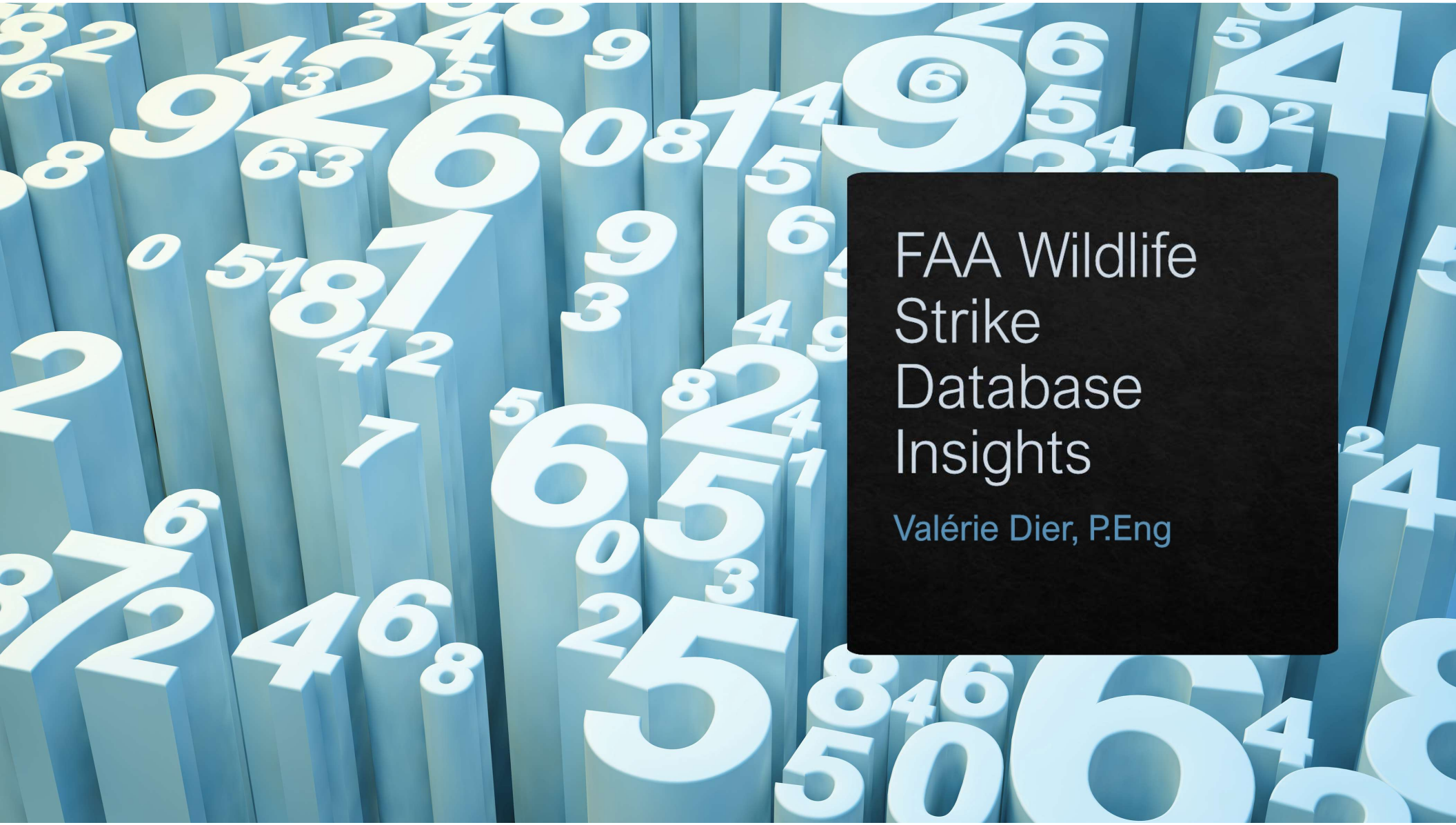

FAA Wildlife
Strike
Database
Insights
Valérie Dier, P.Eng

Paint a Picture with Data

Who will this inform?

Commercially-Driven Dashboard informs business teams

Regulatory-Minded Dashboard informs environmental compliance teams

Visualizations help

Identify trends

Spot outliers

Ask the right follow-up questions

No BI without actions

May need to redirect some investigations and analyses

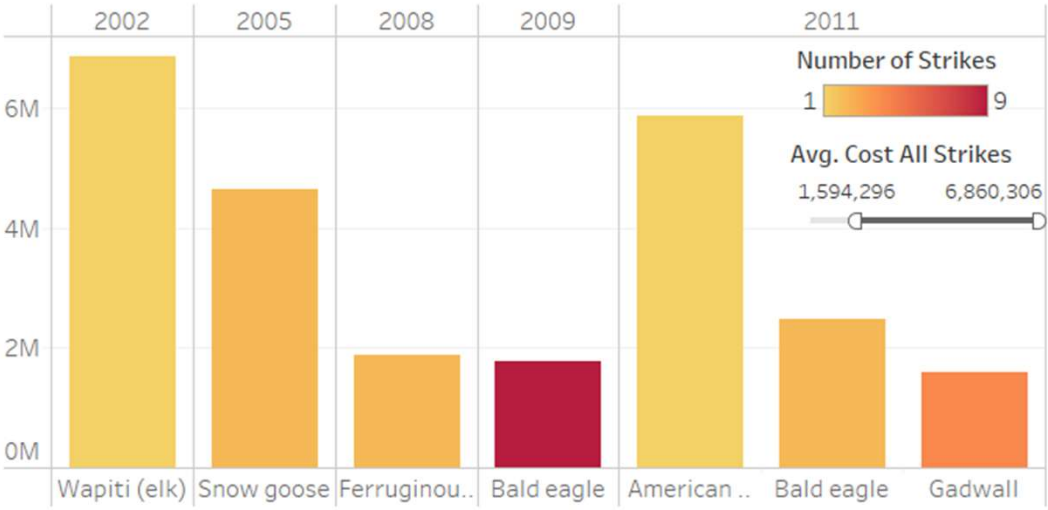
Additional data may be required

Insights drive business decisions and risk mitigation

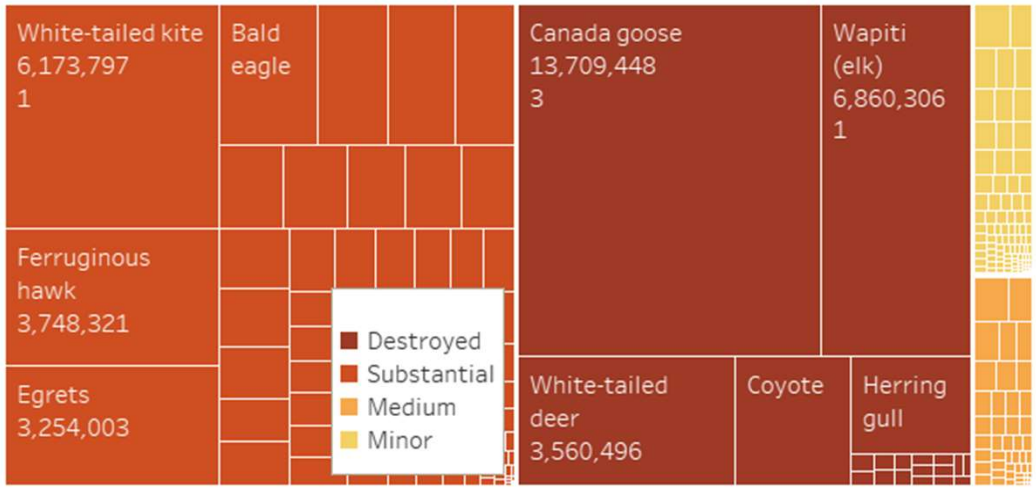
Commercially-Driven Dashboard

Running Average Cost per Strike is trending down

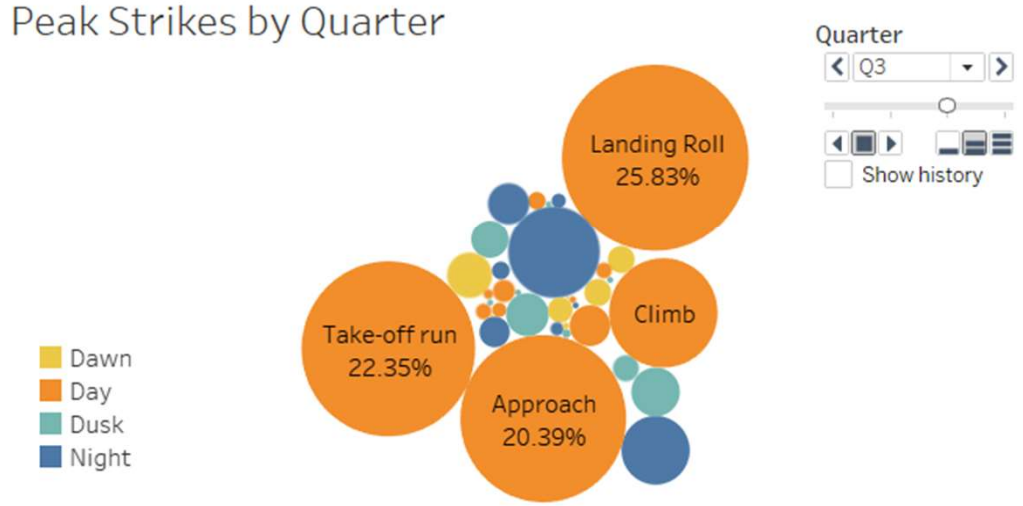
Some strikes cost more... some species are seldom struck



The most costly strikes are rare



Peak Strikes by Quarter



Running Average Cost

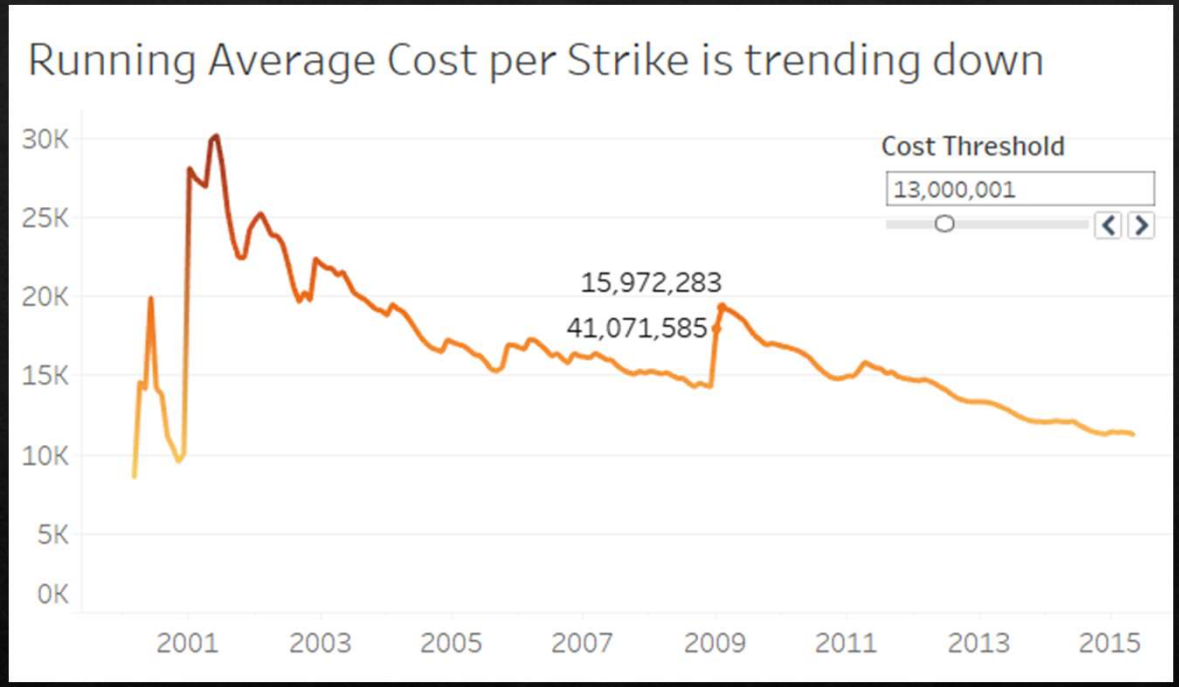
Downward trend

Reporting increased

- Mitigating measures may be paying dividends

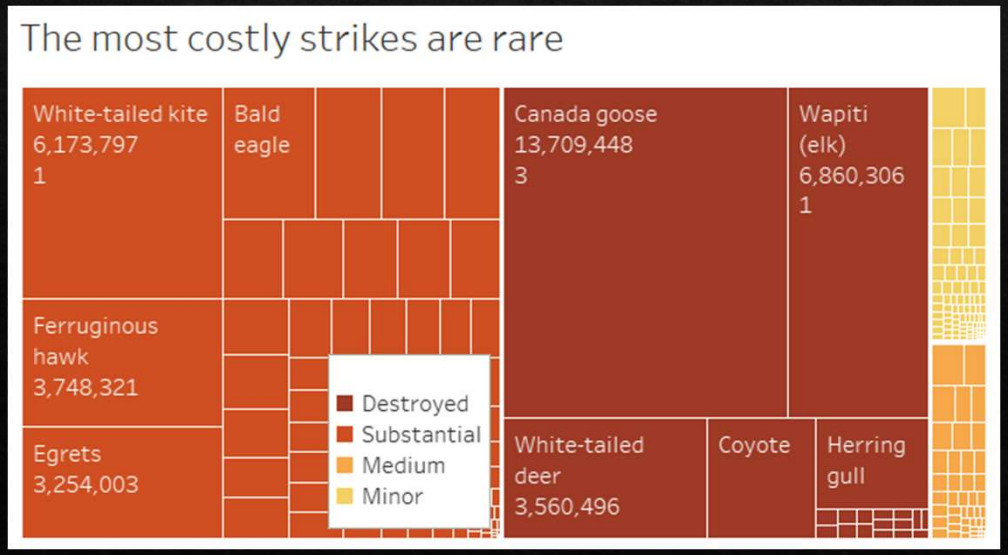
One-time high-consequence events cause spikes:

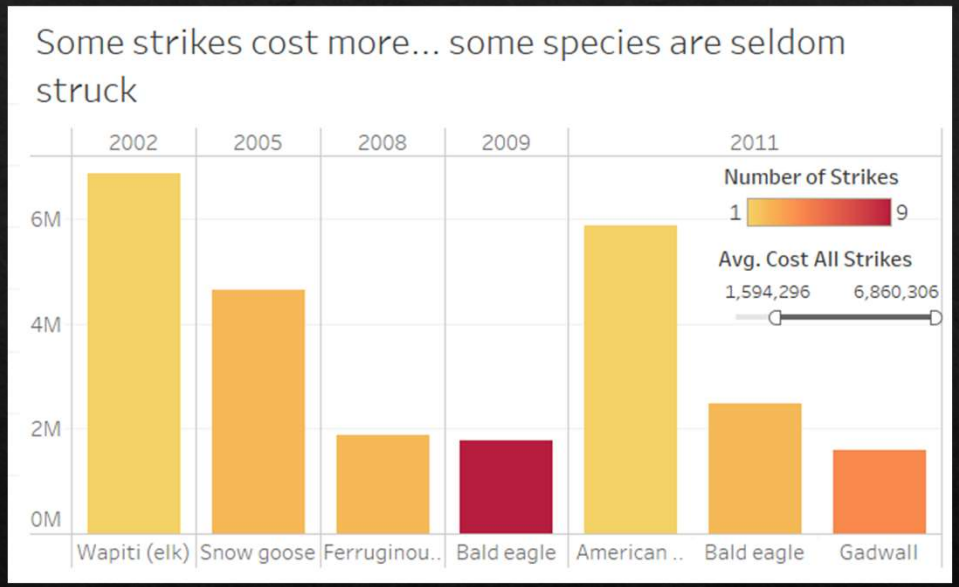
- Emergency landing of US Airways flight 1549 on the Hudson river in January 2009



Cost by Species

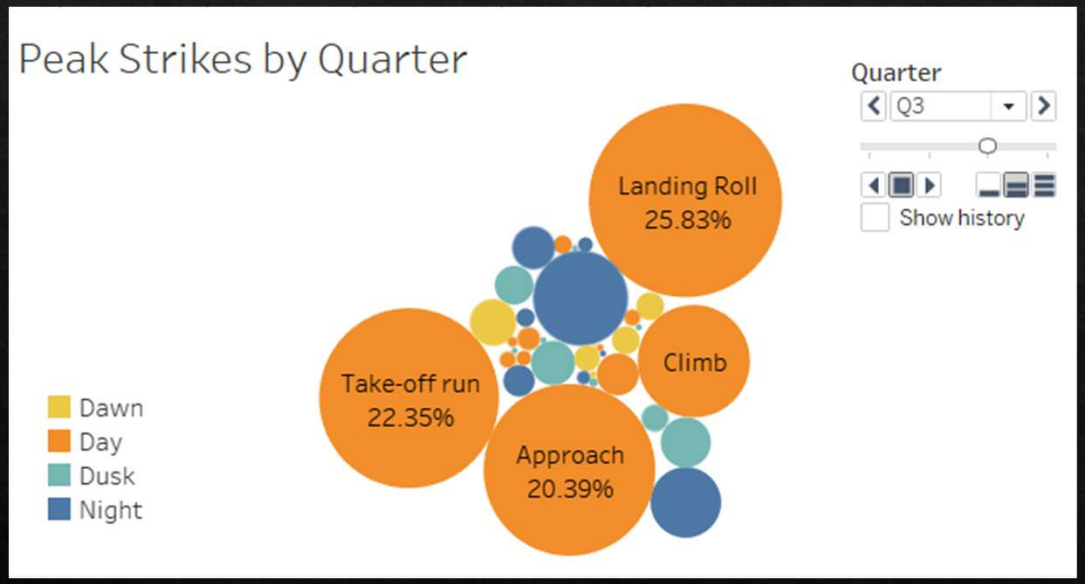
Larger species like elk, geese, hawks or eagles may be struck less often but cause more damage per strike.





Smaller species may cause more damage in larger groups (i.e. flocks).

Strike Timing



Strikes mostly occur:

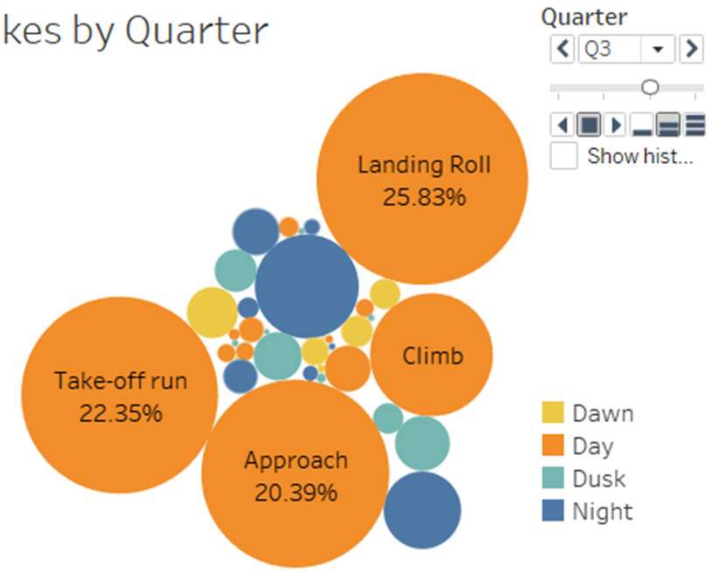
- during the daytime
- take-off, approach and landing

One notable exception:

Nighttime approach in Q4 accounted for 17% of strikes. This is consistent with reduced winter daylight hours in northern locales.

Environmentally-Driven Dashboard

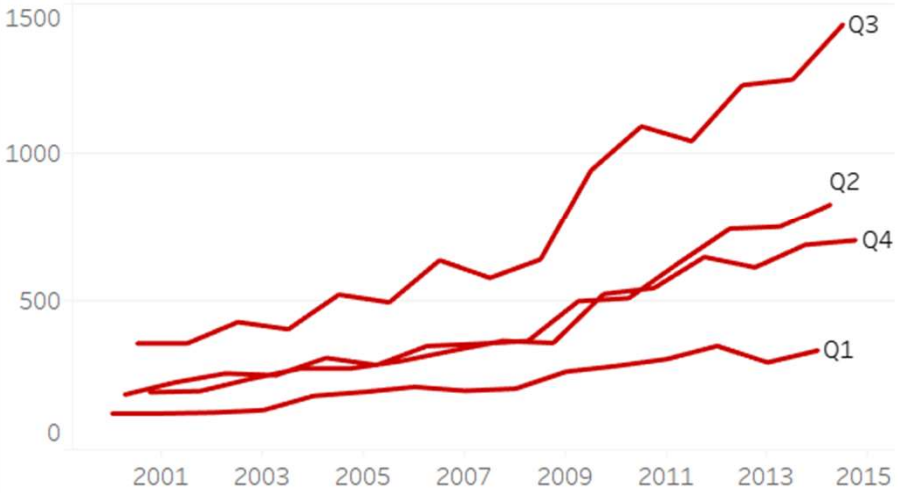
Peak Strikes by Quarter



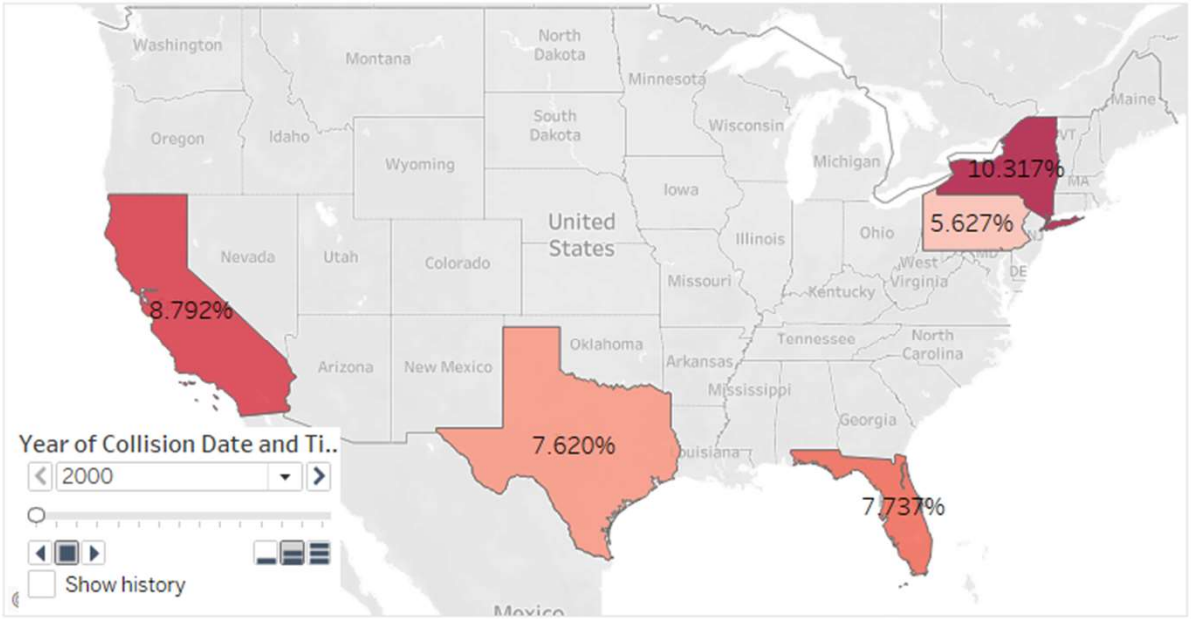
Mourning Dove and Barn Swallow ranked top struck

Wildlife: Species	2000 Q3	2001 Q3	2002 Q3	2003 Q3	2004 Q3	2005 Q3	2006 Q3	2007 Q3	2008 Q3	2009 Q3	2010 Q3	2011 Q3	2012 Q3	2013 Q3	2014 Q3
Barn swallow								1		1	1		1	1	1
European starling									1						
Gulls					1										
Mourning dove	1		1	1		1	1	1				1			
Rock pigeon		1													

Q3 consistently tops the strike count



A Timeline of States with Most Strikes

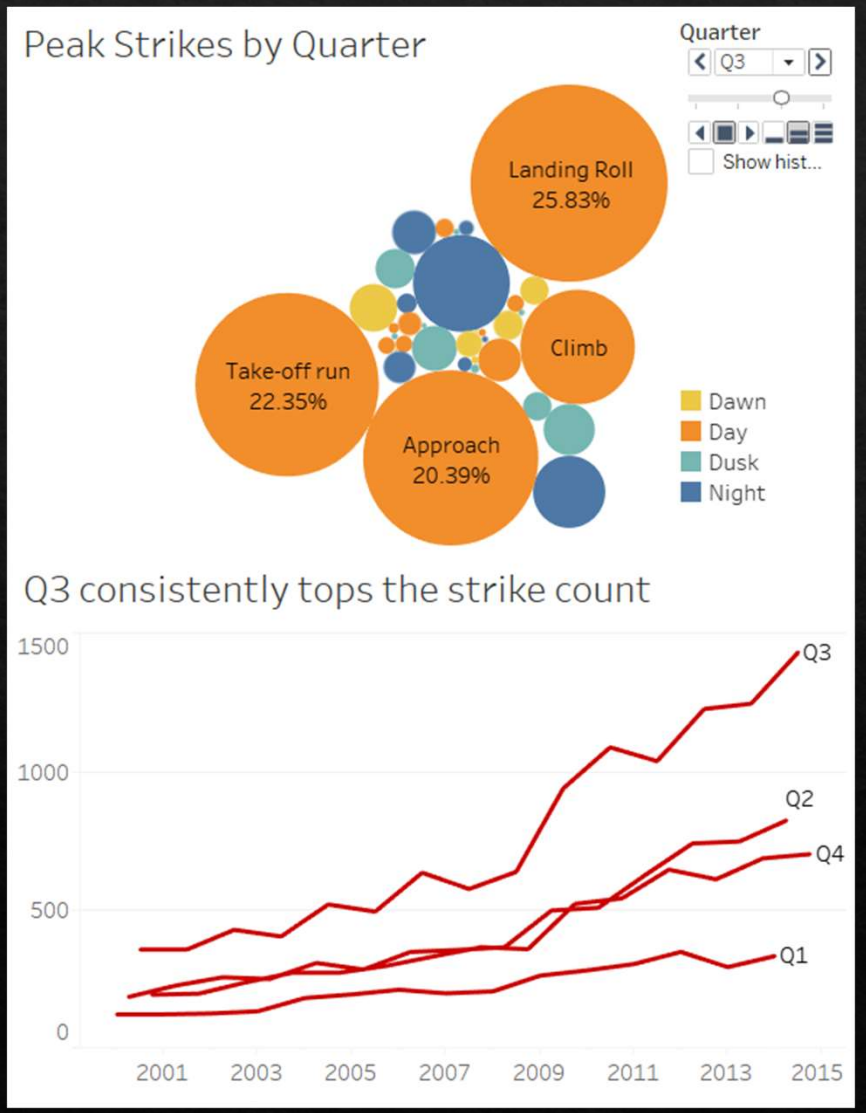


Strike Timing

Most strikes happen in daytime, usually during take-off, approach or landing

Some exceptions in Q1 and Q3 on nighttime approach

Q3 consistently tops the quarterly strike totals in a year



Which Species?

The Mourning dove or Barn Swallow have the highest quarterly strikes each year

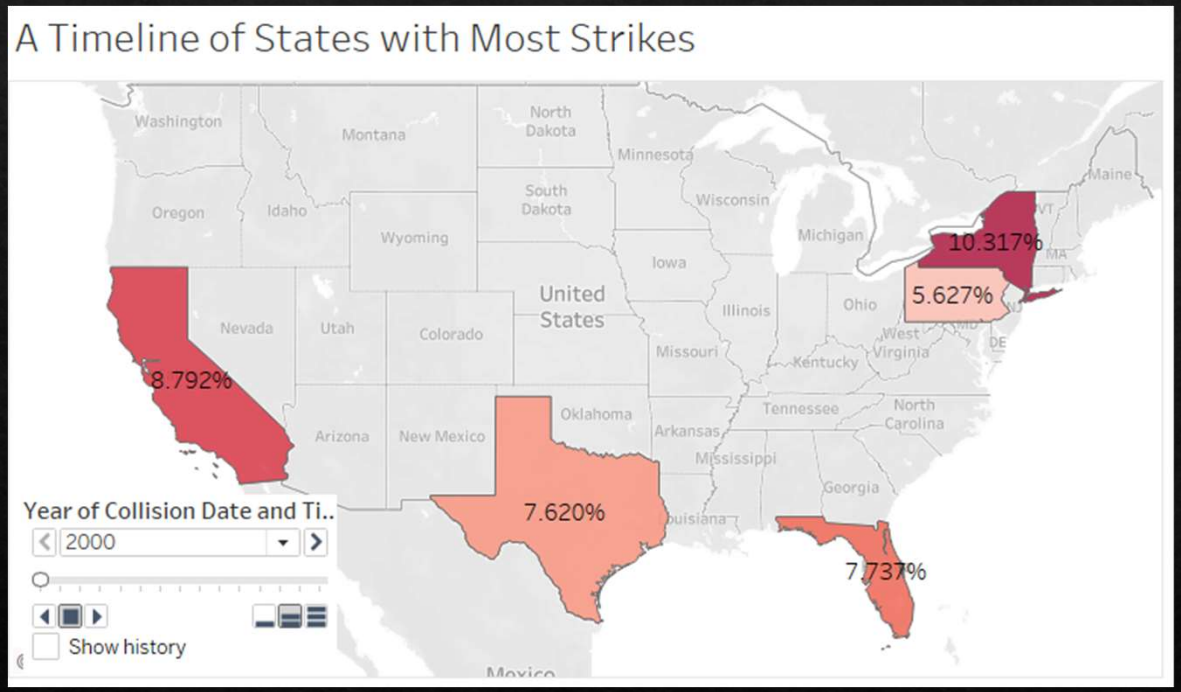
The trend changed from Mourning dove to Barn Swallow around 2007

Could there be migratory behaviour changes?

Mourning Dove and Barn Swallow ranked top struck

Wildlife: Species	2000 Q3	2001 Q3	2002 Q3	2003 Q3	2004 Q3	2005 Q3	2006 Q3	2007 Q3	2008 Q3	2009 Q3	2010 Q3	2011 Q3	2012 Q3	2013 Q3	2014 Q3
Barn swallow								1		1	1		1	1	1
European starling									1						
Gulls					1										
Mourning dove	1		1	1		1	1	1				1			
Rock pigeon		1													

Hotspots

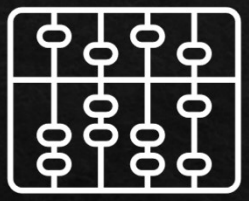


Strikes mostly occur in the same four states

- California
- New York
- Texas
- Florida

The fifth state shifts from New England region to further interior

Next Steps



Destination State data

Commercial and environmental efforts are correctly directed when locales reflect *where* strikes occur

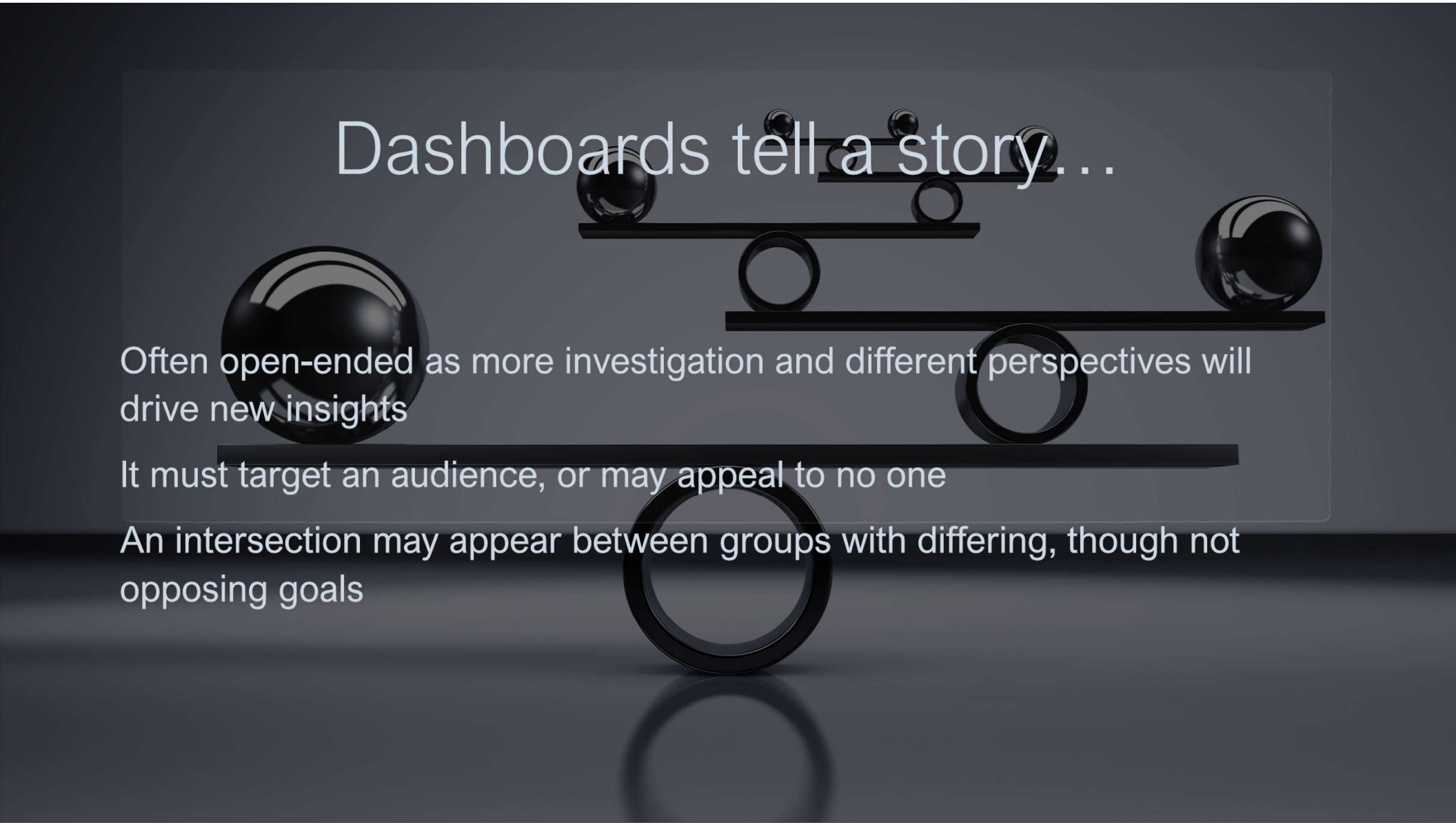
Let's Get Granular

Are highly-struck species driving costs or are low-count high-consequence strikes the big drivers?

What/When/Where

Environmental Compliance could probe whether Q3 high-strike species are in the same locales year over year

Dashboards tell a story…



Often open-ended as more investigation and different perspectives will drive new insights

It must target an audience, or may appeal to no one

An intersection may appear between groups with differing, though not opposing goals