



Welcome to the

Future Sky Safety on Final Approach Conference

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INEA – EU Commission

EUROCONTROL HQ, 6 November 2018





European
Commission

FUTURE SKY SAFETY ON FINAL APPROACH

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• • **6 - 7 / 11**
November

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@EUROCONTROL HEADQUARTERS | BRUSSELS



INEA in short



Implementing parts of **H2020** and **CEF**

- transport
- energy
- telecommunication actions

Total budget **€34.1 billion**

- H2020 Transport: €2.9 billion
- H2020 Energy: €3.8 billion



Providing high-level programme management



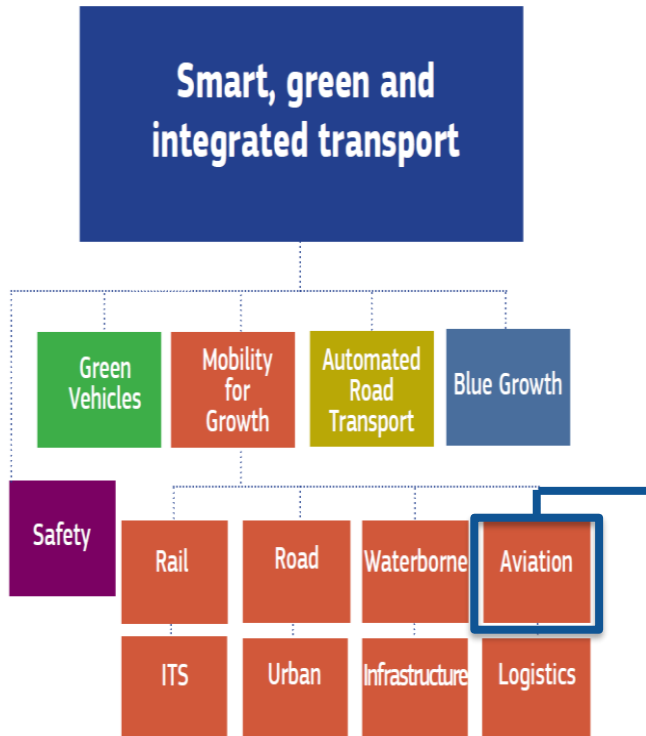
Currently supporting **1500 project**



INEA is part of **EU Aviation R&I family**



Smart, green and integrated Transport



Aviation Portfolio

60 projects

€275 million (executed budget)

- Cost efficiency
- Resource efficiency
- Seamless mobility
- **Safety**
- Breakthrough innovation
- Skills and knowledge
- Coord. Supp. Actions
- Reducing aviation noise
- International cooperation

Open to the world

International Cooperation in Aviation Research



Aviation Safety research supported by INEA

- **Future Sky Safety**, 14.9 M€ EU funding, 54 months, 33 partners
- **PHOBIC2ICE**, 1.8 M€ EU funding, 9 partners, Tech Partners  
- **VISION**, 1.8 M€ EU funding, 10 partners, ONERA  
- **EUNADICS-AV**, 7.4 M€ EU funding, 21 partners, ZAMG
- **SafeClouds.eu**, 5.6 M€ EU funding, 15 partners, Innaxis
- **SARAH**, 6.6 M€ EU funding, 12 partners, IBK-INNOVATION
- **MUSIC-HAIC**, 5.16 M€ EU funding, 13 partners, ONERA

Total EU funding > **40 M€**



- **One of the most ambitious** research programme in the field of European aviation safety (14.9 M€ EU funding, 54 months, 32 partners)
- **Coordinating** several safety research programmes across EU
- **Focusing on safety risk priority areas** (in line with **Flightpath 2050** safety goals)

Current status of the project, currently at month 46

- Showed **promising results on**
- Focus on **exploitation in the final part**
- Expected to have a **high impact** on aviation safety research in Europe



EUNADICS-AV

'European Natural Airborne Disaster Information and Coordination System for Aviation'

- (i) volcanic ash dispersion
- (ii) nuclear emissions
- (iii) forest fires
- (iv) sand storms

Objectives:

- facilitate **coherent Pan-European risk and exposure assessments**
- **improve the quality of data** and analyses available in an emergency situation
- assure **information accessibility** for aviation stakeholders **in a crisis situation** by providing an information system interoperable with the pilot



'Sharing data to make aviation safer'

Objectives:

- develop a **user-requirements driven approach** for (big) data mining
 - to achieve a deeper understanding of the dynamics of the system
 - to pro-actively identify and mitigate risks
- develop novel data structures and **safety knowledge representation**
- develop the **proof of concept** and validate in a laboratory





'Increased safety and robust certification for ditching of aircrafts and helicopters'

Objectives:

- to improve aircraft/ helicopter **certification tools**
- to deliver **simulation tools** for accurate loading information
- to derive a robust way to safely **design new configurations**
- to use **methods** obtained to analyse and optimise approach, landing and impact phases to **supporting the pilot in water landing**

MUSIC- haic



Objectives:

- Develop a numerical simulation tools capable of accurately **predicting ice crystal icing** (ICI) in in flight conditions
- To **incorporate** in currently used industrial 3D multi-disciplinary tools a validated ICI capability that can be used for both design and certification of new engines, probes and aircraft



'Super-IcePhobic Surfaces to Prevent Ice Formation on Aircraft'

Objective:

- to **design materials with anti-icing properties** suitable for the development of a more sustainable and energy-efficient coating systems that prevent ice accretion



'Validation of Integrated Safety-enhanced Intelligent flight control'

Objectives:

- to develop **smarter technologies for aircraft guidance, navigation and control (GN&C)** by integrating onboard vision system and advanced fault detection
- to contribute to the global civil aviation goal of the **aircraft accident rate reduction**

Conference Programme

DAY 1

| 10:00 | WELCOME | EUROCONTROL |
|-------|--|--|
| 10:10 | Introductory remarks | INEA Daniele Violato |
| 10:30 | Future Sky | EREA FUTURE Sky Board Laurent Leylekian (ONERA) |
| 10:50 | Future Sky Safety Programme | NLR Michel Piers |
| | P3: Solutions for runway excursions | |
| 11:10 | A pilot's view on the runway excursion problem | KLM (retired), Safe-Runway GmbH Capt. Rob van Eekeren |
| 11:40 | Overview of the project and technical results | NLR Peter van der Geest |
| 12:00 | COFFEE BREAK | |

| | | |
|--------------|---|---|
| 12:20 | Using the results of P3 in reducing the runway excursion risk | NLR Peter van der Geest |
| 12:40 | Questions & answers | Chair: NLR |
| 13:00 | LUNCH | |
| | P4: Total system risk assessment | |
| 14:10 | Data4Safety: A partnership for a (big) data driven aviation safety analysis in Europe | EASA EASA Erick Ferrandez Leopold Virolez |
| 14:40 | Overview of the project and technical results | NLR Wilfred Rouwhorst |
| 15:00 | Backbone Models supporting a Total Safety Assessment inside the Air Transport System | ONERA Pierre Bieber |
| 15:40 | Questions & answers | Chair: NLR |
| 16:00 | Partnering event – Visit to the poster area | |
| 16:45 | END OF 1ST DAY | |



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|-------|---|--|
| 09:00 | WELCOME | NLR |
| | P5: Resolving the organisational accident | |
| 09:10 | Raising our game in organisational safety management | EUROCONTROL Barry Kirwan |
| 09:30 | The Luton Safety Stack, improving safety and efficiency | Luton Airport EasyJet Liam Bolger Dave Cross |
| 10:00 | Insights from a Safety Culture Survey of a global airline | KLM Jaap van den Berg |
| 10:20 | Ensuring the right safety view at the top – Executive-level Safety Dashboards | Deep Blue Carlo Valbonesi |
| 10:35 | Questions & answers | Chair: EUROCONTROL |
| 10:45 | COFFEE BREAK | |
| | P6: Human performance envelope | |
| 11:00 | Human Factors challenges on the flight-deck | FAA Kathy Abbott |
| 11:30 | Graceful degradation in ATM and the Human Performance Envelope | NASA Tamsyn Edwards |
| 12:00 | Overview of the project and technical results | DLR Matthias Wies |
| 12:20 | Development of new cockpit interfaces | Lufthansa Carsten Schmidt-Moll |
| 12:40 | Development of a Smart Vest for real-time measurements of physiological data | CSEM Josias Wacker |
| 13:00 | Questions & answers | Chair: DLR |
| 13:10 | LUNCH | |

DAY 2

| P7: Mitigating risks of fire, smoke and fumes | | |
|---|---|--|
| 14:20 | Overview of the project and technical results | ONERA Eric Deletombe |
| 14:40 | Cabin Air Quality | EMBRAER Ricardo Reis |
| 15:00 | Material solutions to mitigate fire, smoke and fumes in the cabin environment | VZLU DLR Frantisek Martaus Martin Liebisch |
| 15:30 | Questions & answers | Chair: ONERA |
| 15:40 | Wrap up | NLR Michel Piers |
| 16:00 | END OF 2nd DAY | |

Important info

EU Commission will be present with a stand at

- **Aero Days 2019**
- **Paris Air Show 2019**



WE WANT YOU!

Looking for experts

(proposal evaluation, project assessment).

– enrol via the Participant Portal

***Thanks for sharpening the focus of
aviation safety research!***



For more information



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[@inea_eu](https://twitter.com/inea_eu)



Look for INEA!

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