AVIATION SAFETY WORKSHOP
WILDLIFE STRIKE: ESPERIENZA DI UN OPERATORE
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WILDLIFE STRIKE DATA ANALYSIS
PERIOD 2010-2017
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WILDLIFE STRIKE DATA ANALYSIS

WILDLIFE STRIKE PER SEVERITY (MONTHLY 2015-2017)
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WILDLIFE STRIKE DATA ANALYSIS

WILDLIFE STRIKE PER SEVERITY (YEARLY 2010-2017)

EVENTS PER 1,000 SECTOR LANDINGS

> MINOR  NEGLIGIBLE
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WILDLIFE STRIKE DATA ANALYSIS

WILDLIFE STRIKE PER AIRCRAFT TYPE (YEARLY 2015-2017)

![Bar Chart](chart.png)

- **B777**
- **A330**
- **A32F**
- **ERJF**

Events per 1,000 sector landings:

- **2015**
  - B777: 3.04
  - A330: 2.76
  - A32F: 2.79
  - ERJF: 1.38

- **2016**
  - B777: 2.72
  - A330: 1.45
  - A32F: 2.11
  - ERJF: 1.96

- **2017**
  - B777: 2.73
  - A330: 1.96
  - A32F: 2.07
  - ERJF: 3.14

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16/05/2018
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WILDLIFE STRIKE DATA ANALYSIS

WILDLIFE STRIKE PER FLIGHT PHASE (YEARLY 2015-2017)

- **2015 Totale**
  - Take-off: 123
  - En route: 27
  - Approach: 74
  - Landing: 22
  - Unknown: 0

- **2016 Totale**
  - Take-off: 126
  - En route: 37
  - Approach: 184
  - Landing: 24
  - Unknown: 0

- **2017 Totale**
  - Take-off: 121
  - En route: 23
  - Approach: 153
  - Landing: 23
  - Unknown: 30

Legend:
- Take-off
- En route
- Approach
- Landing
- Unknown
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WILDLIFE STRIKE DATA ANALYSIS

WILDLIFE STRIKE PER FLIGHT PHASE (2015-2017)

- Take-off: 26%
- Landing: 34%
- Approach: 29%
- En route: 6%
- Unknown: 5%
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WILDLIFE STRIKE DATA ANALYSIS

WILDLIFE STRIKE PER LOCATION (2015-2017)
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WILDLIFE STRIKE DATA ANALYSIS

WILDLIFE STRIKE PER LOCATION (2015-2017)

Wildlife strike per Location

- Events per 1,000 Sector Landings (Nessuna aggregazione)
✓ Seasonal event.

✓ Trendlines steady during last 8-years period.

✓ The ratio of Negligible’s events to Other’s with consequences is 20 to 1.

✓ Approach and Landing represent the most critical phases with more than 60% of reported events.

✓ Coastal aerodromes are more exposed to the phenomenon.
PROSPERO EU FP7

AN EXAMPLE OF PREDICTIVE APPROACH
PROSPERO (PROactive Safety PERformance for Operations) is a European 7th Framework project that runs from 2012 through 2015 and comprises 14 partner organisations across 7 countries. The consortium includes end-users, industry, SMEs and academic partners.

PROSPERO expected to develop, implement and evaluate a prototype management system for identifying and actively managing systemic risks, including complex interactions, in the Air Transport System.
AVIATION SAFETY WORKSHOP

PROSPERO EU FP7: AN EXAMPLE OF PREDICTIVE APPROACH

MOVING INTO PREDICTIVE APPROACH

Reactive (Past)
• Respond to events that have already happened such as incidents and accidents.

Proactive (Present)
• Identify hazards before they materialise into incidents or accidents and taking the necessary actions to reduce the safety risks.

Predictive (Future)
• Capability to anticipate and prevent incidents through the support of extensive data with the aim to intercept a risk pattern, or set of pre-conditions, physically or temporarily present within an operational risk scenario.
Example of a segment of risk patterns behind birdstrike events in red a risky configuration (data simplified for GDPM 2018).

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 ✓ Data highlighted that phenomenon is steady over the years and under control.

 ✓ Develop techniques to make predictions about future events for improving crew alertness.

 ✓ PROSPERO EU Project has somehow demonstrated the importance to have the capability to anticipate and prevent incidents through the support of extensive data, integrating operational database from different stakeholders.
THANK YOU

GRAZIE