



EASA
European Aviation Safety Agency

GA Safety and Safety Risk Portfolio

John Franklin

Safety Analysis & Research Section Manager

7 July 2016

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GA Safety Risk Portfolio

- Overview of GA Safety from EASA ASR 2016
 - Fatal Accidents and Accidents
 - Fatalities and Serious Injuries
 - Phase of Flight
- Safety Risk Portfolio
 - Initial Key Risk Areas (Outcomes) and Safety Issues
 - Further improvement
 - GA Safety Workshop
 - Establishment of the GA Aeroplanes CAG



Overview of Safety from EASA ASR 2016

	Domain	Fatal Accidents 2015	Fatal Accidents Annual 10 Year Average	Fatalities 2015	Fatalities Annual 10 Year Average
	CAT Aeroplanes	1	1.3	150	64.2
	Offshore	0	0.4	0	3
	CAT Helicopters	1	2	4	9.1
	Aerial Work/Part SPO Aeroplanes	7	7	23	11.3
	Aerial Work/Part SPO Helicopters	2	4.3	4	8.5
	Non-Commercial Aeroplanes	41	42.2*	65	79*
	Non-Commercial Helicopters	6	8.2*	7	14.5*
	Balloons	2	0.6*	3	1.8*
	Gliders	24	22.3*	27	25.9*
	RPAS	0	0*	0	0

*Annual average is 5 years only from 2011-2015



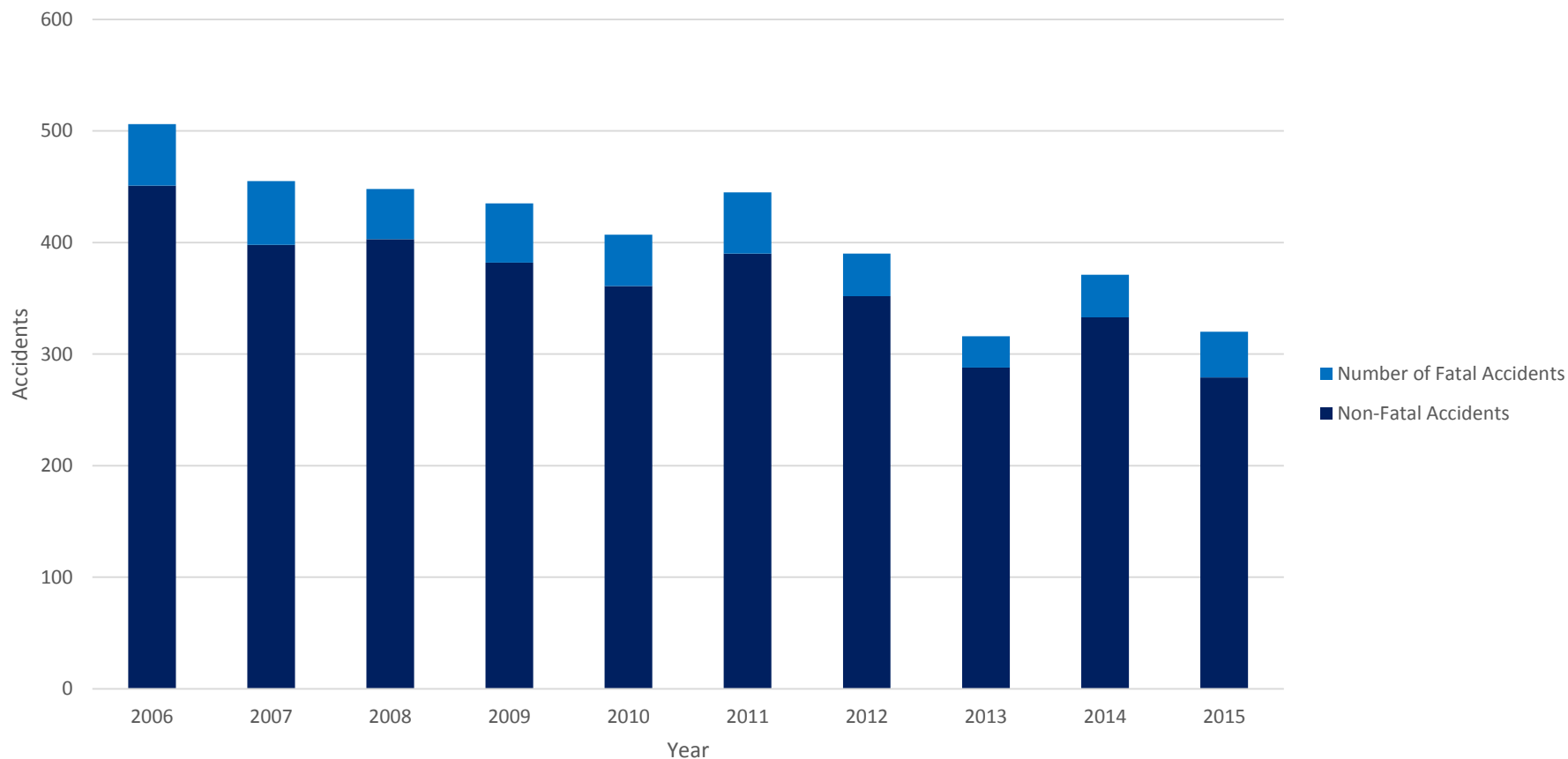
GA Aeroplanes Safety Overview

	Fatal Accidents	Non-Fatal Accidents	Serious Incidents
2005-2014 Annual average	42.2	338.0	21.7
2015	41	279	18

	Fatalities	Serious Injuries
2005-2014 Annual average	79	43.9
2015	65	36

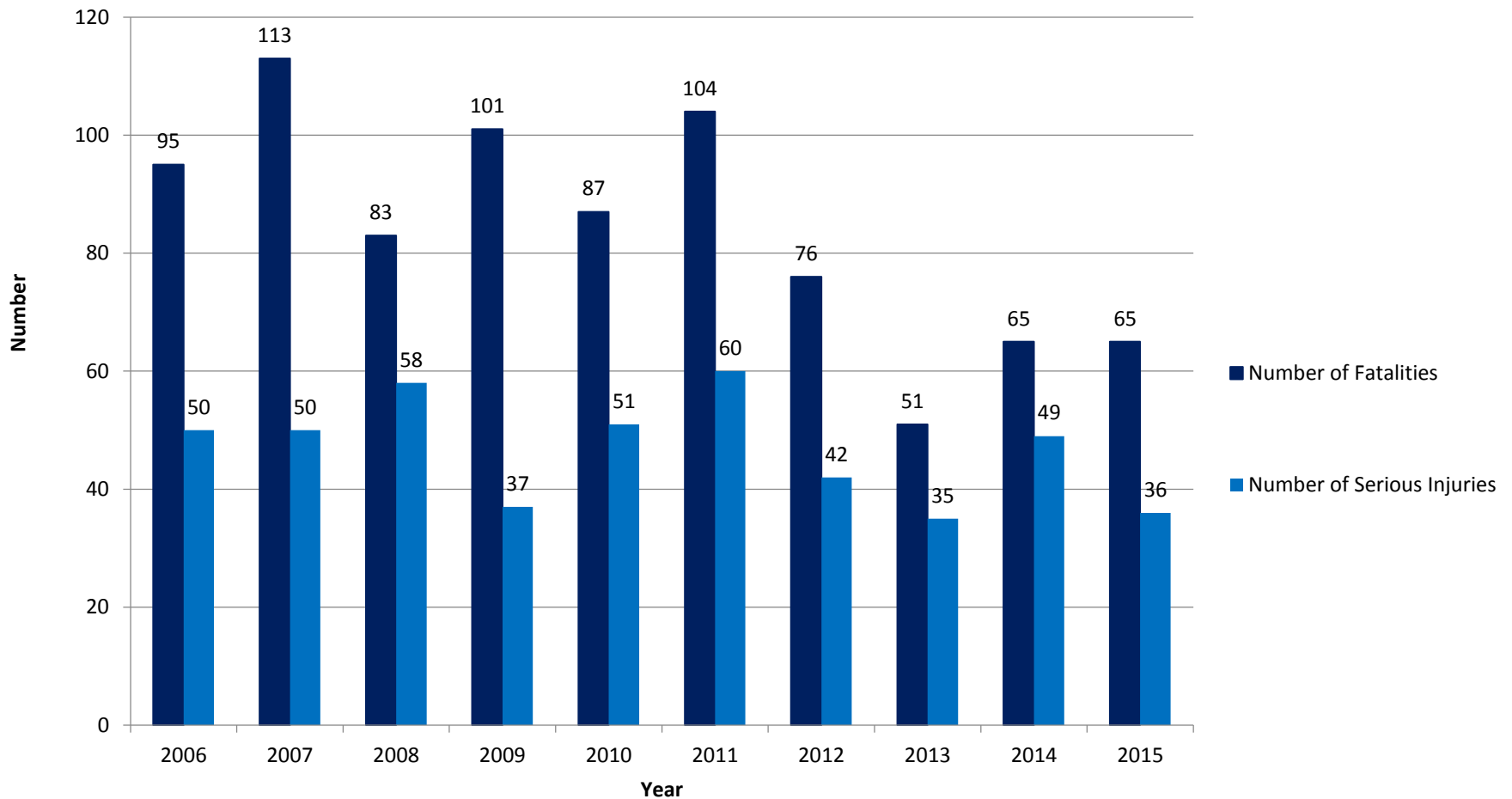


GA Aeroplanes – Accidents 2006 to 2015





GA Aeroplanes – Injuries 2006 to 2015






GA Aeroplanes – Phase of Flight

Phase of Flight	Accidents and SIs	
	2005-2014 average	2015
Standing	10.7	5
Taxi	24	21
Take-off	70.1	59
En route	63	45
Manoeuvring	14.3	7
Approach	37.1	39
Landing	180.4	151
Post-impact	0	0
Unknown	2.6	12



GA Aeroplanes – Safety Risk Portfolio

	Outcome Percentage of Fatal Accidents (2006-2015)	199				47%	15%	9%	6%	3%	3%	1%	1%
	Outcome Percentage of Non-Fatal Accidents (2006-2015)	1,643				8%	1%	17%	2%	19%	4%	25%	12%
	NON-COMMERCIAL OPERATIONS - AEROPLANES				Total number of accidents in 2011-2015 per safety issue	Key Risk Areas (Outcomes)							
	Safety Issues	Incidents (ECR data)	Serious Incidents	Total Accidents	Fatal Accidents	Aircraft Upset in Flight	Terrain Conflict	Engine Failure	Airborne Conflict	Other System Failures	Obstacle Conflict	Abnormal Runway Contact and Excursions	Aircraft Upset on Ground
Operational	Detection, Recognition and Recovery of Deviation from Normal Operations	45	10	372	84	•	•	•	•	•	•	•	•
	Maintaining Adequate Separation Between Aircraft on the ground and in the air	1,347	32	308	26	•	•	•	•	•	•	•	•
	Operation in Adverse Weather Conditions	120	7	190	24	•	•	•	•	•	•	•	•
	Intentional Low Flying	16	1	18	11	•	•	•	•	•	•	•	•
	Pre-Flight Preparation/ Planning and In-Flight Re-Planning	72	3	44	8	•	•	•	•	•	•	•	•
	Aircraft Loading and Balance	–	–	4	2	•	•	•	•	•	•	•	•
	Hard landings due to incorrect action and perception of the situation	46	5	225	1	•	•	•	•	•	•	•	•
	Unstabilised Approach	8	2	39	1	•	•	•	•	•	•	•	•
	Aircraft Maintenance	21	3	11	1	•	•	•	•	•	•	•	•
	Prevention and Resolution of Conflict with Aircraft Not Fitted With Transponders	26	2	2	1	•	•	•	•	•	•	•	•
	Control of Manual Aircraft Flight Path	–	–	29	–	•	•	•	•	•	•	•	•
	Birdstrikes	112	1	12	–	•	•	•	•	•	•	•	•
Technical	Diagnosis and Management of Engine Failures in Flight	25	4	25	2	•	•	•	•	•	•	•	•
	Management of Landing Gear System Malfunctions	374	16	385	–	•	•	•	•	•	•	•	•
Human	Flight Crew Perception and Awareness Decision Making and Planning	–	4	59	7	•	•	•	•	•	•	•	•
	Use and Adequacy of Rules and Procedures (incl. Checklists)	–	1	12	1	•	•	•	•	•	•	•	•
	Knowledge and Competency of Individuals	–	–	22	–	•	•	•	•	•	•	•	•
	Pressure during operation	–	–	3	–	•	•	•	•	•	•	•	•
	Navigation during operation	53	2	–	–	•	•	•	•	•	•	•	•

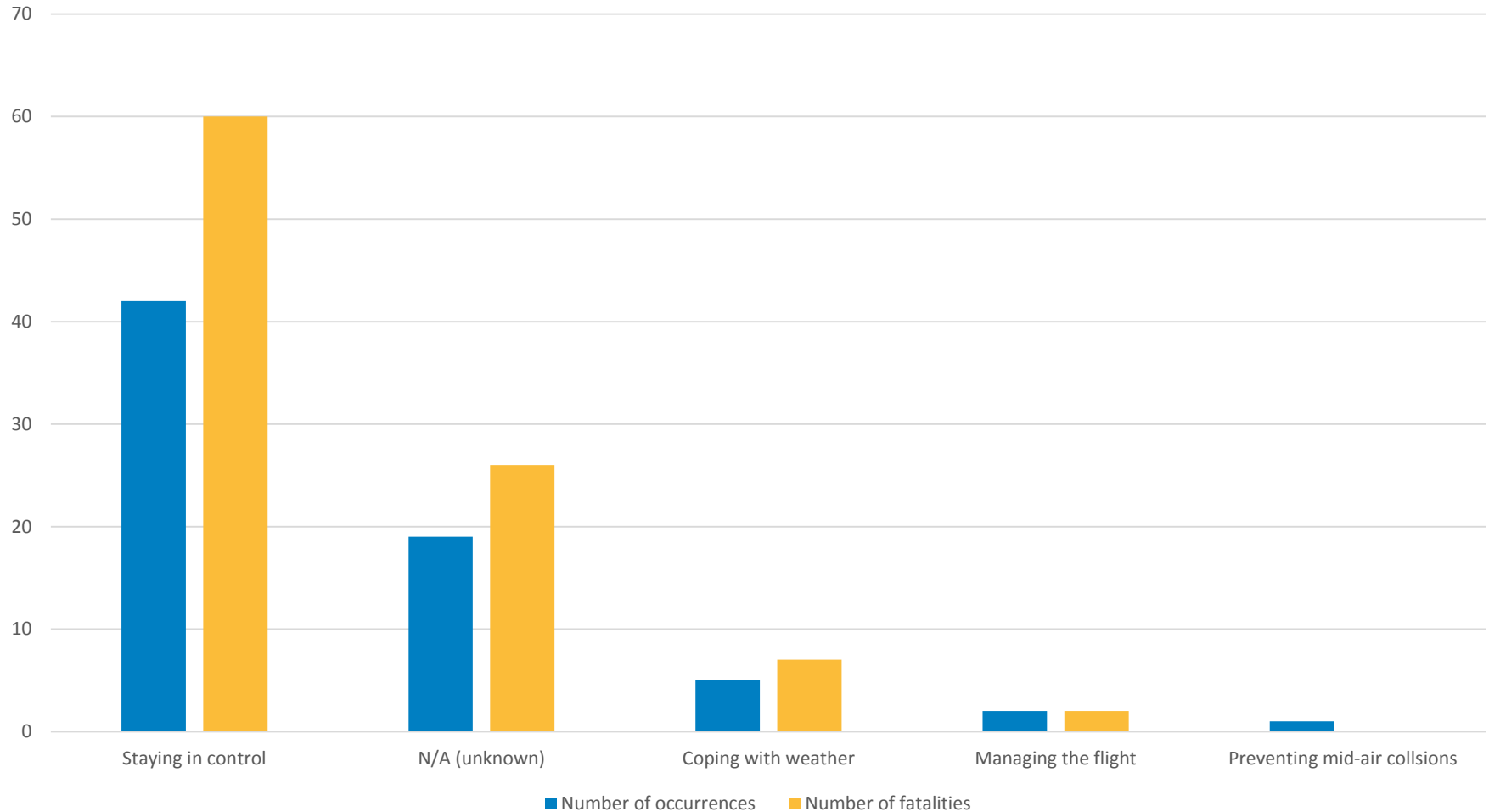


Safety issues

- Staying in Control
 - Flying skills, Pilot Awareness, Intentional Low Flying, Engine Failures, Stall in Final Turn or During Take-Off
- Coping with Weather
 - Entering IMC, Icing conditions, Carburettor icing, Weather information
- Preventing Mid-Air Collisions
 - Airspace infringement, See and Avoid, Airspace complexity
- Managing the flight
 - Navigation, Fuel Management, Forced landings



Workshop Occurrences Provided





Improving the Safety Risk Portfolio

- Initial Safety Risk Portfolio is based on pure analysis
 - Key Risk Areas (Outcomes) linked to Occurrence Categories
 - Safety Issues develop from Event Type mapping
- The Challenge
 - To make sure that the Safety Risk Portfolio makes sense for the GA community
 - Help it reflect the reality of concerns from the community
- One Task for the Workshop
 - To improve what we have now and define the Safety Issues
 - To capture anything that might be missing



Beyond the Workshop

- The Workshop discussion is just a starting point
- Next step is to establish the GA Aeroplanes Collaborative Analysis Group (CAG)
 - Continued development of the Safety Risk Portfolio
 - To support EASA in the analysis and risk assessment leading to a list of prioritised actions for each Safety Issue
- We will establish the GA Aeroplanes CAG immediately and we are looking for enthusiastic volunteers
- Clear link between CAG and the GA Sectorial Committee



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Thank you

Comments and questions are welcomed

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