

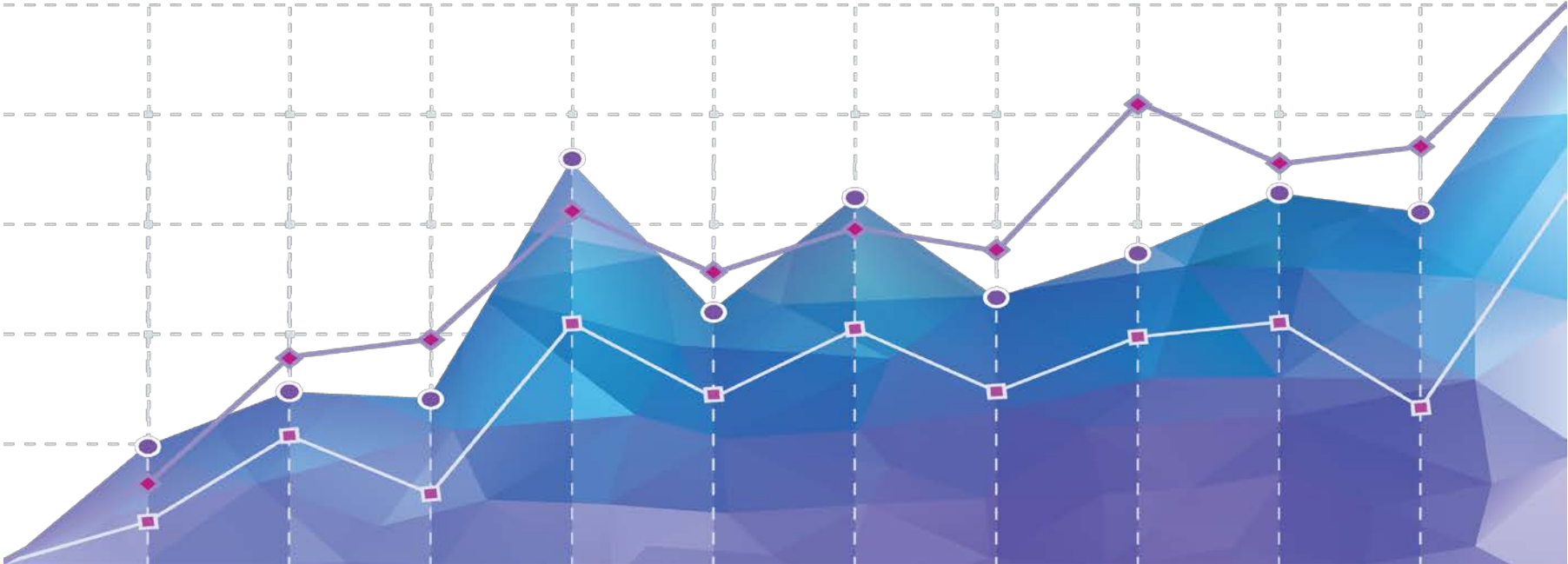


SPGW Data Set Analysis 2018

Dan Ramirez, Director of Safety, XOJET

- The accident statistics presented in this summary are confined to data found in the 2010-2017 Breiling Report , ICAO 2010-2017 Safety Summary, 2010-2017 NTSB data, Assure Data Set 2010-2017. Within that set of airplanes, there are two groups excluded:
 - 1) Airplanes manufactured in the Former USSR are excluded because of the lack of operational data.
 - 2) Military Operations
- Definitions related to development of statistics in this summary are primarily based on corresponding International Civil Aviation Organization (ICAO), U.S. National Transportation Safety Board (NTSB), and Flight Safety Foundation (FSF) terms, as per all agreed taxonomies.
- We like to have thank Maria Goicochea and Paula Bentren for their dedication and finally we like to thank Nova South Eastern for their support during this study

Data Classification



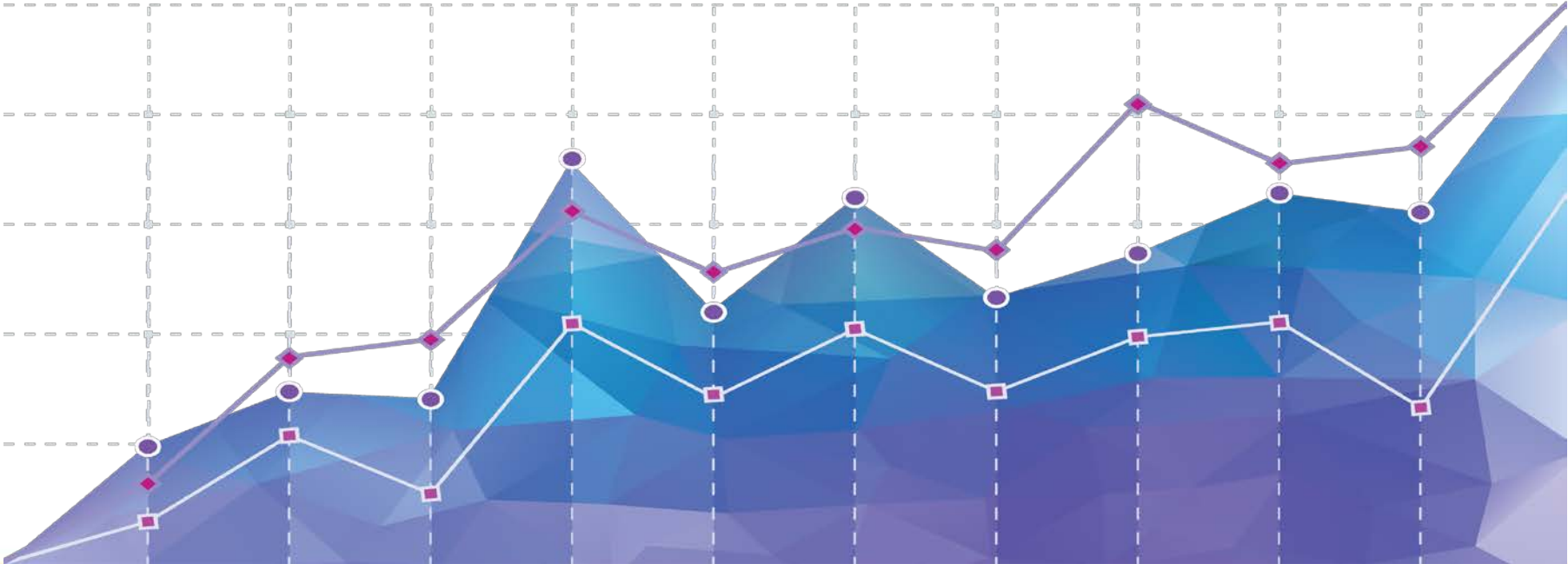
Airplane Accident

- An occurrence associated with the operation of an airplane that takes place between the time any person boards the airplane with the intention of flight and such time as all such persons have disembarked, in which
- The airplane sustains substantial damage.
- The airplane is missing or is completely inaccessible. An aircraft is considered to be missing when the official search has been terminated and the wreckage has not been located.
- Death or serious injury results from Being in the airplane.
- Direct contact with the airplane or anything attached thereto.
- Direct exposure to jet blast.

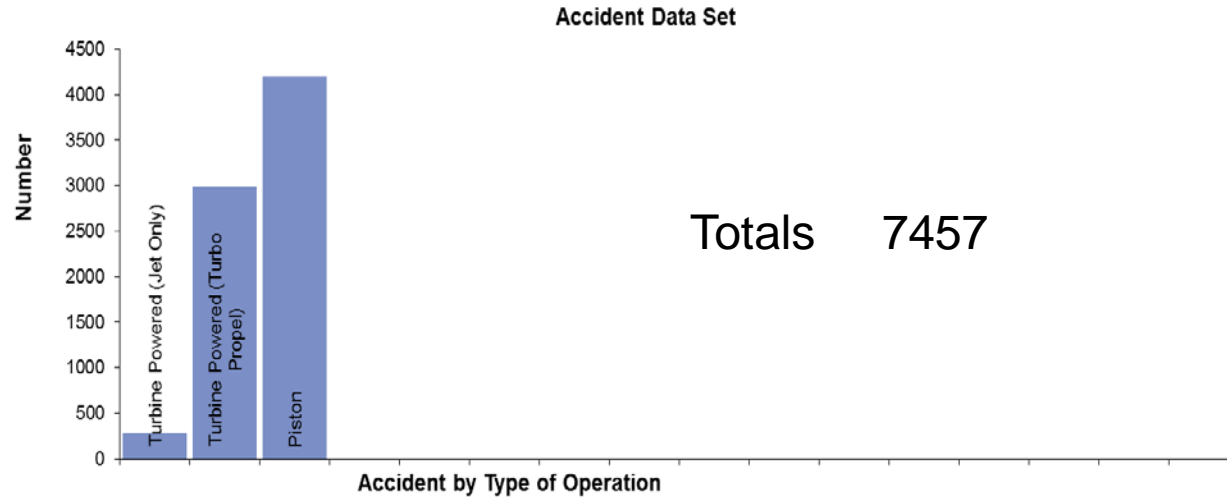
Excluded Events

- Fatal and nonfatal injuries from natural causes.
- Fatal and nonfatal self-inflicted injuries or injuries inflicted by other persons.
- Fatal and nonfatal injuries of stowaways hiding outside the areas normally available to the passengers and crew.
- Nonfatal injuries resulting from atmospheric turbulence, normal maneuvering, loose objects, boarding, disembarking, evacuation, and maintenance and servicing.
- Nonfatal injuries to persons not aboard the airplane.
- The following occurrences are **not** considered airplane accidents: those that are the result of experimental test flights or the result of a hostile action, including sabotage, hijacking, terrorism, and military action.

Data Analysis



Data Analysis – Aircraft Types Business Aircraft



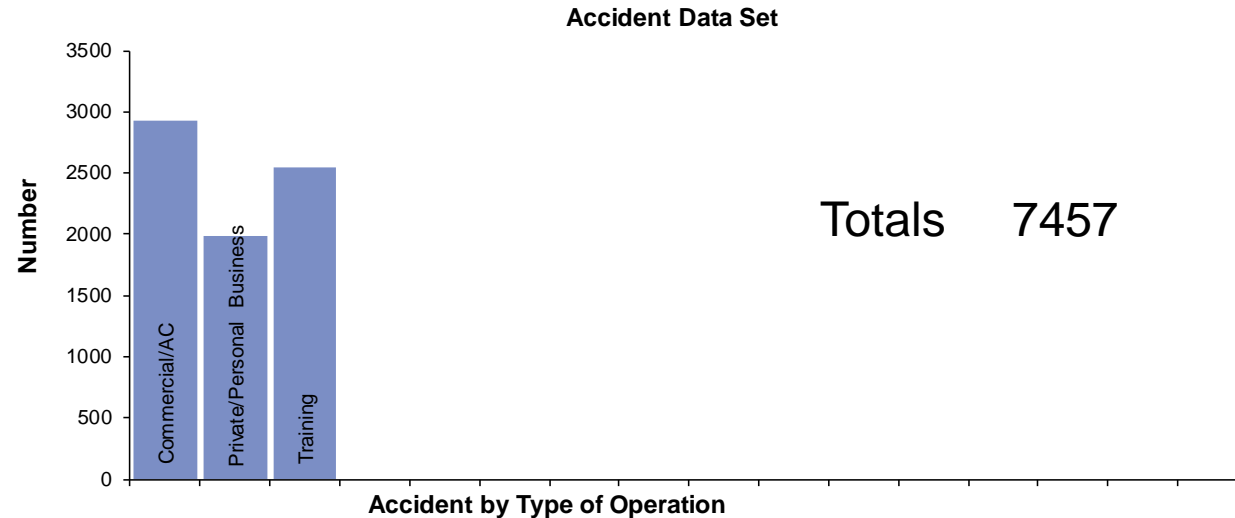
Accident by Type of Operation	Number
Turbine Powered (Jet Only)	289
Turbine Powered (Turbo Propel)	2986
Piston	4200

Data Analysis – Aircraft Types Business Aircraft

Event Group Data Analysis

Review data from Breiling Report, ICAO data, NTSB Data, Assure Data

Jan-17



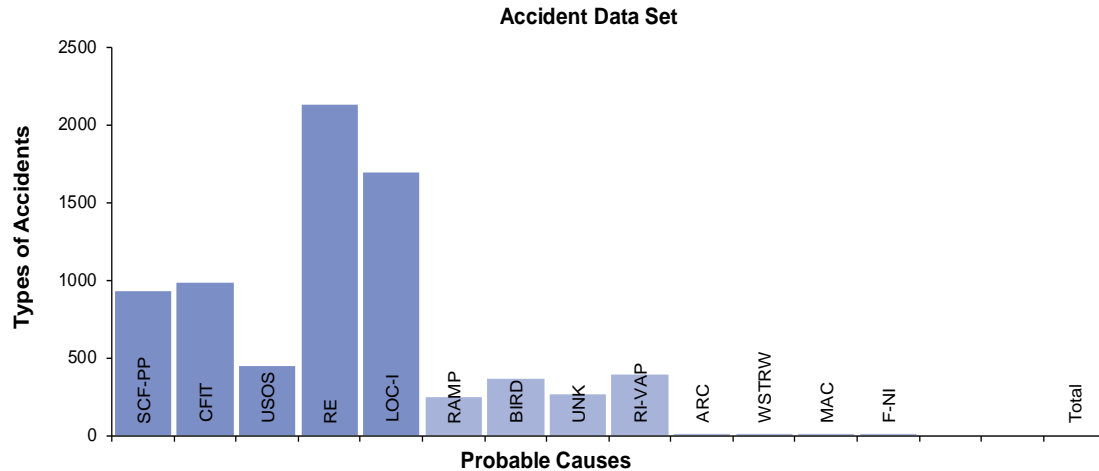
Accident by Type of Operation	Number
Commercial/AC	2926
Private/Personal Business	1982
Training	2549

Data Analysis – Aircraft Types Business Aircraft

Event Group Data Analysis

Review data from Breiling Report, ICAO data, NTSB Data, Assure Data

1/1/2010 - 12/1/2017



Totals 7457

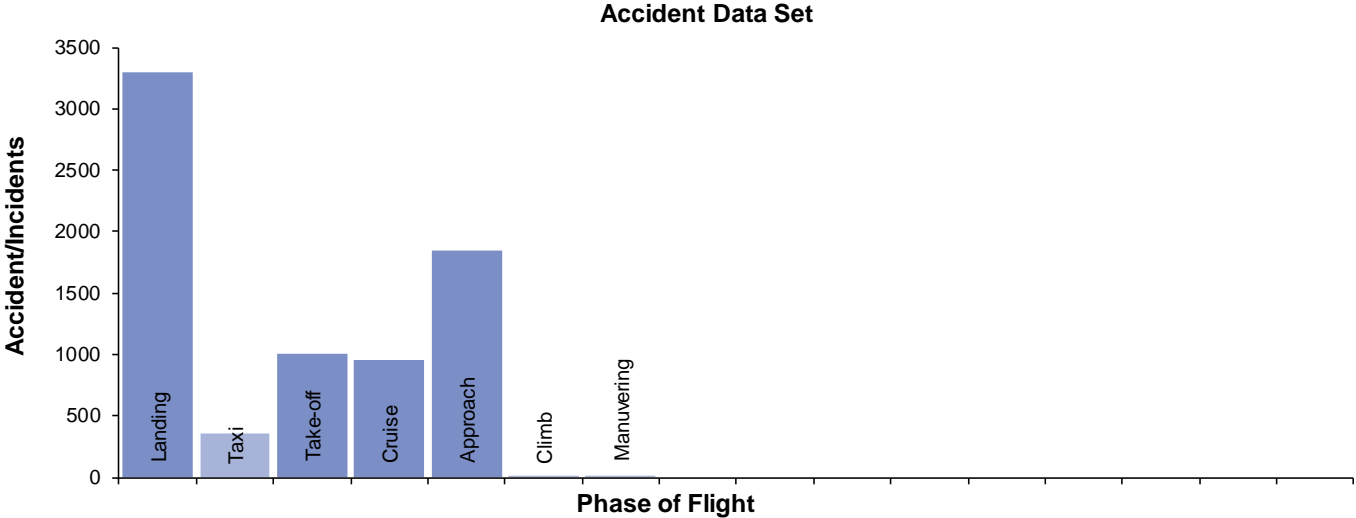
ARC	Abnormal Runway Contact
CFIT	Controlled Flight Into or Toward Terrain
F-NI	Fire/Smoke (Non-Impact)
LOC-I	Loss of Control—In Flight
MAC	Midair/Near Midair Collision
OTHR	Other
RAMP	Ground Handling
RE	Runway Excursion (Takeoff or Landing)
RI-VAP	Runway Incursion—Vehicle, Aircraft, or Person
SCF-PP	System/Component Failure or Malfunction (Powerplant)
UNK	Unknown or Undetermined
USOS	Undershoot/Overshoot
WSTRW	Wind Shear or Thunderstorm

Probable Causes	Types of Accidents
SCF-PP	927
CFIT	984
USOS	450
RE	2125
LOC-I	1692
RAMP	250
BIRD	368
UNK	265
RI-VAP	389
ARC	3
WSTRW	2
MAC	1
F-NI	1

Data Analysis – Aircraft Types Business Aircraft

Event Group Data Analysis

Review data from Breiling Report, ICAO data, NTSB Data, Assure Data
Jan-17



Totals 7457

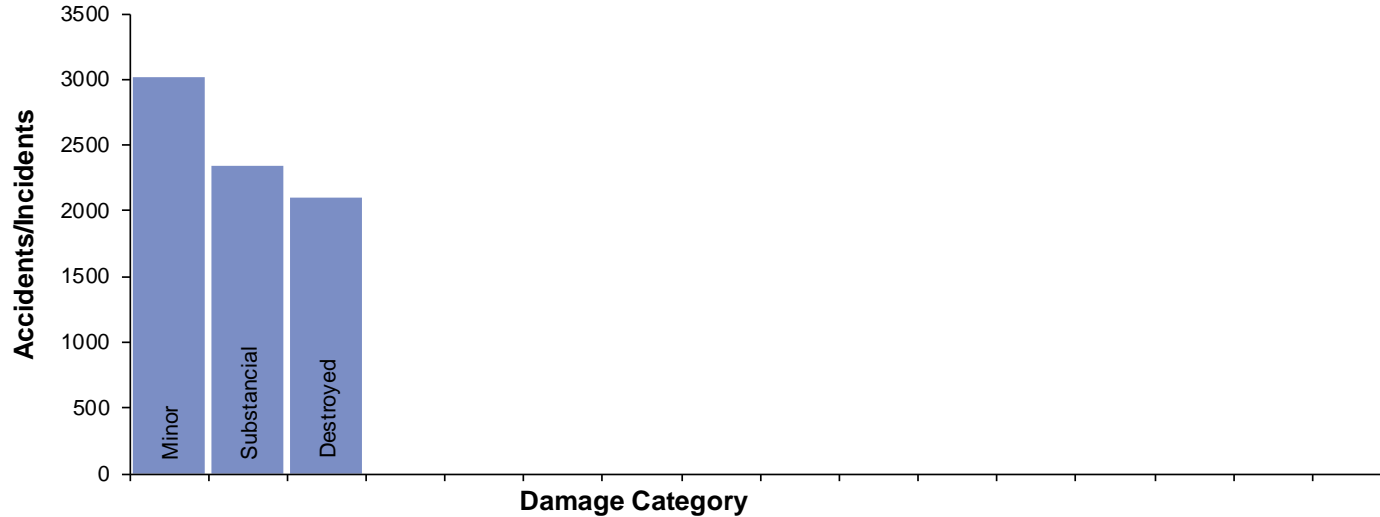
Data Analysis – Aircraft Types Business Aircraft

Event Group Data Analysis

Review data from Breiling Report, ICAO data, NTSB Data, Assure Data

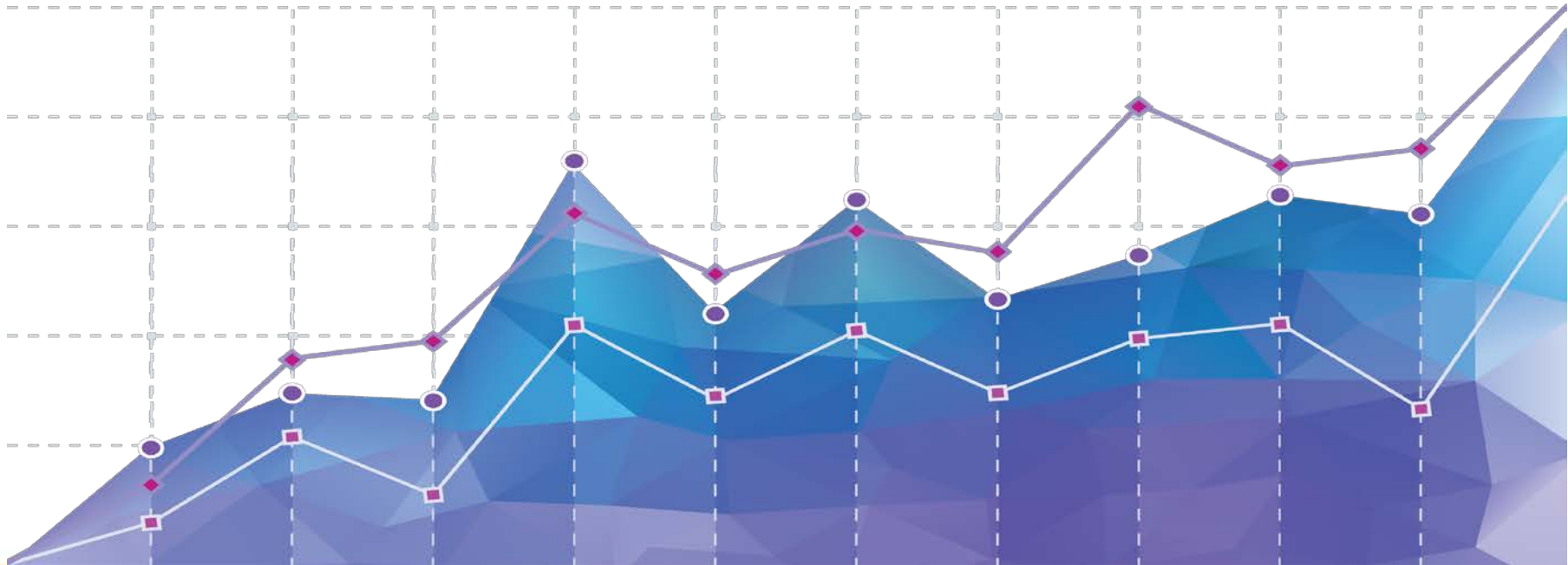
Jan-17

Accident Data Set

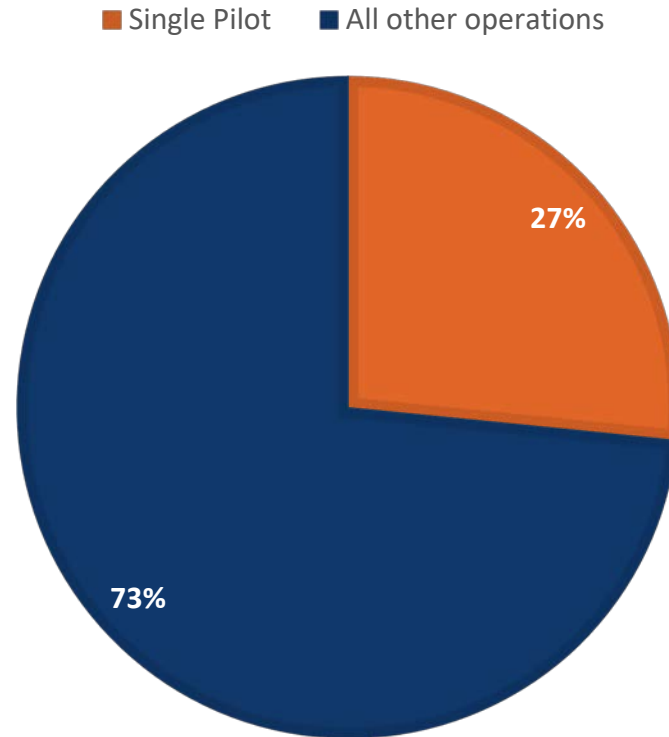


Totals 7457

Data Analysis – Single Pilot Business Accidents



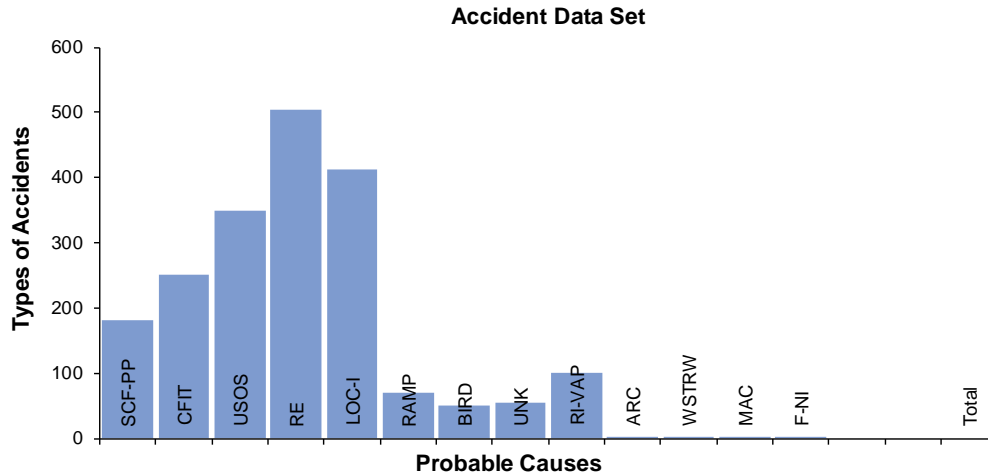
Single Pilot / Main Business Aircraft Data Set



Data Analysis – Aircraft Types Business Aircraft (SP)

Event Group Data Analysis

Review data from Breiling Report, ICAO data, NTSB Data, Assure Data
1/1/2010 - 12/1/2017



Totals 1982

ARC	Abnormal Runway Contact
CFIT	Controlled Flight Into or Toward Terrain
F-NI	Fire/Smoke (Non-Impact)
LOC-I	Loss of Control—In Flight
MAC	Midair/Near Midair Collision
OTHR	Other
RAMP	Ground Handling
RE	Runway Excursion (Takeoff or Landing)
RI-VAP	Runway Incursion—Vehicle, Aircraft, or Person
SCF-PP	System/Component Failure or Malfunction (Powerplant)
UNK	Unknown or Undetermined
USOS	Undershoot/Overshoot
WSTRW	Wind Shear or Thunderstorm

Probable Cause	Types of Accidents
SCF-PP	182
CFIT	252
USOS	350
RE	505
LOC-I	412
RAMP	70
BIRD	50
UNK	54
RI-VAP	100
ARC	3
WSTRW	2
MAC	1
F-NI	1

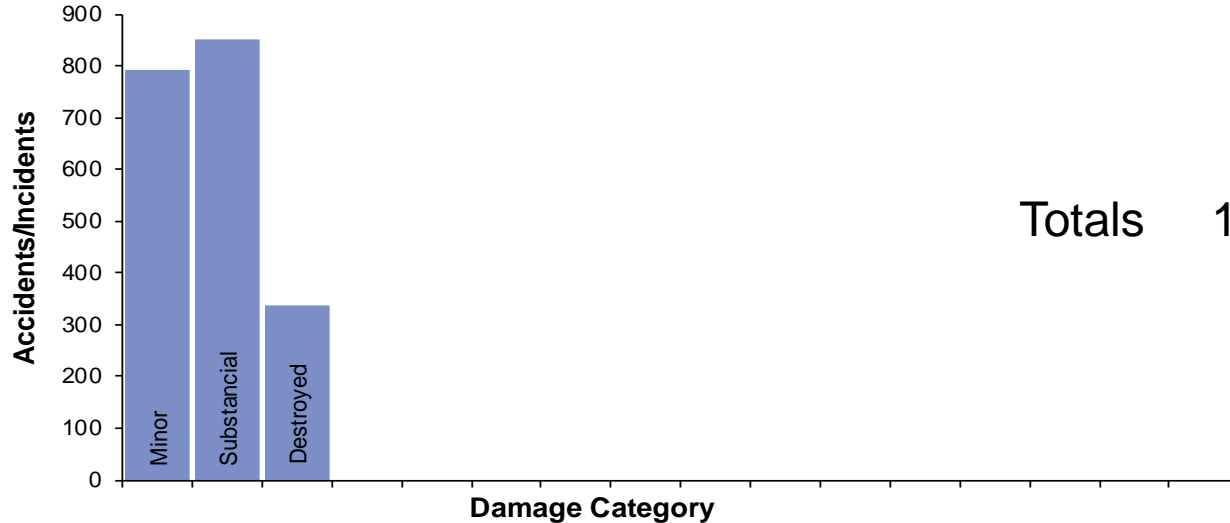
Data Analysis – Aircraft Types Business Aircraft (SP)



Event Group Data Analysis

Review data from Breiling Report, ICAO data, NTSB Data, Assure Data
Jan-17

Accident Data Set

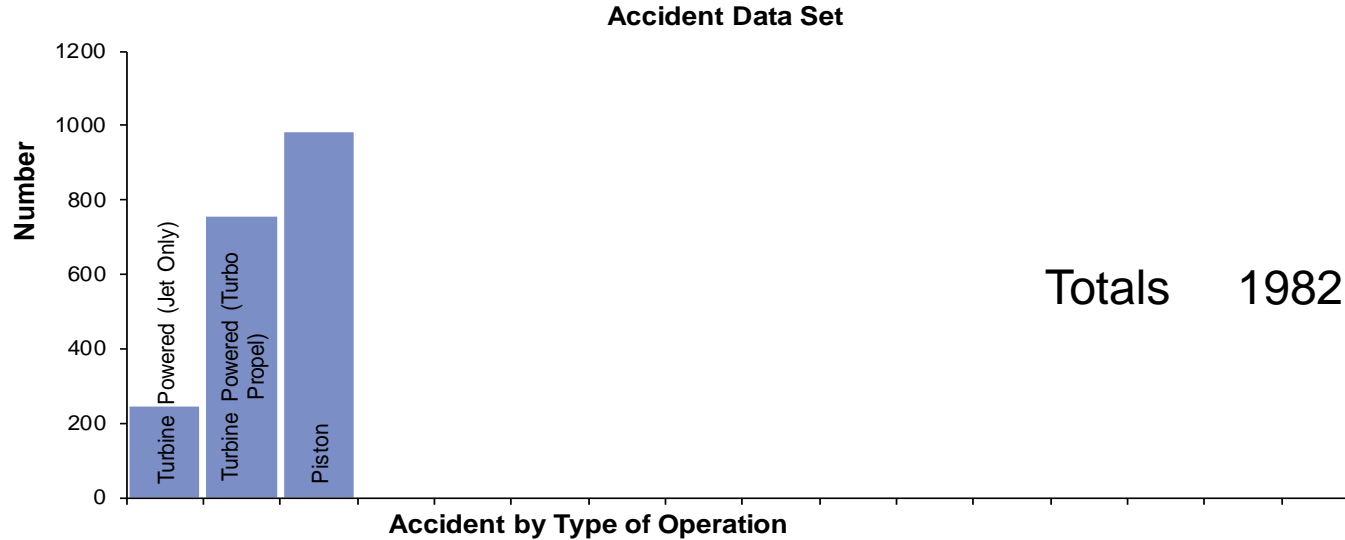


Damage Category	Accidents/Incidents
Minor	793
Substantial	851
Destroyed	338

Data Analysis – Aircraft Types Business Aircraft (SP)

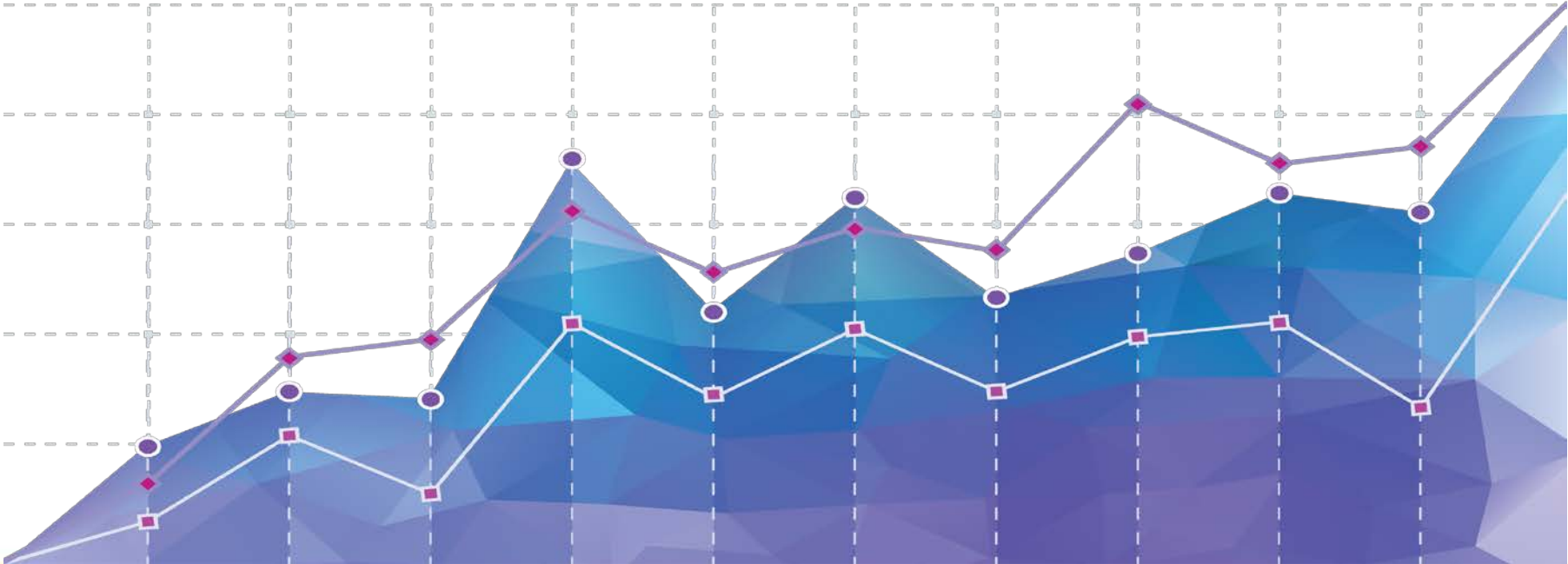
Event Group Data Analysis

Review data from Breiling Report, ICAO data, NTSB Data, Assure Data
Jan-17



Accident by Type of Operation	Number
Turbine Powered (Jet Only)	245
Turbine Powered (Turbo Propel)	755
Piston	982

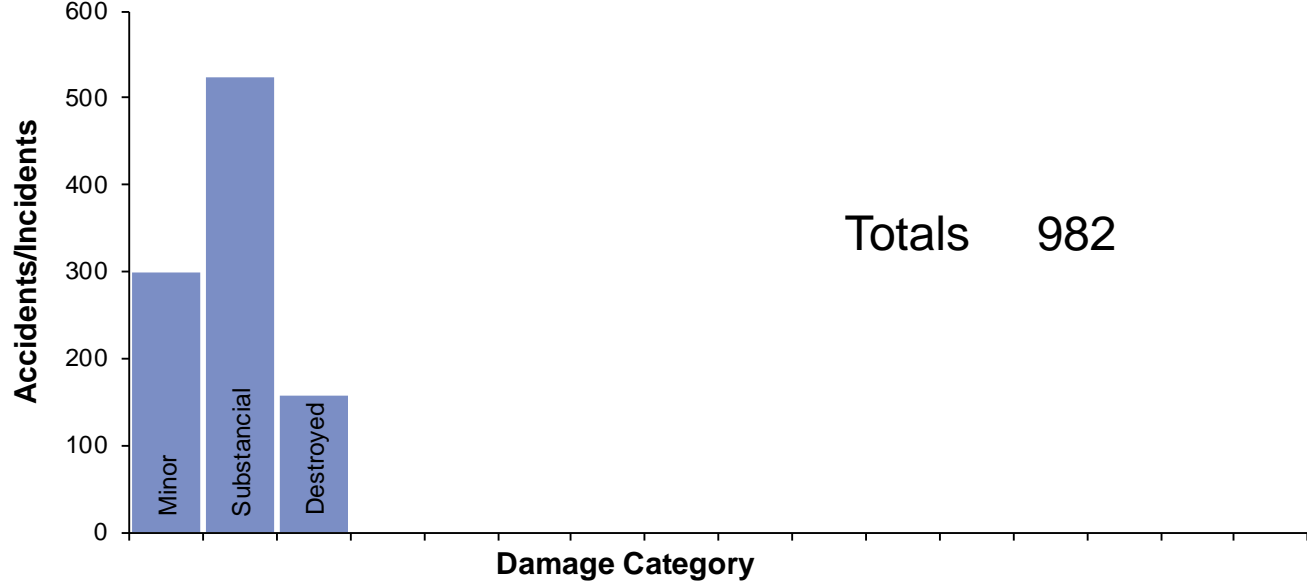
Data Analysis – Piston Data



Event Group Data Analysis

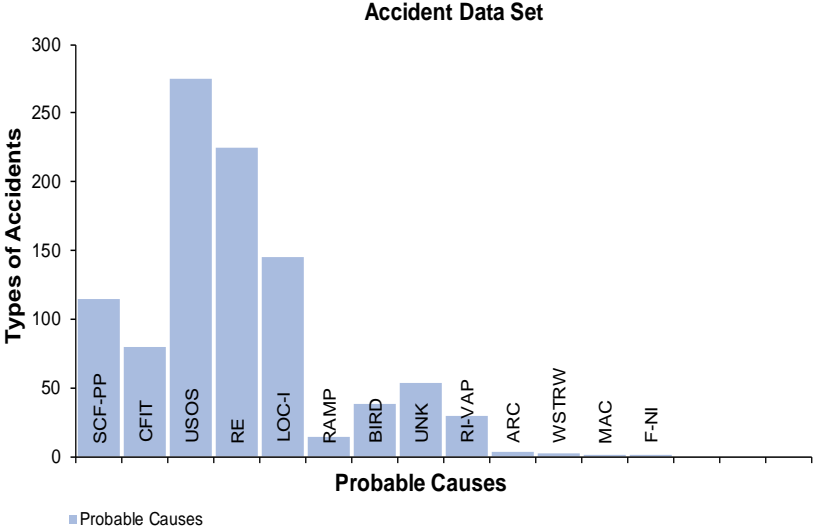
Review data from Breiling Report, ICAO data, NTSB Data, Assure Data
Jan-17

Accident Data Set



Event Group Data Analysis

Review data from Breiling Report, ICAO data, NTSB Data, Assure Data
1/1/2010 - 12/1/2017

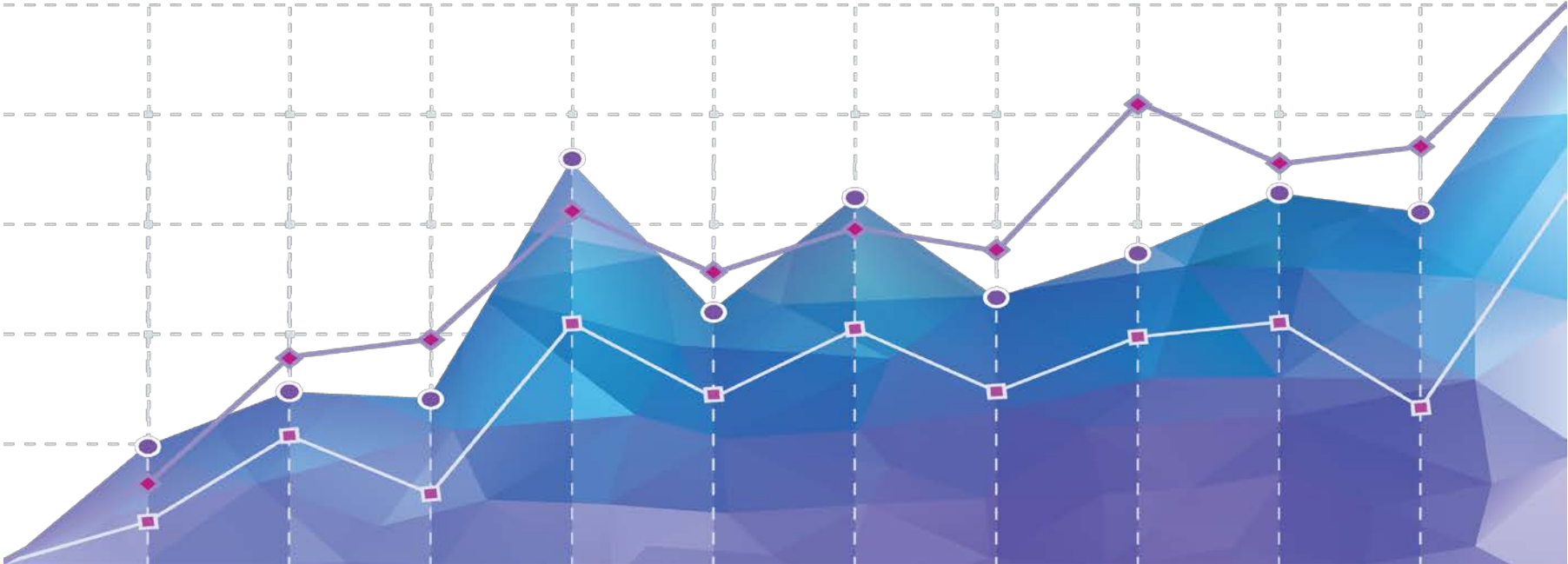


Totals 982

ARC	Abnormal Runway Contact
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MAC	Midair/Near Midair Collision
OTHR	Other
RAMP	Ground Handling
RE	Runway Excursion (Takeoff or Landing)
RI-VAP	Runway Incursion—Vehicle, Aircraft, or Person
SCF-PP	System/Component Failure or Malfunction (Powerplant)
UNK	Unknown or Undetermined
USOS	Undershoot/Overshoot
WSTRW	Wind Shear or Thunderstorm

Probable Causes	Types of Accidents
SCF-PP	115
CFIT	80
USOS	275
RE	225
LOC-I	145
RAMP	14
BIRD	38
UNK	54
RI-VAP	29
ARC	3
WSTRW	2
MAC	1
F-NI	1
	0
	0

Data Analysis – Turbo Prop Data

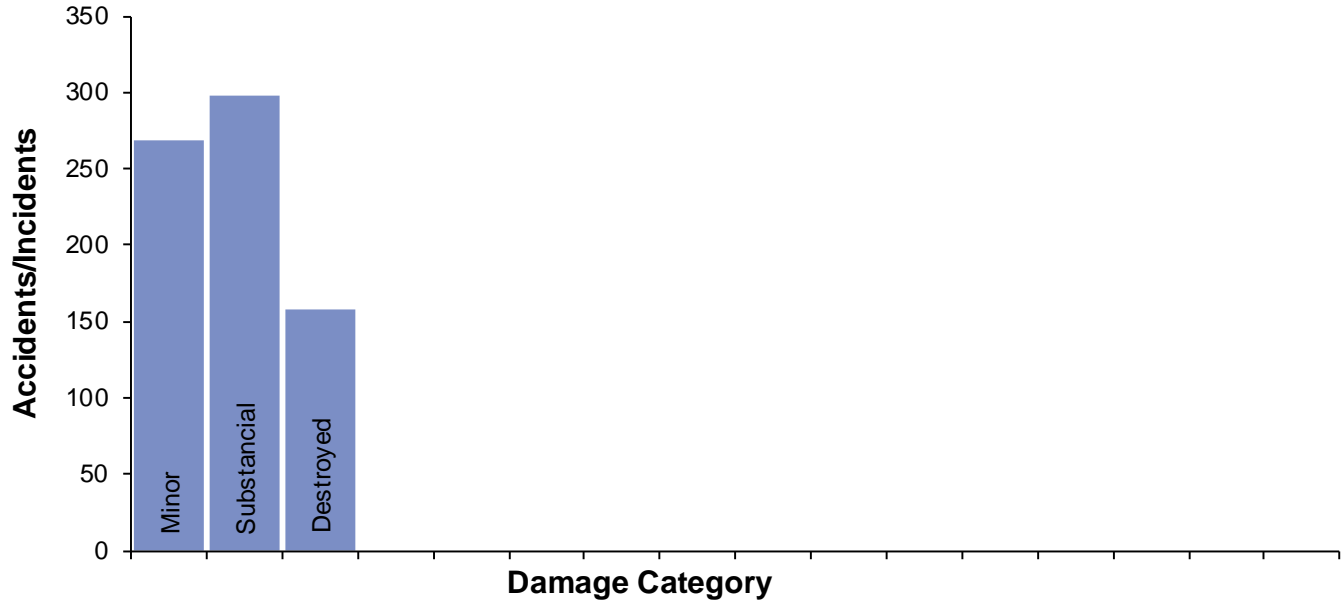


Event Group Data Analysis

Review data from Breiling Report, ICAO data, NTSB Data, Assure Data

Jan-17

Accident Data Set



Totals 755

Data Analysis – Aircraft Types Business Aircraft (SP Turboprop)

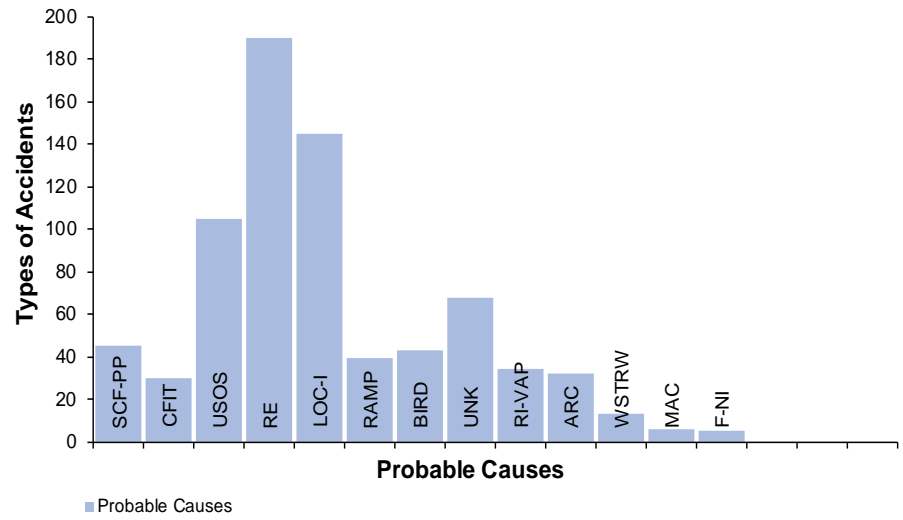


Event Group Data Analysis

Review data from Breiling Report, ICAO data, NTSB Data, Assure Data

1/1/2010 - 12/1/2017

Accident Data Set

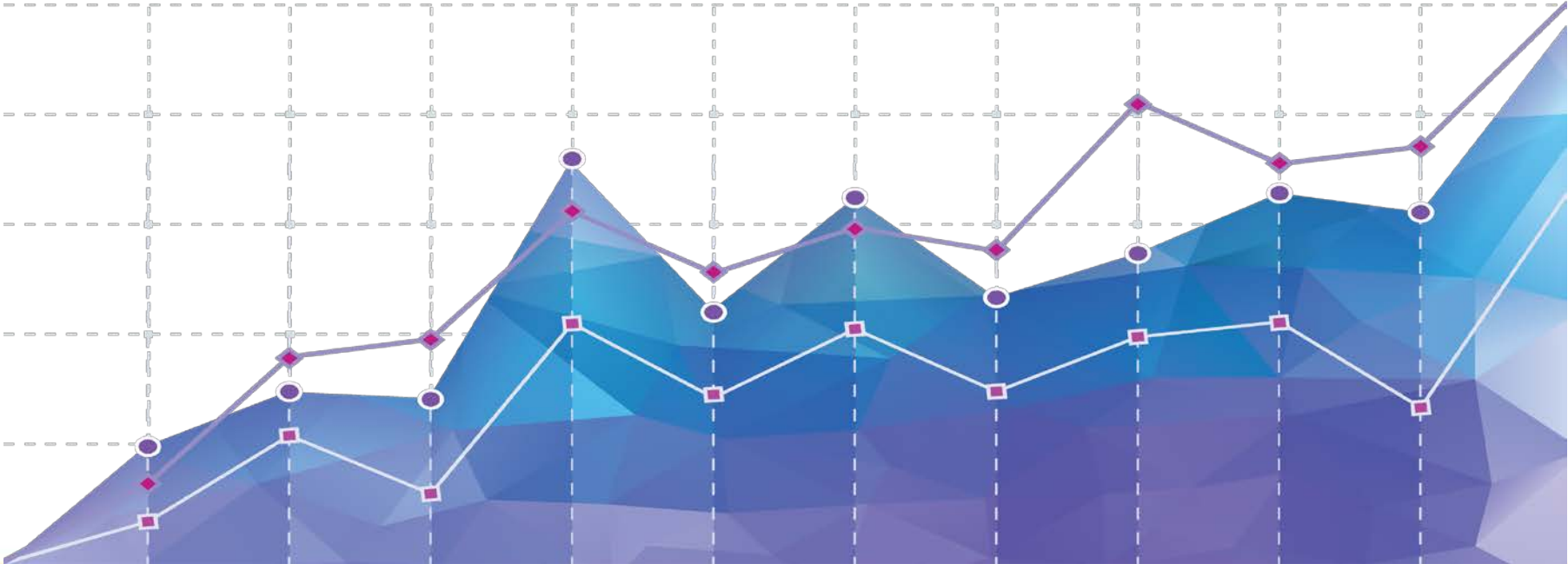


Totals 755

ARC	Abnormal Runway Contact
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LOC-I	Loss of Control—In Flight
MAC	Midair/Near Midair Collision
OTHR	Other
RAMP	Ground Handling
RE	Runway Excursion (Takeoff or Landing)
RI-VAP	Runway Incursion—Vehicle, Aircraft, or Person
SCF-PP	System/Component Failure or Malfunction (Powerplant)
UNK	Unknown or Undetermined
USOS	Undershoot/Overshoot
WSTRW	Wind Shear or Thunderstorm

Probable Causes	Types of Accidents
SCF-PP	45
CFIT	30
USOS	105
RE	190
LOC-I	145
RAMP	39
BIRD	43
UNK	68
RI-VAP	34
ARC	32
WSTRW	13
MAC	6
F-NI	5
	0
	0

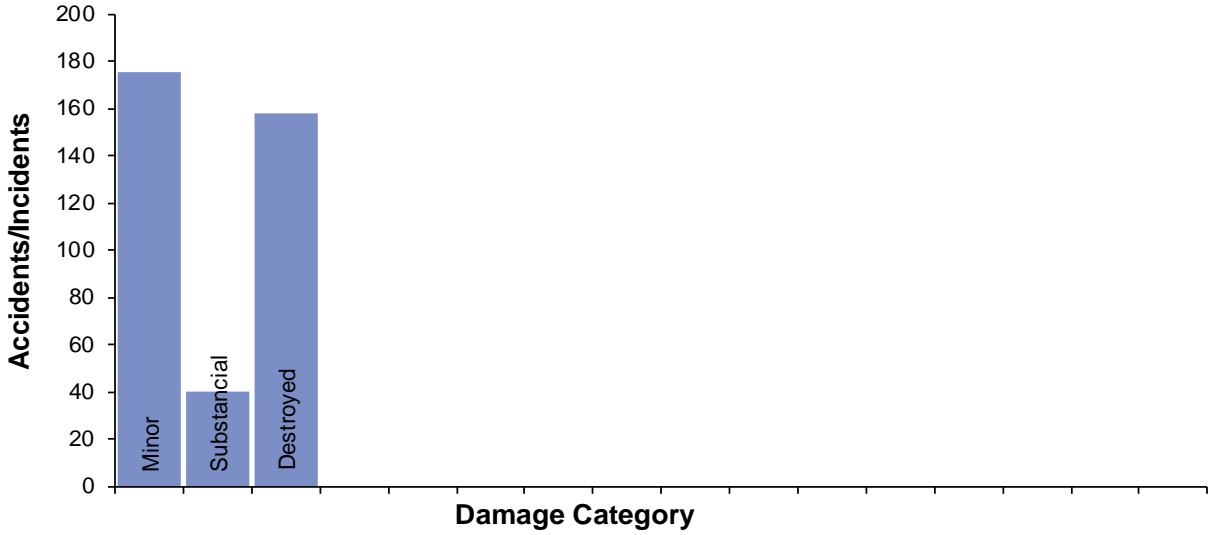
Data Analysis – Turbine (Jet) Data



Event Group Data Analysis

Review data from Breiling Report, ICAO data, NTSB Data, Assure Data
Jan-17

Accident Data Set



Totals 245

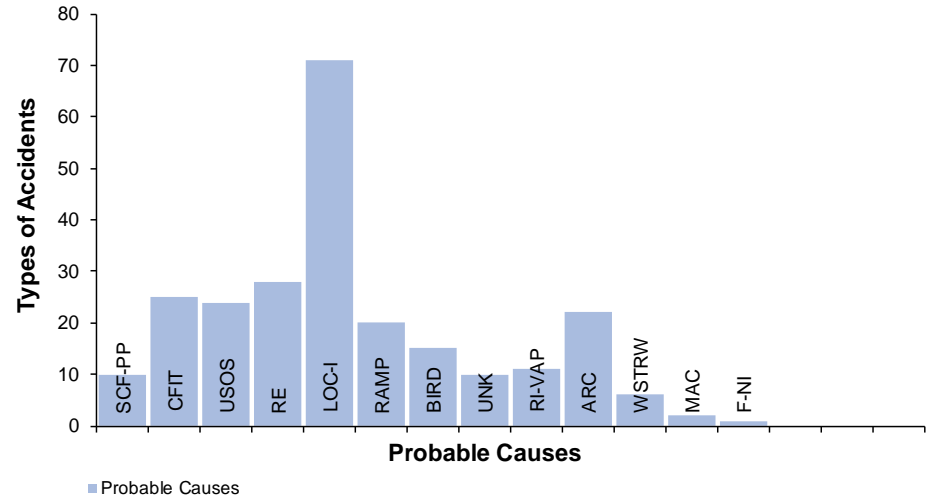
Data Analysis – Aircraft Types Business Aircraft (SP Turbine)



Event Group Data Analysis

Review data from Breiling Report, ICAO data, NTSB Data, Assure Data
1/1/2010 - 12/1/2017

Accident Data Set

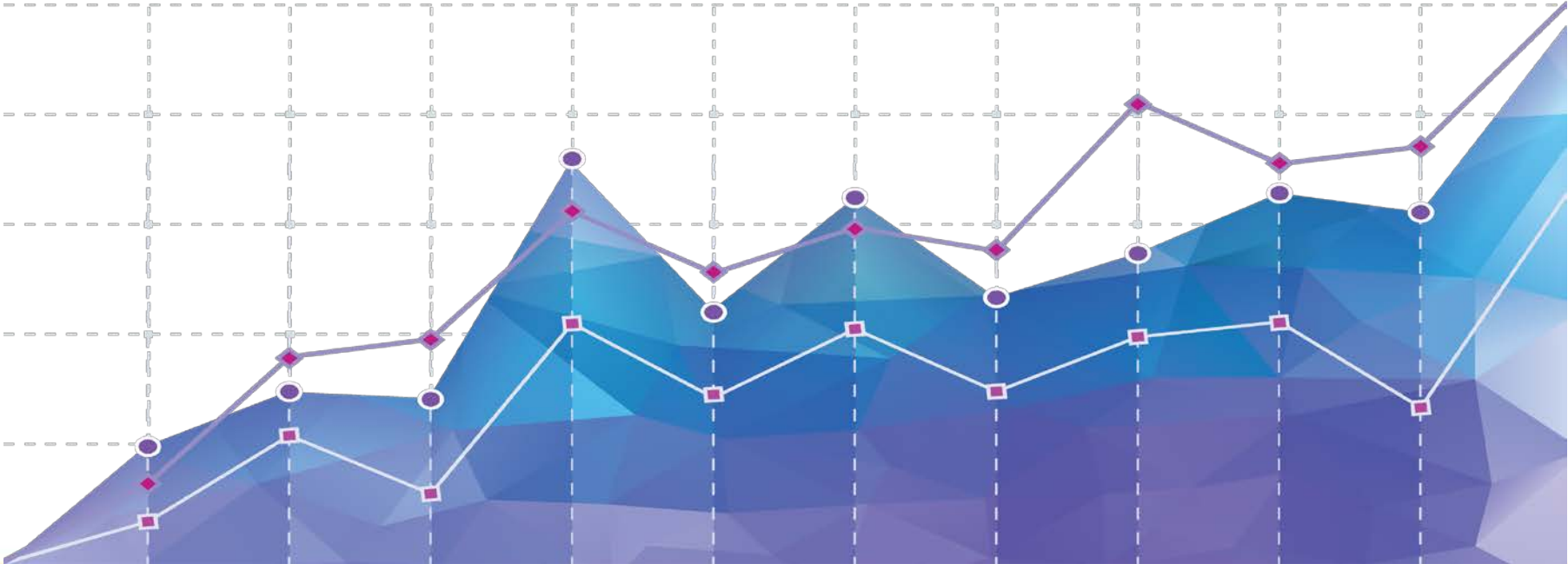


Totals 245

ARC	Abnormal Runway Contact
CFIT	Controlled Flight Into or Toward Terrain
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LOC-I	Loss of Control—In Flight
MAC	Midair/Near Midair Collision
OTHR	Other
RAMP	Ground Handling
RE	Runway Excursion (Takeoff or Landing)
RI-VAP	Runway Incursion—Vehicle, Aircraft, or Person
SCF-PP	System/Component Failure or Malfunction (Powerplant)
UNK	Unknown or Undetermined
USOS	Undershoot/Overshoot
WSTRW	Wind Shear or Thunderstorm

Probable Causes	Types of Accidents
SCF-PP	10
CFIT	25
USOS	24
RE	28
LOC-I	71
RAMP	20
BIRD	15
UNK	10
RI-VAP	11
ARC	22
WSTRW	6
MAC	2
F-NI	1
	0
	0

Data Analysis – Contributing Factors (SP)



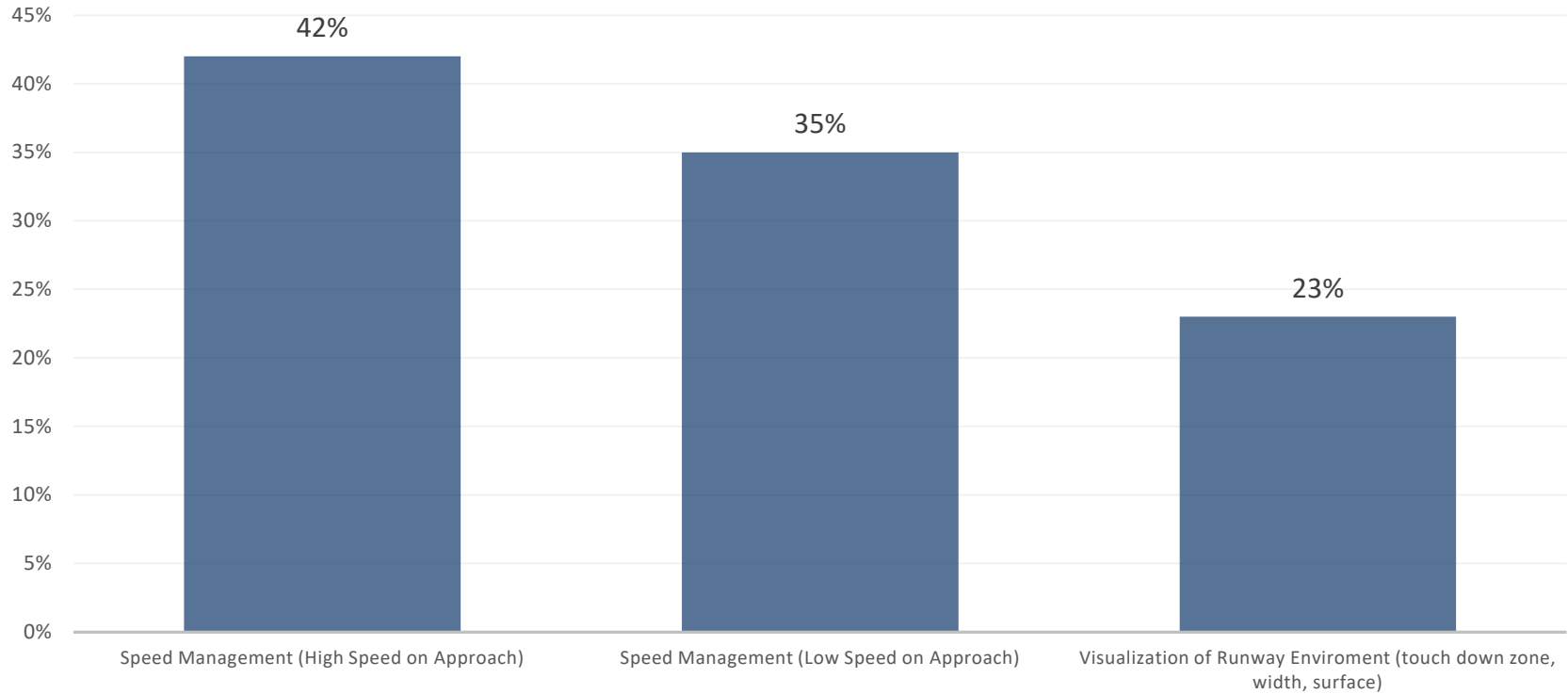
Observations



- The top 4 causes of single pilot operations accident/incident cause:
 1. RE- Runway Excursions
 2. LOC-I (Loss of Control In Flight)
 3. USOS (Undershoot/Overshoot)
 4. CFIT (Control Flight Into Terrain)

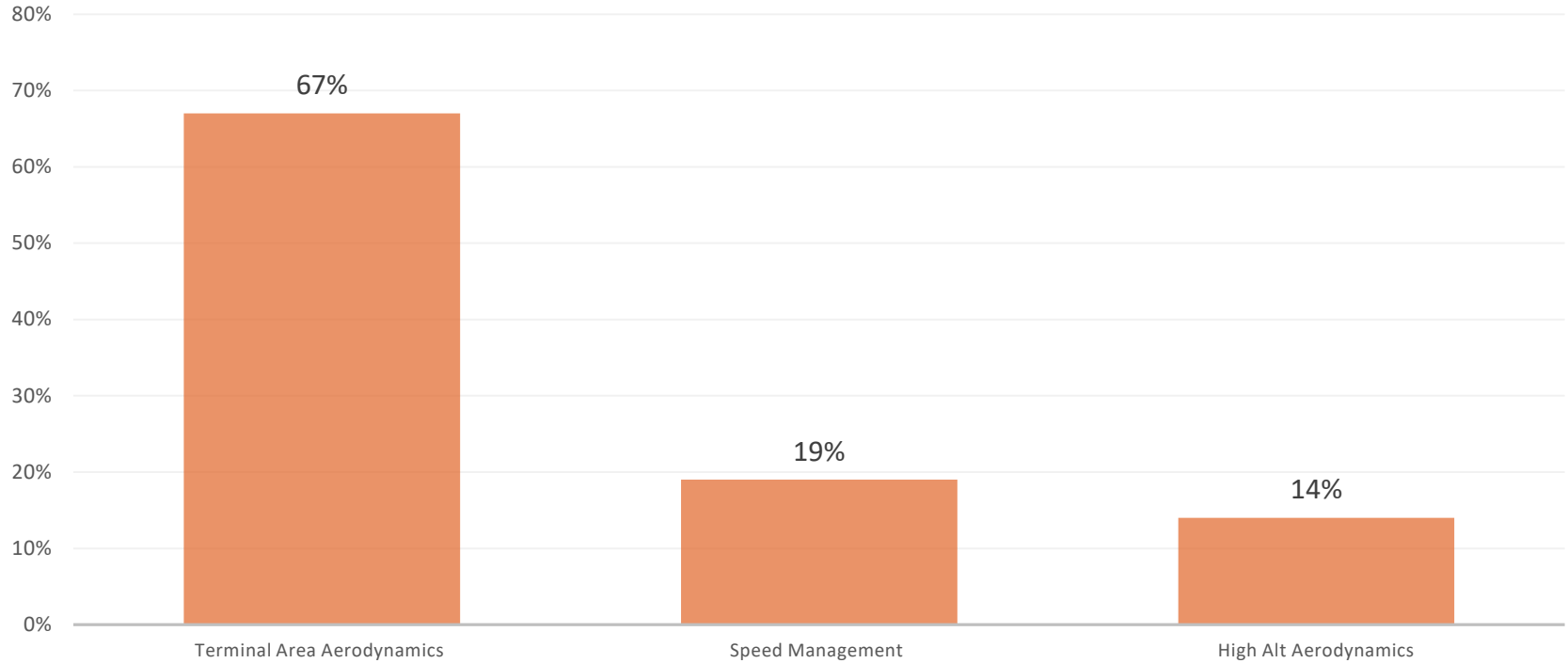
Observations

RE (Runway Excursion)



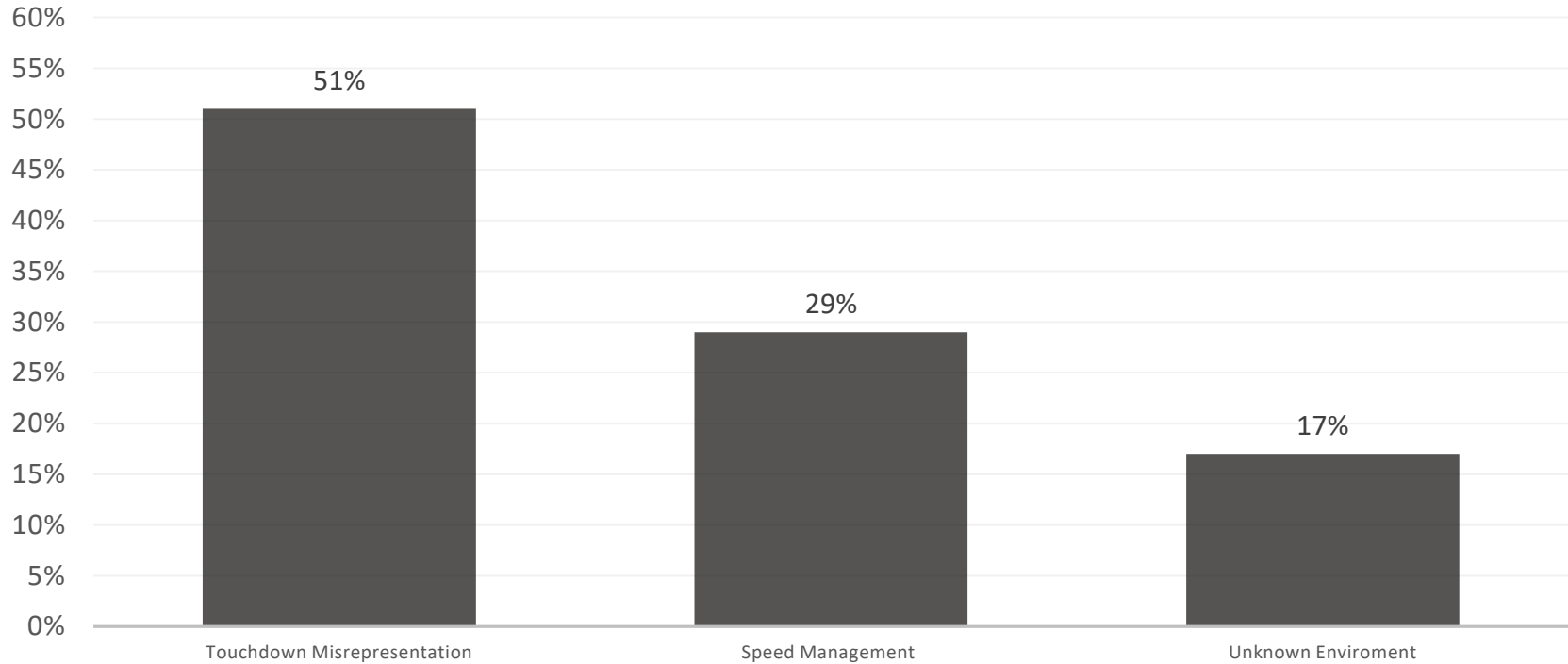
Observations

LOC-I



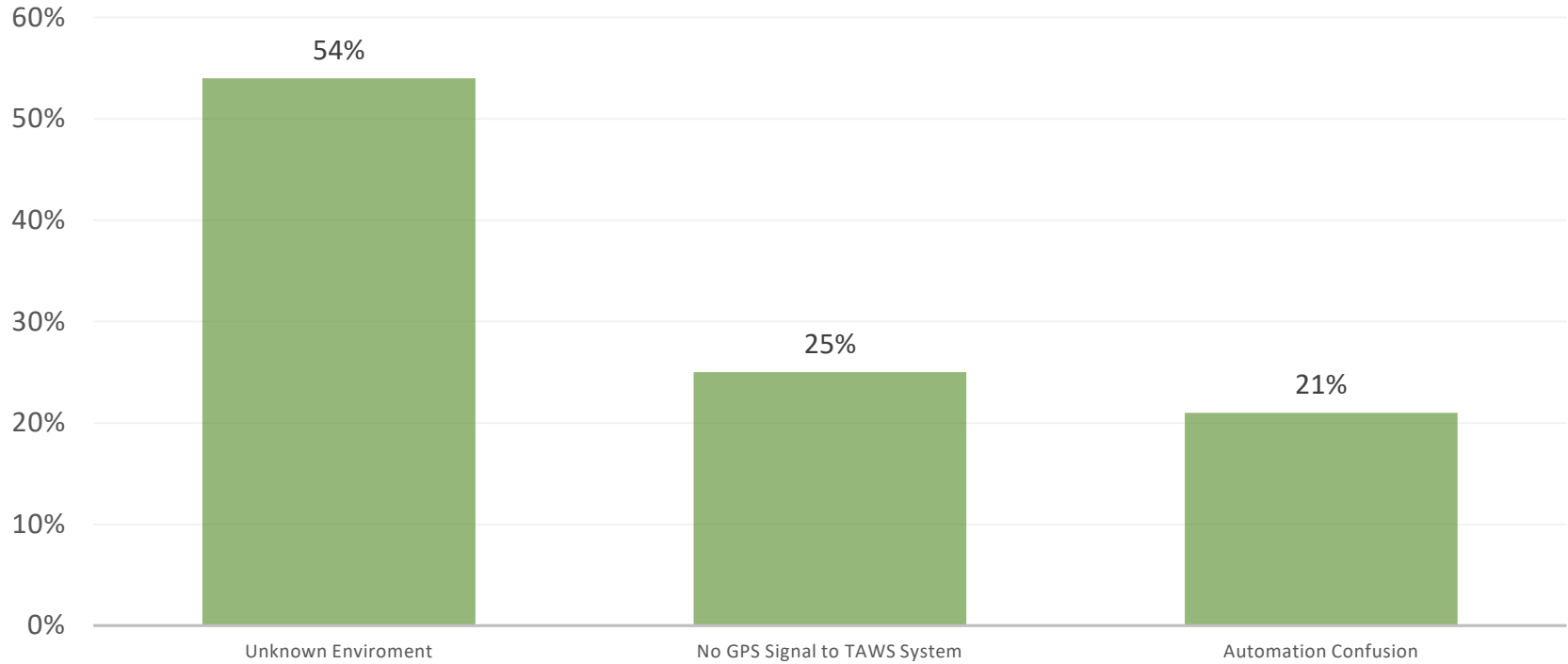
Observations

USOS – Undershoot/Overshoot



Observations

USOS – Undershoot/Overshoot





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