



3ο ΕΠΙΣΤΗΜΟΝΙΚΟ FORUM ΓΙΑ ΤΗ ΜΕΙΩΣΗ ΤΗΣ
ΔΙΑΚΙΝΔΥΝΕΥΣΗΣ ΑΠΟ ΚΑΤΑΣΤΡΟΦΕΣ
ΣΤΗΝ ΕΛΛΑΔΑ

3rd SCIENTIFIC FORUM FOR
DISASTER RISK REDUCTION
IN GREECE

**Η Συμβολή των Ερευνητικών Φορέων της Χώρας
στη Διαχείριση των Φυσικών Καταστροφών**



Θανάσης Μπίνης
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Ενότητες

- **Ρόλος και αρμοδιότητες Επιτροπής Διερεύνησης Αεροπορικών Ατυχημάτων & Ασφάλειας Πτήσεων (ΕΔΑΑΠ) .**
- **Συντονισμός - Συνεργασία φορέων εσωτερικού/ εξωτερικού .**
- **Ασφάλεια Πτήσεων – Στατιστικά στοιχεία .**

ΕΠΙΤΡΟΠΗ ΔΙΕΡΕΥΝΗΣΗΣ ΑΤΥΧΗΜΑΤΩΝ & ΑΣΦΑΛΕΙΑΣ ΠΤΗΣΕΩΝ (ΕΔΑΑΠ)

Η ΕΔΑΑΠ είναι **Ανεξάρτητη Αρχή**
που εποπτεύεται από τον Υπουργό Υποδομών &
Μεταφορών.



www.aaiasb.gr

ABOUT AAIASB (Air Accident Investigation & Aviation Safety Board)

Single Modal: **AVIATION Only!**



Οι Διερευνήσεις της ΕΔΑΑΠ

- **Αποκλειστικός** σκοπός των διερευνήσεων που διενεργούνται από την ΕΔΑΑΠ είναι:
η διακρίβωση των αιτίων που προκάλεσαν το ατύχημα ή σοβαρό συμβάν **με στόχο την πρόληψη** και :
- **ΔΕΝ** αποσκοπούν στη διαπίστωση υπαιτιότητας και στον καταλογισμό ευθυνών και αξιώσεων.



Βασικό Νομοθετικό Πλαίσιο Διερεύνησης Αεροπορικών Ατυχημάτων στην Ελλάδα

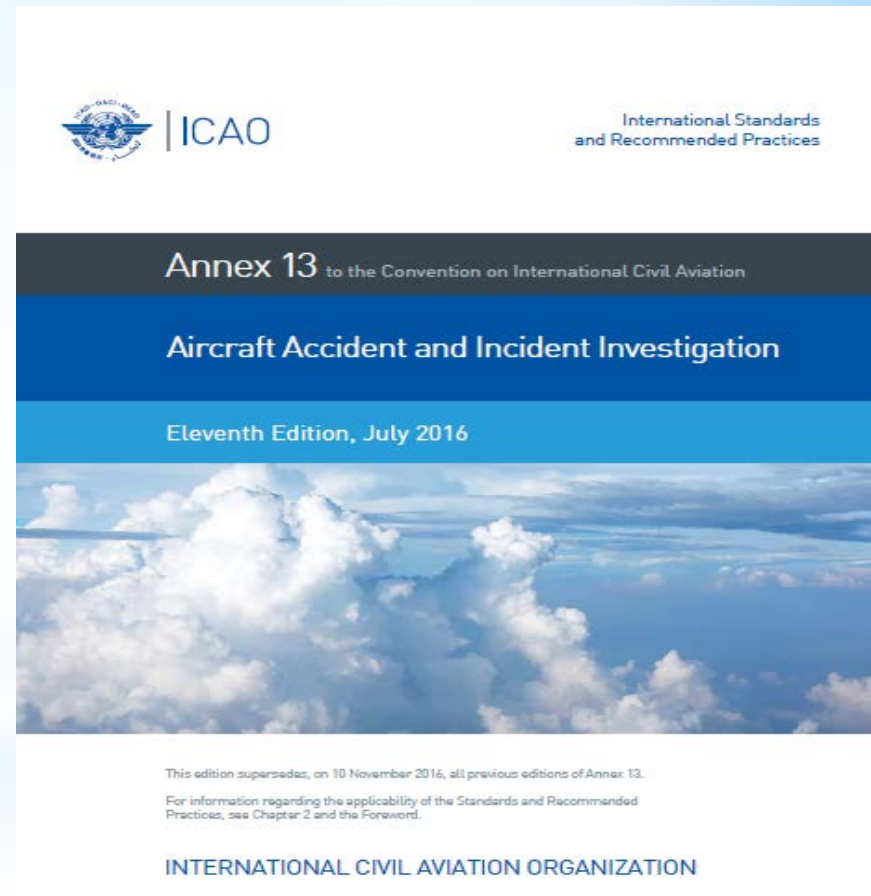


- ✓ **Παράρτημα 13 (Annex 13) του ICAO ,**
- ✓ **Κανονισμός της Ε.Ε. : 996/2010 &**
- ✓ **N. 2912/01.**

Independence of the investigation

ICAO ANNEX 13

“A State shall establish an accident investigation authority that is independent from State aviation authorities and other entities that could interfere with the conduct or objectivity of an investigation.”





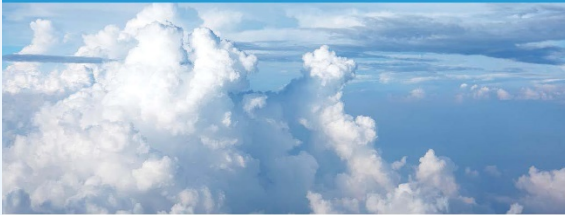
ICAO

International Standards
and Recommended Practices

Annex 13 to the Convention on International Civil Aviation

Aircraft Accident and Incident Investigation

Eleventh Edition, July 2016



This edition supersedes, on 10 November 2016, all previous editions of Annex 13.
For information regarding the applicability of the Standards and Recommended Practices, see Chapter 2 and the Foreword.

INTERNATIONAL CIVIL AVIATION ORGANIZATION

INTERNATIONAL CIVIL AVIATION ORGANIZATION

11th Edition, July 2016



Eleventh Edition, July 2016



ΕΠΙΤΡΟΠΗ ΔΙΕΡΕΥΝΗΣΗΣ ΑΤΥΧΗΜΑΤΩΝ & ΑΣΦΑΛΕΙΑΣ ΠΤΗΣΕΩΝ

Η ΕΔΑΑΠ εκδίδει Πορίσματα
Διερεύνησης & Συστάσεις Ασφαλείας
(Safety Recommendations).

SINGLE FOCUS IS SAFETY



Διερευνήσεις ΕΔΑΑΠ vs Δικαστικές

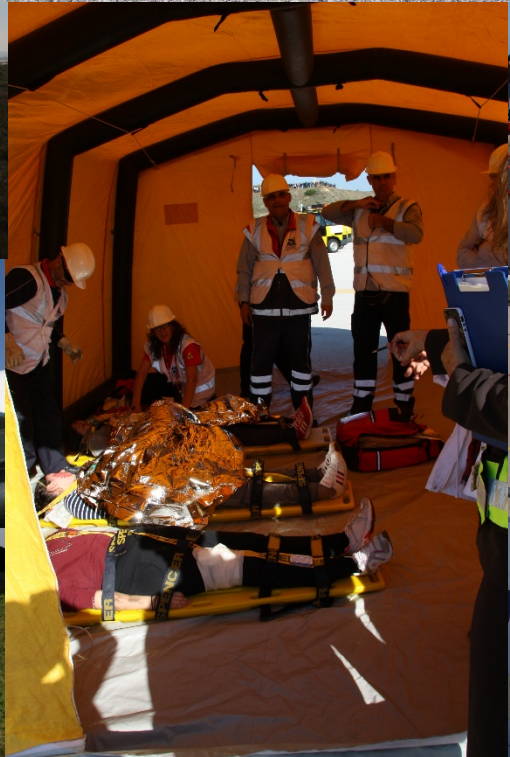
Οι Διερευνήσεις για την ασφάλεια είναι ανεξάρτητες από τις δικαστικές έρευνες.



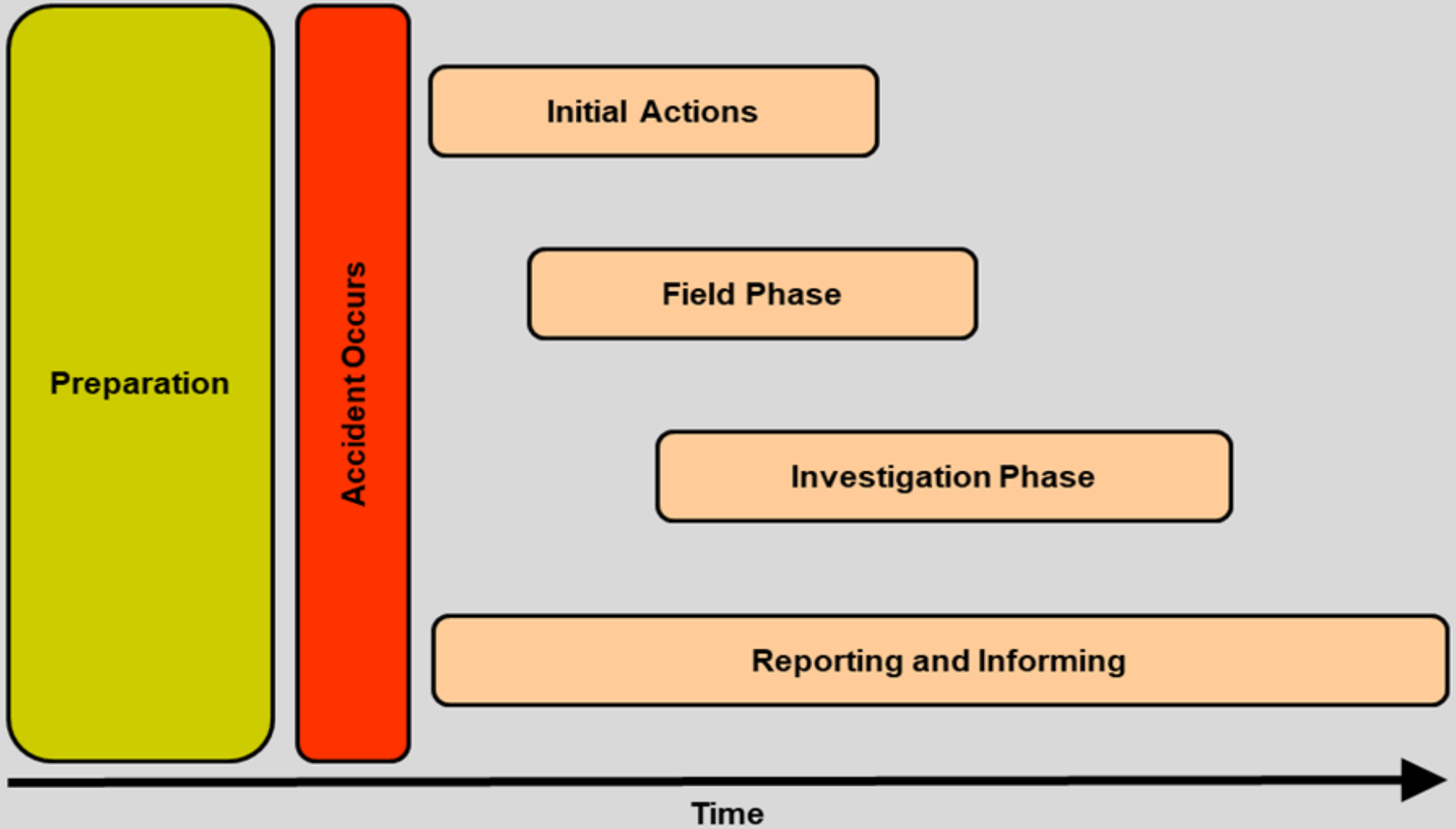
ICAO ANNEX 13
EU 996/2010

Συνεργασία , Συντονισμός & Αλληλεπίδραση της ΕΔΑΑΠ με άλλους Δημόσιους Φορείς

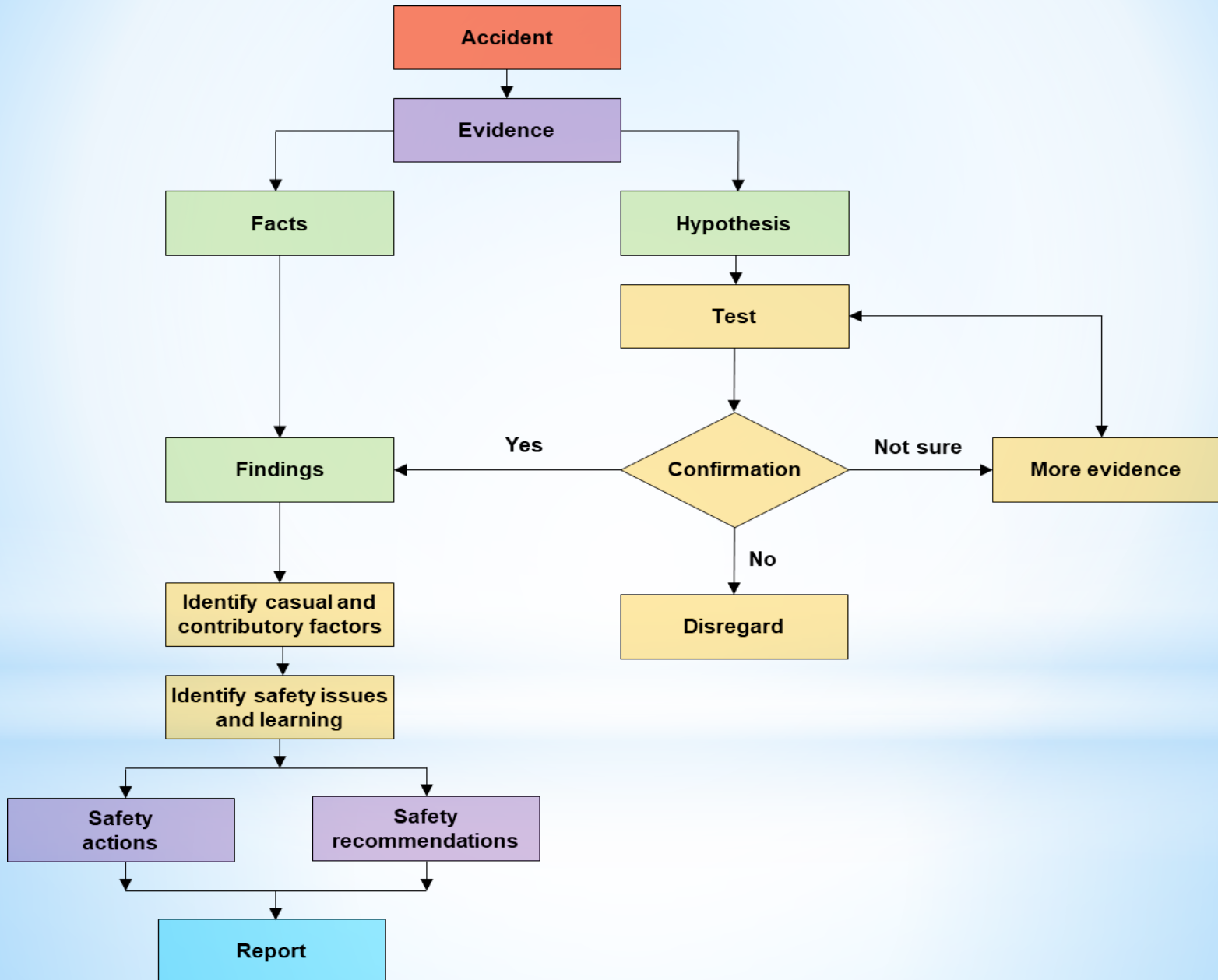




Investigation Process



Investigation Faces



States involved in Major Air Accident:



Overview : The Accident Investigation Process



ENCASIA NETWORK

European Network of Civil Aviation Safety Investigation Authorities

- The 'Network' constitutes an independent grouping of the SIAs of the EU Member States.
- The mission is to further improve the quality of air safety investigations and to strengthen the independence of the national safety investigation authorities.





Zero Accident Goal

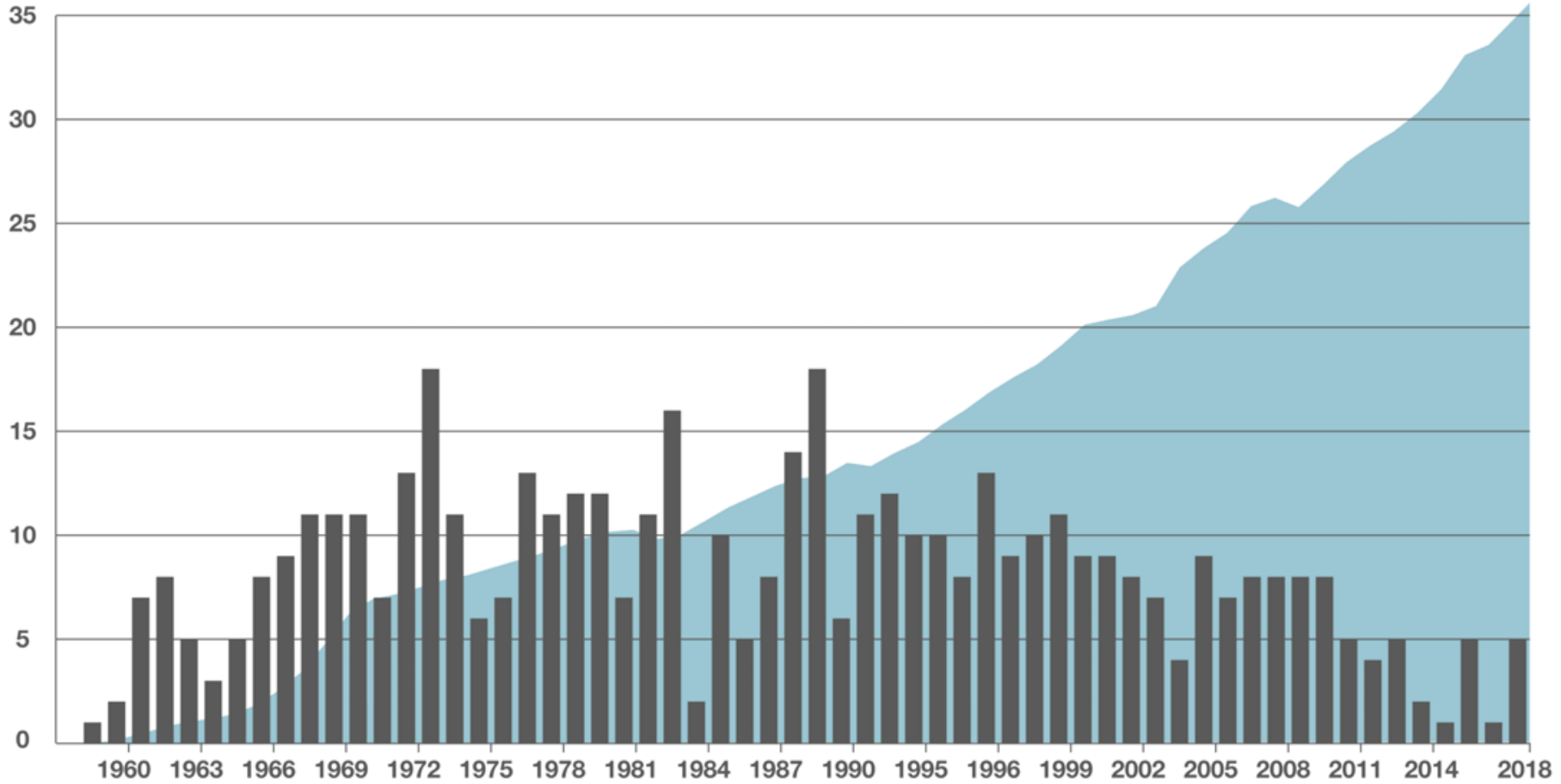


The goal is for every flight to depart and arrive without incident.



■ Yearly number of flights in millions ■ Yearly number of fatal accidents

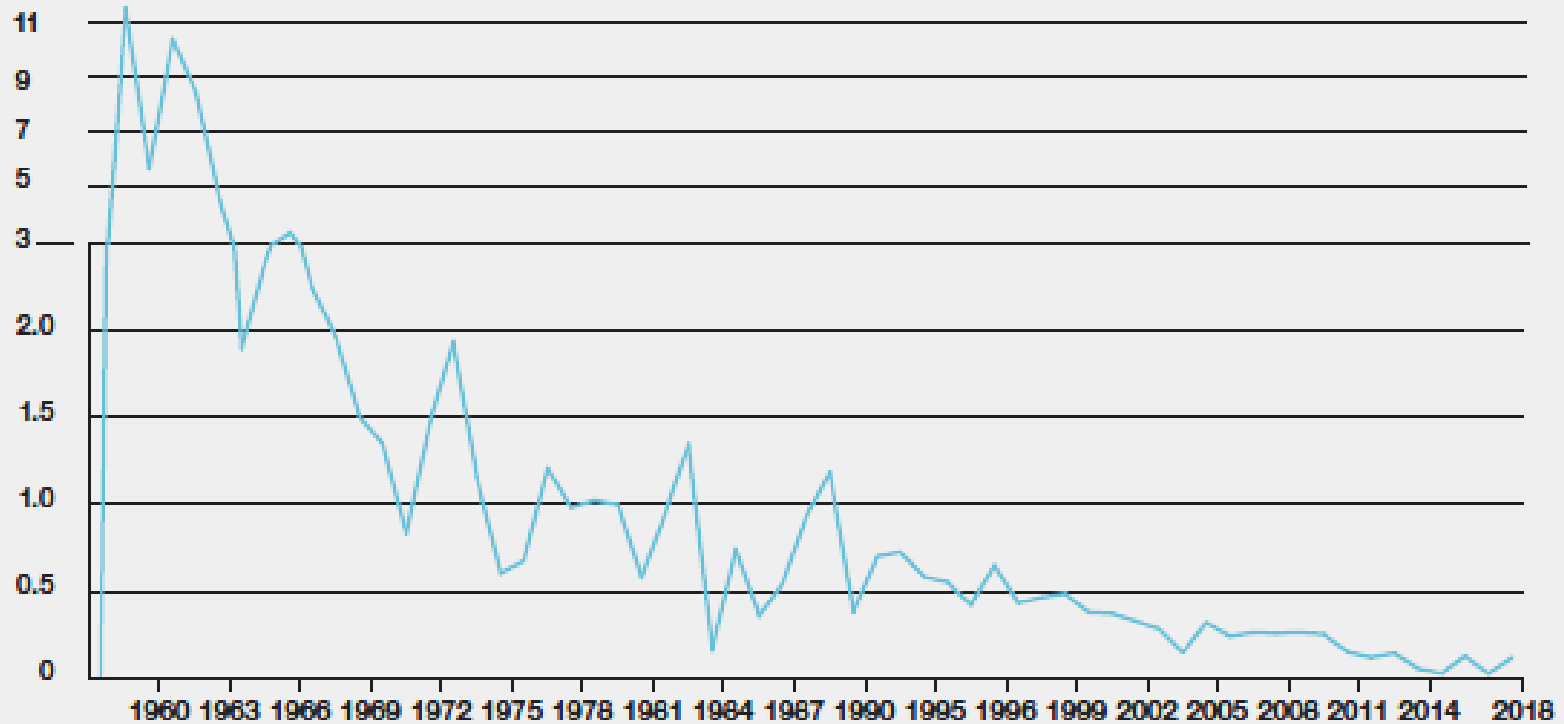
Yearly number of fatal accidents



Evolution of the yearly accident rate

■ Yearly fatal accident rate

Yearly fatal accident rate per million flights

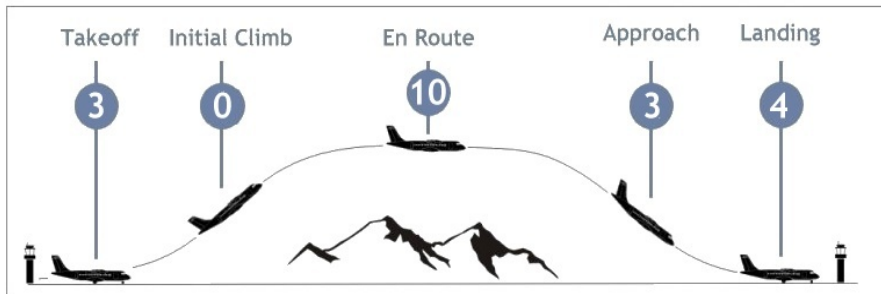
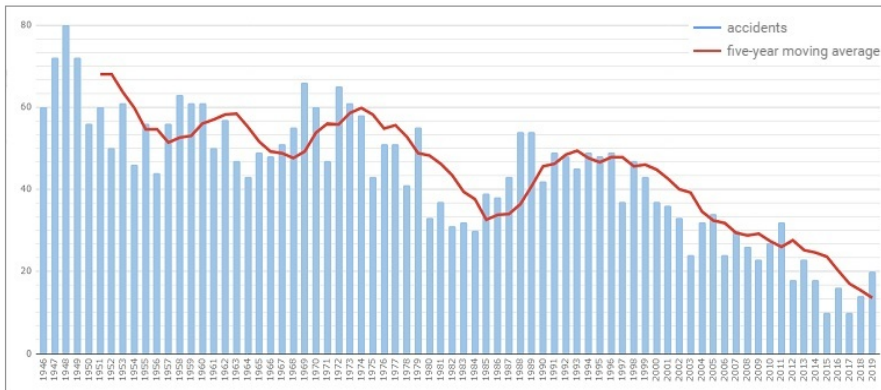


Fatal

Airliner Accident Statistics 2019

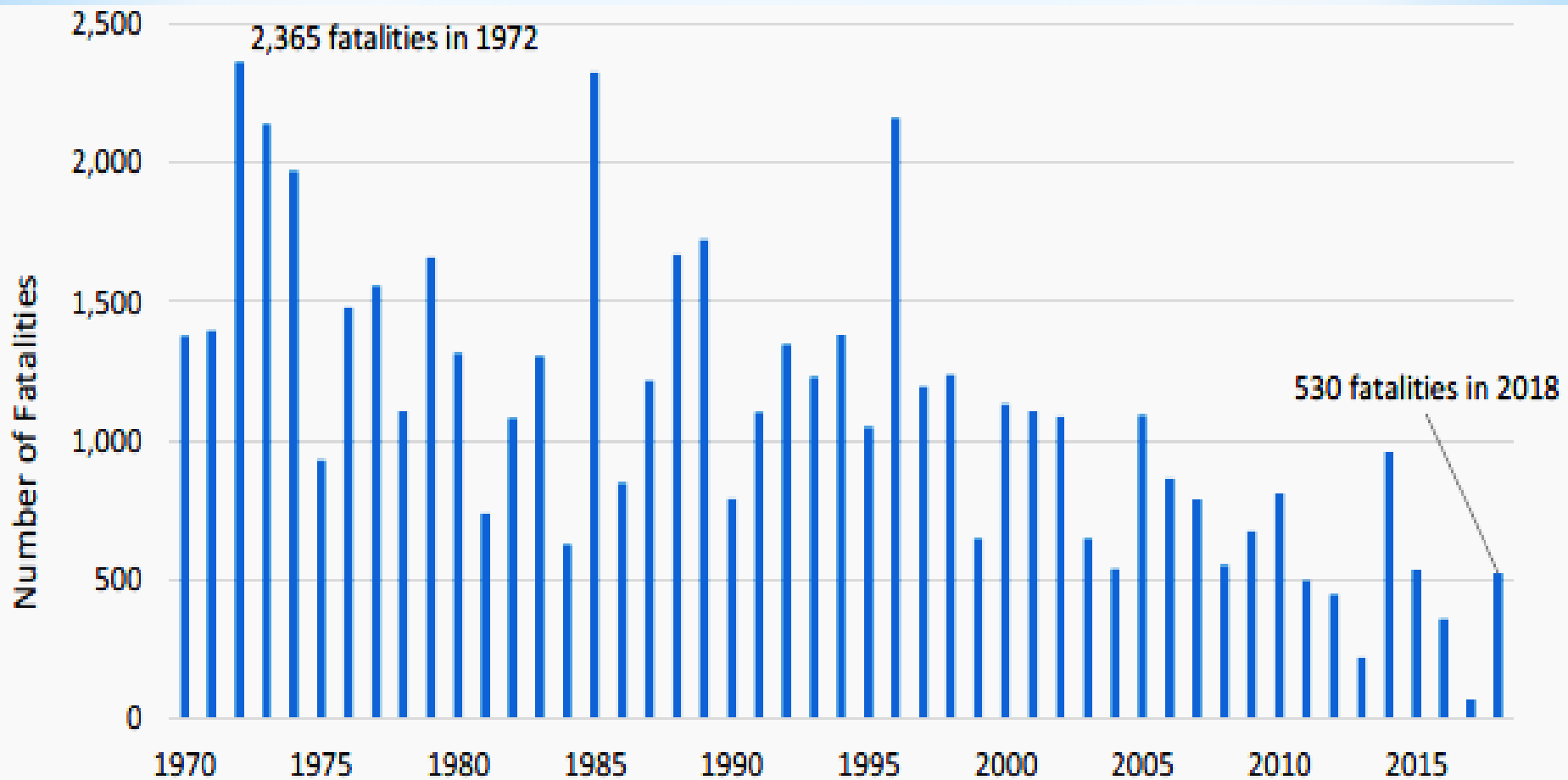
283 fatalities

20 fatal accidents

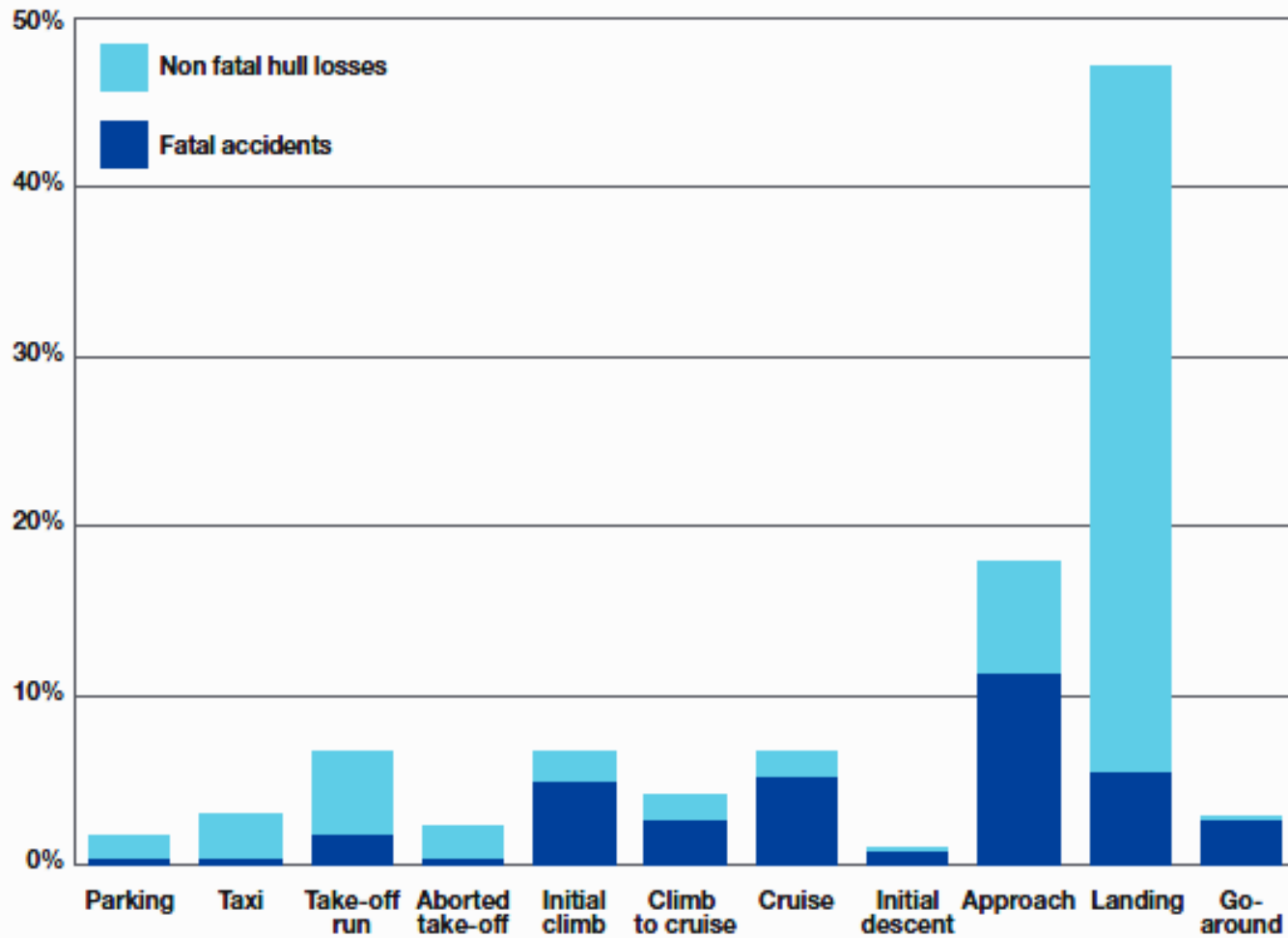


 8 February USA 1	 23 February USA 3	 9 March Colombia 14	 10 March Ethiopia 157	 5 May Russia 41	 13 May USA 1	 27 June Russia 2
 26 July Canada 4	 6 August Canada 2	 11 September USA 2	 18 September Indonesia 4	 23 September Tanzania 2	 2 October USA 7	 4 October Ukraine 5
 17 October USA 1	 26 October Canada 3	 24 November D.R. Congo 19	 9 December USA 1	 24 December Mexico 2	 27 December Kazakhstan 12	

WORLDWIDE COMMERCIAL AEROPLANE OPERATIONS



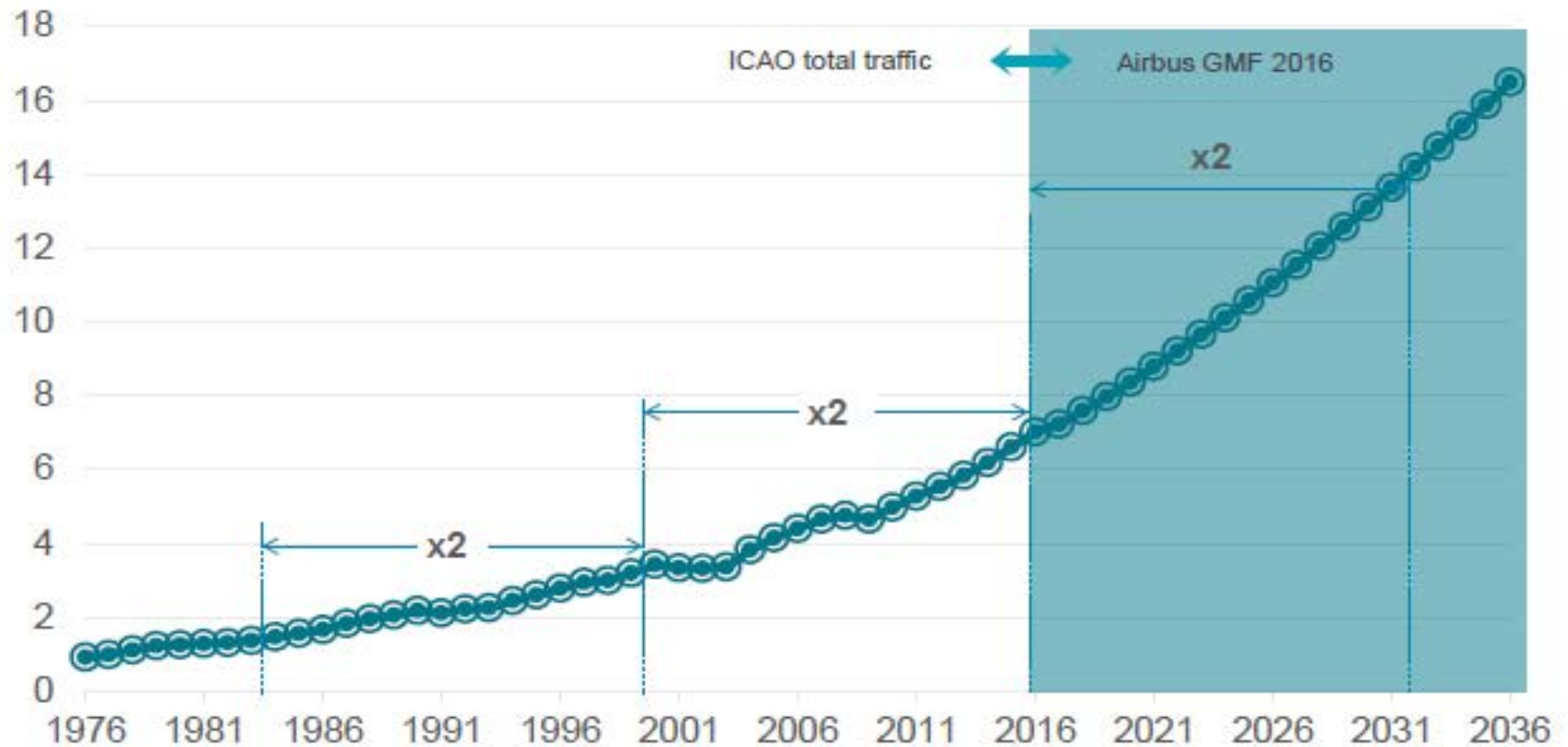
Accidents by flight phase as a percentage of all accidents 1999-2018



ANNUAL TRAFFIC

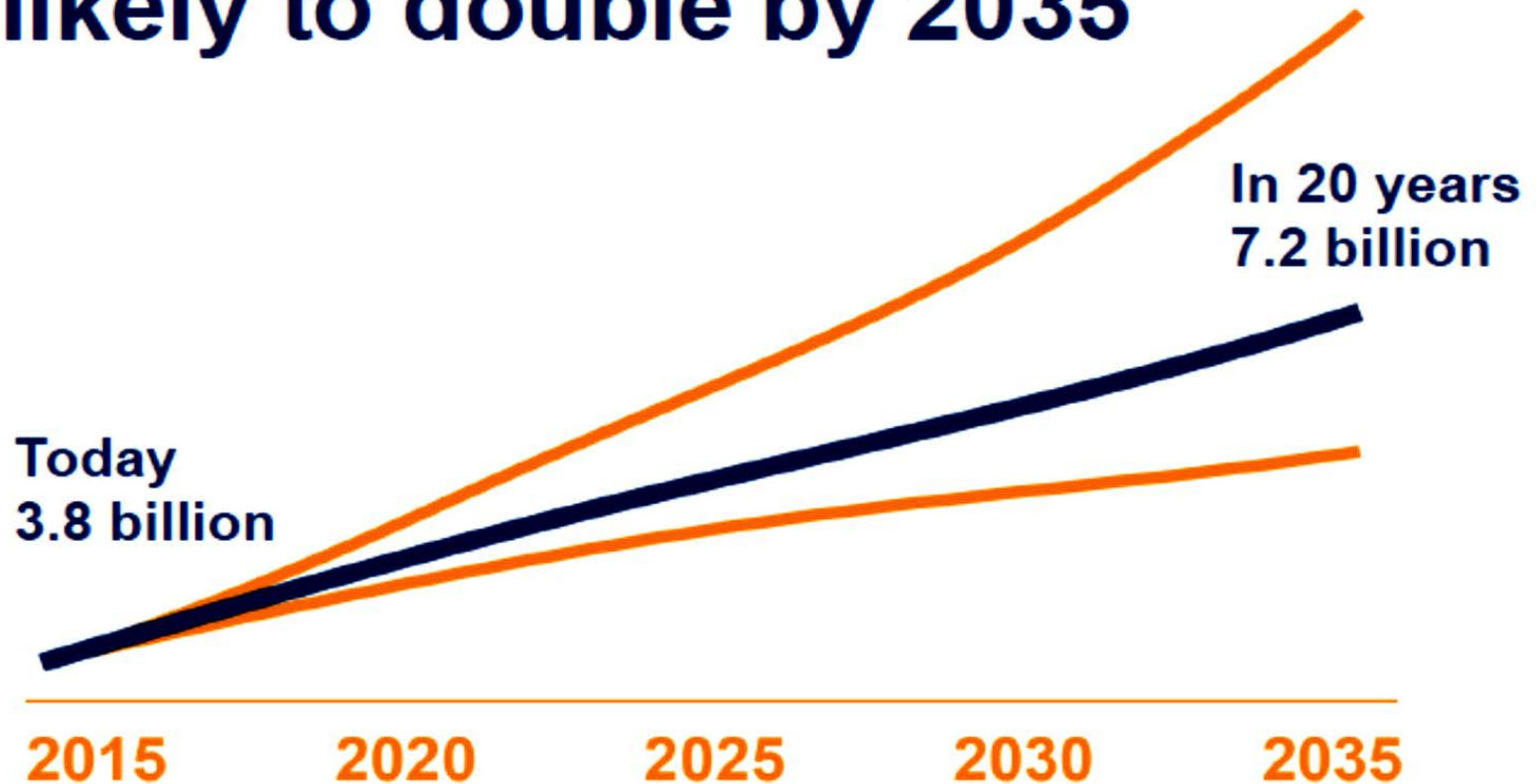
World annual traffic history & forecast

Revenue Passenger Kilometers per year (trillion)



Annual Passenger traffic

Annual Passenger traffic likely to double by 2035



Source: IATA/TE Passenger Forecasting service

Flight Safety in Greece

- The first flight to Greece 25/03/1911
- The beginning of air transport to/from Greece 1924
- Establishment of Ministry of Aviation 13/12/1929
- The first Greek airline flight 10/07/1931

Fatal accidents in Greece

Commercial Passengers Flights

1929 - 2019 18 Fatal Accidents

- Five accidents before 1940
- Thirteen from 1947 (the 1st SX- registered 06/06/1949)
 - ✓ Six - CFIT (Control Flight Into Terrain)
 - ✓ Two - Structure failure during flight
 - ✓ One - Runway Excursion (overrun)
 - ✓ One - Flight Crew Incapacitation
 - ✓ Three - Terrorist Actions
- Total number of fatalities 731

Fatal accidents in Greece

Commercial Cargo Flights

1929 - 2018 3 Fatal Accidents

- One - Terrorist Action
- Two - Excessive alcohol consumption by the crew

Fatal accidents in Greece Before 1940's

s/n	Date	Reg.	Accident Place	Aircraft Type	Airline	Flight Phase	Contributing Factors	Fatalities	
								Pax	Crew
1	27/1/1929	I-AZDA	Corfu	CMASA Wal	Aeroespresso Italiana S.A.	En-route	Weather	2	0
2	18/7/1933	I-AZEE	Makronisos	CMASA Wal	Aeroespresso Italiana S.A.	En route	Weather	2	4
3	22/8/1936	G-ABFA	Mirabelou Bay Crete	Short S17 Kent	Imperial Airways	Approach		2	0
4	1/12/1936	SP-AYB	Malakasa Attika	Lockheed 10A Electra	LOT Polish Airlines	Approach	Weather	1	0
5	1/10/1937	G-ADVC	Faliron Bay	Short S23 Empire Flying Boat	Imperial Airways	Approach		2	0

Note: All of them except no#4 were seaplanes

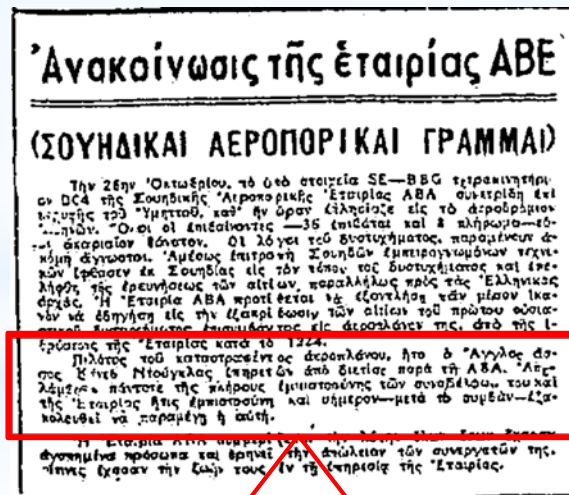
Fatal accidents in Greece after 1940's CFIT

s/n	Date	Reg.	Accident Place	Aircraft Type	Airline	Flight Phase	Category	Fatalities	
								Pax	Crew
6	26/10/1947	SE-BBG	Madara-Evzones Mount Ymitto	DC4	AB Aerotransport	Initial Approach	CFIT	36	8
10	8/12/1969	SX-DAE	Keratea Attika	DC6B	OAL	Initial Approach	CFIT	85	5
11	21/10/1972	SX-BBQ	Voula	YS-11A-520	OAL	Final Approach	CFIT	36	1
13	23/11/1976	SX-BBR	Sarantaporo Kozanis	YS-11A-520	OAL	Initial Approach	CFIT	46	4
16	3/8/1989	SX-BGE	Samos Mount Kerketeas	Short SD3- 30-200	OLAV	Final Approach	CFIT	31	3
17	17/12/1997	UR- 42334	Five Towers - Pieria Mountains	YAK42	Aerosweet	Missed approach	CFIT	62	8

Fatal accidents in Greece after 1940's

CFIT (CONT.)

s/n	Date	Registration	Accident Place	Aircraft Type	Airline	Flight Phase	Category	Fatalities	
								Pax	Crew
6	26/10/1947	SE-BBG	Madara- Evzones Mount Ymittos	DC4	AB Aerotransport	Initial Approach	CFIT	36	8



The Pilot of the destroyed airplane was the English ace Kenneth Douglas serving in ABE, the last two years. He was always enjoying the full confidence of his colleagues and the airline. This confidence - after the event - remains the same.

Fatal accidents in Greece after 1940's

CFIT (CONT.)

s/n	Date	Registration	Accident Place	Aircraft Type	Airline	Flight Phase	Category	Fatalities	
								Pax	Crew
10	8/12/1969	SX-DAE	Keratea Attika	DC6B	OAL	Initial Approach	CFIT	85	5

The accident happened during the time that the PIC was trying to avoid a squall line which was developed in a straight line with ILS-LOC of LGAT which was the destination.

s/n	Date	Registration	Accident Place	Aircraft Type	Airline	Flight Phase	Category	Fatalities	
								Pax	Crew
11	21/10/1972	SX-BBQ	Voula	YS-11A-520	OAL	Final Approach	CFIT	36	1

The accident attributed to the PIC's decision to apply an inappropriate approach through a storm.

Fatal accidents in Greece after 1940's

CFIT (CONT.)

s/n	Date	Reg.	Accident Place	Aircraft Type	Airline	Flight Phase	Category	Fatalities	
								Pax	Crew
13	23/11/1976	SX-BBR	Sarantaporo Kozanis	YS-11A-520	OAL	Initial Approach	CFIT	46	4

The accident attributed to the PIC's decision to continue the flight after a stopover at Larissa airport, knowing that weather and visibility at destination were poor.

s/n	Date	Reg.	Accident Place	Aircraft Type	Airline	Flight Phase	Category	Fatalities	
								Pax	Crew
16	3/8/1989	SX-BGE	Samos Mount Kerketeas	Short SD3- 30-200	OLAV	Final Approach	CFIT	31	3

The accident attributed to the PIC's decision to perform an inappropriate approach through clouds and not following the operator's IFR procedures.

Fatal accidents in Greece after 1940's

CFIT (CONT.)

s/n	Date	Reg.	Accident Place	Aircraft Type	Airline	Flight Phase	Category	Fatalities	
								Pax	Crew
17	17/12/1997	UR-42334	Five Towers - Pieria Mountains	YAK42	Aerosweet	Missed approach	CFIT	62	8

The accident attributed to :

- Flight crew disorientation,
- Difficulty of crew to make appropriate decisions at the right time, due to existence of an instructor pilot in the composition of the flight crew. Both, the Pilot In Command and the trainee copilot didn't make the appropriate decisions.

Fatal accidents in Greece after 1940's TERRORIST ACTION

s/n	Date	Reg.	Accident Place	Aircraft Type	Airline	Flight Phase	Cause	Fatalities	
								Pax	Crew
7	21/12/1948	OK-WDN	Great Lakka-Alagonia-Mount Taygetos	DC3	CSA	En-route	Penetration to Prohibited Airspace	19	5
12	8/9/1974	N8734	Ionia Sea Int. Water near Kefalonia	Boeing 707-331B	TWA	En-route	Terrorist action	79	9
15	2/4/1986	N54340	Over Argolida	B727	TWA	En-route	Terrorist action	4	7

Fatal accidents in Greece after 1940's

Structural failure during flight

s/n	Date	Reg.	Accident Place	Aircraft Type	Airline	Flight Phase	Contributing factors	Fatalities	
								Pax	rew
8	6/6/1949	SX-BAI	Malakasa Attika	DC3	TAE	En-route	Weather	18	4
9	29/10/1959	SX-BAD	Avlona Attika	DC3	OAL	En-route	Maintenance	15	3

Runway Excursion (overrun)

s/n	Date	Reg.	Accident Place	Aircraft Type	Airline	Flight Phase	Contributing factors	Fatalities	
								Pax	Crew
14	7/10/1979	HB-IDE	LGAT	DC8-62	Swissair	Landing	Weather & Landing Tech	14	0

Fatal accidents in Greece after 1940's CREW INCAPASITATION

s/n	Date	Reg.	Accident Place	Aircraft Type	Airline	Flight Phase	Cause	Fatalities	
								Pax	Crew
18	14/8/2005	5B-DBY	Grammatiko Attika	B737-320	Helios Airways	During climb after take-off	Flight Crew Incapacitation	115	6



FLIGHT SAFETY IN GENERAL AVIATION IN GREECE

- Examined period: **1911** (Otto Lilienthal) – **31/12/2019**
- 1st recorded flight in Greece: **25/3/1911** (Sergei Utochkin)
- 1st recorded flight in Greece by a Greek: **8/2/1912** (Emmanouil Argiropoulos)
- 1st recorded fatal accident in Greece : **29/8/1912** (Alexandros Karamanlakis)
- Total recorded incidents in General Aviation in Greece: **483**
- Total recorded fatal accidents in Greece: **94**
- Total recorded fatalities in General Aviation in Greece: **136**

FLIGHT SAFETY IN GENERAL AVIATION IN GREECE

Decade	Parachute	Para glider	Hang glider	Glider	Ultra light	Helicopter	Single engine	Twin engine	Total of incidents
1910							1		1
1950				3			2		5
1960				1		9	22	3	35
1970				1		6	54	9	70
1980				2	3	21	49	6	81
1990		2	3	2	8	24	46	10	95
2000	1	14	3	1	14	15	38	11	97
2010	2	26	1	1	15	11	33	10	90
Incidents	3	42	7	11	40	86	245	49	483

We may not be able to avoid Accidents...
...but WE CAN LEARN FROM THEM !



We can learn from them....

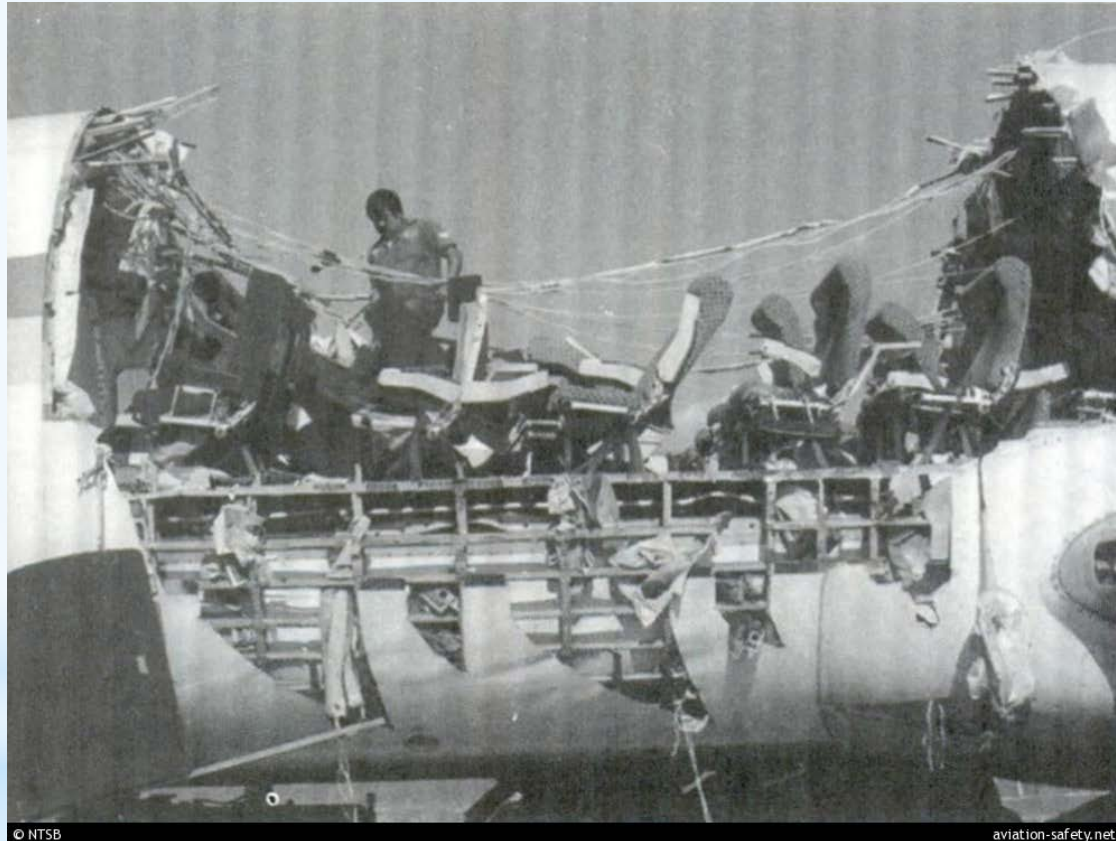
What about maintenance?



BAC One-Eleven, G-BJRT, 10 June 1990

We can learn from them....

What about maintenance?



Aloha Airlines Flight 243/28 April 1988

We can learn from them....

Runway Incursions...



We can learn from them....

What about F.O.D.



We can learn from them....



What about RAMP?



Can Birds enter the cockpit?





AMERICAN
AVIATION

LEARN TO
FLY HERE!

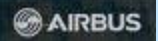


We prefer pictures like.....:





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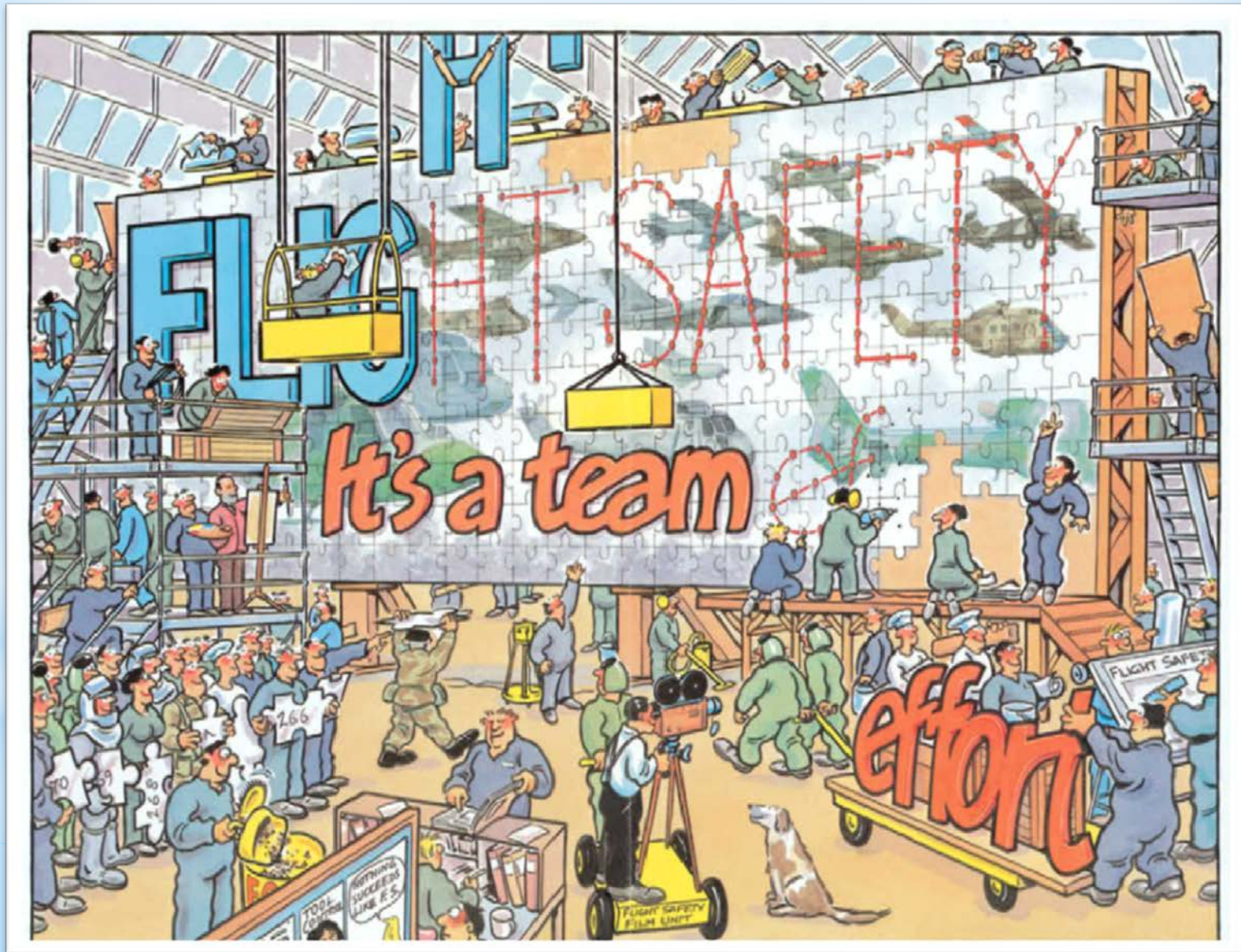
General aviation surveillance



Continue to enhance SAFETY TOGETHER:

- SMS, Safety Culture, Safety Strategy
- Risk Management (Hazards Identification, Risk Assessment, Decision Making, Decision Implementation, Monitoring)
- 'Big data' – identification of trends
 - ✓ At individual organisation level
 - ✓ At National and International scale
- Continuous implementation of known lessons learned
- Further improving the sharing of Safety information

Flight Safety



Flying is the Safest Mode

of Flying is the Safest Mode

of Public Transportation



Questions /Comments?



