



Welcome and Short Introduction to the SAT-Roadmap Project

Brussels, 28 Sept 2011

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Main goal of the Workshop

Discuss with representatives of the SAT Community, EC, Regulators, Operators in order to build up a “Common” shared view of the future.

**COMMON VISION
ON THE DEVELOPMENT OF A
SMALL AIRCRAFT TRANSPORTATION SYSTEM**

Workshop Approach

- ❖ **A Discussion Paper was distributed**
- ❖ **Key elements of a vision for a SAT System will be presented in the morning to set-up the scenario**
- ❖ **Two Parallel Session will take place in the afternoon to openly collect views and opinions on key elements of the SAT Vision**
- ❖ **Preliminary Collection of results from Parallel Sessions**
- ❖ **Panel Discussion on three Pivotal Questions**
- ❖ **SAT-Roadmap next steps**



What is the Small Aircraft Transport System?

It is a segment of high-speed transport market that serves local and regional connections

The SATS approach will add a new modality within air transport and complement international and regional transport.

Small Aircraft Transport will serve:

- **the need for low-intensity intercity routes** (e.g. for west/east directives also in central Europe), which has been dependent so far on road transport;
- **regions out of the central European “economic banana” with less developed infrastructures.**
- **the needs of European business travel;**

What is the Small Aircraft Transport System?

Aircraft

- small 4 to 19 seats, that are low DOC, green, safe, and secure

Infrastructure

- On the ground and in the air - Regional Airports + ATM/ATC services integrated in SESAR

Net – Centric Management & Acquisition

- ICT based logistic and management system for SATS, integrated within the SESAR's System Wide Information Management (SWIM)





Three Pivotal Questions



- 1** “A Small Aircraft Transport System, based on small-size aircraft, operating on commercial scheduled or non-scheduled flights from standard airports and small airfield network, should be accepted as a component of the European (Air) Transport System”
- 2** “The main goal of Small Aircraft Transportation System is to provide fast passenger transport service for European business travel, the need of passengers along city pairs with low-intensity traffic (also in central Europe), as well as the needs of remotes regions with underdeveloped transport infrastructure thus enabling door-to-door travel between EU regions/city pairs at a flying distance of around 4 hours?”
- 3** Do you agree that this goals might be met by 2020 using mostly currently existing aircraft, infrastructure and available ICT?



Short Introduction to the SAT-Roadmap Project



EPATS – STUDY Reports:

- D1.1 Report on European Business& Personal Aviation Data Base
- D2.1 Potential transfer of passenger demand to personal aviation by 2020
- D3.1 EPATS ATM General requirements & related issues to be solved
- D3.2 EPATS airports General requirements, safety and environmental aspects
- D4.1 EPATS aircraft missions specification
- D4.2 Operating Costs Analysis Report
- D4.3 Fuel consumption and transportation energy effectiveness Analysis Report
- D5.1 EPATS Research and Development Program
- D5.2 EPATS Roadmap

<http://epats.eu>



Where we
are going?

Some studies suggest that the number of cars in the world will increase from around

700 milion today

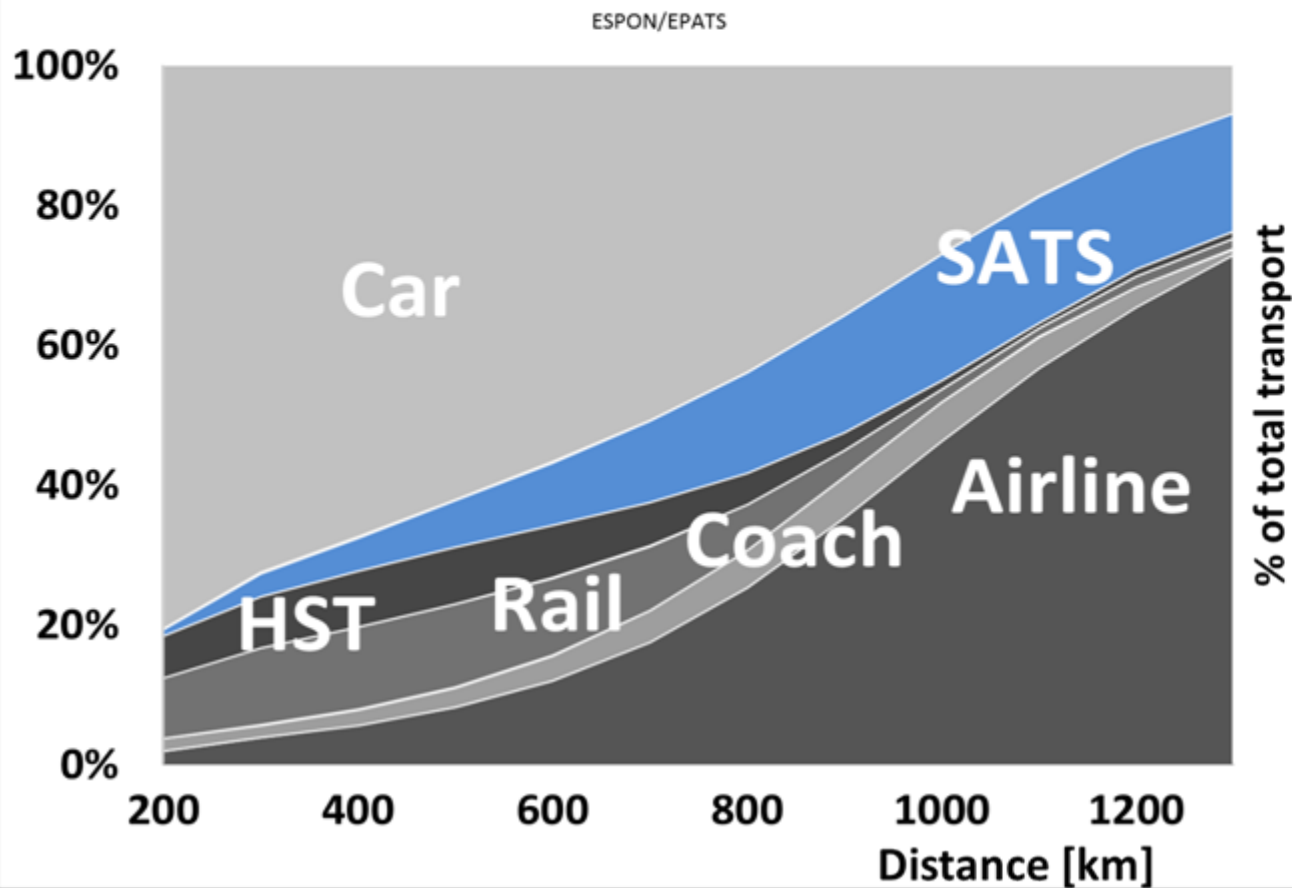
to more than

3 bilion in 2050...

Communication from the EC 17 June 2009

This calls
for a modal
shift!

Modal split of trips in Europe. 2020



Shift part of long distance business trips from cars to small aircrafts

SAT – Roadmap (CSA)

- **Definition of a common vision** of the small aircraft transport system for inter-regional mobility through the identification of the corresponding requirements. The requirements will identify the technology needs and regulatory issues to be addressed.
- **Definition of a business case** compliant with the identified requirements which describes the relations among all the system's components.
- **Assessment of current capabilities** versus the ATS demand, collection of previous results and involvement of the stakeholders in Europe among all actors (manufacturers, research establishment, EASA, airspace users, infrastructure providers, airport managers, small aircraft service providers).
- **Definition of a roadmap to fill the technology/regulatory/operative gaps** in order to fulfil the requirements considering the current capabilities. Identification of dissemination actions and establishment of a network of stakeholders.
- **Assessment of risks and benefits** of the identified new system's concept

Common Vision & Roadmap

What	What (topics)	To	When
COMMON VISION Workshop, Joint meeting with GA Projects	<ol style="list-style-type: none"> 1. European Mobility, Demand, and Business Models 2. System Requirements 3. Common Vision on Small Air Transport 	RTD Community, Airlines, Airtaxi Community EC, ACARE	Sept 2011
ROADMAP Workshop	<ol style="list-style-type: none"> 1. The Capabilities 2. Master Plan for development of Small Air Transport Aircraft 3. The Roadmap of RTD 4. Recommendations on content and timing of EU Framework calls 	Manufacturers Community EC, EGAMA, IMG	April 2012
SAT-RDMP Conference	<ol style="list-style-type: none"> 1. Synthesis of Small Air Transport Roadmap 	General Aviation Community, Public	ILA Airshow 2012



European Aviation Research

- Vision for 2020 - by GoP 2001
- SRAs – by ACARE
- An Agenda for Sustainable Future in General and Business Aviation (EuroParliament Resolution 2009)
- National and FP projects connected to SATS
- Flightpath 2050 – by High Level Group 2011

- **Small Aircraft Transport System** should be seen **as a component of European Transport System** (Flexible & point-to-point, Integrated in the intermodal European Transport System, reaching also peripheral regions)
- SATS could be useful as a **research platform** for testing intermodality within ETS
- In order to develop a SATS within ETS is important to
 - **build-up a Common Vision**
 - **build-up a Technology Roadmap**
 - **Create critical mass to implement the Vision and the Technology Roadmap**

08:30	Registration	
09:00	Welcome and Short introduction to the SAT-Roadmap Project	K. Piwek (IoA)
	Small Aircraft Transport Mode versus the 2020 and 2050 ATS	
09:20	SAT Vision and Roadmap - A new transport mode in Future ATS	M. Amato (CIRA) A. de Graaff (AD Cuenta)
10:00	Demand of SAT Mode	I. Laplace (M3 Systems)
10:30	Business Case with operational Characteristics	R. Curran (TUD)
11:00	Coffee Break (11:00 – 11:10)	
11:10	Future aircraft concepts (Business, GA and Small Transport Aircraft)	A. Cozzolino (Piaggio Aero)
	Enabling Conditions	
11:30	Enabling Conditions for Operations : booking system, airports	S. Ghijs (Fly Aeolus)
11:50	Enabling Conditions for Operations: pilot availability, SES, level of automations	C. Le Tallec (ONERA)
12:10	Regulatory Difficulties and Emerging Needs for Regulations	J. Duda (Evector)

12:30	Lunch (12:30 – 13:15)	
	Parallel Sessions with two Working Groups	
13:15	Workshops Approach and Working Group Creation	M. Amato (CIRA) A. de Graaff (AD Cuenta)
	Parallel Sessions WG – 1	
13:30	<ul style="list-style-type: none"> ❖ Target Products & Technologies <ul style="list-style-type: none"> ○ Piston engine A/C - 9 seats or fewer – MTOW up to 5670 kg, ○ Turboprop A/C - 19 seats or less - MTOW 8618 kg ○ Jet A/C - 11 seats or less – MTOW up to 7600 kg ❖ HLO for Product Technologies ❖ Enabling Conditions for Product Technologies <ul style="list-style-type: none"> ○ R&TD infrastructures ○ Certification, Standards and Rules ○ Industrial Master Plan ○ Funding ❖ Product Technologies HLO vs Challenges 	<p style="text-align: center;">WG – 1 led by A. de Graaff (AD Cuenta) M. Amato (CIRA)</p>
15:30	Coffee Break (15:30 - 15:45)	

Parallel Sessions WG – 2		
13:30	<ul style="list-style-type: none"> ❖ Target Operation, System Concepts and Technologies <ul style="list-style-type: none"> ○ Booking system ○ Fleet Management ○ ATM and SES ○ Airports ○ Automation level for SAT and operation modes ❖ HLO for Operation Technologies ❖ Enabling Conditions for Operations Technologies <ul style="list-style-type: none"> ○ Pilot Training ○ Insertion in SES ○ Certification, Standards and Rules ○ R&TD funding ❖ Operation Technologies HLO vs Challenges 	<p>WG – 2 led by T. Henley (THL) S. Ghijs (Fly Aeolus)</p>
15:30	Coffee Break (15:30 - 15:45)	



Agenda



	Preliminary Results Collection		
15:45	Product Technologies and Enabling Conditions Product Technologies HLO vs Challenges		WG-1 Leader A. de Graaff (AD Cuenta)
16:00	Operation Technologies - Enabling Conditions Operation Technologies HLO vs Challenges		WG-2 Leader T. Henley (THL)
	Panel Discussion on Small Aircraft Transport (SAT) mode		
16:15	EC ACARE SESAR Community	Operators National authority EGAMA	Moderated by K. Piwek (IoA)
	Next Steps towards SAT Common Vision and SAT Roadmap		
16:45	Next Steps		A. de Graaff (AD Cuenta)
17:00	End of the WORKSHOP		

Thank You for attention.
I wish you fruitful day!

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