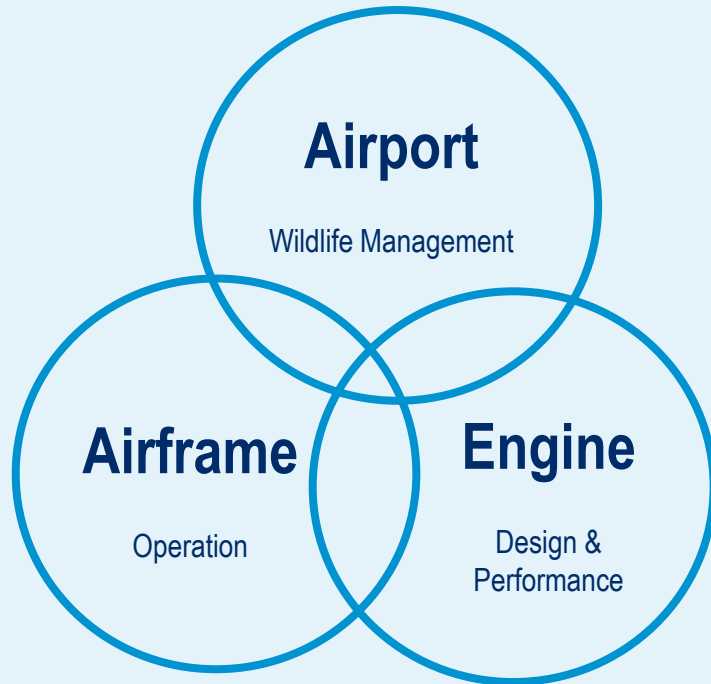


# Bird Strike Trending & Visualization Tool

# Visualization of Trends – Identifying Opportunities

## Purpose

Visualization of Trends to identify opportunities to reduce events & operational impact



## Sources of Data

(specific to GE Aerospace/CFM Commercial Products)

1. GE Aerospace Field Service Reports (proprietary)

Key Inputs:

Date, Operator, Engine, Operational Consequence, Flight Phase, Engine Damage and Bird Species/weight if known

2. FAA Wildlife Strike Database (Public)

Key Inputs:

Date, Operator, Engine, Operational Consequence, Flight Phase, Bird Species/weight and engine damage if known

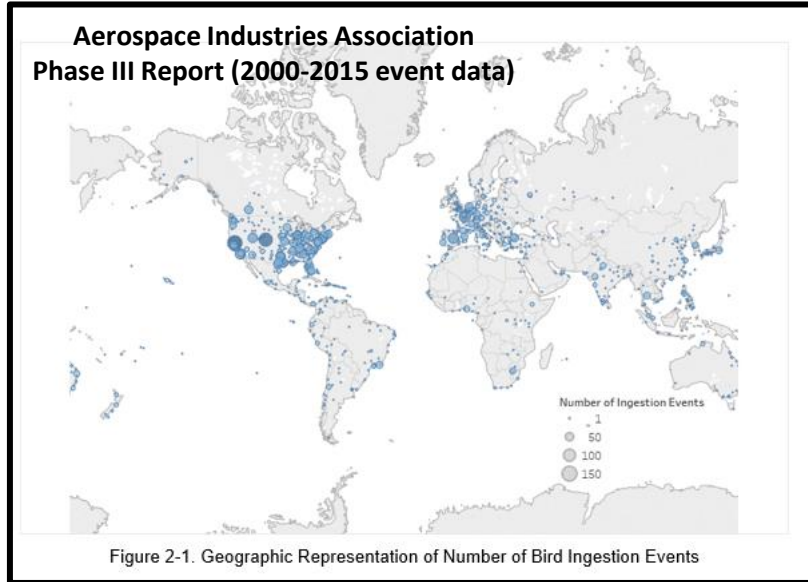
3. Cirium (Public)

Key Input:

Departure Data

# Benchmarking to Industry Data & Historical Trends

## Industry Published Trends

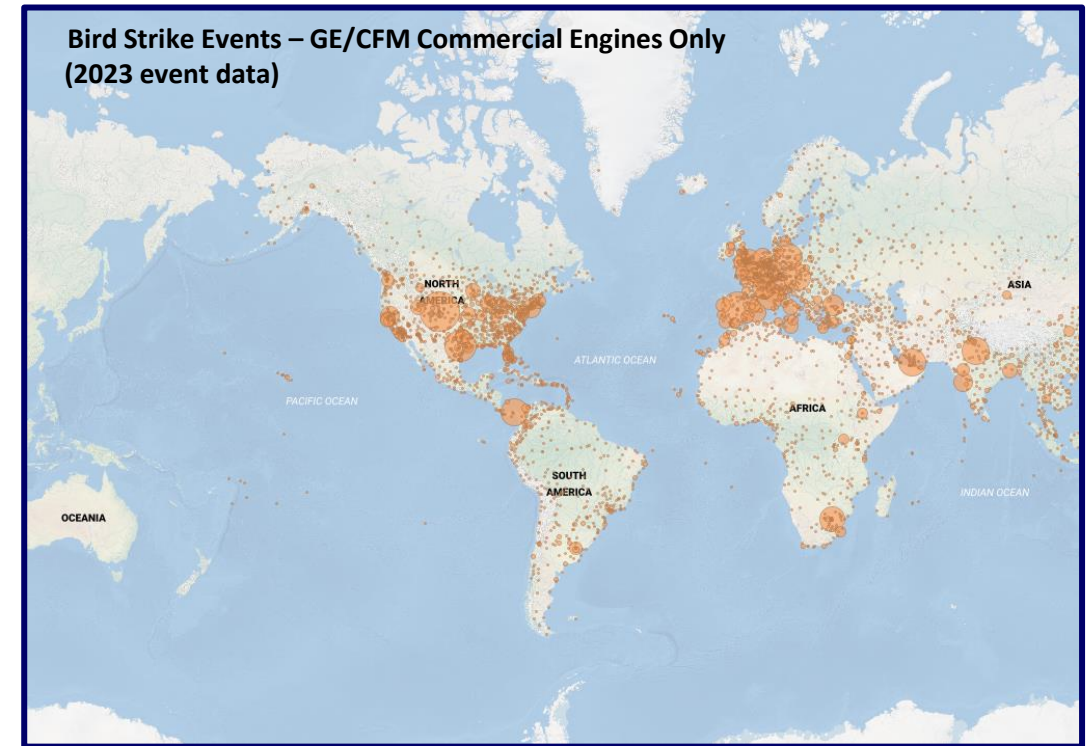


[https://www.faa.gov/airports/airport\\_safety/wildlife](https://www.faa.gov/airports/airport_safety/wildlife)

Airport ID	Airport	State/ FAA Region	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	Total
ZZZZ	UNKNOWN	/	773	900	895	1148	1455	1735	1751	1608	2029	2269	834	15397
KDEN	DENVER INTL AIRPORT	CO/ANM	444	419	428	505	417	483	441	444	326	467	86	4460
KDFW	DALLAS/FORT WORTH INTL ARPT	TX/ASW	333	320	368	323	342	452	431	404	314	320	138	3745
KORD	CHICAGO O'HARE INTL ARPT	IL/AGL	169	247	178	251	252	302	303	256	280	301	62	2601
KMEM	MEMPHIS INTL	TN/ASO	206	168	152	182	175	238	227	249	284	264	63	2208
KJFK	JOHN F KENNEDY INTL	NY/AEA	166	219	257	183	180	210	212	237	211	229	64	2168
KSLC	SALT LAKE CITY INTL	UT/ANM	123	148	123	210	168	265	216	182	141	236	47	1859

Snapshot of Table (full table not shown) showing reported strike totals per year by airport created using FAA Wildlife Strike Database

## GE Aerospace/CFM Database Trends



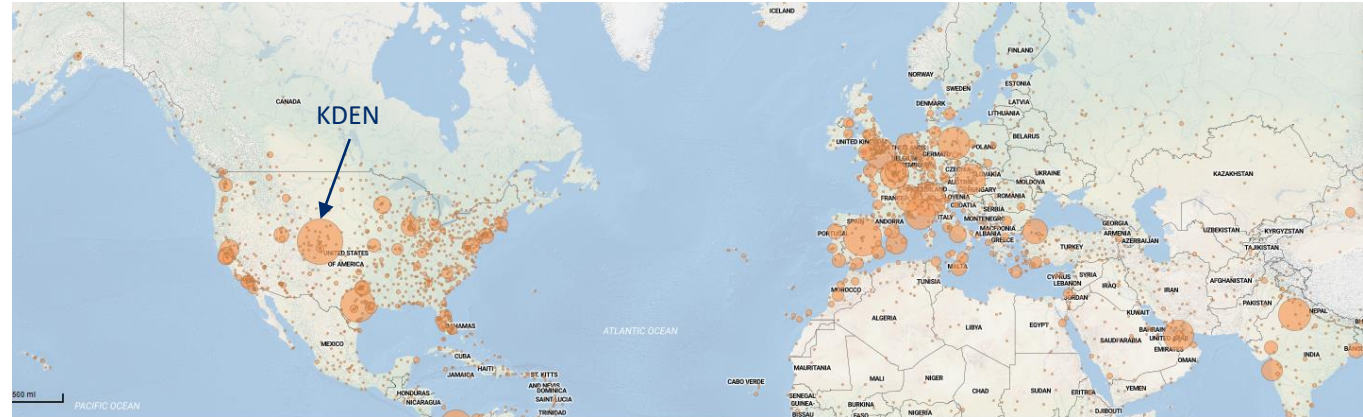
*Similar Trends with Industry Data*

# Geographical Airport Heat Map (US Focus)

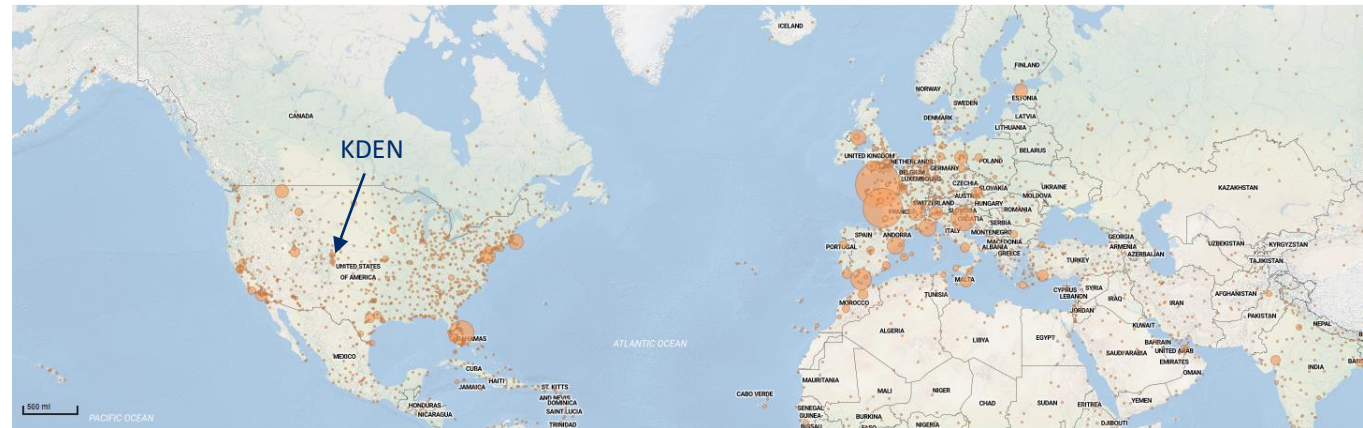
## Bird strike Count & Rates

- KDEN, Denver International Airport highest count of of bird strike events
  - Matches FAA Wildlife Database
- KDEN is not the highest rate due to number of departures
- US trends lower than European Region by strike count and rate

**Bird Engine Strike Events by Airport– GE/CFM Commercial Engines Only (2023 event data)**



**Bird Strike Rate by Airport– GE/CFM Commercial Engines Only (2023 event data)**



# KDEN – Operator & Engine Product Line Rates via Specific Airport

Bird Engine Strike Events by Airport– GE/CFM Commercial Engines Only  
(2023 event data)



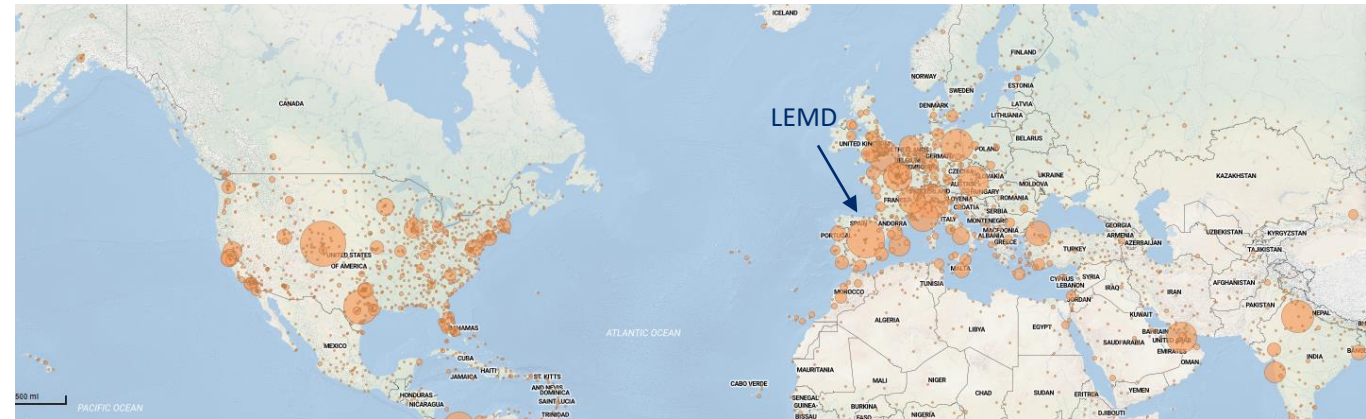
Utilize data for use in next generation engines

# Geographical Airport Heat Map (Europe Focus)

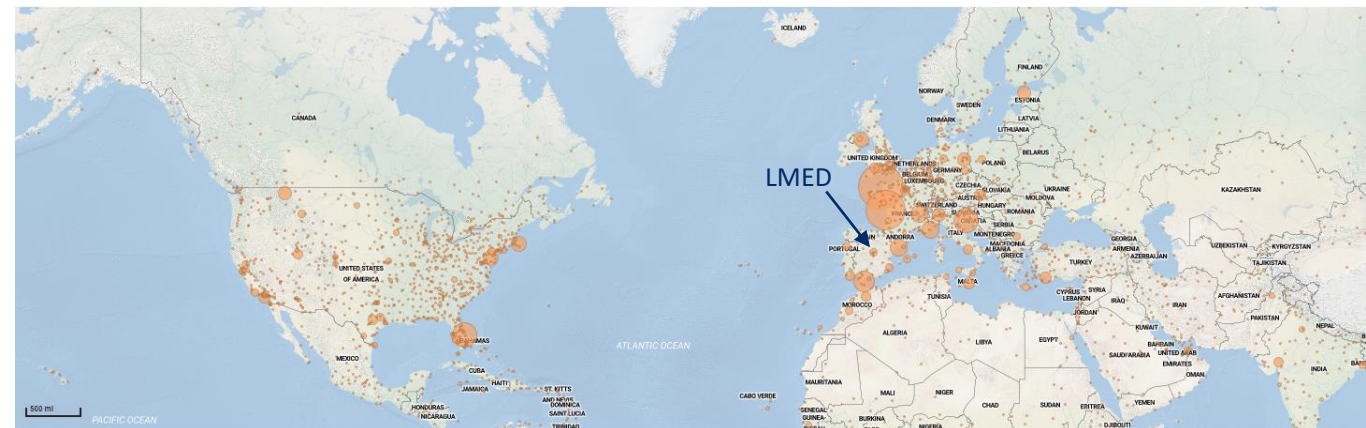
## Bird strike Count & Rates

- LMED, Adolfo Suarez Madrid-Barajas Airport has highest count of bird strikes
- LMED is not the highest rate due to number of departures
- Europe is the highest region by strike count and rate

**Bird Engine Strike Events by Airport– GE/CFM Commercial Engines Only (2023 event data)**

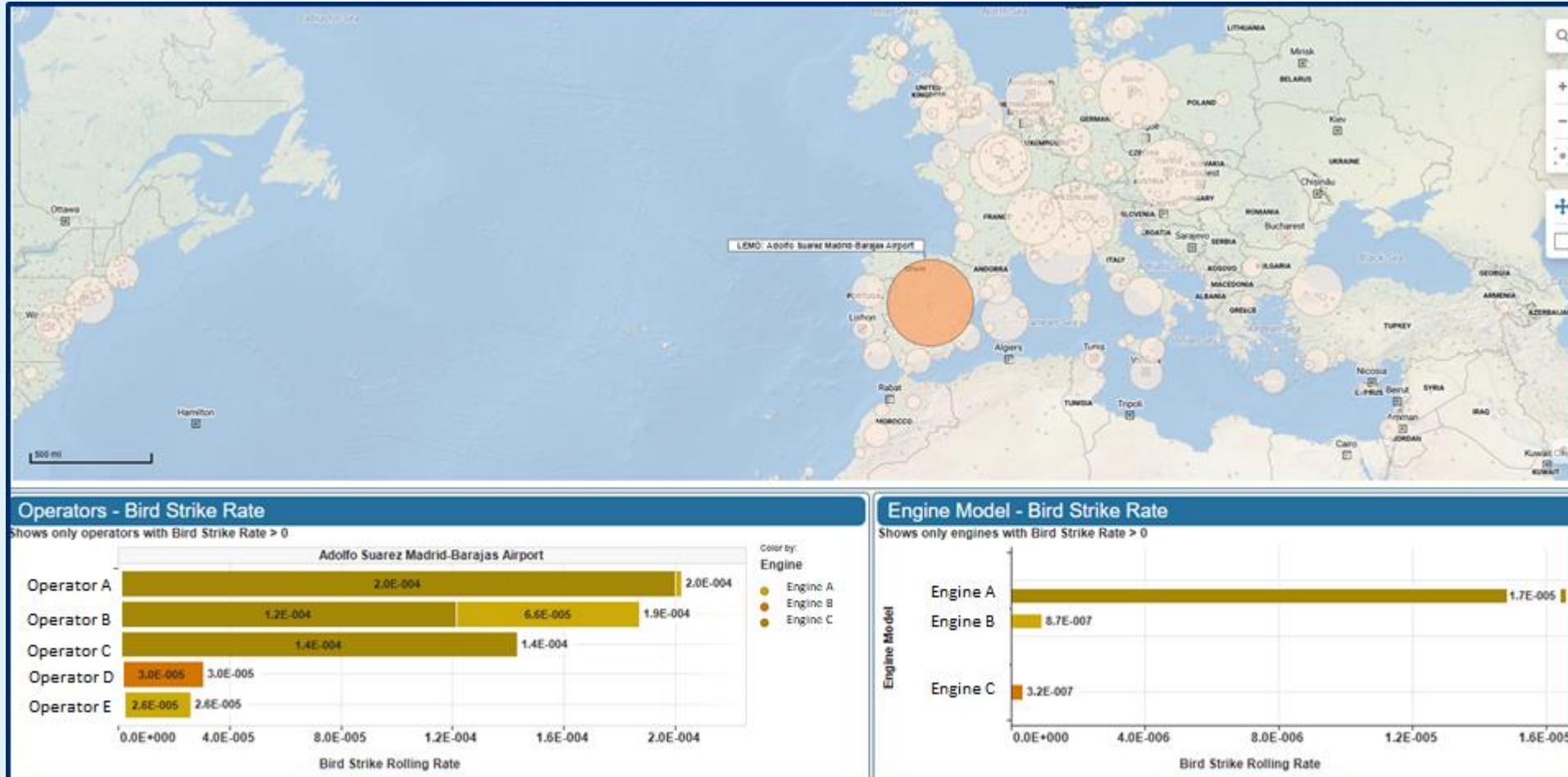


**Bird Strike Rate by Airport– GE/CFM Commercial Engines Only (2023 event data)**



# LEMD – Operator & Engine Product Line Rates via Specific Airport

Bird Engine Strike Events by Airport– GE/CFM Commercial Engines Only  
(2023 event data)



Utilize data for use in next generation engines

# Summary

Provide Awareness of where bird strike counts and rates occur that can be used to identify opportunities in defining additional wildlife management plans, bird detection technology and operational mitigations

Contact

Mary Hussey  
GE Aerospace  
[mary.hussey@ge.com](mailto:mary.hussey@ge.com)