Digital Cargo Track
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Chairman’s Welcome Address and Opening Remarks

Seng Thiam Khoo
Senior Vice President Cargo Services
SATS
DIGITAL CARGO
Opening Address by Khoo Seng Thiam
Senior Vice President, Cargo
SATS Ltd
What do the trends mean to us?

INDUSTRY

World Air Cargo Traffic will DOUBLE Over the next 20 years

CUSTOMERS

7/10

Shipper’s satisfaction*

Source: IATA Cargo Strategy (July 2017)

What are customers looking for?

Reliability  Transparency  Speed

USD 1.12 Trillion in 2022

Focus on Temperature Sensitive products

Global Biopharma Sales Trend 2013 - 2019 ($ Billions)

Source: Based on 2015 Forecasts by IMS Health and Evaluate Pharma

Boom in the eCommerce Industry

Source: Retail Indicators Growth, U.S. Census Bureau

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Is air freight lagging behind ocean on digital connectivity?

Air freight is behind on all touchpoints when it comes to digitalization

Source: Data from Digital Carrier Benchmark - FreightOS
Evolution of Digital Connectivity in Cargo

How do we achieve interaction between players in the Community?
What are the barriers to a more integrated data ecosystem for airfreight?

- Airfreight industry is fragmented
- Lack of a common accepted standard
- Legacy systems still being used today at cargo airlines
- Higher focus placed by airline on passengers business
- Higher focus placed by airline on passengers business
What’s next for the industry beyond data sharing

**DATA ANALYTICS**
- Predictive analytics means better preparedness
- Drives yield and improves productivity/efficiency

**GREATER COLLABORATIONS**
- Competes and complements eCommerce multi-modal model
- Lower cost across the industry – eliminates resource wastages due to duplications

- Ability to simulate and optimize cargo business
- Embracing and leveraging technology disruptions
- Adapting to the changing cargo profiles in the industry

Cost & Benefits
Connecting Business Globally

Transforming the Air Cargo Industry
Common Platform, Greater Connectivity, Real-time Tracking
Thank you
IATA One Record: The Next Milestone for Airfreight Data Sharing

Henk Mulder
Head of Digital Cargo
IATA
A powerful legacy
Industry 4.0
An end-to-end digital logistics and transport supply chain where data is easily and transparently exchanged in a digital ecosystem of air cargo stakeholders, communities and data platforms.
ONE Record

But what exactly is it?
Network

Direct connectivity between supply chain partners
Linked data

Access data at source

“Everything is a URL”
Ontology

Freight as a language

Rather than a rigid data model
API

Universal connectivity

Web standard
Security

Internet of Logistics

We know who you are!
New standards

Ensure global compatibility

Facilitate innovation
Design of ONE Record

~60 representatives from transport and logistics
Hackathon

A new generation of experts

Urgency as a challenge
Not just air

Our customers need digitalization of all modes

Multi model extension of ONE Record with the European Union
Community driven

ONE Record is a global conversation
ONE Record pilots

Mini logistic chains

Test, improve and expand
Apps & modules

Sharing to grow

A new market place
Key enablers

Digitalization is not a nice to have

We need IT solution providers; old and new
Industry 4.0
Technology Driven Digitalization of Air Cargo: The Role of the IT Solutions Provider

Moderator:
- Sandeep Fernandes, Head of Cargo, Accelya

Panelists:
- Jos Nuijten, Vice President, Network Integration Strategy, Descartes
- Ashok Rajan, Senior VP & Head, Cargo & Logistics Solutions, IBS Software
- Christopher Shawdon, Head of Business Development, CHAMP

Slido.com
Code: F426
Networking Break

10:30 to 11:15 in Roselle Simpor Ballroom

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An OSI Systems Company
Digital Cargo Track
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API’s: The Key to Digital Transformation?

Boris Hueske
Head of Digital Transformation
Lufthansa Cargo
APIs: The key to digital transformation?

IATA World Cargo Symposium
March 13th, 2019
APIs are everywhere – it is API economy

Source: developers.google.com; developers.facebook.com; developer.ebay.com; February 2019; http://www.travelotas.com/services/xml-api-integration/
Also faxes can be sent through API

Programmable Fax

API for sending and receiving faxes between your application and a fax machine.
APIs enable next level data exchange

- extend customer reach
- offer digital services
- integrate in stakeholder processes
- stimulate innovation
- enable new business models
EDI and API automate system to system communication

- Asynchronous data exchange
- Industry-standards-based
- Complex to consume and in implementation

- Synchronous transactions
- Based on technology standards
- Simple to consume, easy to develop
Let us watch out for the opportunities of the digital world
APIs offer opportunities for airfreight to speed up and enrich information flow

- real time data
- new data
- new services
Lufthansa Cargo offers APIs for real-time data exchange on top of EDI messaging – now also smartBooking

Public APIs:
- Shipment Tracking
- getRoute
- getCapacity

Private APIs:
- getRates
- smartBooking

Source: cargo.one

https://developer.lufthansa.com
APIs are a key element for digital transformation of airfreight

- build API capability
- use and extend standards
- start fast with small steps
A Cargo App for Everything?

Brian Collins
Chief Technology Officer
Accelya
A cargo app for everything

IATA WCS 2019
Brian Collins, CTO, Accelya
Building cargo apps that deliver real value and unlock rich datasets while traversing the complex cargo ecosystem leveraging flexible APIs
Shifting Focus to the Customer Experience

1900
Assembly Lines

1960
Supply Chains

1990
Automation

2010
Experience & Engagement

**Age of Manufacturing**
Mass manufacturing makes industrial powerhouses successful

**Age of Distribution**
Global connections and transportation systems make distribution key

**Age of Information**
Connected PCs and supply chains mean those that control information flow dominate

**Age of Customer**
Empowered buyers demand a new level of customer obsession

Source: Forrester Research
Existing Cargo Ecosystem
How do we bridge the gap?

Flexible APIs

Command & Control

Existing Cargo Ecosystem

Leveraging Existing Assets

Business Value $$$
Securing the future of Air Cargo in an ‘Apps’ world

The current situation

Complex, fragmented, silo-ed IT landscape with legacy at its core and minimal collaboration resulting in:

1. Business exposure from elongated cycle times in addressing dynamically changing business needs & plans
2. Lack of a coherent view of operations; limited, manual intensive planning, monitoring & control
3. Reliance on paper based processes; Poor data quality from re-entry
4. Data access limitations and lack of proactive real time decision
5. Complex integration challenges
6. Limited focus on UX leading to a higher training costs
7. High cost of maintenance & change

Interoperability Outcomes

Business Benefits:
1. Reduce time and risk for the introduction and delivery of new additional ancillary services
2. Increase process automation delivering higher capacity with higher operational leverage
3. Reduce the time taken to integrate new airlines (and their ecosystem) into the enterprise
4. Reduce time taken to establish new partnerships for new business models and ventures

IT Transformation benefits:
1. Flexible applications enabling agile and accelerated business support
2. Reduced internal and external systems integration time and costs
3. Integrated with existing new gen technology landscape and interoperate with phased transformation onto non legacy technology platforms

“Digital Cargo Platforms will enable the rapid integration of internal and external services and service providers to fulfil the single commitment of an organisation’s brand to its customers.”
A User-centric Approach for App Design

1 Inspiration
2 Shopping
3 Booking
4 Handling & Logistics
5 Post Service

Unmet desires
Paint points
Delight Factors
Opportunities

Cargo App for Everything
Digital Cargo Platform: Product Framework

APIs
- Business
- Event
- Self Service

Flexible Implementation
- Workflow
- Implementation Services

Data Management
- Transactional

System Statistics

Connectivity & Integration
- Business Rules
- Reference Data
- 3rd Party Reference Data

Public APIs

Rules enabled APIs
Digital Cargo Platform: UI SDK

- Accelya Themes & Styling
- Screen templates
- Responsive support (Mobile, Tablets, Desktops)
- VISUAL COMPONENTS
- MODELS
- ASSETS (FONT & ICONS)
- VALIDATION
- Plugins: Camera, FCM, Others...
- Life cycle Support: Localization/Internationalization
- Services: IAM, Localization, Configuration, Others...
- Data Binding & Routing
- Tooling: Build, Quick Start, AOT, Unit Testing

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Accelya’s Data & Analytics Platform (ADAP)

Data Storage Layer
- RDBMS
- Files
- Internal
- Cargo
- Finance
- Contracts
- External
- RMS
- DCS
- Messaging

Ingestion Layer
- Data Preparation
- Prepared Area
- Semantic Layer
- Data Mart
- Publishing

Analytics Production Layer
- Analytics Catalog & Data Lineage
- Model Repository
- Scheduling/Auditing

Management Layer
- Data Catalog & Data Lineage
- Model Repository
- Scheduling/Auditing

Exploratory Layer
- Database + Tableau
- Private storage
- Cluster
- Notebook
- Cluster
- Notebook
- Cluster
- Notebook

Publishing Layer
- Data Preparation
- Prepared Area
- Semantic Layer
- Data Mart
- Publishing

Product Delivery Layer
- Dashboard Data Source
- Published Data Source
- Granular Data Source
- Web Service API
- Application

Subscription Management

Data Scientists
Developers
Service Management An example

ANALYSE

ASSESS

CONTROL

PLAN

Event Sources

Event Analyzer

Assessment Queue 1

Assessment Queue n

Assessor 1

Assessor n

Business Rules

Control Workflow 1

Start

Stop

Control Workflow n

Start

Stop

Plan Management

Event Sources:
- Asset Availability & Utilization Store
- Order Items
- Ref. Data
- Events & Notifications
- Biz. Rules
- Process Flows
- Service Plans
- Audit

ACT

Connectivity & Integration

Existing Cargo Ecosystem

CRM

Rev Mgmt

WMS

ULD

CMS

DCS

Event Sink1

Rev Acct
Securing the future of Air Cargo in an ‘Apps’ world

**Plan & Sell**
- **Offer & Order Management**: E-commerce platform for shopping, booking, documentation & payment
- **Revenue Management**: Profit maximization system that provides forecasting, optimization & modelling capabilities

**Manage & Deliver**
- **Warehouse App**: Portable application for the timely execution of warehouse activities
- **Warehouse Automation**: System that maximizes asset turnover
- **Service Management**: Logistics control tower for service quality
- **Production Planning**: System that provides forecasting, optimization & modelling capabilities
- **Shipment Flow and Control**: Logistics control tower for service quality

**Measure & Improve**
- **Analytics**: Product for the generation of insights, intelligence and predictability.
- **CRA**: Product for invoicing & settlement

**Accelya’s Digital Cargo Platform**

**Accelya’s Data Analytics Platform**

**Cargo Management System**

- **3rd Party systems**
- **In-house systems**
Thank you.
Managing the Disruptive Opportunity of Digitalization

Jonathan Parkinson
Senior Manager Cargo Information Systems
Air Canada Cargo
Managing Digital Change

Jonathan Parkinson
Customers and Employees want a quick and seamless digital experience and they want it Now!
SMACIT: Disrupting your business
“The biggest threat to innovation is internal politics and an organizational culture, which doesn’t accept failure and/or doesn’t accept ideas from outside, and/or cannot change.”

2016 Gartner Financial Services Innovation Survey
SUCCESS

WHAT PEOPLE THINK IT LOOKS LIKE

SUCCESS

WHAT IT REALLY LOOKS LIKE
Digital change is a cultural challenge more so than technology.
Successful change requires both the technical and people sides.

Technical side:
- Design
- Develop
- Installation*

People side:
- Embrace
- Adopt
- Use
- Realization*

Current + Transition = Future

Change management

* Daryl Conner
GOLDEN CIRCLE

WHY DO YOU DO WHAT YOU DO? WHAT'S THE PURPOSE?

HOW DO YOU DO WHAT YOU DO?

WHAT DO YOU DO?

idea: Simon Sinek
THE PEOPLE SIDE OF CHANGE

SUCCESSFUL CHANGE

Awareness  Desire  Knowledge  Ability  Reinforcement

Business need  Concept & design  Implementation  Post-implementation

PHASES OF A CHANGE PROJECT

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People going through change in complex environment

Multiple changes within the organization aggravate and **compound** this risk.

What do you think would be the sum of all these changes going in parallel?

Source: Prosci© flight risk model
Digital experience pyramid

Market Leadership
Trail Blazers

Think for me.
Suggest based on knowing me and be my agent.

Do for me.
Anticipate my needs.

Make it faster than other ways of doing it.

Make it easy to do.

Baselines for customer expectations

Make it safe and secure.

Hygiene Factors

Source: Beyond © February 2016 The Financial Brand
The road to transformation

Digitization
- Conversion of content to digital formats

Digitalization
- Leveraging process technologies to take advantage of digitized content

Digital Transformation
- Transformation of business enabled by digitized content and rapid change capabilities
Great examples outside of our industry
Thank you
Merci

jonathan.Parkinson@aircanada.ca
Chairman’s Closing Remarks

Seng Thiam Khoo
Senior Vice President Cargo Services
SATS
Networking Lunch
12:30 to 14:00 in Roselle Simpor Ballroom
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