IATA
Air Cargo Operations Conference
29 – 31 October 2019, Amsterdam, Netherlands
IATA Air Cargo Operations Conference

29 – 31 October, Amsterdam, Netherlands
Opening Day 2

Brendan Sullivan
Head Cargo Operations & E-Commerce
IATA
Do not discuss:

- Pricing, including fares, service charges, commissions, etc.
- Bids on contracts or allocation of customers
- Geographic/Product market allocations and marketing plans, including
  - Expanding or withdrawing from markets
  - Group boycotts
  - Your commercial relations with agents, airlines or other third parties

Any discussion aimed at influencing the independent business decisions of your competitors

You will be asked to leave the meeting, and the meeting may be terminated, if the above-mentioned discussions occur.

Remember: All discussions count, even informal ones outside the meeting room!
Welcome Back for Day 2

Hendrik Leyssens
Vice President Global Operations Cargo
Swissport International
Keynote Presentation

Henrik Ambak
SVP, Cargo Operations Worldwide
Emirates
IATA Air Cargo Operations Conference
Amsterdam - 30 October 2019
Priorities of Air Cargo Operations?

1. Nobody gets killed or hurt
Priorities of Air Cargo Operations?

1. Nobody gets killed or hurt
2. No penalties or punishments
## OFAC Penalties 2019

<table>
<thead>
<tr>
<th>Date</th>
<th>Name (US Company unless stated)</th>
<th>Fine in USD</th>
</tr>
</thead>
<tbody>
<tr>
<td>17/09/2019</td>
<td>British Arab Commercial Bank plc (UK)</td>
<td>381,400,000</td>
</tr>
<tr>
<td>16/08/2019</td>
<td>Atradius Trade Credit Insurance, Inc.</td>
<td>590,282</td>
</tr>
<tr>
<td>06/08/2019</td>
<td>PACCAR Inc. (DAF Trucks – Netherlands)</td>
<td>2,713,214</td>
</tr>
<tr>
<td>13/06/2019</td>
<td>Cubasphere</td>
<td>112,000</td>
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<tr>
<td>13/06/2019</td>
<td>Expedia</td>
<td>556,250</td>
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<tr>
<td>13/06/2019</td>
<td>Hotel Beds (Spain)</td>
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<tr>
<td>07/06/2019</td>
<td>Western Union</td>
<td>637,614</td>
</tr>
<tr>
<td>02/05/2019</td>
<td>MID-SHIP Group</td>
<td>1,490,320</td>
</tr>
<tr>
<td>25/04/2019</td>
<td>Haverly Systems</td>
<td>125,000</td>
</tr>
<tr>
<td>15/04/2019</td>
<td>UniCredit Bank (Germany)</td>
<td>1,366,372,244</td>
</tr>
<tr>
<td>11/04/2019</td>
<td>Acteon Group (UK)</td>
<td>1,595,000</td>
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<td>09/04/2019</td>
<td>Standard Chartered Bank (UK)</td>
<td>2,715,100,479</td>
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<tr>
<td>27/03/2019</td>
<td>Stanley Black and Decker</td>
<td>3,461,378</td>
</tr>
<tr>
<td>21/02/2019</td>
<td>ZAG IP</td>
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<td>14/02/2019</td>
<td>AppliChem (Germany)</td>
<td>10,022,844</td>
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<tr>
<td>07/02/2019</td>
<td>KollMorgen</td>
<td>1,500,000</td>
</tr>
<tr>
<td>31/01/2019</td>
<td>e.l.f. Cosmetics</td>
<td>2,213,510</td>
</tr>
</tbody>
</table>

Year to date total: **$ 4,488,868,385**

$ 4.5 Billion in 9 months....
Priorities of Air Cargo Operations?

1. Nobody gets killed or hurt
2. Nothing is done wrongly
3. Customer is happy
Customer is happy

- Only number 3 on the list?
- Yes only number 3 on the list
Priorities of Air Cargo Operations?

1. Nobody gets killed or hurt
2. Nothing is done wrongly
3. Customer is happy
4. We spend as little money as possible
We spend as little money as possible

• Only number 4 on the list?

• Yes only number 4 on the list

• Cost savings typically out matched 1:10 or so by net revenue opportunity
  • Save USD 0.01 per kg by squeezing GHA into bad service or
  • Gain USD 0.10 per kg by providing a superior product managing the services delivered

• GHA’s typically selling themselves wrongly – all cost focus...
  • Who builds the fullest pallets? – Forwarders do...understand money
Priorities of Air Cargo Operations?

1. Nobody gets killed or hurt
2. Nothing is done wrongly
3. Customer is happy
4. We spend as little money as possible
Needed to be successful in Air Cargo Operations?

Passion...then the rest follows

Like Angel in BQN...
Staff Competencies
Today and Tomorrow

Brendan Sullivan
Head Cargo Operations & E-Commerce
IATA
People

Cargo competencies today and tomorrow
The Opportunity

2035

Air Cargo & PAX volumes expected to double
The Problem

The demand of skilled labor will be higher than the offer (all industries)*

Air Cargo & PAX volumes expected to double

*"The Global Talent Crunch", Korn Ferry Institute 2018
Already a challenge for air cargo today

33% of cargo industry members say that finding and retaining staff are their biggest challenge.

Source: IATA Global Training Market Assessment, 2018
Already a challenge for air cargo today

44% of ground services say that finding and retaining staff are their biggest challenge

Source: IATA Global Training Market Assessment, 2018
“The aviation cargo industry is quite traditional, particularly when it comes to rules and regulations, **making it a less attractive or exciting career prospect** when compared to other industries, such IT or Finance.”

**Li Wang**, Deputy General Manager of HR, Air China Cargo*

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*IATA Aviation Human Resources Report 2018*
## Cargo Build-Up Competency Training

The IATA Cargo Handling Council (CHC) strongly recommends that the following competencies related to activities and performance criteria be used in the training of personnel to comply with job requirements and needs.

The CHC has developed a competency matrix for the function of Cargo Build-Up which shall follow as a minimum:

### Table 1.6.A

<table>
<thead>
<tr>
<th>Training Contents</th>
<th>Functions</th>
<th>Level of Competency</th>
<th>Cargo Build-Up (SACL)</th>
<th>Source/References</th>
</tr>
</thead>
<tbody>
<tr>
<td>ULD Handling</td>
<td>x</td>
<td></td>
<td>x</td>
<td></td>
</tr>
<tr>
<td>ULD Loading</td>
<td>x</td>
<td></td>
<td>x</td>
<td></td>
</tr>
<tr>
<td>Aircraft Operations</td>
<td>x</td>
<td></td>
<td>x</td>
<td></td>
</tr>
</tbody>
</table>

### 1.2.2 Dangerous Goods Task List - Example

<table>
<thead>
<tr>
<th>Function: Personnel responsible for processing or accepting dangerous goods transportation or handling</th>
</tr>
</thead>
<tbody>
<tr>
<td>Knowledge Data</td>
</tr>
<tr>
<td>---------------------------------------------------------------</td>
</tr>
<tr>
<td>01.01 Recognizing dangerous goods</td>
</tr>
<tr>
<td>01.02 Identifying the hazard</td>
</tr>
<tr>
<td>01.03 Understanding the consequences</td>
</tr>
</tbody>
</table>

### Table 1.6.A

<table>
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</tbody>
</table>

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### What is Cargo Build-Up?

Cargo Build-Up is the process of preparing cargo for transportation, including the gathering, handling, and loading of cargo onto aircraft. It involves ensuring that all necessary documents and procedures are followed to ensure the safe and efficient transportation of cargo.

### Competencies

- **Recognizing & Classifying Dangerous Goods:**
  - Knowledge of dangerous goods classification systems.
  - Understanding the legal frameworks and regulations.

- **Preparation & Handling:**
  - Proficiency in proper loading techniques.
  - Compliance with safety and operational standards.

- **Communication & Coordination:**
  - Effective communication with stakeholders.
  - Coordination with ground handling and cargo operations.

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**IATA**

30 October 2019
Where do Technology Innovation, Operations and People intersect?
Six technology trends

- Augmented Reality & Wearables
- Robotics & Automated Systems
- IoT, Connected Cargo & Devices
- Drones & Autonomous Vehicles
- Big Data / Predictive / AI / Deep Learning
- Green, sustainable, net zero buildings
Augmented Reality in Air Cargo
Six technology trends in the warehouse
IATA’s Call to Action

Urgent need to

- invest in people
- promote diversity
- engage young talent

Future Air Cargo Executives program launched

2013
Our objective

Prepare young professionals to become the next generation of leaders of the air cargo industry
FACE priorities

The industry is no longer seen as attractive

Talent looking outside of air cargo for jobs

Other sectors perceived as more interesting & innovative

Awareness & Attraction

Retention & Development

Innovation & Creativity
<table>
<thead>
<tr>
<th>Initiative</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>FACE UP 2020 competition</td>
<td>Action Air Cargo</td>
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<tr>
<td>FACE Summit</td>
<td>Networking events</td>
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<td></td>
<td>FACE Cocktail</td>
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<td>Facebook community</td>
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<tr>
<td>Vision 2030 white paper</td>
<td>Peer mentorship</td>
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</tbody>
</table>
FACES
(Future Air Cargo Executives Summit)

- Annual summit during IATA’s World Cargo Symposium (WCS)
- Provides unique platform for young professionals under 36 to:
  - Interact with today’s leaders
  - Listen to and get inspired by their career path
  - Create a strong network with likeminded professionals
  - Exchange views on emerging trends and topics

Save the date for the next FACES in Istanbul - 9 March 2020
FACEbook Community

Platform for Alumni & aspiring FACE

- Discuss latest industry topics
- Share news and industry developments
- Be informed about FACE industry projects, upcoming events

www.facebook.com/groups/IATAFACES/
Provides recent graduates with the opportunity to present their thesis on innovation and transformation of the transport industry at WCS 2020

Finalists will win...
- Access to the World Cargo Symposium in Istanbul
- Invitation to FACES & FACE Cocktail
- Return flight to Istanbul and hotel accommodation

Submissions close on 17 January 2020
FACE initiatives at a glance

FACE UP 2020 competition

Action Air Cargo

FACE Summit

Networking events
FACE Cocktail
Facebook community

Peer mentorship

Vision 2030 white paper
Action Air Cargo

A network of young air cargo groups across the supply chain

Do you participate in a group? Reach out!
Everybody has a role to play.
Thank you

Brendan SULLIVAN
Head, E-Commerce & Cargo Operations
sullivanb@iata.org

FACE
Website
iata.org/FACE
Innovation and Digitization’s Influence on Personnel Competencies

Nadine Mücklich
Project Manager / Research Associate
Fraunhofer IML
Innovation and Digitization’s Influence on Personnel Competencies

Fraunhofer IML Aviation Logistics

30.11.2019
FRAUNHOFER GESELLSCHAFT
FRAUNHOFER IML = 100% LOGISTICS

More than 25,000 employees
72 institutes and research institutions
2.3 billion research volume

Fraunhofer IML, Dortmund

290 employees
250 post grad students and student assistants
30.7 million turnover, 50% of which from industry and commerce

Development investment and defence research
German federal and state government base funding
Contracts with industry and publicly financed research projects

Prof. Dr. Michael Henke
100% Management
Processes | Organisation

Prof. Dr. Dr. h. c. Michael ten Hompel
100% Technology
Hardware | Software

Prof. Dr. Uwe Clausen
100% Mobility
Humans | Goods

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Innovations: from concept to finished product

Concepts, studies and roadmaps

Demonstrators, proof of concept

Support through to market maturity
Fraunhofer IML - Aviation Logistics
Frankfurt, Germany

Aircraft
- (Dis-)Embarkation

Apron
- Passenger-transport
- Cargo-, Airmail- & Baggagehandling

Terminal
- Passenger-handling
- Baggage-handling
- Cargo-/Airmail-handling

Pre-/on carriage
- Passenger-transport
- Baggage-transport
- Cargo-/Airmail-transport

PAX
- (un-)loading & servicing

Luggage
- Ground-handling

Cargo
- Security, infrastructure, customs, IT, VAS, ...

Others
Aspects for choosing a future employer
Gen Z (from ~1996)

Source: Statista – Worldwide Survey
## Industrial Revolutions
### The Human-Machine Evolution

<table>
<thead>
<tr>
<th>1st Revolution</th>
<th>2nd Revolution</th>
<th>3rd Revolution</th>
<th>4th Revolution</th>
</tr>
</thead>
<tbody>
<tr>
<td>• Mechanization (Steam &amp; water power)</td>
<td>• Electrification &amp; development of mass production</td>
<td>• Digitalization (IT system development / automation of production / processes)</td>
<td>• Interconnection of Technology (IoT &amp; Cyber Physical Systems)</td>
</tr>
<tr>
<td>• Mechanics to support / move the human in production</td>
<td>• Machines already take over part of human tasks in production (e.g. assembly lines)</td>
<td>• Machines take over more part in production – full automation of production lines, but with human interference (e.g. problem solving)</td>
<td>• Automation &amp; Autonomization of processes and equipment</td>
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<tr>
<td></td>
<td>• No human involvement in the production process needed – monitoring &amp; control of machine</td>
<td></td>
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</tr>
<tr>
<td></td>
<td>• Implementation of human decisions</td>
<td></td>
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</tbody>
</table>
Human Factors – The SHELL Model

L = Liveware
S = Software
H = Hardware
E = Environment
Sustainability – a holistic approach
More than ‘just’ going green

- Definition of Sustainable Development
  - … development that meets the needs of the present without compromising the ability of future generations to meet their own needs.

- Limitation
  - … limitations imposed by the present state of technology and social organization on environmental resources and by the ability of the biosphere to absorb the effects of human activities. But technology and social organization can be both managed and improved to make way for a new era of economic growth.

Source: University of Alberta / UN Report on ‘Our Common Future: report of the World Commission on Environment and Development’
© Fraunhofer - Slide 52
We experience the dawn of AI

With the digitization of everything and artificial intelligence in everything, everything will change. This change will be irreversible. Our working environment will change substantially, requiring new staff competencies.
Artificial Intelligence and related Emerging Technologies

- Autonomous vehicles
- Internet of things
- 3D printing
- Drones
- Robots
- Augmented & virtual reality
- Blockchain
Predictive Analytics

DESKRIPTIV
- Rohdatensammlung
- Datenaufbereitung
- Standard Reports
- Individualisierte Reports
- Analyse und Visualisierung

PREDIKTIV
- Predictive Analytics/Machine Learning
- Vorschreibende Analytik
- Autonome Systeme

DIAGNOSE
- Warum ist es passiert?
- Was wird passieren?

PRESKRIPTIV
- Angepasste Handlung

Produktivität/ Effizienz/ Effektivität

Image: Fraunhofer IML
Picture of the Future

Current research along the process chain

Less drivers,
Central monitoring of autonomous vehicles,
remote control during irregularities

Monitoring & control of e.g. ULD build-up, baggage/cargo handling systems, resource needs, etc.
Augmented Reality in Air Cargo Handling
Implementation Strategy

1. Training
- Contour
- Pile factor
- Mixed-load prohibition
- Pallet weight and balance

2. Contour check
- Database for contours

3. Build-Up
- 3D scan of pieces
- Software
Scannen: Feder
AI and AR supported ULD Build-Up

Database
- Records:
  - Destination
  - Time
  - Properties

Camera Sensor with Artificial Intelligence
- Recognition of:
  - Shape
  - Hull geometry
  - Structure
  - Properties (hard/ flexible)
  - Weight
  - Condition
  - Content
  - Combinability

IK Puzzle
- ULD build up

HoloLens
- Tasks:
  - Identify parcels in open space
  - AR markings
Increased Ramp Efficiency
Smart ULD and Equipment Tracking

**Intelligent air cargo container:**
- monitors environmental influences
- locates itself independently (tracking)
- communicates with surrounding objects and control center
- regularly reports status, location and alarm data

**NB-IoT Equipment Tracking:**
- Low bandwidth and low throughput data transmission
  → Low energy consumption = long battery life
- Equipment Tracking via GSM Network
  → No extra infrastructure
Way to the Future
Industrial Apps to improve Handling

Ability to use these apps and exploit their functions
Ramp of the Future: Automated Baggage Handling concept

Ability to monitor the machine & processes

Interfere if necessary – initiation of processes
Ramp of the Future:
Automated Baggage Handling concept

Further challenges:
- Cargo Handling
- Special & Oversized Luggage
- Securing & Netting

Feed the system with knowledge and experience followed by machine learning.
Staff Competencies
Adapted training & people development

Development of adapted staff competencies through advanced training modes:

- VR/AR supported training tools
- Blended learning concepts
- Serious gaming
- Human factors training incl. the influence of the 'Dirty Dozen' in the new technological environment
- Increased IT skills training to educate all generations and adapt the level of knowledge to the skills needed

The human in the system must be accounted for in the development and implementation phase of innovations

- Knowing your workforce and how to integrate the human in a sustainable development
CONTACT

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Fraunhofer-IML – Aviation Logistics
Tel. +49 (0)69 668118-373
E-Mail nadine.muecklich@iml.fraunhofer.de
Networking break 10:30 – 11:00

Kindly sponsored by;

Viking
PACKING SPECIALIST

IATA
AIR CARGO
OPERATIONS
CONFERENCE

Amsterdam, Netherlands
29-31 October 2019
Industry Efficiencies

Bart Pouwels
Head of Cargo
Schiphol Airport

Arjan Van der Kraan
Documented Standards Manager
KLM Cargo

IATA
AIR CARGO OPERATIONS CONFERENCE
Amsterdam, Netherlands
29-31 October 2019
Industry Efficiencies

The pitch of this topic:

Speed is air cargo’s number one selling point, and we need to protect that speed.

We must link what the consumers want and what air cargo can deliver!

What can the industry do to minimize unnecessary stationary freight pre & post flight, or to make the reasons for these temporary events more transparent?
Rules and restrictions on trade and taxation, export compliance, product safety, counterfeit products, animal welfare, etc.

What Law Enforcement Authorities need to control and who they hold accountable for non-compliance

Enforcement of rules relating to trade and taxation is increasingly targeting the transporter i.s.o. the traders

What consumers want

What air cargo can deliver
SWOT Analysis in the IATA Cargo Strategy paper of last year showed

- The major **STRENGTH** is Speed

- Among the **WEAKNESSES** are
  - Lack of relationship with end-customer (shipper/consignee)
  - Lack of transparency & communication between stakeholders

- Among the **THREATS** are
  - Ground waiting times (clearance)
  - Trade Protectionism
  - Increased regulatory oversight  
    In itself not a THREAT, unless regulatory enforcement targets the incorrect parties.
Warsaw Convention 1929 + Montreal Convention 1999

**Shipper Responsibilities**

Art. 6: ...... to meet the formalities of customs, police and similar public authorities, shall deliver a document indicating the nature of the cargo.

Art. 10.1: The Shipper is responsible for the correctness of the particulars and statements relating to the cargo, ..... 

Art. 16.1: The shipper must furnish such information and such documents as are necessary to meet the formalities of customs, police and any other public authorities before the cargo can be delivered to the consignee.

**Airline Responsibilities**

Art. 6. This provision creates for the carrier no duty, obligation or liability resulting therefrom

Art. 16.2 The carrier is under no obligation to enquire into the correctness or sufficiency of such information or documents.
What consumers want

What air cargo can deliver

Defense mechanisms coming at the expense of SPEED
- Extensive front-door verifications and checks, ultimately before RCS
- Smart searches for hidden information and mis-declarations
- Catch discrepancies before the authorities do

What Law Enforcement Authorities need to control and who they hold accountable for non-compliance

Law Enforcement,
- Including criminal prosecution
- Of Airline & Airline individuals
- For mis-declaration of shipment details, which were fully known to the Shipper
The Industry MOP: the means to better collaboration in the supply chain
The Export Acceptance Process Visualised in Terms of the Industry MOP
The key to **minimize unnecessary stationary freight**

Is not in the first place found in
- increased pressure on the Ground Handling Suppliers and
- faster Ready-for-Carriage checks
- faster ULD breakdown at destination and shipment delivery

It is to be found in
- increased end-to-end reliability of shipment data
- collaborative information sharing between parties in the supply chain
- reduction of physical repeat-checks,
  by feeding reliable data into the data systems of the downstream actors
- co-creation of Safe and Secure Trade Lanes (SSTL) together with authorities
Bart Pouwels
Head of Cargo

Industry Efficiencies

Shaping Europe's smartest cargo hub at Amsterdam Airport
Challenges and opportunities in air cargo

**Market developments**

**Demand X3**

Global demand for air cargo is expected to more than triple towards 2050

- Share of belly cargo
- E-Commerce
- Market share of secondary EU hubs
- Digitization as enabler of growth
Innovations

Seamless flow

E-GPU

CT scans

Living labs
Innovations

- Self connecting bridge
- Flower boxes
- Turn around process
- SMART offices
E-commerce: Innovation or challenge?
Innovations
Smart Cargo Mainport Program
Thank you
Framework for Operational Efficiency

Chee Hong Tan
Chief Operating Officer
Hactl

Paul Cheng
General Manager Service Delivery
Hactl
IATA CARGO EVENTS
AMSTERDAM, NETHERLANDS 29 – 31 OCTOBER 2019
Together Shaping the Future
Our Story

... from 1976 to 2019
Hong Kong Air Cargo Terminals Limited (Hactl)

Over 40 years of experience

Independent with no conflict of interest

All frontline staff directly employed without outsourcing

Pioneer in fully integrated cargo management system since 1976
The Focus on one-stop service

Growing with our customers in the region for over 40 years

- Physical cargo handling
- Freighter ramp handling
- Air Cargo Documentation
- Crew Transportation
- Intermodal Services
Our Challenges ahead...
Challenging Operational Environment

- Manpower Shortage
- Huge and complex variation in requirements
- Huge variation in capabilities and practices
- 100% X-ray Screening (ICAO 2021)
- Manpower Shortage
Our Mission

• Improve Efficiency
• Enhance Customer Experience
Our Philosophy

Efficiency

Lean Mindset = Just In Time
- The Right Cargo
- At the Right Time
- In the Right Place
- In Good Conditions

Transport  Inventory  Movement  Waiting  Over-production  Over-processing  Defects

7 Wastes

Project Management
Industrial Engineering
Facility
Operation
Technology

Dedicated team with 8 members
Digital Initiatives

Over 50 projects delivered, > 150 headcount savings + quality improvements since 2013
Our Two Initiatives ...
Initiative 1: Challenges in Cargo Handling

- **Loose Cargo**
  - LCS – BSS (10,000)
  - LCS – CSS (3,500)

- **BUP**
  - ~ 1,200 Floor Goods (skid cargo) per day
  - No track and trace record

- **Floor Goods**
  - ~ 1,200 Floor Goods (skid cargo) per day
  - No track and trace record
Our Solution – COSAC-SmartLoc

» **Smart Forklift** equip with cameras and RFID reader

» Self-developed **indoor GPS**

» Instant **auto update** of location information
Our Solution

– Smart Cargo Locating

- Video display
Benefits from Smart Cargo Locating

» 20,000 hours saved per year
» Avoid human error in locating skid cargo
» Streamline process from cargo acceptance to cargo build-up
» Eliminating mishandling in daily operations
Recognition and Awards

Innovation and Technology Commission
The Government of the
Hong Kong Special Administrative Region

Innovate Jardines

Supply Chain Asia
Initiative 2: Aircraft Loading Process
Challenges – Paper & Time Consuming

» **Locating** the ULDs on ground and mapping with loading positions

» On-average **15 minutes** per freighter
Challenge – Frequent Changes

- Averaging 2 times of amendments per flight
- Printing new versions of load plan
- Communicating changes by use of walkie-talkie
- Unfavourable handling under adverse weather

Changes of 6 ULD positions within an hour

3:16 am

4:28 am
Our Solution – COSAC-eLoading

- QR code printed on ULD tags
- ULD and flight details
- Access and update information
Our Solution – COSAC-eLoading

» **Industrial grade** mobile device
» **Real time updating at anytime and anywhere**
» **Custom-made** mobile application
  » Cargo Mapping
  » ULD Towing
  » Lower Deck
  » Main Deck
  » Checking
  » Aircraft Loading
  » Checking after Loading
System Interface

COSAC-Plus

1. e-Loading Instructions
2. Progress Monitoring

Inter-connected

Ramp Mobile

1. ULD Chain Mapping
2. Flight Loading
3. Final Checking
Collaboration between Control office and Ramp staff

Verify airline instructions against COSAC-Plus

Real-time communication of updated load plan

Real-time monitoring of loading progress

Eliminate unnecessary travelling for loading instructions
Collaboration between towing and loading teams

Significantly reduce the time for ULD mapping

Inform frontline loading staff if ULDs are not ready at parking bay
» Double **verify** the ULD against the load plan

» **Real-time** update loading progress
Benefits from COSAC-eLoading

» **Paperless** load plan

» Simplify the communication among staff and **avoid** mistakes due to frequent changes of load plan

» Speed up aircraft loading operation by **24%**

» **Improve** aircraft safety
Our efficiency in Training...
COSAC-AR Training on ULD Serviceability

» Flexible training
» Stress free and self paced learning
Contour and Pallet Corner Checking
ULD Serviceability upon Acceptance

- Rivet checking
- Measuring tape
- Contour gauge
## Training Results and Analysis

![A2 Result Table]

### Items to be Checked

<table>
<thead>
<tr>
<th>Item Description</th>
<th>Result</th>
</tr>
</thead>
<tbody>
<tr>
<td>Wrong ULD Contour Measurement</td>
<td>X</td>
</tr>
<tr>
<td>ULD Out of Contour (3 positions)</td>
<td>X</td>
</tr>
<tr>
<td>Top Mirror: ULD Top In Damage Condition</td>
<td></td>
</tr>
<tr>
<td>Missing Rivet (Missing 2 Apart Less Than 12&quot;) Not Serviceable</td>
<td>X</td>
</tr>
<tr>
<td>Pallet Bowed (More than 2&quot;) Not Serviceable</td>
<td></td>
</tr>
<tr>
<td>Net Attachment Point Damaged</td>
<td></td>
</tr>
<tr>
<td>Corner Missing</td>
<td>X</td>
</tr>
<tr>
<td>Pallet Number Wrong</td>
<td></td>
</tr>
<tr>
<td>TSO Tag Missing</td>
<td></td>
</tr>
<tr>
<td>Double Stud not attached</td>
<td>X</td>
</tr>
<tr>
<td>Corner Rope Damaged</td>
<td></td>
</tr>
<tr>
<td>Net Damaged</td>
<td>X</td>
</tr>
<tr>
<td>Missing Tension Hook (Missing 2) Not Serviceable</td>
<td>X</td>
</tr>
</tbody>
</table>

[Image: A2 Result Table]

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*Image Credit: Hactl*
COSAC-VR Training for Aircraft Loading

- Custom-made VR system
- In-flight systems and handling
- Testing functions
Our Journey never ends …
Autonomous Guided Vehicles (AGV)

Forklift

Tractor
BUP Auto Contour Measurement

» Reduction of human errors
» Time efficient
» Identify blind spots
Thank You

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Paul Cheng
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Disclaimer:
Past performance is no guarantee of future results
Networking Lunch 12:30 – 14:00

Kindly sponsored by;
Aircraft Operating Limitations Compliance and Special Loads

Liao Zhi Yong
Manager, Cargo Business Process & Standards
IATA
Cargo Safety Strategy
Managing Safety Risk Across Air Cargo Supply Chain

Presentation:

Kester Meijer
Director Operational Integrity, Compliance & Safety Manager
KLM Cargo
The 5 Compliance Commitments
Integrated Security and Safety approach

Kester Meijer
Director Operational Integrity, Compliance & Safety, KLM Cargo
In a globalization and e-commerce context, shippers and business customers hold a higher standard for the air freight industry than before.
The world is in turmoil – the need for commitment
1 KNOW WHAT YOU TRANSPORT
Know what you transport – postal

- Inspection of Postal traffic is incidental at best
- Backtracking of small parcels is hardly possible
- Cooperation of companies is fragmented
Know what you transport – parcels as cargo

• Visual checks hampered by colored plastic

• Shipper – Consignee data hidden in consolidation

• Self Filing significantly limits effectiveness of Risk Profiling
Know what you transport

- Improper Packaging and mis-declaration
- Wrong handling exacerbates present risk
- Complacency is our enemy
The duty to investigate

Transit and the transport service providers – victims or facilitators?

Transport companies are the backbone of global supply chains, carrying our goods around the world. But should they be liable for compliance with export controls when often they are unaware of the true nature of the goods they are carrying, ask Gerard Kreijen and Martin Palmer with reference to recent Dutch enforcement actions.

The extensive scope of the applicable regulation in combination with the wilfulness criterion applied by the Dutch court, effectively resulted in a kind of strict liability for TSPs failing to obtain the required licence.
CATCH DISCREPANCIIES AS EARLY AS POSSIBLE
Automated DG Targeting
Additional Safety Measures

- Buildup App Mr Beam for weight and straps
- Focus on Export Acceptance
- Integrated Handling Manual according to MOP process
- Elevated Station Risk Mitigations:
  - loose delivery
  - 5th protocol
  - Universal procedures
- IATA DG Autocheck
The Export Acceptance Process Visualised in Terms of the Industry MOP
3 NO MEANS NO
Tone at the top, awareness and training
## Capacity building for Targeting and Holds

### Technology
- XCSN message deployment
- CGOACI tool improvements
- Compliance Approval Tool
- Go Paperless on AWB’s
- Entity screening
- Deepdive AI on alerts

### People
- Timely FWB/FHL entry prior to Dep
- Active Monitoring and Follow-up at Cargo Control Centers
- Alliances & Interline awareness
- Communicate Shipper & Forwarder duty to investigate
- Provide Pro-active customer feedback

### Concept of Operations
- Joint Regulatory Watch AFKL connected to corporate Legal, Safety, Security and to Partners
- Multi Layer risk barriers
- Pro-active approach upstream, origin, sales, customers
- Connect to innovative enforcement agencies
PREPARE
FOR CONTINUOUS CHANGE
Lack of equipment means some Dutch soldiers can’t patrol in Mali: AD

- Many armed forces movements
- Impacting France & The Netherlands regulatory context
- Impacting our partners as well
INTEGRATE & INNOVATE
Digital Challenges for supply chain stakeholders

• Data silo’s, gaps, incorrectness
• Unable to share data in a transparent, trusted manner
• Accountability, quality assurance, efficiency (value creation and waste) and chain integrity are under mounting pressure
• Transport service providers are increasingly accountable for what they ship
Innovate

Co-create a protocol for authentication throughout the supply chain

This trusted ecosystem agent will bridge the gap on trust in the air cargo market by enabling all parties in the supply chain to give and get relevant and compliant data.
FUTURE PROOF
Build for the future

1. No Poverty
2. Zero Hunger
3. Good Health and Well-being
4. Quality Education
5. Gender Equality
6. Clean Water and Sanitation
7. Affordable and Clean Energy
8. Decent Work and Economic Growth
9. Industry, Innovation, and Infrastructure
10. Reduced Inequalities
11. Sustainable Cities and Communities
12. Responsible Consumption and Production
13. Climate Action
14. Life Below Water
15. Life on Land
16. Peace, Justice, and Strong Institutions
17. Partnerships for the Goals

Sustainable Development Goals

freight made personal
The 5 Compliance Commitments

1. Know what you transport
2. Catch discrepancies as early as possible
3. No means NO
4. Prepare for continuous change
5. Integrate & Innovate
BE RESPONSIBLE

Take action!

THANK YOU
Cargo Safety Strategy
Managing Safety Risk Across Air Cargo Supply Chain

Moderator:
LIAO, Zhi Yong
Manager, Cargo Business Process & Standards
IATA

Panelists:
Kester Meijer, Director Operational Integrity, Compliance & Safety Manager, KLM Cargo
Robert Fordree, Executive Vice President Cargo, Menzies Aviation
Juerg Meier, Senior Vice President QSHE, Security & DG/HazMat, Kuehne & Nagel

Amsterdam, Netherlands
29-31 October 2019
Air Cargo Supply Chain Overview

Shipper

Cargo Handling Agent

Airline

Cargo Handling Agent

Consignee

Freight Forwarder

Ramp Handling Agent

Ramp Handling Agent

Freight Forwarder

IATA
Potential Cargo Safety Risks … (by Procedure)

Industry Master Operating Plan

1. BOOK & PLAN SHIPMENTS
2. PICK-UP FROM THE SHIPPER
3. RECEIVE FREIGHT AT FORWARDER BRANCH FACILITY
4. TRANSFER TO FORWARDER HUB
5. PREPARE EXPORT SHIPMENTS
6. TRANSFER SHIPMENT TO THE CARRIER DOMAIN
7. RECEIVE SHIPMENTS INTO THE CARRIER DOMAIN
8. ACCEPT SHIPMENTS AS READY FOR CARRIAGE
9. PREPARE CARGO FOR TRANSPORT
10. SEND SHIPMENTS TO THE FLIGHT
11. DISTRIBUTE INFORMATION
12. UNLOAD & DISPATCH SHIPMENT TO WAREHOUSE
13. CHECK-IN SHIPMENTS
14. ARRIVE SHIPMENTS
15. HANDOVER THE FREIGHT TO THE FORWARDER
16. ARRIVE SHIPMENT AT FORWARDER HUB
17. TRANSFER SHIPMENT TO FORWARDER BRANCH FACILITY
18. LOAD TRUCK AND PRODUCE RUN SHEET
19. DELIVER, OBTAIN PROOF OF DELIVERY (POD) & CONCLUDE CYCLE
Potential Cargo Safety Risks … (by Shipment Type)

Plywood box, 2,600 kg
Potential Cargo Safety Risks … (by Shipment Type)

5,000 kg
Potential Cargo Safety Risks … (by Shipment Type)
Potential Cargo Safety Risks … (by Shipment Type)

Bars, pipes, beams, etc. are much more dangerous than any DG transported by air.
Potential Cargo Safety Risks … (by Shipment Type)

Flatulence from 2,186 goats forced plane to make emergency landing after gas set off smoke alarms

- Smoke was later identified as the gas and manure of 2,166 goats on board
- The 747-400 freighter plane made the emergency landing in Bali Denpasar
- Flight SQ-7108 re-departed and reached Kuala Lumpur two hours later
- Singapore Airlines said the flatulence claims could not be confirmed

An aeroplane was forced to make an emergency landing after the gas of 2,166 animals was mistaken for smoke in the cargo hold.

The Singapore Airlines Boeing 747-400 freighter plane, which was en-route from Adelaide, Australia to Kuala Lumpur in Malaysia, was diverted to Bali Denpasar on October 28 following the urgent announcement.

Upon landing, emergency services boarded the aircraft - which was carrying four crew members and the flock of goats - however reported that there was no trace of fire, heat, or smoke.
Potential Cargo Safety Risks … (by Shipment Type)
Emergent Safety Risks for Future Air Cargo?
Occupational Health & Safety Risks in Cargo Operations
Are current regulations/standards sufficient?
Which IATA standards should be developed or improved?

What other activities can IATA do to improve overall Cargo Safety?
Thank you!

LIAO, Zhi Yong 廖志勇
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IATA APCS Cargo
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liaozy@iata.org | www.iata.org
Networking break 15:30 – 16:00

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[Logo]

IATA
AIR CARGO
OPERATIONS
CONFERENCE

Amsterdam, Netherlands
29-31 October 2019
Joint Session
Air Pharma and Air Cargo Operations
Presentation

Fabrice Panza
Cool Chain Project & GDP/QA Pharma Manager
Air France KLM Cargo
Joint Session
Air Pharma and Air Cargo Operations

Moderator:
Bart Pouwels
Head of Cargo
Amsterdam Airport Schiphol

Panelists:
Fabrice Panza, Cool Chain Project & GDP/QA Pharma Manager,
Air France KLM Cargo

Robert Fordree, Executive Vice President, Menzies Aviation

Julian Wann, Global Category Leader, Procurement Freight & Logistics,
AstraZeneca

Olivier Simonnot, Senior Manager Strategic Marketing, Sensitech EMEA

Dieter Sellner, Program Manager, DB Schenker
Day 2 Closing Remarks

Hendrik Leyssens
Vice President Global Operations Cargo
Swissport International
IATA CARGO EVENTS

6 – 8 October 2020
Manchester, UK

Save the date!
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