Chairman’s Remarks

Glyn Hughes
Global Head of Cargo
IATA
Thank you to our Host Airline and Gala Dinner Sponsor
## WCS 2019 Highlights

<table>
<thead>
<tr>
<th>Monday, 11 March 2019</th>
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<tbody>
<tr>
<td>08:30-17:30 Cargo IQ Board (by invitation only)</td>
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<tr>
<td>09:00-11:00 CTOC (by invitation only)</td>
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<tr>
<td>09:00-12:30 EPC Workshop (by invitation only)</td>
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<tr>
<td>09:00-12:30 Future Air Cargo Executive Summit (FACESS) (by invitation only)</td>
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<td>09:00-12:30 IATA/PIG</td>
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<tr>
<td>09:00-12:30 IATA/Cargo Development Forum by invitation only</td>
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<td>09:00-17:30 CAG (by invitation only)</td>
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<td>14:00-15:00 Cargo Products Workshop</td>
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<td>14:00-15:00 Labor</td>
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<td>14:00-16:00 IATA/PIG</td>
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<tr>
<td>14:00-16:00 IATA/Cargo Development Forum</td>
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<td>14:00-17:30 SMS</td>
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<td>14:00-17:30 CSR (by invitation only)</td>
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<table>
<thead>
<tr>
<th>Tuesday, 12 March 2019</th>
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<tbody>
<tr>
<td>10:00-10:50 Networking Break</td>
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<tr>
<td>11:00-12:00 Networking Break</td>
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<tr>
<td>12:00-13:00 Lunch</td>
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<td>13:30-14:15 Networking Break</td>
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<td>14:15-15:00 Networking Break</td>
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<td>15:00-16:00 Networking Break</td>
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<td>16:00-18:00 Networking Break</td>
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<table>
<thead>
<tr>
<th>Wednesday, 13 March 2019</th>
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<tbody>
<tr>
<td>09:00-12:30 Cargo Executive Summit (by invitation only)</td>
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### Key Figures

- **Executive Meetings:** 4
- **Industry Standard Setting Conferences and Subgroups:** 20+
- **Workshops:** 5
- **Tracks:** 12

**Location:** Marina Bay Sands – Singapore

**Dates:** 12 – 14 March 2019
“Innovation is the change that unlocks new value.”
Innovation Awards 2019

56 Submissions
22 Countries
Innovation Award Finalists

- Unilode Aviation Solutions
  Digital Transformation

- SITA, Safran & CHAMP
  Smart ULD

- Air New Zealand Cargo & AEROTUF
  Keep it cool with aeroTHERM ULD
Innovation Award Finalists

Air New Zealand Cargo & AEROTUF
EMPOWERING THE AVIATION INDUSTRY
KEEP IT COOL with AeroTHERM

Presented by Air New Zealand Cargo & AEROTUF
Innovation Award Finalists

SITA, Safran & CHAMP
Smart ULD - 智能ULD
Powered by Mobile App, IoT & Blockchain
移, 物联网, 区块链

Arnaud Brolly & Aurore Duhamel (SITA)
Lucas Fernandez (CHAMP)
Emmanuel Couturier (Safran Electronics & Defense)
SOLUTION: SMART ULD
Real-time visibility of...

...Ground activities
Digital handling

...Asset status
Location & condition

...Data & processes
Supply chain orchestration
CHALLENGES IN AIR CARGO

- Manual paperwork
- Poor tracking & monitoring
- Lack of collaboration

Leveraging new technologies to transform air cargo
THE TEAM!

Air cargo know-how

Global technology

Renowned manufacturer

Champ

SITA

Safran

航空货运专家

全球技术供应

知名制造商
SMART ULD
Ground activity visibility

Resource and task management
Digital documentation & checklist
Alerting, message/chat

Mobile application (Android, iPhone)
Operational system integration (API)

Full digitization of the ULD handling process on Mobile

Innovation
SMART ULD
Asset status visibility

Aero-compliant sensors (>3Yr battery life)
Alerting (Temperature, humidity, shock, geo-fencing)
Outdoor / indoor geolocation (GPS / BLE)

Leverage expanding IoT network
- Live in 200 airports
- Tracking in & beyond airports
- No additional infrastructure

Real-time visibility of ULD location and conditions

能见度为事物状态
户外/室内地理位置
SMART ULD
Event-driven Blockchain for the industry

Event sharing & automation
Single source of truth
• ULD chain of custody
• Alerting & disruption management
• Invoice and settlement automation
• Customs document digitization

Visibility of events across supply chains stakeholders
Take away！

Full digitization of the ULD handling process on mobile

Real-time visibility of ULD location and conditions

Single source of truth among supply chains stakeholders

1st aero-Blockchain forum kicked off this morning....!
Vote for us! 👍

Undi untuk kami! 👍

为他们投票! 👍

صوت لن! 👍

Votez pour nous! 👍

Wähle uns! 👍

Pilih kami! 👍

Bumoto para sa amin! 👍

Stem op ons! 👍

私たちに投票してください! 👍
Innovation Award Finalists

Unilode Aviation Solutions
Digital transformation by Unilode

Creating the world’s first fully digitised ULD fleet

IATA Air Cargo Innovation Award 2019
Thursday, 14th March 2019
Singapore
The Rationale
Unilode’s aims is to deliver enhanced value for the Air Cargo Industry

Key objectives for the solutions

Identification via barcodes/RFID

This is the current tracking black spot for shippers and freight forwarders

Identification via barcodes/RFID

Not just a new flavour but a better:

- Transparency
- Accuracy
- Safety/Security
- Traceability
- Efficiency

for the industry!

Shippers want to send goods to meet the deadline agreed with consignees and be able to react in event of issues

Freight forwarders have multiple sites off airport and build up a significant number of units (BUPs) in their warehouses

Common issues relating to ULDs and cargo

- Lost in transit
- Wrong positioning causes delays
- Exposed to wrong ambient condition (e.g. too hot)
- Damaged through mishandling
- Opened to remove cargo (theft)
- Unavailability of ULDs causes revenue loss
Challenge
Unilode was looking for best-in-class technology

Any solution should be able to meet 5 predefined criteria

1. Non-obstructive tag design
2. Compliant with regulations
3. Mobile APP – inflight monitoring
4. Multi-sensor capabilities
5. Non-proprietary/ Interoperability

“I looked around and could not find quite the car I dreamed of, so I decided to build it myself”

Ferdinand Porsche
The Solution
Unilode’s digitalisation programme is the industry’s first end-to-end solution

Transforming ULD management into a key value-driver for the industry

Smarten-up the “vehicle”

Containers

Pallets

Build the “highway”

Unilode MRO stations
GHAs facilities
Airport terminals
Freight forwarder facilities
Airlines facilities
Shipper facilities

Create interoperable reader infrastructure together with the key stakeholders!

Deliver the data

Co-develop the back-end system (‘data exchange platform’) that collects information in order to track & trace ULDs around the globe

Automate manual data capture processes (UCM, SCM, LUC, …)

Create operational excellence through process transparency and advanced data analytics.

Creating a new value proposition for the industry!
Translating key pre-requisites into solutions
Creating non-obstructing pallet and container tags

Bluetooth®-tag seamlessly integrates tracking into pallets & containers
Selected technology must fulfill highest compliance standards

Tagged ULDs identifiable, certified & tested against DO-160G, Section 21 (Categories H, M and P)

Unilode's intelligent ULDs are compliant with all regulations & clearly identifiable!

Uses two Lithium Thionyl Chloride ER 10450 batteries which comply with United Nations (UN) Transportation Regulations, ‘Recommendations on the transport of dangerous goods - manual of tests and criteria’, UN ST/SG/AC.10/11; and Underwriters Laboratory, ‘Lithium batteries’ UL1642; and IEC62133, Directive 2006/66/EC and ROHS 2002/95/EC.

Lithium Thionyl Chloride batteries contained in Equipment UN3091 PI970 Section II. Can be shipped by air in accordance with International Civil Aviation Organization (ICAO), 2017-2018 edition, Appendix II for International Air Transport Association (IATA) 58th edition. Section VI PI 970 (Batteries, contained in equipment). Unrestricted, no label or declaration required.

FCC / CE / CSA / UL / EN / IC / Bluetooth / DO-160G Edition 2; Categories H, M and P
Mobile App allows for full shipment control

Accuracy, instant visibility, in-flight alerts – and you already own the reader

A flexible reader network is important to provide global asset visibility, eliminating manual and laborious SCM messages by GHAs. Unilode’s solution enables mobile phone reading, even during flight, and provides you with all the data you need.

Special cargo monitoring is important at all times during the journey. Mobile phones can detect Unilode tags in flight via BLE and send data to the ground via onboard WiFi, so ground and flight crews can be instantly alerted if necessary. Alternatively, a BLE 5.0 reader installed in the aircraft hold can detect tags and send data to ground via the aircraft’s communication hub.
Unilode’s technology is the only feature-rich, scalable, sensor solution

Bluetooth® 5.0 paired with multi-sensor technology

- End-to-end IT integration
- Web-front end
- Geo-location
- Temperature
- Humidity
- Light-Sensor
- Shock-Sensor
- Alert-function
- Smart-phone app
Unilode believes in a non-proprietary infrastructure

The use of standard BLE protocols enables the use of any reader infrastructure
The Use Cases
Unilode’s Digital Solution allows partners to grow their business

Sensor data will create end-to-end transparency for the air cargo supply chain

Unilode’s modern sensor technology may help you to gain better control over your most critical shipments!

Location  Temperature  Humidity  Light  Shock  Alerts

Unilode’s modern sensor technology may help you to gain better control over your most critical shipments!

Flowers  Pharmaceuticals  Perishables  Valuables & Fragile  Baggage  Quality
Use-case: End-to-end monitoring of special cargo

Sensor data creates end-to-end transparency for the air cargo supply chain

Stay in control!

Receive alerts for corrective action!
Building the infrastructure
In 2019 Unilode will build a unique digital infrastructure

Creating end-to-end visibility of our ULD fleet

In 2019 Unilode will:

- Equip 40,000 ULDs of its fleet with Bluetooth® tags
- Establish a reader infrastructure at 40 airports
- Offer a ULD track & trace portal to its customers

During Phase 2 Unilode will:

- Increase the number of Bluetooth® tagged ULDs to 90,000
- Make Bluetooth® reader infrastructure available at more than 100 airports
- Automate ULD control messages

By the end of Phase 3:

- 100% of the Unilode ULD fleet will be Bluetooth®-tagged
- Bluetooth® reader infrastructure will be implemented at more than 254 airports
- Full set of digital value-add features will be available
Innovation Awards Voting

I vote for...

Please select an answer:

- Air New Zealand Cargo & AEROTUF
- SITA, Safran & CHAMP
- Unilode Aviation Solutions

Finish
Innovation Awards 2019: Let’s hear from the judges

Moderator
Glyn Hughes, Global Head of Cargo, IATA

Panelists
Noor Adan, Supply Chain Coordinator, Universal Postal Union
Serene Ho, Director, Networked Trade Platform (NTP) Office, Singapore Customs
Darryl Judd, Chief Operating Officer, Logistics Executive Group
Innovation Awards Jury Panel

Noor Adan
Coordinator Supply Chain, Universal Postal Union

Puay Guan Goh
Associate Professor, National University of Singapore

Holger Bürskens
Partner - Arnecke Sibeth

Serene Ho
Director, National Trade Platform (NTP) Office, Singapore Customs

Liana Coyne
Chief Operating Officer, Coyne Airways Ltd

Darryl Judd
Chief Operating Officer - Logistics Executive Group

Wendy Eitan
Coordinator e-Commerce & Physical Services, Universal Postal Union (UPU)

Bernd Maresch
Owner, MARESCH Ltd.

Wolfgang Lehmacher
Senior supply chain executive, consultant and entrepreneur

MARINA BAY SANDS – SINGAPORE
12 – 14 March 2019
Don’t forget to vote!

I vote for...

Please select an answer:

- Air New Zealand Cargo & AEROTUF
- SITA, Safran & CHAMP
- Unilode Aviation Solutions

Finish
Why is innovation the essence of humanity?

Jerome Thil
VP Digital Innovation
Singapore Airlines
World Cargo Symposium

“Why is Innovation the essence of humanity”

Jerome Thil
Program-Based Framework

Our People

- Digital Idea Submitter
- Project Team
- Pilot Team
- Squad

Our Partners

- Education
- Ideation
- Prototype
- Proof of Concept
- App Challenge Finale
- Acceleration
- Incubation
- Go To Market
KrisPay

Lifestyle app that engages customers beyond flight

Technology Applied
SIA’s Loyalty Marketing and Revenue Generation & Customer Experience teams worked with KPMG Digital Village and Microsoft to commission an SIA-owned private blockchain platform to support the digital wallet.

KrisPay was launched six months after it was first conceptualised.

Value
Customers:
Enhances customers’ experience as KrisFlyer members can now use their miles for everyday spend instantly, from as low as 15 miles at partner merchants

Business:
Transparent and secure transactions which eliminate reconciliation efforts. It also reduces infrastructure and implementation costs.
Training for Cargo Loading

- **Simulate environment and any item to scale**
  - Experience in accessing and maneuvering around objects

- **Accurate strap placements and movement**
  - Build muscle memory in strapping at correct angles

- **Accurate strap placements and movement**
  - Instant validation and reassurance to build confidence

Physical Training in a risk-free environment
PROBLEM: Training is the answer- but it's currently limited:

Theory Based + Wooden Replica

- Limited to only 1 main deck pallet
- Does not accurately represent aircraft components/straps/restraints
- Does not take into consideration other items which are already loaded

Unable to train in actual environment
- Lack of heavy cargo
- Lack of aircraft ground time for training → Costly and limit aircraft utilisation

= Limited exposure to real world scenarios
Thank you
SIAdigitalinnovation.com
WCS Social Media Awards

Be social @WCS
#IATAWCS

7.8 million Tweet impressions in 2018
Launch of FACE-UP! 2020
The air cargo career competition

Glyn Hughes
Global Head of Cargo
IATA
FACE-UP! 2019 Finalists
The Winner of the 2019 Innovation Awards…

Glyn Hughes
Global Head of Cargo
IATA
Where next?

Glyn Hughes
Global Head of Cargo
IATA
IATA WORLD CARGO SYMPOSIUM

Istanbul, Turkey
10-12 March 2020
SAVE THE DATE