

# Aviation Safety Through 2019 YTD

Successes and Challenges

November 4, 2019

# What will be covered



























- Fatal Accident events – All Airlines – As listed in [aviation-safety.net](http://aviation-safety.net) as of 20 Oct 2019
- Major accidents - Commercial Jet Aircraft (passenger and cargo)
- Major accidents - Business Jet Aircraft
- Major accidents - Commercial Turboprop Aircraft
- Major Accidents Definition
  - Aircraft destroyed or cost of repair greater than 50% of cost of aircraft
  - One fatality and substantial damage
  - More than one fatality

# Why Major Accidents?



# 2019 Safety Performance (Fatal Events – All Airlines)

- At Least 16 events – compared to 15 in 2018, 10 in 2017, 19 in 2016 and 16 in 2015 or an average of 14.6 in last 5 years.
- Includes accidents in Iran, USA, Colombia, Ethiopia, Russia, Canada, Indonesia, Tanzania and Ukraine
- At least 261 fatalities – compared to 556 in 2018 and 317 in 5-year average.

 14-Jan-19  Iran 15	 8-Feb-19  USA 1	 23-Feb-19  USA 3	 9-Mar-19  Colombia 14
 10-Mar-19  Ethiopia 157	 5-May-19  Russia 41	 13-May-19  USA 1	 27-Jun-19  Russia 2
 26-Jul-19  Canada 4	 6-Aug-19  Canada 2	 11-Sep-19  USA 2	 18-Sep-19  Indonesia 4
 18-Sep-19  Indonesia 4	 23-Sep-19  Tanzania 2	 2-Oct-19  USA 7	 4-Oct-19  Ukraine 1

Aircraft certified for 14+ passengers

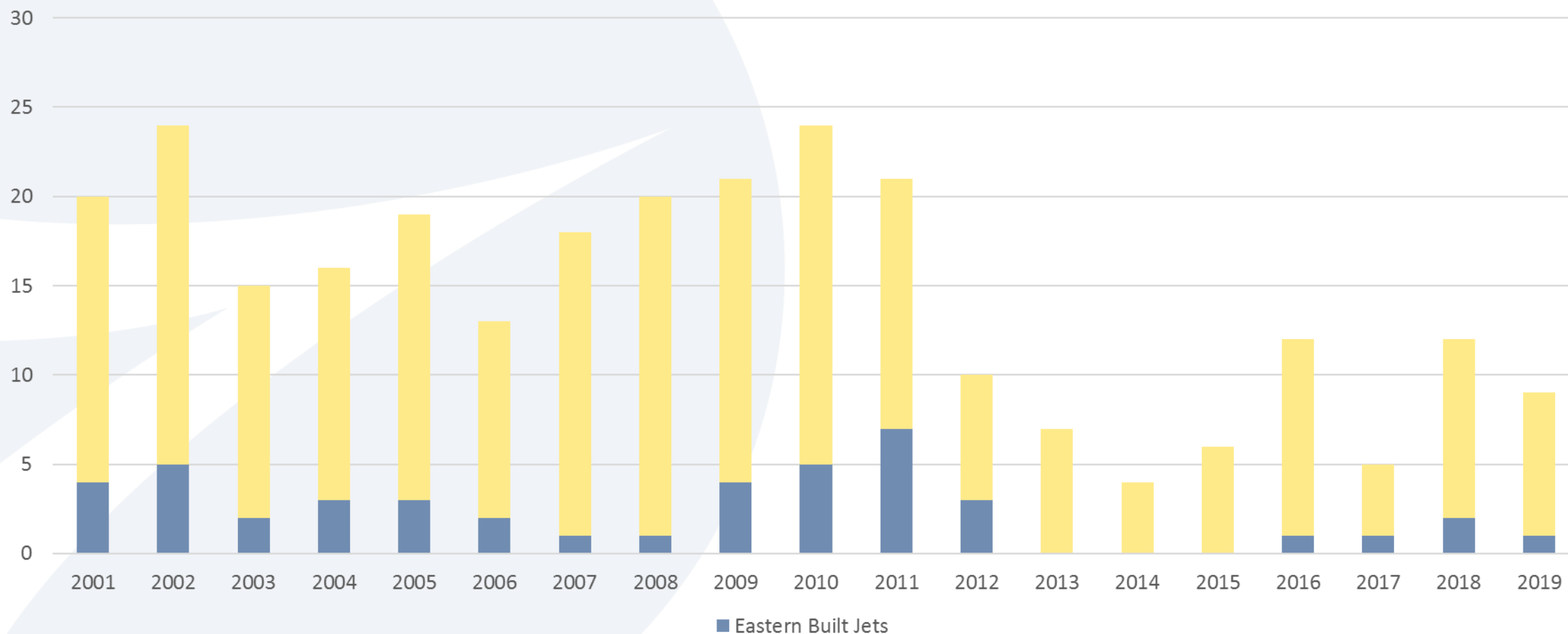
# Commercial Jet Aircraft



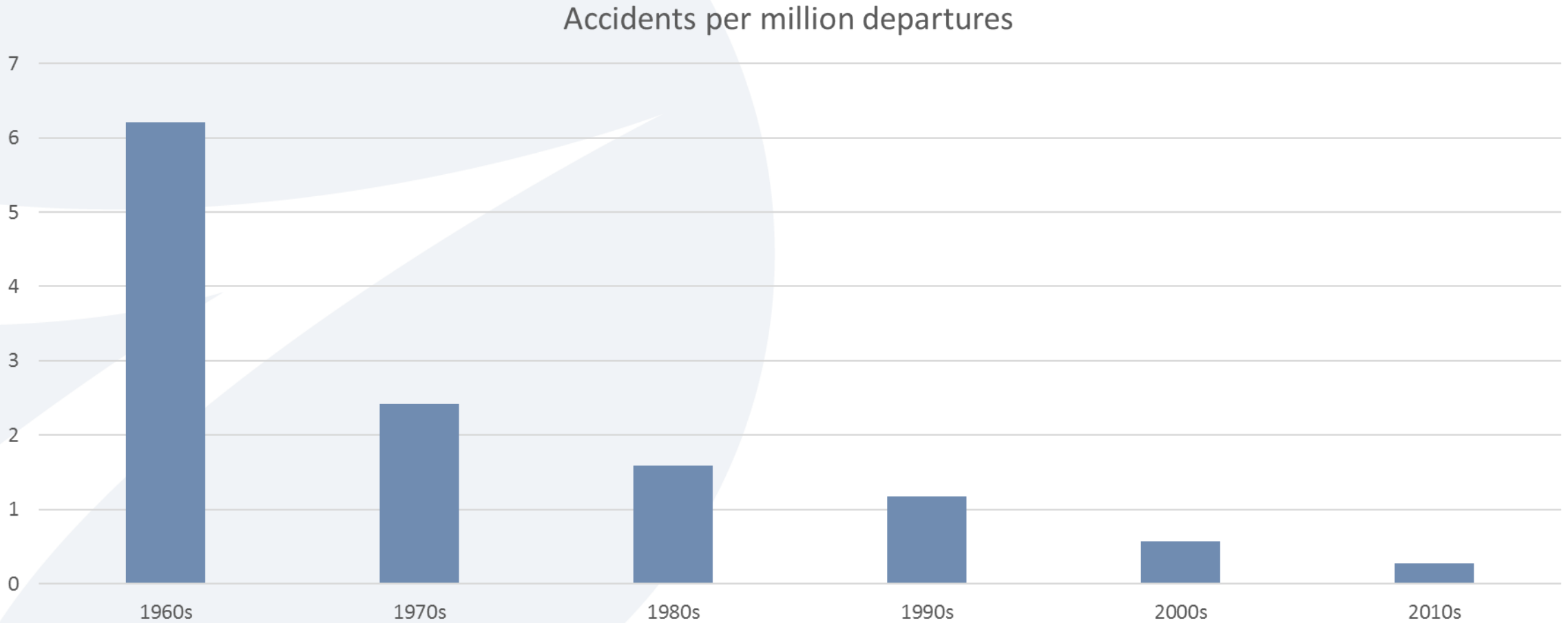
# Major Accidents Commercial Jets - 2019

Date	Operator	Aircraft	Location	Phase	Fatal
14-Jan	Iran AF, op. for Saha Air	Boeing 707-3J9C	Fat'h Airport , Iran	Landing	15
23-Feb	Amazon Prime Air, opn Atlas Air	Boeing 767-375ER	Trinity Bay, USA	Approach	3
10-Mar	Ethiopian Airlines	Boeing 737 Max	Near Addis Ababa, Ethiopia	Initial Climb	157
03-May	Miami Air International	Boeing 737-81Q(WL)	Jacksonville, FL USA	Landing	0
05-May	Aeroflot	Sukhoi Superjet 100- 95B	Moskva-Sheremetyevo Airport	Landing	41
15-Jun	United Airlines	Boeing B757-224(WL)	Newark-Liberty Intl Airport, NJ (EWR)	Landing	0
15-Aug	Ural Airlines	Airbus A321-211	SE of Zhukovsky Intl Airport (ZIA)	Initial Climb	0
27-Aug	Air China	Airbus A330-343	Beijing-Capital Intlal Airport (PEK)	Standing	0
4-Oct	Ukraine Air Alliance	Antonov An-12BL	Near Lviv-Danylo	Approach	7

# Commercial Jet - Major Accidents 2001-2019

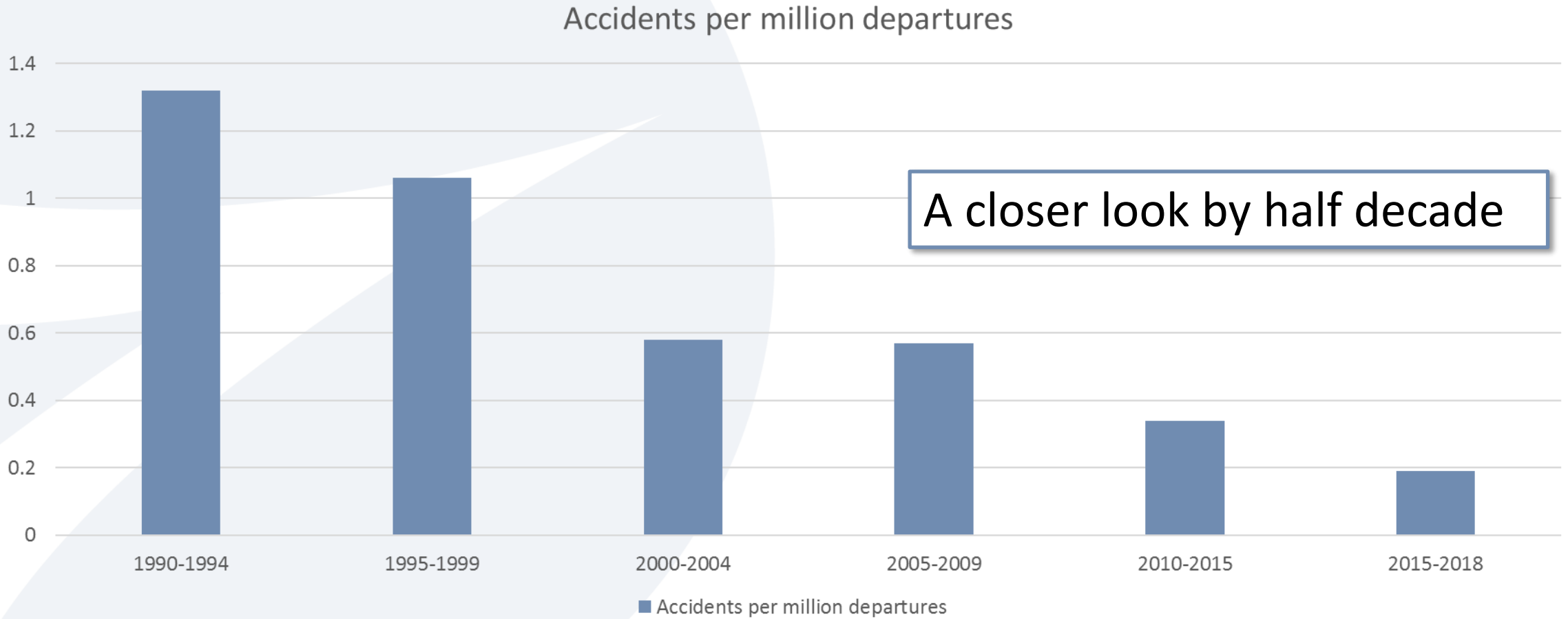


# Major Accident Rates – Worldwide Commercial Jets



\* Through October 2018

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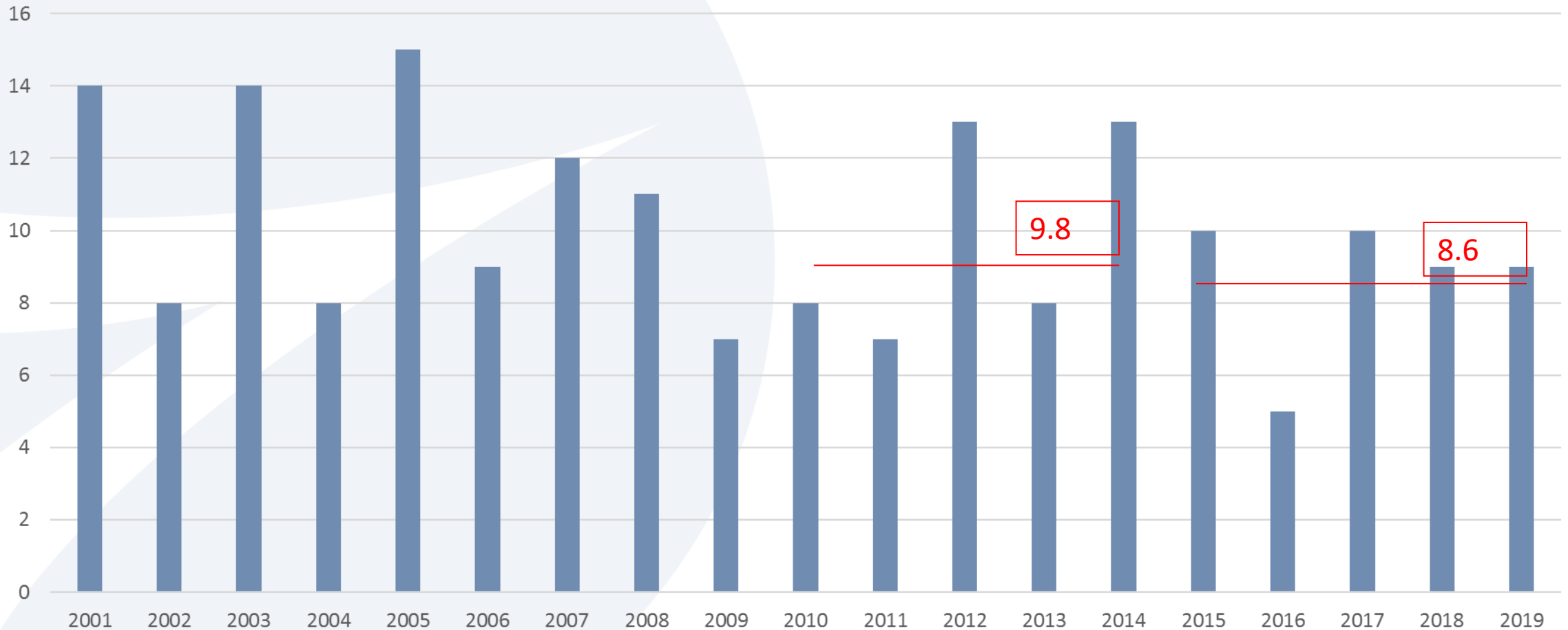
# Business Jets



# Major Accidents Business Jets - 2019

Date	Operator	Aircraft	Location	Phase	Fatal
18-Mar	Sundance Airport	IAI 1124 Westwind	Oklahoma City, USA	Landing	2
13-Apr	Classic Aviation	Rockwell Saberliner 65	Near Albany, MS USA	En route	2
5-May	TVPX Aircraft Solutions	Canadair Challenger 601-3A	257 km (160.6 mls) NW of Monclova Mexico	En route	13
22-May	Unknown	Cessna S550 Citation S/II	Near Indianapolis, IN USA	Takeoff	2
17-Jul	Avia Jet LLC	Cessna Citation II	Mesquite Municipal Airport, NV USA	Landing	0
6-Aug	Aerowest	Cessna 560XLS + Citation XLS	Aarhus Airport (AAR), Denmark	Landing	0
15-Aug	JRM Air LLC	Cessna 680A Citation Latitude	Elizabethton Municipal Airport, TN	Landing	0
21-Aug	Delta Private Jets	Cessna 560XL Citation Excel	Oroville Airport, CA (OVE) USA	Takeoff	0
27-Aug	Air Charter Services	Cessna 560XL Citation Excel	Aligarh Airport, India	Approach	0

# Major Accidents Business Jets – 2001-2019



# Turboprops



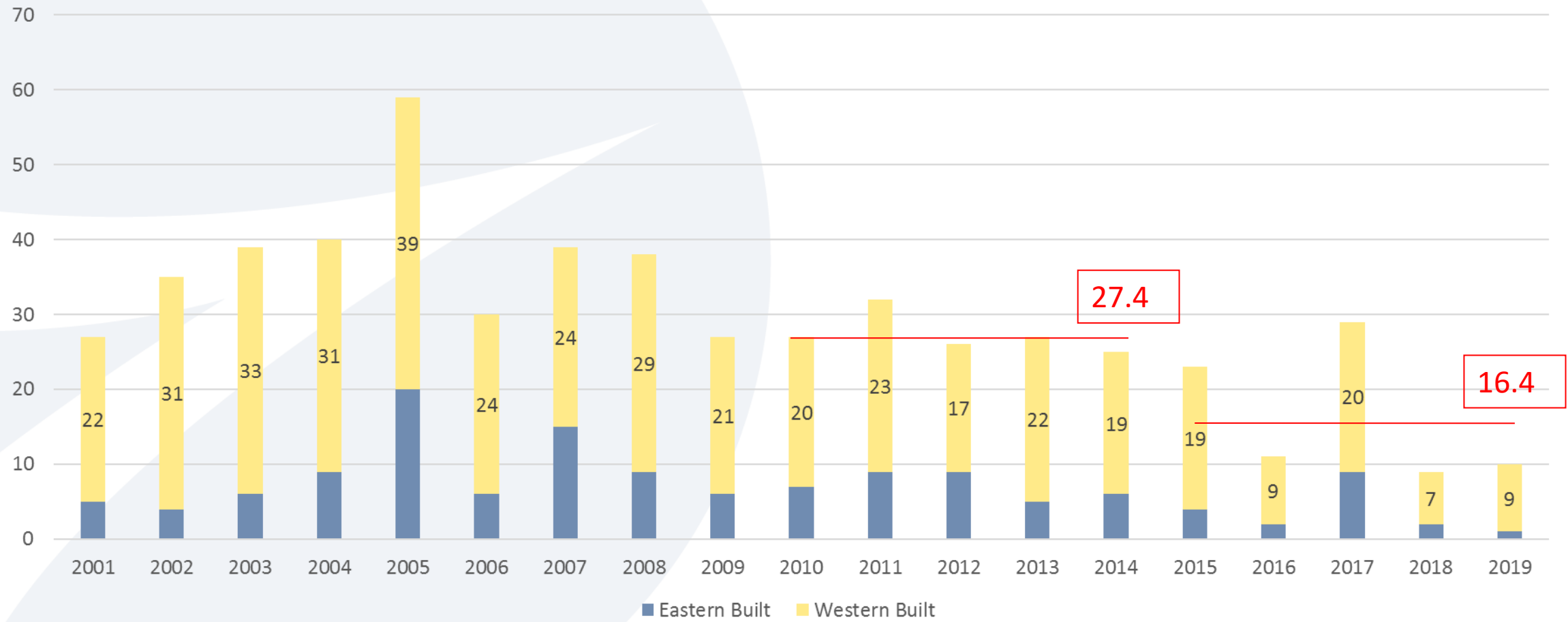
# Major Accidents Turboprops - 2019

## (ICAO mass group 3 or above or > 14 seats)

Date	Operator	Aircraft	Location	Phase	Fatal
21-Jan	Priority Air Charter	AMI DC-3-65TP	SE of Kidron-Stoltzfus Airfield, OH, USA	Initial Climb	2
29-Jan	Guardian Flight	Beech B200 Super King Air	32 km (20 mls) W off Kake, AK, USA	En route	3
30-Jan	Air Tindi*	Beech B200 Super King Air	ca 30 km from Whatì/Lac La Martre Airport, NT (YLE) Canada	En route	2
23-Mar	Major Blue Air	Beech B200 Super King Air	Matsieng Aerodrome, Botswana	Maneuvering	1
14-Apr	Summit Air	Let L-410UVP-E20	Lukla-Tenzing-Hillary Airport (LUA), Nepal	Takeoff	1+2
08-May	Biman Bangladesh	DHC-8-402Q Dash 8	Yangon-Mingaladon Airport (RGN) Myanmar	Landing	0
27-Jun	Angara Airlines	Antonov An-24RV	Nizhneangarsk Airport Russia	Landing	2
27-Jun	Transmandu	Bae 3212 Jetstream 31	Canaima Airport (CAJ) Venezuela	Landing	0
30-Jun	EE Operations LLC	Beech B300 King Air 350i	Dallas-Addison Airport, TX (ADS) USA	Takeoff	10
17-Oct	PenAir	Saab 2000	Unalaska-Tom Madsen Airport, UK USA	Landing	1

\* Resource Sector related operations

# Turboprop Major Accidents – 2001 – 2019

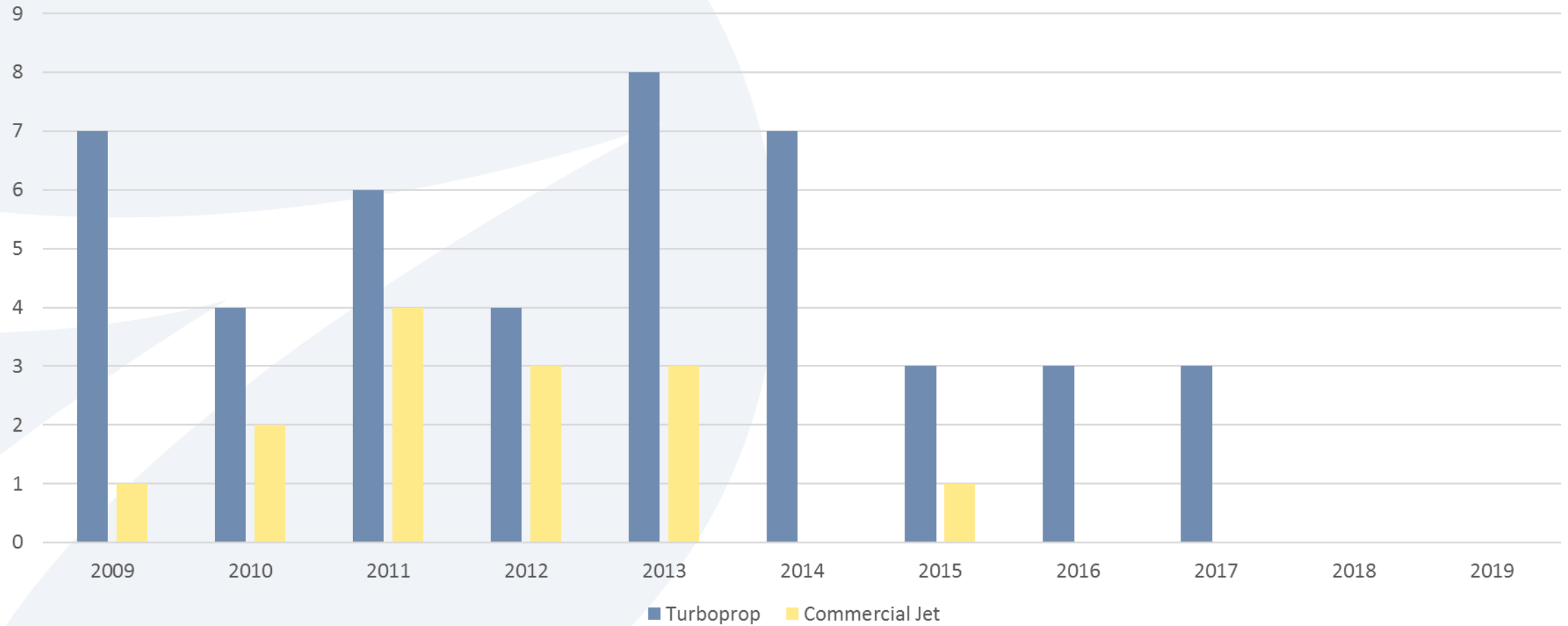


# Major Accident Categories

# Commercial Jets – Approach and Landing

Date	Operator	Aircraft	Location	Phase	Fatal
14-Jan	Iran AF, op for Saha Air	B-707	Fat'h Airport, Iran	Landing	15
23-Feb	Amazon Prime Air	B767	Trinity Bay, near Anahuac, TX	Approach	0
3-May	Miami Air	B-737	Jacksonville FL	Landing	0
15-Jun	United Airlines	B757-200	Newark Liberty NJ	Landing	1

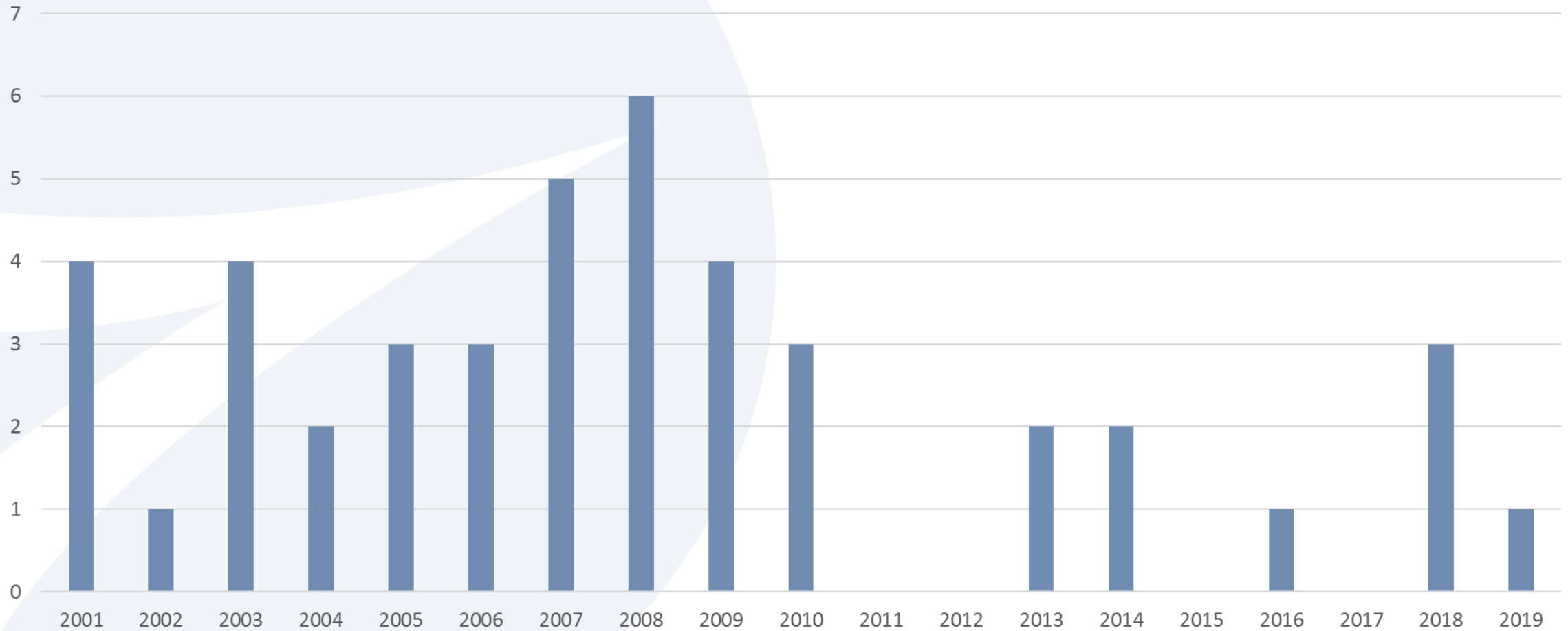
# CFIT History 2009-2019



# Upset Aircraft – 2019 Commercial Jets

Date	Operator	Aircraft	Location	Phase	Fatal
10-Mar	Ethiopian Airlines	B-737Max	ESE of Addis Ababa-Bole Airport (ADD)	Initial Climb	157

# Upset History – 2001-2019 Commercial Jets



- Steady long-term progress continues to be made in Aviation Safety even though there may be a plateau in performance for the last 5 years
- 2019 by Sector
  - Turboprop slightly behind best results in 2018
  - Commercial Jets – experienced more accidents but fewer fatalities than most of the last 5 years
  - Business Jets – about the same number as 2018
- CFIT – excellent results in last two years
- Challenges ahead
  - Approach and landing – biggest phase of flight area all sectors, still needs improvement
  - Upset / LOC – good progress in last decade, and still more to do
  - Continue to work known solutions and double down on hazard identification for all sectors