Closing Plenary

Glyn Hughes
Global Head of Cargo, IATA
Who is at WCS 2018?

- Airline: 38%
- Solution Providers: 3%
- Freight forwarder: 2%
- Airports: 10%
- Ground Handlers: 10%
- Postal Operators: 9%
- Others: 9%

12th World Cargo Symposium
13-15 March
Dallas, Texas
Key Outcomes – WCS 2018

Peter Gerber
CEO, Lufthansa Cargo &
Chair of IATA Cargo Committee

Glyn Hughes
Global Head of Cargo, IATA
Key Outcomes – WCS 2018

13 Tracks
11 Industry Meetings
8 Executive Meetings
4 Workshops
FACE up Air Cargo Career Competition

Glyn Hughes
Global Head of Cargo, IATA
Jurors:

- Karin Klatt
  Director HR Development, Transformation & Executives, Lufthansa Cargo AG

- Edward Matti
  Managing Partner, CCM Consultancy

- Darryl Judd
  Group Chief Operating Officer, Managing Director – Asia
  Logistics Executive
Femke Sickler

Caroline Larisch

Danny Jonker
Femke Sickler  
Caroline Larisch  
Danny Jonker
FACE up Finalists

Femke Sickler  
Caroline Larisch  
Danny Jonker
Femke Sickler  Caroline Larisch  Danny Jonker
European Green Fast Lanes

MSc. Thesis F.M. Sickler
March, 2018
Table of Content

1. Problem Setting
2. European Green Fast Lane Project
3. Who am I?
4. Why I have what it takes to modernize the air cargo industry
Problem Setting
Air Cargo Supply Chain
Research Scope

- 80% cargo originates from Europe
- 85% needs correction
What goes wrong?
Exploration

Current State
Policy: fast

“Rubbish In = Rubbish Out”
European Green Fast Lane Project

**Situation**

- Improve quality
- Reduce rework and repair

- Change
- Evolve
- Forward
How to organize collaboration?

Consortium Approach

Winner 2016 Schiphol Aviation Awards
Design New Policy

European Green Fast Lane Project
Policy: Ready for Carriage

“First Time Right”
“Just In Time”

System Boundary

Quality in

GHA

HUB

Quality out
Lean Cargo Supply Chain

How:
Are we victims of the circumstances?

“When we start with the right information (first time right) and create a process that allows us to orchestrate that what is coming to us (just in time), we gain control of these circumstances.”

- Simon Spoor (Project Manager) -

- Overall hub input quality +18%
- Billund arrival performance +28%
- Copenhagen arrival performance +30%
Who am I?

- Femke Sickler
- 24 years
- The Netherlands
Education

- Bsc. Aerospace Engineering
- “Rocket Scientist”

Top 1% of university
- Analytic
- Analyst in method
  Modelling and math
- Engineer at heart
  Love solving complex problems
- Critical thinker

Quoted from:
- Dr. ir. B. Enserink (TUDelft)
Education

2 Masters:
- MSc. Mechanical Engineering
- MSc. Technology, Policy and Management

Experience
- Several Extra Curricular Activities
- Board member
- Study abroad
About me

- Social animal – love working with people
- Versatile (cultural sensitive)
- World oriented
- Curious
- Hard working
- Love a challenge!
Modernize the air cargo industry

1. **Expertise**
   - Academic Expertise
   - Field Expertise
     - Internship KLM Cargo 1 – European Green Fast Lane Project
     - Internship KLM Cargo 2 – Direct Trucking Pick-up

2. **Innovative & Result Driven**
   - Social-technical systems
   - Complexity

3. **Passion for the air (cargo) industry**
   - Increase % female
   - Challenge, inspire and connect people
Summary

Achievements:
- Innovative pilot
- Responsible for set-up Denmark
- Small team with strong leadership

- In 6 months result
  - +28% Billund
  - +30% Copenhagen

- Relatively small changes → Big impact

Everyone can do it!!
Thank you for your attention!
Femke Sickler  
Caroline Larisch  
Danny Jonker
Global Supply Chain Management and Change

- A combination of supply chain management, innovation and entrepreneurship
- Work on real business cases and gain practical experience
- Close links to international companies in the region

The programme in short
- 1 year MSc programme
- Taught in English
- Small scale and personalised education

Caroline Larisch
Corporate Sustainability Initiatives in the Fast Fashion Industry - Aspects of Consumer Awareness
Corporate Initiatives
The Role of Consumers
Link to Air Cargo
TAKE AWAYS
Femke Sickler
Caroline Larisch
Danny Jonker

FACE up Finalists

12th World Cargo Symposium
13-15 March
Dallas, Texas
The average parcel size in e-commerce shipments – a variable in coping with congestion in carrier networks?

12th IATA World Cargo Symposium 2018 – Dallas, TX

by Danny Jonker
Introducing …

Danny Jonker
Lecturer & Consultant
- Volkswagen AG
  - BSc Logistics Engineering
  - MSc Global Supply Chain Management and Change

Ken Zschocke
Lecturer & Researcher
- Thuiswinkel.org
  - BBA Logistics Management
  - MSc International Logistics and Supply Chain Management
# Agenda

- Background
- Problem description
- Volumetric efficiency in e-commerce shipments
- Main influence factors in a parcel carrier network
- Future research
- Key takeaways and conclusion
Background

_E-GLOBAL in the Netherlands_

- Research project to develop the capabilities of the Netherlands as a hotspot for the distribution of e-commerce shipments to other countries.

- Research group: On-demand packing & printing (VEBOM)
Problem description

*Growth of e-commerce leads to pressure on industry and society*

Retail e-commerce sales worldwide from 2014 to 2021 (in billion U.S. dollars)

Source: eMarketer. (n.d.).
Problem description

*Distribution networks should become smarter, cleaner, and more sustainable*

- Does a reduction in average parcel size lead to less congestion in a carrier network and therefor increase efficiency?
  - Which factors might prevent volumetric savings to take effect?
Volumetric efficiency

What is the current parcel utilization?

- Parcel utilization was on average 39.4% (34.9% after excluding orders shipped in primary package).
- Highest potential in orders with few products (4 or less) and in the segments food/nearfood, health & beauty and shoes & personal lifestyle.
Volumetric efficiency

**Attainable Parcel Size reduction**

- Single item orders
- Maximum size exceeded
- Increase of 17%

- 61% of the orders were suited for further analysis.
- Utilization in these orders was 23%.

- In 14 cases one or two dimensions exceeded limitations.
- Smallest products received minimal dimensions.

- Parcel utilization increased from 23% to 40%.
- Made-to-measure packaging also reduces risk of transport damages.
What are potential constraining factors that might eliminate network efficiency gains caused by volumetric reduction?

Efficiency dynamics in parcel network

Consolidation and network growth contribute to the network efficiency gains.

Customer service level, collection times, and the drop rate are factors that hinder efficiency gains.

Source: Baumung, Günüz, Müller & Sebastian, 2015
Efficiency dynamics in parcel network

*The inter-hub transport section benefits most from an increase in volumetric efficiency*

<table>
<thead>
<tr>
<th>Transport section</th>
<th>Estimated efficiency change</th>
</tr>
</thead>
<tbody>
<tr>
<td>Parcel collection</td>
<td>+5%</td>
</tr>
<tr>
<td>Inter-hub transport</td>
<td>+20%</td>
</tr>
<tr>
<td>Last mile distribution</td>
<td>Limited effect</td>
</tr>
</tbody>
</table>

Source: ProShip, 2017
Future research

**Network simulation model**

- Biggest parcel carrier of the Netherlands (>65%)
- 19 sorting/distribution centers
- Dense network with over 4,000 parcel points in the Benelux.

What is the effect of increased volumetric efficiency on the network in terms of transport costs, vehicle utilization and number of vehicle movements?
Key takeaways and conclusion

- 20% reduction in e-commerce parcel sizes seems easily achievable with the help of made-to-measure packaging technology.
- Last-mile distribution cannot benefit from an increase in volumetric efficiency; the inter-hub transport section shows the biggest potential.
- Parcel carriers confirm that savings in this section will lead to less vehicle movements and reduced logistics cost.
- The precise effects on carrier networks will be substantiated by means of network simulation.
Thank you for your attention!

More information? Contact us!

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Vote for the 2018 FACE up winner!
Launch of the 2019 Innovation Awards

Glyn Hughes
Global Head of Cargo, IATA
Do you have what it takes to shape tomorrow’s air cargo?

Get ready for the 3rd IATA Air Cargo Innovation Awards! Contest will open this summer. iata.org/cargo-innovation-awards
Innovation Award Winners

2015
CANTrack by Floris Kleijn

2017
UTM Concept for Africa by Geoffrey Nyaga Kinyua
Do you have what it takes to shape tomorrow’s air cargo?

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iata.org/cargo-innovation-awards
Mr. Drew Pearson
Dallas Cowboys Ring of Honor member
Super Bowl XII Champion
Host of Drew Pearson Live
The “Original 88”
FACE up Finalists

Femke Sickler  
Caroline Larisch  
Danny Jonker
WCS 2019: Where next?

Rick Elieson
President, American Airlines Cargo
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