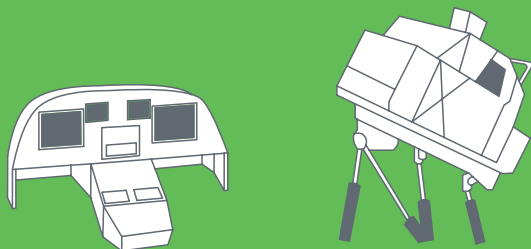


- The two simulations are performed with the involvement of pilots: a Part Task Evaluation (PTE) held in year 3 of the project and a Main Task Evaluation (MTE) held at the end of the project. The PTE aims to assess each of the three single functions (weather, traffic, terrain). Following the PTE, a selection of tools will be chosen to be integrated in the NG-ISS and then assessed during the final evaluation.



Within FLYSAFE, together with the PTE and MTE simulations, two flight test campaigns are also organised in the final project phase. The flight tests are mainly aimed at verifying the technical aspects of the airborne weather tools. In fact FLYSAFE will also launch research activities on a ground-based Weather Information Management System (WIMS) as it constitutes a major stakeholder for safety data relating to weather phenomena. Although the solutions proposed by the WIMS will be targeting the on-board safety requirements of the crew, their applicability also extends to the Flight Management System (FMS) and ATM.



## THE FLYSAFE CONSORTIUM

Coordinated by THALES, the FLYSAFE project is co-funded by the European Commission and launched as part of the 6th Framework Programme of the European Commission. It groups 36 partners from 14 countries for a 4 year joint effort and a total cost of 53 million Euros.

**Airframers:** Airbus Deutschland, Airbus France, Eurocopter Deutschland, Dassault Aviation

**System providers:** THALES Avionics, BAE Systems, Diehl Aerospace

**Research centres:** DLR Oberpfaffenhofen, NLR, ONERA, CNRS, TsAGI

**Meteorological Offices:** UK Met Office, Météo France

**Universities:** University of Hanover, Université Catholique de Louvain, Technische Universität Darmstadt, Cranfield University, University of Malta

**Airlines:** Adria Airways, Air Malta

**Air Traffic Control authorities:** AustroControl

**Specialised companies:** GTD Sistemas de Informació, Euro Telematik AG, Galileo Avionica, Hellenic Aerospace Industry, Jeppesen GmbH, Rockwell Collins France, THALES Air Defence, THALES Laser

**Specialised SMEs:** Avitronics Research, AVTECH, Deep Blue, Skysoft Portugal, Hovemere, USE2ACES



AIRBORNE INTEGRATED SYSTEMS FOR SAFETY  
IMPROVEMENT, FLIGHT HAZARD PROTECTION AND  
ALL WEATHER OPERATIONS



FLYSAFE is the Project federating the most relevant skills across Europe to provide solutions for safety in airspace as defined by the ACARE VISION 2020.

FLYSAFE intends to design, develop, implement, test and validate a complete Next Generation Integrated Surveillance System and to develop, validate and test Weather Information Management Systems to provide aircraft with weather related information and prove that they increase safety.

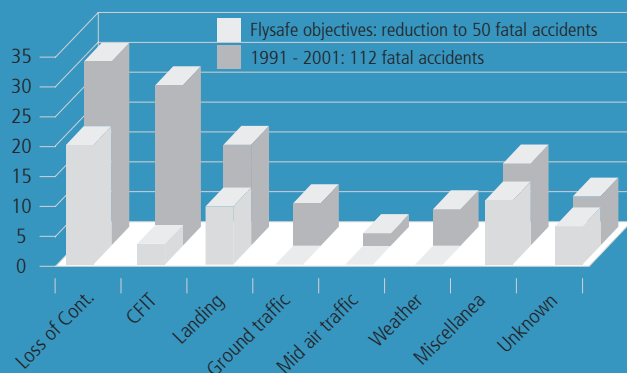
[www.eu-flysafe.org](http://www.eu-flysafe.org) | [flysafe@eu-flysafe.org](mailto:flysafe@eu-flysafe.org)

This leaflet is produced under the EC contract AIP4-CT-2005-516167



## FUTURE SITUATION IN AIR TRAFFIC

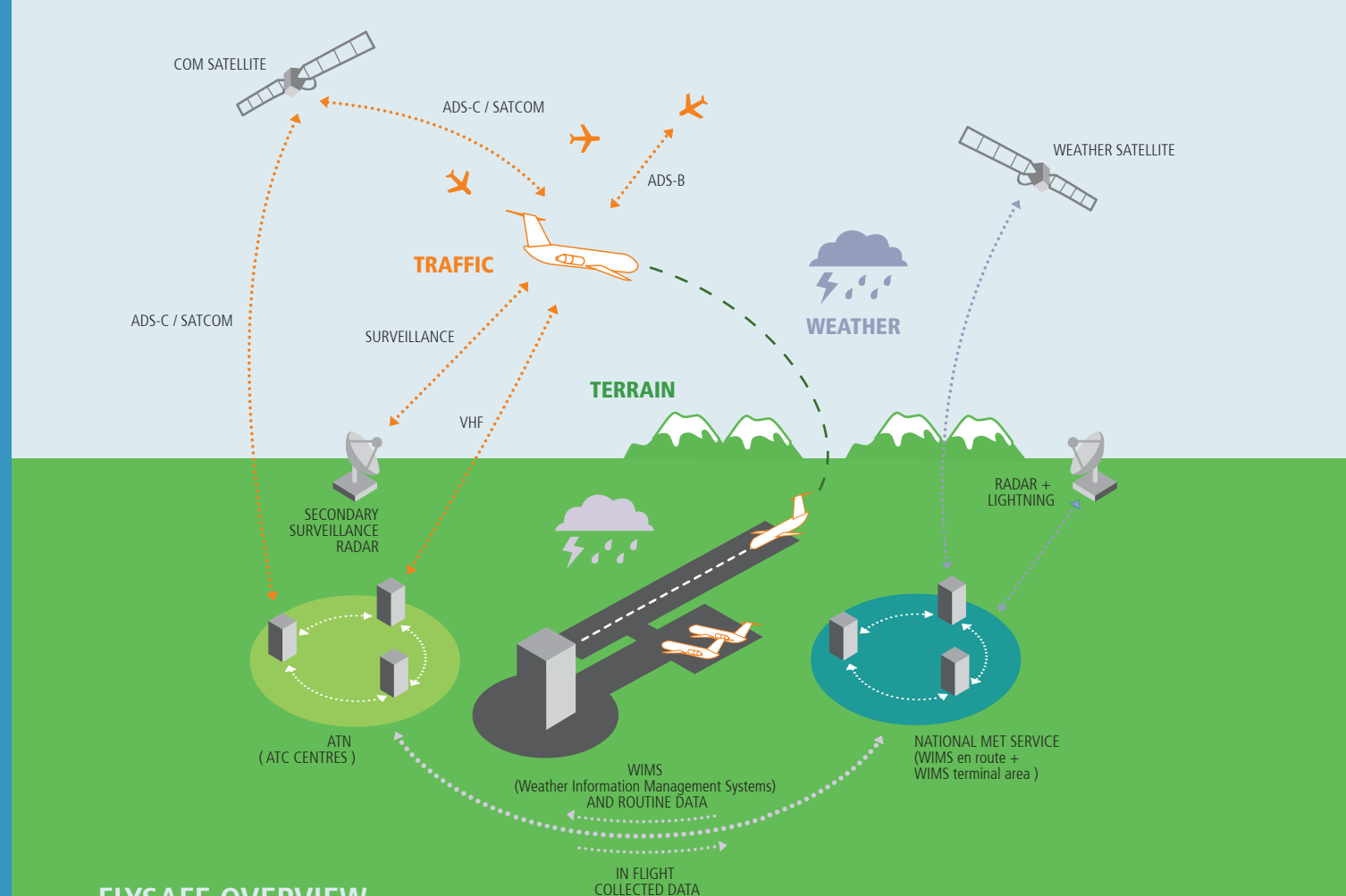
Air traffic is expected to triple world-wide within the next 20 years. With the existing on-board and on-ground systems, this would lead to an increase of aircraft accidents in the same, or possibly even a higher proportion. Despite the fact that accidents are rare, this increase is perceived as unacceptable by society and new systems and solutions must be found to maintain the accident rate at its current low level, or preferably reduce it.



## FLYSAFE GOAL

FLYSAFE will be the first decisive step towards the "VISION 2020" produced by the ACARE, for safety in airspace, with implementation of solutions ranging from 2 to 5 years after project end. FLYSAFE will focus particularly on three types of threats: adverse weather conditions, traffic collision and flight into terrain, covering all phases of flight. Each area is considered separately, but brought together by innovative fusion functions into a Next Generation Integrated Surveillance System, NG-ISS, that will be interfaced with the other aircraft systems. The NG-ISS will allow the pilot to have a detailed, accurate, homogeneous and unambiguous presentation of the aircraft safety situation during all phases of flight. It will include such capabilities as situation awareness; advance warning; alert prioritization and innovative human-machine interface.

A particular emphasis is given to the weather aspects through the development of the Weather Information Management Systems (WIMS), which will allow to provide information about small volumes of airspace and small time periods.



## FLYSAFE OVERVIEW

FLYSAFE is mainly concentrating on large transport aeroplanes operated in commercial air transport. However, some solutions will potentially address the commuter and helicopter market, possibilities of applications to these sectors will be studied in the project.

Within the project the activity is related to three principal type of hazards: Weather, Traffic and Terrain. To achieve the FLYSAFE objective the project is composed of 7 workpackages: WP1 deals with the operational assessment, WP2 with atmospheric hazards, WP3 with traffic hazards, WP4 with terrain hazards, WP5 with the development of the NG-ISS, WP6 with the evaluation and results assessment, WP7 with exploitation, standards

and dissemination. WP2, WP3 and WP4 also deal with the development of their relative functions.

To assess the tools developed along the project, FLYSAFE includes a safety assessment process, 2 simulation sessions and 2 flight test campaigns. The safety assessment process is divided in 3 main sub-processes: qualitative safety assessment, risk assessment modelling and a quantitative safety assessment. The process aims at identifying aircraft operation hazards that can be reduced by the NG-ISS and possible hazards generated by the system itself. Each hazard is classified according to its severity and frequency; appropriate mitigation means are identified to ensure an agreed level of safety to all aircraft operations.