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# Presentation Summary

- ❖ Civil Aviation Authority UK
- ❖ CAA's Safety Regulation Group (SRG)
- ❖ Aviation safety research in Europe
- ❖ 'Expert Group' process to develop the CAA Safety Plan – defines research activities
- ❖ Outline current CAA ATM research.
- ❖ Conclude with our future plans

# CAA UK

- ❖ Aviation regulator (economic regulation, airspace policy, safety regulation and consumer protection)
  - (National Air Traffic Services were separated from CAA in 2001)
- ❖ Funded by those we regulate.
- ❖ Mission
  - The CAA's mission is to provide best practice regulation and expert advice that are independent and enable civil aviation to best meet the needs of its users and society in a safe and sustainable manner.

# Safety Regulation Group (SRG)

- ❖ Based Gatwick Airport, London
- ❖ Has a statutory duty to exercise full rulemaking and oversight responsibility for all those aviation aspects not being adopted by EASA.
- ❖ Responsible for Safety Plan – in 2006 research activities became an integral part of the Plan

# Europe

- ❖ SRG acts as an executive arm of EASA in delivering safety oversight of UK industry against EASA's pan-European rules and standards
- ❖ The developing European framework for the regulation of aviation safety has at its heart '2 pillars' - EASA and the National Aviation Authorities of the Community member states

# Europe – Aviation Safety Research

- ❖ Research has been co-ordinated through the JAA Research Committee
- ❖ Transition to EASA.
- ❖ Wider co-ordination with e.g. FAA, Transport Canada through Research Technical Groups

# Safety Plan - Introduction

- ❖ To assist in meeting safety objectives
- ❖ Manage changing regulatory environment
- ❖ Covers 5 years.
- ❖ Records research plans in context with identifiable risks and safety initiatives

# Safety Plan Research Identification

- ❖ Major initiatives such as CAST, JSSI (now ESSI)
- ❖ CAA wanted to build on previous studies but to keep a focus on UK issues.
- ❖ As a time of transition, to ensure that safety issues did not develop through organisational changes

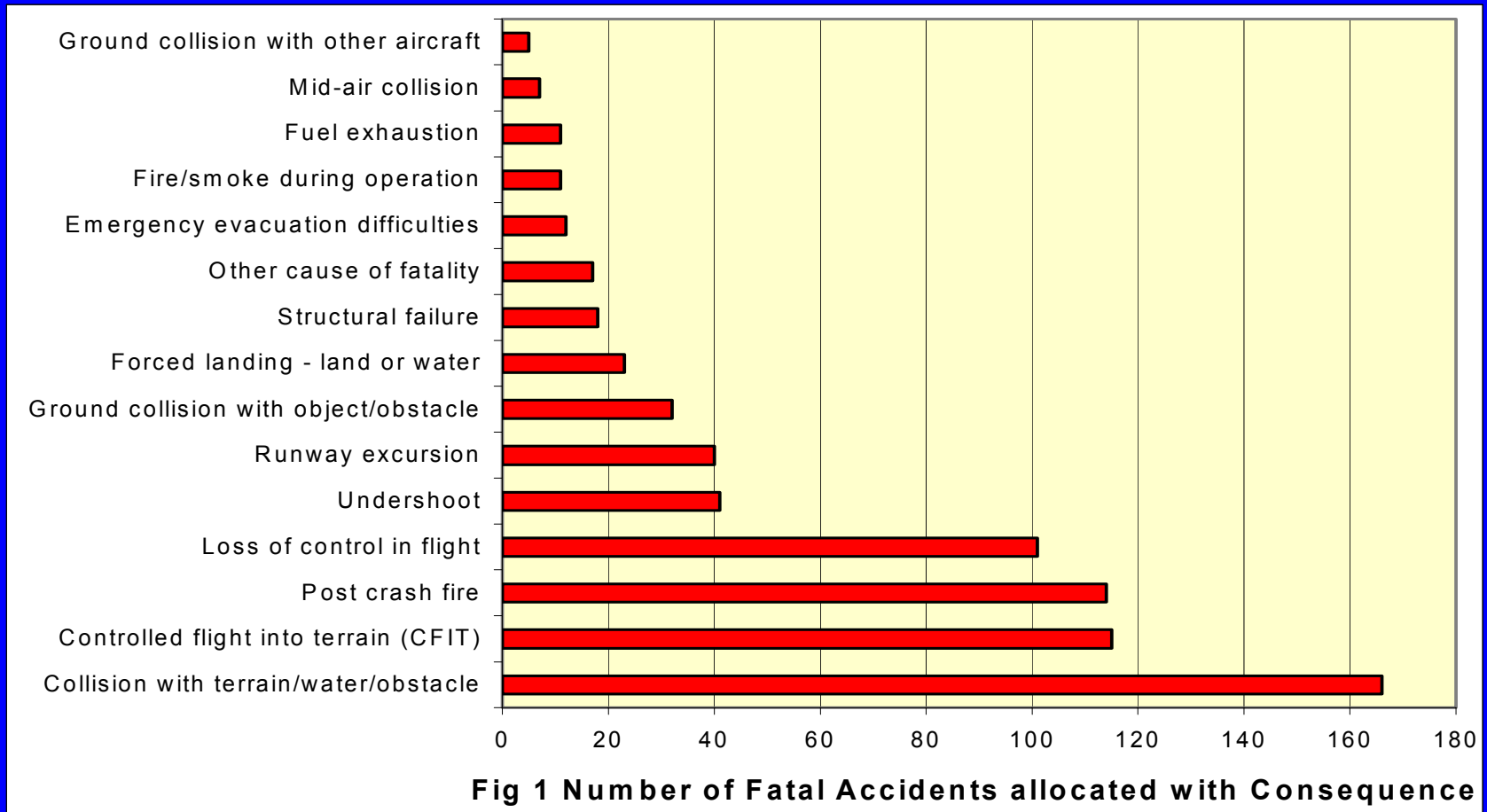
# CAA Responsibilities

- ❖ In the context of the Safety Plan:
- ❖ CAA is no longer independently pursuing research in those areas for which EASA is responsible
- ❖ CAA will pass to EASA any information from implementing the Plan that falls within the competencies of the Agency.

# Safety Plan development

- ❖ SRG starting point accident analysis -
- ❖ Loss of Control
- ❖ CFIT
- ❖ Fire
- ❖ Pilot performance
- ❖ Mid air collision.
- ❖ Not just accident based but potential for future accidents

# AAG Accidents 1995-2004



# Expert Groups

- ❖ Multi disciplinary teams for major elements of the aviation system (such as Loss of Control)
- ❖ Aircraft design
- ❖ Aircraft maintenance
- ❖ Air traffic control
- ❖ Aerodrome design.
- ❖ Flight operations

# Expert Groups framework

- ❖ Used standard prompt words such as:
  - 'support documentation'
  - 'training'
  - 'organisational factors'
- ❖ Substantiated where possible using CAA Mandatory Occurrence Reporting System (MORs)

# Mandatory Occurrence Reporting System (MORs)

- ❖ Running since 1976
- ❖ Over 150,000 records
- ❖ 10,000 reports arriving annually
- ❖ One of the most important safety data resources for CAA and Industry.
- ❖ Significant efforts underway to refine data analysis e.g. text mining

# Prioritisation

- ❖ Potential actions were prioritised -
- ❖ Safety risk
- ❖ Perceived safety risk
- ❖ Degree of voluntary risk
- ❖ Level of international participation.
- ❖ Likely effectiveness and efficiency

# Outcome

- ❖ Safety Plan ([www.caa.co.uk/safetyplan](http://www.caa.co.uk/safetyplan))
- ❖ Initiatives in a wide range of areas (not just research) e.g.
- ❖ Training material
- ❖ Documentation updates
- ❖ Cost benefit reviews of new equipment.
- ❖ Improved data collection

# Research outcome

- ❖ Initiatives to support pilot performance
  - Automation, Medical, Fatigue
- ❖ Aircraft fire
  - Cabin crew fire training, airport fires
- ❖ Inspection of composite structures
- ❖ ATM

# ATM research actions

- ❖ Continued support for the CAA Institute of Satellite Navigation (Leeds University and Imperial College London)
- ❖ Development of RNAV/RNP definitions and terms for standardisation

# ATM Research Actions

- ❖ Develop guidance information for general aviation resulting from CAA conspicuity studies and regulatory impact assessment on Mode S transponder carriage
- ❖ Data analysis of Level Busts to ascertain effectiveness of CAA initiatives

# ATM Research Actions

- ❖ Development of UAV policy in conjunction with other government agencies
- ❖ Analysis of runway incursions and the application of technology
- ❖ Methods to assess small ANSPs for compliance with ESARR4 levels of safety

# Way forward for research

- ❖ Initiatives prioritised as part of the Research Plan process but not resourced will be actioned when possible
- ❖ New 'Expert Groups' will be established for wider risk studies
- ❖ 'Expert Groups' will be consulted for Research Plan annual update

# Summary

- ❖ Discussed the changing aviation regulatory framework in Europe
- ❖ Detailed the establishment of 'Expert Groups' in topics identified as priority risks from accident data but also open to risks without accident data.
- ❖ Outlined ATM activities (but not detailed many non-ATM e.g. cabin crew fire training, flight crew studies on highly automated aircraft

# Questions?

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