INTERIM REPORT
PUBLISHABLE SUMMARY

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About this document

This is a formal report under Work Package 6, of the project FLY HIGHER – Shaping New Evolving Generation of Aeronautic Professional financed by the 7\textsuperscript{th} Framework Programme of the European Commission (Grant agreement N. ° 314383).

Disclaimer

The views expressed in this publication are those of the authors and do not necessarily reflect the official European Commission’s view on the subject.
1 PUBLISHABLE SUMMARY

1.1 Summary Description of the Project Context and the Main Objectives

The aeronautic industry is a key driver of European cohesion and competitiveness, playing a fundamental role in facilitating economic growth and social inclusion, providing revenues to otherwise isolated regions and helping people to enlarge their horizons. However, the unprecedented economic crisis has posed several relevant challenges that affect European competitiveness, performance and sustainability. From its early days at the beginning of the 20th century till today the aerospace sector has required a highly educated and innovative workforce. As this sector operates in a long-term perspective of 20 to 30 years, the actual policy framework which is being implemented today and the assigned resources will shape and determine the performance and success of this industry for decades to come. In the ongoing demographic trend the sector is competing with other sectors and requires a quantitative and qualitative employment preparation and forecast. Europe is also assisting a main demographic development characterised by an aging population and also declining of younger age groups. In this context, shortage of qualified personnel may affect the aeronautic sector in the future, unless there is a joint effort to attract young Europeans to future careers in the field of Aeronautics.

The main aim of the FLY HIGHER project is to attract, motivate and encourage young Europeans to embrace future careers in the field of Aeronautics by raising awareness of young people about future career paths in aeronautics and by fostering a close, open, informal dialogue and sustained interactions and networking activities between the aeronautics research community, industry and the scholar community (in particular primary and secondary schools). The FLY HIGHER project will promote a wide range of well-balanced activities, the “FLY HIGHER MISSION – Pathway to Success”, that valorise the scholar community’s roles for important future decisions that bring awareness to careers in the field of Aeronautics, and that motivate young Europeans to embrace future paths in this field. More specifically, the FLY HIGHER MISSION comprises a set of differentiated activities that intent to reach three main target groups children and youth; teachers and educators; counsellors and Career Advisors (CA).

The project will implement a wide programme of “EDUTAINMENT” activities (including regional, national and European level based activities). The programme of activities (including hands-on experiments; games and simulations, visits, open labs, workshops, exhibitions, competitions, science cafes, training for teachers and career advisers, speed-dating, organisation of a national event called “AIR DAY”, among other activities, etc.) will promote the establishment of a closer dialogue and allow a direct contact on a friendly, informal and fun environment between children and youth, parents, school community, universities, industry and several aeronautic key stakeholders.

The eagerness to create an innovative programme of activities that links the science-teaching world with the aeronautical research organisations and industry is directly derived from the main ambition of the project which brings together education, research and innovation. The
added-value of this project is exactly the fact that it will tackle, in a holistic approach, different target groups, from primary and secondary school students to teachers, as well as counsellors and Career Advisors and aeronautics key actors. All together, the FLY HIGHER consortium gathers partners from 5 different countries (Portugal, Spain, UK, France and Netherlands) which represent a full set of complementary skills and competences with special regard to aeronautics. This partnership gathers the critical mass of the best resources to form a pool of excellence capable of finding the best possible solutions to raise the interest of young Europeans for activities in the field of Aeronautics.

1.2 Description of the Work Performed and the Main Results Achieved

The FLY HIGHER project aims to promote a wide range of well-balanced activities that valorise the scholar community’s roles for important future decisions that bring awareness to careers in the field of Aeronautics, and that motivate young Europeans to embrace future paths in this field. In this sense, the FLY HIGHER project is addressing strategies that promote the future engagement of young Europeans in Aeronautics by bridging two complementary communities – primary and secondary teachers and scientific research centres and industries – and by creating ideal conditions for the establishment of a “pathway to success” trough a specially designed programme of activities, named “FLY HIGHER MISSION – Pathway to Success”. The FLY HIGHER MISSION was designed to include a set of differentiated activities that intent to reach three different target groups: 1) children and youth; 2) teachers and educators; 3) counsellors and Career Advisors (CA).

The added-value of this project is exactly the fact that is tackling in a holistic approach different target groups, from students from primary and secondary schools to teachers, as well as counsellors and Career Advisors and aeronautics key actors (Figure 1 – The FLY HIGHER CONCEPT).
The “Dream it! Get it!” was defined to include the implementation of a wide programme of activities, targeted to children and young, aiming to attract, motivate and encourage young Europeans to embrace future careers in the field of Aeronautics. The main objective is to encourage young people’s passion for aeronautics, showing them the interesting topics that they might find in this field, with the aim of attracting them at a later stage to scientific and technical careers in the aeronautical sector. The “Dream it! Learn it!” initiative was designed to support teachers and other educators with tools and methods to encourage students (predominantly between 12-16 years) to engage in Science, Technology, Engineering and Mathematics (STEM) to improve their skills, qualifications and career prospects. The “Dream it! Explore it!” initiative, focus especially in the counsellors and CA. Failure to provide adequate material and up-to-date information to CA can clearly have a huge impact on the selection of careers in the aeronautical sector by children and youth. In line with objectives above and with the project activities, during the 1st year of the project, the following activities were implemented and results achieved:

- Development of an Aeronautical Sector study on Future Skills needs and making recommendations for action including: an European level database of firms in the aeronautical sector and GIS maps of their geographical distribution, available in the project website; Interviews with relevant sector stakeholders, including sector representatives, policy practitioners and education providers; A Seminar held in UK, and working lunches in France with employers and relevant stakeholders; implementation of 2 surveys targeting schools and aeronautic industry.

- Creation of a framework for the identification of educational and extra curriculum activity needs and priorities within schools and development of a tool to support schools in the implementation of aeronautical educational activities;

- Definition and implementation of an “edutainment” programme of activities to generate passion for aeronautics in children and youth including the realization of an AeroDay in Spain for 160 students;

- Development and maintenance of a social web and knowledge management platform. The FLY HIGHER weblog is the convergence platform of all the activities and events of the project (a privileged “show-window”);

- Organisation and promotion of European competitions and Virtual Events (at European level). Until now 2 online competitions (drawing and photos) were launched and are available until October 2013.

- Organisation and promotion of a European Member’s Club. The “FLY HIGHER Club” was created and is being animated;

- Design and implementation a programme of activities to support career advisors and counsellors with the knowledge, tools and network relations to promote and explore the
importance of careers in the aeronautical sector near the students, including the following: 

- Assessment report of current skills, knowledge and training background of CAs and counsellors in order to provide adequate support for them to describe, explain and argue for the importance of careers in the aeronautical sector; 
- Production of 7 careers kits adapted to the CAs and counsellors skills, knowledge and background including: Presentations of careers profiles kits (in PowerPoint and video format) describing careers evolution, qualification processes, knowledge and practice required; The list of jobs for which career kits have been produced is the following: Embedded Software Engineer; Manufacturing Engineer; Sheet-Metal Worker; Aircraft Painter; Test Technician; Logistics Technician; Business Development Manager.

- Participation in several dissemination activities including national and European Events and implementation of the 1st step for the creation of a strong network of entities for the implementation and sustainability of the project activities.

1.3 Description of the Expected Final Results and their Potential Impacts and Use

Over recent years, the aeronautical industry has changed under the impact of the internal market and of globalization. The potential shortage of human resources in key scientific professions combined with the European economic crises, cries for modernizing science teaching in schools, so that student’s motivation and interest towards scientific and technical careers is boosted and teachers are more successful in educating future scientists and professionals for aeronautics.

An important dimension of the FLY HIGHER impact is derived directly from the main ambition of the project which presents education, research and innovation as the possible key drivers of competitiveness, jobs, sustainable growth and social progress. In fact, Europe needs to take advantage of its research potential and young citizens should be motivated to learn more about the careers in this field. This implies that schools, universities, research centres and industry need to think and work more tightly to promote the attachment and to engage students in this field and to reverse the trend.

In this sense, it is important to understand that several joint actions at Regional, National and European level are necessary in this context of integration of future human resources in aeronautic careers, and for this situation turn into reality, it is imperative to create an innovative programme of activities that links the science-teaching world with the aeronautical research organisations and industry. It can be assumed that the FLY HIGHER project has two very strongly-defined goals:

1. To attract and engage young people into future careers in aeronautics by implementing a well-balanced programme of activities and to provide teachers and other school professionals (including counsellors and CA professionals) with the knowledge, training, tools and assistance to put theoretical frameworks in to practice;
2. To connect Aeronautic research centres with end-users through real-life applications, in order to inspire and motivate both students and school staff, to learn and teach science through real-life applications;

The FLY HIGHER project aims to achieve the following results and impacts:

- Develop an Aeronautical Sector study on Future Skills needs and making recommendations for policy action;
- Create a framework for the identification of educational and extra curriculum activity needs and priorities within schools and an ‘assessment of readiness’ tools for
the evaluation of a schools preparedness for the implementation of aeronautical educational activities;

- Design and implement an “edutainment” programme of activities to generate passion for aeronautics in children and youth;

- The development and maintenance of a social web and knowledge management platform. The FLY HIGHER weblog will be the convergence platform of all the activities.

- The Organisation of 5 “Aero Days!” - Experiences, Speed-dating and Aeronautics Fair in schools (at national level) in each partner country, at a selected local school, with the aim of inspiring students and educators about sciences and engineering. In these events, all participants (children from primary and secondary schools), will have access to a aeronautic programme of activities.

- The Organisation of 10 active learning study visits with a specific pedagogical and entertainment itinerary including different possible partnerships like airports, universities, schools, airlines, ATC service providers, etc...; and a very rich itinerary including simulations, workshops and real experiences in the selected local.

- The Organisation and promotion of European competitions and Virtual Events (at European level).

- The Organisation and promotion of a European Member’s Club.

- Design and implement a programme of activities to support teachers with the knowledge, tools, training and network relations to put theoretical lessons into practice and in line with the latest research developments, including the identification of science and mathematics- teacher’s background and aeronautic-teaching needs-analyses and creation of 5 tutorials dedicated to Science, Technology, Engineering and Maths in Aeronautic to promote efficient science-teaching subjects and updated with the latest research developments.

- Design and implement a programme of activities to support career advisors and counsellors with the knowledge, tools and network relations to promote and explore the importance of careers in the aeronautical sector near the students, including the development of 15 careers kits adapted to the CAs and counsellors skills, knowledge and background.

- Organise and promote the final “FLY HIGHER – Shaping the new evolving generation of Aeronautics professionals” Conference, held at European Level and targeted to reach policy leaders and regional, national and European authorities.

- Prepare and disseminate a booklet about the “FLY HIGHER INITIATIVE”.