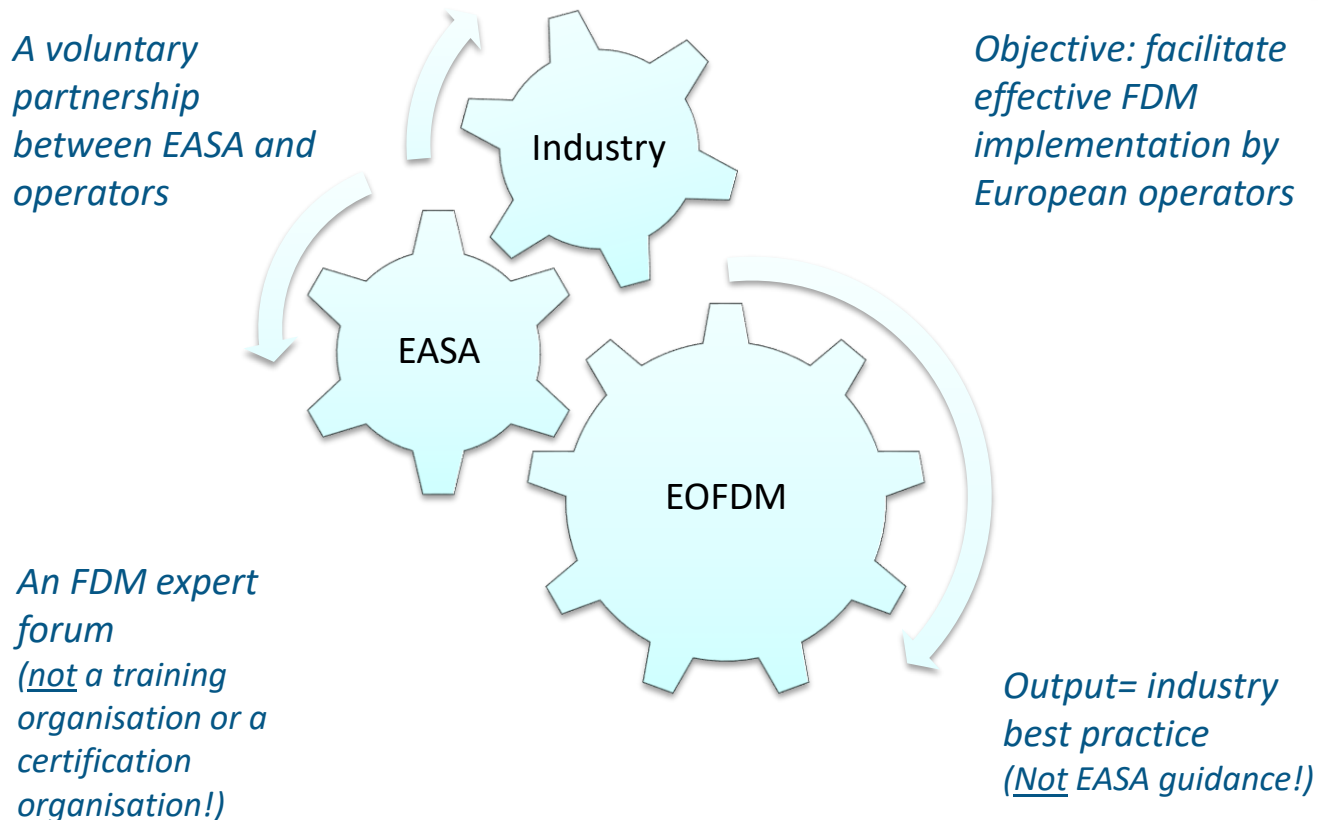


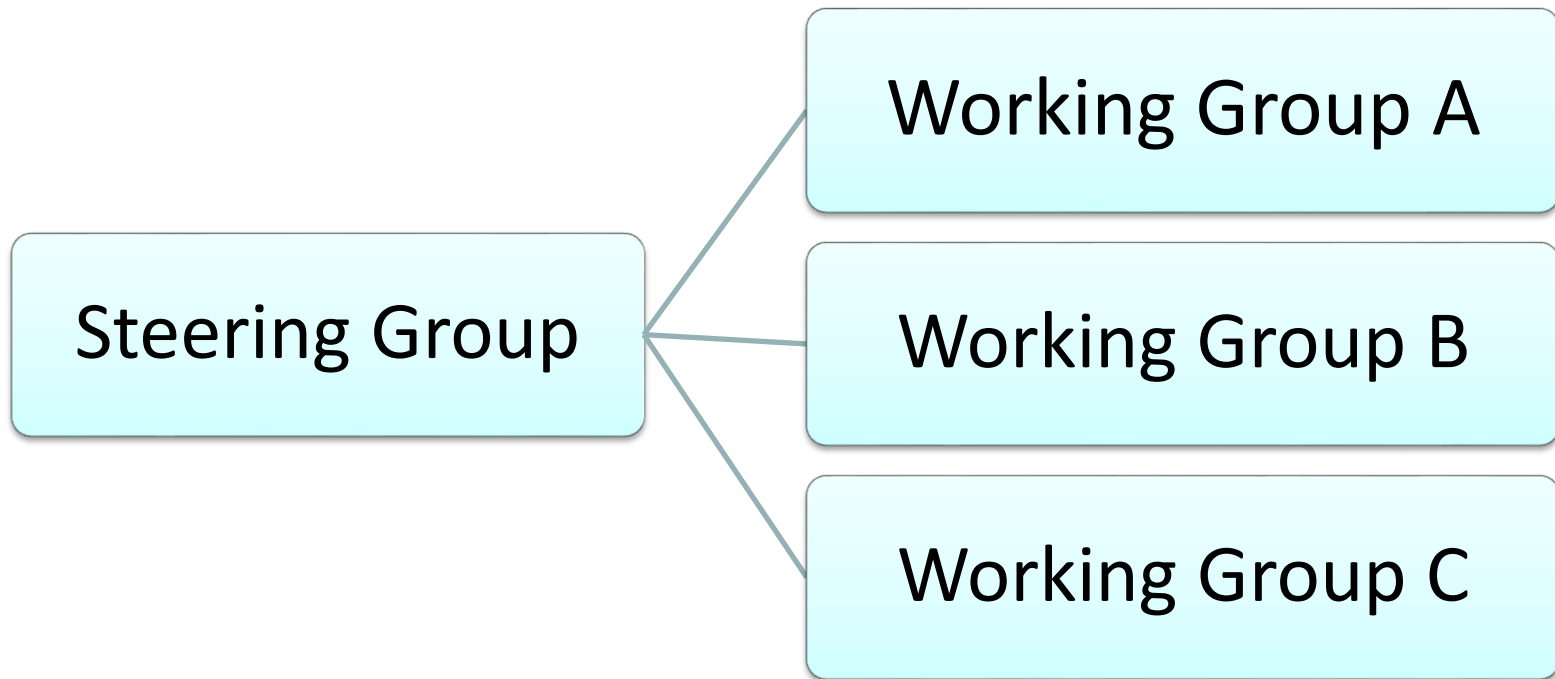
SAFE EOFDM Update 2019

Your safety is our mission.



EOFDM – European Operators FDM







What should be monitored by FDM programmes?

>> Precursors of unwanted scenarios



➤ **Mid Air Collision (MAC)**

- Version 1 has been published on EOFDM homepage

➤ **ICAO Annex 13 – Accident Report Analysis**

- Systematic Review of recent accident reports
- Update EOFDM documents
- Examples: Turbulence encounter entry speeds considerations for LOC-I, missing ground de-icing observable with FDM?



New version of WGA Documentation – JUNE 2019

➤ **Runway Excursion (RE)**

- Example: Information from ROPS/RAAS systems that might be available in FDM considered

➤ **Loss of Control Inflight (LOC-I)**

- Example: Consideration of inappropriate flight control switches (e.g. at low height)

➤ **Controlled Flight into Terrain (CFIT)**

- Example: Time to TAWS alert as a new precursor



How can accident precursors
be monitored through FDM?



➤ WGB Objectives:

- Find and test FDM solutions needed for monitoring precursors defined by WGA.
- Identify useful FDM techniques.
- Define flight parameters performance needed for effective FDM.
- **Clause on ToRs against commercial influence or use**

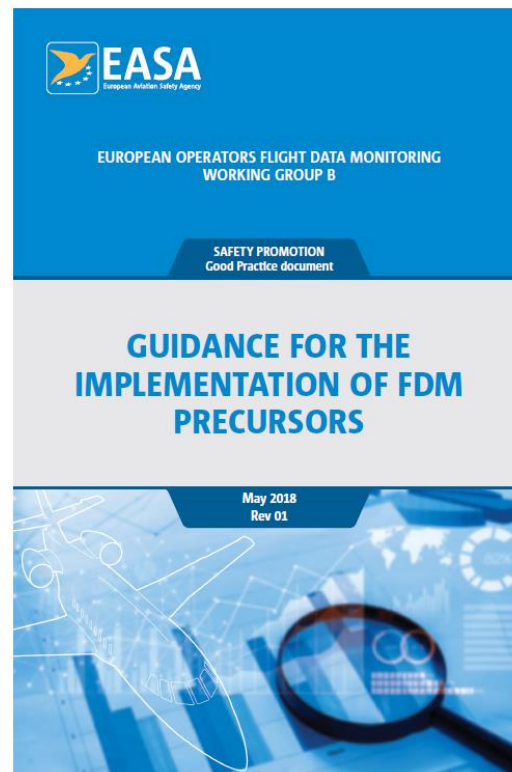


➤ Deliverable:

☐ All Risk Areas covered

- RE
- LOC-I
- CFIT
- MAC

Revision	Date
Rev 01 - Published	May 2018
Rev 02 – To be published	Jun 2019





WG activity (examples)

➤ **Incorrect Performance calculation**

➤ RE01 – Incorrect Performance Calculation

- Thrust lever increase/decrease during TO roll or climb
- Abnormal FMS input: temperature/weight/speeds... etc

➤ RE03 – Monitor CG position

➤ RE05 – Slow acceleration

➤ RE07 – Late rotation

➤ RE08 – Slow rotation

➤ RE09 – No lift-off

➤ LOC08 – CG out of limits

➤ LOC10 – Incorrect performance calculation

➤ LOC11 – Overweight take-off



EOFDM - Working Group C





➤ Delivered:

- *‘Preparing a Memorandum of Understanding (MoU) for an FDM programme’ (2015)*
- *‘Key Performance Indicators for an FDM programme’ (2017)*





➤ Delivered (**NEW!**): *‘Breaking the silos’*

- Combining FDM with other data
 - With ‘contextual data’ (weather, procedures, etc)
 - With ‘subjective data (e.g. air safety reports)
- Practicalities of integrating FDM into the SMS
 - Example: individual FDM-based performance reports
- Confidentiality vs. Safety – where to draw the line
 - What EU Regulation says
 - The notion of ‘circle of confidence’ and principles for sharing information internally

EUROPEAN OPERATORS FLIGHT DATA MONITORING
WORKING GROUP C

SAFETY PROMOTION
Good Practice document

BREAKING THE SILOS



May 2019

Initial issue (unedited)



- Objective: assess the effectiveness of EOFDM activities
 - To orient the strategy in the coming years
- 15 phone interviews
 - with operators not members of EOFDM
 - sampled across regions / types of operation / size
- Results are being assessed
 - Summary of results will be published



EASA
European Aviation Safety Agency

Thank You

fdm@easa.europa.eu



Your safety is our mission.

An agency of the European Union

