EASA
European Union Aviation Safety Agency

Welcome to the EASA Fuel Webinar

July 2022

Regulation (EU) 2021/1296 and ED Decision 2022/005/R

Air Operations – Flight Standard directorate.
Safety promotion – Strategy & Safety managements directorate.
EASA Project management Fuel Regulatory framework

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Agenda

13:30 – 13:40 – **Welcome: John Franklin & Eduard Ciofu (EASA)**
13:40 – 13:50 – **ICAO background**
13:50 – 14:30 –**New Fuel Rules:**

- **Concept of Fuel schemes**
- **Operator capabilities - OCC capabilities – flight monitoring, flight watch – safety relevant information.**
- **Operators capabilities and aircraft capabilities.**

14:30 – 14:45 – **Rules Q&A: Led by EASA.**
14:45 – 15:00 – Break
15:00 – 15:15 – **Implementation Plan at an Airline: Lufthansa Group**
15:15 – 16:00 – **Panel discussion – Experts from the industry**
16:00 – 16:15 – **Safety Promotion Developments and Webinar Closing**

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Welcome by HoD
July 2022

Regulation (EU) 2021/1296 and ED Decision 2022/005/R

Eduard CIOFU

Head of department Air OPS & Aerodromes.
Air Operations – Flight Standard directorate.

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July 7th, 2022

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Fuel Webinar
July 2022

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Francisco ARENAS ALVARINO

EASA Project manager Fuel Regulatory framework
Senior OPS Expert and Air CREW expert
Air Operations – Flight Standard directorate.

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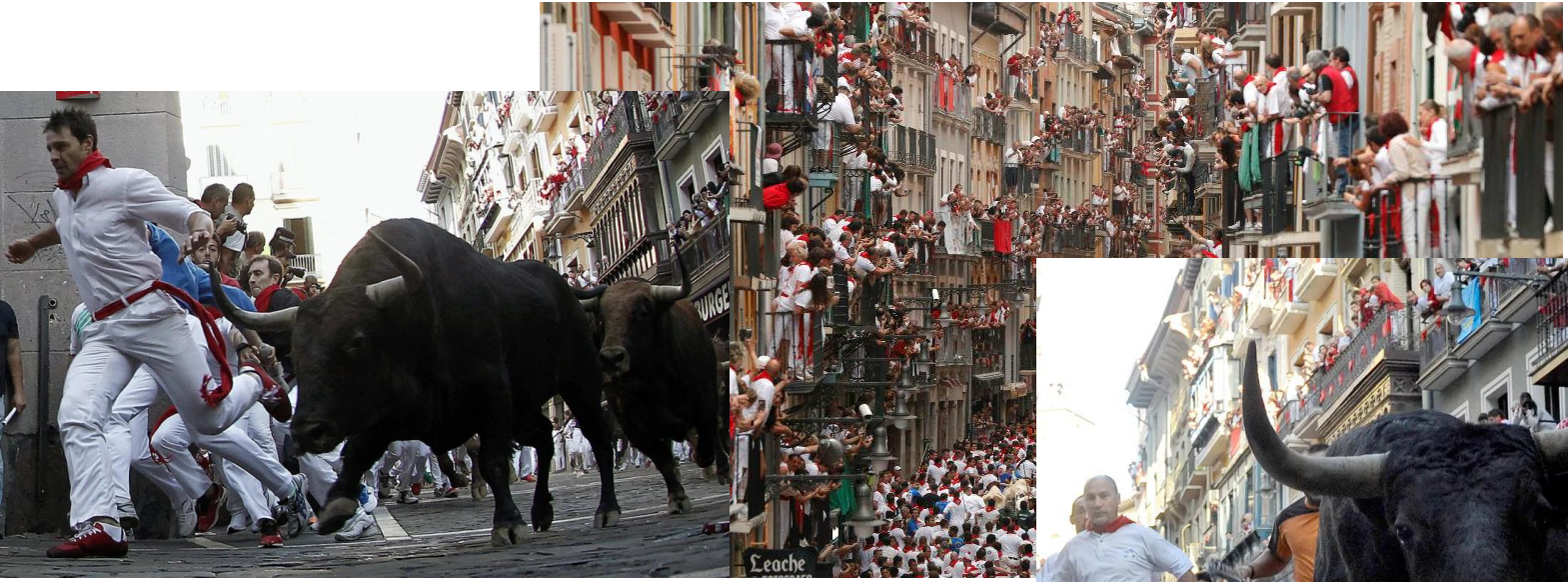
30 October 2022 Implementation date.



7 de Julio San Fermín.

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Implementation support

→ 2nd Webinar 21.09.2022 (13:00 – 16:30) on Fuel – Tentative

- → **13:00 –13:10 – Welcome: John Franklin & Micaela Verissimo (EASA)**
- → **13:10 – 13:30 – Capabilities of the Competent authority. Focus on individual Fuel schemes (it should include a short introduction of the different fuel schemes – basic, basic with variations, individual).**
- → **13:30 – 14:00 – EASA Helicopters Rules and one operator Helicopters.**
- → **14:00 – 14:15 – Rules Q&A: Led by EASA.**
- → **14:15 – 14:30 – Break**
- → **14:30 – 15:00 – Implementation Plan at an Airline: Selection of aerodromes. (alternatively fuel policy). (airline to be determined)**
- → **15:00 – 15:55 – Panel discussion – Experts from the industry: All presenters and Kai Oltmann (LIDO) + Adina Szonyi (EASA)**
- → **15:55 – 16:05 – Latest Safety Promotion Developments and Webinar Closing: John Franklin (EASA)**

Implementation support

→ The New Fuel rules are available in the easy access rules

  → May 2022 Revision 18

  → See more in https://www.easa.europa.eu/document-library/easy-access-rules/easy-access-rules-air-operations-regulation-eu-no-9652012

→ AWO rules - Regulation (EU) 2021/2237 available as well in Rev 18.

→ AWO AMC&GM NOT available until Nov 2022.

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ICAO Background.
July 2022

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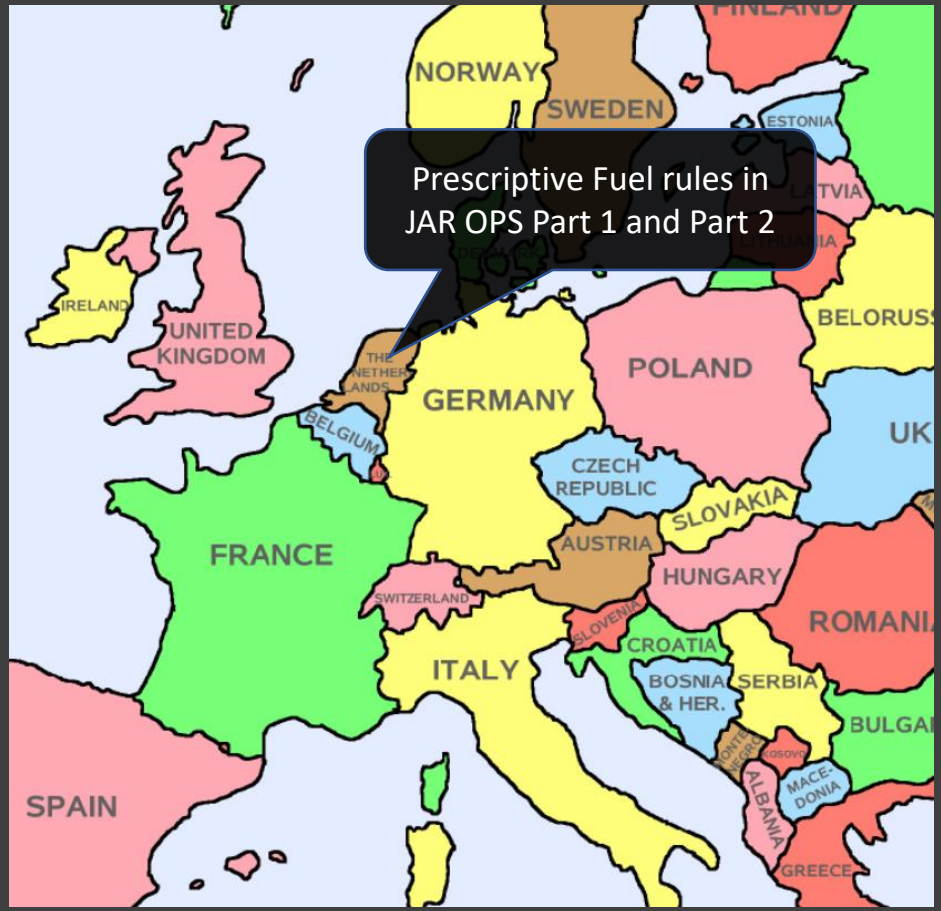
From Hoofddorp to Cologne via …Montreal

Captain Claude Godel

The development of the new European Fuel Policy

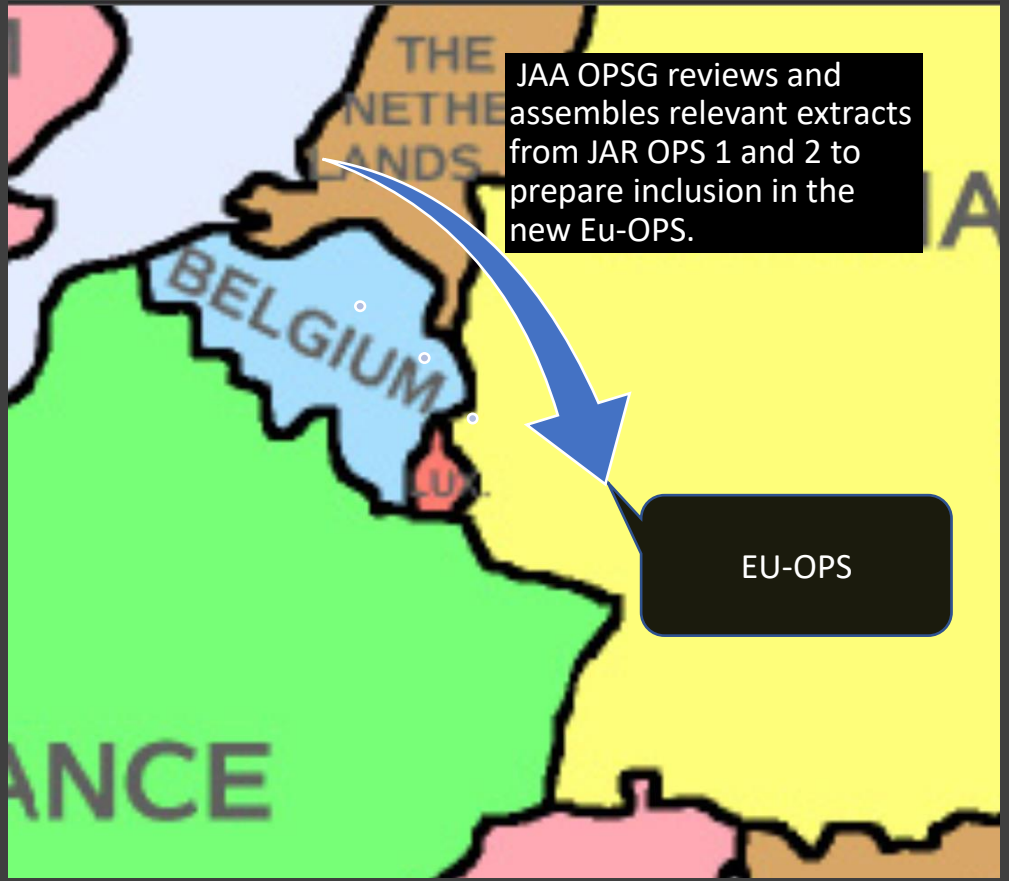
Sometime before 2008

Joint Aviation Authorities, Hoffddorp Netherland



July 2008

EU-OPS, Cologne Germany



2009

IATA, Montréal Canada

IATA, very interested, suggests to use the new EU-OPS Fuel Policy as new

November 2012

ICAO, Montréal Canada

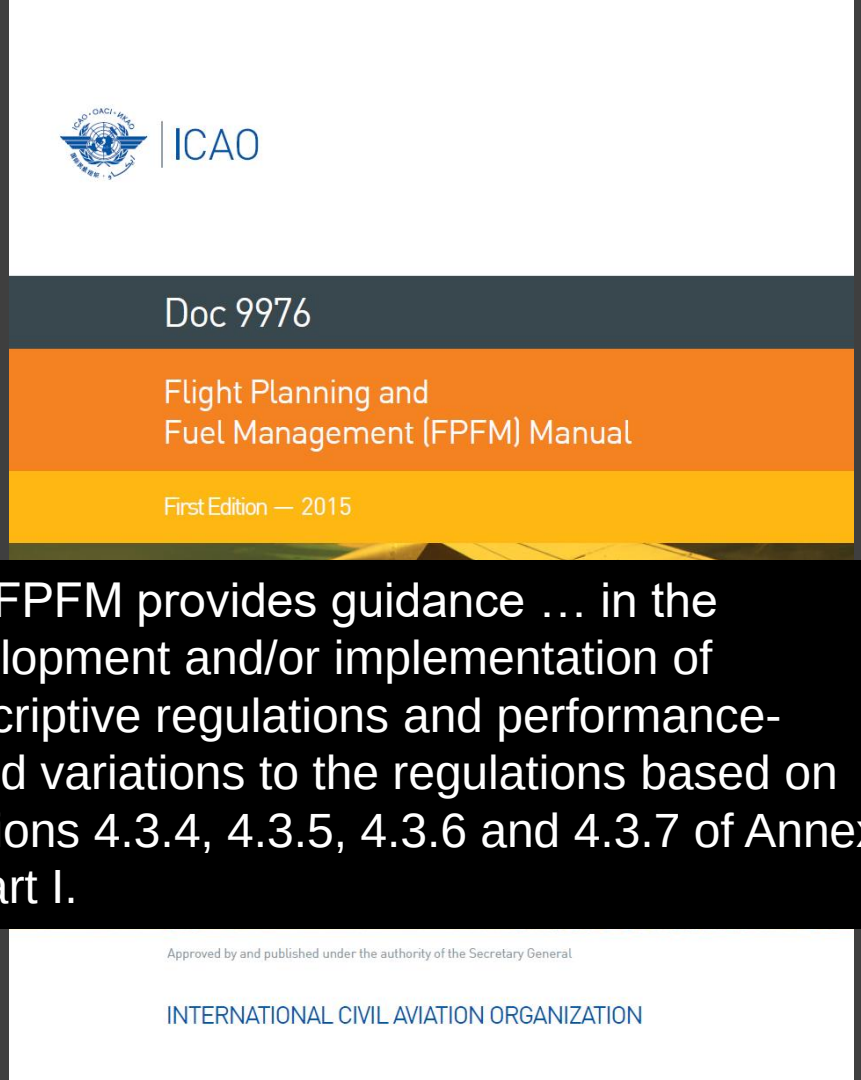
The ICAO FUSG (Authorities + IATA, IFALPA,..) writes new standards allowing performance-based variations.

Old Standards:
Annex 6, Part I, provided very general guidance for alternate aerodrome selection and fuel planning…
Alternate aerodrome selection criteria and contingency fuel requirements were not sufficiently detailed. This lack of detail in Annex 6 may have resulted in the implementation of extremely conservative and prescriptive national policies for flight planning that are not adaptable to a rapidly changing and increasingly complex operating environment.

New standards as per FUSG:
Amendment 36 to Annex 6, Part I, ushered in a new era where operators can improve overall operational efficiency and reduce emissions by implementing national regulations based on globalized prescriptive standards or operational variations from such standards based on an individual operator's ability to achieve target levels of safety performance.

ICAO, Montréal Canada

The new ICAO reference Manual, the FPFM

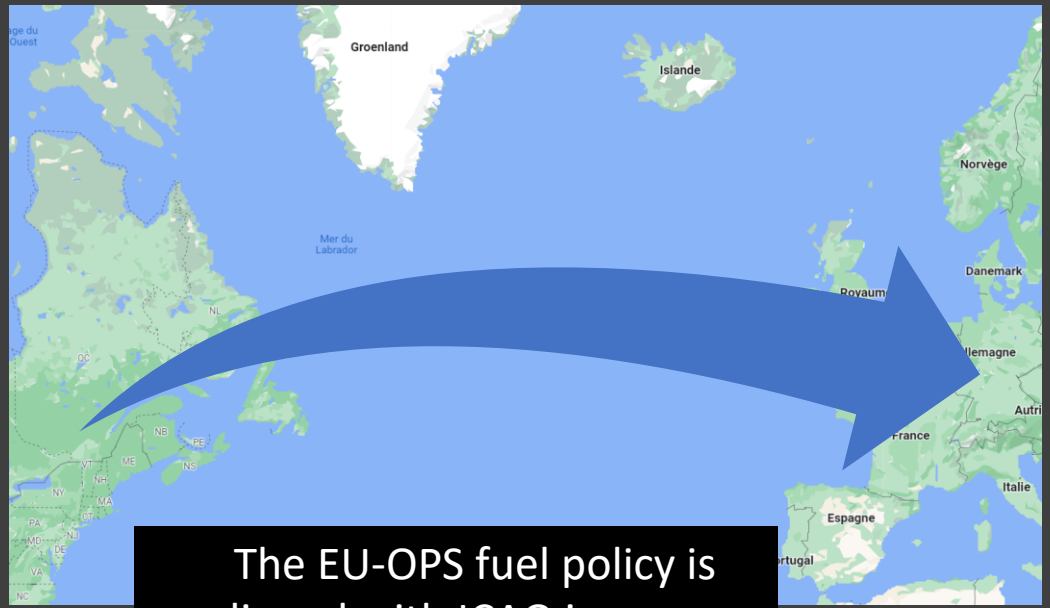


The FPFM provides guidance … in the development and/or implementation of prescriptive regulations and performance-based variations to the regulations based on Sections 4.3.4, 4.3.5, 4.3.6 and 4.3.7 of Annex 6, Part I.

2015

EASA,
Cologne Germany

RMT 573 drafts an ICAO compliant new fuel policy taking advantage of the possibility of performance-based variations.



The EU-OPS fuel policy is aligned with ICAO in a new performance-based version.

2022

EASA,
Cologne Germany

Fuel Webinar

With the approval of
your Authority,
load the
“right fuel quantity”

Thank you

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Concept of Fuel schemes
July 2022

Regulation (EU) 2021/1296 and ED Decision 2022/005/R

Francesco GAETANI

Chair Rulemaking group RMT.0573 Fuel Regulatory framework
Head of Aircrew & Medical Department / Chief Pilot
Flight Standard directorate.

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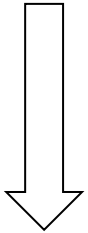
Current fuel rules structure

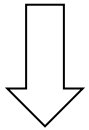
Fuel planning policy



Performance based

Prior approval required

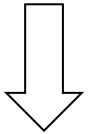
In-flight fuel management policy



Prescriptive

Prior approval not required

Selection of aerodromes & planning policy



Prescriptive

Prior approval required for some parts, however detached from fuel planning

New fuel rules for CAT

Fuel planning / in-flight replanning policy

+

Selection of aerodromes & planning policy

+

In-flight fuel management policy

Safety objective in the IR

+

Means to comply in the AMC

=

Performance-based regulation

Fuel rules for CAT - Performance-based rules

The new rules allow increased efficiency/flexibility in fuel planning, relying on two sets of competencies:

1. **Operator**: organisational and operational capabilities
2. **Authority's inspectors**: understand, monitor, and validate the proposed criteria, particularly "*the relevance and meaningfulness of the operator's SPIs, SPTs, and means by which these SPTs are achieved*"

Fuel rules for CAT – example on Cont Fuel

CAT.OP.MPA.18X series

Basic fuel scheme

Prescriptive: 5% contingency fuel

- No special requirements for the authority
- No special requirements for the operator
- Current situation for most operators

Basic fuel scheme with variations

Variations to basic fuel scheme: 3% contingency fuel

- No special requirements for the authority
- Some requirements for the operator (e.g. ERA, fuel consumption monitoring program required)
- EASA can create new variations in the future

Individual fuel scheme

Can be reduced based on criteria

- Baseline performance (2 years of data on agreed SPIs)
- Safety risk ass. (= or > LoS)
- Continuous reporting with CA
- Available infrastructure in the area of operation
- Organisational control (processes + resources)
- Operational capabilities

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Operator Control Capabilities

Flight Following / Flight Monitoring / Flight Watch
Safety Relevant Information

Regulation (EU) 2021/1296 and ED Decision 2022/005/R

Alexandre ADELLE
Aircraft Performance Engineer at Airbus
Former EASA Graduate Trainee in Air Operations

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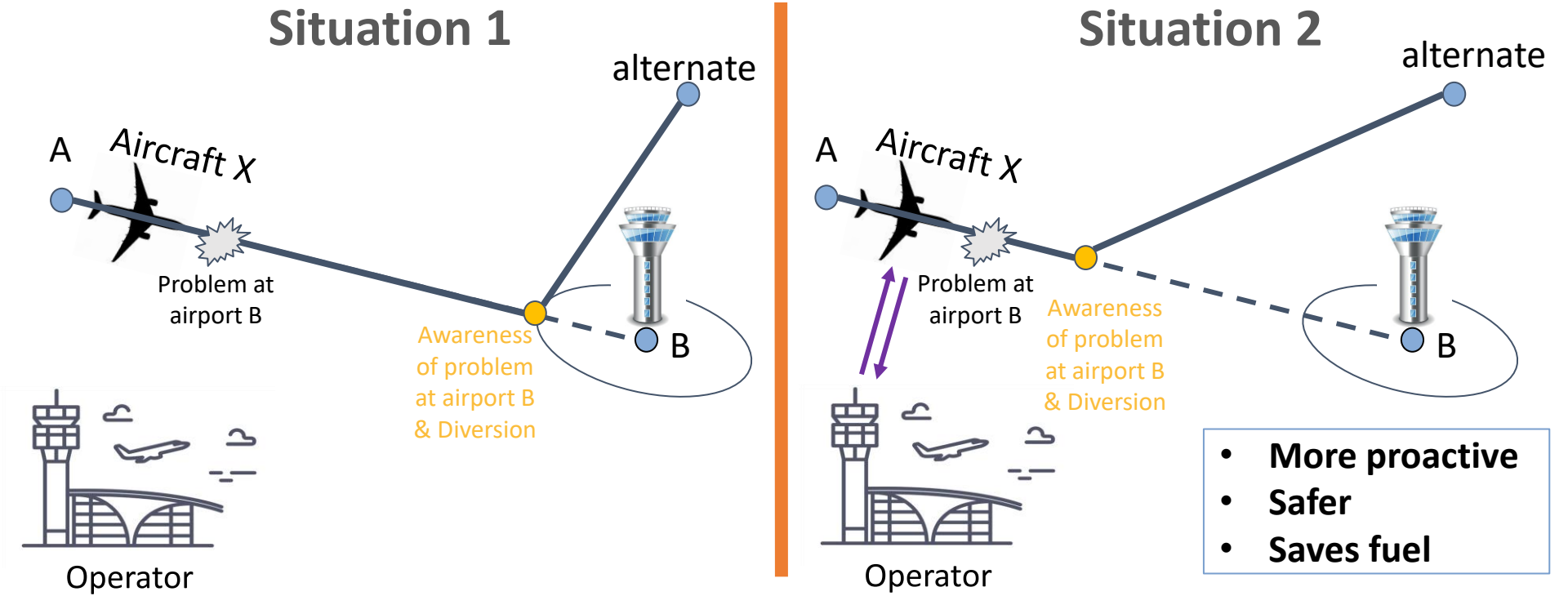
Intent of the new rules



The new regulatory framework encourages Situation 2.
This safety investment can be rewarded through a more efficient fuel policy.

Fuel Schemes vs Operator Control Capabilities

FUEL/ENERGY SCHEME

BASIC

BASIC WITH VARIATIONS

INDIVIDUAL

OPERATOR CONTROL CAPABILITIES

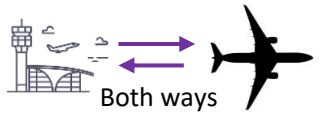
"FLIGHT FOLLOWING"
(minimum advised)

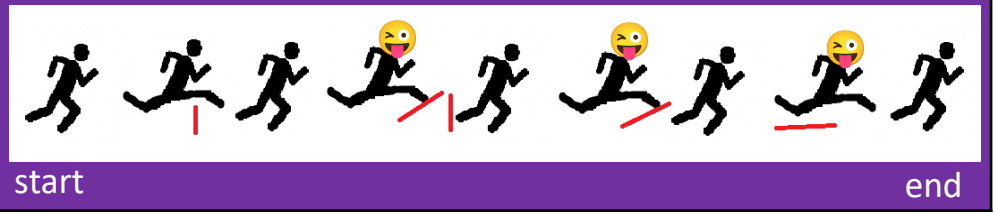
"FLIGHT MONITORING"
(minimum required)

"FLIGHT WATCH"
(recommended)

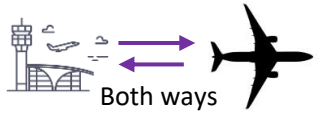
Regulation (EU) No 965/2012 → CAT.OP.MPA.180
Regulation (EU) No 965/2012 → Annex I Definitions

Flight following / Monitoring / Watch : what properties ?



Capability	Primary communication: the position
FLIGHT FOLLOWING	**Recording in real time** • of departure • of arrival messages ○ at the destination ADR ○ an alternate ADR 
FLIGHT MONITORING	**Operational monitoring** **From departure throughout all phases of the flight** ("taxi, take-off, climb, cruise, cruise steep climb, descent, approach, landing") 
Additional provisions for FLIGHT WATCH	**+ Active tracking of a flight** ⇒ *Exact aircraft position* 

Flight following / Monitoring / Watch : what properties ?



Capability	Additional communications	Operator's personnel involved
FLIGHT FOLLOWING	Not required	**"Operational personnel"** (no formal training required)

FLIGHT MONITORING	• All available and **relevant safety information**
	• **Critical assistance** to the flight crew if
	  ○ in-flight emergency
	  ○ security issue
	  ○ request of the flight crew
		"Suitably qualified operational-control personnel"
		(formal training detailed by AMC1 ORO.GEN.110)
		• FOOs (Flight Operations Officers) / FDs (Flight Dispatchers)
		• Training programme (initial + operator-specific + recurrent)
		• Training provided by qualified instructor

<u>Additional</u> provisions for FLIGHT WATCH	2 independent airborne communication systems for individual fuel scheme AMC1 CAT.OP.MPA.180(e)(6) The active tracking allows Operator's personnel to ensure that the flight is **following its prescribed route** without unplanned deviations, diversions or delays	*Same qualifications demanded as for flight monitoring*

Regulation (EU) No 965/2012 → Annex I Definitions 49(d)(e), 50(b)

“Relevant Safety Information”

Applicable to *Flight Monitoring* and *Flight Watch*

is any element that may affect the safety of the flight, such as:

Position Reporting	Aircraft Technical Failure	Unforeseen Hazards	Updates of the operational flight plan when they affect the fuel reserves
		  	

AND other specific risks, based on SMS → Agreement between operator & National Authority

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Operator's capabilities (continue) and Aircraft capabilities

Regulation (EU) 2021/1296 and ED Decision 2022/005/R

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Basic fuel schemes

Operator capabilities

- → Same capabilities as today. However, the new rules promote:
  - → the use of the fuel consumption monitoring system

Basic fuel schemes with variations

Operator capabilities

- → Similar to today's capabilities.
- → However, the new regulatory framework mandates for some variations:
  - → the use of the fuel consumption monitoring system
  - → Computerised flight plan
  - → Additionally, in one specific variation we require: LVO capabilities in another we required multicrew, etc.

Individual fuel schemes (AMC1 CAT.OP.MPA.180)

Operator

- Stablished a baseline safety performance: at least 2 years of DATA.
- Be able to identify and monitor risks associated to the IFScheme. Report to C.Athority.
- Operational control – OCC capabilities – Flight watch or Flight monitoring.
- Operator capabilities: Computerised flight plan, Fuel CMP, LVO, RNP APCH to VNAV min.
  - collection and continuous monitoring of reliable meteorological, aerodrome, and traffic information;
- Personnel training including flight crew
- Aircraft capabilities :
  - fuel prediction system,
  - two independent communication system.
  - the status of aircraft systems that affect fuel consumption and of ground and aircraft systems that affect landing capabilities

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Questions

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