Co-operative Air Traffic Management

Acronym:	C-ATM
Contract Nr.:	TREN/04/FP6AE/S07.29954/502911
Instrument:	Integrated Project
Total Cost:	9 178 219 €
EU Contribution:	4 688 196 €
Starting Date:	05/04/2004
Duration:	18 months
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Partners:

THALES ATM S.A.	FR
Entidad Pública Empresarial Aeropuertos Españoles y Navegación Aérea (AENA)	ES
Airbus France S.A.S.	FR
Alenia Marconi Systems S.p.A.	IT
BAE SYSTEMS Avionics Ltd.	UK
DFS Deutsche Flugsicherung GmbH	DE
Deutsche Lufthansa A.G.	DE
Deutsches Zentrum für Luft- und Raumfahrt e.V. (DLR)	DE
Direction de la Navigation Aérienne (DNA)	INT
EUROCONTROL - European Organisation for the Safety of Air Navigation	INT
Indra Sistemas	ES
Ingenieria Y Economia del Transporte S.A. (INECO)	ES
Ingenieria de Sistemas para la Defensa de Enpaña S.A. (ISDEFE)	ES
LUFTFARTSVERKET (Swedish Civil Aviation Administration)	SE
Stichting Nationaal Lucht- en Ruimtevaart Laboratorium (NLR)	NL
Sistemi Innovativi per il Controllo del Traffico Aereo (SICTA)	IT
Société Française d'Etudes et de Réalisations d'Equipements Aéronautiques (SOFREAVIA)	FR
THALES Avionics S.A.	FR
NATS (En Route) plc	UK
Luchtverkeersleiding Nederland (LVNL)	NL
Alitalia Linee Aeree Italiane S.p.A.	IT
ENAV S.p.A.	IT

Background

The major challenges facing the European air transport system over the next 15-20 years include accommodating the predicted growth of air transport demand whilst providing a better, more predictable and more efficient service to airspace users and maintaining or improving the overall safety of the system.

Such challenging objectives call for a combination of actions that will be targeted at discarding the inefficiencies of today's air traffic management modus operandi, eliminating segmentation and considering the Air Transport System as a whole. The aim of the C-ATM project is to contribute to these efforts.

Project objectives

C-ATM objectives are directed towards the elimination of the main obstacles facing the growth of the European Air Transport system over the next 20 years. The major challenge addressed by C-ATM is the dramatic improvement of the overall Network efficiency, to provide a more reliable and predictable service to airspace users - particularly airlines - in order to support cost effective, on-time air transport services.

This will be achieved through the implementation of co-operative systems and processes aimed at optimising system resources and task distribution between air and ground, supported by the sharing of common data across the system.

The project places great importance on maintaining or improving the overall safety of the system. Environmental protection will be assured by the early identification of requirements to be incorporated into the system design process.

The C-ATM project aims to establish an unambiguous reference baseline facilitating the roll-out of improved, cooperative ATM operations in a 2012 time-frame, thereby contributing to the Single European Sky implementation.

Description of the work

Phase 1 of the C-ATM Project was launched in May 2004 and has a duration of 18 months. At the end of this phase initial reference material will be delivered, including an operational concept and an associated technical baseline that will be further validated in subsequent projects.
C-ATM Phase 1 activities are organised in three main Work Packages:

Work Package 1 - Operational baseline (WP1) led by EUROCONTROL:

The main objective of WP1 is to define the operational concept to be developed and implemented within the C-ATM project. The C-ATM operational concept will build upon mature elements of research developed in previous research programmes, integrating and consolidating these into an overall operational concept that is achievable in the target timeframe. In addition to identifying and documenting this concept and typical operational scenarios the work package includes activities to analyse the cost-benefit and safety impacts of deploying the concept.

Work Package 2 - Technical baseline (WP2) led by AIRBUS France.

The main objective of WP2 is to define high level functional and technical requirements of the airborne and ground applications supporting the operational concept, including interoperability issues. An initial generic specification will be defined and its impact on airborne and ground systems will be analysed, thus creating the technical baseline of the project. A specific activity will be dedicated to supporting standardisation of the selected solutions.

Work Package 3 - Roadmap and planning (WP3) led by AENA

This workpackage will provide a general assessment of the potential deployment plan and implementation schedule of the concepts, procedures and applications defined in C-ATM (i.e. roadmap and transition plans) and will establish a preliminary validation plan. Specific attention will be paid to certification issues, considering their impact on the implementation schedule.

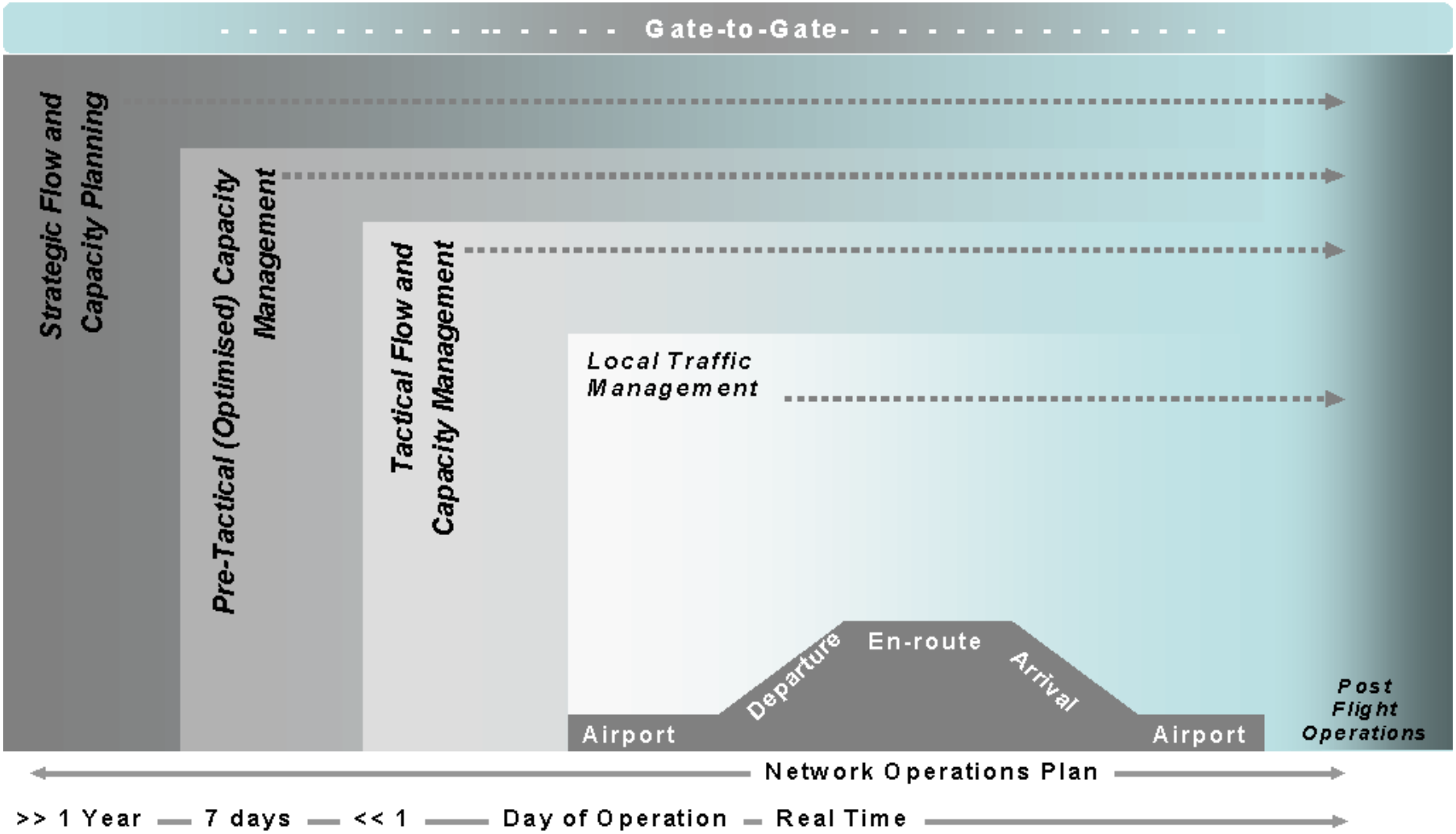
C-ATM Phase 1 is coordinated by THALES Air Traffic Management who also have a leading role in Work Package 0 – Project Management Activities.

WP0 includes project coordination activities and project dissemination and communication activities. Project coordination activities consist of tasks linked to management and coordination of the project at consortium level, administration and reporting to the European Commission.

Expected results

C-ATM Phase 1 will deliver an operational and technical reference baseline supported by an initial assessment of operational deployment roadmaps, while subsequent projects are envisaged to provide further supporting validation material.

The aim is for C-ATM Phase 1 output to become reference material defining cooperative ATM operations deployable in the 2012 time-frame. It will form a major input into subsequent R&D and validation projects and into SESAME, thereby contributing to the Single European Sky implementation.



C-ATM will contribute to improving overall network efficiency by producing the universal guidelines on planning and managing the Air Transport System as a whole, to be used and built upon up to 2012, in the context of implementing the Single European Sky.