Air Transport Net: The AirTN NextGen project

Research Infrastructures & simulation Capabilities
Toward Virtual Certification

September, 25th 2014 – Bonn (DLR e.V. - PT-LF)

Historical overview and Aims of AirTN:

❖ 2006: AirTN → a Special Support Action for ERA-NETS within FP6.

    ❖ To address research and technology developments (RTD) in Aeronautics and Air Traffic.

❖ 2009: AirTN Project → Coordination of EU research

    ❖ To enhance synergies throughout Europe

    ❖ To support transnational programmes

    ❖ To act together to form an integrated community

    ❖ To increase efficiency of and to avoid waste of funding , the coordination of national research programmes must be improved.

❖ **2013: AirTN-NextGen → Enhancing coordination and stimulating cooperation in research and innovation among EU Member States and Associated States to the EU Framework Programme.**

AirTN FP7 → Most important successes:

❖ Establishment of a well-connected network

   ❖ Good cooperation within the consortium, with other consortia and countries.

   ❖ The network is exploited by members also for cooperation out of the specific AirTN project

❖ Three transnational Calls

   ❖ LuFo (Germany) – Take Off (Austria)

   ❖ Austria, Ireland, Spain and Sweden

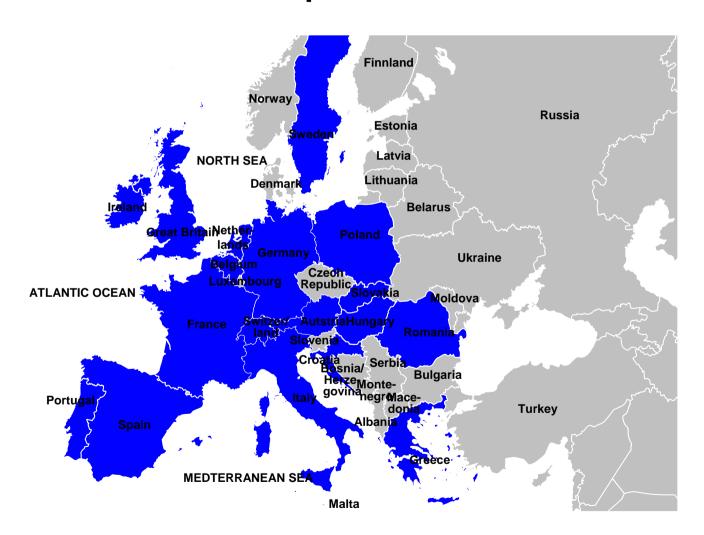   ❖ Austria, Ireland, Italy, Spain and Sweden

❖ AirTN Catalogue

   ❖ The first catalogue of the European Aeronautical Research Facilities.

   ❖ This database focuses mainly on the strategic and key facilities (ACARE typology).

AirTN Landscape

The AirTN Countries:

Austria
Belgium
Croatia
France
Germany
Greece
Hungary
Ireland
Italy
Netherlands
Poland
Portugal
Romania
Slovakia
Spain
Sweden
Switzerland
United Kingdom

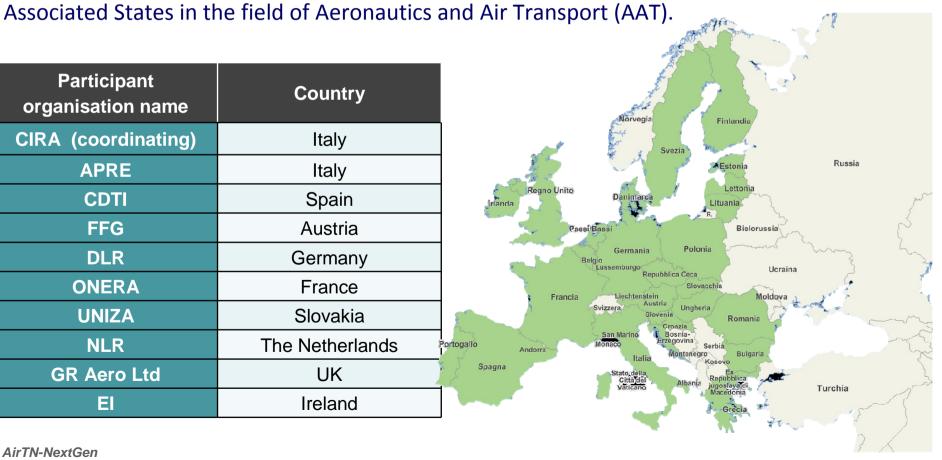|	AirTN NextGen
Goal	**A platform of national representatives** acting towards the support of **joint trans-national initiatives** within the Horizon 2020 framework
Instrument	• CSA-SA • National Funding Mechanisms
Total Budget	810,96 k€
Total EC Contribution	**594,12 k€ ----> 90 k€** are available for **workshops** and **support external experts for performing studies**
Time Frame	• 24 months : start 1-12-2013 / end 31-12-2015 • Horizon 2020 if a new ERA-NET
Content	• Transnational cooperation / joint programming • International cooperation • Research infrastructures • Education and workforce mobility
Core partners	**Agencies/Ministries/Research Centres** that are funding/managing research and innovation programmes/projects relevant to Aeronautics and Air Transport
Communication	**Coordination of National Programmes**

AirTN-Nextgen

❖The action will set up a platform of networking and communication between national organizations and governmental institutions supporting trans-national initiatives for research and innovation within the Horizon 2020 framework in the EU Member States and Associated States in the field of Aeronautics and Air Transport (AAT).

Participant organisation name	Country
CIRA (coordinating)	Italy
APRE	Italy
CDTI	Spain
FFG	Austria
DLR	Germany
ONERA	France
UNIZA	Slovakia
NLR	The Netherlands
GR Aero Ltd	UK
EI	Ireland

AirTN-NextGen

9 European MS and 10 Partners

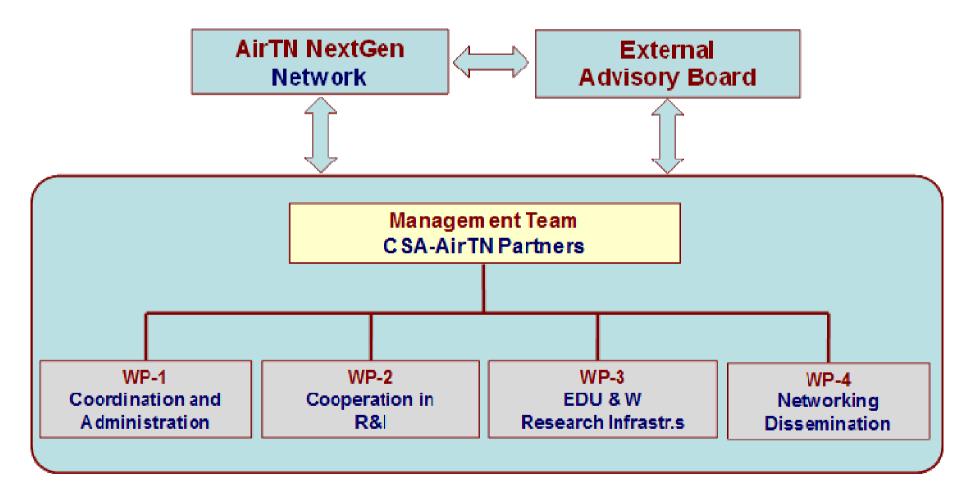| Austria	FFG	Austrian Research Promotion Agency
France	ONERA	Aeronautics and Space Research Centre
Germany	DLR PT-LF	German Aerospace Center - Program Manag. Agency/Aeronautics Research
Ireland	EI	Enterprise Ireland
Italy	CIRA	Italian Aerospace Research Center
Italy	APRE	Agency for the promotion of European Research
Netherlands	NLR	National Aerospace Laboratory
Slovakia	Uni. of Zilina	University of Zilina
Spain	CDTI	Centre for Development of Industrial Technology
UK	GR Aero LTD (GR Aero)	Department for Business, Innovation & Skills

Type of Organization:

Company
Agency
University
Research Centre

AirTN NexGen

Thank you for your attention!

Any question?

Further information & details ...

WP 2: Cooperation in Research and Innovation

Objectives

❖Providing an overview of the different types of transnational (including international) cooperation actions, their focus and the financial resources provided by public authorities.

❖Stimulating practical opportunities to develop cooperation in research and innovation, including transnational joint calls where relevant.

❖Acting as a vehicle for stimulating co-operation of national funded research in support of technology initiatives on a European scale such as Horizon 2020, and specific programmes Clean Sky, SESAR, and their follow on, etc.

❖Strengthening and widening coordinated approaches towards international co-operation.

❖Monitoring outcomes of the performed actions.

Task 2.1: RTD&I transnational (including international) cooperation in EU Member States and Associated Countries at governmental

- **Task 2.1.1: Database of National and Regional funding programmes**.
  - To update database of national/regional funding programmes through *existing* online AirTN questionnaire.
    - Each AirTN partner is responsible to fill out regional/national programmes existing in their countries.
    - Information about contries outside AirTN NextGen should be filled out by «AirTN Next Gen network» and «ACARE MSG»
  - Participation in "transnational cooperation dedicated sessions"

- **Task 2.1.2: National innovation and research strategies in aviation focused on transnational (including international) R&T cooperation** for aeronautics and air transport intensive regions**.
  - Based on the work done by ETNA PLUS and supported by AiRTN Next Gen Network:
    - Best practices/barriers for transnational (including international) cooperation in national R&D strategies for aviation
    - To propose solutions and recommendations for innovative approaches to improve trans-national (including international) cooperation within European aviation research and innovation strategies
  - Participation in "transnational cooperation dedicated sessions"

- **Task 2.1.3: Sessions on transnational (including international) cooperation**
  - To organise/moderate dedicated sessions on transnational (incl international) cooperation:
    - To obtain necessary information to address WP2 tasks
      - Taking advantage of the three "AirTN Next Gen Network" workshops (organised by task 4.1)
      - With the support of WP2 task leaders

Task 2.2: Supporting RTD&I transnational cooperation in aviation

- **Task 2.2.1: Stimulation of transnational cooperation for R&I in support of technology initiatives on European scale such as Horizon 2020, Clean Sky, SESAR, etc.**
  - Direct participation in internal meetings of different H2020 initiatives to increase the awareness of transnational activities.
  - Participation in "transnational cooperation dedicated sessions"

- **Task 2.2.2: Transnational coordinated call**
  - To support new transnational coordinated calls
  - Monitoring, dissemination and impact assessment of funded projects under AirTN FP7 coordinated calls and future calls.
  - Participation in "transnational cooperation dedicated sessions"

- **Task 2.2.3: Eranet cofund instrument**
  - To study the suitability of having an aviation eranet cofund action funded within H2020

WP 3: Education, Workforce & Research Infrastructure

Objectives

❖Enhance transnational cooperation in the field of Research Infrastructures (e.g. RI) dedicated to virtual testing and virtual certification.

❖Provide advices for the upgrades of RIs to federate simulation capabilities and strengthen the RI network.

❖Provide advices to stimulate transnational cooperation in education.

❖Propose recommendation to improve the university courses towards industry needs.

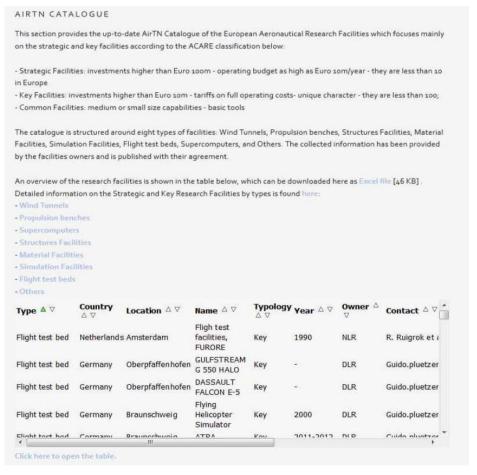❖Provide advices to foster personnel mobility to access RI and whole life training.

WP 3: Education, Workforce & Research Infrastructure

❖ Update of the catalogue or Research Infrastructure facilities:

❖ Specific task on clusters of simulation capabilities → Seminar → Presentation of results at the AirTN-NextGen WS in December.

❖ INAIR conference: A unique platform for discussion between academia and industry

INAIR 2014

International Conference on Air Transport

"Europe: How to Stay Connected?"

13 – 14 November 2014

Hotel Grand Majestic Plaza **

Prague, Czech Republic

AIRTN CATALOGUE

This section provides the up-to-date AirTN Catalogue of the European Aeronautical Research Facilities which focuses mainly on the strategic and key facilities according to the ACARE classification below:

- Strategic Facilities: investments higher than Euro 100m - operating budget as high as Euro 10m/year - they are less than 10 in Europe
- Key Facilities: investments higher than Euro 10m - tariffs on full operating costs- unique character - they are less than 100;
- Common Facilities: medium or small size capabilities - basic tools

The catalogue is structured around eight types of facilities: Wind Tunnels, Propulsion benches, Structures Facilities, Material Facilities, Simulation Facilities, Flight test beds, Supercomputers, and Others. The collected information has been provided by the facilities owners and is published with their agreement.

An overview of the research facilities is shown in the table below, which can be downloaded here as Excel file [46 KB] .
Detailed information on the Strategic and Key Research Facilities by types is found here:
- Wind Tunnels
- Propulsion benches
- Supercomputers
- Structures Facilities
- Material Facilities
- Simulation Facilities
- Flight test beds
- Others

Type	Country	Location	Name	Typology	Year	Owner	Contact
Flight test bed	Netherlands	Amsterdam	Fligh test facilities, FURORE	Key	1990	NLR	R. Ruigrok et a
Flight test bed	Germany	Oberpfaffenhofen	GULFSTREAM G 550 HALO	Key	-	DLR	Guido.pluetzer
Flight test bed	Germany	Oberpfaffenhofen	DASSAULT FALCON E-5	Key	-	DLR	Guido.pluetzer
Flight test bed	Germany	Braunschweig	Flying Helicopter Simulator	Key	2000	DLR	Guido.pluetzer
Flight test bed	Germany	Braunschweig	ATRA	Key	2011-2012	DLR	Guido.pluetzer

Click here to open the table.

WP 4: Networking and Dissemination

Objectives

❖Create the AirTN NextGen Network, strengthening and widening the network established under previous ERA-NET schemes

❖Maintaining an active exchange of information and acting as linkage to avoid duplication of effort between different networks and institutions in the EU Member States and Associated Countries.

❖Creating means of communication to support transnational and international cooperation

❖Communication of achieved results outside of the consortium and AirTN NextGen Network

WP 4: Networking and Dissemination (just e.g.)

❖Website (www.airtn.eu)

❖Newsletter (www.airtn.eu/newsletters/newsletter20140305.html)

❖ To subscribe: (www.airtn.eu/lists/?p=subscribe&id=1)

AirTN NextGen as a support to identify opportunities:

❖ Coordinator : Marcello Amato, CIRA, Italy, M.Amato@cira.it

❖ WP 2: Cooperation in Research and Innovation

  ❖ Database + Transnational Calls + ERANET → Identification of opportunities

  ❖ Contact : Juan Francisco Reyes Sánchez, CDTI, Spain, juanfrancisco.reyes@cdti.es

❖ WP 3: Education, Workforce & Research Infrastructure

  ❖ Catalogue of Infrastructure → Identification of research facilities, contacts → Partners

  ❖ INAIR Conference → Contacts + Partners

  ❖ Contact : Olivier Vasseur, ONERA, France, olivier.vasseur@onera.fr

❖ WP 4: Networking and Dissemination

  ❖ Network + exchange of information + Website → Identification of opportunities and potential partners

  ❖ Contact : Vera Ellegast, FFG, Austria, vera.ellegast@ffg.at