



COVID-19 AND THE LOGISTICS SUPPLY CHAIN

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WHO WE ARE?



Daniel Leung

- Partner in the HFW Shipping team and works between **Hong Kong** and **Shanghai**
- Practice is focused on supply chain related cross-border commercial transactions (especially China-related inbound/outbound investments), general corporate matters relevant to different industry sectors
- Acted for multinational corporations, large PRC state-owned companies, OEMs and manufacturers in high technology manufacturing industry sector.



James Jordan

- Senior Associate in the HFW Aerospace team based in **Singapore**. Previously worked for HFW in Hong Kong.
- Provides support to airline and logistics industry in relation to a range of contentious and non-contentious matters, including commercial contracts within the air logistics sector
- Acted for the aviation insurance industry on a range of matters over the past 10 years including a significant number of cargo claims and disputes
- Singapore Chapter Head for the Asian Business Aviation Association



Sammy Beedan

- Associate in the HFW Aerospace team based in **Singapore**
- Practice is focused on dispute resolution and crisis management in the aviation / logistics sectors
- Worked in London, Piraeus, Beijing and Ulaanbaatar

AGENDA

1. **IMPACT ON THE SUPPLY CHAIN**

- Overview
- Figures
- Outbreak

2. **NOW IS THE TIME TO PLAN**

3. **TRANSPORTING THE VACCINE**

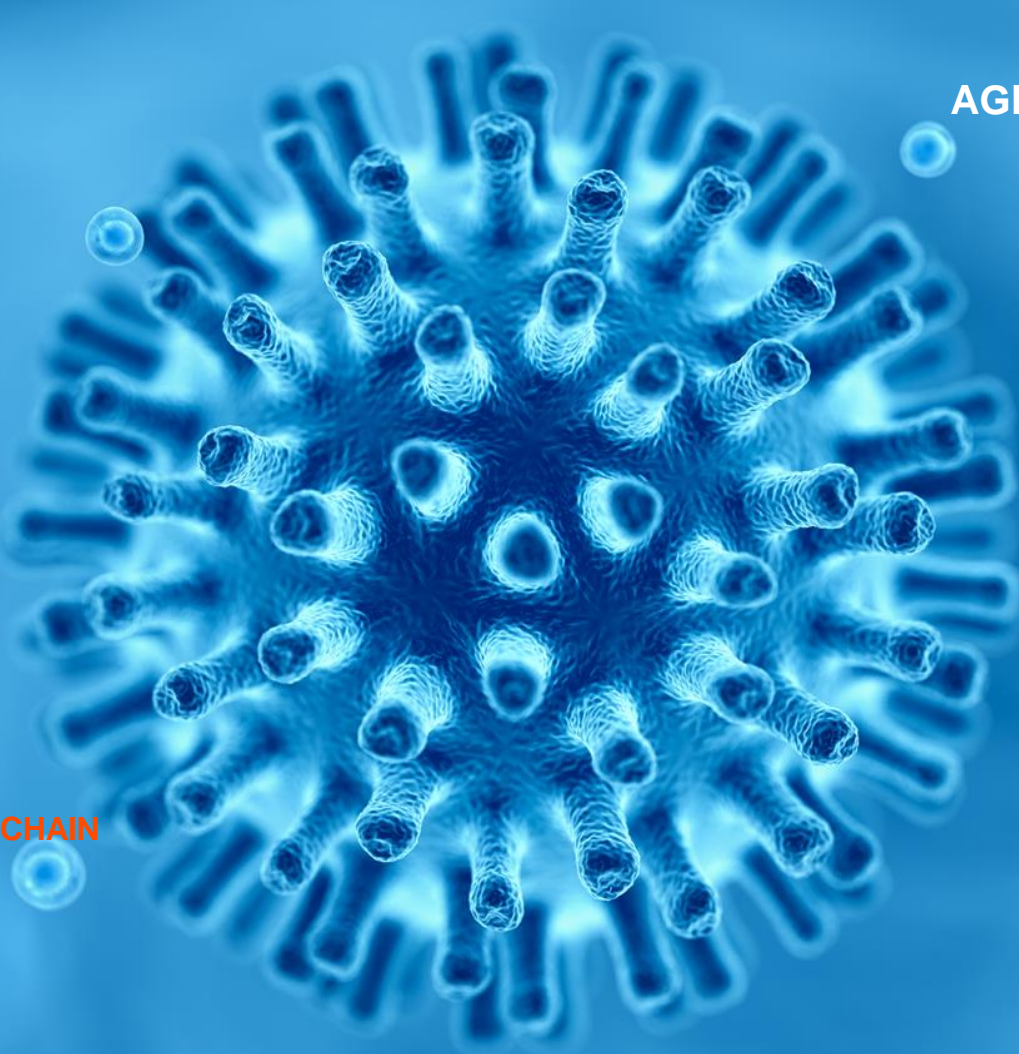
- Multimodal
- Challenges

4. **MANAGING AIR CARGO CLAIMS**

- Special Contract Terms
- Special Declaration of Value

5. **DIGITALISATION OF THE SUPPLY CHAIN**

6. **Q&A**

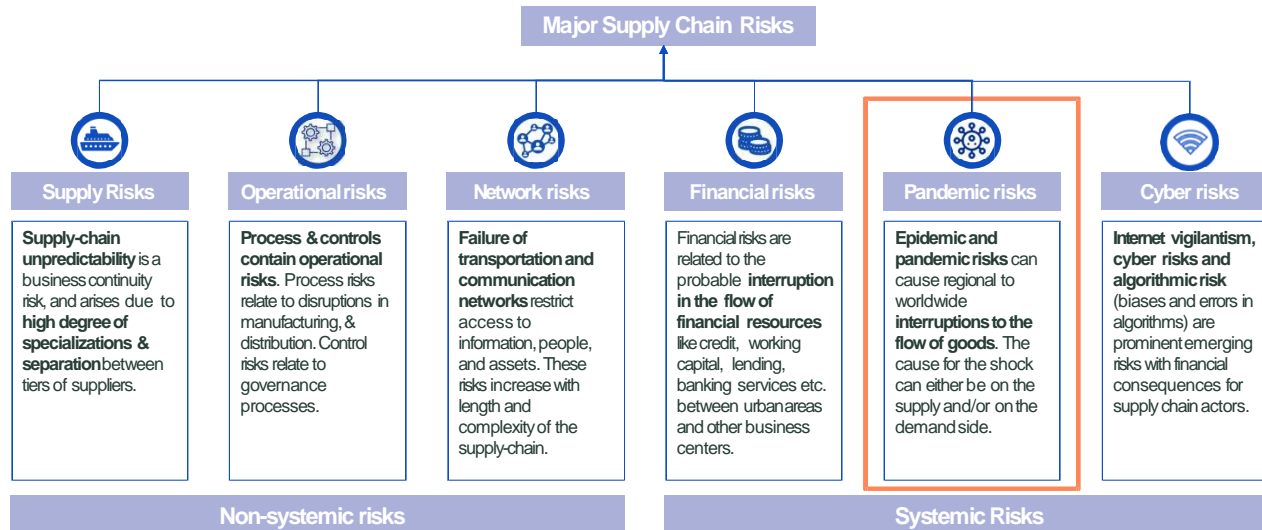




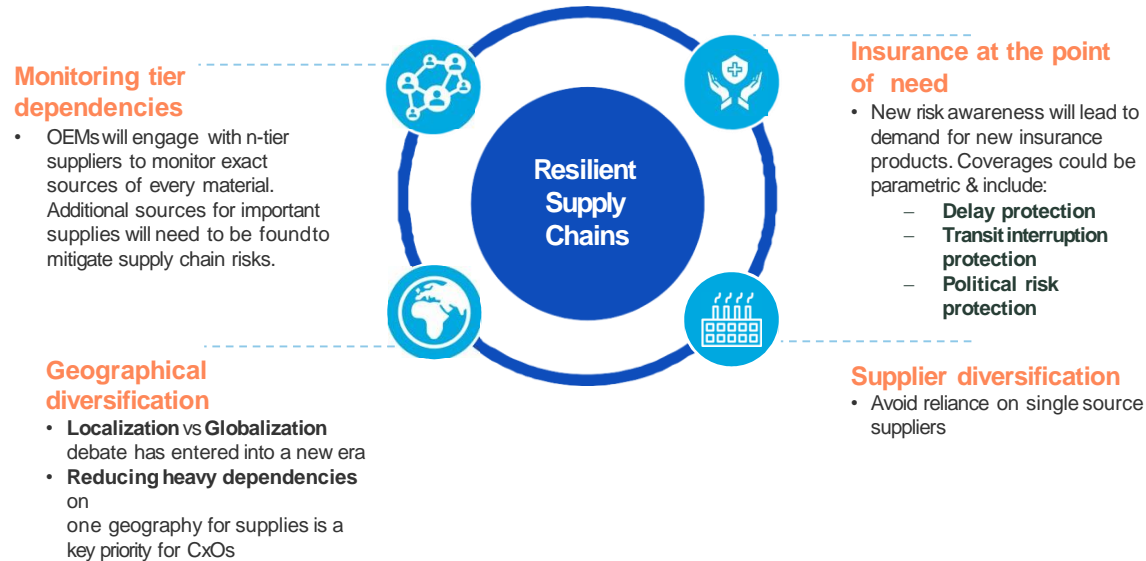
IMPACT ON THE SUPPLY CHAIN

— OVERVIEW

- Covid-19 pandemic risk in supply chain



- Post Covid-19 Supply Chain: Resilient Supply Chain Demand



IMPACT ON THE SUPPLY CHAIN

— FIGURES

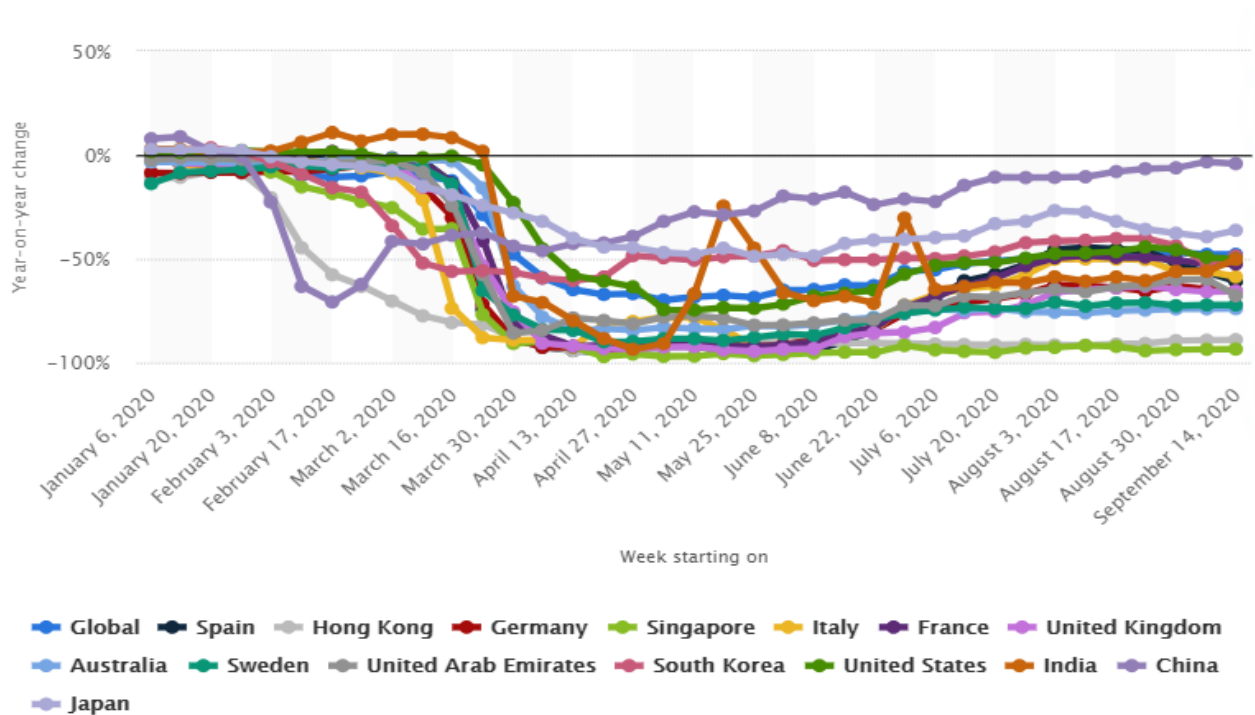


C-19 AND LOGISTICS SUPPLY CHAIN IMPACT OF COVID-19

- At the worst point, 90% of all passenger planes have been grounded
 - Drastic reduction in belly-haul capacity - only 20 per cent of belly cargo is still flying
 - Air cargo capacity worldwide has dropped by 35% (but has since recovered)
 - Average rates increased by up to 3-4 times normal rate
 - Significant impact on ecommerce:
 - Amazon shipping times have tripled in the US (e.g., one-day deliveries are now three to four days)
 - Online retail categories experienced as much as a 74% year over year increase in sales during March 2020
-



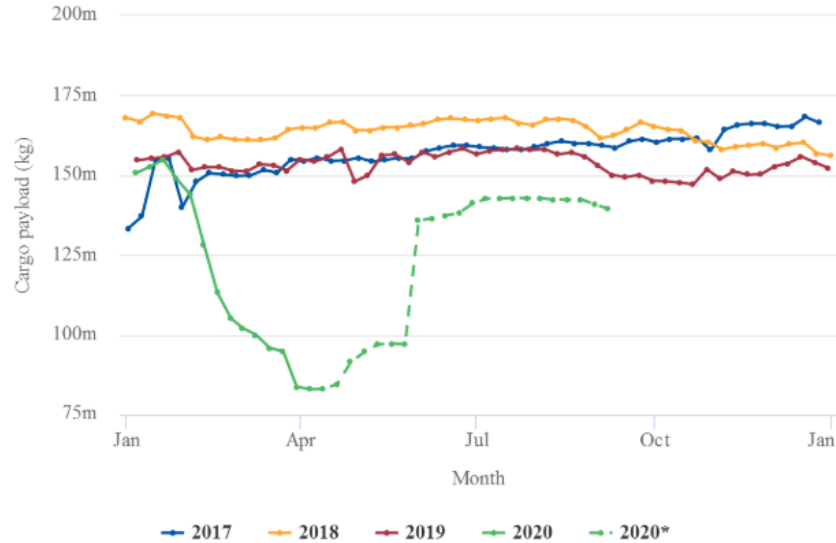
C-19 AND LOGISTICS SUPPLY CHAIN IMPACT OF COVID-19



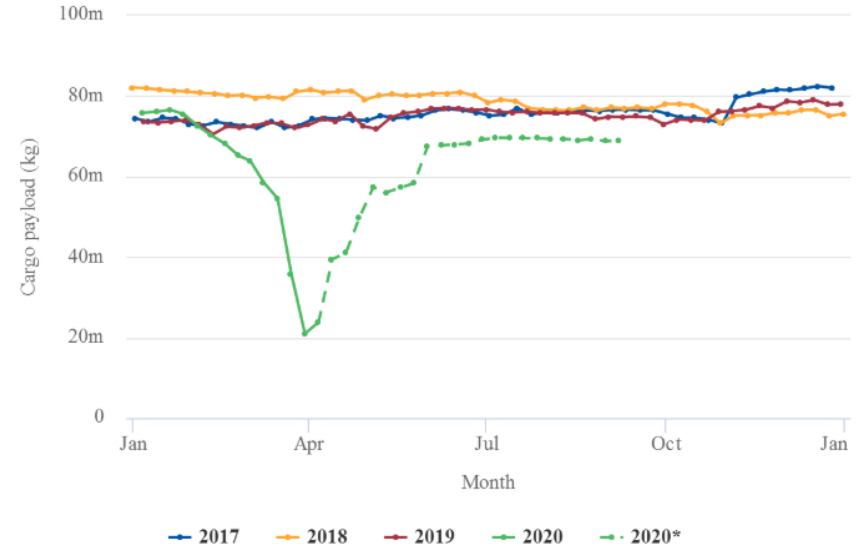


C-19 AND LOGISTICS SUPPLY CHAIN CAPACITY REDUCTION

Hong Kong International Airport weekly total cargo payload (kg) capacity: 2017 - 2020*



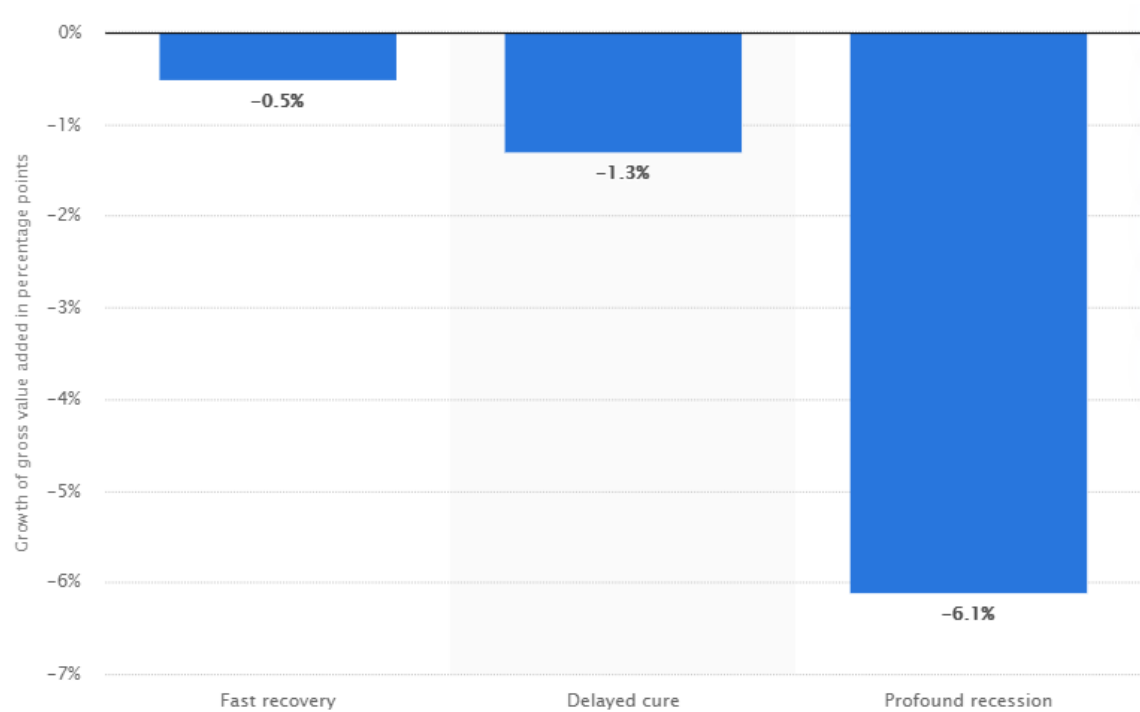
Singapore Changi Airport, weekly total cargo payload (kg) capacity: 2017 - 2020*



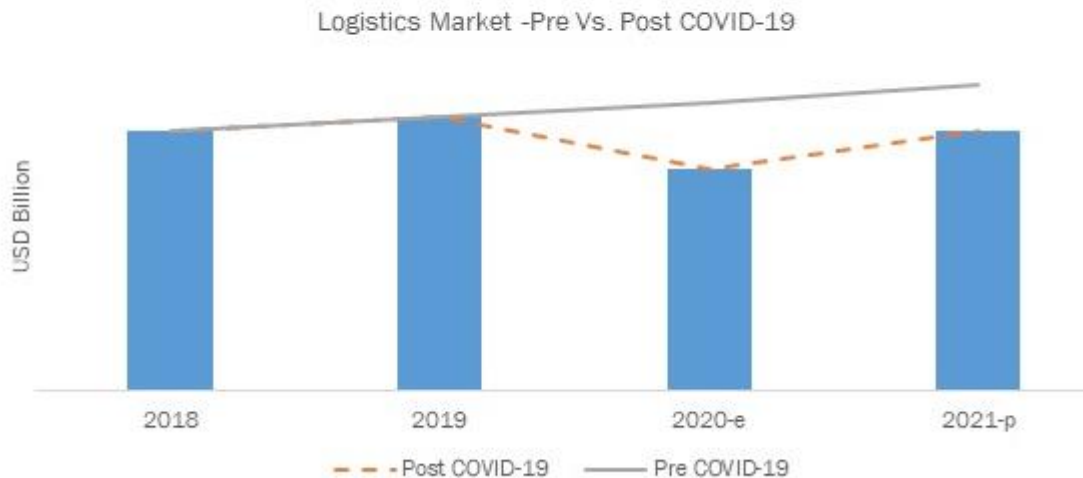
Source: CAPA - Centre for Aviation and OAG



C-19 AND LOGISTICS SUPPLY CHAIN IMPACT OF COVID-19



COVID-19 Impact on Logistics Market (Pre Vs. Post COVID-19 Analysis)



IMPACT ON THE SUPPLY CHAIN

— OUTBREAK



1

Supply

- Failure to supply ordered goods
- Factory closures
- Export bans
- Shortage of empty containers / warehouse space
- Blank sailings
- Significantly reduced capacity

2

Demand

- Failure to take delivery
- No shows
- Massive increase in demand for certain goods (e.g. PPE)
- Significant fall in demand for non-essential goods
- Import bans

3

People

- Employee shortages
- Restrictions on movements of people, particularly internationally
- Need to protect essential workers

4

Processes

- Documentary delays
- Quality issues
- Delays more generally with delivery and payment
- Solvency issues



C-19 AND LOGISTICS SUPPLY CHAIN OUTBREAK

The initial outbreak of COVID-19 brought into sharp focus the challenges and pressure points for the logistics supply chain:

- distribution of the personal protective equipment (PPE)
- product-quality issues at the point of manufacture
- constrained transportation capacity
- complex customs processes and regulations increasing the risk of delays
- warehousing challenges
- limited transparency regarding stock levels
- invocation of force majeure provisions

Will the same mistakes be repeated?

While the production and distribution of the vaccine will be significantly better organised and coordinated, global cooperation will be needed during a period where many countries are becoming increasingly insular in their outlook.



NOW IS THE TIME
TO PLAN



TRADELENS

**Maritime
Supply Chain**

DLT initiative led by Maersk & IBM aimed at digitizing the marine trade supply chain.

MOBI

**Automotive
Supply Chain**

Global alliance of automotive manufacturers, dealers & mobility service providers to simplify & standardize services across the auto supply-chain.

IBM Food Trust™

**Agri-Business
Supply Chain**

IBM industry platform solution to improve transparency and accountability in the food supply chain.

komgo

**Trade
Finance**

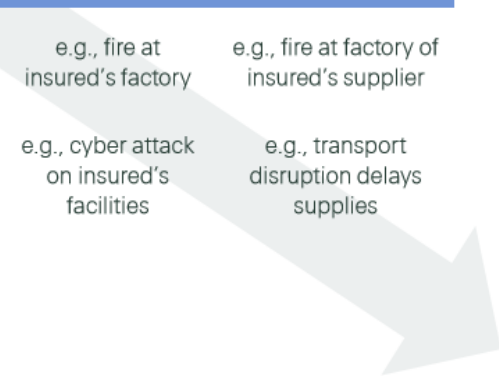
DLT powered commodity trade financing platform bringing speed, trust, security and cost savings in the post trade processing.

Digitizing the workflow in these industry verticals creates data at scale & marketplaces with critical mass. The result is business model innovation opportunities for several service industries including insurance.

PARAMETRIC INSURANCE & SUPPLY CHAIN INSURANCE WILL SURGE IN DEMAND

- **Parametric insurance** will become more appealing for evolving risks and can address the demand for more contactless interactions post Covid-19
- In the dramatically **changing global business environment**, **greater supply chain uncertainties** creates the need for **supply chain insurance solutions**.

	Business interruption (BI)	Contingent Business interruption (CBI)	
Physical damage	e.g., fire at insured's factory	e.g., fire at factory of insured's supplier	•
Non-physical damage	e.g., cyber attack on insured's facilities	e.g., transport disruption delays supplies	•



A blue-tinted photograph of laboratory glassware. In the foreground, three test tubes are visible, with a glass pipette positioned above them. The background is blurred, showing more laboratory equipment. The text "TRANSPORTING THE VACCINE" is overlaid in white, bold, sans-serif capital letters.

TRANSPORTING THE VACCINE



C-19 AND LOGISTICS SUPPLY CHAIN TRULY MULTIMODAL



APPROXIMATELY

15k

FLIGHTS, AND



200k

MOVEMENTS BY PALLET
SHIPPERS, AND



15m

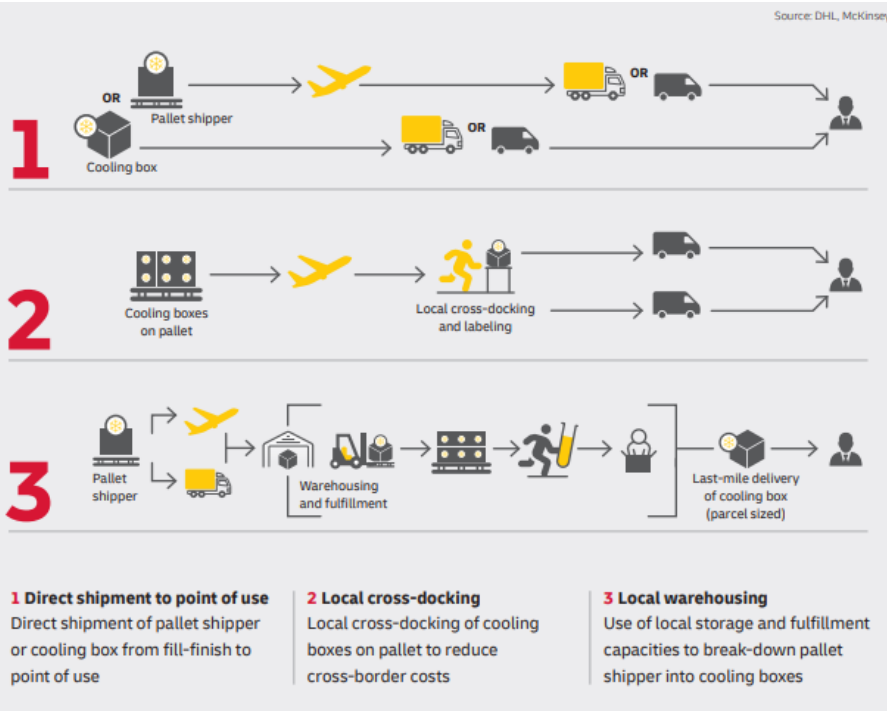
DELIVERIES IN COOLING BOXES
WOULD BE REQUIRED TO SHIP



10 billion

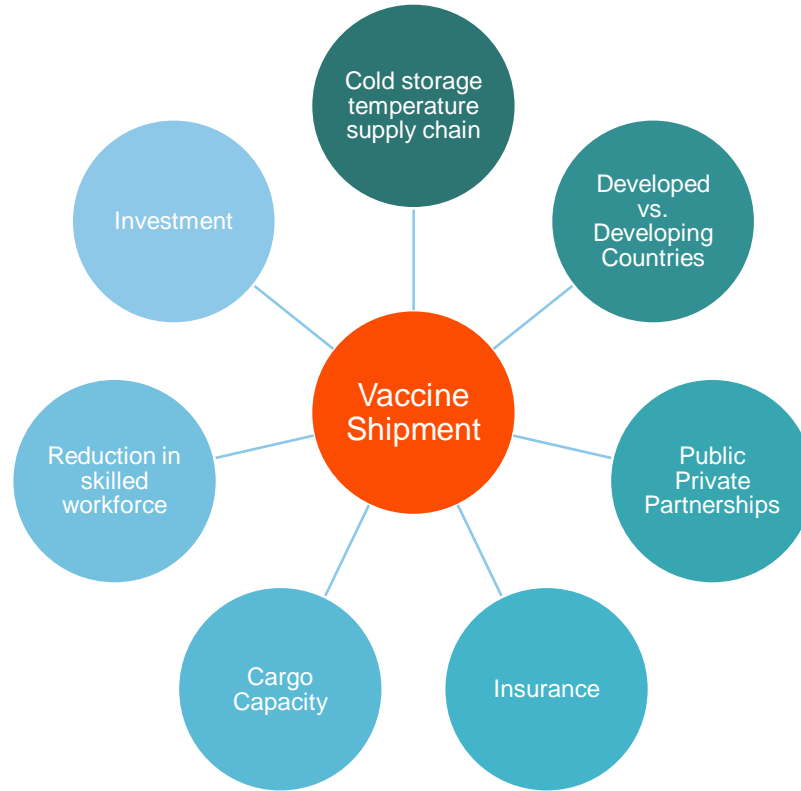
DOSES IN THE STRINGENT AND
CONVENTIONAL SCENARIO.

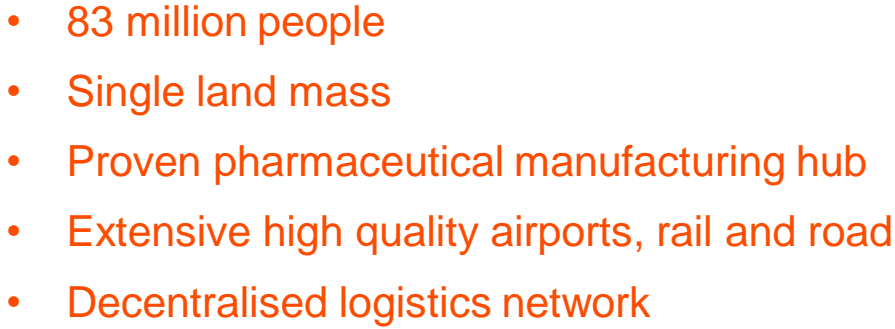
Source: DHL, McKinsey





- All modes of transport to be involved at some stage of the process
 - Temperature controlled supply chain needs investment
 - Not just a vaccine manufacturing and transportation issue:
 - Envirotainers
 - Dry ice
 - Ice blocks
-

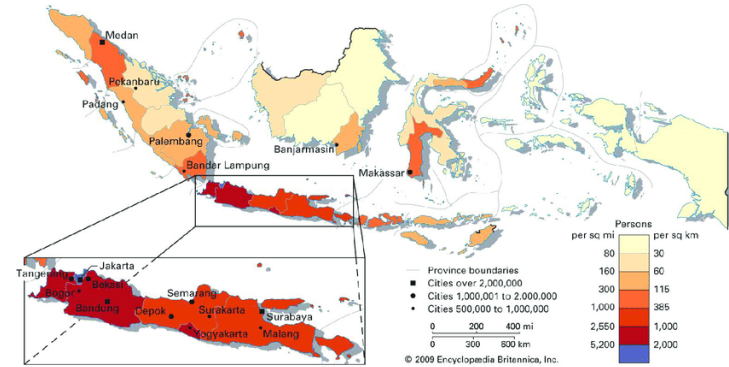


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- 273 million people
- Spread across 6,000 inhabited islands
- High ambient temperatures
- Centralised logistics hub on Java
- Informal logistics network
- Implementation of new technologies – drones / UAVs

C-19 AND LOGISTICS SUPPLY CHAIN CASE STUDY: INDONESIA



“Even if we assume that half the needed vaccines can be transported by land, the air cargo industry will still face significant challenges in planning their vaccine distribution programs, particularly in the event of a global health crisis. The careful consideration of the various logistical challenges involved in the distribution of vaccines remains a top priority. If borders remain closed, travel restrictions are in place, and the capacity to deliver life-saving vaccines will be very much compromised...”

IF THINGS GO WRONG – WILL
THIS LEAD TO CLAIMS AND
LITIGATION?

DIRECTOR GENERAL AND CEO, IATA, ALEXANDRE DE JUNIAC

A large commercial airplane engine is the central focus, with its dark, multi-bladed fan visible. In the foreground, several cargo pallets are stacked, wrapped in clear plastic and secured with black netting. The background shows a clear sky and a distant horizon with some greenery.

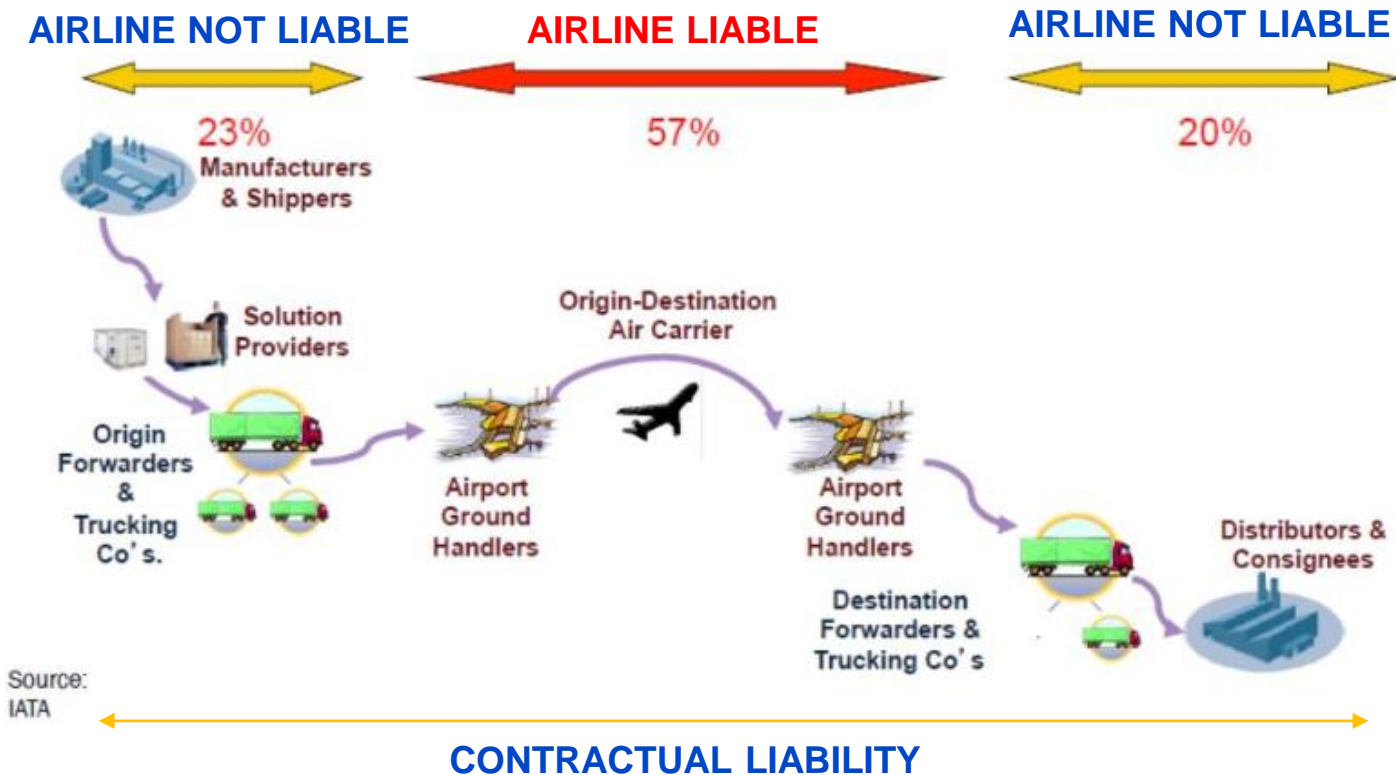
MANAGING AIR CARGO CLAIMS

- Causes of cargo claims include:
 - Bad handling practices
 - Inadequate procedures
 - Handling equipment failure
 - Staff carelessness
 - Employee dishonesty
 - Inadequate planning
 - Inadequate care and attention to specific instructions given by shippers
 - Failure to store at correct temperature



C-19 AND LOGISTICS SUPPLY CHAIN

CARGO CLAIMS - LIABILITY





THE BASIC POSITION:

- Montreal Convention 1999
- a carrier is liable for goods/cargo damaged during carriage by air subject to the limit of liability
- a carrier is also liable for delay to cargo
- limit of liability = 22 SDRs (approx. USD 30) per kilogram

HIGH RISK CARGOS:

- Medical equipment
 - Pharmaceuticals
-



C-19 AND LOGISTICS SUPPLY CHAIN SPECIAL DECLARATION OF VALUE

STATEMENT ON FACE OF THE AWB:

It is agreed that the goods described herein are accepted in apparent good order and condition (except as noted) for carriage SUBJECT TO THE CONDITIONS OF CONTRACT ON THE REVERSE HEREOF. ALL GOODS MAY BE CARRIED BY ANY OTHER MEANS INCLUDING ROAD OR ANY OTHER CARRIER UNLESS SPECIFIC CONTRARY INSTRUCTIONS ARE GIVEN HEREON BY THE SHIPPER, AND SHIPPER AGREES THAT THE SHIPMENT MAY BE CARRIED VIA INTERMEDIATE STOPPING PLACES WHICH THE CARRIER DEEMS APPROPRIATE. THE SHIPPER'S ATTENTION IS DRAWN TO THE NOTICE CONCERNING CARRIER'S LIMITATION OF LIABILITY. Shipper may increase such limitation of liability by declaring a higher value for carriage and paying a supplemental charge if required.



C-19 AND LOGISTICS SUPPLY CHAIN INSURANCE

HIGH VALUE SHIPMENTS

- Shipper or consignee often has to accept the limit of liability and bear the financial risk itself, or is required to purchase its own insurance
 - Cargo interest may request the airline accepts Special Declaration of Value
 - Coverage ?
-
- An opportunity for a new insurance product ?
-



C-19 AND LOGISTICS SUPPLY CHAIN BASIC ACTIONS TO PREVENT CLAIMS (1)

CARGO ACCEPTANCE PROCEDURES:

- Verification of weight and dimensions
 - Packaging and labelling
 - Check for apparent signs of damage – if damage detected either refuse to accept cargo or record nature of the damage on AWB
 - **Cargo tendered with activated "TIP-n-TELL" devices**
 - Check correct labelling of packages and that no old labels are still fixed to them
 - Verify correct completion of documentation
 - In particular check for any special handling requirements (can all intermediate airports and the destination airport comply with these?)
-



C-19 AND LOGISTICS SUPPLY CHAIN

BASIC ACTIONS TO PREVENT CLAIMS (2)

STORAGE:

- Improper storage of cargo produces a significant number of claims for damage/loss
 - All cargo requiring special handling (e.g. perishable goods, pharmaceuticals etc) must be stored at an appropriate location
 - In locations where there are extremes of temperature, to minimise exposure to claims for damage, procedures must be in place to ensure cargo is moved to an appropriate storage facility as soon as possible after arrival
 - Time logs/registers should be kept of the time cargo is both checked in and out of special (especially temperature controlled) storage facilities; continuous temperature records should be kept in respect of all temperature controlled storage facilities
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C-19 AND LOGISTICS SUPPLY CHAIN KEY TAKEAWAYS

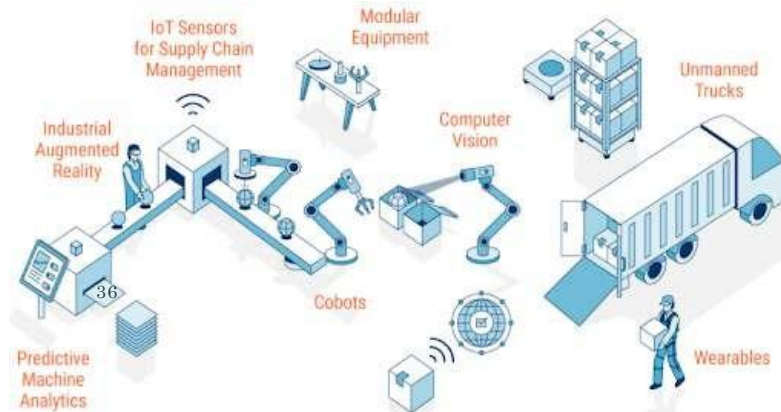
- MC99 - Limits of liability
 - Insurance arrangements
 - Understand the paperwork
 - Assess where weaknesses are in the supply chain
-



DIGITALISATION OF THE SUPPLY CHAIN

- Before Covid-19: More Global Supply Chain transformation was underway by applying new technologies

- ❑ **IoT devices & machine intelligence** drive new **insights** toward end to end visibility
- ❑ **Digital ecosystems** facilitate access to **digital twins** at points of need
- ❑ **DLT & confidential computing** enable **trust** among layers of **counterparties**
- ❑ **Parametric insurance & resilience/risk-mgt-as-a-service** create new ways to close the insurance protection gap

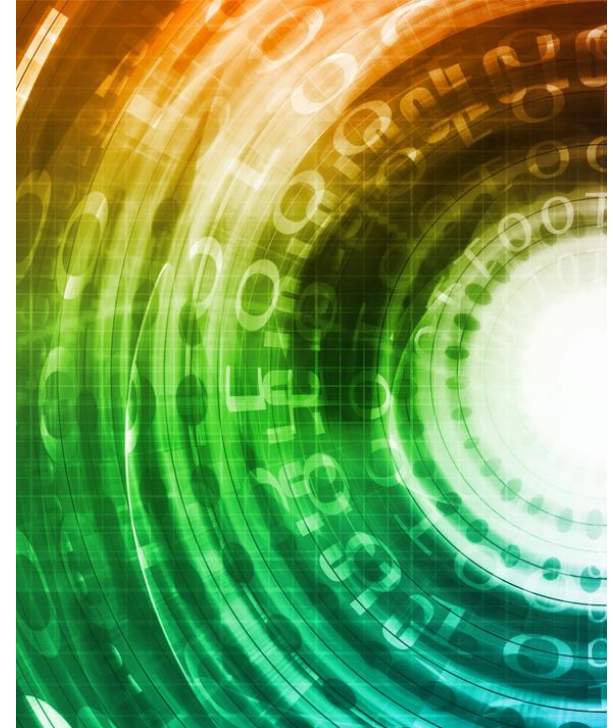




INCREASING GLOBAL SEGMENTATION CREATES MORE CHALLENGES WHERE TECHNOLOGY MAY BE BEST SUITED TO ADDRESS

- 1 Countries have different policy measures in pandemic containment, which creates divergence in economic & social results between advanced & emerging markets, and the East & West.
- 2 Prior to the pandemic, there were already signs that globalization had peaked due to the developing US-China trade war, rising global nationalism & populism
- 3 US-China trade war has no end in sight and is escalating. While decoupling the two countries is difficult, partial retreat from global value chains is a negative-sum game
- 4 Pandemic will accelerate parallel supply chains; more industries will relocate out of China, decreasing global cooperation and increasing regional cooperation
- 5 Strategic (high-tech) and national security productions (health and medical related production) will become more domestically concentrated

- **IoT is a combination and collaboration between the physical and digital worlds.** It is a system of interrelated computing devices, mechanical and digital machines, objects, animals or people that are provided with unique identifiers (UIDs) and the ability to transfer data over a network without requiring human-to-human or human-to-computer interaction.
- **Business value can be released through the IoT.** With the popularity of the IoT, companies are taking advantage of the huge business value that the IoT can provide. These benefits include: deriving data-driven insights from IoT data to help better manage the business, increasing productivity and efficiency of business operations, creating new business models and revenue streams, easily and seamlessly connecting the physical business world to the digital world to drive quick time to value.
- **Almost all industries can benefit from the IoT**, including manufacturing, automobiles, finance and insurance, transportation and logistics, retail, public sector, and healthcare.
- **The key to IoT applications** and the principal components of connected logistics systems are the supply chain monitoring, vehicle tracking, inventory management, safe transportation and automation of processes.





- **Distributed ledger is a database** that is consensually shared and synchronized across multiple sites, institutions, or geographies, accessible by multiple people.
- **DLT allows transactions to have public "witnesses"**. The participant at each node of the network can access the recordings shared across that network and can own an identical copy of it. Any changes or additions made to the ledger are reflected and copied to all participants in a matter of seconds or minutes.
- **DLT is making waves in several industries**, including supply chains of various commodities
- **DLT creates blockchain platform for supply chains**. Parties in a supply chain have historically had to wait days for physical documents to be generated and exchanged before the transfer of ownership of goods could take place. Blockchain digitalises and accelerates this process, making deal completion faster. As a result, goods can be shipped earlier, and storage charges and bank interest can be reduced.

- **Confidential Computing is a breakthrough technology which encrypts data in-use**—while it is being processed. Confidential Computing environments keep data encrypted in memory and elsewhere outside the central processing unit (CPU).
- **Major paradigm shift for data security in the cloud.** Global tech giants, cloud infrastructure organizations has formed the Confidential Computing Consortium(CCC), including Alibaba, ARM, Baidu, IBM, Intel, Google, Microsoft, Red Hat, Swisscom and Tencent.
- **Confidential computing and intelligence exhibited by machines, has many applications.** Programs are developed to perform specific tasks and a wide range of activities including medical diagnosis, electronic trading platforms, robot control, and remote sensing. AI has been used to develop and advance numerous fields and industries, including finance (insurance market), healthcare, education, transportation, and more.





C-19 AND LOGISTICS SUPPLY CHAIN

Q&A



AEROSPACE



COMMODITIES



CONSTRUCTION



ENERGY



INSURANCE



SHIPPING



THANK YOU FOR LISTENING

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