



**EASA**  
European Aviation Safety Agency

# Product Certification and Design Organisation Approval Workshop

22<sup>nd</sup> – 23<sup>rd</sup> November 2017

**Your safety is our mission.**

An agency of the European Union 

TE.GEN.00409-001



# EASA

European Aviation Safety Agency

# Continued Airworthiness: Occurrence Reporting

**Aigars KRASTINS**

**Senior Occurrence Reporting Officer /  
Project Certification Manager**

**22/Nov/2017**

**Your safety is our mission.**

An agency of the European Union 

TE.GEN.00409-001



# CONTENTS

- The best practices for occurrence reporting, analysis and follow-up
  - the regulatory obligations for occurrence reporting
  - experience feedback on processing the occurrences
- What comes next?



# **The regulatory obligations for occurrence reporting**



# The overall objective of occurrence reporting

- The overall objective of occurrence reporting is to prevent accidents from occurring by collecting, analysing and following up safety issues and applying corrective actions on high risk areas
- To facilitate the above, R376/2014 formalises:
  - Exchange of information
  - Appropriate reporting format and data quality
  - Data dissemination and protection rules
  - European Risk Classification Scheme
  - Just culture





# Occurrence reporting requirements

## ► Regulation (EC) 216/2008 and Commission Regulation (EU) 748/2012 - 21.A.3A

### (b) Reporting to the Agency

1. The holder of a type-certificate, restricted type-certificate, supplemental type-certificate, ETSO authorisation, major repair design approval or any other relevant approval deemed to have been issued under this Regulation shall report to the Agency any failure, malfunction, defect or other occurrence of which it is aware related to a product, part, or appliance covered by the type-certificate, restricted type-certificate, supplemental type-certificate, ETSO authorisation, major repair design approval or any other relevant approval deemed to have been issued under this Regulation, and which has resulted in or may result in an unsafe condition.

## ► Regulation (EU) 376/2014 and Commission Implementing Regulation (EU) 2015/1018 Annex II

### 2. DESIGN

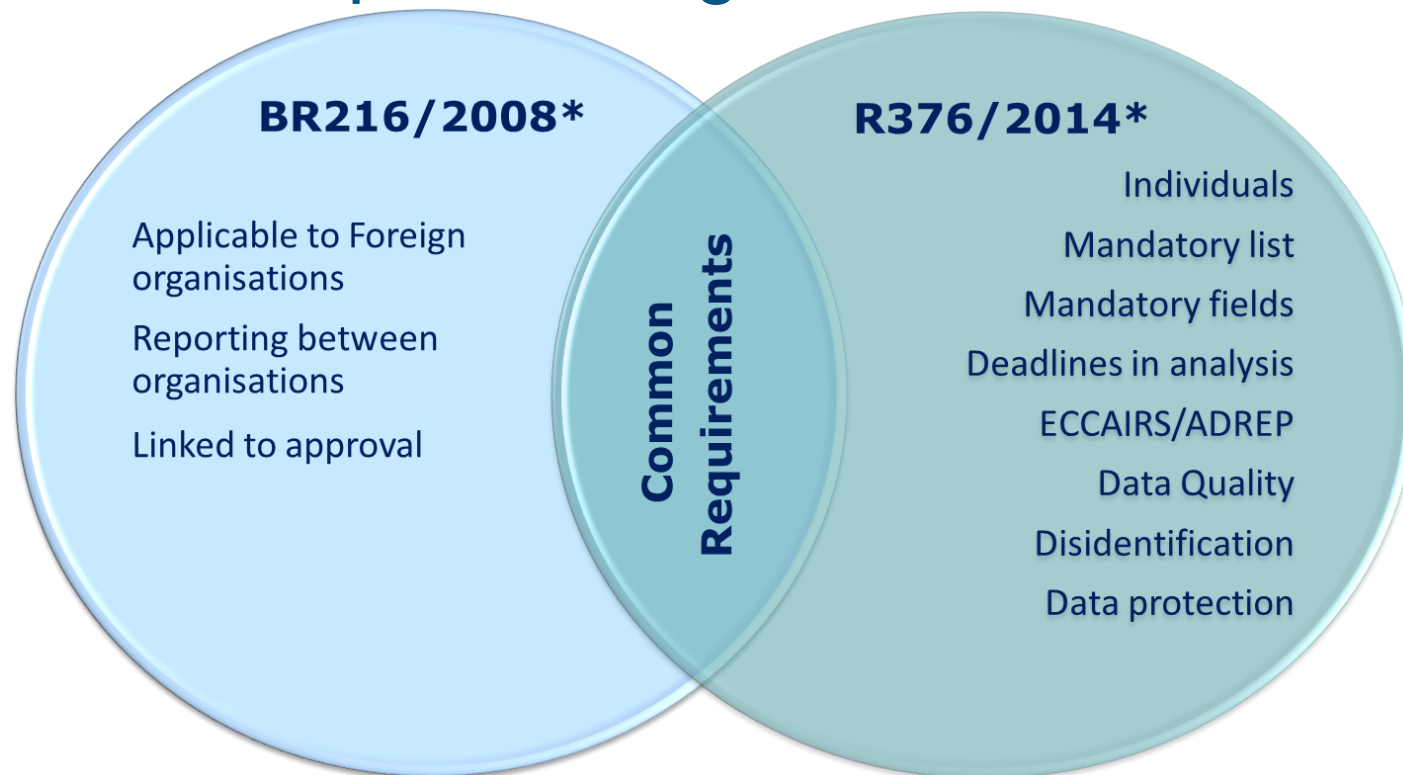
Any failure, malfunction, defect or other occurrence related to a product, part, or appliance which has resulted in or may result in an unsafe condition.

*Remark:* This list is applicable to occurrences occurring on a product, part, or appliance covered by the type-certificate, restricted type-certificate, supplemental type-certificate, ETSO authorisation, major repair design approval or any other relevant approval deemed to have been issued under Commission Regulation (EU) No 748/2012 <sup>(1)</sup>.



# The main overall principle

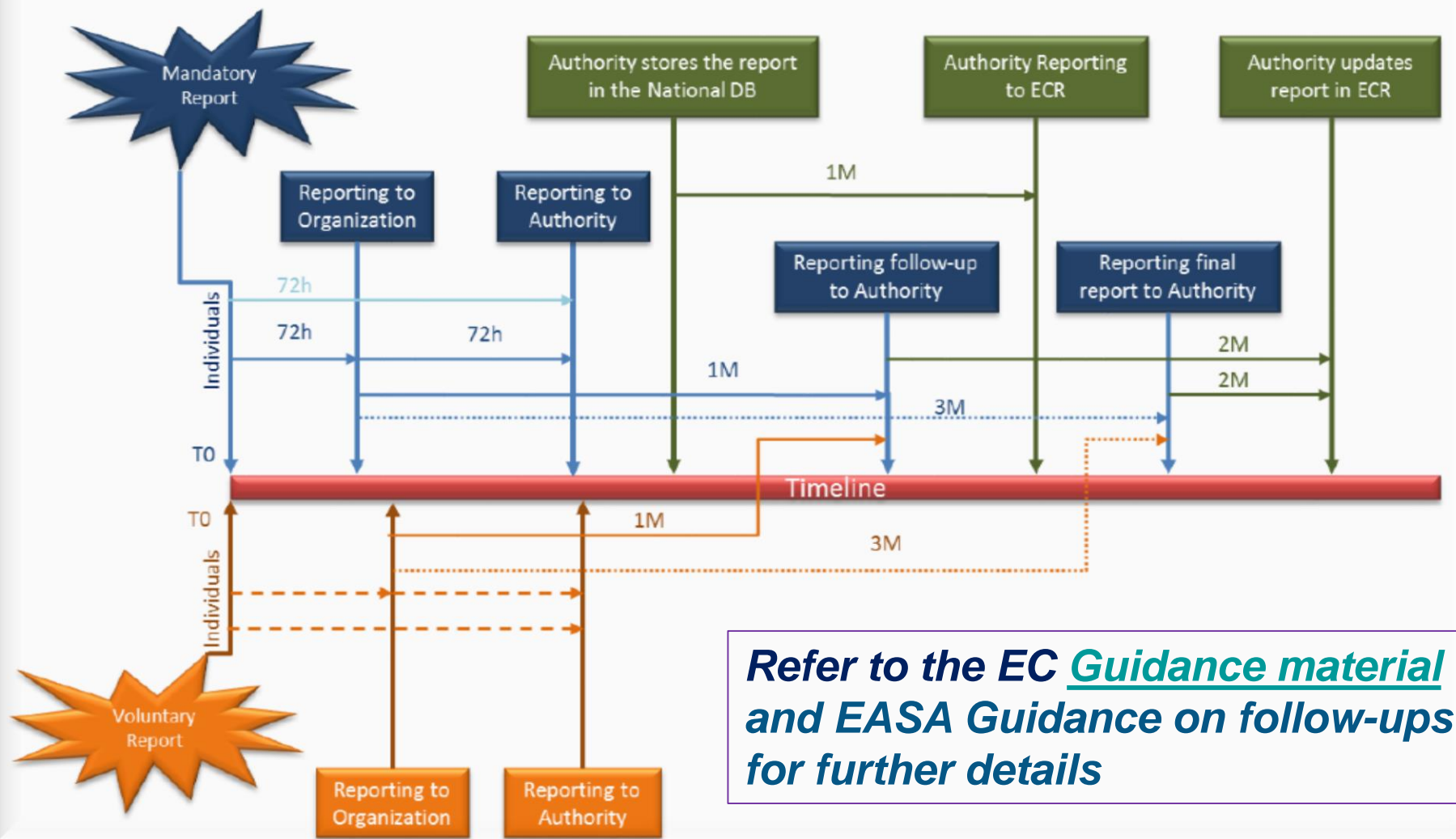
- The main principle is that there should be only one reporting system within an organisation which is compliant to both R376/2014 and R216/2008 and Implementing Rules





# Reporting flow

Diagram 2. Flow of information under Regulation 376/2014







- R376/2014 Article 13 provides a requirement to report follow ups and closure reports
- It was understood that these requirements might be subject to interpretation
- Therefore, to facilitate a mutual understanding, a guidance was generated for DOA and POA holders.



# EASA guidance on follow ups for DAH/POA

Question: Unsafe or potential unsafe condition identified?

## Initial report

A: **No** – may delay reporting and send once closed, state no Unsafe condition exists\*

A: **No** – but Initial report was already sent

A: **Yes**

## Voluntary reporting

## Follow up report

N/A

N/A

Provide 30 days update  
(note information expected)

## Closure report

N/A

Closure report should state that no Unsafe condition exists\*

As soon as available and in principle no later than in 3 months (recognised that it may take longer for complex investigations). Quality of occurrence analysis should not be affected.

\* Information expected: cause(s) of the occurrence and on the TC holder corrective or preventive actions (if any).



- The follow-up/final (closure) report shall include:
  - The latest/final TC holder position as to whether a (potential) unsafe condition exists;
  - The occurrence analysis and first/final investigation results – including cause(s) of occurrence;
  - The containment/corrective and preventive actions;
  - A risk assessment supporting that these corrective and preventive actions allow the product to be operated safely (refer to Part 21 GM 21.A.3B(d)(4) Defect correction – Sufficiency of proposed corrective action or relevant DOA procedure).

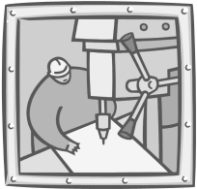


# EU system – Organisations Perspective

R216/2008 and IR | R376/2014 and IR | R996/2010



- Org 3 – Designer



- Org 4 – Production



**Occurrence**

- Org 1 – Maintainer

## Reporting between Organisations



- Org 2 – Operator

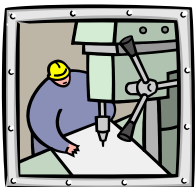


# EU system – Authorities Perspective

R216/2008 and IR | R376/2014 and IR | R996/2010



Design



Production



Maintenance

➤ Reporting to the competent authority via:



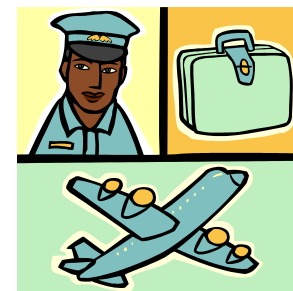
[a.eu/easa-and-you/safety-management/occurrence-](http://a.eu/easa-and-you/safety-management/occurrence-)



Aerodromes



ATM/ANS Providers



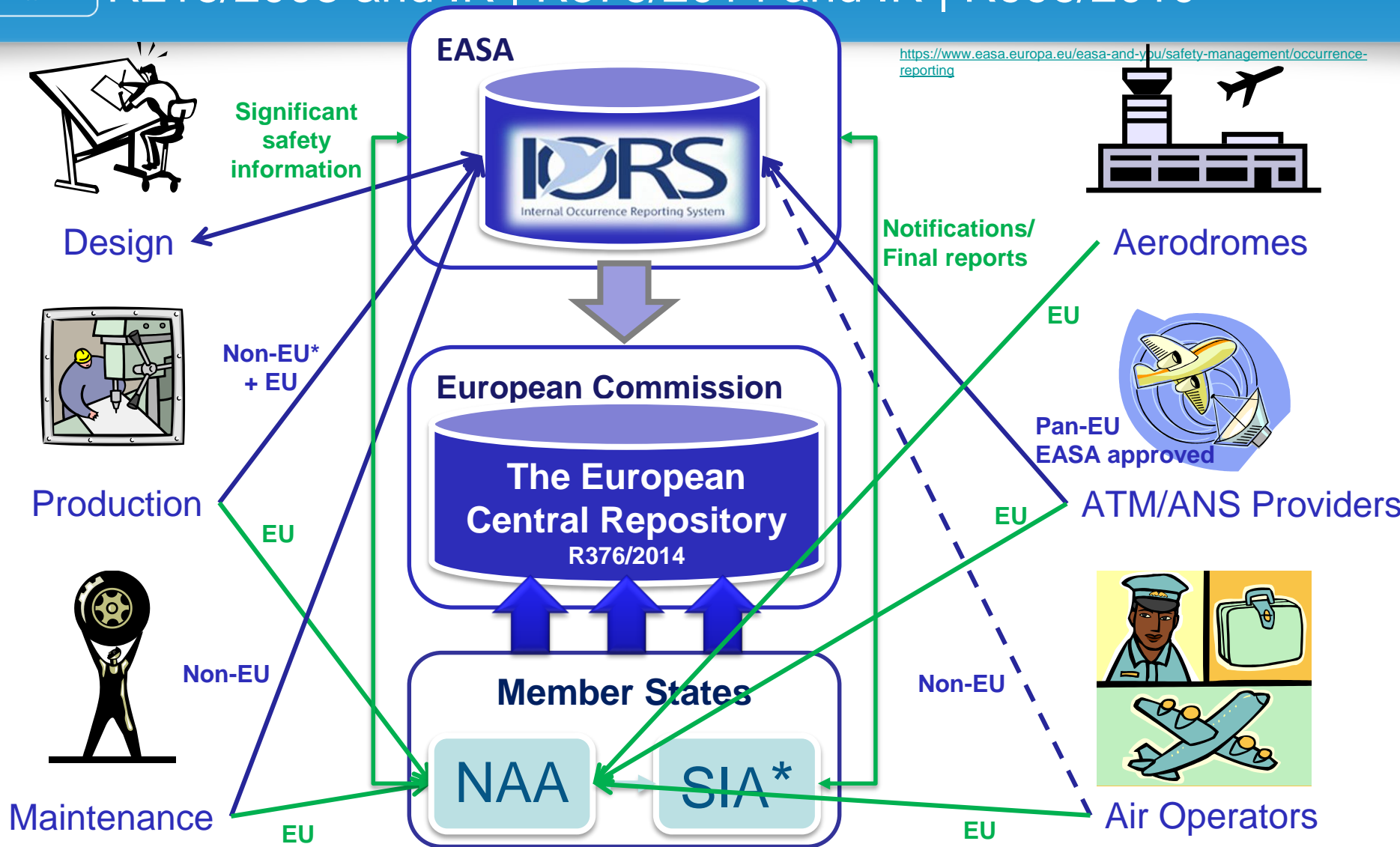
Air Operators

\* When an occurrence is an accident and a serious incident, industry needs to report to the SIA (R996/2010) as well



# EU system – Authorities Perspective

R216/2008 and IR | R376/2014 and IR | R996/2010



\* When an occurrence is an accident and a serious incident, industry needs to report to the SIA (R996/2010) as well



# Outcomes from the Agency – non-exhaustive

- EASA teams' work with the holders of design approval – direct feedback
- **Safety publications** (ADs, SIBs, etc.)
- Involvement of other authorities in occurrence resolution as required (network of information)
- Design approval holders may request occurrence information on their products received by the Agency
- Analysis at EU level by analysis of information contained in the ECR in the context of the **European Network of Aviation Safety Analysts**
- European Plan for Aviation Safety (**EPAS**)





# **Experience feedback on processing the occurrences**





# Potential Unsafe Condition

**It is observed that some DOAs tend to think that they need to report those occurrences only, where and when the unsafe condition is determined**

- This is not the spirit of the 21.A.3A(b) and the Regulation (EU) 376/2014. EASA needs to be reported events that are potentially unsafe as soon as they are known
- As the best practice – such identification should be done in a time period not exceeding 1 week



# Potential Unsafe Condition

**(...) As soon as practicable and in any case dispatched not later than 72 hours after the identification of the possible unsafe condition.**

- The exact risk on airworthiness can be further identified after the initial reporting (e.g.: within 30 days per the R376/2014) within the follow-up report.
- It is in the interest of the DOA to inform EASA asap to work together on the mitigating actions and avoid last minute and too conservative measures.



# 72 hours for high visibility occurrences

## **The 72 hours to report is a maximum time span**

- It is in the interest of aircraft manufacturers to share information on visible events with EASA asap.
- EASA is rapidly questioned by the press, by NAAs, or by the Commission. EASA needs to be informed to be able to react accordingly.
- Nor the media, nor the public would understand or accept it differently.



# Support for risk evaluation at aircraft level on non-design related issues

**EASA needs the aircraft manufacturers' support in determining the Impact on Airworthiness of issues having as root cause maintenance issues or Suspected Unapproved Parts (SUP), etc.**

- Only the aircraft manufacturer can properly evaluate the risk at aircraft level and support EASA in deciding if actions are necessary and how urgent they should be.

[Link to EASA Suspected Unapproved Parts \(SUP\) website](#)



# Recommended fields/information

- EASA invites the reporters to provide some recommended fields to facilitate the process and get prepared for the future more integrated data exchange. These fields are e.g.:
  - For follow-up/closure reports the following attributes:
    - 1067 – Analysis / follow up
    - 1069 – Corrective actions
    - 1070 – Conclusions
    - 1068 – Risk assessment
  - Attribute 802 – “Report” to be able to provide attachments (pictures etc.) when applicable
  - Tracking sheet 1071 – to indicate internal Airworthiness review Sheet, Action Sheet number to which an occurrence was linked to/is part of. This is important to ensure links between AS and single occurrences.



# Other aspects

- For Top Reporting Organisations reporting via E5X files – if file sizes exceed 10 MB – not accepted via email:
  - Solution – EASA FTP, contact IORS for requesting this option
- Aircraft Make/Model/Series [21] – value list updated by including missing types – taxonomy version 4.1.0.3
- Meaning of values – covered by definitions (e.g. what Substantial damage means).
- Use of default values, e.g. Propulsion type for the Engine DAH designing turbofan engines only – can be set as “Turbofan”



# What comes next?

- **Work on Opinion for NPA 2016-19/RMT.0681** on aligning Implementing regulations, AMCs and GM with R376/2014 – Opinion scheduled for Q1-2018
- **E5X schema/taxonomy updates** – 4.1.0.3 issued in September, can be used as of beginning 2018
- **Mandatory fields** as per Annex I of R376/2014 review
- **European Risk Classification Scheme (ERCS)** developed in 2017, adoption of legal act is in process



# More information/Contacts

- Information on occurrence reporting to the Agency:
  - [EASA website](https://easa.europa.eu)
- IORS Team remains available for further assistance on aspects related with occurrence reporting – contact:
  - [ORS@easa.europa.eu](mailto:ORS@easa.europa.eu)





# References for applicable documents/ information

- **R376/2014** on the reporting, analysis and follow-up of occurrences in civil aviation
- **IR 2015/1018** laying down a list classifying occurrences in civil aviation to be mandatorily reported according to Regulation (EU) No 376/2014
- **Guidance material** issued by the EC in supporting the interpretation
- NPA 2016-19
- Occurrence Reporting to EASA (description) [www.easa.europa.eu](http://www.easa.europa.eu), covers/explains:
  - How to Report an occurrence – Who, what and how to Report, follow-ups
  - Legal framework
  - Protection of information sources
  - Suggests reporting methods to use
- Electronic reporting specs: <http://eccairsportal.jrc.ec.europa.eu>



**EASA**  
European Aviation Safety Agency

**Thank you for attention**  
**Questions?**

**Your safety is our mission.**

An agency of the European Union





# How to report an occurrence?

- Organisations can comply to R376/2014 & R216/2008 by using either:
  - Forms on  
[www.aviationreporting.eu](http://www.aviationreporting.eu)
    - Immediately compliant to form and manner
- E5X data exports from organisations' databases (high volume reporters)
  - Export needs to be configured (XML language)



## ► List of acronyms

AMC	Acceptable Means of Compliance
CAA	Civil Aviation Authority (equivalent to NAA)
DAH	Design Approval Holder
DOA	Design Organisation Approval
ECCAIRS	European Coordinated Centre of Accident and Incident Reporting Systems
ECR	European Central Repository
FAA	Federal Aviation Administration (USA)
FAQ	Frequently Asked Question
IATA	International Air Transport Association
ICAO	International Civil Aviation Organisation
IORS	Internal Occurrence Reporting System
KPI	Key Performance Indicator
NAA	National Aviation Authority (equivalent to CAA)
NPA	Notice of Proposed Amendment
PCM	Product Certification Manager
POA	Production Organisation Approval
SMS	Safety Management System
TCCA	Transport Canada Civil Aviation
TCH	Type Certificate Holder
TCO	Third Country Operator
TRO	Top Reporting Organisation
WFT	(IORS) Work Flow Tool
XSD	XML (Extensible mark-up language) Schema Description