PROJECT

EMERALD

EMErging RTD Activities of reLevance to ATM Concept
Definition

Funding: European (4th RTD Framework Programme)
Duration: Feb 1997 - Nov 1998
Status: Complete with results

Background & policy context:
Air traffic in Europe and internationally is growing rapidly. To avoid congestion problems and reduced operational efficiency, the European Air Traffic Management (ATM) systems are being developed, co-ordinated and integrated. This includes short-term actions as well as the development of technologies for the longer term. For the latter, a need had been identified to prioritise future RTD activities for Communication, Navigation and Surveillance (CNS) technologies in support of future ATM concepts, covering the period to 2015.

Objectives:
The objectives of EMERALD were to:

- identify the emerging CNS RTD activities which will have an impact on concept definition for a future European Air Traffic Management System (EATMS) and which should, as a consequence, be integrated into the strategic investment plans of the European stakeholders in civil aviation and ATM;
- make recommendations concerning a realistic deployment of future CNS systems in support of EATMS.

Parent Programmes:
FP4-TRANSPORT - Specific research, technological development and demonstration programme in the field of transport, 1994-1998

Institute type: Public institution
Institute name: European Commission; Directorate-General for Energy and Transport (DG TREN; formerly DG VII)
Funding type: Public (EU)

Partners:
NA

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Key Results:
EMERALD produced a set of recommendations concerning:

- the differences between current forecasts of emerging technologies and those which pertained when long term plans were made by various groups of European decision makers;
- the industrial, commercial, political (etc.) needs of Europe as a regulatory and global trading
enterprise;
- CNS RTD activities likely to respond effectively to allocation of European funds;
- mitigation of risks associated with plans to exploit emerging and immature CNS technologies;
- critical issues concerning CNS technologies which must be addressed and managed to ensure safe, efficient and effective transition to EATMS;
- the defence and enhancement of Europe's position in the airline and aerospace industries and the ATM sector.

Policy implications

The European Air Traffic Management System is evolving. The policy implication of the recommendations made by EMERALD is that, the European Commission needs to revise its ATM strategy in several ways in order to maximise the benefits of European investment.

Related Projects:
- EMERTA - Emerging technology opportunities, issues and impact on ATM.
- FRIENDLY - Functional requirement identification development of methodology.
- TRAFFIC - Traceability of the evolution of CNS requirements versus operational concepts.

STRIA Roadmaps: Network and traffic management systems
Transport mode: Air transport
Transport policies: Decarbonisation, Societal/Economic issues