Data4Safety
The European Big Data Programme for Aviation Safety

Emmanuel Isambert
Safety Intelligence and Performance Dept.

Your safety is our mission.
New IT Technologies available

- Machine Learning
- Text Mining
- Artificial Intelligence
- High Speed Computing

Data4Safety Programme
The European Safety Risk Management Cycle

1. Identification of Safety Issues
2. Assessment of Safety Issues
3. Definition and Programming of Safety Actions
4. Implementation & Monitoring

Safety Risk Portfolios

22/03/2017
Data4Safety Programme
Vision for the future

Data4Safety

1. Identification of Safety Issues
2. Assessment of Safety Issues
3. Definition and Programming of Safety Actions
4. Implementation & Monitoring
5. Safety Performance

Process fundamentally based on Data Collection and Analysis
Feasibility Study: Overall support of the initiative by the industry

Would you be supportive of a European data exchange programme that aims at identifying and analysing aviation safety risks in Europe?

- Fully supportive: 53%
- Supportive: 39%
- With Reservations: 8%
- Not supportive: 0%
Key elements out of the consultation

- A voluntary and collaborative partnership amongst all stakeholders
- Independent governance to reflect the partnership and collaborative approach (dual management authorities/industry)
- Outcome shared for the benefit of the whole community (Risk identification and analysis)
- Linked with other international initiatives (US, Asia-Pacific, IATA, ...)

22/03/2017
Data4Safety Programme and Platforms

- **Analysis Platform**
  - Aviation Experts and Data Analysts

- **Data Collection and Processing Platform**
  - ECR Safety Reports
  - ATC Data
  - Weather...

- Safety Performance Indicators
- Benchmarking
- Directed Studies
- Vulnerabilities Discoveries
The initial Feasibility Study concluded on the necessity to have a proof of concept phase before going to the potential full deployment.

The proof of concept will be done with a limited number of stakeholders and will enable to confirm the expected benefits while testing the technical and governance models.

Proof of Concept phase is planned over 3 years.
Technical Parties

- **EASA and D4S Members**
  - Partner contribution for the PoC in kind: Expertise and Data

- **Data Processing and Protecting Organisation (Big Data IT Provider)**
  - Private organisation selected via a public tender

- **Data Scientists/Analysts team**
  - Selection of data scientist and analyst via a public tender
  - Completed with potential partners (Members/Research Partners)
Partnering with Research

Main aim:
• Access state-of-the-art research developments to prepare D4S ‘cruise phase’

Actions undertaken:
• Identify relevant projects and check for possible synergies

Next:
• Networking with projects: technical exchanges – early lessons
• Assess opportunities for testing solutions
Feasibility study
Jan-July 15

Setup Phase
July 15- June 2016

Proof of Concept Phase
June 2016-2019
KOM at technical level on June, 29th
First Steering Board Meeting 18 Nov 2016

Operational Phase
From 2019/2020

The Road to Data4Safety programme
Your Questions ?