

# Summary of the Workshop on Aviation Research Infrastructures in Europe *"Aeronautics Research & Testing Infrastructures – Key for Europe's Competitiveness in Aviation"*



Brussels, 25<sup>th</sup> & 26<sup>th</sup> February 2013

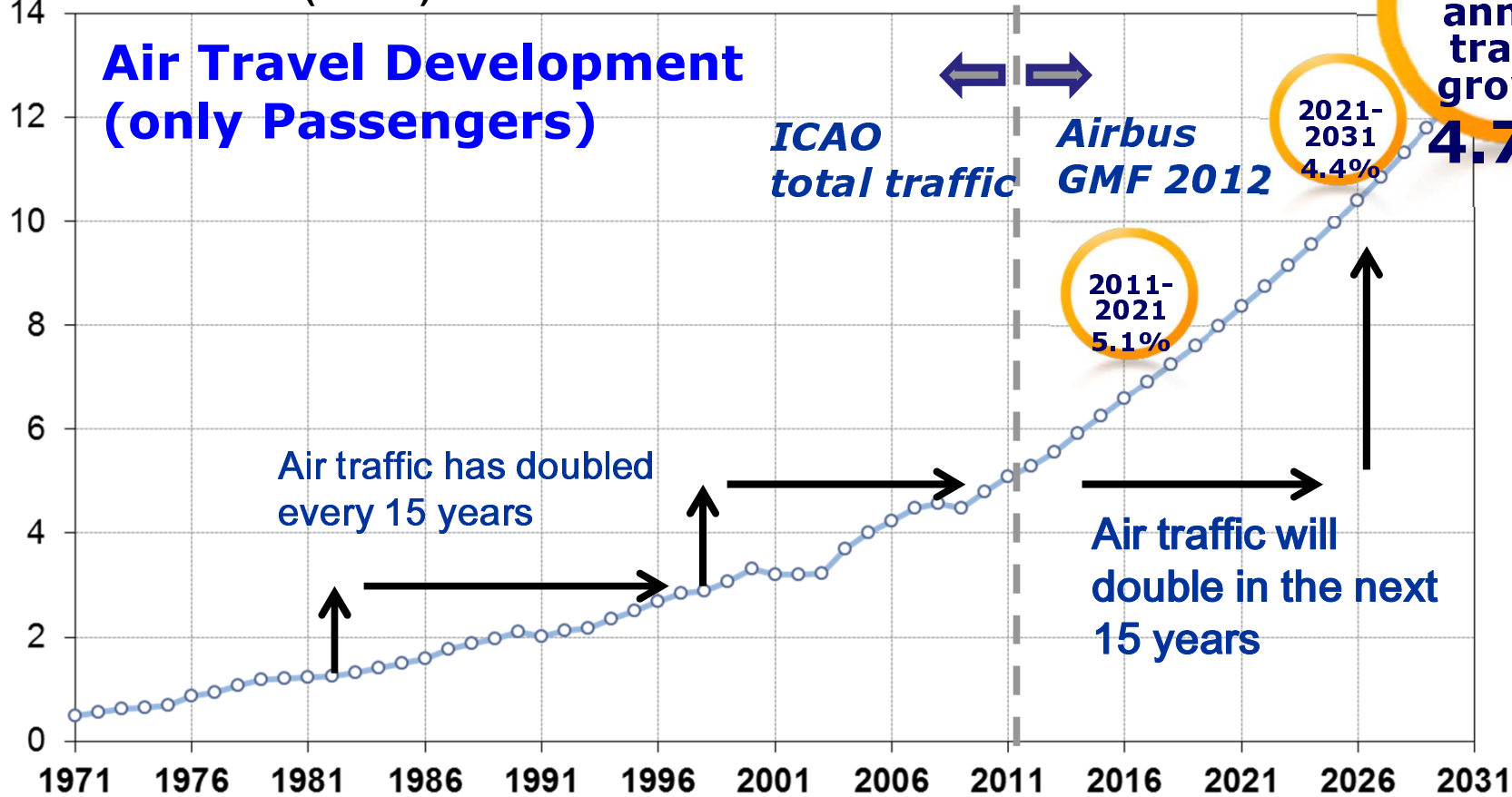


## **Workshop Objectives:**

- To learn and discuss about the findings of the Independent Expert Group (IEG)
- To learn about initiatives on Member States' and European level.
- To identify the needs of aviation stakeholders for the availability and capabilities of aviation research and testing infrastructures in Europe

World annual RPK (trillion)

## Air Travel Development (only Passengers)



Source: ICAO, Airbus

## *IEG Conclusions (1)*

- A **European Strategic Aviation RDT&E Infrastructure is indispensable**
  - For the continued **competitiveness** of the European Aeronautics and Air Transport **industry**.
  - For **excellent science** and **RDT&E** purposes.
  - To achieve the objectives of '**Horizon 2020**' and '**Flightpath 2050**'
  - For **future product development**.
- A "**Levelling of the Playing Field**" is needed with US, Russia and China. A European Strategic Aviation RDT&E Infrastructure is essential to realize this.

## *IEG Conclusions (2)*

- The European Strategic RDT&E facilities are **not usually viable as independent businesses.**
- The European Strategic RDT&E **capabilities also include a highly qualified, skilled, experienced crew** and excellent measuring techniques.
- EU, Member States, research organisations and industry need **to ensure jointly an integrated approach to secure the continuity and quality** of this Strategic Aviation RDT&E Infrastructure.
- The Commission proposal for **Horizon 2020 offers opportunities** for partly meeting this challenge.
- The IEG has developed sets of **Criteria for "Strategic and Unique"** and for **"Key" Aviation Infrastructures.**

## *IEG Main Recommendations (1)*

- Endorse the **criteria** developed by the IEG for "**strategic**" and "**key**" **RDT&E facilities** at both European and national/regional level.
- Establish a working group composed of Industry and Research Establishments **to complete the AirTN list with Engine R&T infrastructures**, and define a plan for the sustainable support of powerplant system R&T infrastructure
- Extend and **update the existing ERA-Net AirTN Database** to include data on candidate strategic and key facilities covering the complete spectrum of infrastructure types as defined by the IEG.
- Determine the requirements against each of these infrastructure types **to meet each specific requirement of the SRIA** (DLR proposed matrix).
- Develop from the updated ERA-Net AirTN database a **consolidated list of strategic and key Infrastructures** to achieve Horizon 2020 by applying the IEG criteria.

## *IEG Main Recommendations (2)*

- **Develop** and **implement procedures** and programmes for applications and their assessment for:
  - the **qualification "strategic" or "key"** in accordance with **IEG criteria**
  - for **EU co-funding for maintenance and upgrades of strategic and key RDT&E facilities** at a European level.
- Support the strategic and unique European Aviation Infrastructure and make sure that they will remain sustainably available for excellent science and high quality testing by the industry to **support also for the future, a worldwide competitive aviation industry.**
- Support the **consolidation of key RDT&E facilities** to further increase quality and cost- effectiveness
- Establish an 'ESFRI like' **Expert Group to judge on proposals** on behalf of the EU
  - from the owners of the Strategic and Unique existing Aviation Infrastructure,
  - from future Strategic and Unique Aviation Infrastructures,
  - from consolidation proposals of key facilities.





## Workshop Outcome (1/2)

### Research Centres (EREA):

- They provide research and testing infrastructures covering the entire aviation needs  
(examples given: wind tunnels, e-infrastructures, ATM, aero-engines, flying testbeds etc.)
- They contribute to industry's competitiveness
- Strong need to be cost efficient and competitive on the global 'research and testing market'
- Reflections on new cost models and funded sources are needed

The ESFRI project PRACE may give an example for certain aviation RDT&E infrastructures



## Workshop Outcome (2/2)

### Airbus:

- 2015+ Improvement of existing aircraft
- 2020+ Technology validation
- 2030+ Step-change new aircraft

Those wind tunnels are key that are needed for keeping the aircraft design programme on track

### Commission:

'Research Infrastructures' line of 'Horizon 2020' offers some opportunities

### Member States:

New initiatives, commitments and joint actions are required

## *Follow-up Actions*

1. Identify gaps and complete **AirTN database** as well as expand the database from aeronautical to aviation research infrastructures
2. Define jointly a **roadmap on strategic research infrastructures (ACARE)**
3. Provide **new and feasible business models** for large strategic and unique RDT&E infrastructures

## Conclusions

- 'Flightpath 2050' and the SRIA identify research infrastructures as key for Europe's aviation
- Europe has already world-class aviation research infrastructures that needs to be enhanced and adapted to future needs
- Joint efforts of Members States, EU and industry are requested to ensure the needed infrastructures and their capabilities in future (-> roadmap)
- The Commission is ready to play its role on this issue



## Thanks . . .

To Fred Abbink and the independent Expert Group for their comprehensive report

To all speakers for their informative interventions

To the moderator and the participants of the panel discussion for their contributions

To the Commission colleagues for their effort to make this workshop happen

To all participants for their interest and contributions

***Good luck for the joint efforts in enhancing Europe' aviation research infrastructures***