



Wildlife Hazard Management
'Safety Performance Beyond Compliance'
a UK perspective

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Introduction



- Aerodrome Policy Specialist
- Chair UK Birdstrike Committee
- UK CAA WHM policy coordinator:
 - Editor UK Guidance Material (CAP 772)
 - Engagement, Collaboration, Participation, Supporting stakeholders
 - Intelligence, Reporting systems, Data, Analysis, Supporting stakeholders
 - State Safety Partnership supporting DfT international collaboration on WHM

Compliance

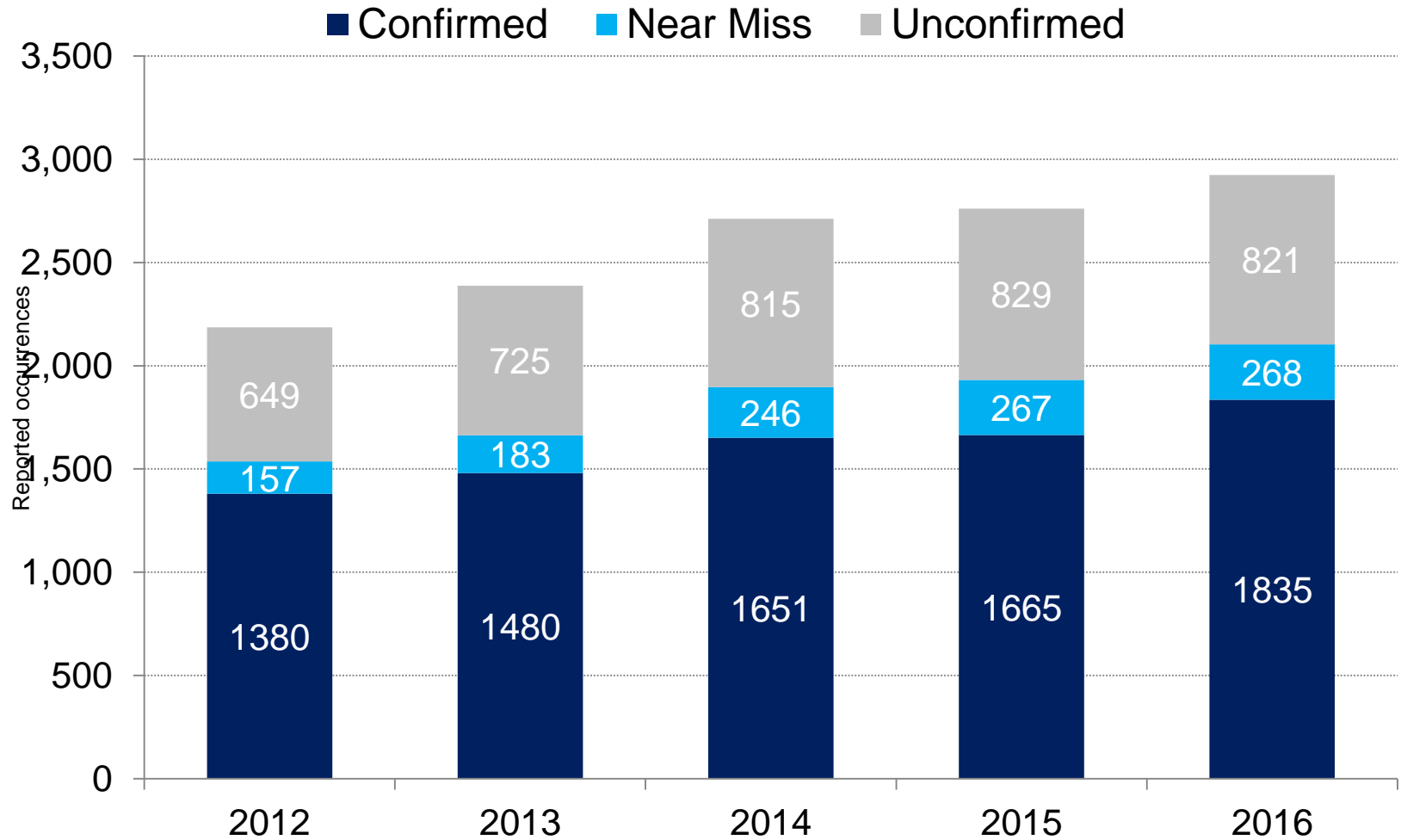


- UK Aerodromes transitioned to EASA regulations meant continued compliance as previous
- WHMP = no changes required
- SMS/Risk Assessment process = no changes required
- Data = adoption of EC 376
- All WHM data is a backward view of lagging ind
- Habitat Management (CAP 772) supp guidance to EASA GM - proportionate flexible (ie wrt '*LGP*')
- Consider Safety Performance = what is it and how might it apply to WHM?

UK Data – a snapshot

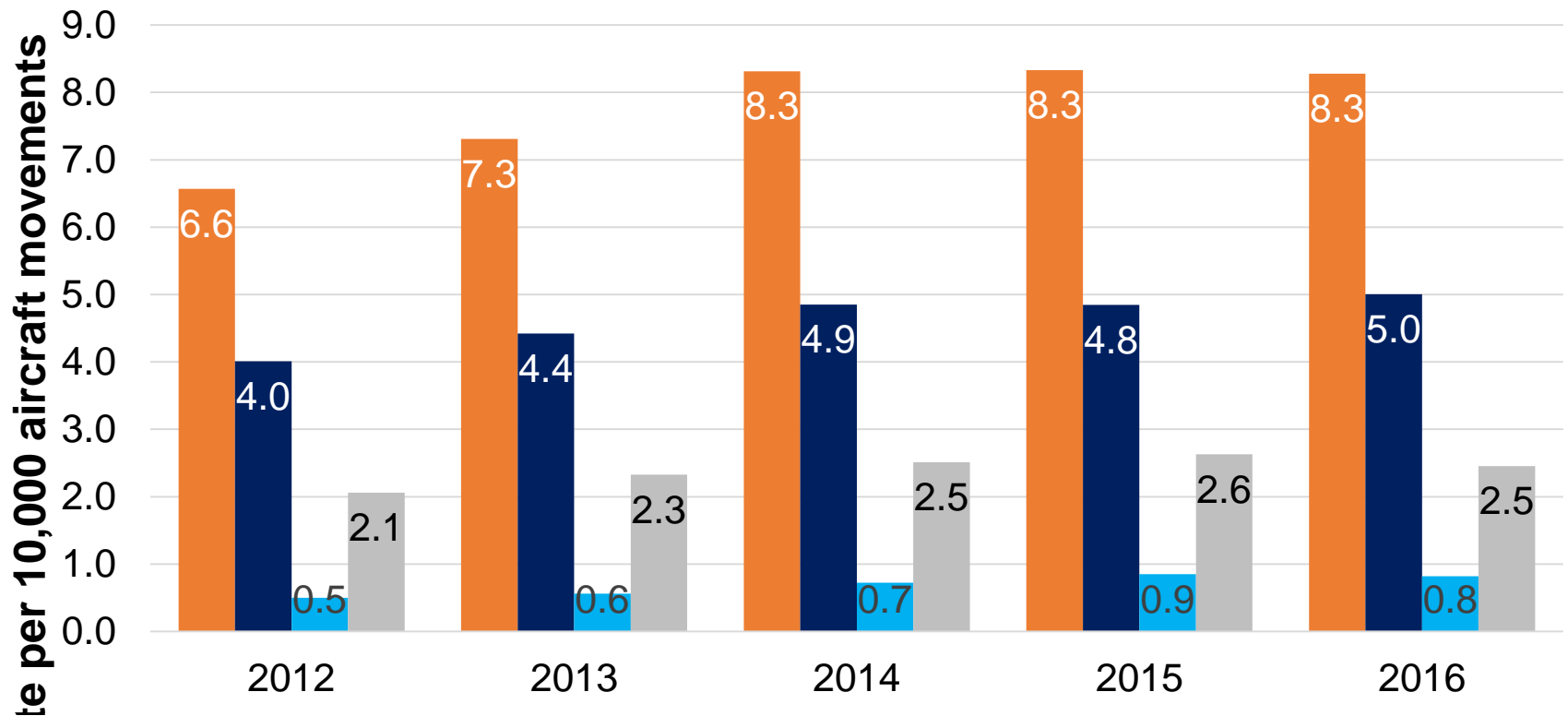
- The annual number of birdstrikes reported in the UK has more than tripled in the last 25 years
- The average annual number of strikes reported has more than doubled since 2003 (when mandatory BS reporting was introduced in UK)
- 2010 – 2016 saw the highest number of strikes reported over a five year period
- Strike rates per 10k over the past +10yrs period do not indicate significant increases
- What does the increasing data say about the risk?
- Is there another METRIC or way of looking at data to indicate risk and provide greater safety improvements?
- *Safety Performance*

Reported birdstrikes by year and birdstrike status 2012-2016



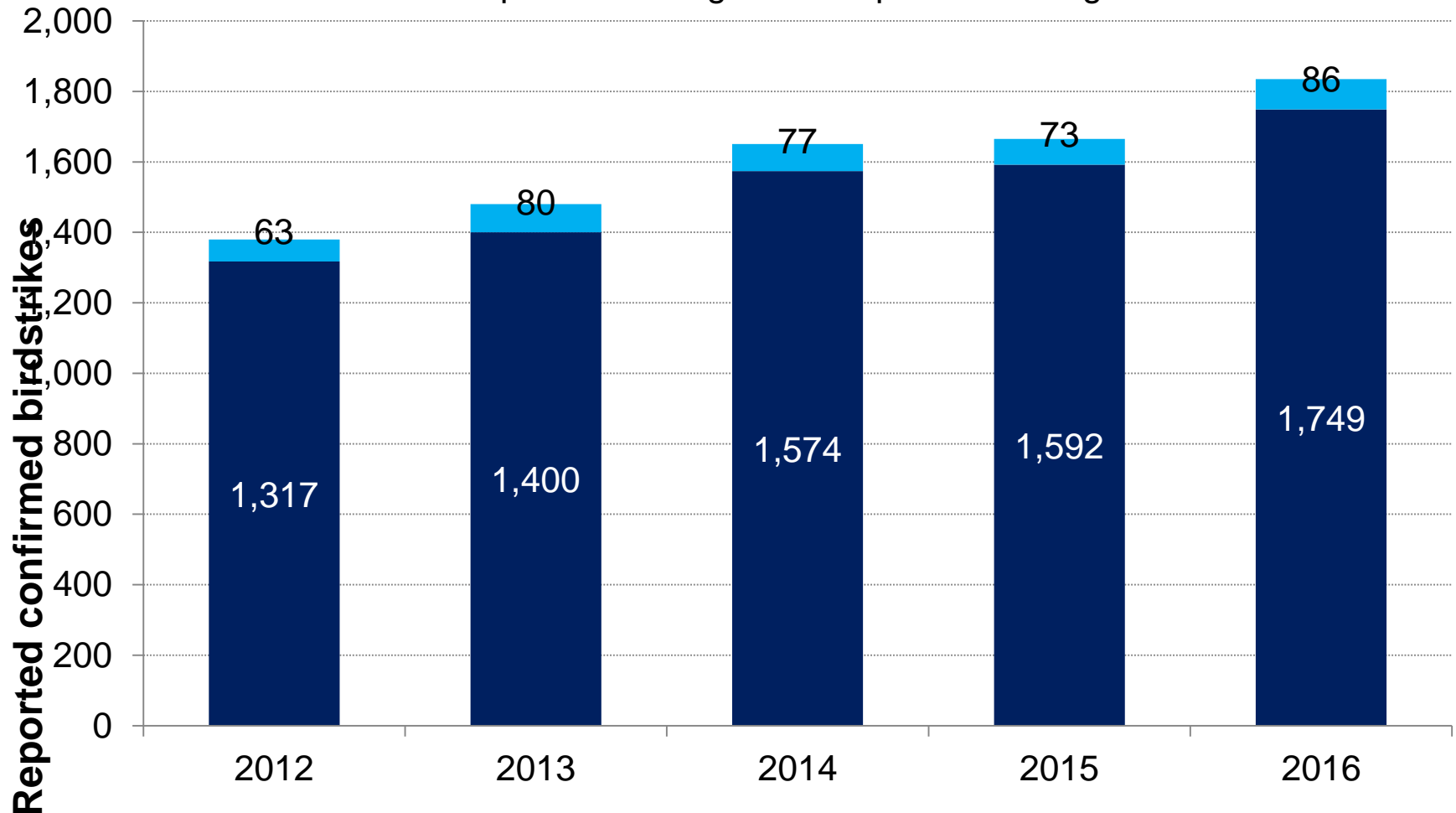
Rates per 10k aircraft movements

- Reported birdstrikes per 10,000 aircraft movements
- Reported confirmed birdstrikes per 10,000 aircraft movements
- Reported near-misses per 10,000 aircraft movements
- Reported unconfirmed birdstrikes per 10,000 aircraft movements

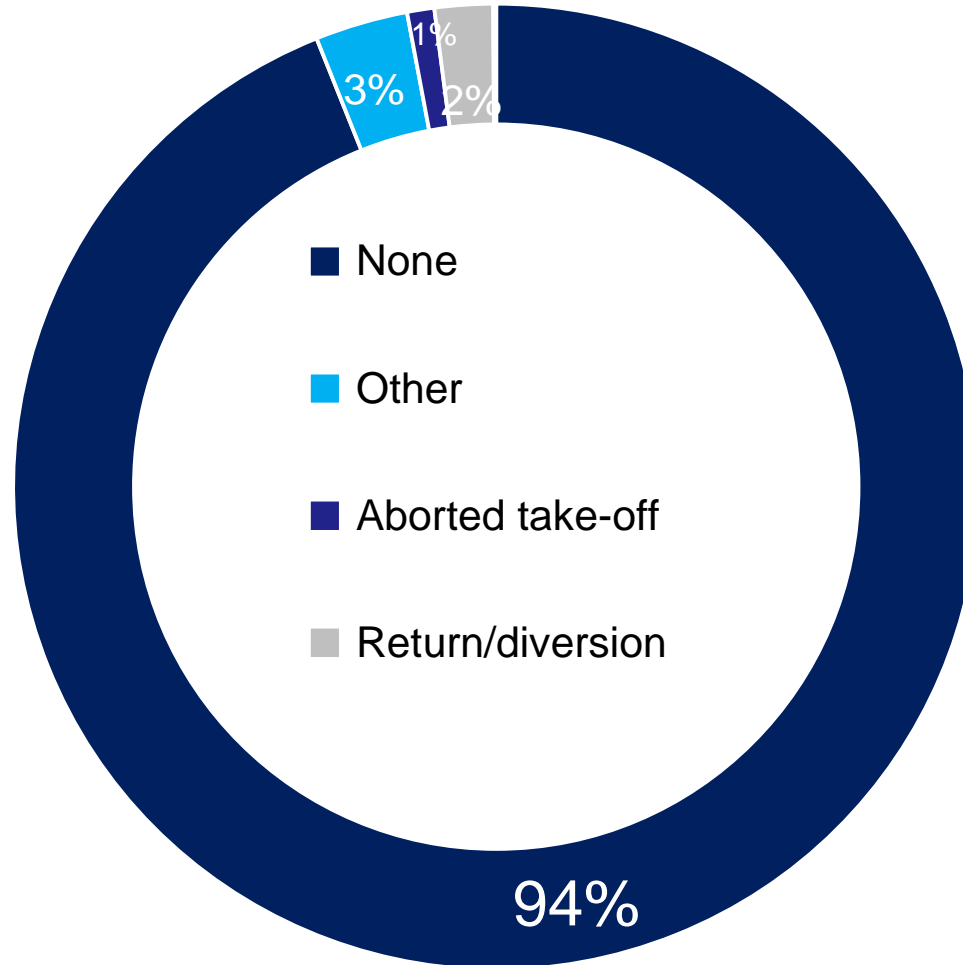


Reported confirmed birdstrikes year/reported damage 2012-2016

■ No Reported Damage ■ Reported Damage



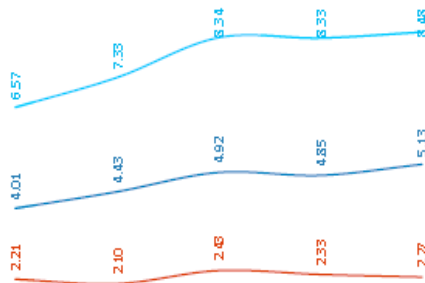
Reported birdstrikes by operational effect 2012-2016



Performance Measures?

Birdstrike Analysis Tool

Rate per 10,000 aircraft movements



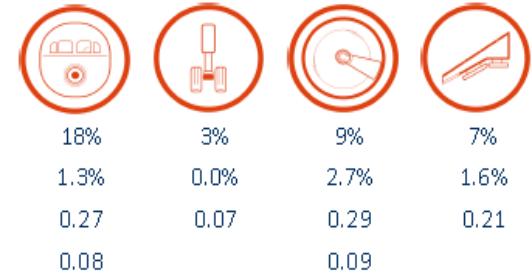
Jan-12

Dec-16

UK Safety Performance Indicators

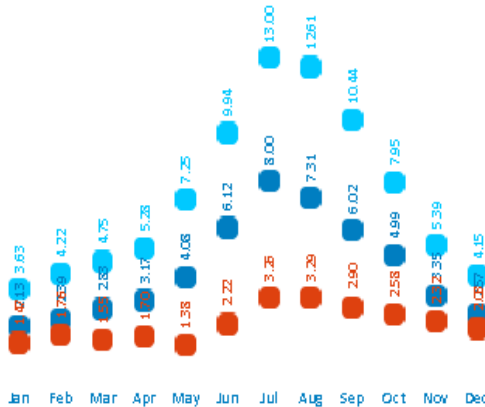
Confirmed birdstrikes	7,210	High/med	Total reports
High/med risk reports (confirmed and unconfirmed)	3,504	29%	Confirmed
Confirmed birdstrikes per 10,000 aircraft movements	4.6	of total reports	High/med risk
High/med risk reports per 10,000 aircraft movements	2.3	58.5	per month
Damage per 10,000 aircraft movements	0.2		

Damage profile



2012 2013 2014 2015 2016

Average monthly rates

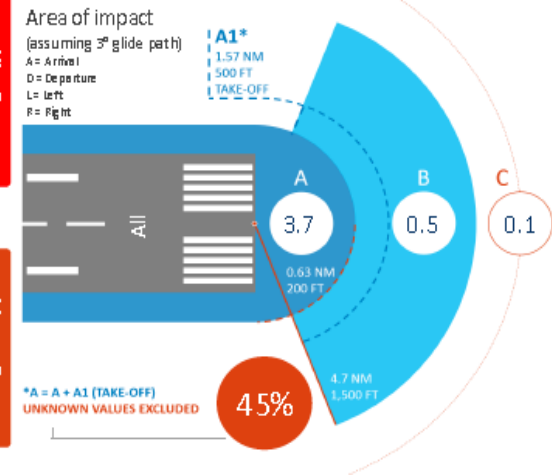


Last Updated 03/03/2017 12:25

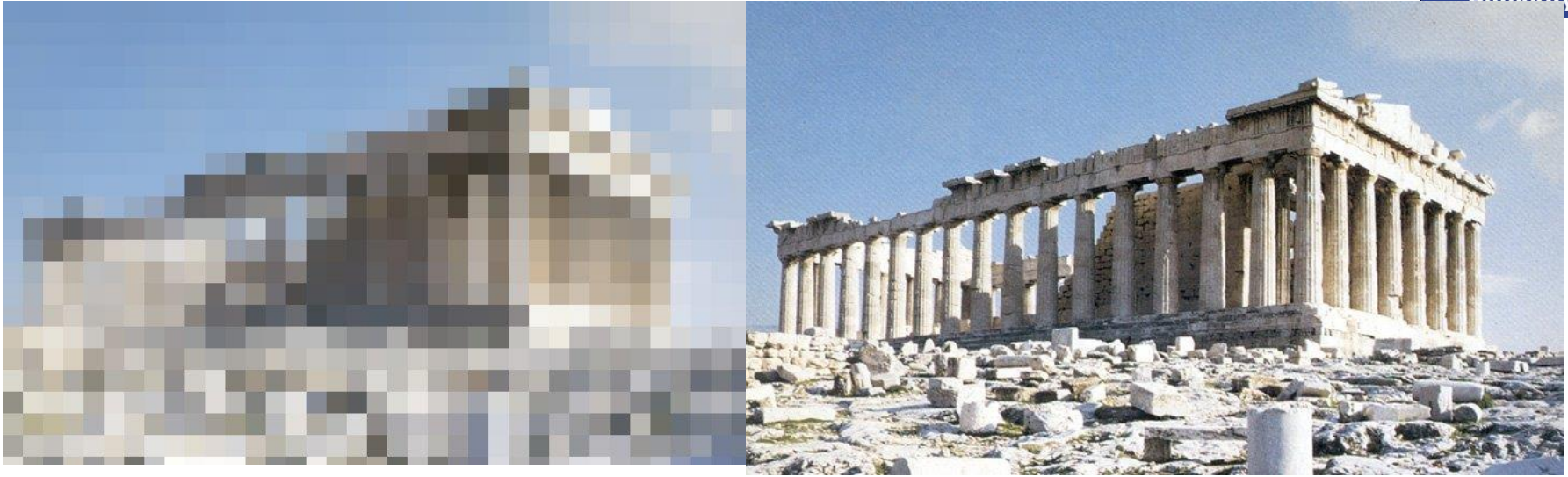
Bird Family/Species	Rate	Events	Season	Damage	Area (A B C)
Gulls	0.80	1220(114)	Oct Aug Jul Nov	52	
Pelicans and allies	0.24	370(3)	Jul Aug Sep Jun	3	
Crows	0.17	260(4)	Jun Jul Sep Aug	7	
Starlings	0.11	175(2)	Jun May Sep Jul	1	
Plovers and lapwings	0.10	160(2)	Sep Aug May Oct	5	
Herons and eagles	0.10	150(1)	Oct Dec Sep Jul	7	
Swans, ducks and geese	0.07	100(6)	Apr Sep Nov Feb	9	
Cheats and thrushes	0.06	100(5)	Sep Oct May Jul	1	
Pigeons and Doves	0.47	725(2)	Aug Jul Jun Sep	31	
Sandpipers and allies	0.04	60(0)	Nov Dec Oct Jan		
Petrels, gulls and shearwaters	0.02	30(1)	Feb Dec Mar Oct	2	
Terns	0.01	10(0)	Jul		
Bitterns and herons	0.01	10(0)			

Runway All

Rates per 10,000 aircraft movements



Do we have the right information?



- an effective SMS & processes provide a better risk picture
- collection and analysis of data will help deliver a better risk picture
- observable information, reported events and subject matter expert judgements are required

Safety Performance



FAQ WHM Safety Performance

- how to measure & monitor and improve safety performance?
- what are the key performance principles and indicators (metrics) – who agreed(s) them?
- Is industry sufficiently mature to understand/measure WHM performance?
- do numbers/rates (using standard metrics) equate to risk? has the risk picture changed?
- is reporting consistent, complete, standardised?
- do we have the right information?

Safety Performance Requires...

- Comprehensive risk picture
 - Risk decisions based on multiple sources of data available
 - Factual and targeted/prioritised and measurable
- Proactive and positive approach
 - Focus on hazard and risk identification and target and prioritise mitigation efforts
 - Continuous improvement and engagement with stakeholders
 - Above all: remember the **basics** – (WHM) plans & people: trained, competent, motivated
 - Use of technologies: to support and supplement but **not** replace the basics

Performance Based Regulation (PBR)



- Transform CAA's into PB Regulators - requires working with stakeholders to reduce safety risk across the total aviation system and develop the capabilities required for future regulators
- Oversight should be targeted, consistent and above all proportionate – one size doesn't fit all
- Initiate new 'risk' conversations based on 'performance' beyond compliance
- Performance measurement is the key challenge to tackle

The 5 Key Performance based objectives

- Gather and analyse safety risk information about all parts of an organisations operations in a joined up way – *the entity approach*.
- Agree the actions needed to improve safety and uphold standards with each entity's 'Accountable Manager'.
- Create a better understanding of the top risks facing major aviation sectors and the performance of industry to manage them.
- Make informed decisions about the safety outcomes that the Regulator & Industry should focus on and steps to achieve them.
- Allocate regulatory resources proportionately to the areas of activity with greatest potential to enhance aviation safety.

Key PBR Benefits

- Improvements in the performance of the CAA and industry to manage the oversight of safety risks
 - Gathering / sharing better safety risk intelligence
 - Strengthen prioritisation and decision making
 - Safety risk discussions with Accountable Managers
- Improvements in the CAA's ability to allocate resources to areas with the greatest potential to enhance safety
 - Allocating resources to risk
 - Vary oversight levels based on evidence
 - Working with industry for joint safety goals
- Increased efficiency and effectiveness of the CAA's safety regulation activities and projects.
 - Standardising / automating oversight processes
 - Standardising the governance of safety projects
 - Removing legacy systems and tools

Thank you for your attention

Any questions?



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