Premium methods for wildlife strike reduction

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Abstract. Standards and guidance for wildlife strike management at airports are provided by a suite of international regulators. Compliance is overseen by the national authorities with implementation and delivery provided by the airport operator. The routine costs associated with strikes are, however, predominantly absorbed by airlines. Whilst the retrieval of significant damages may be attempted from any stakeholder via legal recourse, the majority of preventative cost falls on the airport and consequential costs on the airline.

Airport companies must therefore provide the investment needed to ensure a safe operating environment. Once this requirement is met, there is little *financial* incentive to invest beyond compliance. Airlines benefit from any such investment but only occasionally seek to return predicted savings to an airport and, indirectly therefore, to their competitors. The insurance industry therefore has a strong role to play in that any reduction in their costs are directly attributable to reductions in their clients risks. As the response to increasing costs of bird and wildlife strikes around the world, mitigation can only be achieved via premium increases or risk reduction, these factors are now being investigated directly from the perspective of the insurance industry. This paper reviews how wildlife strike risks have been perceived and the impact of likely future risk reduction strategies.

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Premium Methods of Wildlife Control

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Not…

Why are the insurers interested?

- Business decision risk v reward.
- Insurers want low risk but have been informed that ‘birds just get struck’ for decades…

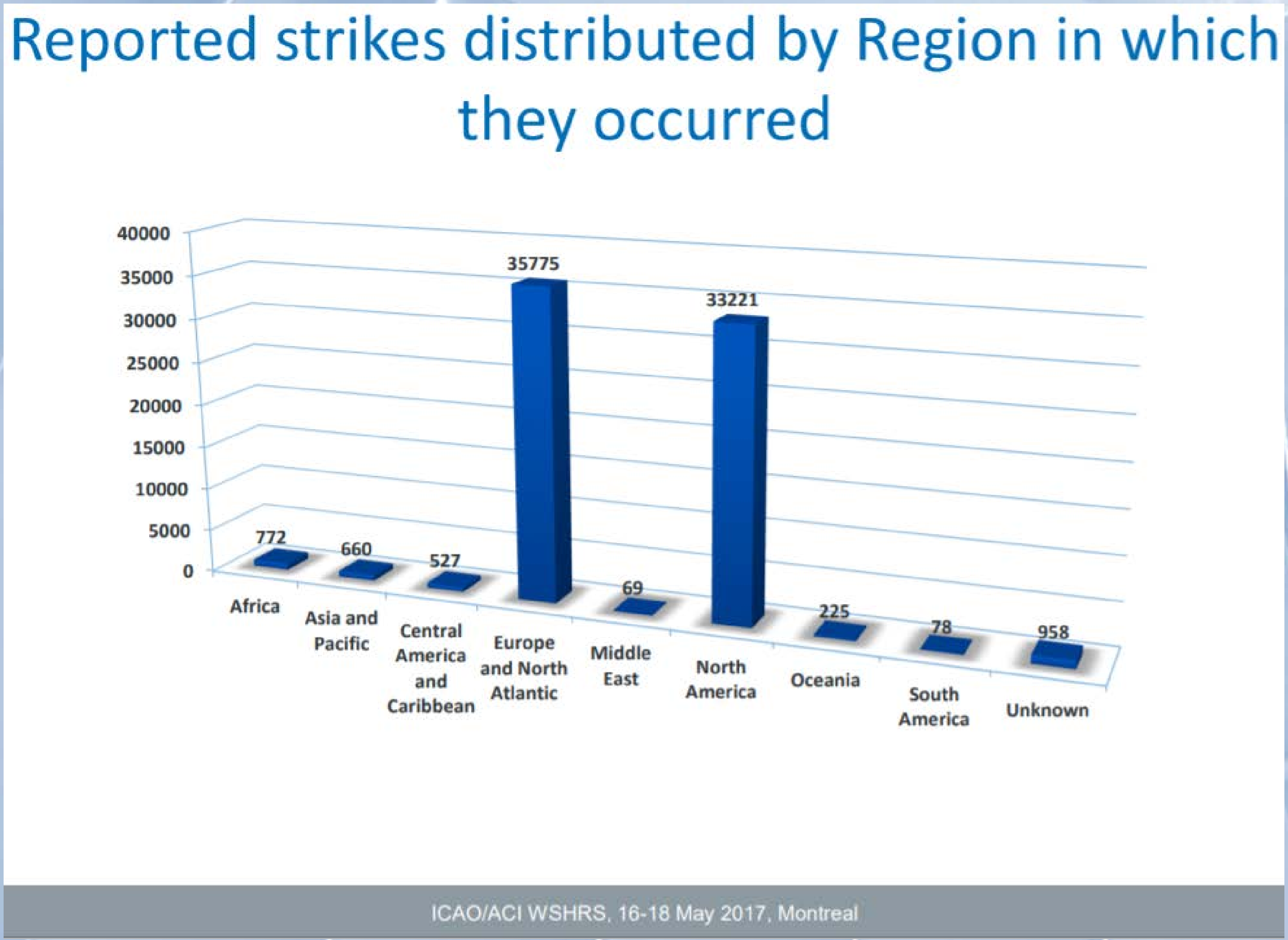
Why are the insurers interested?

- “The wide body deductible introduced nearly 40 years ago was and still is USD 1 million. Compound inflation rates indicate USD 4 million would be accurate.
- The maximum cost of an engine at that time was approximately USD 5 million with the average being nearer USD 2 million. The current maximum engine value is nearer USD 40 million with the average being around USD 15 million
- Composite bodywork repairs are 4-5 times those of traditional aluminium repairs.”

Why are the insurers interested?

- "Insurers should look to respond with solutions to the risks our clients have highlighted, however, the pricing and breadth of cover provided has been largely mismanaged to date and must be addressed and corrected. Some of these coverages may even require standalone polices such is the potential level of exposure to insurers."

Why was there a belief some regions had low issues?



Regulation is in place

- Regulation and Standards ensure Safety
- Internationally recognised with guidance adapted to fit local (national) needs.
- Hence; Provision of Consistent Safety

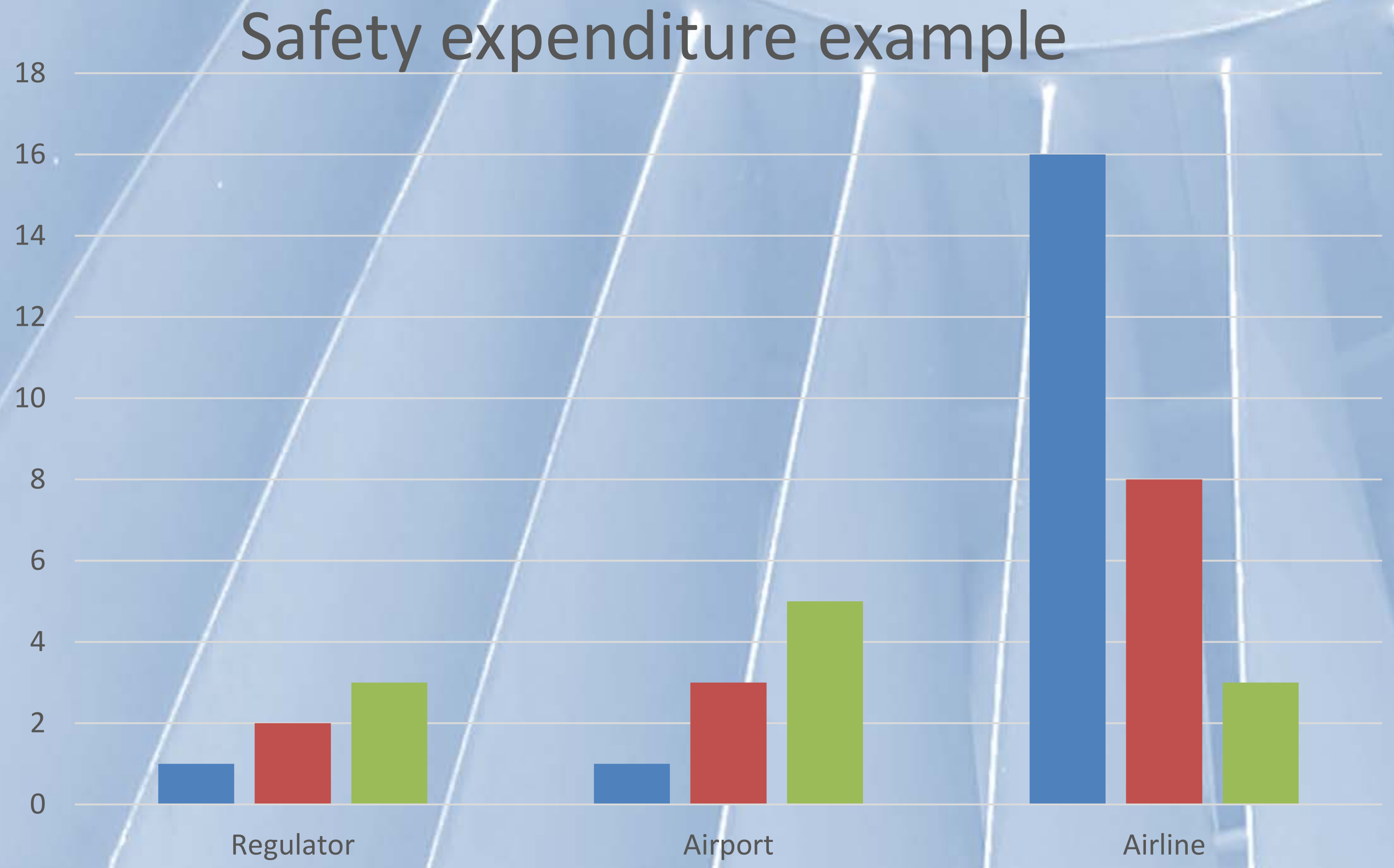
Implementation is in place

- Airports
- Airports have a budget and meet regulatory standards in order to operate.
- Airports provide a safe operating environment

Safety

- Airlines; Implement control.
- Airline / Pilot will not take a risk.
- Airline has a budget and time schedule.
- Takes the benefit of flying to/from low risk environments either through location or quality bird control.
- Takes the hit of high risk environments either through location or poor control

How can insurers reduce their exposure??...



Investing for risk reduction

- An airline investing in an airport benefits it's competitors (airline groups!)
- An airline understanding it's risks benefits itself

i.e.

But

- Insurers investing in reduction at airline or enhancement at airport influences their savings..
- A return to understanding (and improving the gathering of data) becomes key

Targeted Risk Management

- Data, poor data, more data = ? Information

Aerodrome	Unknown	Raptor	Pigeon	Swan	Stork	Crow	Lapwing	Owl	Bat	Sparrow	Total
A	111	20	7	1				2	3	3	147
B	14	9	1			1					25
C	20	17	4						1		42
D	3	1					2			1	7
E	4							1			5
F	7										7
G	6	1	1					1		2	11
H	8		2						1		11
I	9	1	1							1	12
J	6	3								1	10
L	3	1						1			5
M	2										2
N	1										1
O	3										3
P					1						1
Q	2	1									3
R		1						1			2
S	3							2			5
T	6	1	1								8
U	2										2

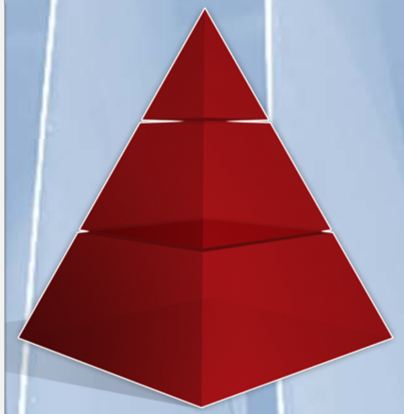
Targeted Risk Management

- Insurers of airlines looking to input airline protocols.
- Looking to select higher risk airports presenting majority of risk. **Check** all standards and regulations being met.
- Future - contract those standards

As Low As Reasonably Practicable (ALARP)------>

Acceptable Level of Safety (ALoS) ------------------->

Regulatory Minimum Standards----------------------->



Insurance premiums

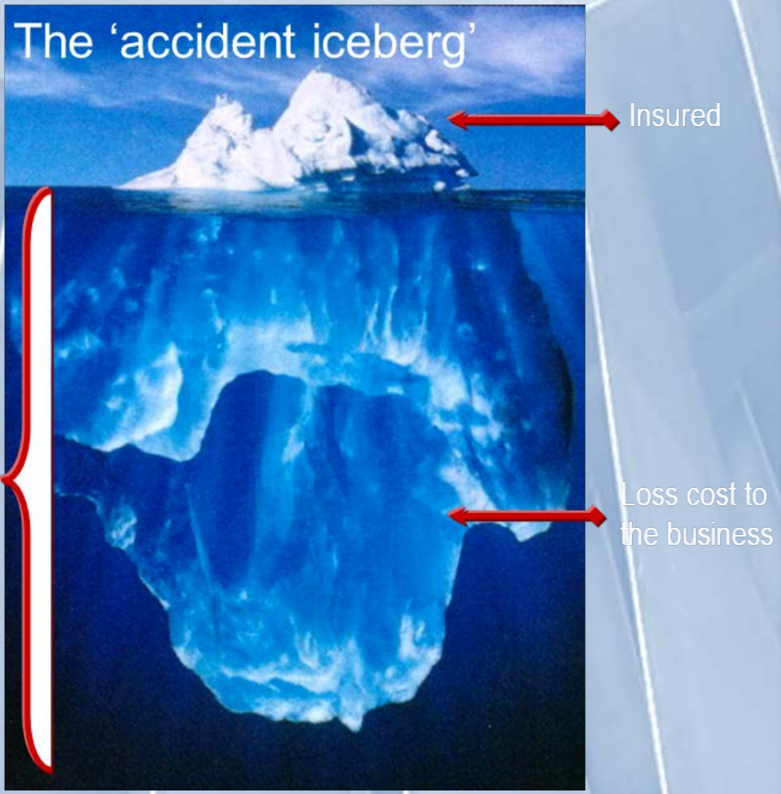
- ICAO SMS
  - Identifies safety hazards.
  - Ensures that remedial action necessary to maintain an acceptable level of safety is implemented.
  - Provides for continuous monitoring and regular assessment of the safety level achieved.
  - Aims to make continuous improvement to the overall level of safety.
- This is the expectation of the Insurance Industry and will target matching wildlife guidance.

Adjustable Premiums

- Good safety record = lower premiums, more marketplace options
- Insurance companies are becoming smarter. If one company decides not to insure, other companies consider risk.
- E.g. lack of **non-damaging strike data** being seen as indicators or poor documentation and *likely* poor delivery.
- Smart Insurance = variable premiums and expected implementation to contract.

Regardless of insured costs..

- Direct cost,
  - Radome, windscreen, body, wings, tail, engine damage etc.
- Indirect costs,
  - Uninsured damage, Delay costs, Financial / contractual penalties, Legal costs, Investigation time & cost, Loss of customer confidence, Damage to reputation
  - Estimated 8-36x direct cost



*UK HSE Cost of Risk Multiplier Study 1992, 1996

Summary

- The missing link is insurance
- Some very large insurers cover airlines and airports – they own the risk, they own the cost.
- Premiums are 40 years out of date, options are only targeted premium increases or decreasing risk.