



Skyline

n°10 Innovation takes off
MAY 2013

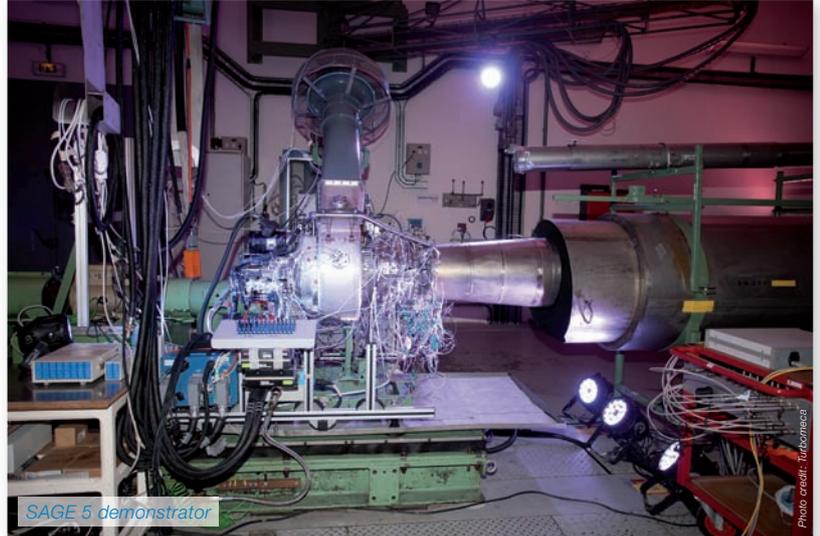
ALL ON BOARD FOR
INNOVATIVE SKIES

CONTENTS

EDITORIAL	P.03
THE FUTURE OF CLEAN SKY CLEAN SKY 2 : THE CURRENT STATUS	P.04
INTERVIEW MARIA DA GRAÇA CARVALHO	P.05
ASD & HORIZON 2020 JEAN-PAUL HERTEMAN	P.06
ONERA BOOSTING TECHNOLOGY AND INNOVATION	P.07
PARIS LE BOURGET 17 - 23 JUNE 2013	P.08
ATYPICAL PARTNERS FROM WINE TO AERONAUTICS A TRULY LITHUANIAN IT COMPANY FIRST SUCCESSFUL STEPS OF A MONO BENEFICIARY	P.09
TWO PATENT APPLICATIONS THE BUDAPEST UNIVERSITY OF TECHNOLOGY AND ECONOMICS	P.12
CALLS	

CELEBRATION OF THE FIRST DEMONSTRATOR

FRIDAY 26 APRIL, PAU (FRANCE)



This public-private partnership will bring research projects closer to their marketing and, through that, it will allow the European aircraft industry to maintain its position as a worldwide leader.

Siim Kallas,
Commissioner for Transport,
European Commission



In Clean Sky 2, we will go on developing demonstrators, either as a continuation of Clean Sky where technologies are promisingly matured but need some further, wider integration, or, in most cases, as new activities which will bring more to the future products beyond 2020, 2025 - meaning, brand new demonstrators.

Eric Dautriat,
Executive Director
of the Clean Sky JU

Today's ceremony also symbolizes the strength of EU initiatives when it comes to networking, between the large European aviation industries, SMEs, universities and research institutions.

Jean-Paul Herteman,
Chairman & CEO of Safran



A TRULY LITHUANIAN IT COMPANY

We cannot really say that Lithuania is a flagship in aeronautics! We cannot really say that an IT company is perceived as the vital partner in a project financed by Clean Sky!

When ELSIS was invited to join the Programme in 2007, we knew very little about Clean Sky. Elis is a typical SME working in field of IT and providing various customized software solutions, mainly intended for public sector clients. We received the invitation to participate in Clean Sky from Alenia Aermacchi and eagerly signed the Green Regional Aircraft Consortium Agreement and became members of the CIRA Plus cluster.

At that time, we knew a few words about Clean Sky namely Green Regional Aircraft, Trajectory & Mission Management, and Flight Simulator. We knew that we would have to develop software but we ignored what technologies or tools to use. And to be honest, the lack of knowledge and experience in this very specific area and the uncertainty and relatively low value of future works should have lead us to reject the offer but because of solid arguments our management was persuaded to be part of it.

So, you wonder: what is the added value of such a project for a traditional IT company like ELSIS? It is not commercial for sure, because the value of the work performed does not exceed 5% of the company's annual turnover. It is hardly likely that the value is technological. When participating in the programme, we were able to verify that this business sector is quite conservative, and that priority is given to proven and mature technologies.

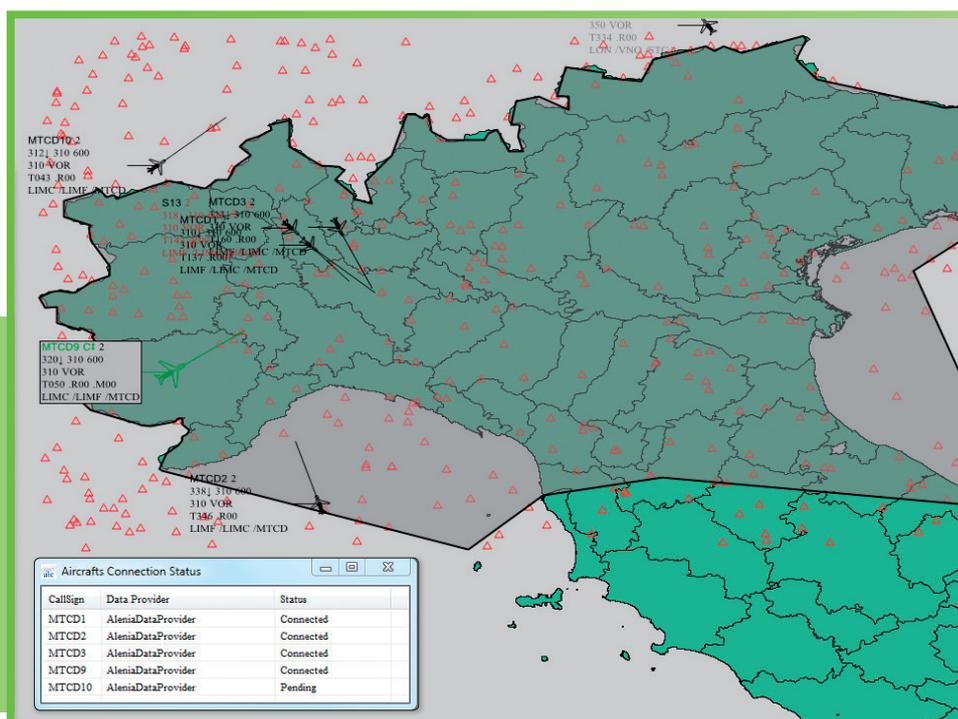
So, why? Firstly, it is a unique opportunity to see how such large-scale joint programmes are implemented and managed. Secondly, it was an opportunity to see how leading world-class international companies work, and how software in the aeronautics sector, which is distinguished by its very strict requirements for the quality and reliability of the product/service, is developed. Thirdly, we could see our effective contribution to the work and compare our technical and organisational abilities in a broader context than Lithuania, i.e. in an international context. Fourthly, we could prove that the technical competition and management of the company's specialists allow us engage without any fear in similar projects in the future.

We participate in the activities the Green Regional Aircraft (GRA) Mission and Trajectory Management (MTM) domain and took part in the set up of a GRA Flight Simulator (FS). The aim is to demonstrate optimized missions and trajectories tailored to the characteristics of regional aircraft. The aim of the GRA FS is to assess, in real time and pilot in the loop environment, the benefits in terms of environmental impact reduction of new green Flight Managemens System (FMS) functions.

The GRA FS is a real-time distributed interactive simulation environment and is being jointly developed by Alenia Aermacchi, Thales, University of Bologna and ELSIS. Our part of the work covers development of the Air Traffic Controller (ATC) simulator, in other words Advanced Communication Interface Model. The ATC will be linked to the Alenia GRA Flight Simulator and will receive input data from the air traffic scenario model prepared by the University of Bologna (UNIBO) and the A/C simulators.

The ATC is responsible for aircraft at the airport and in air space and it shall be able to manage future communication requirements such as CPDLC (Controller Pilot Data Link Communication) and support ADS-B and C communications. The pressure for security improvement is leading to new communication technologies. Radio systems that already contributed highly to flight safety are now being joined by, and will soon be replaced by, new data link applications.

The ATC simulator has been created and succesfully tested, and is currently waiting for the integration into final configuration of GRA FS and testing, which is scheduled for autumn 2013.



Region (flight zone)- Italy. Symbols of flying aircrafts. Communication window.



Components and equipment in progress

FIRST SUCCESSFUL STEPS OF A MONO BENEFICIARY*

our commitment really strong. Dealing with a very motivated and collaborative customer and with tight specifications makes our daily job really interesting and rewarding.

Next Technology Tecnotessile is not completely new to the aeronautical and aerospace sectors. Over the years, we have collaborated with Proel and Thales Alenia in the framework of National funded programmes, and with a small French company manufacturing aircraft interior parts within an FP4 Craft. Our experience in composite materials ranges from preform design and manufacturing, such as 3D weaving of Si-C roving (Nicalon and Tyranno), to thermoset processes (RTM) and reinforced thermoplastics, where we bring our textile knowledge in producing hybrid yarns and complex knitted and woven structures.

As a monobeneficiary in E-SLEEVE, we are in charge of all activities ranging from design, set-up and demonstration as well as of most static testing on new laminates.

We came to know about the topic and Clean Sky through an Italian aeronautic engineer who knew we had a suitable technology and long experience in European projects. We became familiar with the company which proposed the topic during the negotiation of the grant agreement. Meeting the Liebherr team at the kick-off made

This article is our first dissemination step since the project started back in September. We are not yet exploiting the Clean Sky partnership widely. In the last ten months we have considered two new topics but have preferred not to participate because we did not feel strong enough regarding these topics. On the other hand, we are looking forward to participating to the SGO Annual Review Meeting, at Nottingham University in June, as a good opportunity to widen our contacts and promote more recent activities in nanotechnologies, like electrospinning polymer nanofibres.

We are very proud of being yet another Italian company participating in the largest aeronautical research program in Europe and we cannot but encourage other Italian companies to take part in Clean Sky calls. We believe that this is in itself an accomplishment of our internationalisation and technology diversification efforts in the last twenty years, and are fully aware of the big challenge we have undertaken. We grab this opportunity with both hands.

Marco Barbieri,
Project Manager,
Next Technology Tecnotessile, Italy

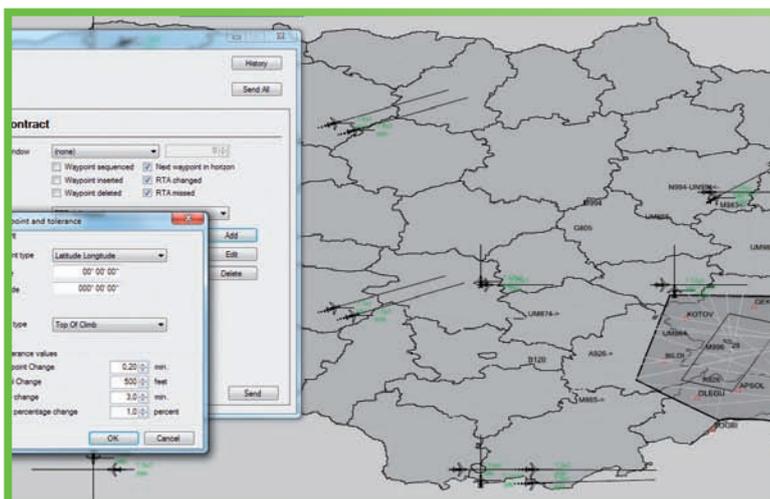
* One single entity signing a grant agreement.

Participation in the Programme has brought tangible benefits, even if they are indirect, to ELSIS. First of all, it is associated with the image of a reliable company providing high-quality services, and capable of participating successfully in international projects and cooperating with world-class companies. The words 'aeronautics' and 'aviation'

automatically display the sign of the highest quality. When working with the public sector, where our major clients come from, it is of utmost importance. Because of this project we had nice coverage in the Lithuanian business press and it has had an impact on our clients and prospects and decision-makers. 'Clean Sky' or 'Green Regional Aircraft' attract everyone's attention and interest.

The most frequently asked questions are how did you get to be involved in such a Programme with such famous companies and what do you offer to the project since you are not experts in aeronautics? We do not pretend to be experts in aeronautics but we have expert knowledge in IT and we apply that by offering high-quality software engineering services to our highly-demanding clients. We encourage other, similar, IT business companies to follow our approach.

Vytautas Mielkus,
Business Development Manager
EL SIS, Lithuania



Region (flight zone) - Lithuania. Symbols of flying aircrafts. Communication windows for direct message communication between the Controller and Pilot (aircraft Flight Management System)