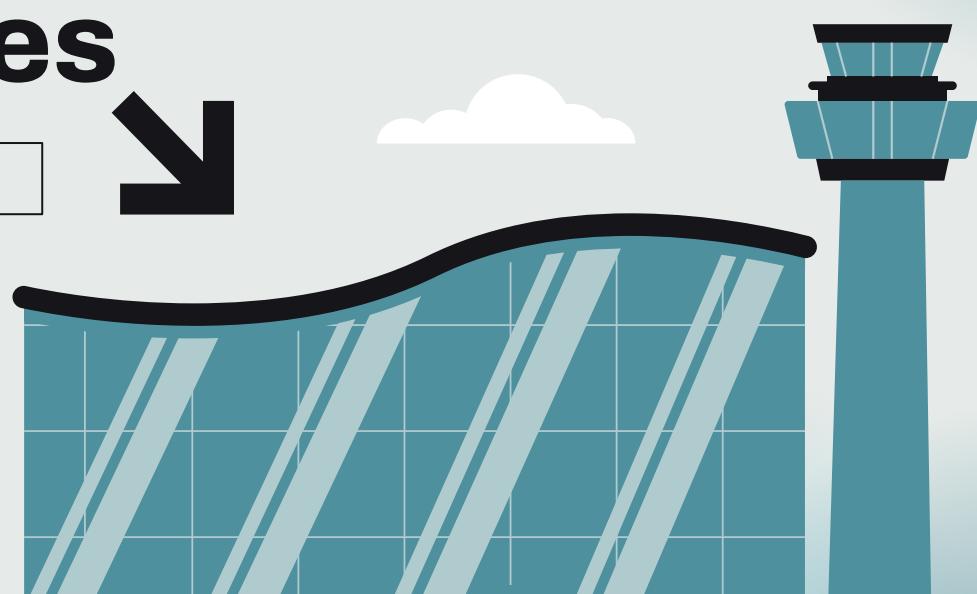


FAA Wildlife Strikes for Airports in the United States

Presented By Tina Pham

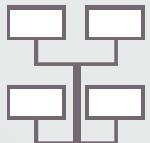




Introduction



- **Wildlife strikes** are common in the **aviation industry**.
- **Strikes** pose a remarkable **safety** and **economical threat**.
- Wildlife Risk Assessments is important :
 - Airport infrastructure development to enhance **health and safety** for passengers
 - Air traffic control to **minimize** aircraft-wildlife **collision**
 - **Reduce** operation **cost** from collision damage



Project Goal



- Design an **interactive dashboard** to assist with **wildlife risk assessments**.
- Perform root cause analysis and conduct study on the **economical effect** of **wildlife strikes** to the **aviation industry** in the **United States** from 2000 to 2015.



Process



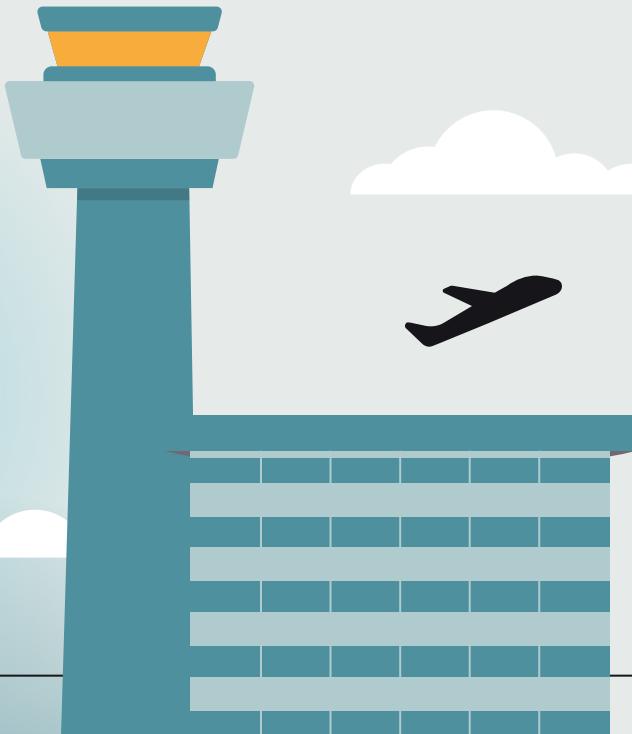
Overview

- Examine year to year economical effect of wildlife strikes.
- Identify out of trend patterns

Detail Analysis

- Perform root cause analysis for the out of trend pattern

Process



Cost

What is the trend in operation cost on wildlife strike over time?



Number of Strikes

Time of year with the high number of strikes?



Wildlife Species

Wildlife species with high number of strikes?
Wildlife species that caused the most damage?

Results

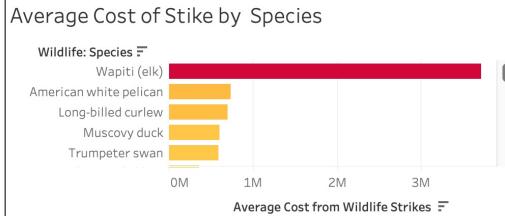
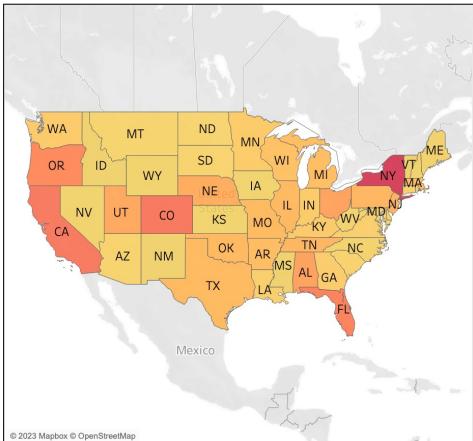
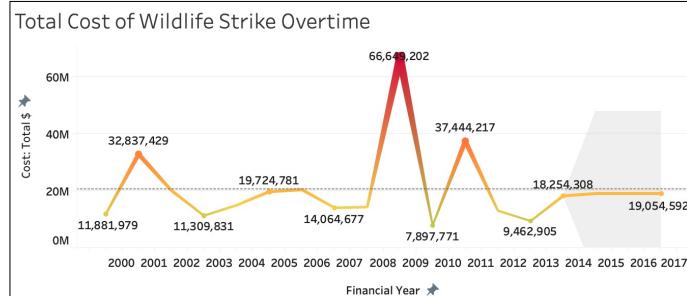
Economical Effect of Wildlife Strikes

\$322,160,887
Total Cost of Wildlife Strikes
on Aviation Industry

Month of Collision Date and Time
January 2000 May 2015

When: Phase of flight
(All)

Effect: Amount of damage (detailed)
(All)

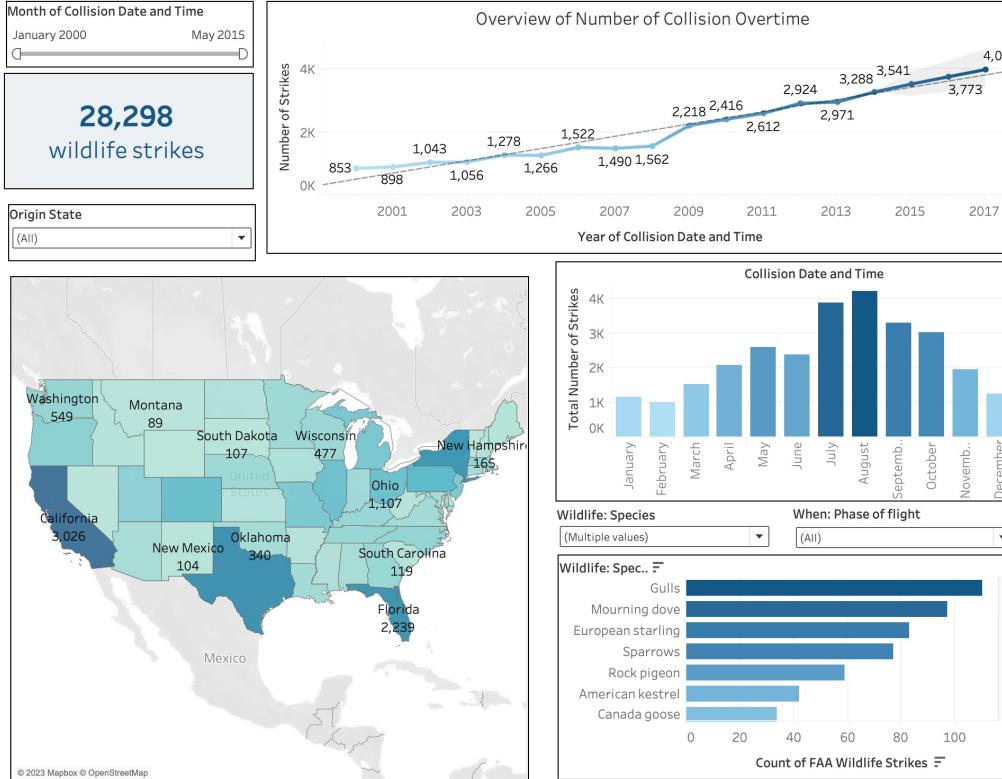


- Significant high cost from wildlife strikes in 2009 fiscal year.

WHY?

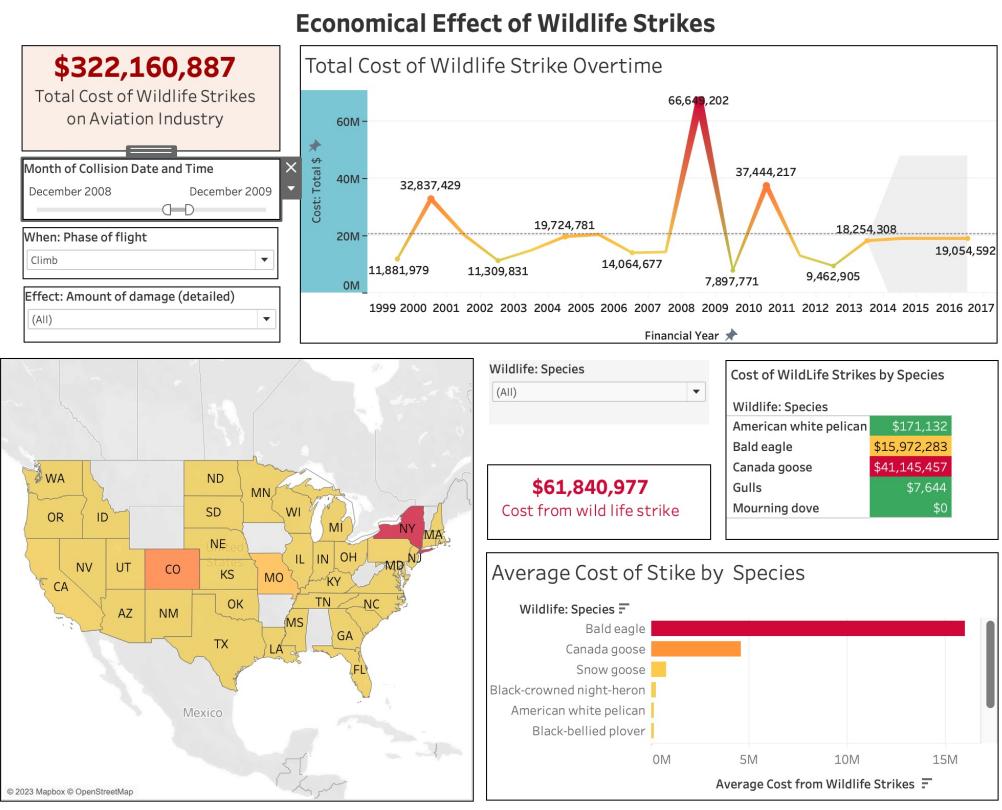
Results

Infographic on the Number of Wildlife Strike in United States



- **Forecasted** trend that number of wildlife strike will continue to **increase** in the next **2 years**.
- **Peak season** of wildlife strikes is **August**.
- Most strikes happen during **approach**.
- **California** has the high number of strikes with **Gulls** is the most common species to get strikes.

Results



- Significant high cost from wildlife strikes in 2009 fiscal year.
- The damage is done by a wildlife strikes in **New York** by a **Canada Goose** during **Climb** that **destroyed** the aircraft → cost **\$41 M.**
- **Bald Eagle** strikes during **climb** in **Colorado** that cause **substantial damage** to the aircraft → cost **\$15 M.**

Lesson Learned

1. Start with \$

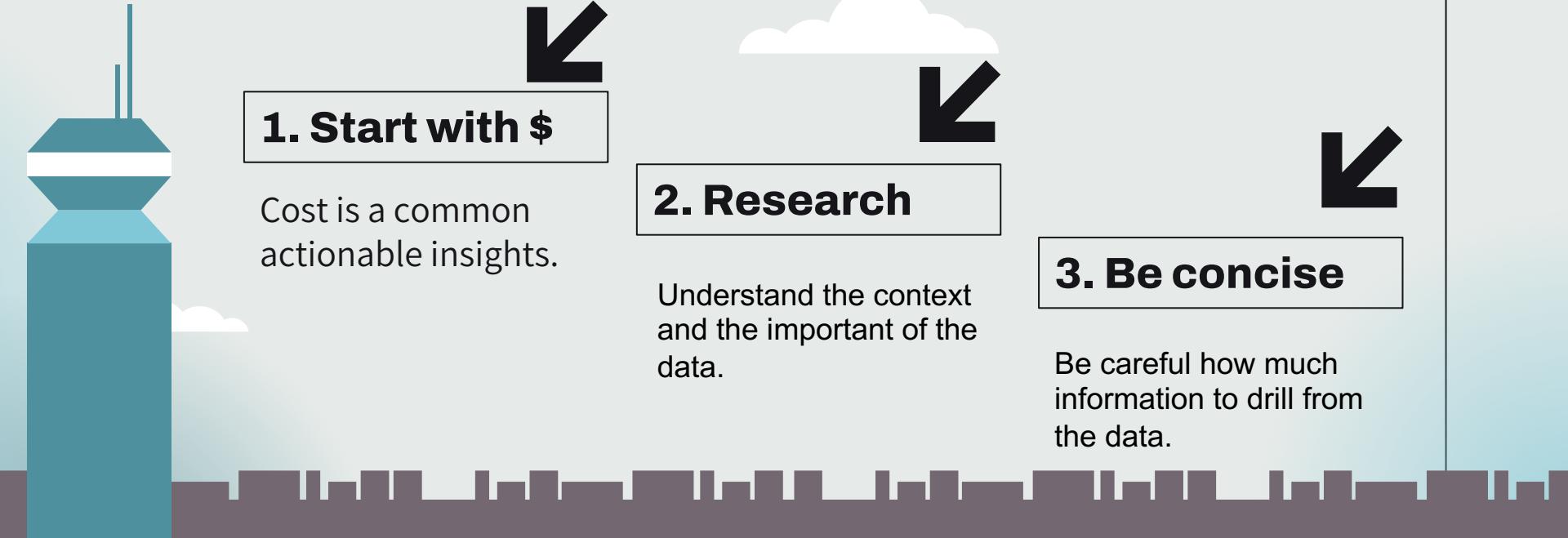
Cost is a common actionable insights.

2. Research

Understand the context and the important of the data.

3. Be concise

Be careful how much information to drill from the data.

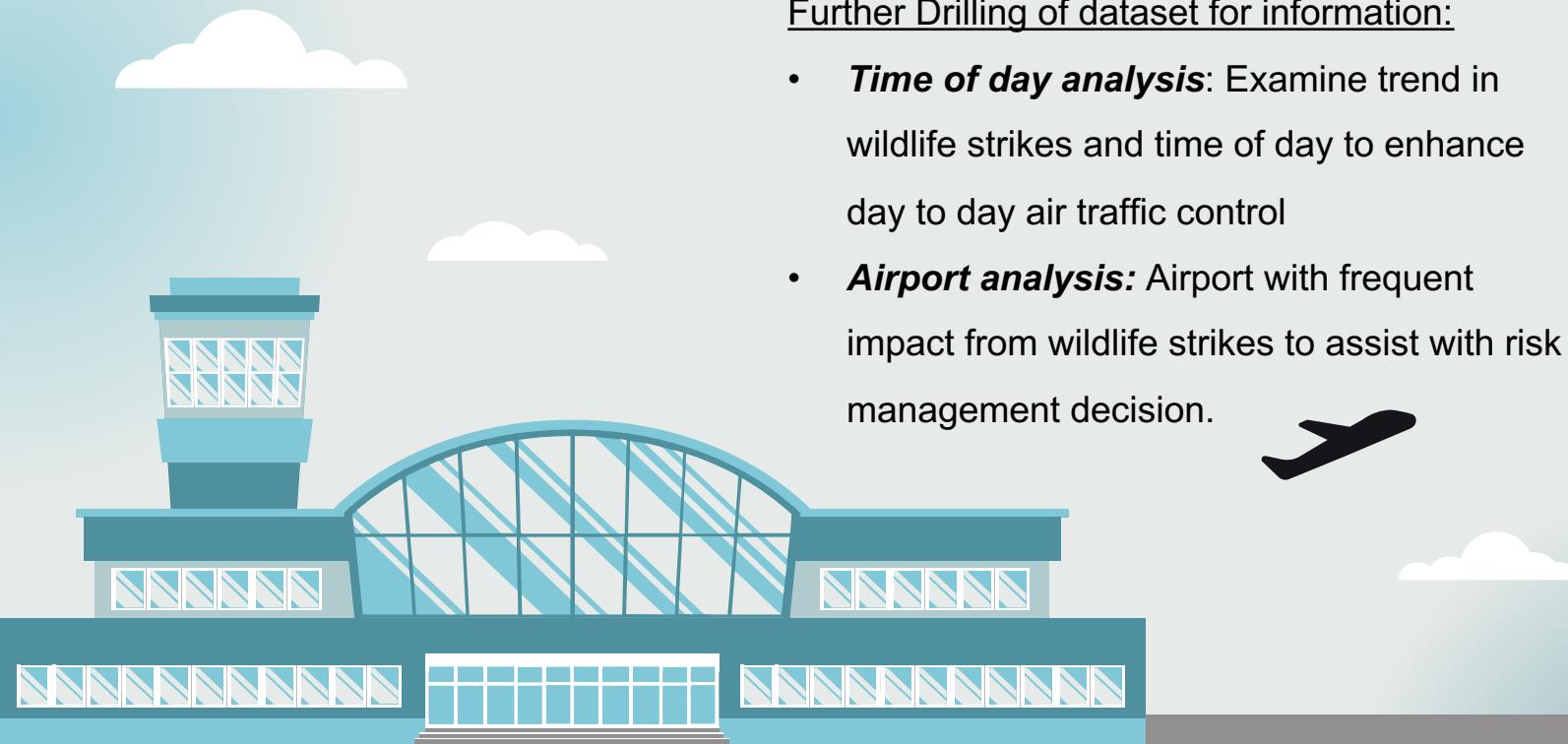


Future Goal



Further Drilling of dataset for information:

- ***Time of day analysis:*** Examine trend in wildlife strikes and time of day to enhance day to day air traffic control
- ***Airport analysis:*** Airport with frequent impact from wildlife strikes to assist with risk management decision.





Thank You