

# Trabajo Fin de Grado Ingeniería Aeroespacial

## Management Experience as President of the EUROAVIA International Board 2017-2018

Autor: Juan Manuel Lora Alonso

Tutor: Carlos Gómez Camacho

Escuela Técnica Superior de Ingeniería  
Universidad de Sevilla  
Sevilla, 2019





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Autor:

Juan Manuel Lora Alonso

Tutor:

Carlos Gómez Camacho  
Catedrático de Universidad

Dpto Ingeniería Energética.  
Escuela Técnica Superior de Ingeniería  
Universidad de Sevilla

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El tribunal nombrado para juzgar el Trabajo arriba indicado, compuesto por los siguientes miembros:

Presidente:

Vocales:

Secretario:

Acuerdan otorgarle la calificación de:

Sevilla, julio 2019

El Secretario del Tribunal



# Acknowledgments

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*To my tutor for always pushing me to aim higher and further.*

*To my family, for what I made them go through.*

*To Vale, Javi and David for the path we walked together.*

*To Jean Roeder, whose dream is still alive after 60 years.*

# Abstract

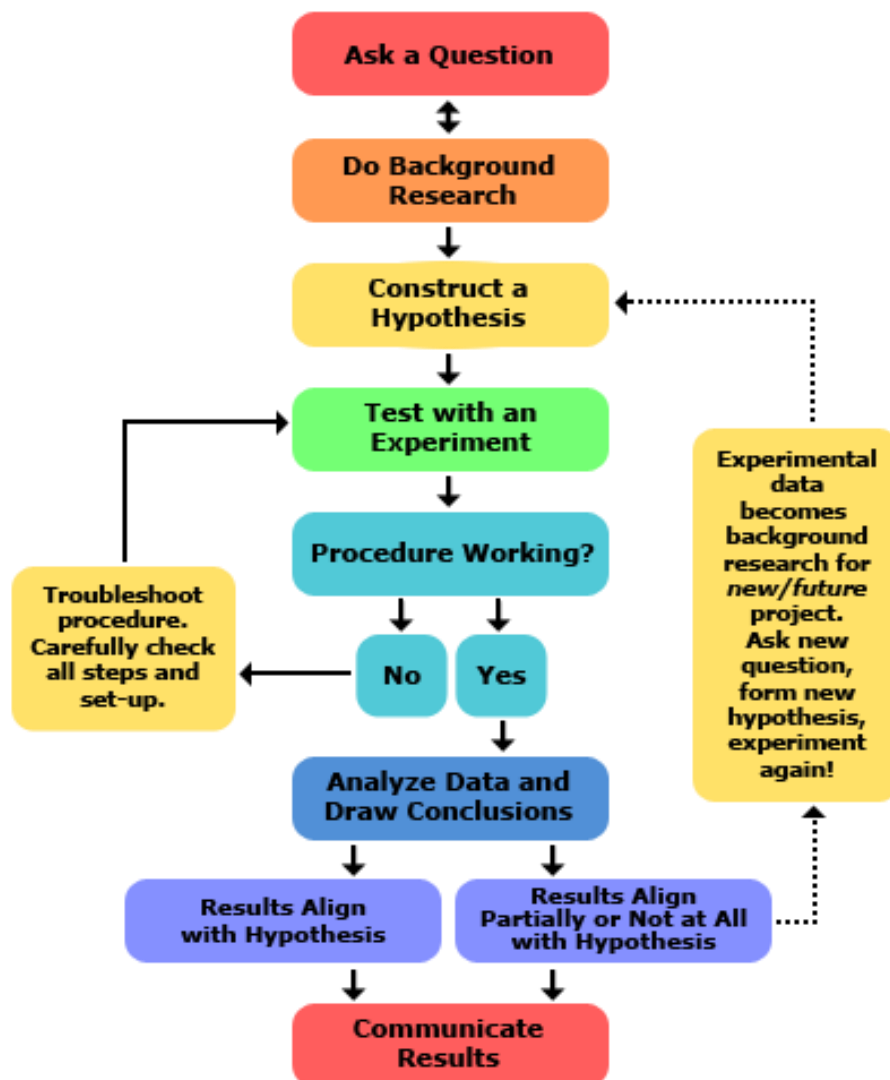
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The following document reflects the results of nineteen months of work at the international management level of EUROAVIA, an EU wide-spread YNGO with sixty years of heritage in the aerospace sector and more than 2500 students coming from 42 universities in 17 different countries. The study covers the main achievements, difficulties and decisions taken during the planning and execution periods of the Business Year 2017-2018 of EUROAVIA: The course followed based on communication, visibility and opportunities as cornerstones, an internal analysis and a disruptive structural reorganization, a financial management that allowed hitting the largest ever income in the history of the organization, a renewed policy for industrial partners and deep focus on European institutions, and other issues related to the everyday run of an organization. As a subsequent goal, this document aims to help any organization of similar nature to improve its performance through the lessons learned by Juan Manuel Lora Alonso as Former President of EUROAVIA. As a final remark, the reader shall be familiarized with the importance of student's organizations such as EUROAVIA and their contribution to the industry shaping process of the future and its benefit for society.



# Prelude

At the time of taking strategic decisions within an organization, specially when its vulnerability is high and the sustainability of it uncertain, as it happens for YNGOs as EUROAVIA, it is quite useful to follow a comprehensive methodology that reduces the risks and maximizes the impact. The scientific method comes handy at many situations by just following these steps:



The following chapters will address the previous steps sequentially:

- The first chapter will answer to the question What is EUROAVIA? Serving as an introduction and setting the whole document into the right context.
- Secondly, there will be an exhaustive analysis of the previous state of the Association prior to the handover ceremony that took place in September 2017. Properly understanding the background will help to follow the plans and changes proposed later. The hypotheses are gathered in the Business and Financial plans proposed by the International Board, underlining the pillars above which the strategic plan is based.
- The following chapter is a sequence of test and analysis of the results, particularly relevant taking into account the disruptive changes in the functioning of the association included in the aforementioned plans. The different issues that arose along the Business Year 2017-2018 are discussed leaving a clear view of the goals achieved and the deficiencies to improve.
- The fourth chapter gives the reader, in a glimpse, a full picture of the financial evolution of the organization during the year, comparing it to the past couple of decades and partially answering to the validity of the procedures proposed.
- Finally, the main conclusions obtained are shown and extended as lessons learned for other organizations of similar nature in the fifth and sixth chapters respectively.

Following the scientific method chart, this document serves as the final communication of the results obtained with the main goal to encourage the reader to take part in entrepreneurial environments as well as sharing the main difficulties encountered during the executive running of EUROAVIA as a wide European Young Non-Governmental Organization. Hopefully, this will assist the reader to better overcome the different challenges that his/her organization may have to face.

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# Acronyms list

<b>AM</b>	Adjunct Member	<b>HR</b>	Human Resources
<b>ACC</b>	Air Cargo Challenge	<b>IB</b>	International Board
<b>AMEAC</b>	Annual Meeting of the EUROAVIA Congress	<b>ICM</b>	International Contact Member
<b>AS</b>	Affiliated Society	<b>ID</b>	Innovation and Development
<b>BDLI</b>	Bundesverband der Deutschen Luft- und Raumfahrtindustrie	<b>IE</b>	International Event
<b>BM</b>	Business Meeting	<b>IEM</b>	International Editor Member
<b>BoP</b>	Board of Presidents	<b>IFISO</b>	Informal forum for International Student Organisations
<b>BP</b>	Business Plan	<b>IT</b>	Information Technology
<b>BY</b>	Business Year	<b>JFM</b>	Javier Ferrero Micó
<b>CE</b>	Cultural Exchange	<b>JMLA</b>	Juan Manuel Lora Alonso
<b>CM</b>	Communication	<b>LB</b>	Local Board
<b>CR</b>	Company Relations	<b>NEREUS</b>	Network of European Regions Using Space Technologies
<b>CVA</b>	Communauté des Villes Ariane	<b>NGO</b>	Non-Governmental Organisation
<b>DeWo</b>	Design Workshop	<b>NL</b>	Newsletter
<b>DIB</b>	Designated International Board	<b>PAM</b>	Prospective AM
<b>DL</b>	David Leiser	<b>PAS</b>	Prospective AS
<b>DN</b>	Design	<b>PEGASUS</b>	Partnership of a European Group of Aeronautics and Space Universities
<b>EA</b>	EUROAVIA	<b>PPAS</b>	Possible PAS

<b>EM</b>	Executive Member	<b>PR</b>	Public Relations
<b>EMEAC</b>	Electoral Meeting of the EUROAVIA Congress	<b>S&amp;B</b>	Statutes & Bylaws
<b>ETS</b>	EUROAVIA Training System	<b>TNT</b>	Train New Trainers
<b>ExMEAC</b>	Extra Meeting of the EUROAVIA Congress	<b>TSP</b>	Travel Support Programme
<b>FIB</b>	Former International Board	<b>UKSEDS</b>	UK Students for the Exploration and Development of Space
<b>FoWo</b>	Formation Workshop	<b>VL</b>	Valentina Luchetti
<b>FP</b>	Financial Plan	<b>WG</b>	Working Group
<b>FR</b>	Financial Report		



# 1 EUROAVIA

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*"Co-operation is greatly a matter of education and, therefore calls for an early preparation of students for this purpose. This is, besides a wider stimulation of European co-operation one of the aims of the association we intend to establish"*

*- Jean Roeder, 1959-*

Either if the reader is familiarized with the environment of EUROAVIA or not, it is fundamental for the proper understanding of this document to devote the first lines to understand the reasons why an organization such as this one was created, what does it strive for and how it is structured. These are the main aspects discussed in this first chapter

## 1.1 History

After the havoc of the Second World War in the European territory, the decade of 1950 was yet marked by the possibility of another World War dragged by the two main military powers, the U.S.A and the U.R.S.S.

Before this scenario and considering the great recovery that Germany experimented over the early fifties, the at the time French Foreign Minister, Robert Schuman, came up with an idea to avoid further conflicts between France and Germany: The European Coal and Steel Community.

Creating a common market for Coal and Steel, the fierce competition between the signing countries would be neutralized leading to Mr Schuman's goal: "making war not only unthinkable but materially impossible". The foundation of this organization was ratified under the Treaty of Paris in 1951, to which France, West Germany, Italy, Belgium, Luxembourg, and the Netherlands adhered to.

This milestone led, six years after in 1957, to sign another treaty in Rome known today as the *Treaty on the Functioning of the European Union* becoming together with the Treaty of Maastricht, the constitutional basis of the European Union.

The idea of a united Europe was spreading across the continent, to a certain extent, due to different initiatives such as the *Internationaler Karlspreis der Stadt Aachen*, a prize given in Aachen since 1950 awarding the work done in the service of the European Unification which precisely in 1958 was given to Robert Schuman.

Within this context, some students of Aachen started questioning in 1956 the unstable situation of the aerospace industry which traditionally was strongly linked to the military field. This situation resulted in a lack of collaboration between the industry and both the international and the national stakeholders.

In order to foster the collaboration among different countries, long discussions between students from Germany, France and the Netherlands were carried out from which a common vision arose. Creating an association of all European aerospace students would boost the European cooperation.

Professors from Belgium, France and the Netherlands were approached from that point on through active correspondence with the following message:

*“Single European nations cannot provide resources for further development of the European Aerospace. For that reason, it is essential to meet the problems and challenges of the future with a collective cooperation of the European states on a civil, military and university basis.”*

The idea behind was to inform students through their professors all around Europe about the foundation of a European student's association. Despite of just receiving a reply from the students of Paris and Delft, the message had been spread through three different countries.

In the beginning of the year 1958, Aachen had fourteen active and highly motivated members managing activities at local level and keeping the communication with other cities. The first international meeting there gathered students from France and the Netherlands and led a stronger network through the organization of meetings in Italy, France and the Netherlands.

One of these meetings took place between the 22<sup>nd</sup> and 28<sup>th</sup> of September of 1958, where representatives of Aachen, Delft, Paris and Pisa founded a “comité provisoire”. This group had the aim to take further steps and found an association, discussing about its goals and principles and coming to the proposal of its name: EUROAVIA. To do that, it was necessary to organize a congress where the statutes and legal form of the association could be shaped.

The call for an international constituent congress in Aachen from the 9<sup>th</sup> to 17<sup>th</sup> of March in 1959 was released. The six months between both meetings became a race of hardwork to engage the larger number of universities as possible as well as preparing the documents and topics for the congress itself.

The idea to build the future of the Aerospace branch captivated representatives of Aachen, Berlin, Braunschweig, Delft, Toulouse, Paris, Milano, Pisa, Stuttgart and Turin who were present at the constituent congress. All in all, there were thirty students from ten universities in four different countries. The official statutes were presented and accepted on the 16<sup>th</sup> March in 1959. Officially EUROAVIA began its work on the 1st of May in 1959.

During the first Business Year, the International Board (IB) was represented by the local group of Aachen. Jean Roeder, who years later would become the responsible for the A330-A340 fuselage and father of the A380 project, was the first president of EUROAVIA who during the constituent congress defined his dream with the following words:

*“Co-operation is greatly a matter of education and, therefore calls for an early preparation of students for this purpose. This is, besides a wider stimulation of European co-operation one of the aims of the association we intend to establish”*

Sixty years later, Europe is going through some difficult times in terms of unity, however, the aerospace industry is a bridge between the states, an important factor that encourages the European spirit that nowadays, starts from the very early stages of superior education for more than 2 500 aerospace students every year thanks to EUROAVIA.

## 1.2 Aim

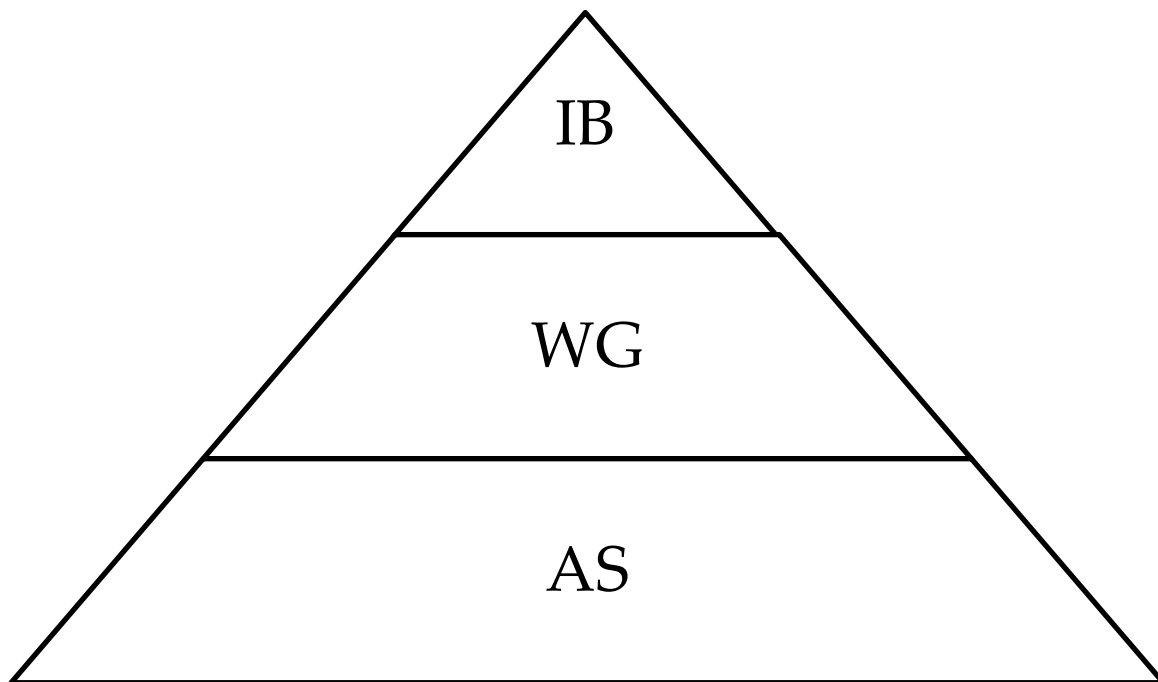
The largest network of aerospace students in Europe, EUROAVIA aims to represent young people's voice to enhance the stakeholder collaboration across the value chain, by being a bridge between EU institutions, tractor enterprises, Academia and youth societies. Conversations with stakeholders have brought to EUROAVIA's attention that technical skills are not enough to ensure its member's success. With so many different problems affecting young people's lives nowadays, it is imperative to help the members grow by better understanding the complex world we live in.

Moreover, EUROAVIA is heavily committed towards the following aspects:

- Encouraging young people's fair and equal access to opportunities – Sponsoring student's travel costs allows deprived students to fly abroad from their home country to the different events, and take part in opportunities for personal and professional growth;
- The integration into the labour market and youth employability – Active involvement and dialogue with the industry shape the workshops and meetings. This dramatically increases our member's odds of attaining a good aerospace job from the customization and trust provided by our partners from direct engagement with their needs. A unique benefit is industry internships from partners;
- Increase the social inclusion of all young people as well as foster the development of competencies and skills through non-formal learning – Our international physical events bring all nationalities together, regardless of economic and cultural background. These events are a unique opportunity for non-formal learning of soft and technical skills and the development of cultural tolerance, understanding and capacity to work in modern diverse environments and industry networking;
- Promote digital literacy, intercultural learning, critical thinking, the respect of diversity, and the values of solidarity, equal opportunities and human rights among young people in Europe – The heavy social emphasis on EUROAVIA events instills the respect of other cultures, cohesion and tolerance under true European spirit. Every International Event ends with a cultural sharing night and activities that fosters the best European values among our members.

### 1.3 Structure

After sixty years of existence, EUROAVIA is present in 40 different universities among 16 countries for a total number over 2400 students for the 2017-2018 Business Year. The organization is divided in three main levels:



*Figure 1-1. International Structure*

The International Board (IB) is metaphorically, the cockpit of the plane. It is composed by the president, secretary, treasurer and may include executive members. It is the managing body of the association responsible for its well functioning. The IB oversees that every EUROAVIAN body is properly working, ensures the financial stability and represents the association among the different stakeholders.

The working groups (WG) are a fundamental part of the association since they ease the workload of the IB and push the association further. There are currently 10 working groups each one of them specifically oriented towards a certain topic: from writing bylaws proposals to managing the relationship with third parties or delivering soft skills training sessions to the members.

Finally, the Affiliated Societies (AS) often called Local Groups (LG) are the core of the association, they stand for every local association member of EUROAVIA and is the only body that holds voting rights. Each of them has a local board in charge of managing the local activities and members of the association and is also responsible for maintaining an effective communication channel between the international side and the regular members of the association.

It is during the two bi-annual congresses of the association, the “Electoral Meeting of the

EUROAVIA Congress” (EMEAC) and the “Annual Meeting of the EUROAVIA Congress” (AMEAC) where all these bodies meet to discuss and vote on the different motions concerning the well being of the association.

To better understand the different parts of the association, a more detailed description and figures are given below,

### 1.3.1 The Local Groups

Quoting from the Statutes [1]:

*EUROAVIA has ordinary members: local, Europe-based, incorporated associations of students interested in aeronautics and astronautics, acting under the name of EUROAVIA, which have applied for membership with the Board of the Association and which have been admitted as members of the Association by the General Meeting.”*

The process to become part of the Association is described below:

#### 1. Creation of a solid base:

As a first step, it is fundamental to gather a group of enthusiastic students who share the goal to create a local association in case there is not one already existing. At least five people must appear as founders, making it easier to share ideas and provide advice resulting in a better performance compared to an individual job.

Once the group is solid and active, contacting an academic advisor is important to stabilize the regime of the association within the local institutions/university. Generally, reaching the dean of the faculty or explaining the project to certain professors can boost the relationship with the university and encourage the collaboration between the parties. At all times, the International Board supports the group throughout the whole process.

#### 2. Get in the loop:

In order to announce the application to join the network, the group has to write a motivation letter including all the official data regarding the society, the motivation to join EUROAVIA and basic information that allows EUROAVIANS to get to know the applicants.

Once the IB accepts this letter, the group is given the status of Possible Prospective Affiliated Society (PPAS) and invited to attend the following General Meeting of the Association. Then the group has to present their project to the members of the network through a presentation before an acceptance motion is carried out.

In case this motion is favourable, the group is then named as Prospective Affiliated Society and entitled with the task to organize an international event to acquire full membership during the following 12 months.

#### 3. Make it happen:

Once granted the status of PAS, a local group has the right to use the corporative image of the Association. It is fundamental at this point to focus on the local growth

by motivating more students, sharing the international opportunities that EUROAVIA provides to the students and organizing local activities in both the social and technical field.

Finally, the international event can take the form of Fly-ins, Simposia, Workshops... As long as it hosts at least fifteen EUROAVIAns maximizing the diversity of the participants for at least three days.

#### 4. Acceptance:

In case the process is steady and reaches the deadlines, by the next General Meeting after the International Event is celebrated, the members shall vote to fully accept the PAS as an Affiliated society and therefore become one more of the already 40 existing local groups of EUROAVIA.

### 1.3.2 The Working Groups

The working groups are a dynamic body of the Association that gather active members around certain thematic topics. The main goal is to execute different tasks that help the Association to develop the performance of EUROAVIA and its members.

Currently there are eleven WG whose definition can be found within the Bylaws of the Association. A brief definition is given below however, further details will be given in the following chapters.

- Affiliated Societies Working Group (AS WG)

Manages the interaction among the different (Prospective) Affiliated Societies and their environment.

Composed by four different units responsible for:

- Board of Presidents: keeping a healthy communication between the AS representatives and the IB by means of regular online meetings and constant communication via social network
- Search and Rescue: assisting those AS undergoing through difficulties endangering their existence as an Association
- Expansion: guiding new groups of students through the application process and spreading the image of EUROAVIA among new universities and supporting universities to get in contact
- ERASMUS+: dealing with the different academic plans towards and enhancement of the relationships with the final goal to create new ERASMUS+ agreements.

- Communication Working Group (CM WG)

Manages the internal and external written production of the Association and designs the communication strategy of the Association along with the IB.

Composed by three different units responsible for:

- Social Media: Increasing the visibility of EUROAVIA through different channels of communication by sharing news and opportunities developing new methods for a better positioning.
- Press: Producing, publishing and distributing the Newsletter, an internal communication tool including articles, career opportunities and news related to the Association on a bimonthly basis and the EUROAVIA Magazine, an external communication channel that promotes EUROAVIA's goals and achievements within the aerospace sector and it is comprised of interviews with experts, technical articles and the main activities of the Local Groups and issued once a year.
- Website: Updating the online contents at [www.euroavia.eu](http://www.euroavia.eu), Linkedin, and Wikipedia while keeping it professional.
- Company Relations Working Group (CR WG)

Handles the relationship between the different private third parties and the IB while supporting the local level by providing formation and linking opportunities from the international side.

It is composed by three main units responsible for:

  - Brochures Unit: Developing the content of the documents sent by the IB or the (P)AS to the potential partners and sponsors.
  - Approach Unit: Searching and reaching companies as a first step to establish a possible collaboration.
  - Company fair Unit: Compiling data regarding existing company fairs to provide members with opportunities and increase the Association's visibility.
- Design Working Group (DN WG)

Developes and maintains the corporative image of EUROAVIA including the design of the brochures, promotional material, commercials or logo. It does work on demand depending on the tasks submitted.
- EUROAVIA Training System Working Group (ETS WG)

Creates, prepares and deliver soft skill training sessions to the different bodies of EUROAVIA, providing the members with complementary formation to the technical/academic field. Moreover, interacts with other YNGOs trainers looking for opportunities for young Europeans.

It supports the organization of the Formation Workshop and Train New Trainers events.
- Human Resources Working Group (HR WG)

Manages the flow of members among the different working groups by sorting them out according to their interest and best set of skills. Provides basic formation on the

specific tasks to execute related to the working groups to reduce the integration time.

Gathers, certify and distribute CVs pursuing a benefit for the affiliates.

- Information Technology Working Group (IT WG)

Monitor and coordinates all internet-based activities of EUROAVIA. Manage the ticketing system and website domains, solve the corporative mailing issues and train members on digital competencies by introducing agile methodologies and projects such as database development.

- Innovation and Development Working Group (ID WG)

Researches and implements new ideas to improve the overall performance of EUROAVIA by targeting niches to exploit.

Oversees its projects from conception to completion supporting its development.

- International Board Working Group (IB WG)

Aims to train experienced members on the International Board tasks while helping the later to reduce the workload, guaranteeing a smooth transition of the Association's leadership in case the members are elected.

- International Events Working Group (IE WG)

Organizes International Events timewise, ensuring the right teaming and the equal opportunities to the local organizers and the members while aiming for the biggest impact towards society.

Moreover, monitors, guides and supports the local groups to reach the minimum requirements for the International Events as defined in the statutes and bylaws and to raise the quality of the event.

Controls the five-year rule that entitles every single Affiliated Society to organize an international event in such timeframe by early encouraging these groups to start the planification.

- Statutes and Bylaws Working Group (SB WG)

Constantly reviews the bylaws writing the relevant changes under bylaws proposals which are subjected to vote during the General Assembly. Also, it is responsible for the elaboration of a new version of the Statutes which better represent the current times.

Furthermore, it is responsible for the application of the European Commission Grants together with the International Board striving for a successful application.

Former Working Groups up to September 2017:

- Design Workshop Working Group

The aim of this working group is the implementation of the Design Workshop concept, an international event following EUROAVIA's rules and regulations responding to the International Board. Its activity follows the demands of a parallel



international foundation registered under the Dutch law, legal responsible for the development of the Design Workshop Competition: the EUROAVIA DeCo/DeWo Foundation.

This foundation was born in 1990 to divide the amount of work carried out for this project from the daily business of the International Board. The Board is composed by the positions of President, Secretary and Treasurer, being its work supervised by the International Board and subjected to the approval of the EUROAVIA Congress.

The task of the Design Workshop Working Group is to organize a 1-3 weeks event focused on the future development of the aerospace industry through innovative solutions to different engineering challenges while being taught and trained by sectorial leaders of the industry.

- Press Working Group

Produces, publishes and distributes the EUROAVIA's Newsletter and Magazine to spread news about EUROAVIA's activities both local and international ones, to all EUROAVIA members

- Public Relations Working Group

Intensifies the communication and motivation within EUROAVIA as well as the marketing and networking towards all European Aerospace students, other organizations and aerospace companies. Coordinates the Corporate identity and the presence of the association in the main internet-based social networks. Responsible for the creation and distribution of the printed promotional material

### 1.3.3 The International Board

According to the statutes of the association, every member of EUROAVIA is eligible for the International Board being the only mandatory requirement that he or she has participated at least in one General Assembly before.

Once the member has sent the candidacy letter, if 2/3 of the quorum present at the Electoral Meeting of the EUROAVIA Congress votes in favour, the elected people are named Designated International Board (DIB) and during the following six months in between two consecutive Congresses are entitled to prepare both the Business and Financial Plans (BP and FP) for the next Business Year (BY).

In the meantime, the IB shall train the DIB in the different tasks they will have to deal with, as well as guide them towards building a functional team.

It is during the Annual Meeting of the EUROAVIA Congress where the IB presents the results achieved over the BY through the Business and Financial Reports, if accepted, then the IB is exonerated and the DIB takes their place.

## 1.4 Personal Experience

Juan Manuel Lora Alonso, being member of the local group of Sevilla since his first year in the Aerospace Engineering degree had his first international experience as organizer of the “UAV and flight navigation systems Symposium” in 2013 where 25 EUROAVIANS from different countries attended the event. The following Academic Year became part of the Local Board of Sevilla as International Contact member and International Editor Member, event that became the turning point towards a more European oriented vision as he attended the 11<sup>th</sup> Lustrum and EMEAC 2014 in Stuttgart. Since May that year, he became part of the Affiliated Societies Working Group becoming the WG’s Coordinator shortly after. It was not until 2016 while he was member of EUROAVIA Istanbul due to an Erasmus scholarship that he took the step to candidate to the International Board of EUROAVIA becoming the first President from Sevilla during the 2017-2018 Business Year.

## 1.5 Conclusions

- EUROAVIA is a 60-year-old organization, which is to stay in context, 10 years older than Airbus. Since its creation it has strived for the unity of the European aerospace sector and the creation of new opportunities for young Europeans.
- Being present in 40 universities within 17 different countries and gathering more than 2500 students worldwide, it is the largest aerospace-wise oriented student organization in Europe.
- It is composed by legal-independent associations who are entitled as vote holders. The individual members of these organizations may work either locally or internationally, grouping together on a task-dedicated working group. The general performance of every single EUROAVIAN body is overseen and managed by the International Board.
- The main goals are: representing the aerospace students’ community before the industry and European institutions, fostering a better labour market integration of its members tackling the needs of these two, and providing complementary formation to the one given by universities, encouraging young Europeans to embrace a European oriented vision and helping to overcome unfavourable socioeconomic backgrounds and thus increasing the equally distribution of opportunities.

# 2 BACKGROUND & BUSINESS PLAN

*Science is the study of what is, engineering builds what will be. The scientist merely explores that which exists, while the engineer creates what has never existed before*

*-Theodore von Kármán-*

This chapter will attempt to give the reader a comprehensive explanation of the events that took place before the handover ceremony in which Juan Manuel Lora Alonso assumed the international presidency of EUROAVIA.

Specifically, it will focus on the actions that took place until September 2017, when the Annual Meeting of the EUROAVIA Congress 2017 was celebrated. It is important to notice that for the period of six months before this event, two parallel storylines coexisted:

- The general performance of the Former International Board 2016-2017 that goes from September 2016 to September 2017, as the driving body of the Association.
- The business plan making process of the Designated International Board between the Electoral Meeting of the EUROAVIA Congress in 2017 till its approval during the Annual Meeting of the EUROAVIA Congress 2017.

For the sake of comprehension, the timeline below tries to clarify this situation:

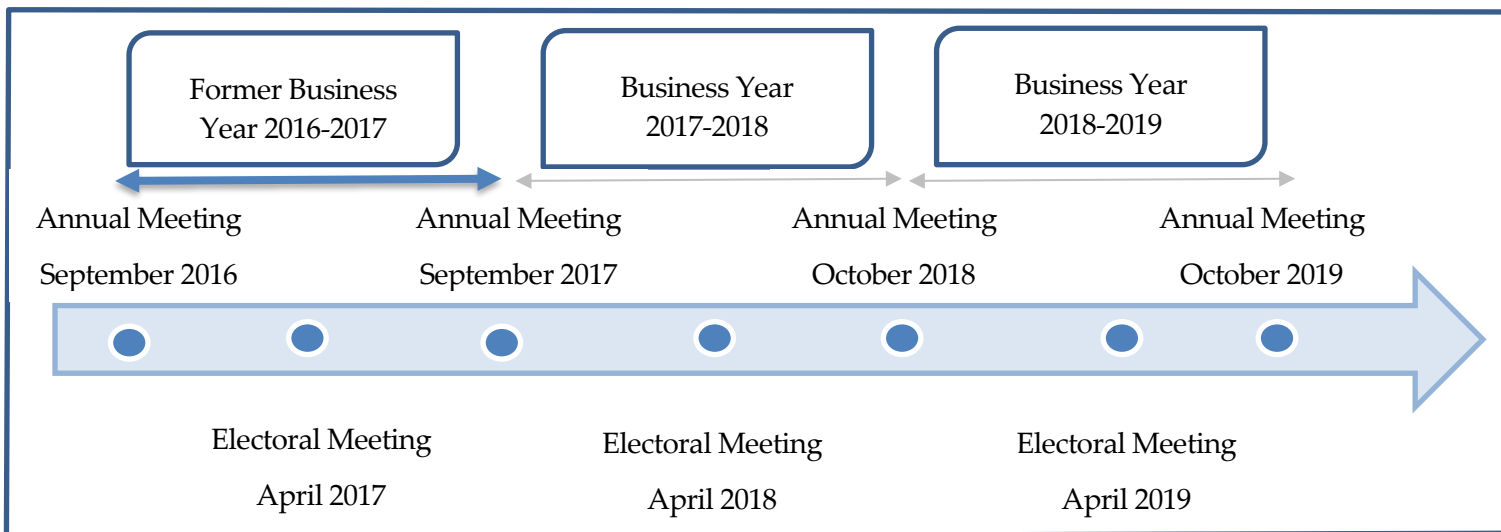


Figure 2-1 Chapter Time Line

## 2.1 Designated International Board Course

On the Electoral Meeting of the EUROAVIA Congress in Covilhã in April 2017, three out of five DIB candidates were elected: Dillon O'Reilly, Javier Ferrero Micó and the author of this document. Considering that the standard amount of team members for the IB is five members, the Extra Meeting of the EUROAVIA Congress (ExMEAC) was convened.

Despite of the unfortunate resignation of Dillon O'Reilly due to personal circumstances barely one month after the elections, the rest of the DIB set a clear vision of the steps to follow for the following six months to elaborate a disruptive new model for the Association.

Three pillars would sustain the different initiatives proposed by the team becoming the cornerstones of the business plan:

- **Communication:** Implementing new strategies to encourage Local Groups to increase their international activity. In the same way, the interaction between AS, WGs and the IB shall be simplified boosting the collaboration and improving the overall efficiency in future joint projects.
- **Visibility:** Increasing stakeholder collaboration across the value chain, better positioning the Association as a reference for the industry, the academia and the YNGOs community. As a result, EUROAVIA shall become a key role player supplying highly-qualified professionals to the industry.
- **Opportunities:** Pushing the integration of young Europeans into the labour market is one of the main goals behind the business plan proposed. Companies provide with internships, job opportunities, formation and funding for technical and cultural projects thus, working closely to the industry, is fundamental to have a better insight of the industries' expectations towards students and universities. Therefore, providing EUROAVIANS with the proper hard and soft skills would increase the available opportunities for all.

Due to the short period of the International Board in office, approximately of one year, implementing new changes may be difficult to effectively achieve, moreover when this trend can happen on a regular basis every year impeding certain stability over time.

To reach consensus and avoid drastic changes, the DIB conducted a meeting/interview with every single working group, BoP region and relevant figures within the Association like the DIB candidates for ExMEAC and the IB together with external bodies such as JADE, AIRBUS and other stakeholders.

In total more than 120 h of meetings were conducted during this period, including the physical meeting that took place in Napoli between the at the time IB and DIB.

## 2.2 Internal structure

Communication has been established as one of the three pillars that characterize the frame under which the IB set its strategy. The internal communication is both the tool that brings the biggest growth potential and the main source of inefficiencies.

One of the main actions taken during the development of the Business Plan was to interview every coordinator of the different working groups and to attend every single Board of Presidents meeting during a whole round to better understand the perception of the local groups and their interaction with the international bodies.

As a result of these meetings, two were the main problems identified for the upcoming 2017-2018 BY: an inefficient distribution of task-based working groups and a shortfall in the engagement to the working groups both of which are discussed in the following two main lines of action.

### 2.2.1 Working Group structure

There were up to ten Working Groups during the 2016-2017 Business Year: Affiliates Societies, Company Relations, Design Workshop, Information Technology, Innovation and Development, International Board, International Events, Press, Public Relations and finally Statutes and Bylaws.

The study of the performance of these working groups produced the following results:

- Duplicities were found in the Press, Public Relations and Company Relations WGs where subunits were in charge of both providing the design and content for their deliverables. The tasks were poorly optimized, continuously requiring one WG to ask for help to the other and the consequent miscommunication
- There was a manifest non-homogeneous distribution of work neither in quantity nor time with cases of big workload peaks for short periods and some other occasions with long periods of inactivity.
- The perception of importance of certain WGs prevailed for some of them over the others, leading to an uneven distribution of the workforce
- The ID WG was being gobbled by its own project

The vision of the International Board was to disrupt with the previous years strategy and set the pavement for a midterm plan that despite the transitory regime, could in less than one year achieve a stable situation.

Accordingly, the main changes proposed for the structure in the Business Plan were:

- To suppress the Press and Public Relations WGs and reorganize their members within the newly created Communication and Design WGs distributing the members around their set of skills on a task-based layout. On one hand the content writers and distributors while on the other, those with design capabilities both in creativity and software skills.

- To create the Human Resources WG to better manage the inclusion of new members homogeneously in the working groups, reduce their period of adaptation and to manage in a second step the CV database of the members.
- To suppress the Design Workshop WG due to its inactivity and distribute its task among the fully functional working groups.
- To create the EUROAVIA Training System, born as a project of the ID WG it was necessary to create a hierarchy once the project became mature enough and make it independent from the ID WG not to consume the 2ir resources and let the group work in new projects.

To summarize, three working groups were eliminated, and four others were created leaving eleven working groups in total for the Business Year 2017-2018.

Nonetheless, this measure though necessary to the one writing these pages, aggravated the consequent problem of altering the working group compositions leading to the second big problem faced in terms of internal structure.

### 2.2.2 Working Group management

It is a common trait among all YNGOs to have a short member "life-span" since the academic life is generally limited to a short amount of years. This would explain the sudden drop out of members and the lack of engagement hence disturbing the well functioning of the working groups, known as the generational gap.

It is also relevant to notice that both the positive and negative effects of the execution of the business plan and the general performance of the International Board can be felt with a certain delay. The number of members actively working at the international level during the 2016-2017 BY was substantially large, generally with a wide population almost in every group.

This is the result of a high participation of the 2015-2016 International Board members in the International Events organized by the Local Groups during that BY which proves to be the the main mechanism to recruit members for the working groups.

The number of WG members was around 130 pax however this tendency declined over the BY as no more members were required to accomplish that BY's goals and thus, relaxing the recruitment strategies. The inflow of new members was insufficient to take over the leaving members.

Moreover, the creation, reorganization and suppression of the former working groups together with the fact that three of the WG coordinators at that point were entitled to leave the coordination tasks to join the IB left the organization with a managerial crisis in which just one coordinator out of nine committed to stay for the following BY.

Finally, one more setback arose, due to the lack of International Events planned for the beginning of the Business Year, it would be quite difficult to launch proper recruitment campaigns.

To face this issue two decisions were made

- To use the AMEAC, where the handover would be made, to encourage the members to join the new working groups and for those left without a coordinator, the IB would take over acting as a temporary coordinator
- To plan events for the upcoming year and beyond as early as possible to ensure a smooth participation at international events.

The status of the working groups at the end of the business year was defined as:

1. Affiliated Societies Working Group:

Shortly after the beginning of the business year the overall efficiency of the working group was affected due to the sudden departure of the working group coordinator and one of the regional coordinators. The coordination of the group could not be reestablished until the beginning of the next natural year, reducing the number of Board of Presidents meetings, conducting a low participation Dynamic BoP and overall communication.

Moreover, there were no real outcomes from the activity of the EAX and SaR units and the stability of the working group could not be restored since there was a shortfall of members.

The AS WG remains as the most effective tool for internal communication, leading to build real relationships between the different local groups and the international body. The structure of the working group had been revisited just a couple of year ago to better adapt to the current needs and to reduce the workload on the IB hence, the strategy for this working group was continuity. The following words detail the specific plans on the units:

- Board of Presidents Unit

As one of the main problems concerning all working groups is the international engagement, the DIB decided to attend one full round of BoPs as a team to get to know the local groups representatives.

In addition, regional physical meetings were proposed to encourage the development of BoP technical projects.

Regarding the Dynamic BoP, the experience earned from the past BY was conclusive to better plan this meeting along the year, which still was one of the focus for the unit.

- Search and Recue Unit

Analyzing the inactive local groups of EUROAVIA, most of them were inactive for a long period which in practice means the only difference between funding a new AS and rescuing a long-term inactive one is the legal treatment in terms of going through the PPAS to AS process.

To better focalize the work of this unit and avoid overlapping with the Expansion one, a new philosophy was introduced:

SaR would work with the BoP unit to track the potentially inactive AS and

approach them in case any of the following conditions would be met:

- BoP attendance lower than 50%;
- No attendance to the EUROAVIA Congress for more than 2 years;
- No international event organized under the 5 years rule;
- No Board announced for the current year;
- Expansion Unit

Since the inclusion of the Adjunct Member concept into the bylaws, non-European countries were indistinguishably targeted, however due to the inactivity of important aerospace hubs such as Hamburg and Milano, a new focused was put on strategic universities within the european territory.

Moreover, the unit would be entitled to guide PPPAS through the whole process until the group reached the status of PAS.

## 2. Communication Working Group

As stated before, the Communication WG was proposed in the BP to better tackle the communication strategy. Unifying all channels of communication under the same working group would allow the different bodies of the association to know who to contact for promotional purposes.

Moreover, it becomes more attractive for possible members to join since it does not require specific design software knowledge but social network and writing skills and thus embracing the people both from the Press WG in charge of the content of the Newsletter and Magazine, and the Public Relations WG responsible for the website and social media management.

## 3. Company Relations Working Group

Due to the group's short period of existence no specific achievements were made, however, the basis underwhich the WG was settle was solid with a wide population. To improve the performance, a subcoordination level was added to the different units. Subunit coordinators would therefore allow more members to join the different departments and better track the actions taken by the members fostering the collaboration with more thirdparties.

It was decided to suppress the Grants Unit which would be transferred to the Statutes and Bylaws WG and to leave any design related issue, specially for the Brochures Unit, to the Design WG so to have a stakeholder relationships centered team.

## 4. Design Workshop Working Group

The last record of a Design Workshop event goes back to 2005 however, a renovated proposal was discussed over the last 5 years: The Dynamic Design Workshop, an event aiming to gather three different teams of motivated students who spend each of them 1 week in a different country hosted by the corresponding local group. During this time, the teams must develop a project on the topic suggested by the sponsors i.e turbine design, cockpit enhancements while studying the topic for a final round



where all the teams compete for the best proposal.

It comes without saying that the logistic difficulties to coordinate and fund this event, including the right timing for the students, academic calendars, sponsors, local groups available and a large etc made this project unlikely to happen. After several attempts the DeCo/DeWo board resigned and thus, all activities of the working group were terminated.

Different proposals and analysis were made for this working group during the business year, but no concrete actions were taken. At this point, the DIB proposed to abolish the WG distributing its competences among the different working groups and the International Board.

#### 5. Design Working Group

Simplifying the branding of the WG together with the Communication could boost the active participation of members, specially those who were part of the Public Relations' Design Subunit.

Gathering creative members with aesthetic ideas and the proper software skills or the aim to learn them motivated the creation of this WG which was entitled with critical tasks for the association.

- After a couple of years of deep discussions, a gradual change in the CI was considered necessary for the DIB, permitting EUROAVIA's corporative image to be renewed to the current standards in the aerospace sector.
- Assuming the design of brochures for the CR WG
- Designing new promotional material and commercials to be published around Europe and elaborating a new round of merchandize products.
- Develop the EUROAVIA web shop project;
- Close partnership with IT WG to implement a similar platform of the ticketing system currently in use for a better management of the design requests.

A strong cooperation between working groups was predicted however, centralizing all the design requests would potentially improve communication and productivity

#### 6. EUROAVIA Training System Working Group

During the 2016-2017 BY, the ID WG implemented a new project aiming to form a professional group of soft skills trainers who could deliver sessions for both EUROAVIAN and external events.

After the Leadership Workshop 2016 in Naples, the first Train New Trainers event within the EUROAVIA network, a first generation of trainers were formed on leadership, management and soft skills.

This way, the trainers became part of the ID WG as members of the subproject to develop the EUROAVIA Internal Training System, also named after the Greek letter  $\eta$  after the efficiency concept.

However, this group created deep discussions. To start, the nickname of the group

“eta-η” was not well received from the Spanish local groups side as it resembled to the armed terrorist band. Moreover, the trainers took over the coordination of the ID WG since they outnumbered the original members of the group and, taking into account the original aim of the ID WG, the management of the WG was not fulfilling the first intention.

In order to unstick this situation, the unit had to be released from the ID WG, so the former could be rearranged in a more efficient structure and the later focus again on their original purpose.

The EUROAVIA Training System (ETS) would be a self managed body within the association to which only trainers and the overseer member from the IB in case they are not trainers can belong to.

This group would take over the tracking and scheduling of the different training sessions developed around Europe as well as ensuring the maximum amount of people benefitting from it.

As a first milestone, organizing the Train-New-Trainers (TNT) event in order to enlarge the network with a second generation of trainers would ensure certain continuity in the network, allowing to have a more diversified workforce across the continent.

#### 7. Human Resources Working Group

Due to the large workload, especially at the beginning of the BY, that the IB have to undertake, focusing on the recruitment strategies and providing the right training, moreover when there is a lack of coordinators, becomes a humongous task.

To avoid delays and missed opportunities, creating a WG focused on these early stages task-related training and responsible for the recruitment campaigns deemed to be necessary.

As a midterm/longterm goal, the Human Resources WG would be responsible for the management of the CV database function of the IT WG's database project and be the link between the companies and the regular members.

#### 8. International Board Working Group

No plans to modify this working group were proposed due to its relatively new nature. Only one member applied to join this WG

#### 9. Information Technology Working Group

During the 2016-2017 BY, two of the main projects this working group had for the last years were completed. On one side, the database project could be launched during the AMEAC 17 being however in an early status, the structure allowed the user to upload the personal data of the different members. On the other side, the website was finally launched using a much more user-friendly interface, giving a new look to the association.

The main actions planned for the working group were divided into four different approaches:

- Enhancing the database by providing it with new functionalities and populating it, allowing the LGs to better manage their local activities
- Through a tight collaboration with the HR and AS WGs developing a CV database that fosters the integration of EUROAVIA's members into the labour market.
- Securing the well functioning of the new website, the database and the ticketing system.
- Aiding the Office 365 users and promoting its use among the members.

#### 10. Innovation & Development Working Group

Once freed of the EUROAVIA Training System, the ID WG's plan for the upcoming BY was to focus on new projects, technical or not that could engage the larger number of participants into it.

Particularly, especial interest was given towards technical international contests shaped by the following pattern:

- As a first stage, an online concept design round would be implemented, allowing a greater impact while minimizing the costs.
- Once evaluated, the best "x" number of projects shall compete in a face to face competition in which they shall test their projects.

The ID WG shall develop such project, mediate between the Association and the interested thirdparties and tutorize the participants through the project.

#### 11. International Events Working Group

Several projects were proposed to the IE WG due to the new structure of the association.

On one side, a deeper focus in the events' procedures including those for the participants and the organizers to standardize all the different outcomes depending on the circumstances:

- Optimizing the international events calendar to maximize attendance along the year giving especial focus to the Congresses.
- Revisiting the application and cancellation rules to minimize the number of cancellations among the members.
- Implementation of training sessions regularly into every EUROAVIA event delivered by the ETS WG
- Regulating the Air Cargo Challenge rules to foresee the organization by a non-EUROAVIA organization and its implications.

On the other side, discussing the need of new events and reaching consensus with thirdparties to foster joint events. Also, keeping the PR Workshop to promote the learning of communication strategies and design technics.

## 12. Statutes and bylaws Working groups

For many years, the workload of the SB WG had been focused just after the celebration of the congresses since all bylaws proposals have to be sent three months in advance prior to the next congress. This led to long periods of inactivity that disengaged the members to have an active participation. Moreover, these tasks were not very interesting for the wider part of the community.

To solve this issue, a new unit was designed to increase the steadiness of the workload along the year while challenging those participants to develop their professional skills by developing the applications for the European projects.

Further details on the particularities of these grants are discussed in the following pages.

## 2.3 Third parties

The following pages detail the current situation of EUROAVIA's relationships with thirdparties until September 2017. This includes 15 partners handed over from the FIB and 3 more included in the Business Plan. A brief definition of the different activities each of the companies cited in this document perform can be found in Annex A

### 1. AIRBUS

Years before EADS was rebranded as AIRBUS, the company already became the main sponsor of EUROAVIA. This collaboration was steadily kept until the 2016-2017 BY when the communication with the PoC was interrupted due to several reasons. Together with the communication, the annual fee was lost as well.

Thanks to the local collaboration of AS Munich with Airbus DS through Mr. Winfried Lohmiller, the DIB could get in touch with the company, opening two new lines of collaboration.

- a. Technical event: Looking for a technical collaboration that could complement the ACC, the idea of implementing an international challenge, driven by the company for members of EUROAVIA was launched. At the very early stage, three topics were proposed, waiting for the student's feedback and further discussions on the implementation. The topics were:
  - Zeppelin emergency landing system
  - Drones launch from a cargo airplane under cruise flight conditions
  - Redesign of a Rudder for a Messerschmitt 262A
- b. International agreement: A new communication channel could be reestablished with the University Relations Manager at Airbus, Mr. Kimble Woodworth thanks to the Germany responsible Mrs. Nicola Kichner who also introduced her Spanish equivalent, Mrs. María Jesús Díez Paniagua in order to restart the collaboration at a international level.

## 2. IT AÉREA

After a failed attempt to formalize a partnership between IT Aérea and AS Sevilla, an international MoU was signed in 2016 in order to support initiatives such as the Leadership Workshop (LeWo) 2016 in Napoli and the International Rocketry Workshop in Terrassa. Mr. José Ignacio Escudero, CEO of ITAérea has been the Point of Contact so far.

EUROAVIA is a strategic partner for ITAérea's dissemination and expansion in European territory. Hence, the School is really eager to collaborate with the Association. A promotional campaign was announced to be started along the Business Year with the purpose to promote their courses in English.

## 3. Aviation Skills Partnership

At the beginning of the FBY, Ms. Jaqueline Chindea, FIB President 2012-2013, got in contact with the FIB in order to present the opportunity of a collaboration with the organization.

Since then, EUROAVIA and Aviation Skills Partnership have agreed to collaborate for the benefit of people entering and processing the aviation sector with the signature of a Memorandum of Understanding.

In this respect, the FIB attended the Helicopter Expo & Conference, promoting EUROAVIA in the global network of the rotorcraft industry as well as establishing new contacts with potential collaborative partners.

The partnership between the two parties lead to the invitation to participate in the next rotorcraft event, Helitech International 2017 at London Excel from 3<sup>rd</sup> to 5<sup>th</sup> October 2017.

The Designated International Board planned to attend the event having representation at the "Learning and Skills Zone" where experts provided advice on careers, education and job opportunities.

Furthermore, a dedicated stand would provide the chance to meet and talk with local, UK and international students, education establishments, pilots, engineers and company representatives both opening the possibility to enlarge the network in local groups and sponsors.

## 4. Bundesverband der Deutschen Luft- und Raumfahrtindustrie (BDLI)

EUROAVIA first contact with BDLI was established in November 2016 by the Approach Unit of the Company Relations Working Group. During that Business Year, BDLI offered EUROAVIA several and valuable opportunities to approach the German Aerospace Industry.

Being focused both on local and international level, some members from AS Berlin

joined the BMWi Start Up Night event in February and two representatives from AS Stuttgart were invited to the BDLI Human Resources gathering at Schwäbisch Hall in March 2017.

At that time, they presented EUROAVIA international events and technical projects, EUROAVIA's relationship with the Alumni and Trainers network, looking for a potential way of collaboration. Furthermore, Fly-In Paris participants had the chance to join a technical tour during Le Bourget Air Show in June 2017. Internships, jobs and research opportunities, technical details were offered by ZF Friedrichshafen, ESG, TechConnect, SITEC Aerospace, OHB, Jena Optronik, Diehl, SLM Solutions, ARTS Holding SE, MTU Aero Engines, Liebherr Aerospace and Airbus.

#### 5. Council of European Aerospace Societies

EUROAVIA and CEAS have kept a strong long-term collaboration in which both the President and Former President of the Association join CEAS Board of Trustees, thus representing the European aerospace student's community before the main national agencies, research centres and industries.

As a Corporate Member, attending the 38<sup>th</sup> Trustees Board Meeting of CEAS at the Netherlands Aerospace Center NLR, Amsterdam, on 7<sup>th</sup> June 2017 played a key-role to increase the visibility of the Association towards the other Council Members.

Furthermore, it led to have an active contribution in the organization of the Aerospace Europe Conference (6<sup>th</sup> CEAS Air & Space Conference), which would take place from 16<sup>th</sup> to 20<sup>th</sup> October 2017 at the Palace of the Parliament in Bucharest, Romania.

#### 6. Careers International

As one of EUROAVIA's main goals is to connect its members to the companies, providing them with new opportunities, an approach to Careers International was proposed for the upcoming BY.

#### 7. European Wind Energy Master (EWEM)

After a pause in the collaboration during the last BYs, it was proposed to assist TU Delft again promoting the European Wind Energy Master. This way, the relationship with the university could be improved.

#### 8. Informal Forum of International Students Organizations (IFISO)

After attending the IFISO Autumn Meeting 2016 in Lisbon, contacts with Best and Study Portals were made, reviewing the partnership with the later one.

This shows the importance of these meetings in which several YNGOs meet to discuss and share their ideas and experiences.

For the time being, the collaboration would be maintained and plans to attend the following Autumn Meeting in Belgrade highly considered.

#### 9. Junior Enterprises Network (JADE)

Several ways of collaborating have been explored towards common goals of JADE and EUROAVIA. The signing of an agreement of cooperation currently allows to:

- Grow each other's network and acquire multidisciplinary skills;
- Help in the enlargement of the respective associations;
- Join each other's international events.

Since May 2017, JADE has been providing with a fruitful and valuable support in terms of approaching and recovering local branches, European Grants framework knowledge and application process, training system, scope and location of jointed international events. Moreover, a physical meeting between JADE Vice-President, the FIB Secretary and the DIB President took place in Istanbul on the 15<sup>th</sup> June 2017. The meeting aimed to evaluate business and technical projects/cases for companies and introduce Junior Enterprises at Turkish universities where EUROAVIA is based.

The next Executive Board of JADE took over the office at the end of July 2017. Hence, new business and common strategies underwent for evaluation.

#### 10. Network of European Regions Using Space Technologies (NEREUS)

The contact with NEREUS was lost during the 2015-2016 Business Year. However, the former Secretary of the International Board managed to get in contact with NEREUS Secretary General during the physical meeting that took place in Brussels.

Both parties informed each other about their current status and goals; possible collaborations were discussed, and parties agreed on trying to attend each other's events and mutual support with publications. A successful handover was carried by September 2017.

#### 11. Qreer

After receiving renewed visibility on the aerospace part of the Qreer.com website and in their newsletter, Qreer.com committed to prepare an article to publish in the EUROAVIA newsletter. The goal was to use the new website of EUROAVIA to share individual job vacancies among members. Qreer.com was interested in linking this feature with their own system.

Despite of the aforementioned information, no handover was effectively driven by the end of the BY.

## 12. SpaceBoard

The International Board put a lot of emphasis on the relationship and collaboration between SpaceBoard and EUROAVIA knowing the fact that a great number of EUROAVIANS are interested in the space sciences.

The involvement in the SpaceBoard network would also allow EUROAVIA International to be more visible in the space field, strengthening its position as a reference. EUROAVIA would be able to promote their events to the entire space community of SpaceBoard and raise awareness of its activities.

## 13. Space Up

EUROAVIA has been already a supporter of SpaceUP Milan and has participated in other un conferences such as the ones in Cork and Rome, promoting the Association and establishing contact with many other YNGOs as well as companies.

Officializing a partnership agreement with Space Up, a wider variety of events and a deeper engagement on the space sector would be achieved.

## 14. Study Portals

EUROAVIA and StudyPortals made a written agreement where both would advertise each other and since AMEAC 2016, the IB responsible has been able to establish a fluent communication.

EUROAVIA has published several articles on its Newsletter giving its members the chance of getting to know StudyPortals more in detail, as well as the programs they offer. In exchange, Study Portals sent some gadgets to EMEAC 17 participants to promote both parties.

By the end of the BY, a new Point of Contact from StudyPortals was set, and therefore communication had to be re-establishing again.

## 15. Think Young

EUROAVIA and ThinkYoung have both been providing display space at their respective events and international social media. In this respect, ThinkYoung actively encouraged the promotion of the crowdfunding campaign aimed to support Fly-In Padova.

Furthermore, EUROAVIA members had free access to the Makerstown event held in Brussels on 20<sup>th</sup> June 2017. The event brought together Makers, business leaders and European policy-makers to showcase and share a new wave of entrepreneurship, do-it-yourself experience and technology.

A new external relations and communication assistant manager was introduced to EUROAVIA as Point of Contact with whom meetings have been already planned to define mutual actions for the next Business Year.



## 16. UK Students for the Exploration and Development of Space (UKSEDS)

The agreement defining the level of relationship between EUROAVIA and UKSEDS, the United Kingdom chapter of the global SEDS movement was renewed during the FBY.

The main points of the agreement are defined as follows:

- EUROAVIA and UKSEDS shall provide display space for the partners' organization free of charge at their respective national conferences and congresses;
- UKSEDS shall provide discounted conference admission fees for registered EUROAVIA members to its national conference;
- UKSEDS and EUROAVIA partner to share advices and agreed-upon contacts for the benefit of mutual initiatives, networking opportunities and strategic goals.

EUROAVIA members can benefit of great resources in terms of:

- Improving knowledge base and skill sets;
- Participating in student's projects and other events;
- Boosting the space community involvement through government, industry, and academia, both nationally and internationally;
- Disseminating research and development of space-related technologies;
- Jobs, internships and careers advices through SpaceCarrers.UK platform.

Moreover, EUROAVIA members were invited to attend the National Space Students Conference 2017, which is the premier event for students interested in space organised by UKSEDS.

The handover between the new executive board and the DIB was successfully done by the end of the BY.

## 17. YouthProAktiv

Despite of a strengthen relationship between both parties achieved during the FBY, no handover was successfully done. The communication between PoCs was interrupted.

## 18. Zero 2 Infinity

The company gave a technical presentation during Fly-In Padova, showing interest in a closer cooperation with EUROAVIA. Indeed, Zero 2 Infinity declared its intentions to write an issue for the Magazine and a prospective partnership was going to be evaluated to have an active role in SpaceUp events, of which Zero 2 Infinity is usually a partner.

## 2.4 European Grants

More often than not, YNGOs are financially in trouble to reach the minimum support that allows them to ensure the continuity of their associations from one year to the next one. Besides, companies find interesting those organizations who can support their own initiatives and have a list of achieved events.

In other words, when an association has its basic needs covered, can then focus on the activities that add real value and thus become more attractive for companies helping the wheel to start turning. European Commission funds are one of the main economical sources for many YNGOs and upon a valid application do help to overcome the aforementioned issues.

During the previous year an intensive research was performed and thanks to the collaboration with JADE after the physical meeting that took place in Istanbul, the decision to propose the application for these grants was taken. In case the application would be successful it would help to support Working Groups Physical Meetings, Congresses, IB/DIB Physical Meetings and any other major statutory meetings.

The European Council policy for the integration of youth has developed a funding budget to support the civil society organizations in the fields of education, training and youth. As part of the EU Youth Strategy, the Key 3 Action program [2] was a perfect fit both for European non-governmental or EU-wide network organizations in the field of education and training or in the field of youth.

Some of the requirements to apply for the grants are the following:

- As a general rule, the budgetary year starts on 1st January and ends on 31st December. Any exception (after the beginning of the starting date) from this rule should be announced by applicants in a letter joined to the application package. The organizations for which the financial year starts later than the 1st of January must inform the Agency about this situation and send a detailed justification by email together with the compulsory annexes.
- Organizations should operate through an informal governance setting, composed of a) an organization legally established for at least one year on the date of submission of the application in an Eligible Country with functions of coordination of and support to the network at European level (the Applicant); and b) other organizations established in at least twelve Eligible Countries;
- Involve young people in the management and governance of the network.
- The operating grants for Civil Society Cooperation in the field of Youth take exclusively the form of reimbursement on the basis of the following unit costs:
  - Personnel (unit cost per personnel)
  - Statutory Meetings (unit cost per meeting) related to the organization of statutory meetings.

In the light of the aforementioned conditions the organization would be able to apply for the Statutory Meetings funding that provides with 3 318 € up to a maximum of 33 180 € in case of

covering the 10 statutory meetings and assigning 0 € to personnel.

A clear definition to Statutory Meetings shall be updated in the bylaws and statutes.

## 2.5 Other issues

### 2.5.1 Archive

Being registered at the “Kamer van Koophandel”, EUROAVIA is legally registered at Kluyverweg 1, 2629 HS Delft. The relationship between TU Delft and EUROAVIA goes back to the foundation of the Association 60 years ago. It is there where for many years; the archive has been based in.

Due to several factors, the impact of the local group has been drastically reduced and the relationship between AS Delft and TU Delft severely jeopardized:

- The international character of EUROAVIA has a better synergy with the international students of the university who generally spend a short period doing their masters, meaning it is difficult for these students to engage to the organization during their stay
- Local organizations such as the VSV focus more on the national students and thus becoming more numerous, easier to manage and better supported by the university.

As a result, the university stopped supporting the local group with room free of charge where to store the archive. The FIB relied on the local president to find a temporary solution and store these documents in a private deposit which has a not affordable monthly cost on the long term.

A specific expenditure item was included in the financial plan to give solution to this problem, by considering the shipping costs to the neighbouring AS.

## 2.6 Conclusions

- Despite of an arduous beginning due to the abandon of the elected secretary, both the treasurer and the author of these lines could establish a solid vision of the business plan: improving communication, increasing EUROAVIA's visibility and providing better opportunities.
- The period between EMEAC and AMEAC which is used for the preparation of the Business and Financial plan has been in the past years a task for at least 4 people in average. A total of more than 120h of meetings were conducted during this period to include the feedback and gather new ideas.
- A considerable new structure was proposed, cancelling the PR, Press and DeWo, working groups, creating the DN, CM, ETS and HR new ones and expanding some of the remaining ones. This change was disruptive but nevertheless oriented to a midterm planification.
- One of the main problems foreseen was the lack of members in coordination positions, thus, a focus on an early preparation of IE in order to recruit more members was proposed.
- Most thirdparties were handed in paper, however, no answer nor real communication was achieved with several of them. Moreover, three new partners were already proposed in this early stage.
- No final solution was given to the problem generated by the lack of storage for the archive. A fixed amount was predicted in the financial plan to find a solution later on during the business year.
- The most important project introduced was clearly the European Grants, a project attempted several times in EUROAVIA's history but that was never achieved before. Obtaining the grants, the association would be guaranteed a huge new dimension of financial independence.

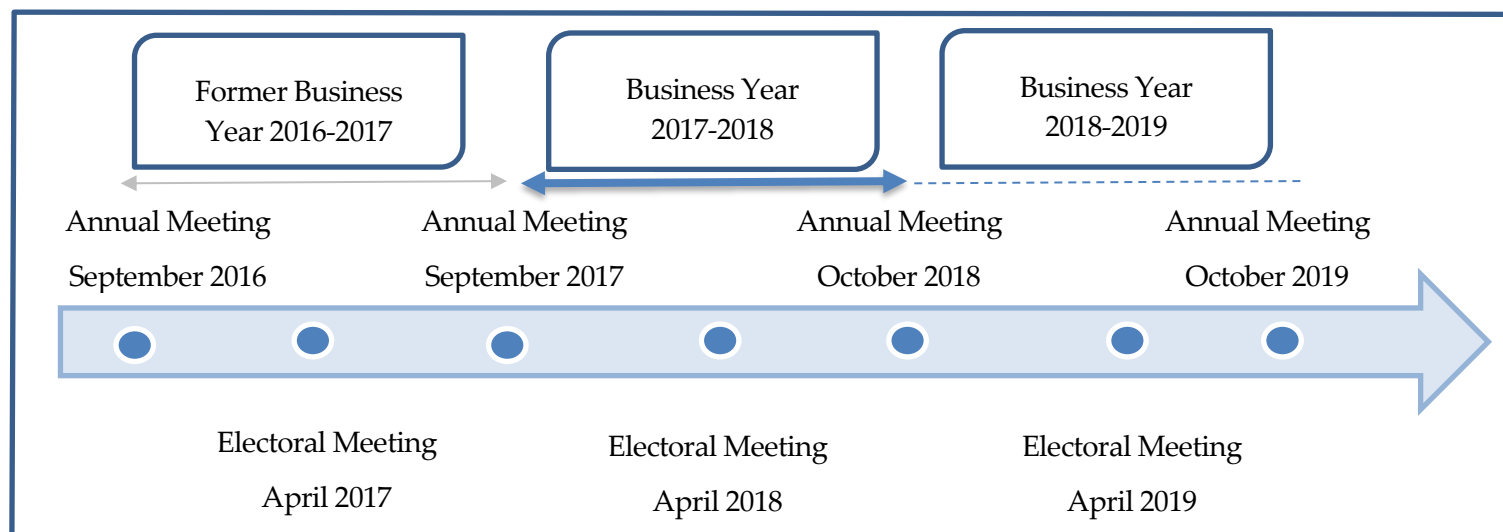
## 3 BUSINESS EXECUTION

*For some people the sky is the limit, for us, it is just the beginning*

*-Jacqueline Cindea-*

The following pages cast a comprehensive report on the milestones achieved along the business year, starting with the executive committee philosophy and leading towards a fully detailed explanation on the internal changes, working groups performance or main projects such as the European Grants.

As in the previous chapter, a timeline is including reflecting the period of analysis taking place between the Annual Meeting of the EUROAVIA Congress of 2017 and 2018. It is also important to note that to some extent, some important results achieved during this period were materialized after the succession of the International Board 2017-2018 and thus included in these pages.



*Figure 3-1 Chapter Time Line*

### 3.1 International Board Course

In line with the goals described in the Business Plan and presented in the second chapter, every single action taken by the International Board pursued to support three fundamental pillars in the development of the events: Communication, Visibility, and Opportunities. The combination of these ingredients has provided with:

- A stronger community where information flows in a more efficient way;
- Both a better conception and a larger awareness of EUROAVIA among European stakeholders;
- New challenges for EUROAVIANS to develop their professional career and private life.

The following lines attempt to give the reader a nuance on the kind of activities and achievements that were carried out by the International Board chaired by Juan Manuel Lora Alonso and how they relate to the category under which they are described.

#### 3.1.1 Communication

EUROAVIA is a European-wide spread YNGO and its members come from very different places, thus including the working groups and the International Board whose four members were originally from three different countries: Germany, Italy and Spain.

First, ensuring a smooth communication within the steering committee of the Association was indispensable to execute a full-of-changes business plan. Due to the non-localized nature of this group, a major part of the communications was online however for the critical periods especially before congresses, physical meetings were carried out. Some figures are displayed next:

- More than 41,000 messages were sent on the private IB Whatsapp group.
- 60 Skype meetings accounting for 101 hours on the groupal skype conversation
- 2 physical meetings for a total duration of 9 days
- 8 International Events with at least 2 IB members present at the same time

Moreover, the use of task planners such as Trello and Office 365 package (Outlook, Onedrive, Sharepoint, Teams...) made a real difference at the time of keeping everything well structured and organized

It should be considered that these figures refer to the group channels and do not represent individual conversations, parties of three nor any kind of communication taken with working groups or thirdparties.

Regarding the communication between the International Board and the Local groups some measures were also implemented:

- Effectively delivering sensitive information in an urgent way through traditional channels such as email, proved to be an arduous task. To ease this technicality, a Whatsapp group including the presidents of every single Affiliated Society was

created. Used as a high importance channel, it reduced the waiting time of responses and increased the awareness among members.

- Several rounds of BoPs and a successful DyBoP took place to which at least for once, all IB members joined the IB responsible to get to know the members.
- The massive attendance to the EMEAC, accounting for a quorum of 32 Affiliated Societies, was undoubtedly the best measure to reinforce the links between the different bodies of the Association. This was possible thanks to the collaboration between the IE, DN, CM, and IB with the local group in Istanbul.

Working groups had a difficult beginning due to the lack of coordinators, however, the direct implication of the IB responsables could correct this shortfall during the first half of the business year. As a downside for the high involvement of the IB in the WGs performance, less Board of Coordinators were organized and thus reducing the overall awareness of the working groups with respect to the others performance.

As a general measure for all the bodies, the implementation of the Ticketing System of the IT WG allowed to better report and solve the technical issues of the EUROAVIA network's user.

### 3.1.2 Visibility

EUROAVIA was settled from the very beginning of the Business Plan to strive for an international leading position among the aerospace stakeholders, representing the aerospace student's community in Europe. In this way, great efforts have been put to increase its visibility attending to the following categories:

- Internal visibility: Increasing the impact of EUROAVIA international at local level has been one of the main targets for the CM, DN and IT WGs. It is a challenge for YNGOs of this kind to maintain a homogeneous corporative identity and after years of discussion, a full renovation of the image of the Association has been officialised.
- Industrial visibility: After a year of financial drought, reestablishing the relationship with former partners and formalizing new contracts was of extreme necessity to keep EUROAVIA functioning. Thanks to the renovated image, a consolidated CR WG and a more professional oriented strategy, essential stakeholders like Airbus have been recovered and new alliances have been forged like Lilium or a reinforced IT Aerea
- Institutional visibility: Representing the aerospace student's community, being acknowledged by the policy makers, academia and research centres as a key player for the development of the future industry is a necessary step to impact on young Europeans' lives tomorrow. Thus, successfully applying for different Horizon 2020 programs and reaching new MoUs with important European stakeholders such as Clean Sky, CVA or Pegasus clearly states the path that EUROAVIA is walking through.

### 3.1.3 Opportunities

Finally, a better communication and a significant raise on the global awareness can be translated in more opportunities to develop the professional career of EUROAVIANS:

- The EUROAVIA Training System has been implemented allowing students to improve their soft skills while having an international experience in a foreign country
- The collaboration with the industry has allowed to develop several technical projects such as the Bionic Studio Challenge in collaboration with Heinkel Group and the Airbus Sloshing Rocket Workshop with Airbus, putting into practice the knowledge learnt at university
- Deepen the theoretical knowledge on certain topics often not provided at the local universities, putting students into contact with relevant personalities and stakeholders to inspire the professional path of young people. The participation into the CVA Summer School is a good example of this.
- Internships and job vacancies in a wide diversity of companies, from big ones like Airbus to cutting-edge innovation companies such as Lilium.
- Last but not least, spreading the European spirit through a constant collaboration and communication between youngsters from different countries, fostering mobility and promoting the cultural, industrial and idiomatic traits of every region.

### 3.2 International Events

During the 2017-2018 BY more than 300 students across Europe could benefit from the international events organized within the network. Stimulating the international mobility, aiding students to travel for professional purposes in terms of working experience, technical formation or soft skills development has a positive impact regarding the integration of young Europeans in today's scenario according to the European Commission.

In this way 9 events were organized by EUROAVIA:

1. ExMEAC and AMEAC 17, Cluj-Napoca: This event gathered around 50 participants. During ExMEAC 2 more members were elected to join the International Board for the Business Year 2017-2018, ensuring the legality and feasibility of the business plan's execution. Right after, started AMEAC where the business and financial reports were accepted exonerating the former international board leading to a motion to accept both the Business [3] and Financial plans after they were presented in front of the Congress. These events help decreasing political disaffection by initiating young people into the European democratic processes. Taking part an active role during the General Meeting empower students within society and develop their life skills.
2. Formation Workshop 17, Stuttgart: Being the first soft-skills-oriented event fully managed by EUROAVIA's trainers, the FoWo 17 gathered five EUROAVIA trainers who spent four days training 20 participants on a variety of soft skills ranging from presentation skills via time management to communication.
3. Space Symposium 2018, Sevilla: Favored by the increasing collaboration with the CVA and the imminent Presidency of the network hosted by Sevilla parallel to the President of EUROAVIA living in this city, a strategical path centered on the space sector had been set for the following years within the local group of Sevilla. During a week, 25 members from different countries together with the local



community of students from the University of Seville attended lectures on a wide spectrum of space topics.

Industrial partners like Ariane Group, Alter Technology or Deimos gave technical speeches either on their products and vision of different engineering problems, from space debris to the future of European launchers. Policy makers like Andalusia's Government and Nereus covered how the use of space applications can benefit society thanks to projects such as Galileo constellation.

Finally, soft skills training sessions, technical, and cultural visits were organized to give the participants the best possible experience of the city while supporting the future needs of the region as a industrial hub, reference in Europe.

4. Train New Trainers 18, Bucharest: This event became the most important milestone for the ETS WG since it would define if the newly implemented training system would have a real impact or not. Fortunately, 18 participants attended the TNT to master those skills that would later let them inspire and train new members. Over 10 days with more than 80 hours of active training sessions took place, providing EUROAVIA with the second generation of trainers.
5. EMEAC 18, Istanbul: Represented the large multicultural environment that EUROAVIA boosts and its dissemination potential: 32 universities from 13 different countries attended the meeting to vote on internal regulations such as the paulatine change of the corporate identity of the Association or the election of the new Designated International Board.
6. ILA Berlin: Thanks to the partnership with BDLI, the Fly-in in Berlin allowed participants to get in touch with the main leaders of the aeronautical industry. Sadly, this was the only event in which there was no IB representative.
7. Space up Pisa: Another partnership achieved during the year resulted in the celebration of the unconference of Space up in Pisa which had an attendance of 100 people. The event had to be extended in order to fulfil the minimum requirements for an International Event.
8. Rocket Workshop 18, Valencia: 24 rocket enthusiasts met in Valencia to attend lectures, build and launch rockets attending to the main rocketry principles, including interesting speeches by outstanding partners like ESA.
9. ExMEAC/AMEAC 18, Bremen: The final Congress in which the cycle starts again with the exhoneration of the International Board previous to the handover for the next team. It took place right after the IAC and congregated more than 50 students willing to contribute to the policy making process from an academic point of view.

In addition to the official events, several physical meetings were held among EUROAVIA's steering committees. Therefore:

- Two DIB+IB meetings took place prepare the AMEAC 17 and 18 in Napoli and Heidelberg respectively.
- An IB physical meeting before the Space Symposium to prepare the first Congress of

the year in Istanbul.

- IE, IT, ETS, DN and CM working groups had physical meetings where the vision and mission of the groups was decided and worked upon, also, one Board of Coordinators gathering most of the existing working groups took place.

Finally, several thirdparties events such as the “Aerospace Europe CEAS 2017 Conference – 6th CEAS Air & Space Conference” were attended for different reasons: to increase EUROAVIA’s visibility, to discuss with other stakeholders on common initiatives that could benefit society or to comply with the obligations that EUROAVIA holds toward other parties. Further details are given in the thirdparties subchapter.

### 3.3 European Grants

Designing a sustainable and financially independent plan has been one of the main cornerstones of the IB course. In this way, the European Grants diversify EUROAVIA’s incomes, minimizing the potential hazards from sponsors’ turndowns.

EUROAVIA International has applied to three European Grants during the Business Year 2017-2018:

- ERASMUS+ Key Action 3 - Support for Policy Reform EACEA-26-2017 - Civil society cooperation: Education, Training, and Youth; [2] [4]
- ERASMUS+ Key Action 1 – Learning Mobility of Individuals
- H2020-SwafS-2018-2020 (Science with and for Society). [5]

The Key Action 3 has two modalities. One stands for three years, granting more funds and is awarded to applicants with deeper knowledge of the requirements and procedures set by the EU. The application the IB undertook has a duration of one year and covers up to 10 statutory meetings (total amount 33180.00 €). During these meetings, the attendants manage and govern the association in question (e.g. general assembly, management board, steering committee, regional meeting, etc.). Other meetings organised by the beneficiary organisations (such as conferences, seminars, roundtables, workshops, external audits, etc.) shall not be included in the calculation of the grant. Project-based activities are not reimbursed under this call.

During the period 1<sup>st</sup> January 2018 – 31<sup>st</sup> December 2018, there were 10 statutory meetings applicable for this grant. EUROAVIA received confirmation that the application was successful on the 25<sup>th</sup> May 2018. After that day, and having signed the agreement, the European Commission became a partner of EUROAVIA and the association received 81% of the total amount applied for. The rest of the grant was confirmed the 16<sup>th</sup> of April 2019 after the International Board of 2017-2018 fulfilled the activities report and the European Commission gave its approval to the program executed.

The Key Action 1 supports the mobility of European youth. EUROAVIA applied to this grant in cooperation with AS București to fund the TNT2018. Even though the application was declined the feedback received was crucial in future applications to grants under the European Commission.

The European Commission Call: "Science with and for Society" under the umbrella of the Horizon 2020 programme has been money-wise the most ambitious project led by EUROAVIA: 1.5 M€ to execute the project throughout Europe

The S.P.A.C.E. - Science Partners in Aerospace Centered Education project, has been fully developed by EUROAVIA. The aim of this project is to attract, motivate and encourage young Europeans to embrace future careers in the field of Aerospace by raising awareness among society actors about the future-shaping potential of this sector and by fostering a close, open, informal dialogue, sustained interactions and networking activities between the aerospace research community, European policymakers, industry and the academic community.

Unfortunately, the project, despite having a positive feedback from the European Commission, did not surpass the threshold grade of 8/10 points by 0.5 points. This rather than discouraging further applications is a good starting point for future achievements and currently EUROAVIA has applied with the earned experience to the SWAFS project once again.

The content of the S.P.A.C.E project can be consulted in Annex B.

### 3.4 Internal Structure

Over the duration of the Business Year the workload has been distributed among the four members of the International Board, assigning a first and second level of priority for each member regarding the working groups and the BoP regions as it will be explained in the AS WG section. The workload distribution is shown in the table below:

	Juan Manuel Lora Alonso	Javier Ferrero Micó	Valentina Luchetti	David Leiser
AS WG				
CM WG				
CR WG				
DN WG				
ETS WG				
HR WG				
IT WG				
ID WG				
IE WG				
S&B WG				
Eastern				
Southern				
Middle				
German				
Western				

First Responsible		Second Responsible	
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Table 3-1. Work distribution

As a first responsibility the tasks to execute comprise:

- Stating the business year’s goals and help to design the strategic path to achieve it.
- Keeping a healthy environment that motivates the members to perform their tasks
- Ensuring there is enough workforce to reach the working group’s goals.
- Fostering the communication with other bodies of EUROAVIA
- Overseeing the global working group’s performance

As a second responsibility, the main task is to support the first responsible and cover the leading role when necessary.

The distribution of working group members attending to their origin is accounted in the following figure:

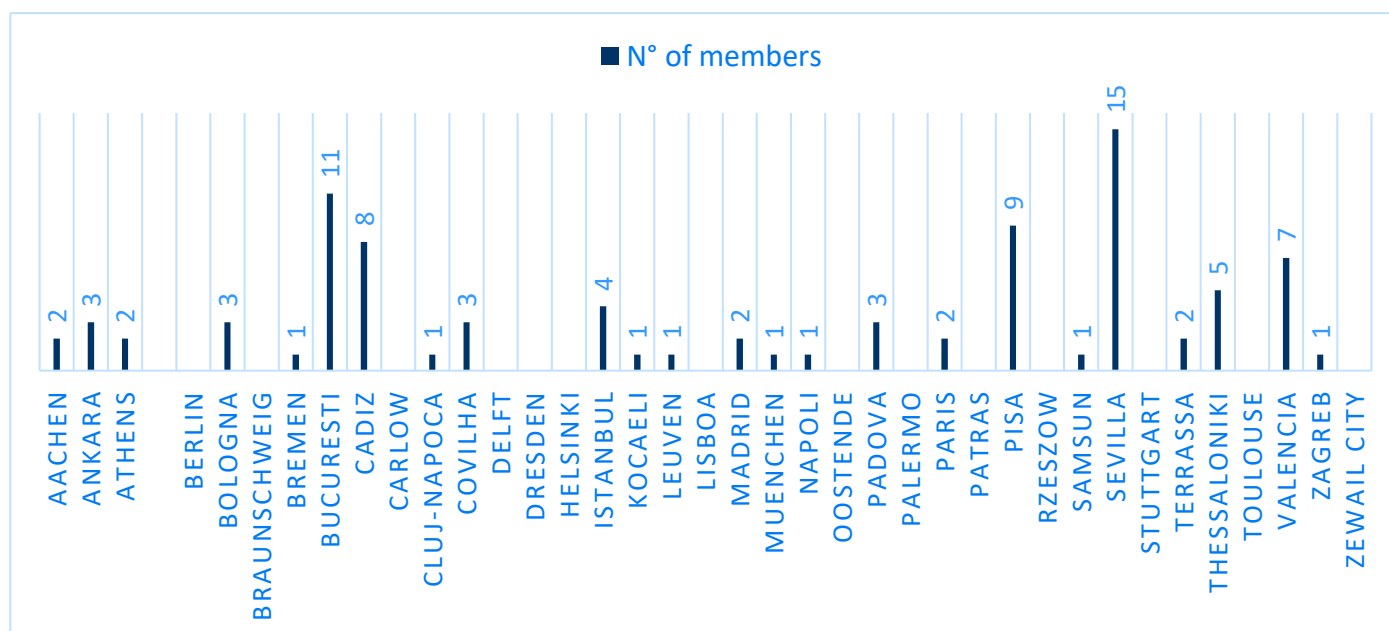


Figure 3-2. WG members origin

### 3.4.1 Affiliated Societies Working Group

The first half of the BY saw a lack of coordination, period in which the IB took over the role. Fortunately, after EMEAC 2018 Istanbul a new coordinator was elected, and new members joined the WG increasing its activity.

- Board of Presidents Unit: to better manage the regional meetings, an arrangement according to different traits such as timezone, language and proximity has been done. The following table shows such groups:

Eastern Europe	Southern Europe	Germany	Middle Europe	Western Europe
Ankara	Athens			
București	PAS Bologna	Aachen	Carlow	Cadiz
Cluj-Napoca	Napoli	Berlin	Delft	Covilhã
Helsinki	Padova	Braunschweig	Leuven	Lisboa
Istanbul	Palermo	Bremen	Oostende	Madrid
Rzeszów	Patras	Dresden	Paris	Sevilla
Samsun	Pisa	München	Toulouse	Terrassa
Zagreb	Thessaloniki	Stuttgart	PAS Bordeaux	València
PAS Kocaeli	AM Zewail City			

Table 3-2. AS BoP distribution

In the BoP Unit, a new generation of region coordinators was elected, decreasing the workload of the AS WG coordinator and the IB. To improve the visibility and awareness of the International Board within the different regions, every IB member attended at least one BoP per region together. A Dynamic BoP meeting was organized with a substantial increase in the participation compared to the previous year allowing Local Groups to discuss together.

Furthermore, a technical collaboration between Local Groups is constantly encouraged and between the 4<sup>th</sup> and 9<sup>th</sup> of October while celebrating the World Space Week in Seville, the award for the best business idea in the space sector was launched among the Spanish local groups. This led them to gather in Seville and to have the opportunity to share ideas.

- Search and Rescue Unit: it focused on the inactive AS. At the beginning of the BY, due to the lack of members, it proved difficult to coordinate all of them.

Continuing the previous Business Year's work and adding the local groups that along this BY were not inactive: Milano, Hamburg, Patras, Palermo, Beograd, Technion and Delft were kept on the list of critical AS:

- AS Milano has a group of motivated students willing to activate the local group, but they still have some internal issues with the university to be solved before becoming active. A new AS will be created since AS Milano has been dismissed during ExMEAC 2018;
- AS Hamburg has been dismissed during ExMEAC 2018 as the association was cancelled from the German District Court last year plus no one interested in EUROAVIA was found this year;
- AS Patras has been fully recovered from its financial issues and it is currently organizing an International Event: "Airbus Sloshing Rocket Workshop" which will take place during the Summer of 2019;
- AS Palermo will have the election during the first part of the BY to have a new Local Board and restart the association;
- AS Beograd has been dismissed during ExMEAC 2018 in Bremen, however, a motivated group of local students has attended AMEAC 2018 with the intention to settle a new local group;
- AS Technion has been dismissed during ExMEAC 2018 in Bremen as there were no people committed anymore;
- AS Delft still has some difficulties due to the many student associations that are present at TU Delft, however, thanks to the close collaboration with the current LB, the IB could establish a cooperative relationship with VSV to find a common ground for both Societies. A possible collaboration is starting with VSV and shall be continued by the next IB

It can be noticed that one of the main goals of this International Board was to leave a clear scenario where every single group within EUROAVIA has an active role thus dismissing the local groups that repetedly infringed the EUROAVIA Statutes. For many years the philosophy had been to keep those inactive local groups as long as their name had a certain impact in the aerospace field such as Hamburg or Milano, however this group decided to revert this situation in order to have a real measurement of the impact and potential of EUROAVIA. Nevertheless, new attempts to refund these groups will be made.

- Expansion Unit: the main milestones over the year are:
  - PPAS Kocaeli was accepted during EMEAC 2018 in Istanbul as PAS;
  - PAS Bordeaux has been accepted during AMEAC 2018 in Bremen;
  - PPPAS Eskişehir in Turkey has been contacted;

- The university in Graz has been contacted and many professors responded positively. However, the contact with students had to be postponed to the start of the new academic year in September.
- CVA Summerschool in Seville provided IB with several contacts from La Sapienza in Rome, a potential group of students might be contacted by EAX;
- A motivation letter from the Lovely Professional University has been received and shall be driven by EAX during the process of becoming a PAM;
- The University of Saint-Quentin in France contacted a member of AS Paris showing interest in EUROAVIA.
- Through a member of AS Aachen, some students of the Samara State Aerospace University have been contacted and they are now being guided to the process of becoming a PPPAS.
- The collaboration with the Stratofly project has provided with the local contacts of the aerospace society in the Politecnico de Torino

Finally, the Erasmus + unit could not get started due to the lack of members. However, a stronger collaboration with the S&B WG is going to be pursued to attract members throughout the following BY.

### 3.4.2 Communication Working Group

The performance of the WG will be shown next divided in two periods, before EMEAC and after it. For the first half of the year the Communication WG achieved to:

- Post more than 60 posts on each social media;
- Deal with the new Facebook policy that decreased the page reaches from November to January, implementing promotional measures like the raffle of the ILA tickets in February;
- Activate the News Section in the euroavia.eu website increasing its visibility;
- Check the Wikipedia terms of service and start updating it with current information;
- Revise the website content correcting typos and other mistakes;
- Publish two EUROAVIA Newsletters;
- Publish a EUROAVIA Christmas Newsletter focused on the Christmas/New Year's Eve period;
- Decide the content for the next EUROAVIA Magazine.

During the second half of the Business Year:

- A second special edition of the Newsletter was published expressly issued for Messe Berlin and the ILA Berlin.
- The Newsletter distribution list was changed, making it fully compliant with the GDPR increasing the opening rate of the newsletters

As shown in the figure below, the opening rate remained constant for the editions between



October and February and decreased from April onwards. Due to the General Data Protection Regulation (GDPR) update, the distribution of the Newsletter changed from direct mail to local group's members' list to subscriber's list composed of those who accepted to receive the Newsletter after the GDPR update. This explains the increase in the opening rate and the decreased number of subscribers. Note that after the GDPR only half of the local AS groups subscribed to the Newsletter.

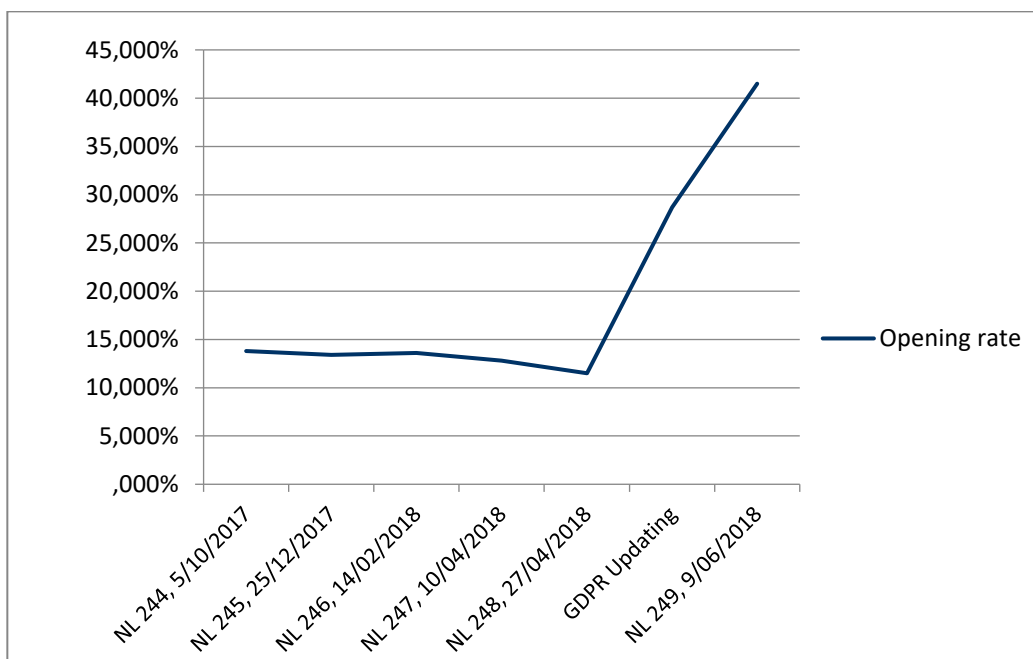


Figure 3-3. Newsletter opening rate

- The technical articles were removed from the EUROAVIA Magazine, due to the lack of contributions.

Regarding the website:

- Upload articles to the News section and update the Events section
- Edited the text (Grammar, Language improvement) in several sections of the website;
- Updated the Photo Gallery.

Moreover, it completed the task of revising and updating the EUROAVIA Wikipedia page, having reached several objectives:

- Added inline citations, references, and footnotes for any further clarifications;
- Added verifiable sources for the information contained (the EUROAVIA website, the Statutes, and Bylaws, etc...)
- Updated the structure paragraph: International Board, Affiliated Societies, and Working Groups;
- Updated the International Events paragraph;
- Solved page issues (mentioned at the points above) and removed the "Multiple Issues" warning;
- Updated the EUROAVIA page in Wikipedia also in Romanian and Italian, according to the edits made on the English one.

Finally, the Social Media Unit experienced a good performance on Facebook and Twitter, while the performance on Instagram increased drastically, yet the unit did not act much on LinkedIn.

Figure 3-4 shows when the new Facebook “page’s policy” started to take effect (November). The effect is that pages that do not pay to advertise, do not reach all the people that follow them. Meaning that a post will only appear in the Facebook’s feed of about 10-15% of EUROAVIA followers.

In February the results were much higher because of a raffle was organised, and it was also the month in which the highest number of posts were published, with 23 total posts.

The best post of the Business Year was the “International women’s day” with a coverage of 3618, 288 interactions, 124 reactions, 1 comment and 4 shares during the Space Symposium in Sevilla. In total terms, the Facebook page had an increment of 486 followers, ramping up for more than a 12%

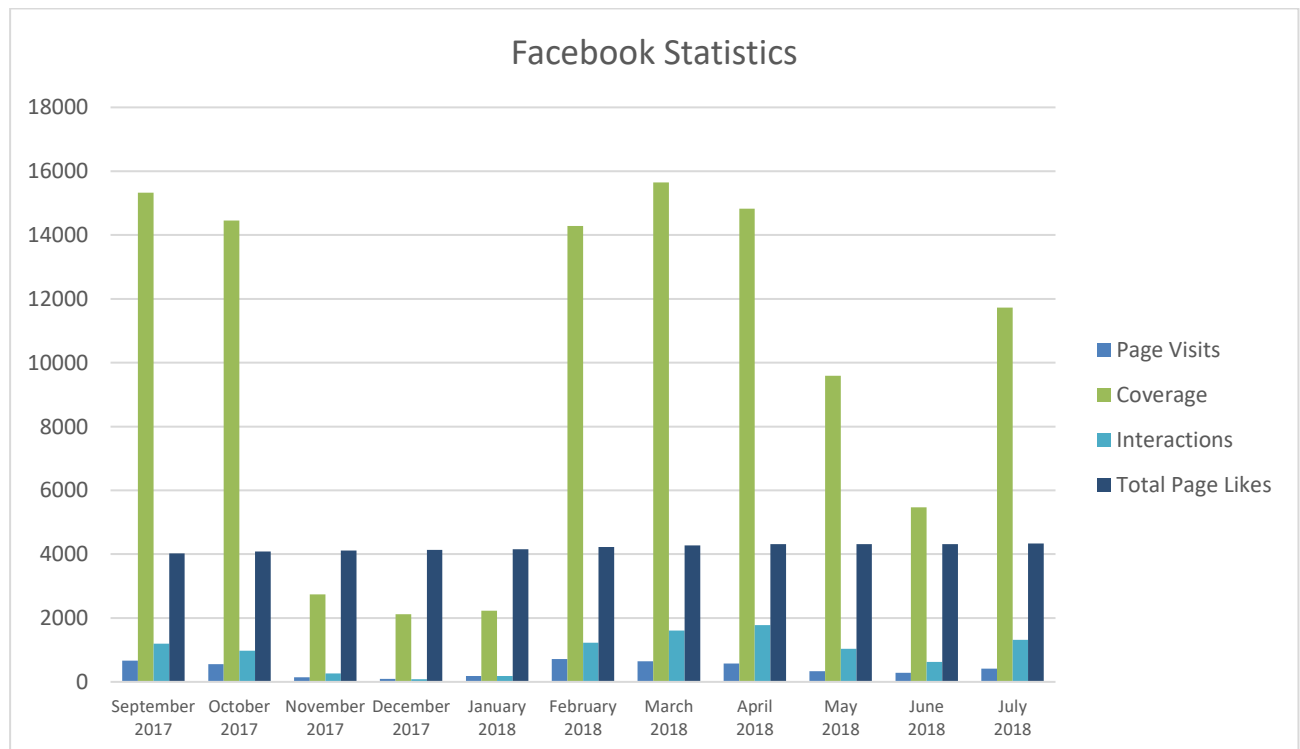


Figure 3-4. Facebook Data statistics

On Instagram, as mentioned before, the WG had the best performance amongst all social media as the views and the likes for each post were constantly quite high. It got more than +720 followers, reaching the milestone of 1000. The best post was the “BelugaXL”, with 165 likes and 1988 views. Finally, the WG managed to have a total of 606 visits in the profile in one week.

As for Twitter, the growth was not representative as it is not the students’ favourite platform and it does not work in the same way and with the same strategy as for Facebook and Instagram. A new strategy shall probably be discussed for it.

Along significant moments of the Business Year, such as Congresses, Physical Meetings, and

International Events, where the future of the association was discussed, the WG also published in LinkedIn. However, a new strategy to make it more active has been discussed and it is proposed for the next Business Year.

Finally, after a close collaboration during the BY, in August the WG had the Physical Meeting in Pisa together with the DN WG where strategies and plans for the next BY were examined.

### 3.4.3 Company Relations Working Group

The CR WG has focused on local projects instead of working for EUROAVIA International agreements. It is so since it has been proven that companies respond in a better way to specific ideas than to just a general partnership proposal. Moreover, in this way, local groups feel a stronger support from the international site of the Association, increasing their motivation to work.

- CR WG provided guidance to the Patras organisation team on how to approach companies for the celebration of the Airbus Slosing Rocket Workshop.
- EUROAVIA Alumni and CR WG are now working together to get company contacts.
- More than 34 companies have been contacted and 22 profiles have been registered
- The Brochure Sub-unit has supported the creation of 6 brochures: RoWo València, Symposium Patras, International Brochure, FoWo Stuttgart, AMEAC Bremen and FoWo Braunschweig.
- The Approach Sub-unit participated in the establishment of a list of companies to support the organisation teams of AMEAC Bremen and FoWo Braunschweig.
- A partnership agreement has been signed with the start-up EDUOpinions and the management of its relationship runs through the coordinator of the working group.

### 3.4.4 Design Working Group

A smooth transition and completion of tasks from the very beginning of the year was achieved thanks to the experience and know-how of the Design Subunit of the former PR WG as well as the designers of the former Press WG.

The aims of the WG were:

- Revision of the CI and development of a new one;
- Design of brochures, promotional material and commercials;
- Management of the Website Design;
- Design of Merchandise;
- Develop the EUROAVIA web shop project;
- Close partnership with IT WG to implement a similar platform of the ticketing system currently in use for a better management of the design requests.

Regarding the last two points, some technical problems arose since the webshop exceeded the capabilities and financial sustainability of the Association and the workforce of the IT WG. Furthermore, the ticketing system of IT WG experienced some troubles and was restored as of

August 2018 meaning that an application to DN WG was not feasible before the end of the BY. However, the structure of this potential platform is ready and is only a matter of time.

During the BY the working group has completed 27 tasks. Some of those were multiple tasks.

The first half of the BY saw the following tasks completed:

- HR WG logo
- EA pins
- Bionic Studio challenge poster
- Social media identity update
- WG posters
- WG promotional videos
- Christmas card
- Sponsors chart update
- International Brochure update
- Sponsors brochure
- Composite Symposium brochure
- ILA Fly-In Berlin brochure
- Space Symposium Sevilla brochure
- New CI proposal

The second half of the BY saw the following tasks completed:

- Logo competition
- New CI finalization (working template)
- General Poster template
- General flyer template
- Alumni flyer
- Brochure and flyer for FoWo Braunschweig
- New IE calendar design
- Liliun proposal brochure
- Poster for AS WG
- Brochure AMEAC 2018
- EduOpinions Brochure
- EduOpinions Banner for advertising
- Social media update (Profile pictures + Facebook cover)

The working group held mostly bi-weekly meetings with some exceptions due to holiday or exam periods resulting in 17 meetings. Additionally, the working group had a physical meeting together with the CM WG in Pisa during the first week of August. Three WG members were able to attend. The low participation rate can be explained since the PM was scheduled according to the availability of the members at the beginning of the natural year.

It is important to notice that the change of the corporate image of the Association had a great impact since it was the first time since the logo creation that it has been modified. The change on the logos can be appreciated below and attends to the needs to renew the image into a more aerospace related trend.



Figure 3-5. EUROAVIA Logo evolution

### 3.4.5 EUROAVIA Training System Working Group

Two actions were necessary at first to set the working group in the right direction: Providing a clear structure so that future generations of trainers can easily expand their capabilities and pass their knowledge on to more members and defining the goals of the WG. In this sense the subtasks were defined as:

- Creating the necessary rules/guidelines/working environment:
  - Encouraging coworking of the current trainers
  - Supporting the organization of FoWo and train a new generation in TNT
- Making ETS more visible to all EUROAVIAns:
  - Providing training opportunities during International Events
  - Cooperation with other YNGO Training Systems

As for the structure the following system was designed:

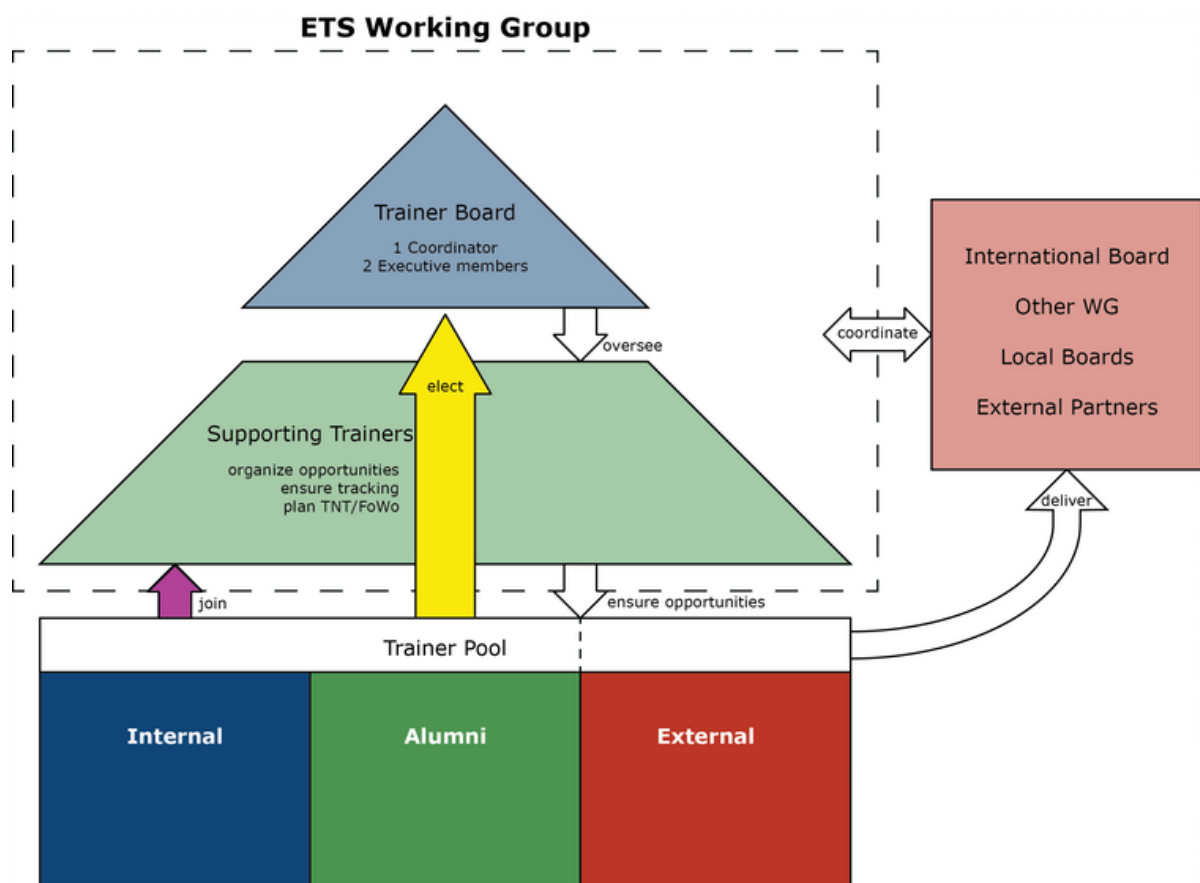


Figure 3-6. ETS WG Structure

The general structure that was adopted shows a working group composed of supporting trainers headed by a trainer board. Similar structures are in use by many other YNGO training groups and have proven themselves to be effective.

The pool of internal trainers was successfully enlarged with the celebration of the TNT in Bucharest. The 35 EUROAVIA trainers at that time, spread out over 16 universities in 10 countries show that training sessions can be easily delivered all over Europe and in most local languages additionally to English. The following map shows their location according to the local groups:



*Figure 3-7. Trainers distribution*

A full board was elected and a successful handover by the interim coordinator was completed. This saw the reestablishment of regular trainer and board meetings.

During the 2017-2018 BY, ETS WG delivered and partially organized the following international sessions:

- Formation Workshop Stuttgart (05.11-11.11.2017)
- Space Symposium Sevilla (04.03-10.03.2018)
- Train New Trainers Bucharest (16.03-25.03.2018)
- Alumni Exchange İstanbul (07.04-08.04.2018)
- ILA Berlin (24.04-28.04.2018)
- Rocket Workshop València (22.07-28.07.2018)
- CVA Summer School Sevilla (15.07.2018-11.08.2018)

In total, around 100 hours of training were delivered during international events. Additionally, there were numerous local training that were not tracked as well as deliveries at external events and multiple local and international deliveries to/with other YNGOs.

### 3.4.6 Human Resources Working Group

During EMEAC 2018 the HR WG was officially established by being introduced into the EUROAVIA Bylaws. In agreement between the IB and the working group, it was decided not to overload the working group with too many tasks but to make sure that the working group is capable of handling specialized ones. Additionally, some tasks could not be started before a major revision of the data privacy regulations and the membership database were concluded. The four tasks assigned to HR were:

- WG promotion
- Training and guidance of new members
- CV Database
- Job hunting

Thus, from the total of four tasks the working group is assigned to, only the first two have been pursued actively. Work on the CV Database was started, and a concept map developed that requires detailed analysis in conjunction with the IB and IT working group to safely access this highly personal data. The task of job hunting was paused for the as further evaluation of what value the HR WG can bring to this specific field is necessary.

In total, HR WG trained 35 EUROAVIANS for an active participation in the Working Groups. While most training activities were achieved with one HR member and one trainee, during periods of high demand they were expanded to accommodate up to four trainees at one time. A training consists of a general introduction to the work of EUROAVIA including a guide to the commonly used programs and tools (e.g. SharePoint) as well as the specific working group tasks.

Figure 3-8, shows the training sessions completed, sorted by date. Two main peaks are evident, correlating to the two main EUROAVIA events, the Congresses. This underlines previous theories that the active presentation of working groups is the main driver for active participation of members. The number of training sessions fell to zero both in the months around the turn of the year and the summer months. This is due to the exam periods in summer and the general holidays during winter.

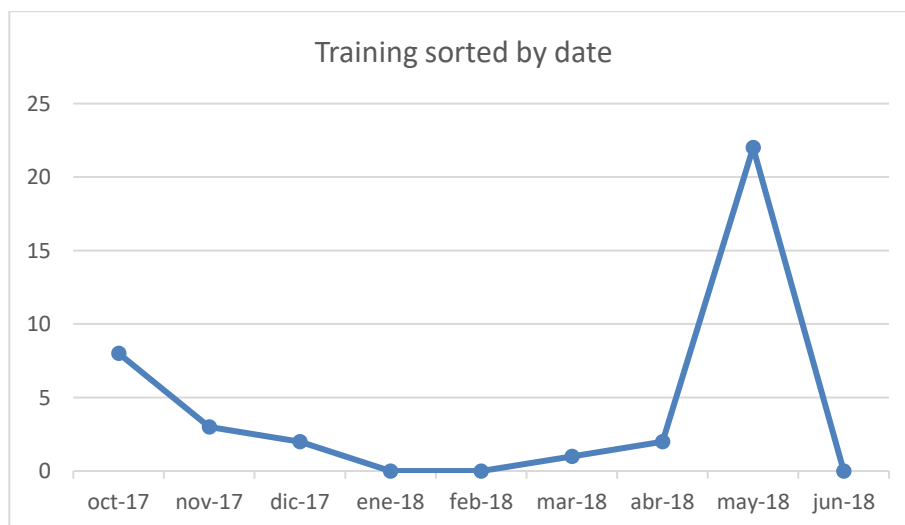


Figure 3-8 WG Training dates

It is advised to focus the promotion to periods of activity such as the beginning of the semester and international events foremost the congresses.

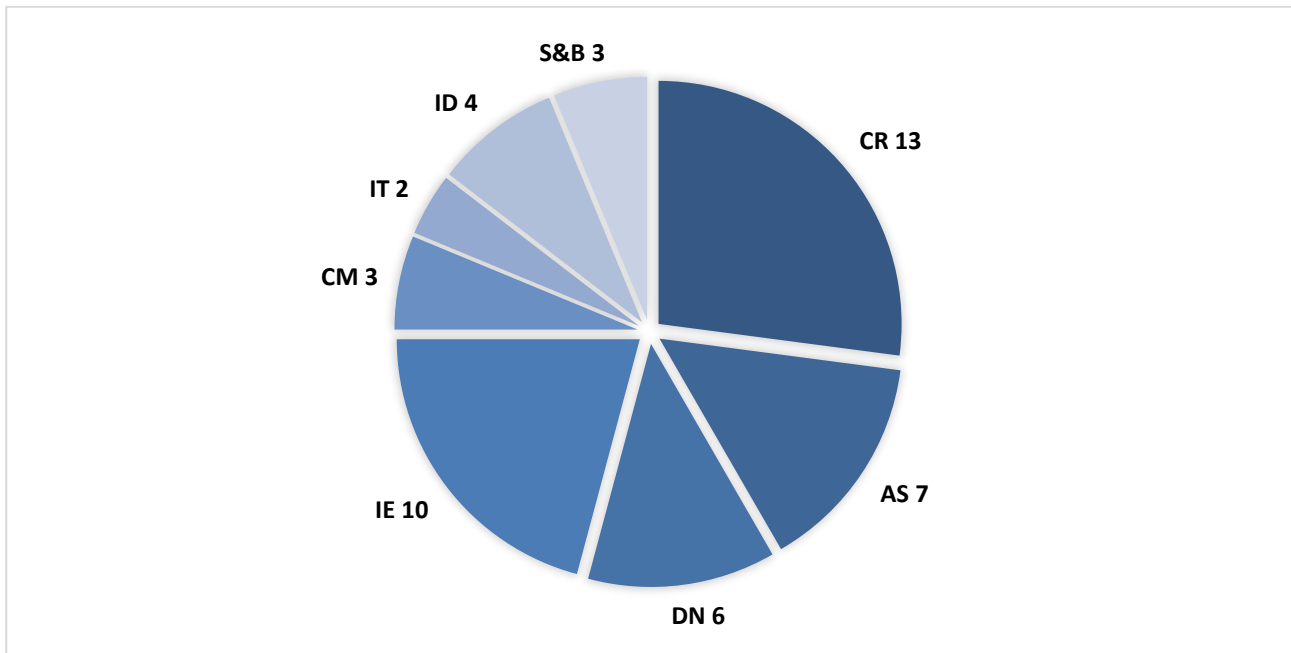


Figure 3-9. WG training sorted by target WG

Looking at *Figure 3-9* it is evident that the number of applicants and training to the working groups was very different. While CR and IE WG benefitted the most, the smallest number of new members chose IT. After consulting with the working groups that received the smallest number of members it is advised to create a targeted campaign for specific working groups dealing with problems due to a lack of members.

### 3.4.7 International Board Working Group

Having just one member and taking into account the challenges during the beginning of the business year, no proper attention could be given to the WG. However, the IB WG member could have a first experience as an international representative of EUROAVIA attending the Autumn IFISO meeting.

The real value of this working group has not been proven yet and its elimination is suggested for the future.



### 3.4.8 Information Technology Working Group

The launch of the new EUROAVIA website was the starting point of the BY. Since then, many new features have been included, e.g. a description of the upcoming events and recent news timeline.

In May the General Data Protection Regulation (GDPR) entered into force, which led to a revision of the security protocol on the website and the compliance with the new cookie policy. In addition, the former host company, Carbonsoft, has been fully dismissed and EUROAVIA is no longer using their services. Currently, nine LG websites are hosted by EUROAVIA together with event-related temporary websites.

Besides the website, the Database was announced during AMEAC 2017 in Cluj-Napoca going into service during the first half of the BY. However, due to functionality issues first and, later on, compliance with the GDPR, the database was decommissioned despite having received almost 1.3 thousand entries.

Even though it was not fully steady over the year, all issues related to Office 365 were solved within a short response time. The ticketing system has not been functional during most of the second part of the BY due to technical problems, however, this issue was rectified during August.

Overall, the main challenge of the Working Group has been dealing with the lack of continuous leadership throughout the year which is reflected in the lack of motivation among the members. IT WG relies heavily on a continuous knowledge transfer. The following two measures were taken to tackle these issues:

- A cleanse, and declaration of commitment of the working group members has been done. In addition, different tutorials and manuals regarding website domains creation and development combined with the management of the international website and ticketing system were created
- The Database project led by the IB Treasurer aimed to fulfill two targets:
  - Training a self-sufficient team of EUROAVIANS who can develop high-level programming codes and transfer this knowledge to new members. This would cover the demand on digitalization related skills that industry stakeholders, such as Airbus, are demanding on the future generations of engineers.
  - Provide EUROAVIA with the necessary knowledge to launch different projects and apps that help to strengthen the IT functionalities of the Association such as a GDPR compliant CV database.

To achieve this, the Database Project Team, fully formed by IT WG members has been trained with “agile” methodologies. Furthermore, technologies and languages such as Java, SQL or Angular 5 are taught through a project-based learning method in which the main target is to programme a fully functional database for EUROAVIA.

### 3.4.9 Innovation & Development Working Group

ID WG is based on weekly Skype meetings, where the members discuss the possibility of new projects as well as the progress of the existing ones. To have a clearer view, the meetings are separated in “Brainstorming phase” and “Status Update Phase”:

- Brainstorming Phase: During this time, every member has the chance to propose new ideas that could benefit EUROAVIA or the existing projects.
- Status Update Phase: Meetings are started with this phase so all members of the WG can have a general picture of the current situation. During this slot, members that are responsible for a project inform the WG about its progress. After that, the WG decides about the further development of those projects and new tasks are distributed.

From the very beginning, ID WG started studying possible projects on Social media, adapting new competitions from externals to EUROAVIA’s network and preparing the teams to apply to such challenges.

After Christmas, the IB assigned the task of managing the Bionic Studio Challenge to the ID WG. The members prepared all the necessary material for the organization of the competition. Nevertheless, the number of applications stayed low. ID WG came up with different ways to change this situation, but none gave a positive result. The challenge had to be canceled due to lack of teams and a lack of motivation from the teams that had applied. Heinkel requested a report based on these results and ID WG analysed the situation and prepared a collection of possible improvements for all parties involved.

The second project for ID WG was getting shaped between the IB and Airbus group: “Airbus Sloshing Rocket Workshop”. ID WG has been entitled to oversee the organization of the event. The first phase of the competition has been held online in the same format as the one with Bionic Studio Challenge which means that ID WG had already acquired experience on this topic and some results could be guaranteed to Airbus. Moreover, ID WG will be in charge of managing the applications and supporting the local team of Patras, where the physical part of the event will take place.

### 3.4.10 International Events Working Group

During the Business Year, the working group experienced significant difficulties due to the withdrawal of most experienced members.

The Maintenance Crew has created a survey document to have an updated exams calendar. This is updated every Business Year, as the knowledge of the exam dates is essential to the correct organization of an International Event and the planning of the whole year. Moreover, the Maintenance Crew oversees the International Events calendar, and with the help of the Design WG, they keep it up to date.

Due to the lack of tutoring experience of most of the members, the Tutors Manual was the cornerstone of the tutors training and tutoring process. It includes everything a tutor may need to efficiently provide help and advice to the organization team. Therefore, it is a priority of the working group to have the manuals up to date.

The IB observed that during the Business Year the tutoring of the events did not reach the expectations so the IB provided a training to solve this problem. As the number of members was not enough to maintain the two units, every member of the team had a secondary task to keep the database and calendars updated while tutoring the events. The new members were invited to join an event as a trainee tutor and after the training period, they started to follow the standard procedure.

In addition, the International Events Working Group continued working in collaboration with the CR, CM and DN WGs to help local groups to promote their events professionally throughout the aerospace industry. This collaboration has always been extremely important to ensure a good visibility of the events, which eventually would lead to more partners.

In total, nine events have been tutored and the events calendar for the 2018-2019 BY was planned:



Figure 3-10. International Events Calendar

### 3.4.11 Statutes & Bylaws Working Group

The task of the Statutes and Bylaws Working Group is to make sure that the official Statutes and Bylaws of EUROAVIA are up to date and adequately meet the contemporary needs of the association. Additionally, the WG helps financing EUROAVIA's activities and structural costs through the active use of the European Commission funding platform, and to keep up to date on opportunities and due procedure for European Funds. These goals have been tackled by:

- Reviewing of the agreements between EUROAVIA and foundations linked to the Association while observing compliance with its interests;
- Ensuring that grants are compatible with EUROAVIA's interests;
- Actively communicating with collaborating/partner entities in the gathering of European Grants information;
- Increasing EUROAVIA's understanding of European Grants mechanisms, opportunities, and due procedures;

- Submitting applications for structural costs financing through European Grants.

During this Business Year, the S&B WG has played a fundamental role in EUROAVIA. The WG renewed the EUROAVIA Bylaws and updated them through 12 Bylaws proposals and followed the grant applications.

As for the Bylaws proposals, the main changes presented during the BY have been:

- Update of definitions for pre-existent WGs;
- New WGs definitions;
- TNT event definition;
- General Bylaws text revision & female gender introduction;
- Update WG Coordinator election;
- Update IE General Rules;
- Update EUROAVIA Logo;
- GDPR modifications.

The first one was obtained with a high score and so for the first time, EUROAVIA has been funded by the EU Commission, while the second one was missed by 0.5/10 points. Furthermore, the feedback from both applications has been studied to submit better applications in the future.

### 3.5 Third parties

As mentioned before, one of the goals at the time of the handover was to have a lean scenario of members and collaborators. A round of messages and negotiations were carried out with every single third party involved with EUROAVIA in order to renew, if convenient, the existing agreement between the two. As a result, the following companies have been removed from the collaborators list of the Association:

- Zero 2 infinity
- Studyportals
- SpaceBoard
- UKSEDS
- QREERS
- YouthProAktive

Two different relationships can be found, those with a financial basis and those with a non-profit collaboration.

#### 3.5.1 Sponsors

1. European Commission:

As described in the previous section corresponding to the European Grants, the European Commission has co-funded EUROAVIA for the period reflected within this document under the ERASMUS+ programme. *The European Commission's support for the production of this publication does not constitute an endorsement of the contents which reflects the views only of the authors, and the Commission cannot be held responsible for any use which may be made of the information contained therein.*

2. Airbus:

Once the communication with the company was recovered and after a full year of negotiations, a common ground was achieved. This agreement has been validated by

Airbus' University Relations Manager and approved by the company. This milestone was achieved days before the handover to the next International Board thus, receiving the payment became a task for the new team.

However, this actually never happened, communication was lost again while waiting for the final answer of "ethics and compliance" department and in the mean time, no answer from the PoC was received. Before this situation, another attempt to communicate with them was done, before the meeting with Airbus' CTO, Grazia Vittadini and the Former CEO, Dr. Thomas Enders during the 60<sup>th</sup> Anniversary of EUROAVIA in Aachen took place.

Shortly after this meeting, the communication was reestablished once again, including the 2018-2019 BY participation fee to the agreement that was achieved in October 2018 and which is described below. Once the payment is received, Airbus will acquire a full membership treatment.

This agreement stands for:

- The sponsorship for both the BY 2016-2017 and BY 2017-2018 at the international level;
- Local collaboration on different projects at the national level;
- A common strategy towards new training trends within EUROAVIA for a better labour market integration.

Additionally, the IB strives for:

- New Design Workshops in Munich and Toulouse;
- Common initiatives in terms of recruitment strategy and digitalization formation;

On top of that, a regular WebEx communication was established reducing the chances of a renewed loss of contact. Multiple partners in the different divisions of Airbus Group have ensured that activities can nevertheless continue with Airbus' support and collaboration. Airbus Defence and Space is now supporting the "Airbus Slosing Rocket Workshop".

### 3. BDLI:

Thanks to the active and efficient communication between the two parties, BDLI has supported EUROAVIA in collaboration with Messe Berlin and Heinkel Group. BDLI provided EUROAVIA with the tickets to the ILA Berlin Air Show 2018 for the international participants and the opportunity to attend as a speaker at one of the podium discussions that were held in a conference room.

### 4. Liliium GmbH:

An active contact with Liliium was established through the president of the EUROAVIA Alumni Association Mr. Moritz Jung, currently working for the company and CR WG after the EMEAC Istanbul 2018. A sponsorship agreement has been signed and the imbursement has been processed. Liliium has now a direct channel with EUROAVIA in order to promote the interships and job opportunities.

### 5. ITAérea:

ITAérea has contributed activiely contributed to sponsor two events over the last years RoWo 2017 in Terrassa and Space Symposium 2018 in Seville

Moreover, EUROAVIA has taken a step forward in the collaboration with ITAérea getting the commitment to promote their latest project: Master in Sustainable Air Transport Management. Its main objective is to train students to fill management positions in airports, airlines, as well as in companies associated to airports and aviation in general, in exchange, EUROAVIANS get a 7% discount on the final price and ITAérea commits to take a fundamental sponsorship role to EUROAVIA's events.

6. EDUopinions:

Thanks to the work of CR WG, EUROAVIA has set a new MoU to collaborate with EDUopinions. With this agreement, the EUROAVIA network's universities have been evaluated by EDUopinions and EUROAVIA members can leave a review registering via Facebook or LinkedIn through the following link: <https://www.eduopinions.com/find-university/?ref=euroavia>. Once a EUROAVIA member submits a review, EDUopinions checks it and there is a direct return of money into EUROAVIA based on the following chart:

University Category	Min. per review	Max. per review
Standard	1 €	3 €
Silver	2 €	5 €
Gold	4 €	8 €

Table 3-3. EduOpinions conversion rate

Up to now, there are four EUROAVIA network universities that do not appear in the EDUopinions database, 31 Universities in the Standard category, 6 in the Silver category and 1 in Gold category. 563 clicked links lead to a total of 41 submitted reviews. For further boosting the benefits of the collaboration, during the month of October, the reviews were rewarded with up to two times the normal rate (i.e. Gold max: 16€).

3.5.2 Partners

7. Aviation Skills Partnership:

In the first half of the BY, ASP invited EUROAVIA to join Helitech International 2017 in London. The IB Secretary as Point of Contact attended this event from the 3<sup>rd</sup> to the 5<sup>th</sup> of October.

In the second half of the Business Year, EUROAVIA informed its members about the courses offered by ASP in its academies and tried, without any success yet, to enlarge the network in the UK with the help of this organisation.

8. CEAS:

EUROAVIA members can periodically check a list of competitions, internships and career opportunities all around Europe on the official CEAS website ([www.ceas.org](http://www.ceas.org)). "The

Quarterly Bulletin of the CEAS" is also available there. It offers the opportunity for EUROAVIANS to be aware of:

- International aerospace upcoming events
- Aeronautics sciences, aerospace & defence security topics
- Technical presentations and workshops
- Conferences
- News from European institutions

The "Aerospace Europe CEAS 2017 Conference – 6th CEAS Air & Space Conference" took place from the 16<sup>th</sup> to the 20<sup>th</sup> of October 2017 at the Palace of the Parliament in Bucharest, Romania (<http://ceas2017.org/>) where the IB President delivered a keynote speech during the event organized by COMOTI – Romanian Research & Development Institute for Gas Turbines.

The goal of this conference was to bring together academia, research organizations, industry and operator representatives for a fruitful exchange of the latest ideas and developments in the European aeronautics and aerospace. Young professionals, PhDs and graduate students were invited to participate with discounted fees through the submission of scientific papers until July.

Besides the keynote speech, a 12 square meters stand offered display space through the exposition of technical projects. A workshop about the "Future through education" was also included in the program. Non-formal education methods and training approaches at school and university were the main topics, which will be delivered by some EUROAVIA members.

Moreover, both the FIB President Daniele Vangone and the IB President attended the CEAS Board of Trustees that took place between the 4<sup>th</sup> - 5<sup>th</sup> of February in Milan where a solid relationship with other networks such as the Royal Aeronautical Society (RAeS), ESA and Pegasus have been established.

More in detail, on one hand RAeS were invited to attend the Space-Up Pisa and possible conversations with British student societies might arise. On the other hand, ESA provided IB with the PoC for university-related issues proving itself to be a rewarding move resulting in the attendance of ESA at the RoWo 2018 in València.

## 9. CleanSky

EUROAVIA has become the official entity representing the students' community at the European Commission level. Since EUROAVIA joined, its representatives joined three meetings:

The first meeting was held in Brussels during the first week of March, Mr. Jan Van Baelen attended the meeting bringing the first experience to EUROAVIA.

The second meeting took place in Brussels during the month of May. A closer collaboration was achieved during this meeting since EUROAVIA became the host of the next Clean Sky Academy meeting taking place outside the Clean Sky headquarter, in the city of Seville between the 27<sup>th</sup> and 28<sup>th</sup> of September. Additionally, the thematic topics for the next academic call for proposals funded by Clean Sky were discussed, considering the opinion of

the Association.

In this way, EUROAVIA gains further visibility and recognition as a major representative of the aerospace student community throughout Europe.

#### 10. CVA

The interests of CVA and EUROAVIA converge, providing CVA with the right profile of students and EUROAVIA with opportunities for its members to develop their professional careers.

A closer collaboration was achieved during the organization of the CVA Summer School in Sevilla, where EUROAVIA contributed with workforce, soft skill training sessions and a Rocket Workshop.

The final agreement was signed between the two bodies during the 60<sup>th</sup> Anniversary of the association, putting an end to one-year of negotiations.

#### 11. Heinkel Group

Following the BDLI spring meeting in 2017 where Mr. Johannes Brommer and Mr. David Leiser presented EUROAVIA to the attending BDLI Human Resources responsible, formal contact was established with Heinkel Group. Based on a project that is run locally, Heinkel approached EUROAVIA with the idea to pursue an international design competition in their newest field, additive manufacturing.

Thanks to the continued contact with Mr. Johannes Brommer, who started an internship with Heinkel Group this IB was able to sign a formal agreement for the “Design Studio Challenge by Heinkel Group for EUROAVIA”. A representative of Heinkel joined the EMEAC 2017 in Istanbul to promote both the event and the company.

The challenge had to be cancelled before its completion due to a low number of participants. Heinkel is nevertheless interested in an ongoing cooperation with EUROAVIA and an updated and renewed challenge or workshop is being discussed.

#### 12. IFISO

During this Business Year, EUROAVIA attended both the Autumn and the Spring Meetings getting closer to some other organisations present in the network and establishing stronger relationships with partners such as JADE.

#### 13. JADE

EUROAVIA collaborated with JADE in many different fields:

- The enlargement of the respective association: EUROAVIA supported JADE in Turkey and Poland;
- JADE helped EUROAVIA in the application process for the European Grants;
- Both parties exchanged invitations to the respective Congress. Mr. Jan Van Baelen attended the JADE Spring Conference as EUROAVIA representative.

#### 14. NEREUS

The relationship between EUROAVIA and NEREUS was stopped after EMEAC 2015 in



Seville, however, the FIB (BY 2016-2017) recovered the Point of Contact in Brussels. After the handover, this IB has created a common strategy, including NEREUS' active participation in the Space Symposium in Seville and their collaboration in the SWAFS project.

This partnership brings opportunities to high-level educated students who may want to contribute to their annual Ph.D. awards and magazines with their own contributions.

#### 15. Space Renaissance International

During the second half of the Business Year, EUROAVIA signed a Memorandum of Understanding with this organisation to get a cross promotion and mutual help in the European enlargement.

#### 16. Space Up

EUROAVIA Pisa hosted the first EUROAVIA SpaceUp between the 4th and 7th of May.

#### 17. Think Young

At the beginning of the year, all communication was working smoothly while the previous point of contact was still in office. As the BY went on, the point of contact changed and IB lost contact with the association. They have a big potential due to their powerful social media, especially their Facebook page. By retaking contact, EUROAVIA could get many benefits such as sharing EDUOpinions link through them and reach a big amount of people and therefore reviews or getting new opportunities for members. The IB has renewed the contact and hopes to sign an updated agreement.

### 3.6 Other business

#### 3.6.1 EUROAVIA Archive

Continuing with the problem mentioned in the previous chapter, a solution was found to avoid the expensive feed of the private storage. At the end of May, the IB, with the help of some members of AS Delft and AS Aachen, went to the storage space, selected the documents and at the end of June, the EUROAVIA Archive was moved to KU Leuven. There, it is accessible by AS Leuven, an active local group, and the storage is again free of

#### 3.6.2 DeCo/DeWo Foundation charge.

Shortly after starting the business year, while inspecting the documents from previous years it was found that the DeCo/DeWo Foundation, whose management board had resigned a couple of years before, had frozen funds in a separate bank account with a constant leak of money due to bank fees.

Upon consultancy to the KVK and the founder of the Foundation, the IB decided to shut it and transfer the money back to EUROAVIA. Every single member of the former board had to be contacted and asked for their signature to do so.

Despite of having months of difficult bureaucracy, these funds could be reinvested in the Association while the former functions of this separate body were assumed by the existing working groups of EUROAVIA.

#### 3.6.3 EUROAVIA Data Protection Policy

On the 25<sup>th</sup> of May 2018 the General Data Protection Regulation entered into force.

To comply with this new EU law, the International Board:

- Realised a “Data Protection Policy” that protects the rights of members, partners and visitors. It states what personal data EUROAVIA collects and processes depending on the relationship with the association. It defines how an individuals’ data is stored and processed.
- Added an SSL certificate to the website, to ensure protection over the members accounts.
- Updated the subscription form of the Newsletter.
- Included several disclaimers in the International Events application form, such as privacy policy acceptance, pictures fair usage, and insurance.
- Created a manual for the Local Groups to support them in complying with the GDPR.
- Launched a new database project, with a stronger safety system further explained in Section 3.4.8 IT WG

### 3.7 Conclusions

In terms of communication:

- At the International Board level, more than 41 000 messages, 60 Skype meetings, 9 days of physical meeting and 8 events took place between September 2017 and October 2018. The use of task tracking and distribution as Trello besides the use of Office 365 allowed a smooth performance along the BY.
- The overall interaction between every body was highly improved, raising the participation and awareness from the local members and working groups, reducing the time needed for them to respond. The use of a Whatsapp group for urgent news among the presidents of every single AS proved to become a powerful tool.
- By EMEAC 18, 80% of the local groups were represented during the congress, becoming the event with the higher participation recorded. The performance of the Communication WG, one of the new ideas proposed in the Business Plan resulted satisfactory.

Visibility wise:

- A complete renewal of the corporative identity was approved after years of discussion. The new image of EUROAVIA adapts to the current trends in the aerospace sector and unifies the local groups together.
- Every single MoU and partnership were evaluated, ceasing the relationship with those companies to whom there was no an efficient communication. As a result, 6 of the inherited companies from previous years were erased from EUROAVIA’s active network.
- The lack of sponsors streak was finally stopped with the signature of new agreements. Up to 6 different sponsors contributed in different ways to the 2017-2018 campaign, from the European Commisision to Eduopinions.
- At European level, a great effort was put into getting to the relevant aerospace forums. In this way, for the first time in EUROAVIA history, the co-operation of the European Commission was achieved. Other than that, EUROAVIA is now part of the CVA or Clean

Sky 2 Academy WG, being CSJU2 the larger EC programme dedicated for aerospace matters, among others.

In the field of opportunities:

- The completion of the EUROAVIA Training System has allowed to deliver training sessions in every single International Event and thus providing soft skills formation to a every-day-larger number of students.
- The re-establishment of communication with Airbus results in the celebration of the Airbus Slosing Rocket Workshop, with more than 200 students all around Europe being given lectures by top qualified professionals in the sector.
- Several job opportunities have been addressed directly to EUROAVIA members, with special mention to Lilium.
- The budget dedicated to the Travel Support Program has been the largest ever executed, supporting students from different socioeconomic backgrounds and encouraging mobility.

In terms of internal structure:

- After an adaptation period, every single working group has become independent in terms of coordination. Mostly every single working group included or expanded has achieved and, in some cases, surpassed the expected results. As the maturity of these WG increases even further results are expected.
- The workload has been better distributed along the business year increasing the members motivation.
- In the same way as it has been done with the sponsors, those local groups who have infringed the statutes and stopped any communication with the international level during the last years have been dismissed from EUROAVIA's network and thus leaving a faithful representation of the association's extension.

For the general issues:

- A solution to the archive has been given by relocating it in a nearby AS.
- With the termination of the DeCo/DeWo Foundation every EUROAVIA-related external body is under control
- EUROAVIA reaches the EU standards in data regulation imposed by the GDPR.

# 4 FINANCIAL REPORT

*You have to know the rules of the game. Then you have to play better than anyone else*

*-Albert Einstein-*

The financial status of the Association throughout the business year is summarized below. The data concerning previous years comes from the financial reports of the former International Boards, stored in the digital archives of EUROAVIA [2] [3].

## 4.1 General Balance 2017-2018

The initial situation of the Business Year was jeopardized by the unstable economical balance due to the low reservation inherited from the previous IB after the loss of sponsors and other incomes. This situation forced the IB to manage the Association in a conservative way to ensure its continuity if a worst-case scenario would take place.

Two relevant milestones can be observed: the termination of the DeCo/DeWo foundation and the European Grants. The first one allowed the Association to have higher flexibility and to ensure the sustainability for at least one more year even if it would mean being conservative. The second one, which came quite late relatively to the duration of the BY, did not allow to plan far ahead however, a ground base on which the following management board could make good use of these resources was achieved.

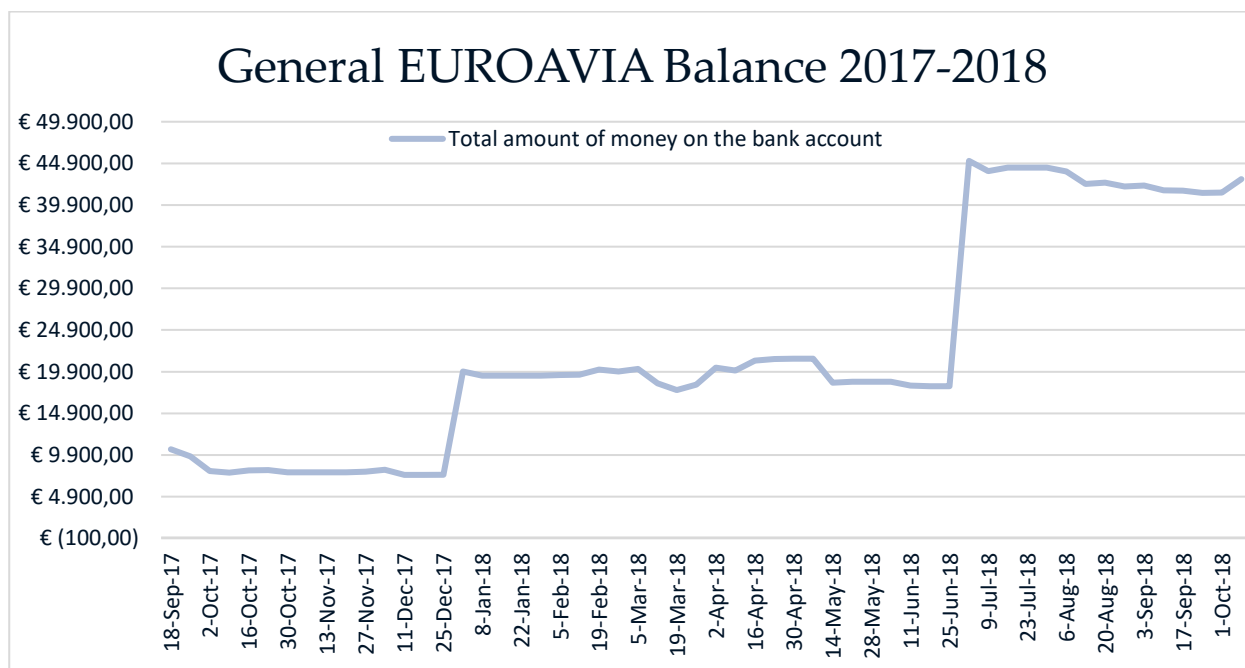


Figure 4-1. 17-18 Financial Balance

## 4.2 Incomes

As for the incomes, the following chart gathers the data for almost the past twenty years. Several conclusions can be obtained out of its analysis:

- Considering the average income for the past 17 years, the income obtained in the 2017-2018 BY is 5,5 time greater, compared to the previous 2016-2017 year it is more than 12 times greater which is presumably the largest income in EUROAVIA’s history.
- There is a disruption in the way the Association has been financed compared to the past, diversifying the source of these incomes i.e. not only focusing in private industrial partners but obtaining support from the European Commission, successfully managing merchandising campaigns and being exhaustive at the time to financially pressure the members to commit to the statutes of the Association.

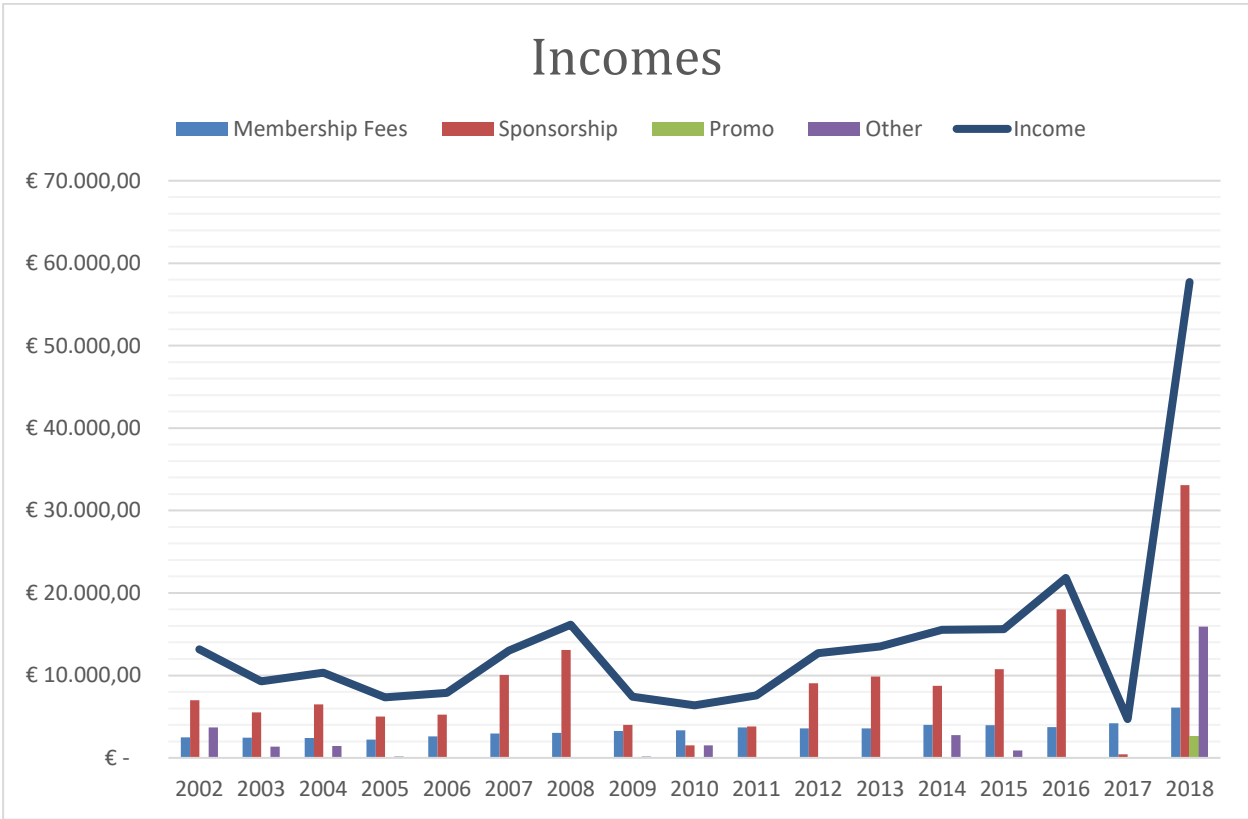


Figure 4-2. Income evolution

It is also important to consider that these numbers do not include those monetary sponsorships paid in kind such as the one from BDLI who paid for the tickets of ILA Berlin nor the signed agreements with Airbus or Lilium whose sponsorships which sum up for a total of 19.500€ more, were not received in time before the handover of the BY.

### 4.3 Expenses

EUROAVIA is a YNGO organization which means that its monetary policies should strive for the best use towards the student's community i.e executing the financial plans, however, due to the timing of the incomes as stated before, not every single action could be taken. Nevertheless, looking at the figure below, several conclusions can be made:

- The EUROAVIA support programme has been duplicated and becomes the largest ever allowing European students from different places overcome the social/economical background and be integrated within different European activities
- Despite having the change of the statutes as a goal, due to the lack of enough funds it could not be driven, however, the healthy reservation for the following International Board sets a comfortable position for both the change of statutes and the support for the 60<sup>th</sup> anniversary of the association.
- Finally, it is also relevant to notice that no matter the great increment of incomes, ensuring the future of the Association is a must, this way, it would have been reckless to spend the money for the simply reason of having it. It is important to stabilize the new paradigm of the Association and in case there is a continuity in the acquisition of European funds together with the current sponsors, then new ways to invest into the young Europeans should be explore

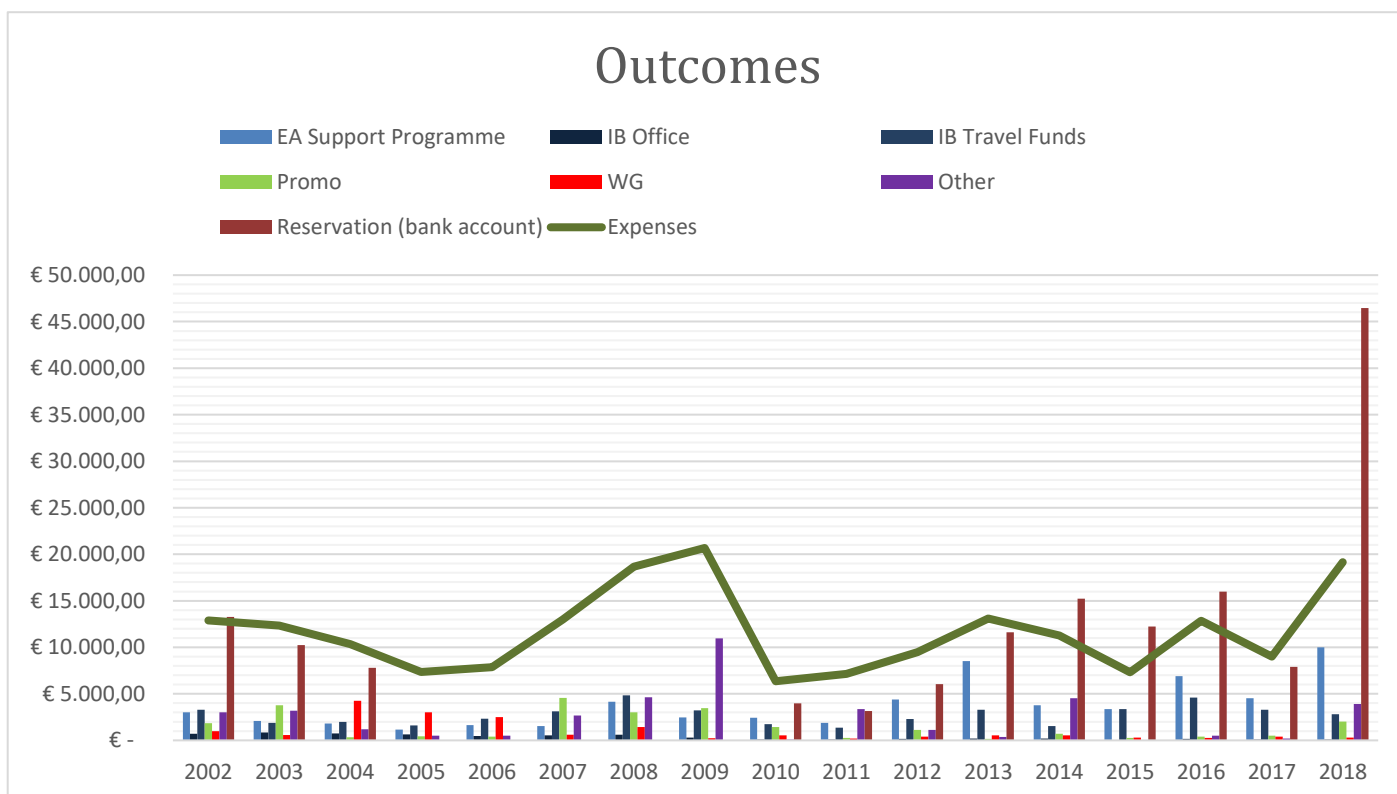


Figure 4-3. Expenses evolution

# 5 CONCLUSIONS

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This chapter aims to clearly state the main achievements obtained during the BY 2017-2018 by the International Board composed of Valentina Luchetti as International Secretary, Javier Ferrero Micó as International Treasurer, David Leiser as International Executive Member and Juan Manuel Lora Alonso as International President of EUROAVIA.

Regarding the communication, visibility and opportunities related to EUROAVIA, cornerstones of the program proposed by the International Board 2017-2018:

- Both the internal and external communication have been enhanced, increasing the participation of the local groups to record levels of Congress attendance (80%), raising the impact of the association on social network and improving the performance of the working groups.
- The corporative image of EUROAVIA has been changed, adapting to the current trends in the aerospace field.
- EUROAVIA has a larger presence at European institutions becoming a member of Clean Sky 2, CVA or CEAS among others, and being funded for the very first time by the European Commission
- EUROAVIA has provided young European students with new opportunities in the aerospace sector such as job and internship opportunities, international workshops or lectures, becoming a bridge between the students and the industries, the academia, and the institutions.
- New high dimension technical projects such as “Design Studio Challenge” by Heinkel group or the “Airbus Sloshing Rocket Workshop” have been implemented.

Regarding financial matters:

- The source of incomes has been diversified, exploring new ways of funding and hitting an all-time record mark in terms of incomes, 12 times greater than the previous year and approaching the 100 000 € threshold. The general balance left for the future IB is the largest ever, even if the balance received was among the lowest.
- For every single rescinded agreement with a thirdparty, two have been signed or acquired establishing a record number of 6 sponsors and 11 partners.
- In a worst-case scenario and following a conservative management, the financial sustainability of the association can be ensured for the next 10 years.

- The support given for EUROAVIA members to join international events has been the largest ever surpassing the 10 000 €, clearly fighting against adverse socioeconomical backgrounds and fostering the equal access to opportunities

As for the general performance of the association:

- A significant overhaul in the working group structure has been executed: Three WG have been removed, four new working groups have been created and further enhancements to the rest have been implemented.
- The number of training sessions delivered has rocketed up, complementing the technical formation acquired at universities with soft skills.
- Digitalization has been introduced as one of the cornerstones for the future development of the association tackling this way the needs of the industry.
- Several gender-related initiatives have been implemented during the International Events, becoming the 8<sup>th</sup> of March publication the one with the greatest impact.
- Finally, a clear and confident step forward in favour of a united Europe has been taken. More than 300 students did benefit from the international events celebrated along the business year but many more have been working in an international, multicultural and diverse environment as a team, where no borders can be found and fostering the well known EUROAVIA's Spirit.



# 6 EXTENSION TO OTHER YNGOS

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This final chapter aims to state clear outcomes from the experienced gained by Juan Manuel Lora Alonso in the management position of President at EUROAVIA, with the hope that it may be helpful for any stakeholder to better understand the role of this kind of organizations.

Three different categories will be used to sort the conclusions out: observations, difficulties and benefits.

Please take into account that a personal point of view has been used based on the experience of the author and do reflect his personal opinions.

## 6.1 Observations

The fact of being both locally and internationally involved into a student organization for the last 5 years, allows the author to have a closer look of the current situation of this kind of organizations within their environment. The main points are listed below:

- The first clear observation is the lack of feedback that can be found outside of the boundaries of the Association. This might be due to the short “life-span” of the YNGOs members, specially for those in executive positions that generally stop collaborating after their duty is done.
- There is a clear misrepresentation of the student community in different areas, not only covering the industry but the institutions and the academy. Even more importantly in the field of engineering, where most students gather around technical projects leaving other important topics aside.
- The European Commission predicts in the H2020 report a shortfall in highly-qualified workforce in the shortem period, however, the number of STEM subject students is not increasing accordingly while the industry demands complementary skills, being both of these issues not properly considered in every University.
- The youth involved in these kind of initiatives present innovative ideas and a closer approach to the needs of the different stakeholders producing remarkable results with very limited resources.

## 6.2 Difficulties

Two different natures can be observed regarding the main difficulties faced along the management of an organization: those of internal issues and those imposed by the surrounding stakeholders:

On the internal side:

- The main enemy of any YNGO as EUROAVIA is called the “Generational Gap”, as it has been said before, the management teams dispose of a very short time to lead the organization, generally a one year period, making it quite difficult to implement long-term changes because either they lack of time enough to implement all the changes before the upcoming board overlaps implementing their own program or simply because the communication with the previous board was not good enough and there is no continuity at all.

- Keeping up the team's motivation and willingness to work for a project that may delay their individual academic results and that returns no monetary income is a challenge. EU wide organizations such as EUROAVIA where people from many different countries work together, with different environments and contexts require a great effort from their members not to give up and keep up with the work to do.
- On the other hand, there is an inertial effect which implies assuming inefficiencies inherited from previous boards that are not subject to change leading to multiple problems if not properly taken care of.

External side:

- Establishing the legal body of an Association is, in many countries, a slow process that requires unproportionated amounts of bureaucracy that diminishes the motivation and availability of students to commit to new projects
- As the times change, it is also fundamental to be aware of the current situation of the organization as much as the past trends. It is mandatory to pay attention to the legislative situation, the different contracts, MoUs and debts the organization may have with third parties and which often arise when the situation is unsustainable.
- Not every university supports these initiatives, and sometimes their internal regulations conflict with the Statutes of the Association or with its fiscal independence.
- The economical sustainability of a student organization is quite fragile as companies and institutions do not always take seriously the job developed by the organizations and its related cost, underestimating the needs of sponsorship and procrastinating the support through the bureaucracy.

### 6.3 Benefits

Nevertheless, multiple benefits can be found for a wide spectrum of the society in activities developed by YNGOs:

- Being in touch with the industry allows a more efficient communication between the companies and the potential work force becoming a bridge between the two. Students can have an early experience with the industry and be taught what is it required so the process and cost to train people is assumed in an earlier stage by this organizations instead.
- Young people involved in these projects complement their technical background with an important experience in business and project management, event organization, financial planning and execution and a vast variety of softskills including international team work experience, leadership, communication skills etc.
- The work developed brings people together vanishing the borders between countries and enhancing the European spirit, cornerstone on the functioning of Europe as we know it today and lately endangered.
- Fosters the mobility between countries promoting other European projects such as the Erasmus +, develops the cultural and linguistic exchange and diversifies the opportunities across different countries.

## 6.4 Recommendations

Concluding all the previous ideas there are a few recommendations that if considered, shall help to improve the stability of any organization, and the extension of the results obtained:

- Work closely to the outgoing board to understand the current situation, analyse the functioning of the organization and gather feedback from the members on different levels of responsibility.
- Come up with a solid vision of the business year and stick to those principles throughout the execution. These ideas must be generously shared by the whole steering committee, body that must work as a unified entity outdoors.
- Establish a solid legal base in which fundamental documents and regulations are up to date i.e PIC and TAX numbers, LEAR, bank authority, legal address, country regulations...
- Strive for a consensual midterm planning avoiding inconsistent radical changes that cannot ensure a longterm establiity.
- Diversify the income introducing new sponsoring strategies and funds gathering. Relying on one main sponsor increases the risks of financial instability substantially. It is a must to understand the different stakeholders needs and evaluate what product or service they might find useful in exchange for a sponsorship or support.
- Try to ensure the continuity of the association on a worst-case scenario in terms of incomes including a good enough starting point for the future business year.
- Increasing the visibility in European and national institutions is fundamental to better represent the main concerns of the European youth and improve the communication between all stakeholders to better address the communitary issues.
- Set a reliable network revisiting every thirdparty collaboration after the handover avoiding fictional relationships. Stating out of date partnerships could endanger the credibility and corporative image of the organization.
- Pay attention to the needs of the members as the final goal set in any YNGO pursues a benefit for the community.
- Including the importance of digitalization and the current trends of the industry into the attractive field for the members in order to better integrate them into the industry of tomorrow.

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# I. Annex A

## a) Aviation Skills Partnership

Aviation Skills Partnership is an independent UK organization dedicated to transforming the approach to aviation skills and creating career pathways at all ages and career stages. Training programmes and degree courses are offered to young generations to make the aviation industry totally accessible to them.

## b) BDLI

Bunderversband der deutschen Luft- und Raumfahrtindustrie, as the German Aerospace Industries Association, is the primary industry representative whose members come from a wide range of companies active in all the aspects of the sector. It encourages its members to engage in dialogue with political institutions, authorities, trade associations and government bodies. BDLI e.V. belongs to Germany's most important trade group, the Federation of German Industries (Bundesverband der Deutschen Industrie) combining the vast expertise of the aerospace industry in manufacturing, technology and economics and ensuring its representation on the political level.

## c) CEAS

The Council of European Aerospace Societies (CEAS, [www.ceas.org](http://www.ceas.org)) is an International non-profit Association, with the aim to develop a framework within which the major Aerospace Societies in Europe can work together. Its main aim is to add value at a European level to the wide range of services provided by the constituent Member Societies, allowing for greater dialogue between the latter and the European institutions, governments, aerospace and defence industries and academia.

The network is formed by the national agencies NVvL, 3AF, AAAR, AIAE, AIDAA, CzAeS, FTF, RAeS, SVFW, PSAA, TsAGI and the corporate members: ESA, EASA, EUROCONTROL and EUROAVIA

## d) Clean Sky

The Clean Sky 2 Joint Undertaking (JU) is the largest European research programme developing innovative, cutting-edge technology aimed at reducing CO<sub>2</sub> gas emissions and noise levels produced by aircraft. Funded by the EU's Horizon 2020 programme, Clean Sky contributes to strengthening European aero-industry collaboration, global leadership, and competitiveness.

To better involve the academia into the research topics discussed within Clean Sky 2 JU, the Clean Sky Academy Group was created. Its purpose is to ensure interfaces at the institutional level of the Clean Sky 2 JU, with representatives of bodies in the aeronautics academic and research areas, e.g. PEGASUS, EASN, EREA, CEAS, and EUROAVIA. It is composed of representatives of these bodies, complemented by other independent high-level experts from academia and research bodies, selected via an open call for expression of interest.

## e) CVA

Founded in 1998 as a non-profit organization, the CVA is a network which brings together 19 European Cities, the so-called Ariane Cities, and 16 partner industrial firms, working in European

space transportation. The CVA enables them to build up cooperation, keep elected representatives and citizens informed about Europe's space activities, and help train tomorrow's space-sector professionals. CVA promotes and fosters some educational programmes, addressing all space interested people:

- Summer School: an annual 3-4-week programme targeting university students and young engineers from the aerospace industry.
- Professional visits to Guiana Space Center: a one week visit to French Guiana for Summer School Alumni.
- Science Holidays: an annual one-week programme for 14-17-year-old students, hosted by a CVA Member City.
- Intercultural Seminars: consisting of three one-week sessions for 15-17- year-old students, each taking place in a different Member City.
- REVA (Educational Network of Ariane Cities): a short seminar, hosted by an Ariane City, to encourage the exchange of ideas and sharing of experience among secondary school, university, and professional training staff.

#### **f) Heinkel Group**

Heinkel Group is a Hamburg based engineering company specialized in acoustics, structural design, and additive manufacturing. Their main fields encompass consultancy, service provision, and production. Their subsidiary Bionic Studio is a main contact point for rapid prototyping requests in a wide range of engineering fields.

#### **g) IFISO**

Informal Forum of International Student Organizations (IFISO) is a forum for international officers of non-political, non-profit and student-run organizations. This network is consisted of 27 student organizations and counts over 2 million students.

#### **h) ITAérea**

ITAérea Aeronautical Business School provides postgraduate programs in Airports Management, Airline Management, Airport Safety and Security Analysis, Aeronautical Industry Analysis and Technical and Organizational Navigation-related courses.

It is present in Spain and South America, Africa and Asia. ITAérea courses were held by Spanish teachers up to this point but the programs are currently being adapted to English with the intention to expand in Europe.

#### **i) EDUOpinions**

EDUOpinions is a student-centred platform with real reviews from students to students as well as a valuable tool for universities. Their mission is to connect current students with prospective students and create valuable reviews, easily available and accessible to everyone to provide an excellent education for everybody.

## **j) EWEM**

The European Wind Energy Master (EWEM) aims to educate at least 50-60 MSc graduates per year, covering the top 0.5% global demand of Wind Energy professionals with post-graduate education.

EWEM is a 2-year (120 ECTS) master course. The joint first semester and the specific multi-disciplinary and project-oriented teaching will give the student the ability to transfer knowledge and competences beyond his/her specialisation and to embed design choices in a sociotechnical context. The student acquires knowledge in theoretical and applied sciences underlying wind energy systems, and specific competencies necessary to operate in the chosen area of specialization.

The EWEM prepares graduates for a career in research, both in industry and in academia, and is closely linked to the partners' research, in particular the large wind energy PhD cohort of the four partner universities, of over 130 PhD students.

## **k) Careers International**

Careers International is an international portal whose aim is to bring together employers and talented individuals. Their experience and effectiveness have made them the preferred partner for many global companies and professionals when it comes to building a network and researching new opportunities.

Their consultants and project leaders have extensive experience in international recruitment and operate a worldwide network of universities, students & alumni associations and professional bodies.

## **l) JADE**

JADE is an umbrella organisation of more than 300 student-run businesses across 250 universities in 14 European countries. Following the motto "learning-by-doing", JADE bridges the gap between academia and real business world. By running non-profit SMEs and being social entrepreneurs, the students turn over 16M € per year and involve more than 22,000 peers, thus leaving a significant impact on the local and national business world.

## **m) NEREUS**

Network of European Regions Using Space Technologies is an initiative by regions from all over Europe. Emphasis is placed on the use of space technologies; the network aims to explore the benefits of space technologies for regions and their citizens and to spread their applications. NEREUS is a strong voice for the regional dimension of European Space Policy and programs as well as end-user needs.

## **n) Q.reer.com**

Qreer.com is an independent technical career board enabling European companies to post vacancies and internships and for applicants to search and apply for these positions throughout Europe. It is supported by an academic network of over 200 technical universities and focuses on candidates with a technical background – both students and graduates.

## **o) SpaceBoard**

SpaceBoard is a unique online platform which aims to connect all the people involved in the space network. Young professionals, students, academics and space industry representatives will get the

opportunity to interact with each other.

**p) Space Renaissance International**

Space Renaissance International is a cultural non-profit organization, founded as a spontaneous union of people sensitive to the development and practical testing of an open world philosophy, which includes the Earth and the entire solar system.

It is dedicated to human expansion into space, sure that it is fundamental to the sustainability of the current civilization and its essential growth, but also for the survival of life itself. It aims to stimulate the system to trigger a change in the political perception towards space travel and the use of space resources to achieve a substantial increase in investment in human space activities and a focus of these investments concrete actions oriented the expansion of civilizations in space.

**q) Space Up**

SpaceUp is an unconference on space topics. This means that topics, schedule, and structure of the event are chosen by participants. Indeed, aside from some plenary sessions put up by the organizers, most of the talks are given by participants themselves

**r) Study Portals**

StudyPortals is set as the Global Study Choice Platform. It was founded to solve student problems regarding where to continue their studies. StudyPortals wants to inform and help students to choose the most suitable place to study depending on their profiles as well as increasing the accessibility to education. This follows the idea of Europe unifying its university system, a process powered by the Bologna Process and set mobility as the key of the process. Encouraging and supporting people to relocate themselves can help it to success.

**s) Think Young**

ThinkYoung is the first think tank that focuses on young people. It was founded in 2007 and has expanded to have offices in Brussels, Geneva, Madrid and Hong Kong. It is a not-for-profit organisation with the aim of making the world a better place for young people, by involving them in decision making processes and by providing decision makers with high quality research on key issues. ThinkYoung conducts studies and surveys, makes documentary movies, writes policy proposals and develops education programmes.

**t) UKSEDS**

SEDS (Students for the Exploration and Development of Space) is an international student organization that empowers young and enthusiast people across the country by running space projects, hosting conferences, workshops and doing outreach to inspire and educate.

SEDS helps students develop their technical and leadership skills by providing opportunities to manage and participate in national projects as well as to attend conferences, publish their workshop and develop their professional network. This aims to help students becoming more effective in their present and future careers in industry, academia, government and education.

**u) YouthProAktiv**

YouthProAktiv is an organisation that aims to help young individuals to get prepared and



equipped with the necessary skills to make their step into their professional lives. It encourages them to trust in their talents and skills and start their own career or business.

The organization helps young individuals:

- To change the mentality of young people from reactive to proactive
- to build entrepreneurship-friendly policies at national and international level
- to promote educational reform to achieve more personalized system which will create space for young people to discover their talents and develop their skills
- to build a new generation of proactive individuals able to create their own businesses and produce jobs for themselves and others.

The main event of this organization is the ProAktivitySummit which is the annual conference of the association and which takes place at both local & international level. The international level takes place every year in Brussels and young people are encouraged to speak about problems and news concerning the young generation such as youth unemployment, youth entrepreneurship, start-ups, innovation and new trends in business. This is a 3-4 days conference compiling roundtables with experts in different fields. It also includes workshops where participants can improve their practical skills, networking lunches & dinners and many different types of events.

#### **v) Zero 2 Infinity**

Zero 2 Infinity is the first sustainable experimental aerospace company, which provides affordable access to space. It has been successfully lifting heavy commercial payloads into Near Space since 2009, using balloon technology. By helping projects succeed, Zero 2 Infinity fuels future economies and foster the knowledge of the world and the universe the human kind lives in. Collectively, Zero 2 Infinity team has track records in aerospace management, aerospace engineering, avionics engineering, international Space law, innovation, marketing and communications.

## II. Annex B

The following lines comprise the proposal submitted to the European Commission under the “Science For and With Society (SWAFS)” Program:

### a. Excellence

The European Union has set ambitious goals to promote smart, sustainable and inclusive growth, to find pathways to create new jobs and to offer a sense of direction to our societies. These goals require significant strengthening of our knowledge and innovation capacity and our creative capability to boost our growth. As the world becomes more inter-connected and competitive, the need for technological know-how pressures states into educating citizens for a better understanding of science and technology so they may participate actively and responsibly in science-informed decision-making and knowledge-based innovation.

At the moment, Europe faces a shortfall in science-knowledgeable people at all levels of society and the economy. In dissonance, it would seem, with the fact that more students leave formal education with science qualifications than ever. The interest in science related innovation, careers, and entrepreneurship appears to be lacking in the general population, which is worrisome given the recognized necessity of their implementation for the continued and sustainable competitiveness of the European Union. Additionally, the European population is aging above replacement levels, which makes effective and efficient teaching of children even more precious and important.

Science activities, practices and results must become more responsive to the needs and ambitions of society and reflect its values, and support people of all ages and talents in developing positive attitudes to science. We must replace the existing sweeping notion that science is too hard for the average person to partake in, particularly Aerospace, as it is one of the most strategic goals of the European Union and boasts some of the highest returns on investments (social, economic and scientific). We need to enhance the educational process to better equip citizens with the tools to become better researchers, as well as other stakeholders with the necessary knowledge, motivation and sense of societal responsibility to actively participate in the innovation process.

All the actions hereby presented are aligned with the Accelerating and catalysing processes of institutional change strategic orientation putting special emphasis on Open schooling and collaboration on science education.

## b. Objectives

- I. **To promote Aerospace Engineering, related entrepreneurship, soft-skills and research, schooling and diffusion** with internal projection (scientific fields) as well as external (industry, general society and schools in particular), strengthening European benefits from this strategic field which encompasses all **STEM subjects** (Science, Technology, Engineering, Maths).
- II. **To promote primary and middle school engineering activities** (competitions, challenges, talks, workshops) that enable the **creation of dialog between science and the student sector** in its distinct languages, levels of education and gender-specific, geographical and socio-economic backgrounds, **including scientific manuals** for the purposes of Aerospace education, dissemination and awareness
- III. **To foster dialog between administrative-governmental regions, industry and top-bottom education stakeholders** creating a long-term sustainable consortium and thus ensuring comprehensive representation and the implementation of an integrated European policy.
- IV. **To continue and enhance European-wide projects** to elevate local events from various countries and institutions into an **international cooperation** paradigm and strengthen the cooperation networks relevant to the project's continued success as the Air Cargo Challenge, the Summer Schools or the Formation Workshops among others.

### c. Relation to the work programme

In order to link every action with a specific objective and the partners involved, both Work and Partner Packages have been defined on different categories as follow:

<b>Partner package 1: Education</b>	<b>Partner Package 2: Policy Makers</b>	<b>Partner Package 3: Industry</b>
University of Seville (+PEGASUS), EUROAVIA International, AEROUBI, EUROAVIA Bucuresti, EUROAVIA Stuttgart, EUROAVIA Toulouse,	Municipality of Seville, Junta de Andalucía (Regional Governments)  NEREUS – Network of European Regions Using Space technologies	CVA – Community of Ariane Cities FADA- Fundación Andaluza para el desarrollo Aeroespacial  Aeropolis- Parque Tecnológico y Aeroespacial de Andalucía S.L.

<b>Workpackage 1 Startup</b>	<b>Workpackage 2 Lift off</b>	<b>Workpackage 3 Exploration</b>	<b>Workpackage 4 Rendez-vous</b>
Educational materials and activities for children/schools. Integrated with Aerospace activities, trends and opportunities.	Research support, dissemination and encouragement of activities for higher education.	Addressing inter- personal, personal and professional skills requirements of the Aerospace sector.	Addressing Aerospace Industry needs through public challenges

Activity	Sub-Activity	Objectives	Work package	Partner Package	Date (Duration)	Estimated Budget [Thousand €]
<b>Exhibitions</b>	Air Show - Logistics Support Base and Castelo Branco Aerodrome	1	2	1,3	May 2019 (1 day)	5
	Le Bourget	1,3,4	1,3,4	1,3	June 2019	15
<b>National Aeronautical and Aerospace Meeting</b>	National Aeronautical and Aerospace Meeting	1,3,4	1,2	1,2,3		15
<b>Industry Challenges and Competitions - Multiple University Teams</b>	AirCargo Challenge – Multiple University Teams	1,2,3,4	1,2,3,4	1,2,3	Ongoing until summer	40 per team
<b>Industry Challenges and Competitions</b>	Air Cargo Challenge Competition	1 2,3,4	1,2,3,4	1,3	Summer (1week)	50
<b>Engineering Skills Certification Program</b>	Certification on Catia V5; C++; MATLAB; CFD; Office 365	4	2,3,4	1	Spring/autumn (10-40h)	1.5
<b>Academic Enhancement</b>	Development of Space Master program Cooperation between Universities	1,3	2	1,2	2019/2020	100
<b>Workshop</b>	Formation workshops, TNT Rocket Workshops	1,3,4	2,3,4	1,3	Autumn/summer 2019 (1week)	60
<b>Summer School</b>	Youth Summer school	1,2,3,4	1,2	1,2,3	Summer (2 weeks)	20
	Aerospace Summer school	1,2,3,4	2,3,4	1,2,3	Summer (1 month)	40
<b>Youth Schooling, Trips, Cultural Exchanges and Science Holidays</b>	Discovering the Guiana Space Centre	2	1,2	1,3	Summer (1 week)	100
	Science Holidays	2	1,2	1,3	Summer (10 days)	7

	intercultural seminars	1,2,3,4	1, 2, 3	1	Spring/summer (3x7days)	15
<b>Scientific Efforts</b>	Research grants	1	2	1,2	2019	200
	Mobility research grants	1,3,4	2,3	1,2	2019	5 each
	Space Symposia	1,4	2	1,2,3	Spring 2019 (5 days)	10 each
	EUROAVIA Magazine	1,2	1,2	1,3	September 2019	3
	Newsletter	1	2	1	(Monthly)	-
	Research presentation and publication	1,2	2	1,3	-	20
	Promote research awards from partners	1,3,4	2	1,2	-	30
<b>Hackathon</b>	promote use of space technology on Earth	1,3,4	2	1,2	-	10 each
<b>Multi-faceted</b>	World's Space Week	1,3,4	2,4	1,2,3	October (1 week)	18
	EMEAC, AMEAC	1,3,4	1,2,3,4	1,2,3	Spring, Autumn (2x1week)	20
	Yuri's night	1,2,4	1,2,4	1,2	April (1 night)	10
<b>Stakeholder Dialog</b>	Company Fairs	3,4	2,4	1,3	2019 (2-3 days)	75
	Job Fairs	1,3,4	2,3,4	1,3	2019 (1-2 days)	50
	Aerospace Summit	1,3,4	2,4	1,2,3	-	20

## d. Concept and methodology, quality of the measures

### Project description

The Aerospace Industry development is a strategic goal of the European Union member states, as the research and technological innovation this sector promotes are universal and permeate every stratum of our daily-lives. ESA, with its current 5.6B€ annual budget is the most resounding proof of this reality. Every day, more innovation from this sector makes its way into our daily life and ground-based industries. For involving all STEM-related subjects (social sciences, biology, medicine, physiology, aerodynamics, thermodynamics, safety, security, electronical, and many others), the Aerospace domain is the most relevant aggregate field for scientific research and advancement today.

The main aim of the S.P.A.C.E. - Science Partners in Aerospace Centered Education project is to attract, motivate and encourage young Europeans to embrace future careers in the field of Aerospace by raising awareness of young people about the future-shaping potential of this sector and by fostering a close, open, informal dialogue, sustained interactions and networking activities between the aerospace research community, European policy makers, industry and the academic community (primary, secondary schools and BSc Students).

The project activities are distributed among the aforementioned work packages which align with the objectives of the S.P.A.C.E Project by:

#### Work Package 1: Startup

- Elaborating DIY deliverables in form of manuals and tutorials related to the experiments behind the fundamental concepts of aerospace subjects.
- Preparing diverse technical workshops where children can get involved into science and collaborate with their parents such as Rocket Workshop, Yuri's Night...
- Fostering the competitiveness and entrepreneurship of Youngs through scientific-technological competitions at local, national and European dimension

#### Work Package 2: Lift off

- Raising the awareness of responsible research topics such as Clean Sky, fostering the PhD involvement in pursuit of research development
- Establishing the breeding ground for advanced studies in the field of space through a tighter collaboration between the industry, academia and public administration.

#### Work Package 3: Exploration

- Delivering training sessions for teachers and professors for a better transfer of the scientific knowledge.
- Spreading the values of project-based learning giving added value to teamwork and intercultural cooperation.
- Organizing diverse international events such as Aerospace related symposia, seminars and summer schools among others thus pushing specific technological knowledge

#### Work Package 4: Rendez-vous

- Offering new opportunities to have better awareness and comprehension of the competences and skills required by such a competitive environment.
- Facilitating the integration of young professionals into the labor market through enhanced communication with companies and promotion of internships and opportunities.

## **Partner's roles and methodology**

In order to ensure an efficient communication, online platforms will be used to keep track of the different tasks and proposals from the different partners both in terms of dates and topic. Besides, to ensure the commitment, success and sustainability of the project, the coordinator partners will keep a regular phone call communication together with physical meetings with representatives from the consortium. These physical meetings shall take place at the beginning, midterm and final stage. Cloud management will be used to provide a direct and easy access to all the information and documents generated by the S.P.A.C.E. Project.

University of Seville shall coordinate teaching institutions (middle-schools, high-schools and universities) towards open-schooling initiatives, and coordinate administrative management and efforts for added cohesiveness, dialog and engagement of all Aerospace and society actors.

EUROAVIA International will oversee the operation of local groups and provide an international link between European regions. Additionally, it will make use of current international agreements and network partnerships (CEAS, Clean Sky, and other research and Aerospace societies) to enhance stakeholder cooperation for a better integration of science in citizen's lives and represent Aerospace students voices on a European level.

EUROAVIA local groups (AEROUBI, Bucuresti, Stuttgart, Toulouse) will organize international initiatives, and promote the local participation in European-wide competitions. Local groups shall also strengthen links between Universities, local governments, industries, policy-makers, and society in an effort to engage every stakeholder in sustainable policy-making, as well as elevating the regional scientific development in Europe.

PEGASUS shall serve as the link between top-rated European universities in the Aerospace field, allowing the creation of new synergies and development of Erasmus + agreements that can foster researcher's mobility across Europe and stimulate the cooperation at research centres.

The Municipality of Sevilla together with the Regional Government (Junta de Andalucía) will support the different initiatives at primary and secondary school by providing the right policies and opportunities to raise awareness on Aerospace education and implement new methodologies and tools for teachers to integrate science in the everyday life schooling.

Industrial partners i.e. AIRBUS, FADA and Aeropolis shall provide this project with their expertise and share their industry scientific and workforce needs, thus enabling the creation of real-life problem-solving competitions where both the scientific literacy levels of participants will be elevated and industry needs will be solved. Their input will shape and decide on which workshops and additional extra-curricular courses will be given to middle schools, high-schools and university students.

CVA will use their extensive experience in fostering the sustainable implementation of international Youth Open-Schooling, Trips to promote research excellence in EU Outermost Regions (French Guiana), Cultural Exchanges and Science Holidays on an international level, with privileged and unparalleled access to the most competitive and innovative Aerospace science centers throughout Europe.

NEREUS will advocate and foster political dialogue amongst regions and towards the European institutions, as well as interregional collaborations to promote exchange of best practices, policy-making and innovation, communication and public outreach to broaden the awareness and understanding of the benefits of using space technologies and represent regional scientific efforts at the European Commission.

Addressing gender issues is also considered by this project in order to widen access and create consciousness of how women had in the past and shall have in the future, large roles in STEM areas. These issues should be considered at the earliest stage of education, so to avoid any constrain among girls and boys that may result in a gender-based limitation. Female achievements and role models will be given visibility as a common goal.

Finally, the improved communication between NEREUS (Regional Governments), Aerospace Students Community (EUROAVIA), European Universities (PEGASUS, Seville) and industry (Airbus, CVA) will result in a better integrated policy discussion at European level that elevates Aerospace activities into an international common framework that promotes open-schooling and scientific research proliferation.



## **e. Impact**

The direct results of the project are measured thusly: 250000 post views on social media, 2500 youth directly involved in our activities and 100 technical project reports created and delivered. In the short term... The joining of all partners involved will lead to a more scientifically interested society, with better awareness of scientific issues, aiming to entice young people to embrace future careers and to encourage further research in the field of Aerospace. The S.P.A.C.E. project shall not be constrained by the number of partners within this proposal but fully use the potential of the different European-Wide networks here listed that individually account for more than 18 countries, 60 universities, and more than 80 cities

Promote partnerships between Public Administration (municipality and regional governments), academia (teachers, students NGOs and researchers), sector professionals, enterprises and other stakeholders in science-related fields, aiming to work on real-life challenges with a broader understanding of social and technological innovation, all the while considering ethical, social, gender and economic backgrounds.

In the mid-term, Youth is expected to be in a better knowledge position towards deciding their future: At secondary school level, not only is the ratio of students who choose STEM studies expected to increase, so is the proportion of women joining this field too. At university level, it is expected to see an increased number in MSc and PhD students as a result of the emphasis placed on raising awareness of the opportunities in innovation and development in the aerospace sector. With focus and greater attention towards responsible research and innovation (by promoting topics such as Clean Sky), as well as enhancing public's understanding of scientific research and its consequences and impact in daily life.

These activities allow society actors to have easy access to the latest research findings and emerging technologies, which is essential to build and develop a network that foster the sharing of knowledge.

In the long term, the ongoing involvement of young students through the proposed technical competitions will encourage the European feeling and will prepare the students for the competitive market in terms of Team Work, multicultural environment and leadership among other soft-skills. In addition, it is expected that those who join these technical projects in an early academic-stage will take a leading role in research and entrepreneurship during their professional life for the benefit of society.

### **Dissemination materials and actions**

Besides the numerous activities where the target groups of the project will be directly involved, several other initiatives will be supported by the S.P.A.C.E. project. These include:

- S.P.A.C.E. Webportal and Social Networks (Instagram, Facebook, Youtube).
- Project brochure and other promotional materials.
- Newsletters and press releases.
- Papers to be presented at numerous Aerospace congresses.
- Participation in third-party events such as Air-Summit Portugal and IAC conferences.
- Continuous online presence in all EUROAVIA's 40 local groups and project partners' pages.

### **Exploitation of results**

Although it is possible to include aerospace examples, especially in the teaching of STEM related subjects, teachers perceive Aerospace as advanced engineering, not realising how broad the opportunities are in the field and how many students could be impacted by such activities.

It is strategic to target very young children (primary school) as there is still enough time to influence their career path significantly into studying STEM subjects and set a career related to aerospace.

Teachers are happy to attend events with their school children (as the immediate return is evident to teachers), but one of the “obstacles” the literature reveals is the fact that school programmes have little flexibility. Extracurricular activities are consequently fundamental to integrate students in informal and non-formal environments that will lead them down the path to general activities in the field of aerospace.

University students and aerospace employers alike recognize a widening skills gap between academia and industry. This is a widespread, global problem that is especially concerning for the European Union given the aging population. The problem is further compounded by the fact that there is a sweeping notion that success in the aerospace field is out of reach of the general population and rare levels intelligence are required to work in the field. In essence, the already reduced pool of possible future aerospace workers (youth) is disconnected and unaware of the sector, and those who do end up studying aerospace engineering are taught disciplines and knowledge that is growing exceedingly out-of-touch with the needs of the aerospace industrial sector itself. It is here that “academia do futuro” will play a major role as they have built extensive activities on the motivating and career coaching of vulnerable youths, which the project will amplify to cover all young students.

For this reason, the project will heavily rely on fostering excellence and providing financial and educational opportunities for bright students to attend formative events of all levels of competence and complexity. This way we ensure geographical and socio-economic barriers are mitigated with regards to the sustainability of the sector’s workforce – already in shortfall. Additionally, existing technical projects that exist on a local event will be promoted in a true European dimension. This will result in a more cohesive connection between sector companies and academy and the proliferation and dissemination of best practices in the 40 universities within the network.

The strengthening of socio-economic and political ties of the regions involved in the project will result in clear benefits for the growing number of space sector SMEs and start-ups from local-government technological parks, society at large (more focused on the local level, but also in all 40 universities where EUROAVIA is active on a local level), and finally, university institutions that engage in the project.

Formal, non-formal and informal science education providers, enterprises and civil societies are therefore committed to meaningful engagement of all societal actors with science and increasing the uptake of science studies, citizen science initiatives and science-based careers, employability and competitiveness of regions and individuals.

The impact of the S.P.A.C.E. project is not restricted to the activities carried out during its lifetime. The consortium attributes a great deal of importance to the sustainability and will carry out various efforts to ensure continuation of the project for years to come. The consortium shall seek to:

- Highlight the positive impacts of the project on the target groups;
- Present project results with strongest potential and provide plans for continued exploitation;
- Assure availability and dissemination of project results;
- Develop, improve and build upon what has been done in terms of materials, activities and results.
- Foster a close link between social, industrial and academic stakeholders.
- Elaborating a paper addressing the Industry-Academia skills gap with feedback from every stakeholder involved in the project and other invited third parties.
- Disseminating the best practices identified by the consortium inside the Council of European Aerospace Societies, International Astronautical Congresses and the European Aerospace Cluster to influence policymaking.

Activity	Sub-Activity	Direct Impact	Dissemination Impact
<b>Exhibitions</b>	Air Show - Castelo Branco Logistics Support Base and Aerodrome	400 people directly reached	2300 people reached in social media
	ILA Berlin	30 students attending the event and networking with international industry	2500 people reached in social media
<b>Industry Challenges and Competitions</b>	AirCargo Challenge – Multiple University Teams	30 fully sponsored university teams to design, build and compete with their own original RC controlled aircraft in an international setting. Reports will be disseminated online for free.	10000 people reached in various social media posts from the teams.
	Air Cargo Challenge Competition	150 students involved in international multicultural & heavily technical, hands-on learning experience; 30 different technical reports	8000 people reached via official organization posts
	Space Technologies Hackathon	40 space entrepreneurs; 8 business plans with space technologies	20000 people reached via social media
<b>Youth Schooling, Trips, Cultural Exchanges and Science Holidays</b>	Discovering the Guiana Space Centre	40 youths involved	10000 people reached in social media
	Science Holidays	40 youths involved	8000 people reached in social media
	Youth Summer school	30 youths involved	6000 people reached in social media
	Aerospace Summer school	40 young students involved	20000 people reached in social media
<b>Academic Enhancement &amp; Skills certification</b>	Development of Space Master program	Space Master program in Sevilla university	15000 people reached in social media
	Cooperation between Universities	Cooperation agreement between universities	8000 people reached in social media
	ISU Scholarships	5 students sponsored	10000 people reached in social media experience from students shared
	Certification on Catia V5; C++; MATlab; CFD; Formation Workshops; Train New Trainers; Rocket Workshops	15 skills certification courses delivering a total of 300 certifications; A total of 20 rocket projects from 100 students; 20 new certified trainers	25000 people reached via social media
<b>Scientific Efforts</b>	Research grants	16 grants for research	25000 people reached in social media
	Mobility grants	[10 - to - 50] mobility grants for research and extracurricular activities	25000 people reached in social media
	Space Symposia	5 space symposia	10000 people reached in social media
	Research presentation and publication	25 papers	2500 people reached in social media
	Promote research awards from partners	Awareness of excellence in research awards in aerospace	15000 people reached in social media
<b>Stakeholder Dialog &amp; Awareness</b>	World's Space Week	Awareness of space industry's impact in daily life	8000 people reached in social media
	Yuri's night	5 simultaneous celebrations of the first man in space	4000 people reached in social media
	Company Fairs; Job Fairs	bring 45 companies and 700 students together	6000 people reached in social media
	National Aerospace Summit	bring 12 companies and 120 students together	6000 people reached in social media
	Space-UP	200 direct participants	6000 people reached in social media