EASA
European Aviation Safety Agency

New Business Models – Business innovation challenging legacy concepts

Moderator

Panellist

Jean-Marc Cluzeau

Pekka Henttu

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Panel 1

Morten Ydalus

Don Thoma

Your safety is our mission.

An agency of the European Union

Trafi Finnish Transport Safety Agency

The New Business Models – Business innovation challenging legacy concepts

EASA Annual Safety Conference 2016

Pekka Henttu

Responsible traffic.

Courage and co-operation.

Platform economy, digitalisation, robotism
→ New Business Models and working Methods

The big picture

An aviation strategy for Europe (Dec 2015)

2.3 Maintaining high EU safety and security standards

While safety is crucial, it cannot be looked at in isolation. **The regulatory framework must also set the conditions under which the aviation industry can thrive and remain competitive on the global market. This includes the integration of new business models and emerging technologies**, such as electric engines or drones. It also requires a **more proportionate approach** to regulation and recognising differences in risks involved in various sectors of civil aviation. Finally, it means abolishing rules and procedures that add time, burden and cost but do not contribute to safety as well as those that stifle innovation and entrepreneurship. There is also room for a greater reliance on recognised industry standards. **Ultimately this will provide more regulatory flexibility, while achieving the same or higher level of safety overall.**

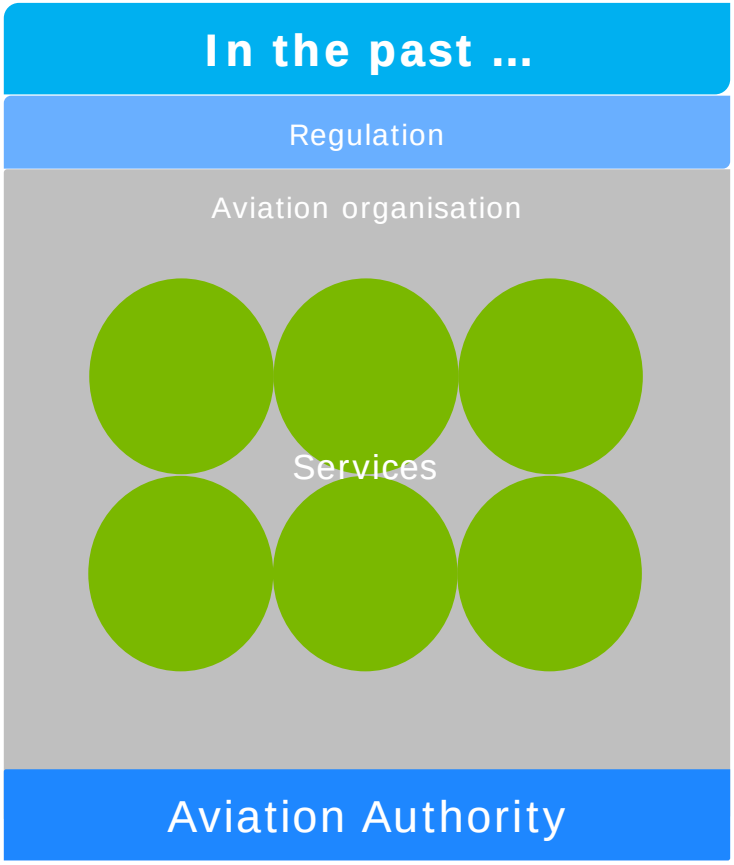
The big picture

The transport sector – especially aviation – is highly regulated

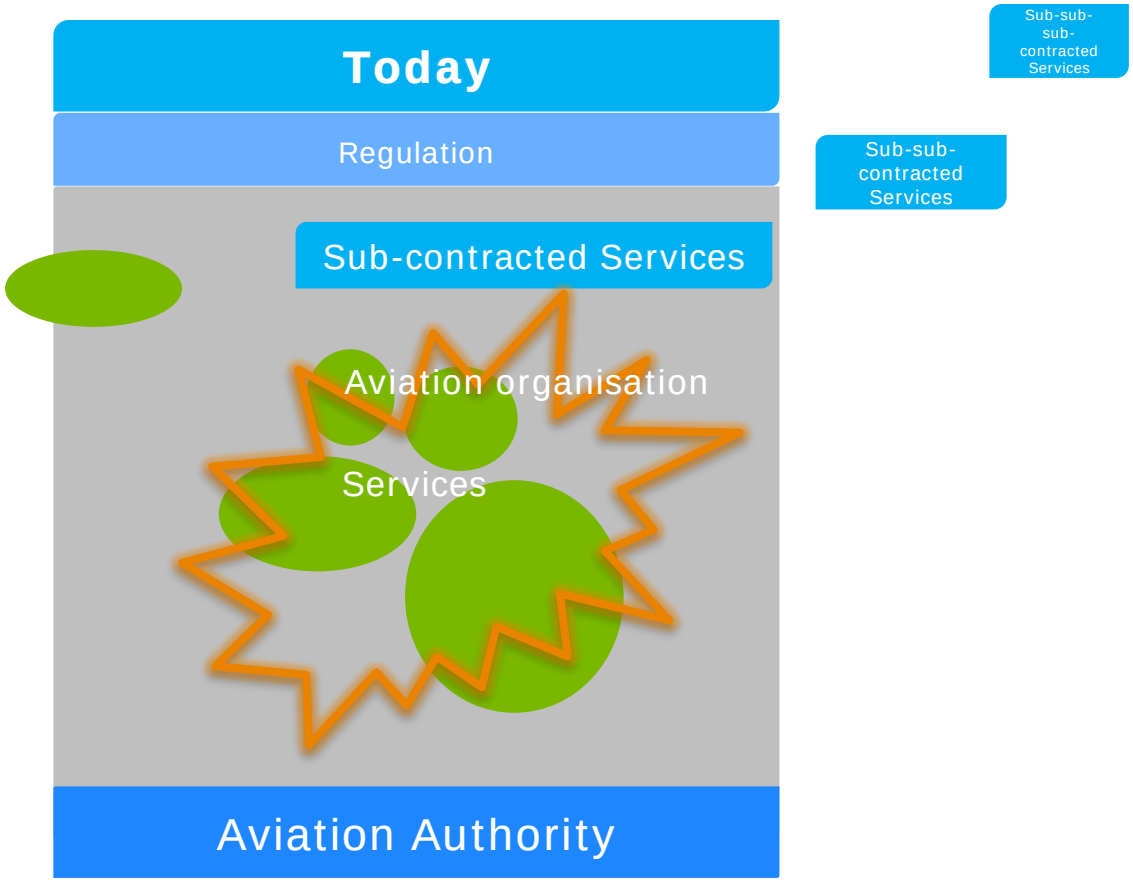
Our regulation may not respond to the requirements of today's business environment after all

Our regulation does not sufficiently recognize the current variety of business models

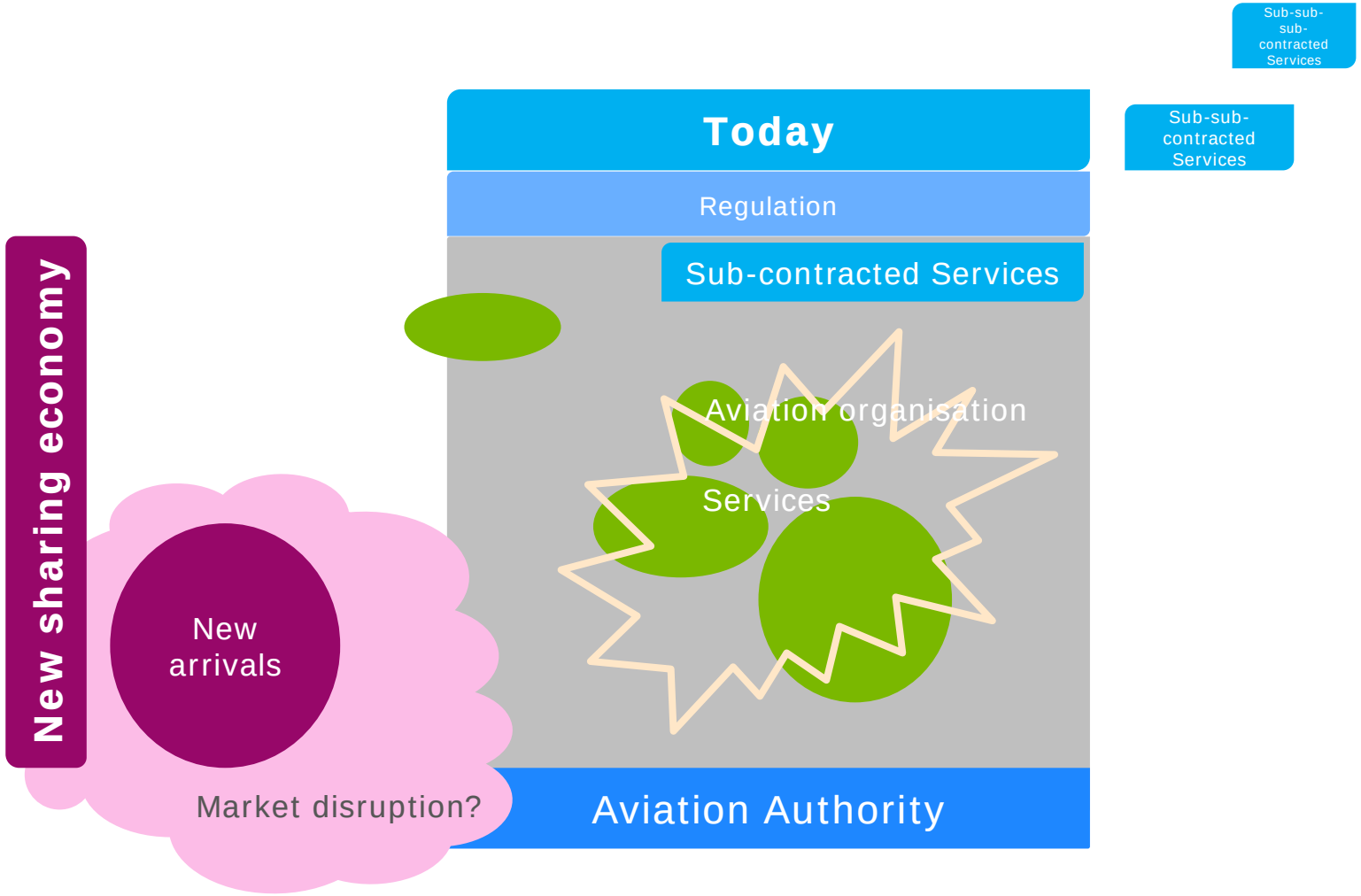
The big picture



The big picture



The big picture



The big picture

We must ensure that the aviation sector in Europe is **constantly developing and competitive**, both within the European and global transport ecosystem.

New business models assist in developing the sector and related services

- new ways of producing the necessary functions
- new sharing economy
- digitalisation spreads through the whole transport system
- new technology
- new business sectors (drones)

New business logics

Trafi

Our regulation does not sufficiently recognize today's business logics

How do the new operators (e.g. SkyUber) perceive regulation?

→ legacy rules/concept

Operators in the new platform economy are marketing a better customer experience.

We, as regulators, should be proactive about this

Transport always entails a residual risk, both for conventional operators and for new businesses in the platform economy.

Responsibility for the level of residual risk rests essentially with the operator itself.

Should the travelling public be aware of the different levels of residual risk?

Is the residual risk approximately at the same level irrespective of the business logic?

The big picture

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New regulation ?

We need new kind of regulation addressed to

- organisations
- service providers
- authorities (need for “new business models”/working methods)

New architecture for the regulation

- prescriptive regulation
- performance based regulation
- hybrid regulation (perf based & prescriptive)
- proportional regulation

Aviation organisations & service providers

Various types of **agreements** play a significant role in business arrangements

Agreements should be well balanced as regards different elements (values):
safety, economy, efficiency, reliability, punctuality...

Not exclusively cost-orientated

A balanced agreement reflects the common view and commitment of the service purchaser and service provider.

This benefits both parties

Aviation organisation & competent authority

Partnership model – Emphasized operator responsibility

Operator's responsibility for maintaining safety margins also at times of economic depression – under all circumstances

Crucial role for the superior management, even company owners

Coaching

Mutual trust

Aviation organisation & competent authority

Authorities are not trying to avoid responsibility – the old models of operation are simply not working any more.

The current regulation restrains the development of the sector.

We must find new models of operation and evaluate our regulation against a new background.

Trafi Finnish Transport Safety Agency

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norwegian

Interoperability

What is interoperability?

Interoperability is a characteristic of a product or system, whose interfaces are completely understood, to work with other products or systems, present or future, in either implementation or access, without any restrictions

Development of safety regulations….

EASA
European Aviation Safety Agency

"A modernised aviation system requires a strong regulatory framework. EASA, in conjunction with its partners, has a crucial role to play in delivering increased performance and global interoperability, while also ensuring high safety levels," said **Patrick Goudou**, Executive Director of EASA.

Only for ATM?

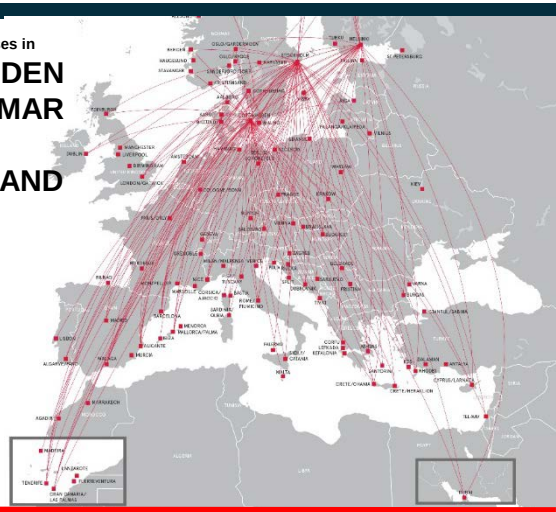
Norwegian Facts

- **World's 6th largest low-cost carrier**
- **Third largest low-cost carrier in Europe**
- **Voted best low-cost airline in Europe in 2013, 2014, 2015 and 2016, and best low-cost long haul airline in the world by SKYTRAX**
- **5 500 employees**
- **19 operational bases**

Norwegian operates 450 routes to 138 destinations

From bases in the
USA & THAILAND

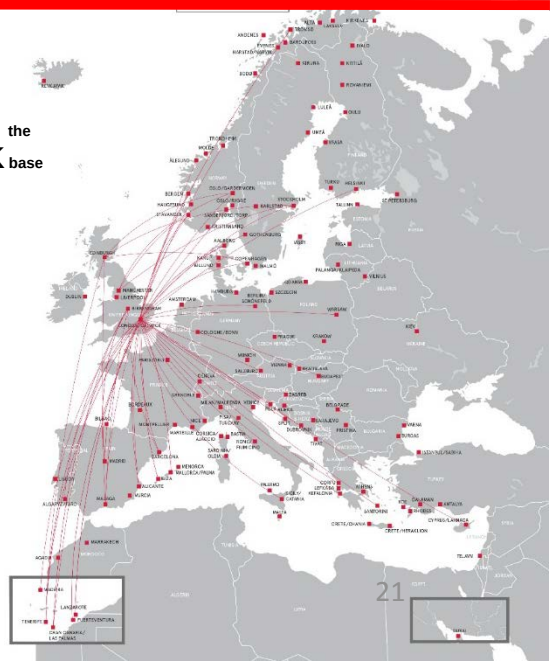
From bases in
SWEDEN
DENMARK
FINLAND



From bases in
NORWAY

From bases in
SPAIN

From the
UK base



The future requires a flexible corporate structure

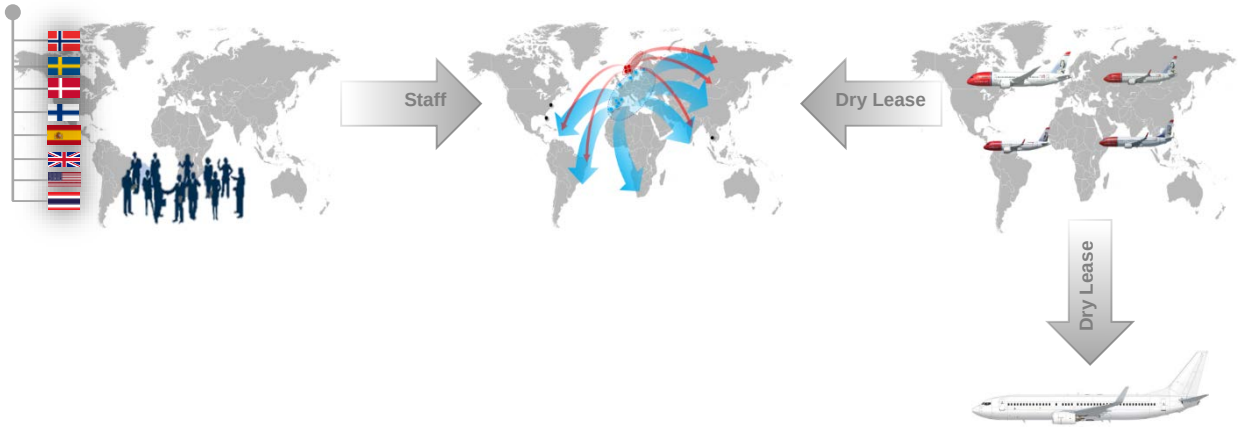
Norwegian Air Shuttle ASA
Parent Company

Ancillary
All activities not directly related to aircraft operations

Resources
National entities –
Terms and conditions in tune with social welfare systems and regulations in each individual country

Aircraft Operations
Norwegian & EU AOCs
Securing traffic rights & expansion also outside Europe

Asset / Financial
Aircraft Financing Cluster
– Cape Town – ECA support – Leasing
(Securing access to financing)

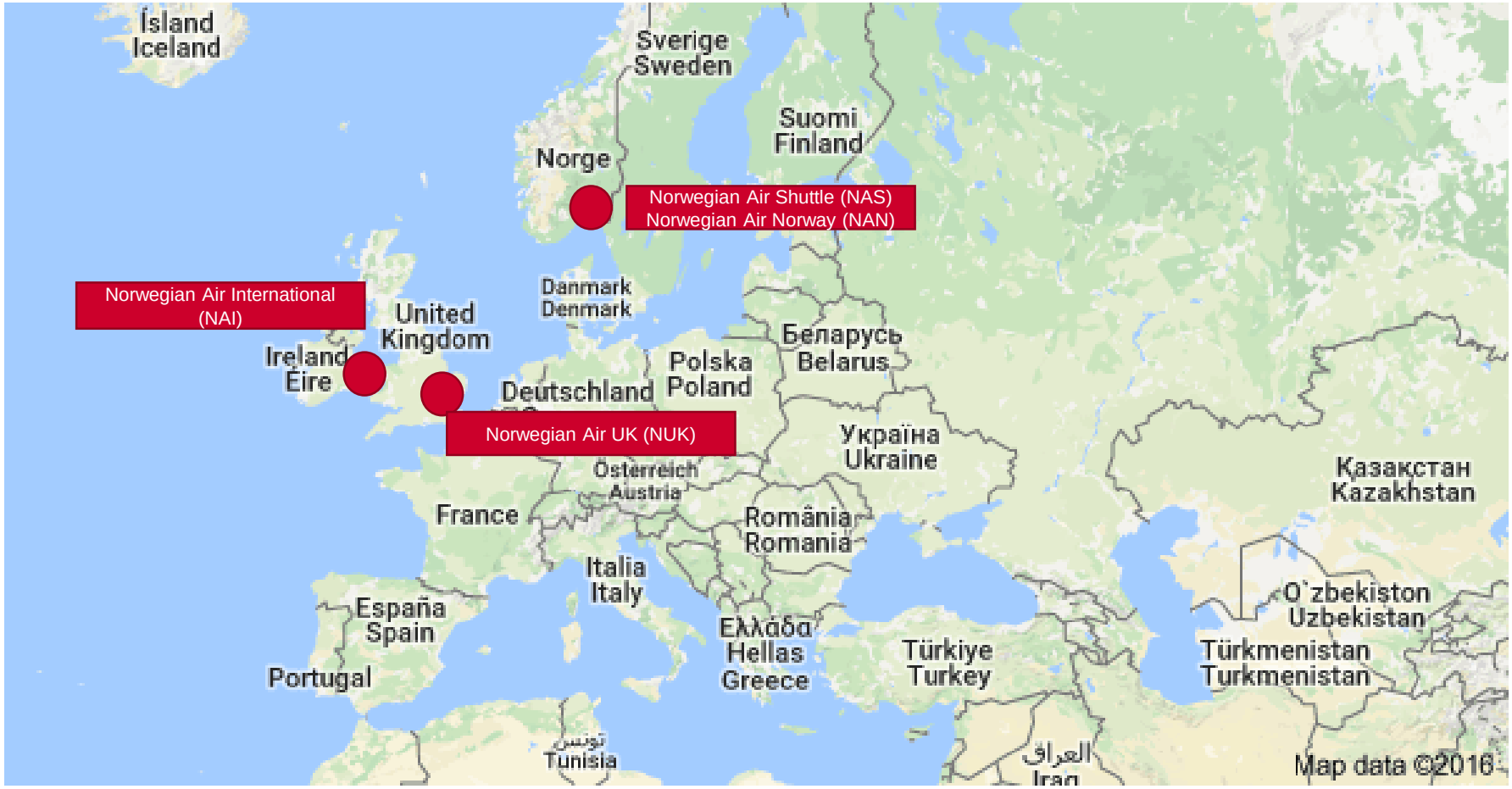


EU aviation strategy

A strong internal aviation market, **underpinned by an effective and efficient legal framework**, benefits the aviation sector and serves as a springboard to the highly competitive global market.

Reinforcing the sector's competitiveness through an innovative approach to air transport services should mobilize the full potential of the EU aviation ecosystem serving the economy and the people.

Norwegian requirements for interoperability



Norwegian is reorganizing with a Shared Service Centre for Air Operation and Crew Management

- Increased cost efficiency with future growth
- Standardisation of processes across the AOCs
- Keep the AOCs at a necessary minimum supported by shared services allowing for increased flexibility
- Standardised “franchise package” for all AOCs, including potential new ones
- Increased focus on improvements and best practices
- Maintain safety standards at the highest level
- Ensure a unified Norwegian regardless of AOCs

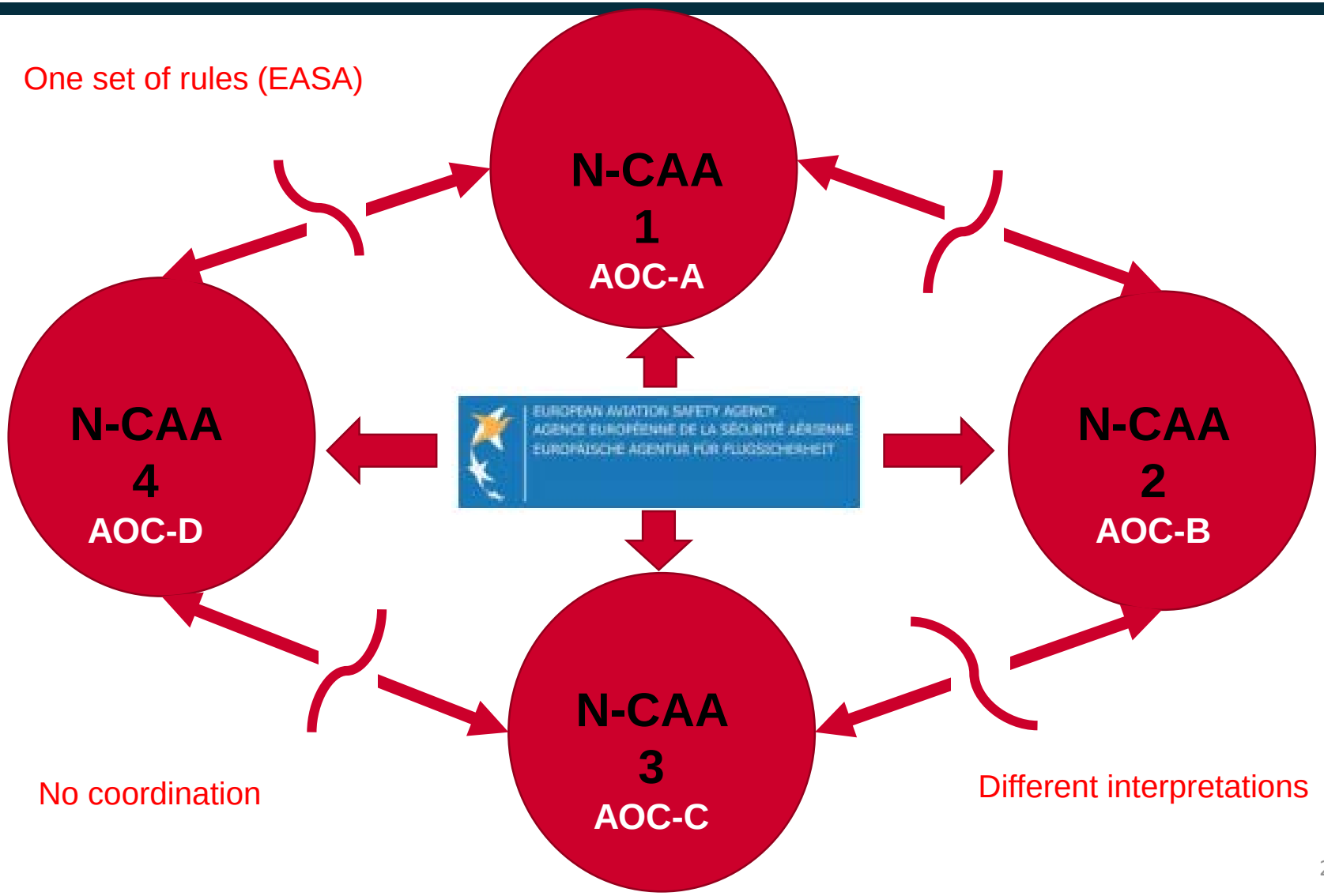
(EC) No 1008/2008

Proposal for a regulation
Recital 63

Text proposed by the Commission	*Amendment*
(63) Regulation (EC) No 1008/2008 should be amended to take due account of the possibility established by this Regulation that the Agency may become the competent authority for the issuance and oversight of air operator certificates. Moreover, ***given the growing importance of air carriers with operational bases in several Member States which results in the competent authority for the operating licences and the competent authority for air operator certificates no longer being necessarily identical,*** there is a need to reinforce the efficient supervision of those air carriers. Regulation (EC) No 1008/2008 should therefore be amended to ensure close cooperation between the authorities responsible for the oversight in respect of the air operator certificate and the operating licence respectively.	(63) Regulation (EC) No 1008/2008 should be amended to take due account of the possibility established by this Regulation that the Agency may become the competent authority for the issuance and oversight of air operator certificates. Moreover there is a need to reinforce the efficient supervision of those air carriers. Regulation (EC) No 1008/2008 should therefore be amended to ensure close cooperation between the authorities responsible for the oversight in respect of the air operator certificate and the operating licence respectively.

Not in place?

Current interoperability challenges



Potential negative outcomes

- Difficulties in harmonizing procedures
  - Must adhere to N-CAA specific interpretation of EASA rules
- Not optimal use of airplanes and crews
- Increase environmental impact
- Increased cost
  - Authority, Training, Crew efficiency, Technicaletc

Thank you for your attention and welcome on board!

Lufthansa Technik – An International Business Case

EASA Annual Safety Conference 2016
Bratislava

Lufthansa Technik

What is the Lufthansa Technik Group (LHT)?

800
customers worldwide

20.289
employees worldwide*

3.680
aircraft under exclusive contracts

5,099 billion €
in revenue*

33
subsidiaries and affiliates worldwide

* Lufthansa Technik AG Germany and 23 consolidated companies of Lufthansa Technik Group in 2015; employees as of 31.12.2015

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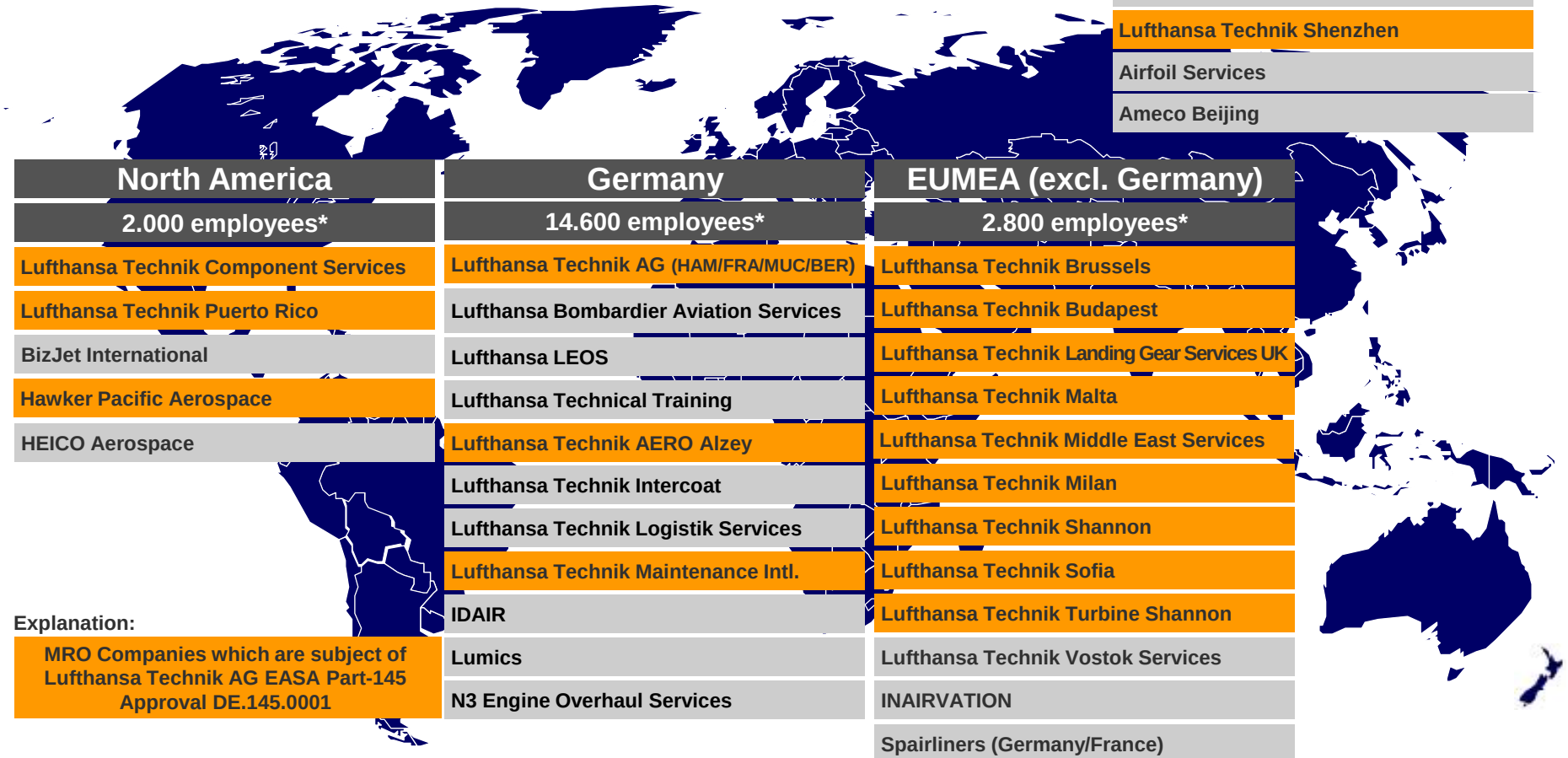
Where is LHT?



Asia

9.700 employees*

- Lufthansa Technik Philippines
- Lufthansa Technik Services India
- Lufthansa Technik Shenzhen
- Airfoil Services
- Ameco Beijing

North America

2.000 employees*

- Lufthansa Technik Component Services
- Lufthansa Technik Puerto Rico
- BizJet International
- Hawker Pacific Aerospace
- HEICO Aerospace

Germany

14.600 employees*

- Lufthansa Technik AG (HAM/FRA/MUC/BER)
- Lufthansa Bombardier Aviation Services
- Lufthansa LEOS
- Lufthansa Technical Training
- Lufthansa Technik AERO Alzey
- Lufthansa Technik Intercoat
- Lufthansa Technik Logistik Services
- Lufthansa Technik Maintenance Intl.
- IDAIR
- Lumics
- N3 Engine Overhaul Services

EUMEA (excl. Germany)

2.800 employees*

- Lufthansa Technik Brussels
- Lufthansa Technik Budapest
- Lufthansa Technik Landing Gear Services UK
- Lufthansa Technik Malta
- Lufthansa Technik Middle East Services
- Lufthansa Technik Milan
- Lufthansa Technik Shannon
- Lufthansa Technik Sofia
- Lufthansa Technik Turbine Shannon
- Lufthansa Technik Vostok Services
- INAIRVATION
- Spairliners (Germany/France)
- Lufthansa Technik London Gatwick

Explanation:

MRO Companies which are subject of Lufthansa Technik AG EASA Part-145 Approval DE.145.0001

*employee figures also fully include companies only partly-owned by Lufthansa Technik

Updated 18-Jul-2016

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What does LHT do?

Maintenance (AMO)

- Aircraft (Line/Base/Mod.), engines/APU and components
- VIP-conversions

Design (DOA)

- Minor/major changes/repairs
- STC

Manufacturing (POA)

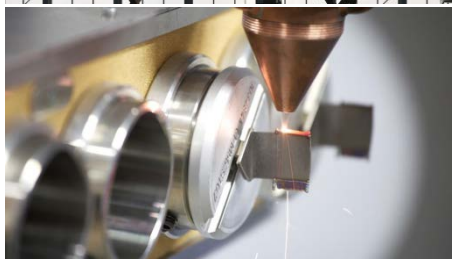
- Cabin interior
- Cabin management and entertainment systems
- Non-electrical floor path marking (“GuideU”)

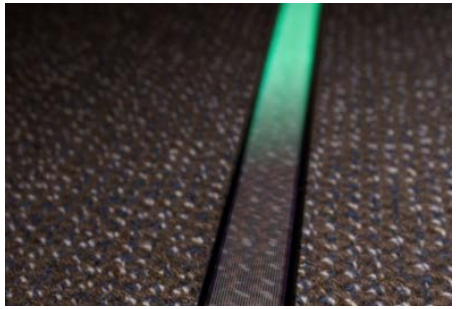
Engineering services (CAMO, SCAMT)

- Transitions, ARCs
- Maintenance programmes etc.

Pool parts

- “Total Component Support” packages





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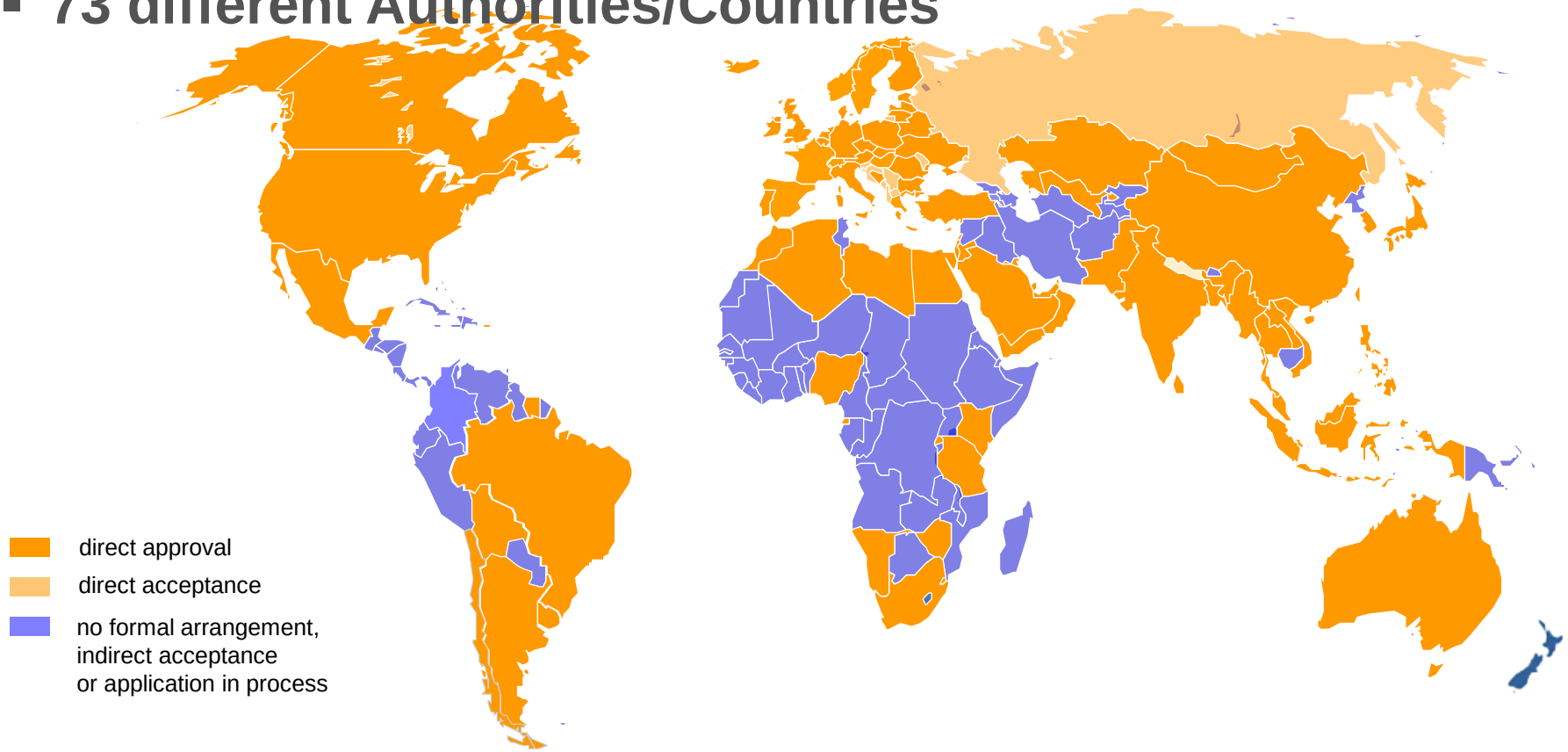
Where are LHT's customers?

Everywhere, therefore

- 136 Aviation Authority Approvals from
- 73 different Authorities/Countries



Status as per 18 OCT 2016

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How does LHT “tame the beast”?

Measures

- Cross location **“business unit” concept**
- **Proper technical tool** for the “Organization Exposition”: **IQ MOVE***
- **Single quality management system**
- **Foster and support standardization** of production and administrative processes

Result

- **Single approval** for (almost) all worldwide AMO locations (“Group Approval”), issued and overseen by the LBA, Germany

Benefits

- Fewer and simpler contracts (e.g. CAMO-AMO)
- More aligned processes and quality
- Less oversight burden by and for authorities

* process and employee role based, compliance integrative and intranet/internet accessible

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What does it need from the Regulators?

Legality

- Appropriate rules and regulations for “cross border group approvals”*
- In the EASA domain currently only ok for AMO (§145.B.15)

Ability

- Resources (mostly personnel)
- Budget (e.g. for travel)

Willingness

- To support the idea of “cross border group approvals”
- Mindset (“out-of-the-national-box thinking”)

*see Article 54 in proposal for a new EASA Basic Regulation

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Vielen Dank für Ihre Aufmerksamkeit.
Thank you for your attention.

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Lufthansa Technik

Aireon – Space-Based ADS-B Surveillance as a Service

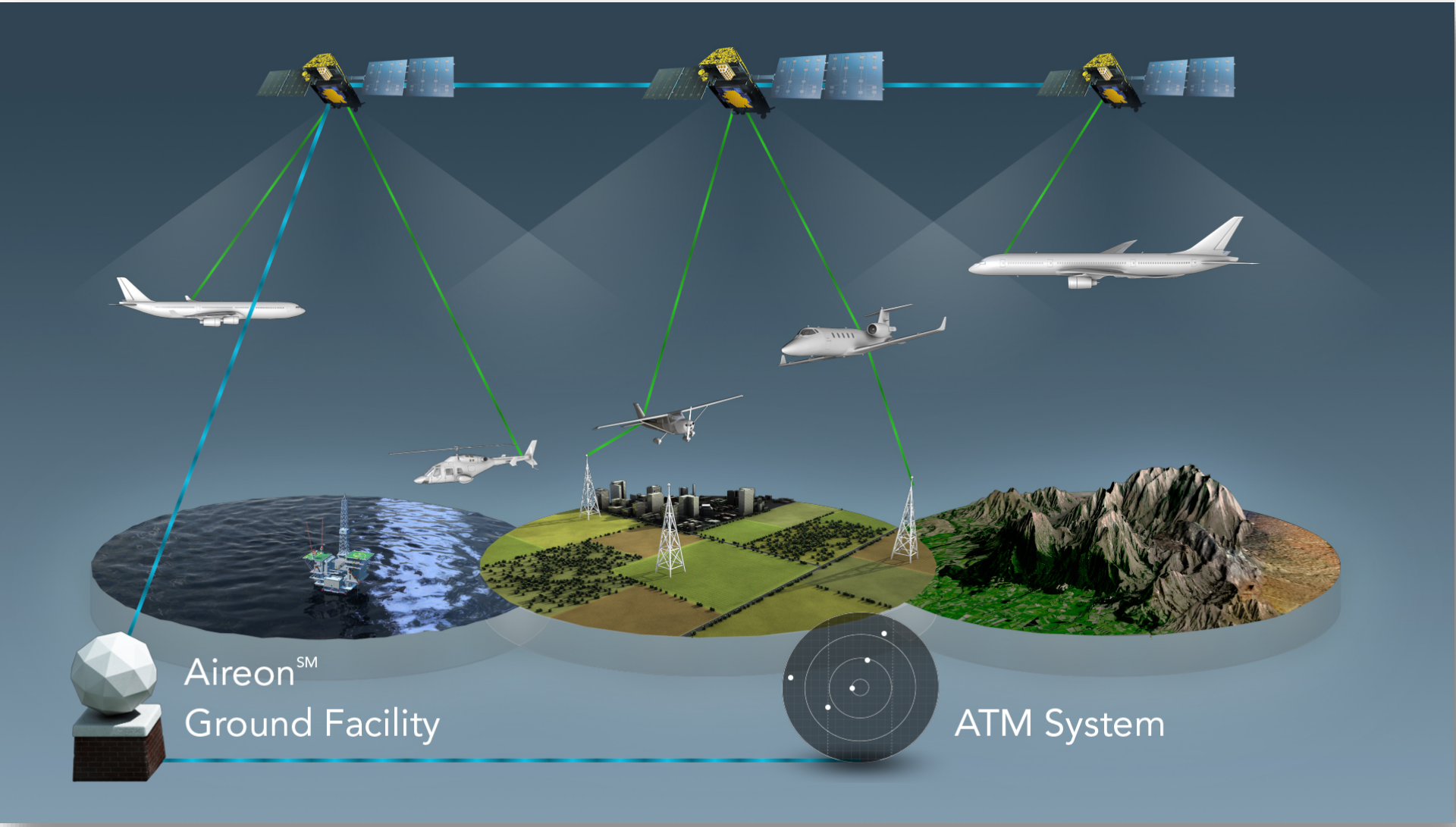
Panel 1: New Business Models – Business Innovation Challenging Legacy Concepts

Don Thoma, CEO, Aireon

25 October 2016

AIREON LLC PROPRIETARY INFORMATION

AIREON LLC PROPRIETARY INFORMATION



AIREON LLC PROPRIETARY INFORMATION

Investment By Aviation Stakeholders

A Major Aviation Enhancement
Created By ANSPs

Benefits Accrue To All Aviation Stakeholders

Aireon
AIREON LLC PROPRIETARY INFORMATION

Space-Based ADS-B Business Enablers

- Shared infrastructure in space – hosted payload on Iridium
- Very limited ground infrastructure
- ANSP investors with a long-term view

AIREON LLC PROPRIETARY INFORMATION

Aireon - An Innovative Business Model

- Surveillance as a service
- High benefits to cost ratio
- Global coverage in 2018 - global business

AIREON LLC PROPRIETARY INFORMATION

Challenges or Opportunities?

- Global infrastructure
- Surveillance source not owned by ANSP
- Global vs. regional vs. local regulation?
- Partnerships with ANSPs and regulators

AIREON LLC PROPRIETARY INFORMATION

A Reality in 2018!

- Global surveillance as a service
- Global benefits
- Global partnerships

NAV CANADA iridium Everywhere IAA ENAV NAVIAIR

EASA
European Aviation Safety Agency

NETWORKING LUNCH BREAK

12:30 H – 13:45 H

Your safety is our mission.

An agency of the European Union