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a European project  
to assess *Contract of Objectives*





The CATS project was selected during the 4<sup>th</sup> call of the European Commission FP6. It started on 1<sup>st</sup> of November 2007 for a three years duration.

The strategic objectives addressed through this project are to propose solutions to cope with traffic growth and to improve the efficiency of European Air Transportation System (ATS). Two of ACARE/SRA.2's High-Level Target Concepts (HLTC), namely Highly Customer-Orientated ATS and Highly Time-Efficient ATS, are specifically addressed.

The CATS project is based on the "arriving on time" concept while improving efficiency and synergy between all ATM actors through **Contract of Objectives**.

## CONCEPT OVERVIEW

The CATS project proposes an integrated decoupling ATM organisation, where all the actors negotiate and agree on their own objectives. This organisation is based on the division of responsibility between the different actors. The transfer of responsibility between them will be explicit and formally contracted. This will reinforce the arrival punctuality.

The trade-off process, driven by actors' interests and constraints, will reinforce autonomy and responsibility, while allowing a high level of integration between all stakeholders and consistency of the ATM organisation, in order to optimise the use of their scarce resources.

## PROJECT OVERVIEW

The main aim of the CATS project is to assess by experimental & operational validation the Contract of Objectives concept.

This will be achieved by:

- defining the interfaces between various actors and operators:
  - Air Traffic Controllers (ATCO) in airborne cycle (between two Air Navigation Service Providers (ANSPs));
  - ATCO and air crew in airborne cycle;
  - Airport, airline and ANSP during the renegotiation process;
- assessing, through Human-In-the-Loop experiments, the operational acceptability and the technical feasibility, particularly in case of renegotiation;
- evaluating the impact of this contract in terms of Human Factor issues, safety and operators' workload;
- evaluating the benefits (cost business analysis, safety & risk analysis) and the legal implications.

## MEETING THE SESAR OBJECTIVES

The CATS project was identified during the SESAR definition phase as one of the possible implementation of the Contract notion, and is closely related to SESAR WP3.2 and WP1.2.2 (CDM). The Contract of Objectives could be one of the possible solutions to implement the SESAR Business Trajectory.

The CATS project has also been identified to fit in with the WP4 of Episode3 project (SESAR Validation).

The CATS project is fully in-line with the SESAR objectives.

**CATS** contracts will provide well-defined objectives for each actor involved on a flight.

**CATS** objectives represent the commitment of each actor for delivering the aircraft inside temporal and spatial intervals. Each actor commits himself/herself and is accountable for their achievement.

**CATS** objectives are situated on the transfer of responsibility areas, all actors being accountable for their own achievements.

**CATS** objectives are negotiated based on schedule integrity at destination, taking into account all the actors' constraints.

**CATS** contracts will ensure the operational continuity of the flight. ATCOs are now able to visualize, on their own working position, the final objective, instead of managing sectors that they are responsible for without considering global ATM optimisation.

Negotiation

Collaboration

Continuity

Schedule integrity

Trade-off

Responsibility

Transparency

Accountability

Commitment