IATA CARGO WEBINARS

21 October 2020

Three-Part Webinar Series

Webinar 1: Industry Readiness for Vaccine and Life Science Products Transportation

Welcome

Industry Readiness for Vaccine & Life Science Products Transportation

Andrea Gruber Head, Special Cargo IATA





IATA CARGO WEBINARS



This session is conducted under the Competition Law Compliance



Microphones have been muted

Please submit your questions through the **Question box** and **send to Everyone**

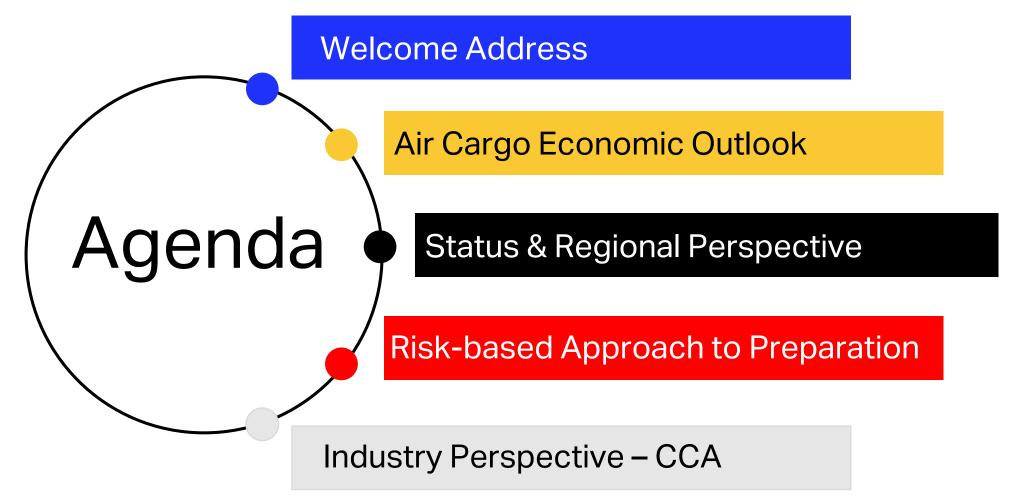


The webinar is being recorded and will be made available afterwards, including the PPT slides.





Transport of Vaccines and Life Science Products by Air





Air Cargo Markets: Recent developments & the near-term outlook

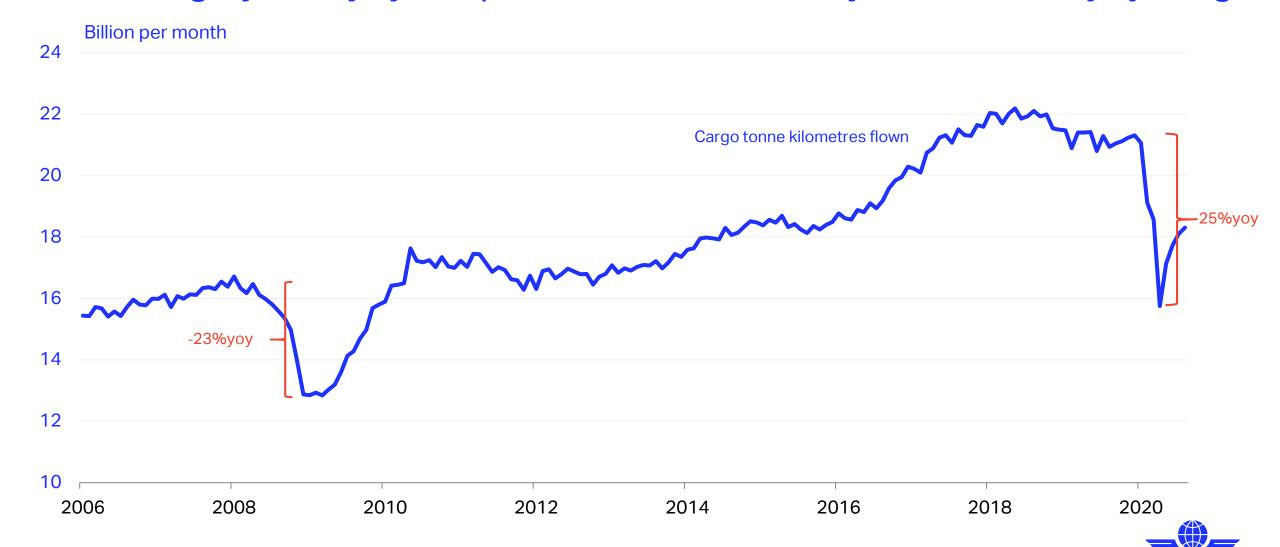
Andrew Matters
Deputy Chief Economist
IATA





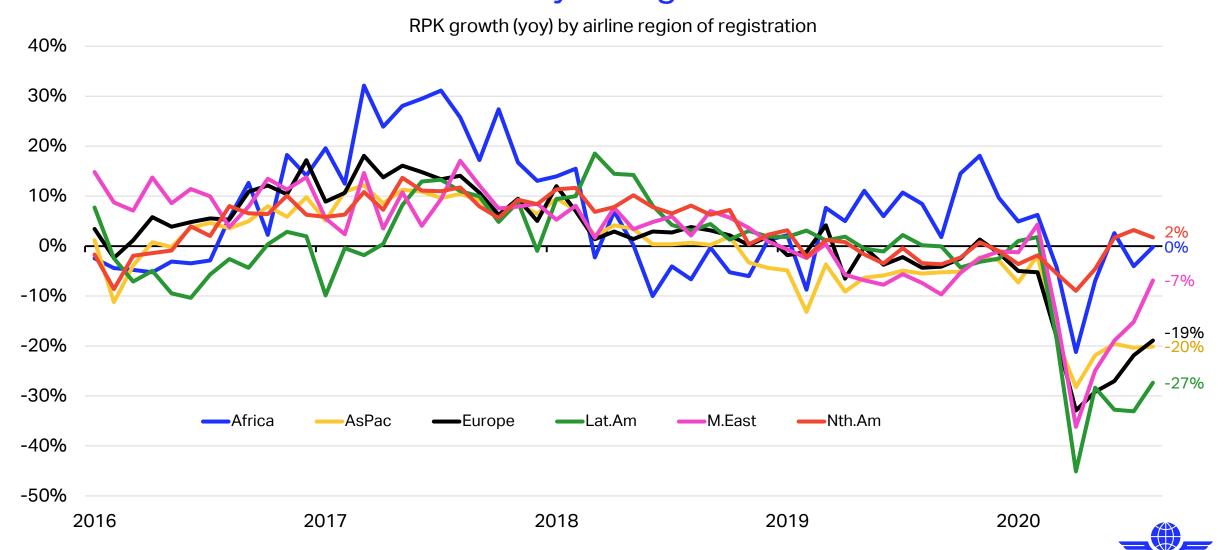


Decline in cargo volumes similar to the GFC in 2008-09 After falling by 25%yoy in April, CTKs are currently down 12.6%yoy (Aug)

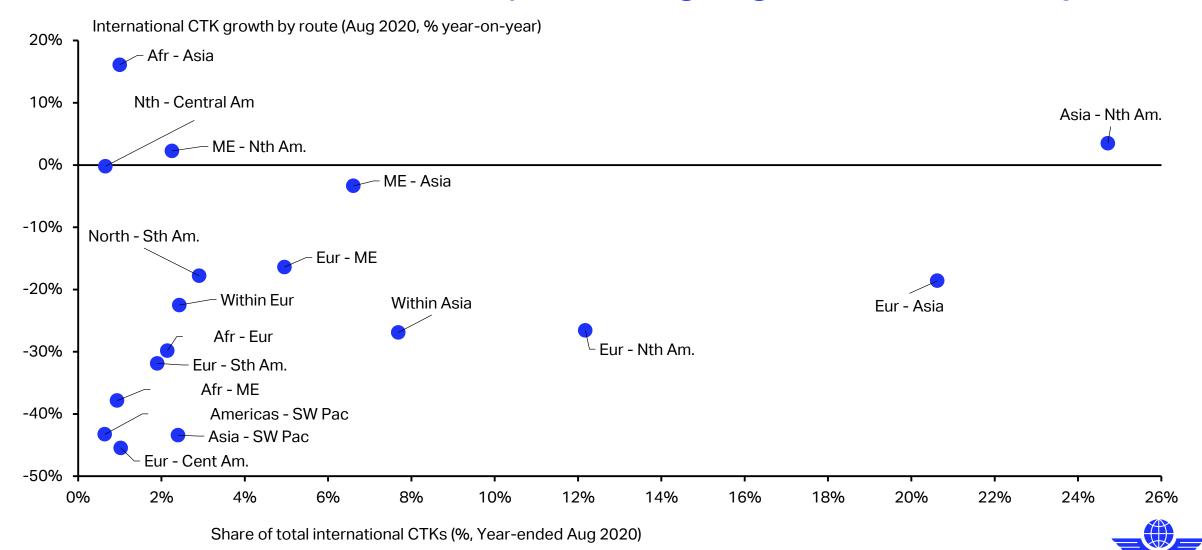


Performance is mixed across regions...

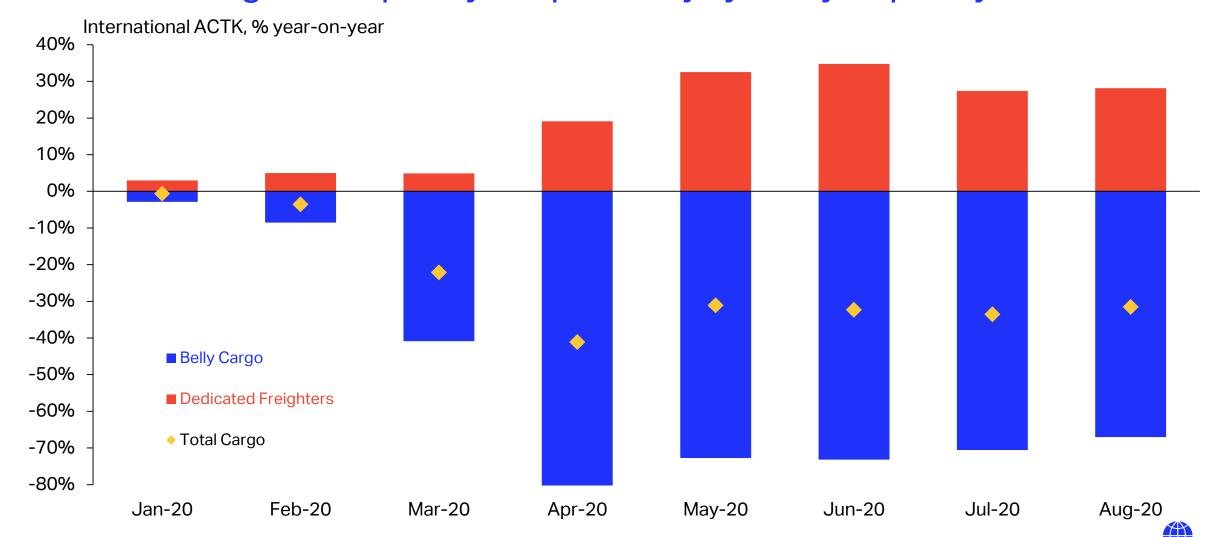
...volumes are still well down vs a year ago in Lat.Am, Eur and AsPac



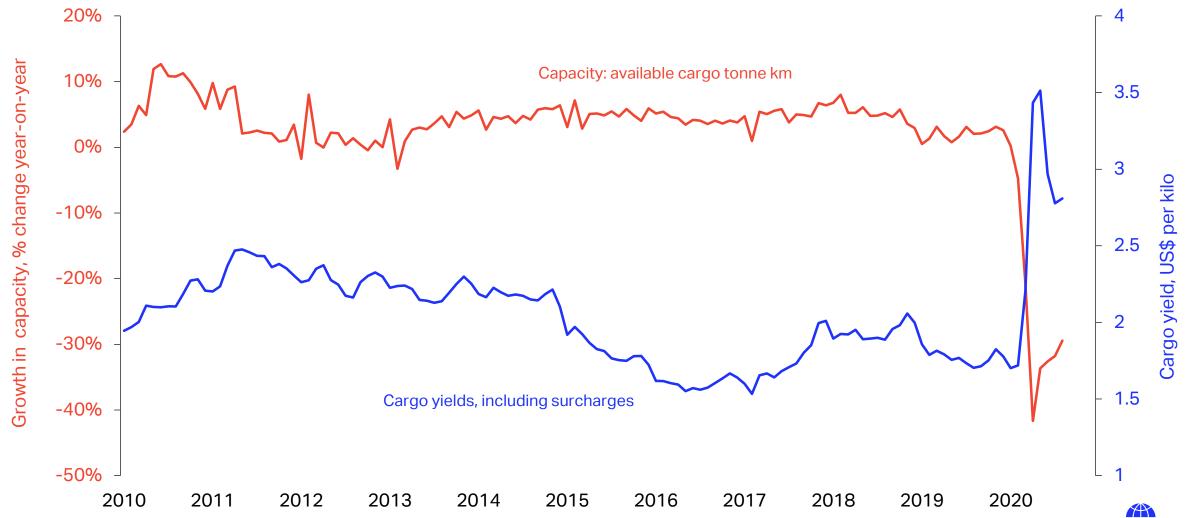
Widespread weakness across major route areas Asia-North America is the best performing large market currently



Lack of capacity is a key part of the current cargo 'story' Dedicated freighter capacity is up ~30%yoy, belly capacity is down ~70%



Shortage of belly capacity has forced yields higher August capacity down 30%yoy, yields up 65% vs last year



Latest developments by region (overview) Capacity has fallen more than volumes; load factor has risen significantly

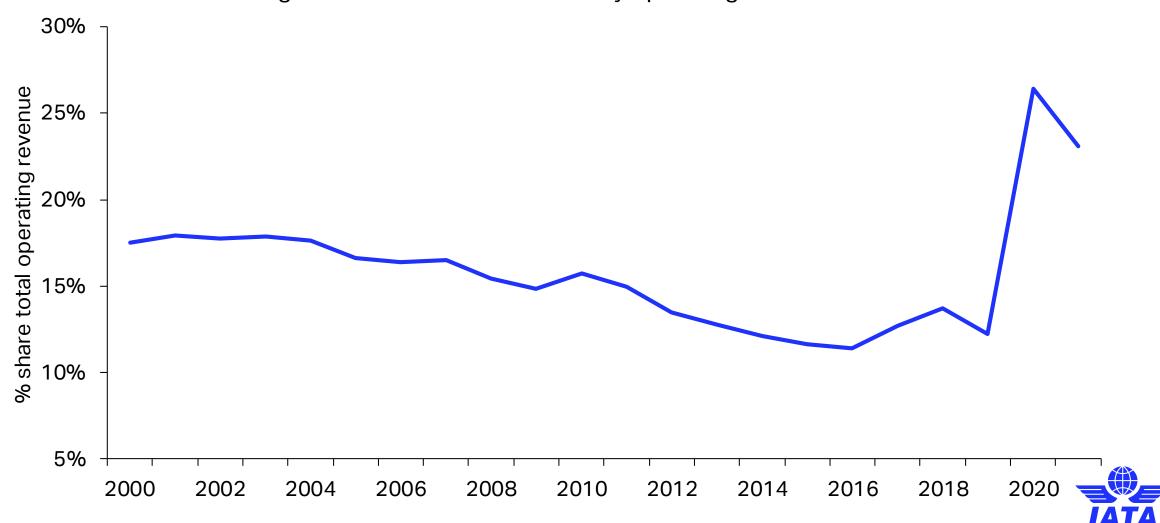
share 1	CTK	A OTIC	0	_
	OTIV	ACTK	CLF (%-pt) ²	CLF (level) ³
100.0%	-12.6%	-29.4%	10.6%	54.8%
1.8%	-0.2%	-37.9%	19.0%	50.2%
34.5%	-20.1%	-33.5%	10.3%	61.6%
23.6%	-18.9%	-32.1%	9.3%	56.8%
2.8%	-27.3%	-43.5%	10.6%	47.8%
13.0%	-6.9%	-24.3%	10.0%	53.5%
24.3%	1.7%	-23.3%	12.0%	48.9%
	34.5% 23.6% 2.8% 13.0%	34.5% -20.1% 23.6% -18.9% 2.8% -27.3% 13.0% -6.9%	34.5% -20.1% -33.5% 23.6% -18.9% -32.1% 2.8% -27.3% -43.5% 13.0% -6.9% -24.3%	34.5% -20.1% -33.5% 10.3% 23.6% -18.9% -32.1% 9.3% 2.8% -27.3% -43.5% 10.6% 13.0% -6.9% -24.3% 10.0%

See link to our monthly briefing here

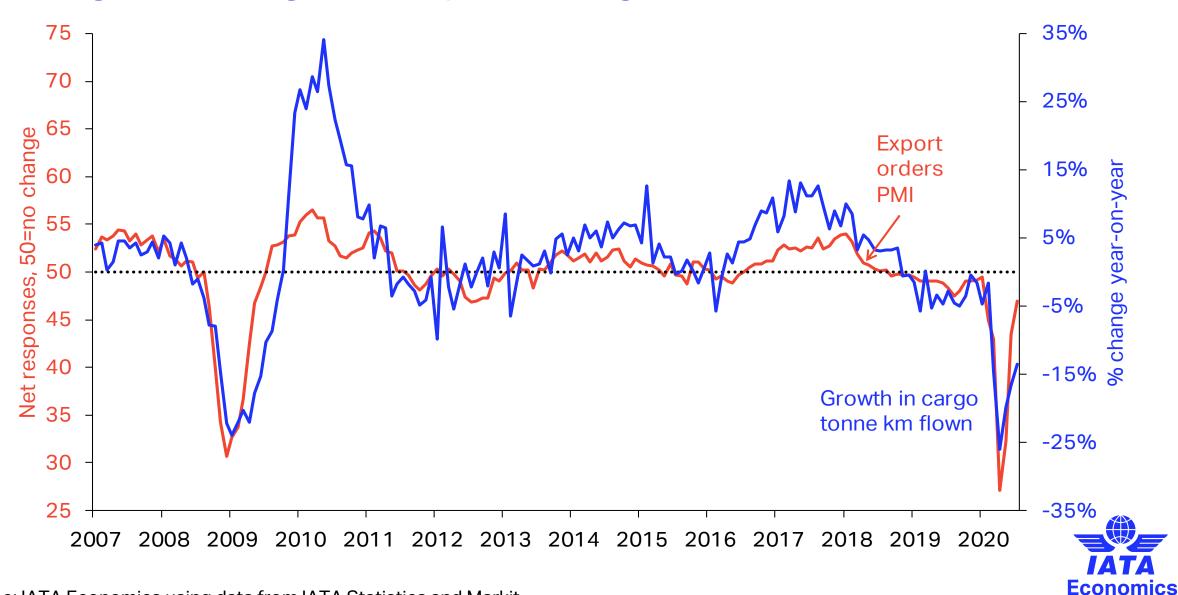


Cargo a partial offset to collapsed passenger revenues Cargo's share of operating revenues had been in decline; now ~25%

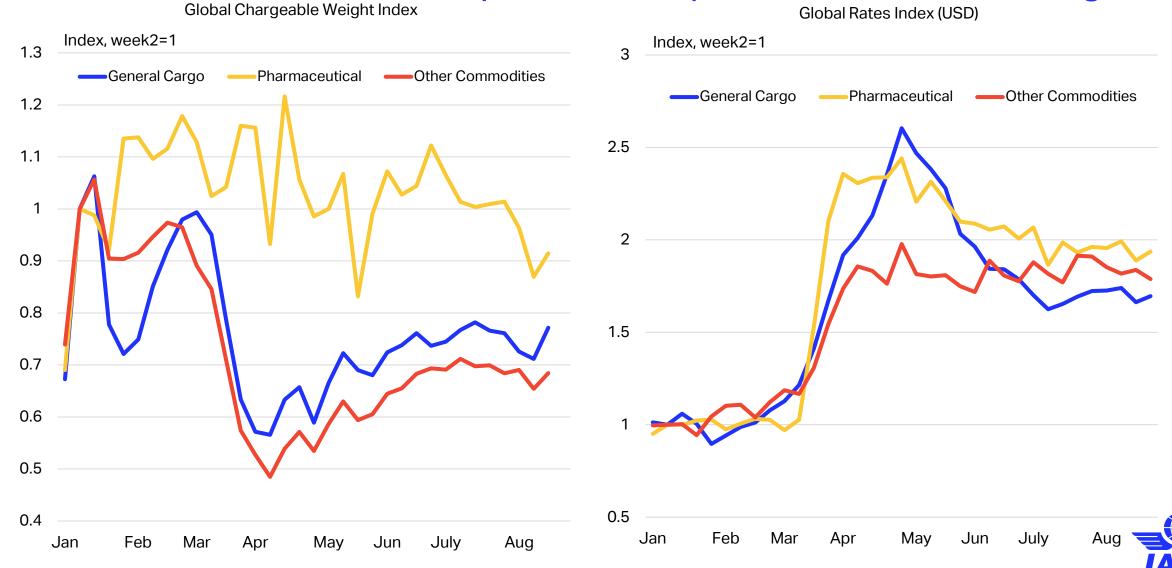
Cargo share of total airline industry operating revenue, %



Export orders have rebounded sharply... ...pointing to a strong recovery in air cargo volumes



Air pharma has proven resilient this year In terms of both volume and price developments vs other air cargo



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Industry Status with Regional Input

Andrea Gruber Head, Special Cargo IATA





Call-to-Action from the AirPharma Webinar

Industry readiness and preparedness to manage globally a temperaturecontrolled supply chain for vaccines, health, and humanitarian supplies

- Global Collaboration
- Plan Prepare Inform
- "Continuous improvement is better than delayed perfection" - Mark Twain





Managing a global temperature-controlled supply chain for vaccines, health, and humanitarian supplies

Key considerations:

- Capacity & Connectivity
- Capabilities & Facilities
- Infrastructure & Equipment
- Border Processes
- Security & Safety
- Interconnected Logistics Networks







COMMUNICATION

Uncertainties have a great number of implications on the supply chain planning efforts









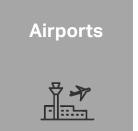














- Manufacturing locations and sites ready to ship the vaccines
- Product shelf life & efficacy and number of doses of vaccines required
- Overall weight, size and volume of shipments foreseen
- Handling, transport and storage requirements
- Different vaccines with different temperature conditions
- Understand the supply chain constraints
- Identifying the airline capacity and connectivity
- Identifying the airport, handler and cargo terminal capabilities
- Ensure compliance on the Regulations (e.g. DGR)

- Uninterrupted temperature-controlled management across supply chain
- Ensure appropriate and availabilities of Road Feeder Services (RFS)
- Coordinating an integrated transport solutions and landbased infrastructure in remote areas
- Local distribution operational capacities
- Reinforced multilateral communication on services and capabilities, etc.









- Availability of specialized temperature-controlled infrastructure, facilities and equipment
- Dedicated qualified and trained staff
- Planning on overall capabilities
- Temperature-controlled dollies helping maintaining temperature control
 while the shipments are outside the temperature-controlled facility
- Accommodating inbound and outbound aircrafts
- Airport communities for coordination, consistency and uniformity
- Trucking access directly to the aircraft & security protocols









- Governments and regulatory bodies
- Border processes
- Facilitation procedures
- Health authorities





- Capacity & Connectivity
- Planning to ensure safe, reliable transport and distribution
- Operational capabilities and aircraft capacity
- Prioritization of shipments
- Facilitating freighter charter
- Interline agreements



Global & Regional Perspective

COORDINATION

- Real-Time Digital Supply Chain
- Initiatives aiming at rapid and efficient access to governments in Africa
- Everyone involved must work closely in real-time
- Communities EUR / ASPAC Airports
- Ground handling warehouse capacity management for large volumes of pharma
- Unprecedented financial constraints SA
- Lack of temperature-controlled area for customs inspection, if necessary

LOGISTICS/INFRASTRUCTURE

CAPACITY/CONNECTIVITY

- Africa has been hard aggravating connectivity
- Withdrawal of capacity due to operational reduction by loss-making airlines - AME
- Lack of manpower at airports
- Putting the lessons learned from PPE distribution to good use
- Establish regional control and communication centers
- Last mile delivery

REGIONS

DISTRIBUTION

Future Requirements

Uncertainties have a great number of implications on the supply chain planning efforts

> COLLABORATION COMMUNICATION PLANNING





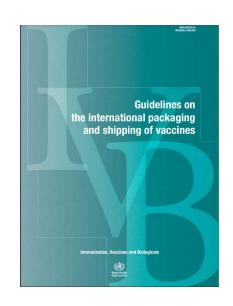


Industry's Readiness Starts Here

The aviation and the pharmaceutical industries have been working together in collaboration for many years to strengthen the quality requirements with realistic capabilities.

The importance of global supply chain standards and harmonized procedures







TCR specific information on vaccine transportation:

- Information in Chapter 4, Sections 4.2.9.2 and 4.2.9.3
- Packaging Requirements in Chapter 6
- WHO Documentation and Labelling for vaccines in Chapter 7, Section 7.8
- Good Storage Practices in Chapter 8 sections 8.2.8 and 8.3.3
- Product Temperature Ranges Chapter 17, Section 17.5



Risk-based Approach to Preparation

Ronald Schaefer
Senior Principal, Consulting
IATA





Transportation of COVID-19 Vaccines

Transporting additional vaccines globally will be challenging

Additional key considerations and opportunities:

- International regulations
- Packaging (active vs passive)
- Infrastructure & capabilities
- Supply chain integrity (alignment of processes, standards and procedures)
- Transparency
- Risk assessments





Transportation of COVID-19 Vaccine (Storage)

Priorities for developing capacity and resources for vaccine distribution include:

- The availability of temperaturecontrolled facilities and equipment maximizing the use or re-purposing of existing infrastructure and minimizing temporary builds
- The availability of staff trained to handle time and temperature-sensitive vaccines
- The building of robust monitoring capabilities to ensure the integrity of the vaccines is maintained





Mitigating the Risks

- Quality and product integrity cannot be jeopardized
- Building confidence and trust through knowledge, training and global standards
- Continuous improvements, harmonization, collaboration and alignment with industry initiatives are key elements that will transform the future







Approach to Harmonized Standards

Different approaches for stakeholders

Road **Transport** Origin Freight Freight **Forwarders Forwarders Stations** Ramp/Cargo Airlines **Airports** Handlers

Approaches:

Individual

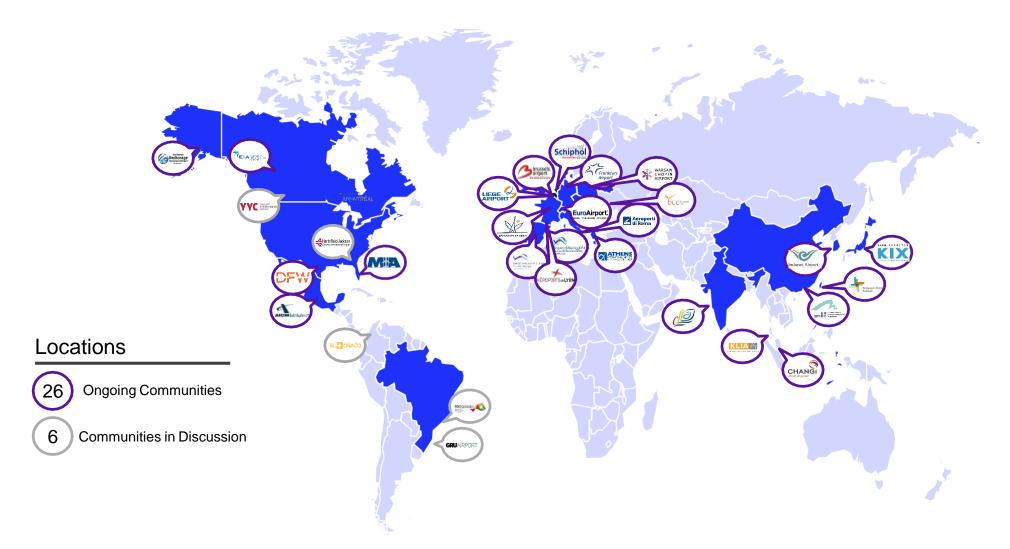
Network

Community



CEIV Pharma (Community Approach)

Certified Pharmaceutical Trade Lanes Development

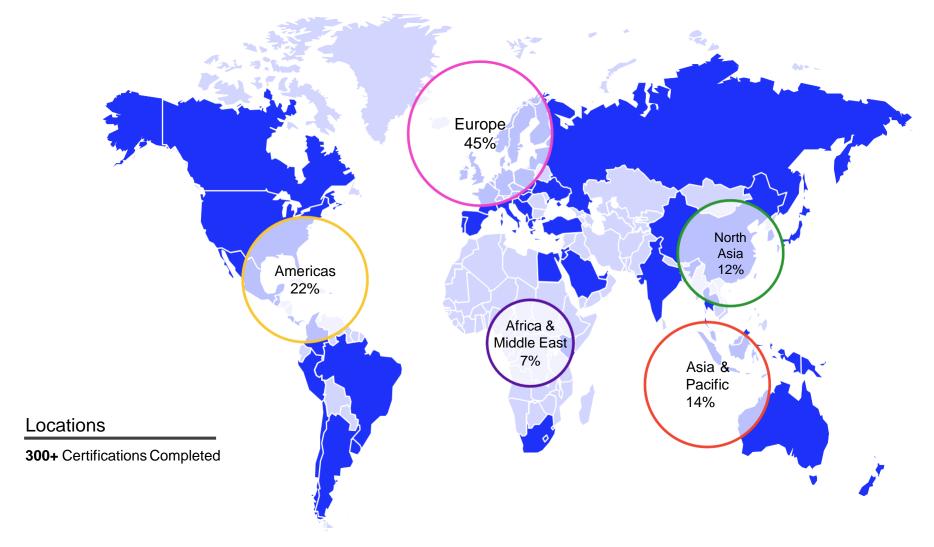






CEIV Pharma – Locations Certified Worldwide

Certified Pharmaceutical Trade Lanes Development







Benefits of Harmonized Approach

A harmonized approach will improve compliance and quality, mitigate risks and increase visibility of stakeholders

COMPLIANCE

Improve handling and transport

Instill trust & confidence in the air freight environment

Increased competency by training

Implementation of quality-driven strategies

QUALITY

Raising the bar & improving the level of operational and technical preparedness

MITIGATING RISKS

Global harmonized Audits

Risk-based Approach Recognized certified organizations

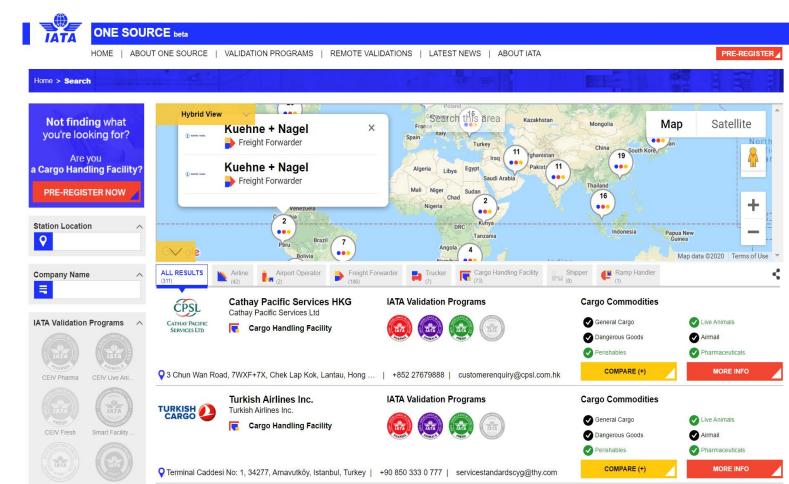
Visibility of capabilities

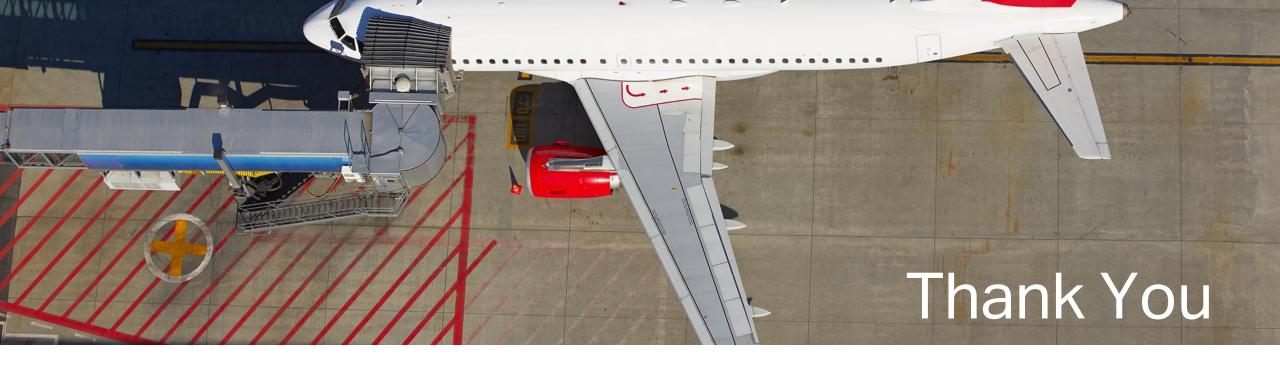
VISIBILITY



Capabilities & Infrastructure Industry Platform – ONE Source

- Visibility across the supply chain
- Find facilities & infrastructure with validated information
- Demonstrate competencies of handling expertise
- Showcase adherence to quality standards





CEIV Pharma

IATA ONE Source

IATA Training



Industry Perspective

Nicola Caristo
Secretary General
Cool Chain Association







Reducing food wastage • Reducing food born diseases • Improving shelf-life • Investing in clean mobility • Using sustainable equipment • Reducing inefficiencies • Improving reliability • Improving RTI's / Packaging • Improving transparency • Implementing new technologies • Stimulating new software • Bringing stakeholders together • Showcasing projects • Stimulating new initiatives • Interacting with Universities

COOL CHAIN ASSOCIATION

Perspective on the importance of supply chain collaboration and required efficiencies to ensure industry readiness for the global distribution of the COVID-19 vaccine.

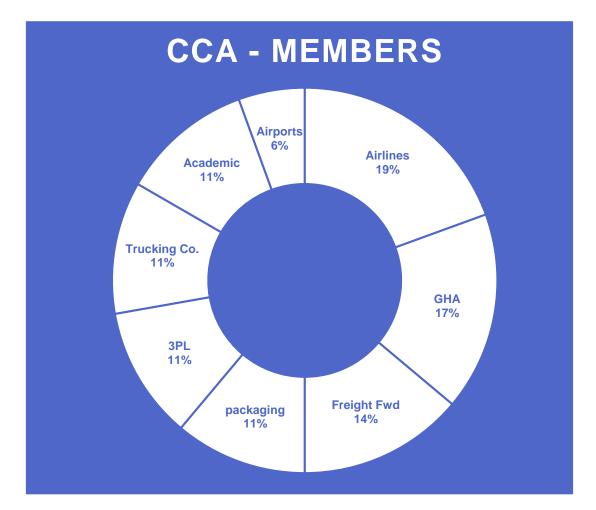


THE COOL CHAIN ASSOCIATION

- CCA Membership Overview
 - Perishable Project The LAX initiative
 - Vaccines Distribution The Scenarios Challenge
 - Supply Chain Critical point and Bottleneck
 - COVID-19 Airport Distribution Change Management Matrix
 - Project charter for change management
- CCA Members Workshop and follow up

























AIRFRANCE / KLM /// Martinair CARGO





















































COOL CHAIN ASSOCIATION

PERISHABLE PROJECT – THE LAX INITIATIVE

Scope:

Improve quality
Define minimum standard
Adopt degree-hour standard
Accountability
Reduce Inefficiencies A-Z
Reduce Impact at environmental level
Sustaining shelf-life of perishable products

Inform and make public aware of cold-chain integrity

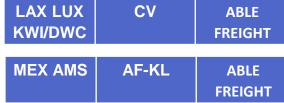
Methodology: Degree Hours

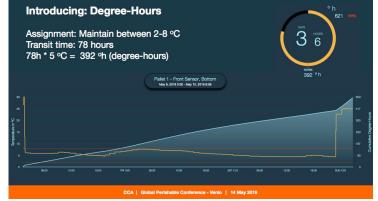
Type of loading: passive solution and active container

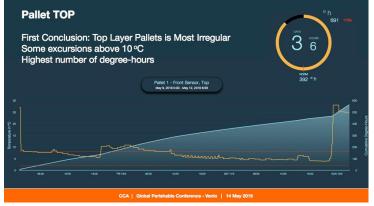
Type of protection: cool /thermo dollies

Standards: feedback for regulators (CEIV Program)

Airports	Airlines	Freight Forwarder	GHA	Shipper (Consignee)	Packaging Solution	ULD provider (Supplementary thermal protection)	IT platform	Aircraft manufacturer	Regulatory Reference
LAX LUX	CV	ABLE	Intro	ducing: Degree-Hours	1	°h 621 1998 Pal	let TOP		° h









PHARMA AND VACCINES DISTRIBUTION - SCENARIOS

ACTUAL SCENARIO CHALLENGE

- AIRLINES NETWORK REDUCTION
- STAKE HOLDERS CONTINGENCY PLANS



STANDARD PHARMA & VACCINES DISTRIBUTION

COVID 19 DISTRIBUTION SCENARIO CHALLENGE

- AIRLINES NETWORK REDUCTION
- STAKE HOLDERS CONTINGENCY PLANS



STANDARD PHARMA & VACCINES DISTRIBUTION

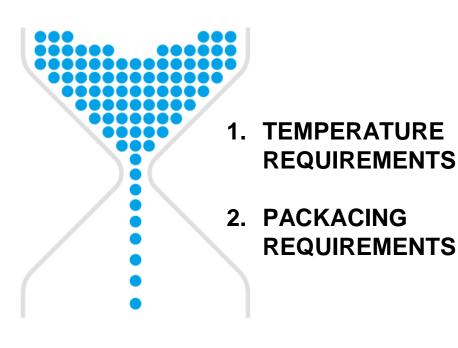


COVID-19 VACCINES DISTRIBUTION

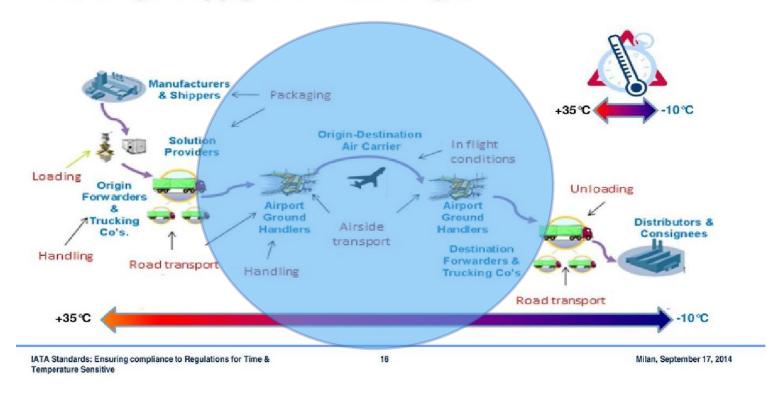
- TEMPERATURE REQUIREMENTS
- PACKACING REQUIREMENTS
- FORECASTS AND QUANTITY
- TIME FRAME



THE VACCINE COLD-CHAIN BOTTLENECK



Air Cargo Supply Chain Challenges



3. AIRPORTS



AIRPORTS COVID-19 DISTRIBUTION CHANGE MANAGEMENT MATRIX

- FACILITY
- W/H OPERATION
- RAMP OPERATION
- TRAINING
- SAFETY
- SECURITY
- SUPPLIER MANAGEMENT
- RISK MANAGEMENT
- QUALITY



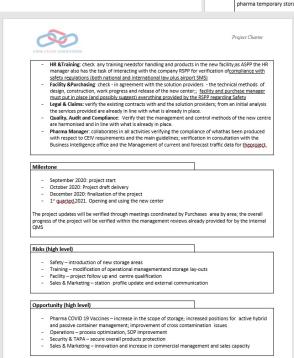
AIRPORT COVID 19 DISTRIBUTION CHANGE MANAGEMENT MATRIX

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	Facility	Warehouse Operation	Ramp Operation	Training	Safety	Security	Supplier Management	Risk Management	Qualit
Temperatur e range	Temp. Mapping Capability CRT COL FRZ General Cargo (Monitored) General Cargo (Monitored) General Cargo	- Check in/Delivery - Storage - Contaminatio n - Flight preparation (in and out) - Tarmac - Contingency Operation have to consider the both dedicated temperature controlled areas and general cargo areas and in harmonization with Ramp OPS	- weight & Balance - Contamination - Transportation	Low Temperature management training Dry Ice Management	Personal Protective Equipment (PPE)		Identification of new critical supplier and/or SOP review	Risk Management Review Identification of new risks Definition of new critical control points Risk Mitigation	KPIs
Type of packaging	Packaging types - Active - Hybrid - Passive - Loose - ULD - Plugs			New Container Types Dedicated training Capability Management Training	Facility safety check	Security Policy and Screening	Interaction with packaging providers Dedicated SOP		
Forecast and Quantity			Contingency - scenarios per flow - scenarios per quantity - scenarios per flights	- products flow - contamination - rotation - cut off times - contingency - dedicated SOP Contingency - scenarios per quantity - scenarios per event types			Risk Ranking Update		
Time frame		,		TBD					

PROJECT CHANGE MANAGEMENT CHARTER

- 1. Purpose
- Project Objectives
- 3. Description
- 4. Deliverables and Requirements
- 5. Milestones
- 6. Risks
- Opportunities
- 8. Functions involved
- 9. Budget
- 10. Criteria for assessing the success of the process





Functions involved and type of participation

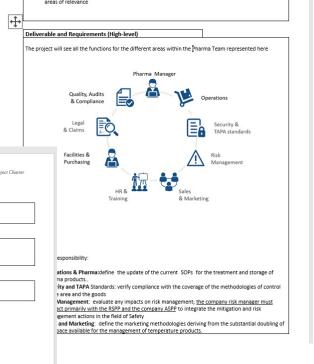
Total budge

s specified above: Pharma Team and Management

Criteria for assessing the success of the project

Compliance with project timelines and characteristics

Construction of new pharma temporary storage
Rev.0 Revision and Date 01/09/2020



Updating, defining, drafting of all the SOPs necessary for the different areas of relevance

Qualification of the performance of the structure according to methods defined for the different

Project Chartes



MEMBERS WORKSHOP

04th of November 2020 from 15.00 to 16.00 (CEST time)

During the webinar we will share with all the members the last CCA initiatives and ongoing fruitful collaboration with IATA. As per the moment we're living, the Webinar will have a special focus on the Vaccine issue, in particular we would like to share and discuss with all of you - in a very interactive way - following points:

- Actual pharma and vaccines transportation experience

How the pandemic situation and Airline capability reduction is impacting the pharma products and vaccines supply chain? How Airports Communities and single stakeholders are re-organizing our own internal processes to guarantee the operation and the sustainability of the supply chain?

- COVID 19 vaccines distribution - Scenarios exercises

Which are the main aspects Airport Communities and single stakeholders are considering for the upcoming COVID 19 vaccine distribution?

Use of the Airports COVID-19 Distribution Change Management Matrix and dedicated Project Charters





Reducing food wastage • Reducing food born diseases • Improving shelf-life • Investing in clean mobility • Using sustainable equipment • Reducing inefficiencies • Improving reliability • Improving RTI's / Packaging • Improving transparency • Implementing new technologies • Stimulating new software • Bringing stakeholders together • Showcasing projects • Stimulating new initiatives • Interacting with Universities

COOL CHAIN ASSOCIATION

Thank you!

Nicola Caristo CCA – Secretary General

nicola.caristo@coolchain.org



Wrap Up & Next Steps

Andrea Gruber Head, Special Cargo IATA





Supply Chain Possible Solution



COMMUNICATION



Working back in the logistics chain







Freight















Focus on industry readiness to manage globally a temperature-controlled supply chain for vaccines, health, and humanitarian supplies

Call-to-Action

- Information Sharing Global Collaboration
- Plan Prepare Inform
- Engage and communicate on scale up projects and initiatives for better space and distribution planning
- Stay Tuned



Question to the audience.... to unlock the answer!



From the challenges that have been outlined by the speakers what are the other areas you believe IATA should be addressing or getting involved in on behalf of the industry?

You can use reply at cargo@iata.org



Additional Outreach & Resources

Three-Part Webinar Series: Transport of Vaccines and Life Science Products by Air Cargo

This webinar series will explore the aviation industry's challenges with regards to the transportation of an eventual vaccine and explain the role that IATA standards in pharmaceuticals and other tools are playing in moving medical supplies in this extraordinary time

Webinar 2 - Global distribution and the flow of vaccines throughout the supply chain, 24 November / 14h00-16h00 CEST

Hear firsthand from transport and handling supply chain experts as they showcase actionable steps developed to achieve the upcoming vaccine distribution effort. Shipper, airline, ground handler, freight forwarder and regulatory agency will speak to specific initiatives being implemented, addressing foreseeable challenges along the temperature-control supply chain as well as collaboration and partnerships.

REGISTER NOW

Webinar 3 - Key learnings in the aftermath of the vaccine distribution effort & paving the way for the future, TBD

REGISTER HERE

Action Cargo: COVID-19







Enabling global trade

Airlines transport over 52 million metric tons of goods a year, representing more than 35% of global trade by value but less than 1% of world trade by volume. That is equivalent to \$6.8 trillion worth of goods annually, or \$18.6 billion worth of goods every day. Find out more interesting air cargo facts (pdf)

VISIT iata.org/cargo

Transportation of COVID-19 Vaccine





Air cargo plays a key role in the distribution of vaccines through well-established temperature-sensitive distribution systems, using cutting-edge technology and procedures

This capability will prove crucial to the guick and efficient transport of COVID-19 vaccines once available. This will naturally require careful planning by every segment in the entire cargo supply chain to ensure full preparedness when vaccines for COVID-19 are approved and ready for

Supporting the industry

IATA offers solutions and services to support cold chain capacity and resources for the anticipated scale of transporting and distributing COVID-19 vaccines.

PUBLICATION TRAINING WEBINARS ONESOURCE CONTACT US

VISIT iata.org/vaccine-transport

Thank you

- Please visit iata.org/vaccine-transport to register for the upcoming webinars
- Please visit iata.org/cargo for all COVID-19 resources

For further information, contact us at cargo@iata.org

