



ICAO

UNITING AVIATION



# The pilot's view

The International Federation of Air Line Pilots' Associations



ICAO HQ, Montréal, Canada

9 – 10 SEPTEMBER 2014



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# The pilot's view

on green technology and  
operations

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# The pilot's view

Captain Robert Brons  
IFALPA



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# IFALPA

- 100.000 airline pilots
- 100 countries
- “Global Voice of Pilots”

The International Federation of Air Line Pilots' Associations





# IFALPA

- Active participation in ICAO
- Common policies on technical, training, operational and regulatory issues
- Support local member associations
- Publications



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## Information on volcano Bardarbunga, Iceland

Since August 13th, heightened seismic activity at the volcano Bardarbunga in Iceland has been observed. Several hundreds of earthquakes per day, some exceeding strength 5 on the Richter scale were sensed, and it was feared that the volcano might erupt. Status of the volcano had been set to **RED** for some time, and a danger area around the volcano had been established. IFR flights were not cleared into this area, it was de facto a no-fly zone.

When the situation had stabilized again, the status of the volcano returned to **ORANGE**, and the danger area had been removed. Early on August 29th, lava flow had been detected northeast of Bardarbunga, where the bulk of the seismic activity moved. The Icelandic authorities are closely monitoring the situation and have installed additional mobile observing stations. Information about an





# Why here?

- Safety is our core business
- *“ to promote the highest level of aviation safety worldwide...”*



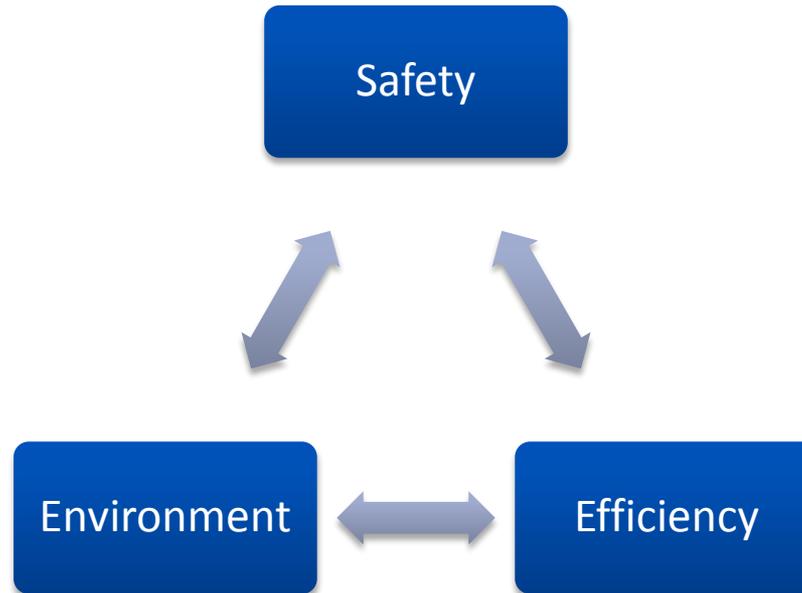


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...but also..





- **IFALPA believes a viable and expanding air transport industry can only be achieved on **sustainable** grounds.**
- **Every solution for environmental benefit must be **weighed** against operational feasibility, economic reasonableness, and safety.**
- **Safety** must be the overriding principle.



# Operational input

- Why?

To make it practical: designed or adapted for actual use

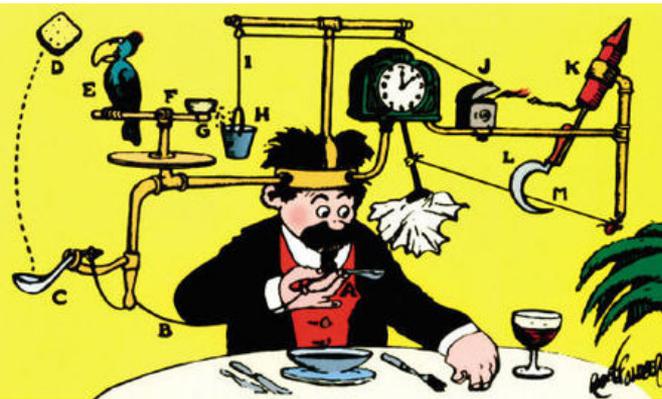
To make the design fit for the operational environment

To make it safe

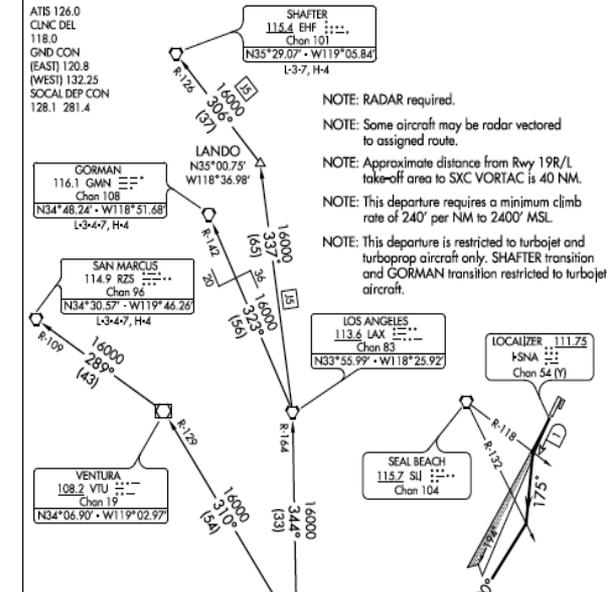
To make it efficient



To make it .... work



(CHAN1.SXC) 13346  
**CHANNEL ONE DEPARTURE** JOHN WAYNE AIRPORT-ORANGE COUNTY (SNA) SL-377 (FAA) SANTA ANA, CALIFORNIA



**DEPARTURE ROUTE DESCRIPTION**

**TAKE-OFF RUNWAY 19L/R:** Maintain runway heading or I-SNA localizer south course to I-SNA 1 DME fix or SLI R-118, turn left heading 175°, cross SLI R-132 then turn right heading 200°, intercept and proceed via SXC R-084 to SXC VORTAC, thence via (transition) or (assigned route). Expect filed altitude ten minutes after departure.

or (assigned route). Expect filed altitude ten minutes after departure.  
**GORMAN TRANSITION (CHAN1.GMN):** From over SXC VORTAC via SXC R-344 and



# Continuous Descent Operations

- Descending - the flying technique - is not the issue;
- Airspace and air traffic management is.
  - Standardisation
  - Predictable
  - Practical
  - Dependent on technological improvements (ATM tools, cockpit)



# CDO

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# Aviation System Block Upgrades

- way forward
- for a global and integrated implementation
- performance driven
- indications of environmental and efficiency gains
- Indications of necessary system capability and human performance issues
- potential dependencies clear

Concerns: implementation scheme, costs, transition phase, safety.



# CDM

Seamless gate-to-gate

- ✓ But is it flexible?
- ✓ Who is responsible? In strategic and tactical phase?
- ✓ Is there a contingency plan?
- ✓ Are the system components redundant?



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# Future developments

- Near future: aircraft operations and management
  - Preflight: planning, flexible use of airspace, airspace management, CDM
  - Loading, fleet planning,
  - Taxibot
  - Inflight: real-time weather, optimum trajectories, PBN, CCO, CDO, CPDLC, ADS
  - Maintenance, engine washing



## Role of the human

- **Human is ultimate safeguard of safety**
- **Pilot-in-command remains ultimately responsible for safe flight.**
- **Give him information:**
  - Real-time information to the cockpit (on weather, traffic etc).
  - New integrated displays (4d trajectories)
  - Datalink



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# Thank you

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