



Life Logistics Conference 08Oct19
Cool Master Plan:
LCAG's Answer to the Requirements of
the Pharmaceutical & Healthcare
Industry



Lufthansa Cargo



Our Project at a Glance



Certification and Expansion



Temperature Protection



Digitization of Cool



Outlook



Implementation of Cool Master Plan to address ever-changing market environment



Market environment

Growth
of pharma/healthcare market



Complex supply chains
of manufacturers



Huge investments
made by other logistics companies



Increasing requirements
from regulatory authorities



Our answer



Certification and expansion
of our infrastructure



Improved temperature protection
for your goods



Digitization and transparency
throughout the entire transportation chain



Our Project at a Glance



Certification and Expansion



Temperature Protection



Digitization of Cool

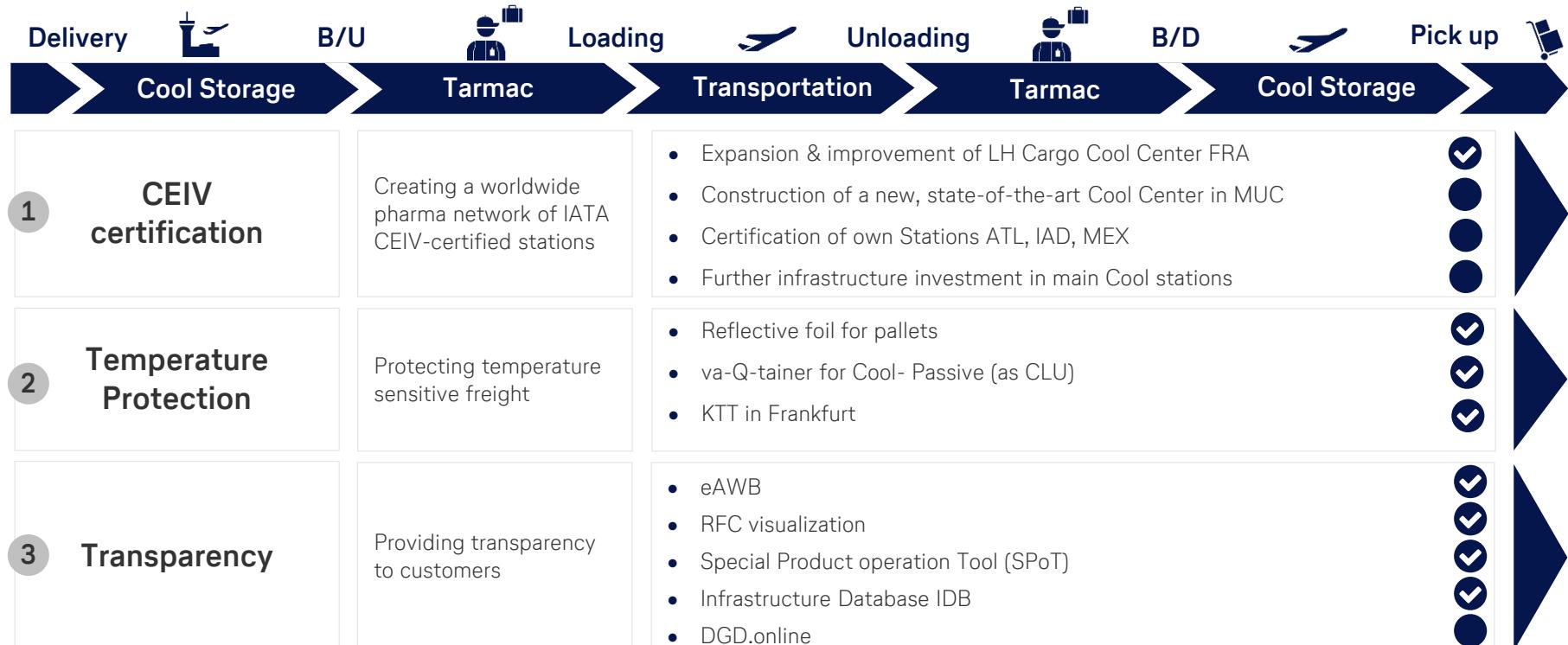


Outlook



Cool Master Plan

Affects the Whole Supply Chain





Our Project at a Glance



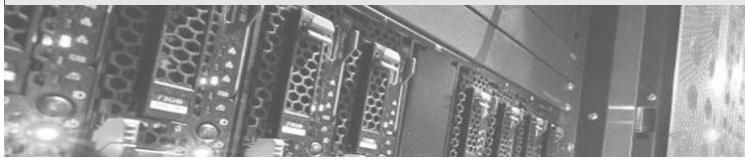
Certification and Expansion



Temperature Protection



Digitization of Cool



An Outlook

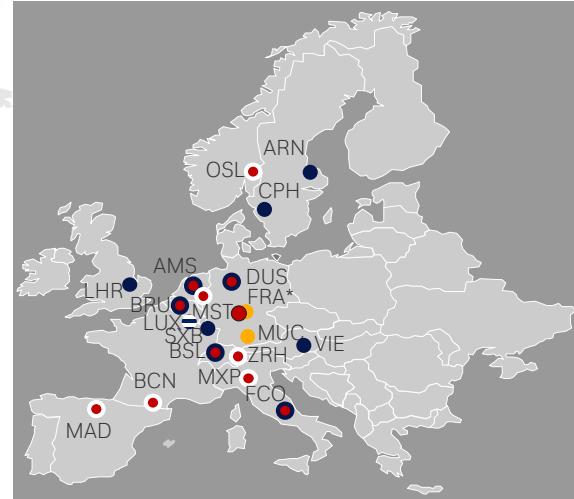
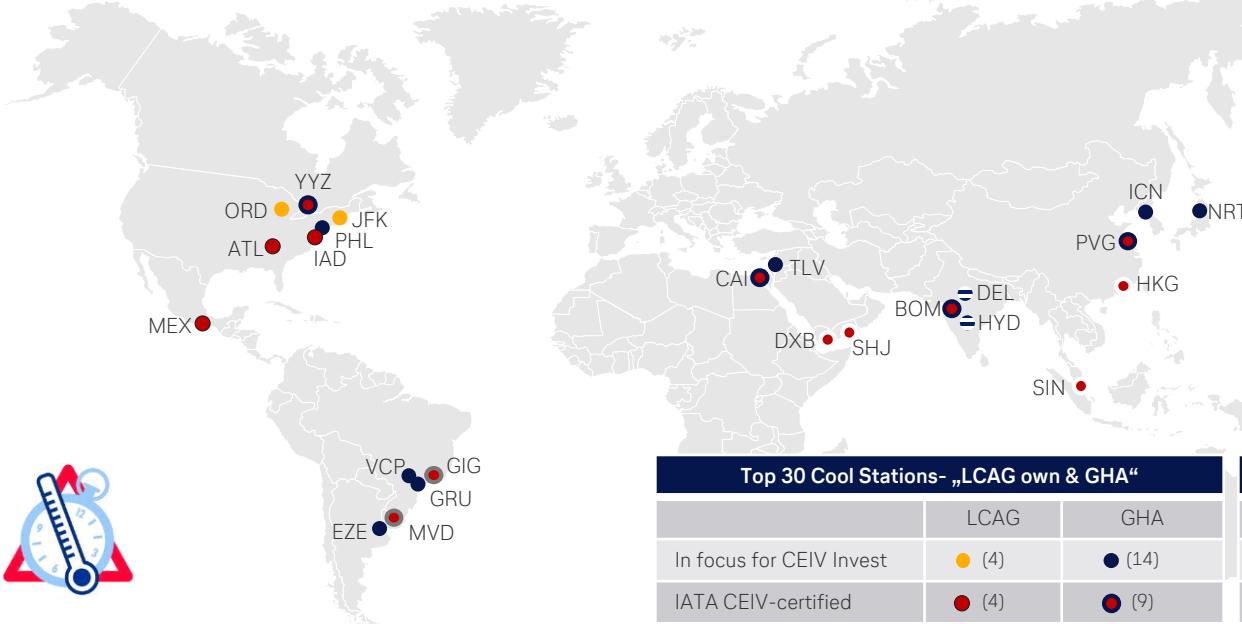




25 Stations of LCAG Network are CEIV-Pharma certified.

13 out of 30 Top Cool Stations - ATL, IAD, MEX received certification in SEP 2019.

In October 2016, the IATA awarded Lufthansa Cargo as a pioneer in quality services with its CEIV Pharmaceutical seal for compliance in worldwide processes



Top 30 Cool Stations- „LCAG own & GHA“		Other Cool stations/ Airports	
	LCAG	GHA	Act. GDP
In focus for CEIV Invest	● (4)	● (14)	
IATA CEIV-certified	● (4)	● (9)	● (3)
Partly certified		● (2)	

Lufthansa Cargo Cool Center in Frankfurt

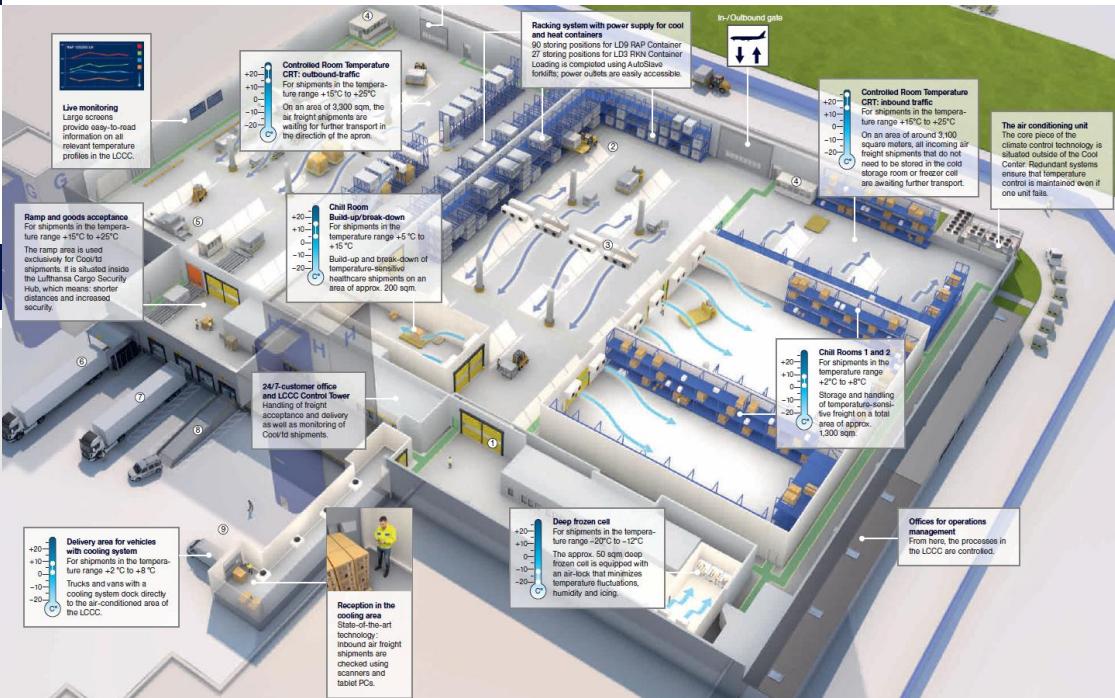


Ramps

- Four ramps for **15°-25° C**, one ramp at **2°-8° C**.
- Another ramp **with truck dock** and roller bed into the warehouse (temperature range 15°-25° C). For unmixed cool trucks.

Warehouse

- Original LCCC – 5,000 m²
- Extension of warehouse facility by **approx. 3,300 m²** in 2017.
- Extension and doubling of **racks** for active containers.
- Incorporation of **x-ray device** into temperature controlled area of **15°-25° C**.
- Racks** for passive units.
- Splitting of area into **inbound and outbound traffic, 15°-25° C**.



A new CEIV-certified cool storage facility in MUC planned for 2020



Excellent conditions for temperature-sensitive goods

The station in Munich is Lufthansa's second-largest hub. It offers an excellent network, attractive access rates and short handling times. Thus, it is essential for our pharma network. So far, cool storage has been limited and the station is not certified.

Status Quo

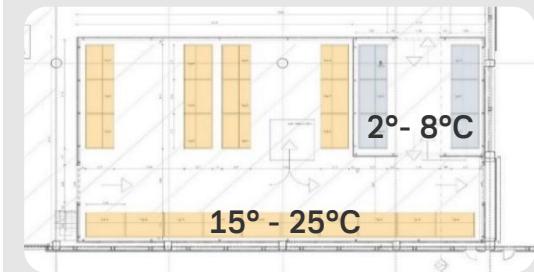
As a short-term solution, three temperature-controlled trailers have been set up with room for up to twelve PMC pallets.



Planned Cool Facility

New state-of-the-art Cool Center is planned for MUC with 2 storage rooms:

- 695m² for 15° - 25°C
- 170m² for 2° - 8°



Opening planned for Q3-2020

MUC Cool Center will provide **excellent conditions**, especially for health care and life-science shipments.

CEIV Certification Process

- Not only the infrastructure in MUC is updated.
- Currently ORD and JFK are in focus for extensive infrastructure upgrades with effects in 2020 and 2021.



Our project at a glance



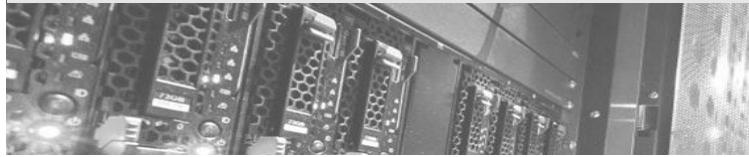
Certification and Expansion



Temperature Protection



Digitization of Cool



Outlook



The highest risk of cool chain breaks occurs on tarmac for Cool-Passive shipments



Effective measures against cool chain breaks on tarmac

Reflective foils



Launched 06/2017

Reduced tarmac time



Ongoing

Extension of Cool dollies



Under evaluation

Effective sun protection for temperature-sensitive freight since 2017



Launched in 2017

1 Lufthansa Cargo provides a one-of-a-kind service in the airfreight industry.

Since **2017**, **Cool-Passive** shipments are protected by a specially developed protective thin foil.

2 This custom reflective foil helps to keep freight cool by reflecting direct sunlight.

It reduces solar-induced temperature increases by up to **20° Celsius**.

3 The service has been rolled out worldwide for all pallets with Cool-Passive.

The product feature is **completely free of charge** for our customers.



Cooling dollies offer protection against ambient conditions



Cooling dollies offer temperature-controlled apron transport to ensure uninterrupted cool chain.



Frankfurt:

- Thermo trailers for temperature-controlled shipments for lease.
- State-of-the-art technology: constant cooling (up to -30° C) and heating (up to +30° C) even during long tarmac transportation.
- Digital monitoring for temperature management with multi-level fail-safe system: SMS warning messages, warning siren & warning light.
- Doors of the rear section with windows to allow monitoring from outside.
- Only for ULD shipments. Suitable for LD and MD.

KTTs are bookable on request no later than 72 hours prior to departure.



Our Project at a Glance



Certification and Expansion



Temperature Protection



Digitization of Cool



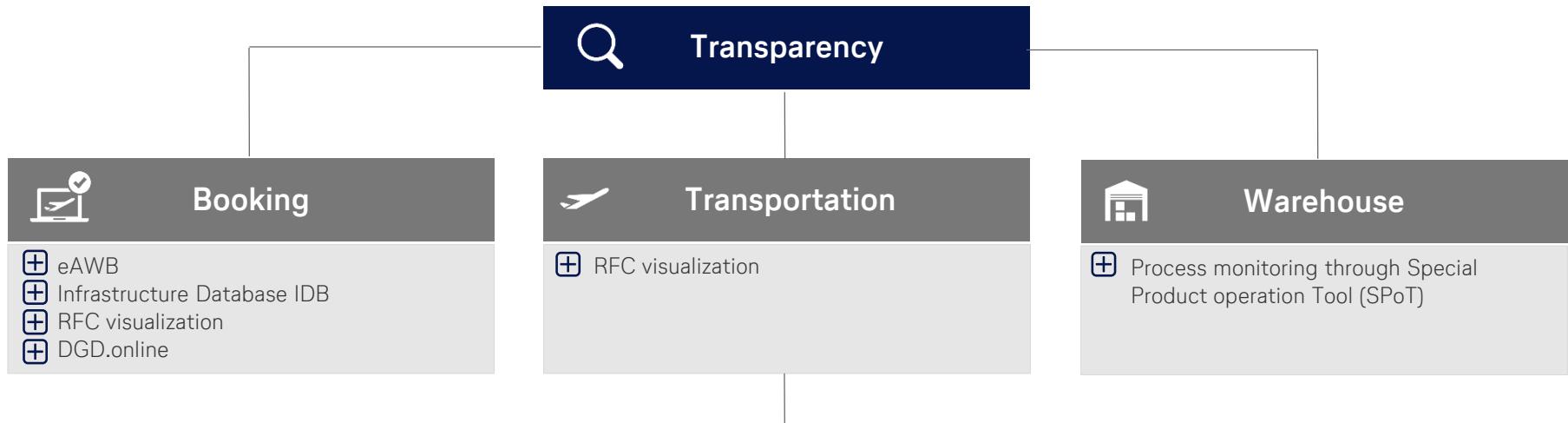
Outlook



Transparency through Digitalization is increasingly important for the transportation of the temperature-sensitive goods



Shippers, especially from the healthcare industry, ask for more transparency during the entire transport chain to fulfill the changing requirements of various legal frameworks and to ensure the quality of their products. Lufthansa Cargo, as a pioneer for digitalization in the air freight industry, plans to create transparency throughout the entire cool transportation chain



More digitization projects like the cool container data management will be planned and implemented in 2020.

Temperature control during trucking



- Since **2017**: “Road Feeder Cool” (RFC) is visualized in iCap and eTracking.
- When “RFC” is shown in the booking system, it is a **scheduled truck service. No extra charge occurs.**
- The new provision ensures that temperature-sensitive cargo is actively or passively cooled or warmed during road connections with cool trucks.
- Cool-Active is always booked on RFC.

The Routings shown below are for Service : td.Pro

Org: HAJ Dest: FRA LAT: 28AUG17 TOA: For Service: Id Pro - Cool/Id/Passive

Capacity Agreement: AC-Group: All

Commodity Description: Pharmaceuticals, not restricted

Refresh Capacities Print Back Show DRT Clear DRT

Route No	Org	Dest	LAT	TOA	A/C Type	Weight RSA (kg)	Volume RSA (m³)	ULD Positions RSA	Alt Weight RSA (kg)	Alt Volume RSA(m³)
Flight No	Dep Station	Arr Station	Flight Dep	Flight Arr						
Route 6	HAJ	FRA	29AUG17 / 16:25	30AUG17 / 03:50						
LH059	HAJ	FRA	29AUG17 18:55	29AUG17 19:50	319	1500.0	9.0	0/0/0		
Route 7	HAJ	FRA	29AUG17 15:00	30AUG17 09:59						
LH7061S	HAJ	FRA	29AUG17 17:00	30AUG17 01:59	RFS	15585.1	12.06	4/0/0		
Route 8	HAJ	FRA	29AUG17 19:00	30AUG17 11:30						
LH7065S	HAJ	FRA	29AUG17 21:00	30AUG17 03:30	RFS	20000.0	68.0	4/0/0		
Route 9	HAJ	FRA	29AUG17 20:00	30AUG17 12:00						
LH7001S	HAJ	FRA	29AUG17 22:00	30AUG17 04:00	RFC	19399.0	59.49	4/0/-1		
Route 10	HAJ	FRA	29AUG17 20:30	30AUG17 13:00						

SPoT: quality assurance through state-of-the-art process monitoring*



3. Rules & Workflows

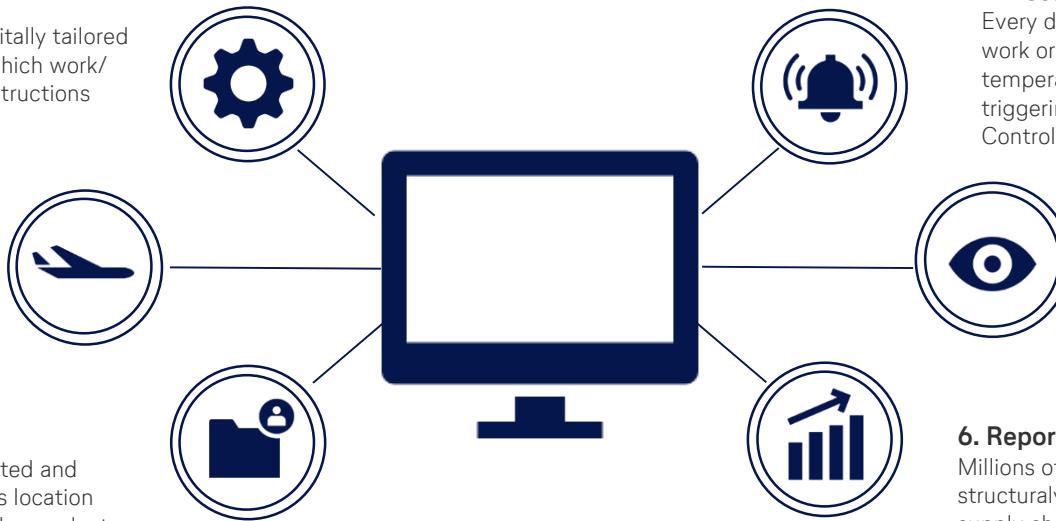
Every shipment has its own digitally tailored rules (What? When? Where? Which work/ Which shipment?) and work instructions creating work order.

2. Transport Monitoring

Tailored transport plans for nearly every transport/ transaction are integrated with actual transport and transaction and thereby monitored by default.

1. Central Data Storage

Everything is digitally documented and centrally available. This includes location changes and depending upon the product ambient temperature, set points, seals, dry ice quantities, battery levels.



4. Escalations & Alert Mechanism

Every deviation from transports, transaction, work order or captured data (e.g. temperature) is immediately and globally triggering escalation to a dedicated Cool Control Team.

5. Supervision

This Team assure global process compliance and service recovery to assure the highest quality standards possible.

6. Reporting

Millions of work executions allow us to structurally identify weaknesses and risks in the supply chain, resulting in the immediately enforced improvements in the work instructions as well as permanent process improvements.

* currently for Cool-Active, Cool-Passive BUP via FRA.

We network the world



361

destinations

107

countries

9,500 **4**

marketed flights
per week *

hubs in Frankfurt,
Munich, Vienna
and Brussels

91

cities served by freighters
per week*

42

Asia and the Middle East

10

Europe

39

the Americas

* annual average 2018



Cool – The right conditions
for temperaturesensitive
goods.



Your benefits

- Temperature-controlled transport throughout the Lufthansa Cargo network, including Road Feeder Service
- Cool-Active: temperature management in special containers with active temperature control systems
- Cool-Passive: passive temperature management using a variety of packaging solutions
- Temperature-controlled transport is also available for dangerous goods

Key Facts

- 60,000 tons of pharmaceuticals per year
- Our daily flown insulin supplies 1.3 million diabetics

Logistics for the healthcare industry



Your needs

- Customized solutions and reliable transport for computer tomographs, vaccines, generics, donor organs, blood and plasma or radioactive isotopes for cancer therapy

Our recommended products

- **Care** for dangerous goods
- **Cool** for temperature-sensitive goods like insulin
- **Safe1** for especially valuable goods like donor organs

Interested to learn more about LCAG's products for pharmaceutical and health care industry (www.lufthansa-cargo.com)



Lufthansa Cargo

Home German Newsroom Process Changes Contact Search eServices Network Products Industries Company Login

Contact database.



Search for country contacts.

Custom search.

Select country:

Greater China (CN)

Select city:

Select position:

Start search

Country	City/Info	City Code	Position	Job title	First name	Last name	Phone	Email	
Greater China (CN)	Beijing	BJS	Customer Service		-		+86 10 8468 9696	sales-bjs@lufthansa-cargo.com	
Greater China (CN)	Guangzhou		Customer Service				+86 20 8668 5538	sales-can@lufthansa-cargo.com	
Greater China (CN)	Kowloon		Customer Service				+85 22 7697 882	sales-hkg@lufthansa-cargo.com	
Greater China (CN)	Nanjing		Customer Service				+86 25 5248 2985	sales-nkg@lufthansa-cargo.com	



Cindy Yu
Sales & Handling Manager
Email: cindy.yu@dlh.de
Phone: +86 147 1503 6351



Lufthansa Cargo
Networking the world.