



# CANSO Global ATM Operations Conference

MADRID | SPAIN | 8-9 MARCH



The challenges ANSPs will face in the future when their core business may have to be radically different

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# Challenges and Opportunities for ANSPs

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*CANSO Operations Conference 08.03.18*



**DFS** Deutsche Flugsicherung

# How the Future might look like

## *A case study on potential future scenarios for 2040*

*New means for transportation will be available:*

*How will Mobility, Aviation and ATM change?*

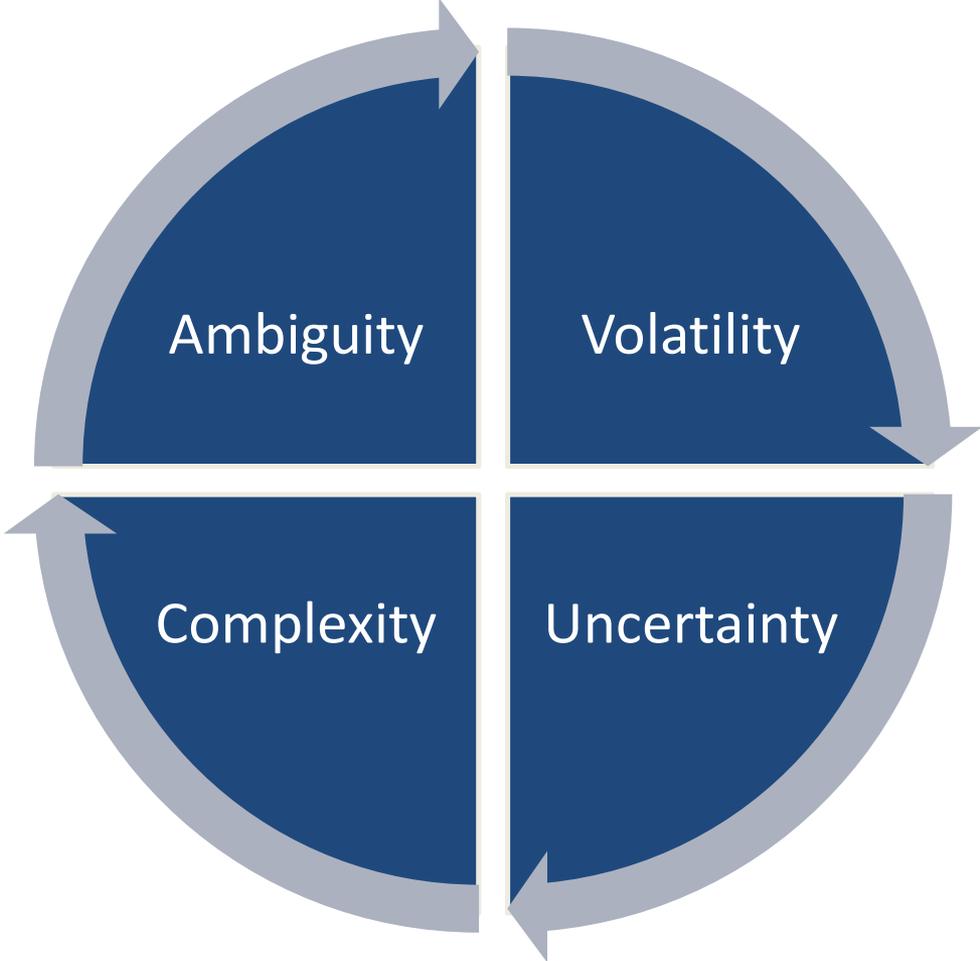
*Rapid technological advances:*

*What are the Consequences for our Company?*

- ❖ **Developed by an interdisciplinary group of young employees**
- ❖ **Initial results:**
  - ❖ **New vehicles (e.g. drones, hyperloops, spacecraft)**
  - ❖ **Connectivity and intermodality**
  - ❖ **Automatisation, digitalisation and artificial intelligence will radically change our current core business**
- ❖ **How can we ensure that our company remains relevant in 2040 in light of these disruptive changes?**

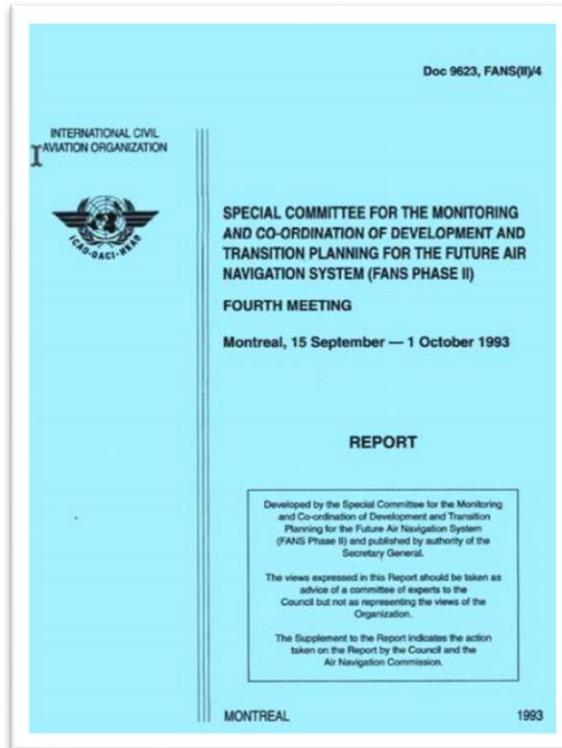


# Future Environment



# Short-term Realities and Long-term Visions

## 1993: ICAO „Future Air Navigation Systems“



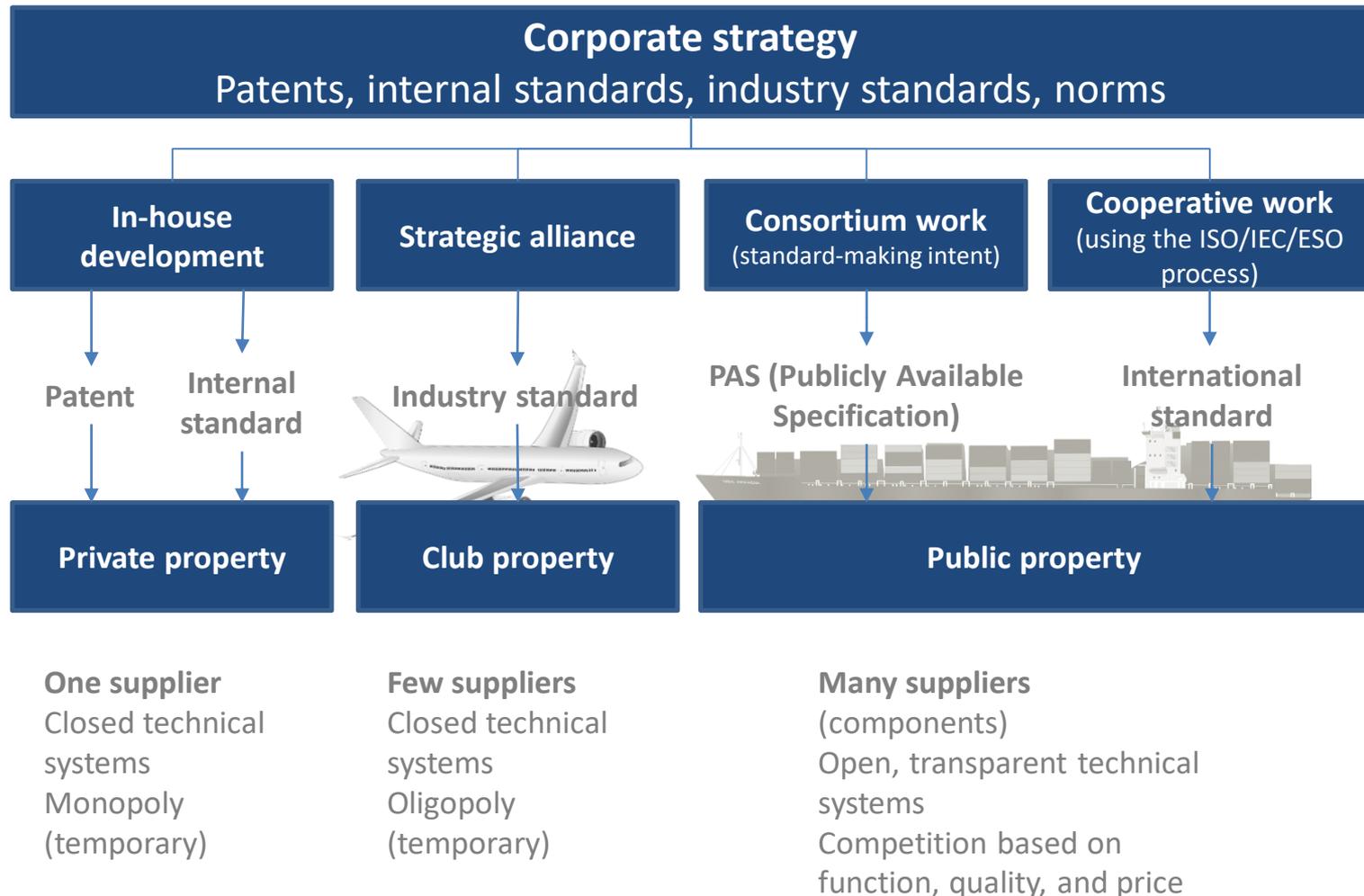
Satellite Navigation

Satellite  
Communication

Automatic  
Dependant  
Surveillance

Datalink

# Standardisation Processes



Translated from: Hartlieb et al., 2009, page 8: *Normung und Standardisierung: Grundlagen*

# Conclusions

- **Aviation has an excellent safety record. We need to keep that on top.**
- **Generally good performance record:**
  - Capacity and delays
  - Improved route-network
  - Free-route airspace
  - Civil-military cooperation
  - Flexible use of airspace

**Cooperation and partnership is key to success**

# CANSO stands for Partnership





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