ORLY, A NICHE ACTIVITY

In 2015, Paris-Orly handled close to **126,000 tonnes of freight and mail.** The launch and continuation of phytosanitary controls at weekends (Saturday mornings) has strengthened cargo activity. At the southern Paris region's airport, cargo is perceived more as a niche activity, owing to the airport's proximity to Rungis International Market; Orly being particularly well positioned for imports of fruit and vegetables and other fresh produce.



Paris-Orly's annual cargo-handling capacity.

THE DEVELOPING CARGO CITY

Of the 3,257 hectares belonging to Paris-Charles de Gaulle Airport, 300 hectares are dedicated to air cargo activities, comprising almost 600,000 sqm of buildings (cargo delivery services, hangars, warehouses, sorting centres, etc.) with direct access to 80 aircraft parking stands. All of this constitutes a contiguous "Cargo City", a space that is unique in Europe, as the cargo areas of all other major hubs are dispersed across their airport.

In terms of cargo, Groupe ADP's real estate strategy is to prepare the land and develop or invest - alone or in partnership, depending on the circumstances — in facilities (warehouses, cargo terminals, express cargo delivery services, etc.) that are directly connected to the aircraft, thereby facilitating cargo loading/unloading operations.



HECTARES surface area of the Cargo City at Paris-Charles de Gaulle.

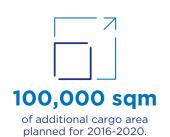
DIVIDED INTO 9 AREAS, THE CARGO CITY STRETCHES ACROSS OVER 600,000 SQM OF BUILDINGS



Since 2011, Groupe ADP has undertaken to reorganise and reinvigorate the Cargo City at Paris-Charles de Gaulle. Approximately 80,000 sqm of new buildings were developed between 2011 and 2015. As a result, several big names in cargo (DB Schenker, Kuehne+Nagel, DHL Global Forwarding, Sodexi, and Bolloré Logistics which commissioned a new 37,500 sgm complex this year) have been able to bolster their presence.

As part of its Connect 2020 strategic plan, Groupe ADP is continuing to update and increase the density of the cargo area with 100,000 sgm of additional cargo terminal facilities set to be developed between 2016 and 2020.

The tonnage capacity of the airport, now estimated at 3.6 million tonnes per year, is expected to double over time.





SERGE GRZYBOWSKI, Real Estate Director at Groupe ADP

"The airport real estate and cargo activity in particular are an essential part of our investor strategy over the next four years.

Our priority is investing in warehouses that are connected to the runways, like the cargo delivery services, to provide our customers with modern facilities that meet their needs and save them time."



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THE ANIMAL STATION AT PARISCHARLES DE GAULLE: AN INTERNATIONAL BENCHMARK





The animal station at Paris-Charles de Gaulle, operated by WFS/VIA, was enlarged and modernised in 2014 to meet the highest health standards in force, and to ensure the welfare of animals during their passage through this establishment.

Approved for the accommodation of all animal species (equines, production animals, pets, wild fauna, etc.). the animal station's main task is to conduct the health inspection of live animals in transit or being imported from third countries and entering the European Union.

Each year, over 3,000 animal consignments come through the station where they are inspected by officials at the border inspection point, the largest of the French Veterinary and Phytosanitary Border Inspection Service (SIVEP).

AN AMBITIOUS CARGO STRATEGY

A FOUR-PART CARGO STRATEGY:



RECLAIMING TRAFFIC

through the implementation of a marketing assistance programme to encourage the development of both existing cargo routes and new routes, or the establishment of new all-cargo airlines

As part of its new pricing policy, Groupe ADP is committed to financially rewarding any airline that increases its number of all-cargo flights departing from Paris.



COMMITMENT TO IMPROVED **SERVICE QUALITY AND A MORE** ATTRACTIVE CARGO AREA.

In addition to the modernisation projects and work to create facilities that offer the highest international standards, attention has also been paid to cleanliness, signage and security. A major security project carried out in collaboration with all operators established restricted access points under video surveillance in order to improve lorry traffic and the security of goods.

With regard to real estate, the priority is to develop the active "front line" (area comprising the warehouses nearest the aircraft, on the border between the airside and landside areas). In order to do this, the Group is investing in border cargo services with direct access to runways in order to facilitate loading/unloading/customs operations in the holds of all-cargo aircraft. The Group is also increasing the number of advanced cargo storage platforms to factor in moving cargo to the holds of passenger aircraft.

The challenge is also to offer tailored solutions to forwarding agent partners: either in Groupe ADP's investment in divisible warehouses or, following the example of Bolloré or DHL, in private warehouses, or even through third-party investors.



PREPARING FOR CHANGES IN CARGO ACTIVITY IN THE LONG TERM.

Together with the cargo community, Groupe ADP has launched projects for a for an apron equipment geolocation system as well as an export animal station to supplement the existing import station. Furthermore, this summer, in conjunction with IATA, Groupe ADP launched a programme allowing all interested cargo operators to obtain CEIV Pharma certification, which is becoming the norm in the face of growing demands in the pharmaceutical industry: Air France Cargo and Bolloré Logistics are already certified.

Groupe ADP has also undertaken several prospective studies regarding the potential for a joint air-sea offering with the Paris Seine Normandie ports (HAROPA), the changing roles of cargo operators, and also the development of a European benchmark for the cost per tonne of cargo across the entire logistics chain.



PROMOTING AIR CARGO TRANSPORT:

- Groupe ADP campaigns for the development of traffic rights (the granting of fifth freedom rights) and for all measures to simplify administrative procedures that improve the competitiveness of air cargo in France. As such, the reverse charge of import VAT, a measure defended by the Group, was adopted in 2015 to allow forwarders and shippers to optimise their cash flows as they are no longer obliged to disburse VAT when goods clear customs.
- Groupe ADP has put a lot into Paris hosting Air Cargo Forum 2016 and, in March, it took part in the International Week of Transport and Logistics (SITL).

INITIATIVES AND INNOVATIONS THAT UNITE THE CARGO COMMUNITY



Innovation is key to Groupe ADP's cargo strategy. As a coordinator and leader in the cargo community — which includes over 200 businesses at Paris-Charles de Gaulle in addition to public services — the Group supports numerous initiatives designed to facilitate goods handling operations and procedures.

For example, the electronic data exchange platform, "Cargo Community System", developed by Cargo Information Network
France (CIN) and Groupe ADP allows the tracking of airport cargo operations, while optimising compliance with customs regulations and safety and security obligations. Its roll-out has been a great success; it is already being used by 115

airlines and 80 forwarding agents. This exchange platform is closely linked with **e-freight**, i.e. the posssibility of issuing an electronic air waybill with the security certificate. This project, organised with the Inter-regional Directorate of Customs at Roissy, will reduce the number of paper documents that accompany each shipment.

Groupe ADP is also involved in *Hubstart Paris Région*®: a partnership which includes over 30 public and private stakeholders and works to promote the "Greater Roissy-Le Bourget" area by means of concerted and networked efforts, in order to encourage the establishment of logistics centres at and around the airport.



BUSINESSES with an air cargo presence at Paris-Charles de Gaulle.

Finally, the first **innovation challenge** dedicated to cargo will take place in 2017. A competition will be organised with start-ups and innovative SMEs to devise and design inventive solutions. The winning ideas will be tested in experimentation phases and the most promising projects will then be rolled out at the Paris airports.

FOCUS ON THREE MAJOR CLIENTS

AIR FRANCE CARGO

Groupe ADP's primary customer with over 521,000 tonnes handled in 2015: the cargo branch of Air France has successfully redesigned its model to strengthen its position in a highly competitive market.

Air France-KLM Cargo is now focusing on the capacity available in the holds of its passenger aircraft, taking advantage of its vast global network. 90% of cargo is carried in the holds of passenger aircraft. This capacity is

supplemented by all-cargo aircraft, which enables the Group to maintain its renowned expertise in transporting exceptional goods and makes it possible to serve additional stations. The Group is also seeking to boost its revenue by developing cargo with a high added value, such as express cargo and mail, growing rapidly with e-commerce, the pharmaceutical and aerospace industries, etc.



ALAIN MALKA,Executive Vice President at Air France Cargo



"Air France-KLM Cargo can rely on first-class airport infrastructures at Paris-Charles de Gaulle: its G1XL cargo terminal, one of the largest cargo centres in Europe; the HubExpress, a state-of-the-art facility operated by Sodexi which opened in spring 2015, entirely dedicated to handling flows of small, lightweight express packages and mail in transit; and finally, Terminal 2 for import and export express and mail flows. Our ideal geographic positioning at the heart of Europe allows us to offer customers access to the entirety of our global network."

At Paris-Charles de Gaulle Airport, Air France Cargo boasts one of Europe's largest cargo centres: the G1XL terminal, 130,000 sqm, 1,200 pallet positions and 77% of cargo handled in transit. The terminal is equipped with cutting-edge technology, such as the electric pallet truck or the electronic labelling of containers to be

transported. It features modern facilities tailored to suit customer needs: temperature-controlled facilities for the handling of pharmaceutical products, and an advanced storage platform located as close to aircraft as possible to anticipate loading operations.



FedEx

With close to 1,200 tonnes handled each day, FedEx is the second-largest cargo airline at Paris-Charles de Gaulle, where it set up its hub for Europe, Africa and the Middle East in 1999. This logistics hub — the American express carrier's largest, outside its Memphis hub — .extends over more than 108,500 sqm and is equipped with 39 aircraft stands, 25 of which are for widebody aircraft.

The American group employs 4,250 people in France, including 1.800 at the Paris hub.

The express transport group is set to bolster its presence at Paris-Charles de Gaulle by expanding its hub with a new building which, once completed, will be one of the most advanced express hubs worldwide, equipped with cutting-edge technology. Thus, the sorting capacity will be increased by more than 40%. The financial commitment for this expansion project comprises a direct investment of €200 million coupled with rent on a 30-year lease. Construction of the new sorting centre is set to commence in early

centre is set to commence in early summer 2017 with commissioning scheduled for 2019. Once the expansion is completed, the Paris hub will boast an automated sorting system for large, over-sized packages — a worldwide first for FedEx Express — which, with the continuing growth in e-commerce,

corresponds to a market trend. In connection with this major investment at the airport, FedEx plans to add more aircraft stands and to increase the number of its Roissy-based employees.



CAPITAL INVESTMENT at Paris-Charles de Gaulle by 2020..



+50%

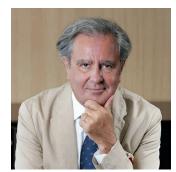
ADDITIONAL DOCUMENTS AND PACKAGES

processed after expansion of the hub, to reach 51,000 packages per hour.



39

FEDEX AIRCRAFT operating out of the Paris hub.



ALAIN CHAILLÉ, Vice-President, Operations, FedEx Southern Europe

"Our customers wish to expand internationally and need a reliable, extensive transportation network. Our Paris hub, Fedex's true gateway to Europe, is close to the taxiways and provides us with sufficient space to develop our activities there. With the expansion of our hub, we are looking forward to having further great successes alongside Groupe ADP."



WFS



CRAIG SMYTH. Chief Executive Officer at WFS Group

"Developing and sustaining our place at the Paris airports is a top priority and, as such, WFS Group is building a trusting and lasting partnership with Groupe ADP. Together, we are doing our utmost to develop cargo and ramp activities, optimize facilities and participate actively in the competitiveness and international exposure of these airports."

Groupe ADP's third-largest customer, the French Worldwide Flight Services (WFS) is one of the world's leading providers of airport services, with more than 190 locations worldwide. Specialised in air cargo handling and technical ground handling services (aircraft, passengers, baggage), WFS works with more of 300 airlines worldwide and handles 4 million tonnes

of goods per year, including 900,000 tonnes at Paris-Charles de Gaulle. WFS boasts more than 120,000 sqm of dedicated facilities over 20 hectares of land spanning a large part of cargo area 7, and employing approximately 1,500 people. WFS Group provides solutions in terms of auditing, strategic and operational consulting.



600,000

TONNES OF CARGO HANDLED PER YEAR by WFS and its subsidiaries at Paris-Charles de Gaulle..





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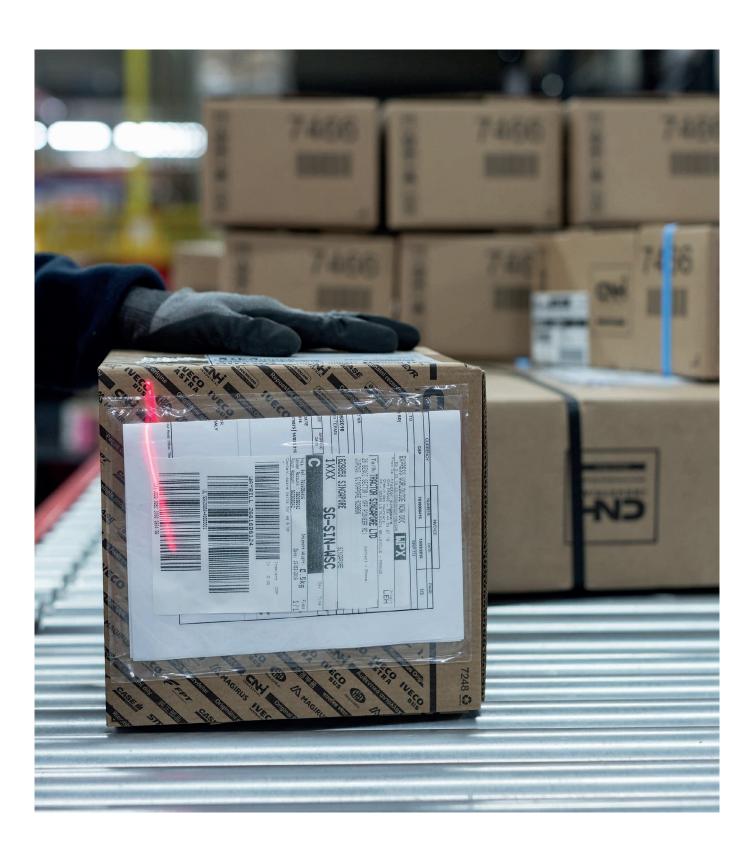
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Communications Division
Media Relations & Reputation Management
T.:+33 (0)1 43 35 70 70

mail: infopresse@adp.fr website: www.groupeadp.fr corporate twitter: @GroupeADP

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