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AEROSPACE ECOSYSTEM REPORT IN THE BALEARIC ISLANDS

APRIL 2024

For Omar Beidas Soler
Head of innovation at the Government of the Balearic Islands

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CONTENT

STATISTICS OF AEROSPACE COMPANIES IN THE BALEARIC ISLANDS

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INTRODUCTION

This report on the statistics of the aerospace ecosystem (aviation and space) in the Balearic Islands serves as a basis for understanding and analyzing the current state of the ecosystem and its potential as a cluster and innovation ecosystem. It explores how SMEs and large companies within the sector have the potential to innovate, identifying areas for innovation and collaboration with academics and startups in the Balearic Islands.

The aerospace ecosystem in the Balearic Islands comprises 69 active companies, representing around 20% of Spain's aerospace sector. From an entrepreneurship perspective, 3.4% of aerospace startups in Spain are based in the Balearic Islands. Additionally, there are 10 professors at the University of the Balearic Islands researching aerospace topics, accounting for 3.86% of aerospace academics in Spain. Regarding academic contributions, researchers from the University of the Balearic Islands represent 16.7% of Spanish scientific publications on astrophysics and aviation, and 1.2% if considering only space-related publications.

Throughout the investigation, we observed that aerospace companies founded by individuals from the Balearic Islands often do not have their companies registered in the Balearic Islands. Similarly, founders of aerospace companies registered in other countries, but residing in the Balearic Islands, are not counted in this statistical report. However, these cases are considered in the recommendations and analysis reports of the aerospace innovation ecosystem, emphasizing the importance of technological and multidisciplinary talent in activating the aviation and space ecosystem in the Balearic Islands.

Another notable statistic is that 38 aerospace companies in the Balearic Islands closed between 2011 and 2020, representing 38% of the companies that closed in 2020, with an average of 9% closure rate in previous years. In total, 39 aerospace companies closed from 2011 to 2020, accounting for 36% of the total aerospace companies in the Balearic Islands. Despite the negative impact of the pandemic on the aerospace sector, these data highlight the need for support from the Balearic Government and the Ministry of Innovation to advance and strengthen the sector through an innovation ecosystem and the creation of an aerospace cluster in the Balearic Islands.

METHODOLOGY

The methodology used to carry out this analysis of aerospace companies in the Balearic Islands is a method created by Collabwith, based on the principle of collaboration for innovation within the ecosystem. This involves analyzing the needs and challenges of companies and translating them into types of innovation and areas where the company can innovate. From there, a matchmaking process has been conducted with academics, their research, and startups at a national level as an initial approach. This demonstrates that companies can innovate in their work areas, taking steps to remain relevant in the future through collaboration. Companies have been classified first by aviation and space and then by the main topics of their services and technologies.

Additionally, the classification related to the potential for innovation is added on a scale of 1 to 5, indicating each company's potential based on its main work topic and the topic in which they can direct innovation (sustainability, virtual reality, artificial intelligence, communication, circular economy, process efficiency, etc.), type of innovation (product, service, marketing, user experience, digitalization, business models, etc.), and topics of potential collaborations. This classification helps to understand the future of the aerospace innovation ecosystem in the Balearic Islands and its innovative potential.

KPIs: Aerospace Plan: 2030-2050

In the recommendations report, these metrics are added to the recommendations for the monitoring and supervision metrics of the aerospace innovation ecosystem in the Balearic Islands. Below you can see the recommended KPIs and the progression for the following years.

KPI NUMBER OF STARTUPS: 4 PER YEAR.

KPI NUMBER OF ACADEMIC PUBLICATIONS: 10 PER YEAR.

KPI NUMBER OF COLLABORATIONS BETWEEN STARTUPS-UNIVERSITY-COMPANY-GOVERNMENTS: 10 PER YEAR.

KPI NUMBER OF COMPANIES SUPPORTED IN DIGITALIZATION: 5 PER YEAR.

KPI NUMBER OF COMPANIES THAT HAVE ACQUIRED THE INNOVATIVE SME SEAL: 4 PER YEAR.

KPIs can be achieved and surpassed through the intercorrelation with other sectors currently being strengthened in the Balearic Islands, such as software development technologies, artificial intelligence, blockchain, and video games. Existing clusters, such as naval, tourism, biodiversity protection, and newly created ones based on technology, will be further strengthened if collaboration among them is supported by public institutions. This unified perspective highlights the intercorrelation and relationships between technologies and their applications.

KPI	2023	2030	2050
Companies in the aerospace innovation ecosystem	69	93	173
Startups created	4	24	104
Companies with Innobal innovation certificate	0	24	104
Companies in the Innovation Factory	0	24	104
Companies supported at digitalization	0	30	130
Collaborations between startups-university-company-governments	0	18	34
Companies within European project consortia	0	9	17
Academic publications	26	+60	+260

PERSPECTIVE OF THE AEROSPACE INNOVATION SECTOR AND ECOSYSTEM IN THE BALEARIC ISLANDS

Statistics show that the Balearic Islands have significant critical mass within the Spanish and European aerospace ecosystem, representing 20% of the sector despite lacking past or present support. This demonstrates the region's progressive potential.

The Spanish and European Aerospace PERTE focus on a green transition for the aviation sector and the development of new opportunities in the space sector. Lunar exploration and missions, for example, open new opportunities for public-private partnerships and introduce new concepts such as lunar satellite constellations, space robotics, software applications for mapping lunar cartography, lunar habitats, and training for commercial astronauts. The new space paradigm includes creating applications for current satellite images, developing nanosatellites, enhancing nanosatellite technologies, and applying aerospace technologies to mitigate climate change on Earth. This includes reducing water and energy consumption, improving the efficiency of agricultural and food resources in arid habitats, and protecting biodiversity.

In aviation, technological innovations aim at improving maintenance, support, air traffic management impact reduction, operational and process efficiency, and creating new business models. Innovative applications include hydrogen versus helium propulsion, communications, payloads, passenger services, installations, testing, earth observation, surveillance, communication relays, and cargo. The Government of the Balearic Islands can enhance cooperation with the ICEX network and embassies, promote the use of drones within the MITMA competence area, streamline drone flight authorizations, and facilitate tests and trials for drone innovation projects. The Balearic Islands have a great opportunity to develop the aerospace innovation ecosystem and become one of the European hubs for new proofs of concept in aviation and space.

Cockpit of the state of aerospace companies in the Balearic Islands

The following table provides an overview and present vision of the aerospace innovation ecosystem in the Balearic Islands. This ecosystem control panel can be used to monitor the evolution of the ecosystem and assess the effectiveness of recommended programs and activities aimed at creating and maintaining the aviation and space ecosystem in the Balearic Islands.

Companies in the Innovation Factory	**Companies in Innobal**	**Companies that collaborate**
0	0	0
Companies registered with NIF in the Balearic Islands 72.5%	**Company type**	26.1% Large companies 72.5% SMEs 1.4% Startups
Number of companies	**Potential themes of collaborations to innovate and innovate**	**Number of companies that have closed**
69	14.0% Sustainability 5.8% Technology 4.8% Optimization of land spaces 4.8% Fleet and crew management 4.8% Process efficiency 4.8% Alert to emissions 4.3% Luggage system 4.3% Digital platforms 4.3% Optimized spaces 4.3% Automation of processes in airports 3.4% Marketing 3.4% User experience 2.9% AI 2.4% Advanced simulators	38

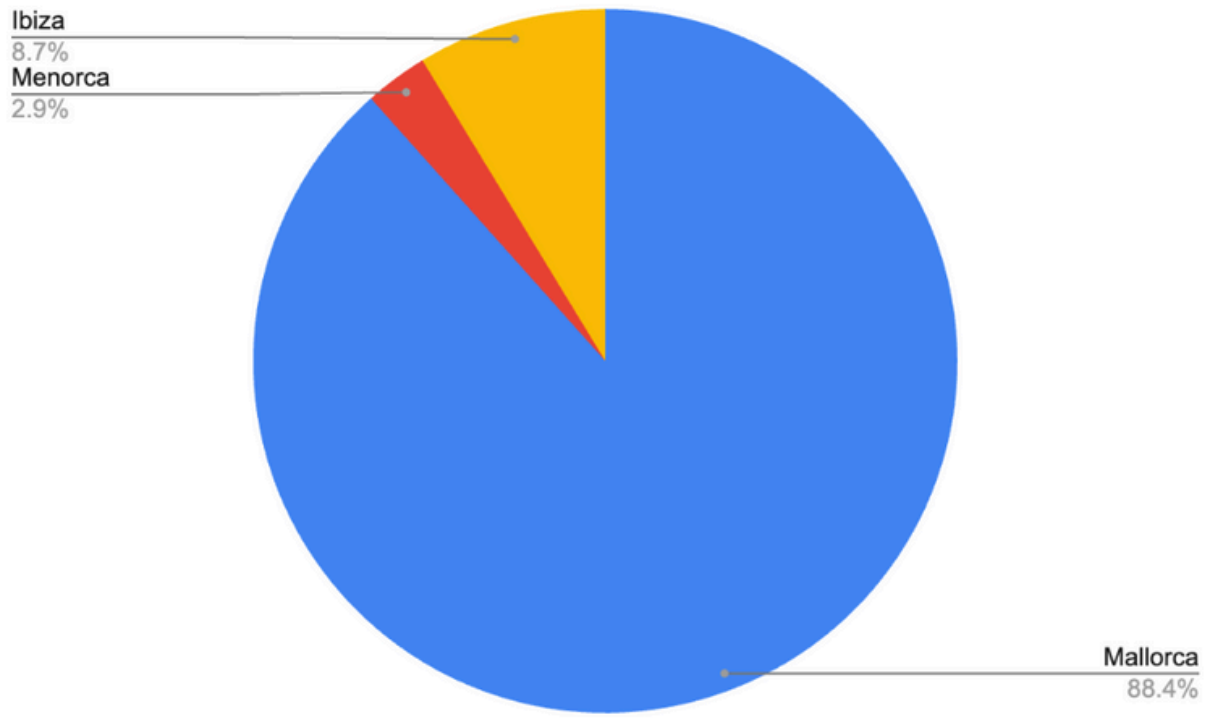
Type of aerospace industry	Potential collaborations	Closing reasons
89.9% Aviation 1.4% Space 8.7% Aviation and Space	1.9 average number of academics who match with Balearic companies to innovate through collaboration 2.5 average number of startups that match with Balearic companies to innovate through collaboration 89.9% of Balearic companies have the potential to collaborate with academics (already with a match) 91.3% of Balearic companies have the potential to collaborate with startups (already with a match)	67% n/a 18% Merged 8% Bankruptcy 3% Relocation
Themes	**Possible topics to innovate**	**Year of closures**
Airports Construction of aircraft and space devices Audiovisual content Technical installations Machinery Robotic systems Information resources Consultancy Drones Operational services Flight school Private aviation Airline Technical maintenance	AI, Education in consumption and resources, Personalized training, Fleet and crew management, Sustainability and Efficiency, Emissions alert, Optimization of ground spaces Pre-diagnostic and preventive maintenance, Internal platform and network for exchanging parts availability, Use 3D technology and robotics, Integrated digital platforms, Process automation: Airports, Baggage system, Optimized spaces, Public relations Advanced simulations, Programs, App, Online learning, Drone operations training, Technology and Accessibility, User Experience Awareness, Compensation Program and Recycling Education, Use of Sensors and Data Analysis, VR, Digital, Diagnostics	38% 2020 14% 2017 12% 2018 12% 2015 12% 2012 6% 2016 3% 2013 3% 2011

Collaborative Actors	Potential collaborations	Closing reasons
Relevant academics Rafael Ruiz Mansilla Ivette Maria Rodríguez Pérez Ivette.Rodriguez Enric Pastor Juan Carlos Cante Teran Jaume Sanz Luis Miguel Munoz David Gonzalez Xavier Prats David Gonzalez Juan Cante Abel Lucena, M. Antònia Garcia Sergi Mas Pujol Ivette Maria Rodríguez Pérez Pablo Royoupc Ramón Torrens Jorge Mata Diaz Pedro Javier Gamez Alicia Casals Pedro Javier Gamez Abel Lucena M. Antònia Garcia Rosalía Rodríguez Fernando Narváez Arnau Aguilera Daniel Garcia Xavier Prat Prof. Alicia Sintes Prof. Nona Agawin Prof. Maurici Ruiz	**Relevant Startups** AtlasPosidonia Aistech Space Balamis Ingeniería De Sistemas Rokubun Dapcom Data Services Madrid Space Axter Aerospace Heatconv Aeon-T Composite Technologies Cedrion Detektia Quasar Science Resources Polar Developments skanSENSE Airelectronics Ienai Space PLD Space Pangea Space 2C Degrees Aardvark Sensing Agtuall Celemation Ecosmic Inframent Marmoris Meteory Reef Support Revolv Space Spherical Systems Shore Systems Terraprisma Turle Island Space	**Universities** E.T.S.I. Aeronáutica y el Espacio, Madrid, Universidad Carlos 3, Madrid, Universidad Complutense, Madrid UPC, Barcelona, Universidad de las Islas Baleares, Mallorca

THE POSITION AND LOCATION OF THE AEROSPACE ECOSYSTEM OF THE BALEARIC ISLANDS

Mallorca, together with the Palma de Mallorca area, is where aviation and space companies are mostly concentrated, which has 88.4% with 61 companies including SMEs, large companies and startups. Ibiza is the second area with 8.7% with 6 companies.

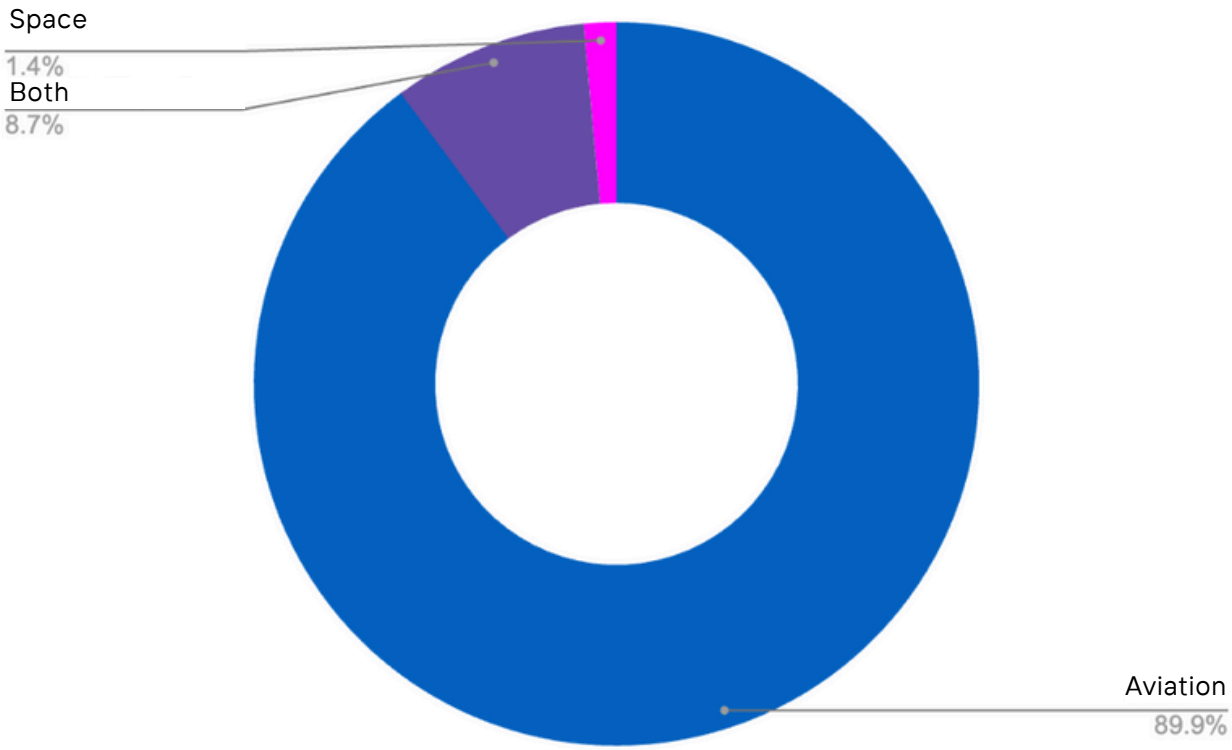
88.4% Mallorca
8.7% Ibiza
2.9% Menorca



COMPANY CLASSIFICATION

89.9% of the companies are dedicated to aviation, with 62 companies, 8.7% working in both areas of aviation and space and only 1.4% dedicated to space.

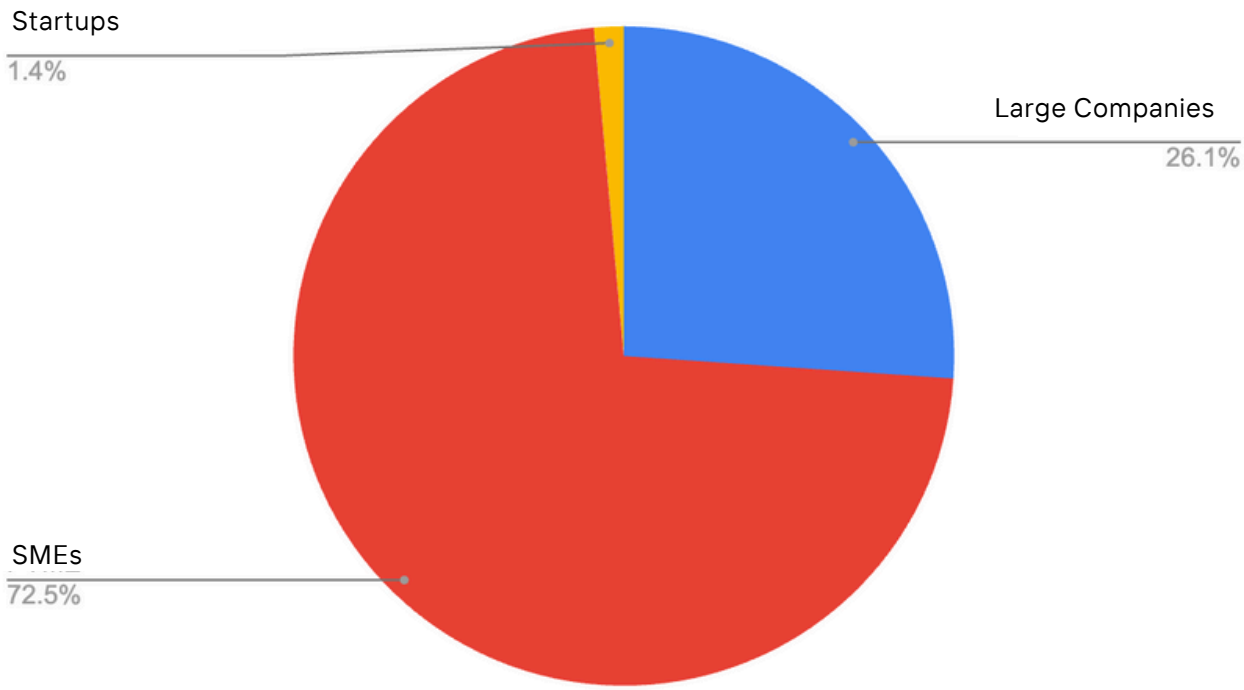
89.9% Aviation
1.4% Space
8.7% Both



COMPANY CLASSIFICATION

A remarkable 72.5% of the companies are small and medium-sized, making up 50 enterprises. Large companies account for 26.1%, representing 18 significant players in the industry. Meanwhile, a niche 1.4% are pioneering startups, with just one innovative venture leading the way.

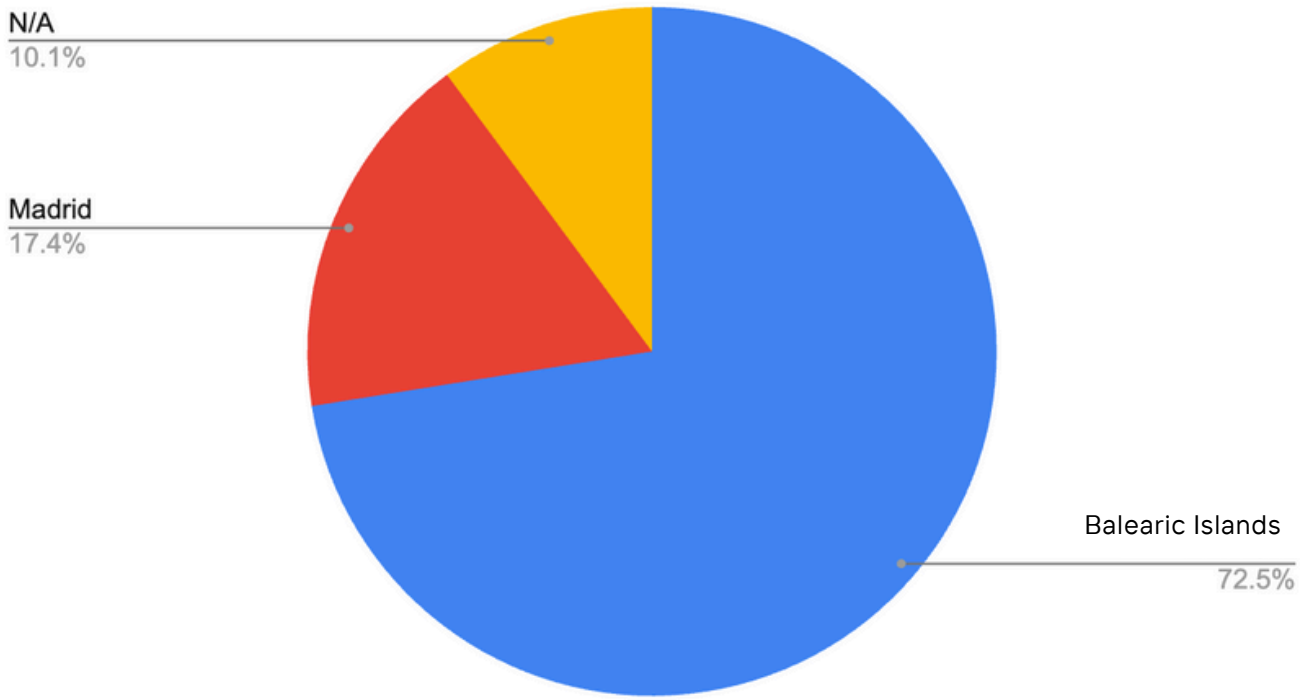
26.1% Large companies
72.5% SMEs
1.4% Startups



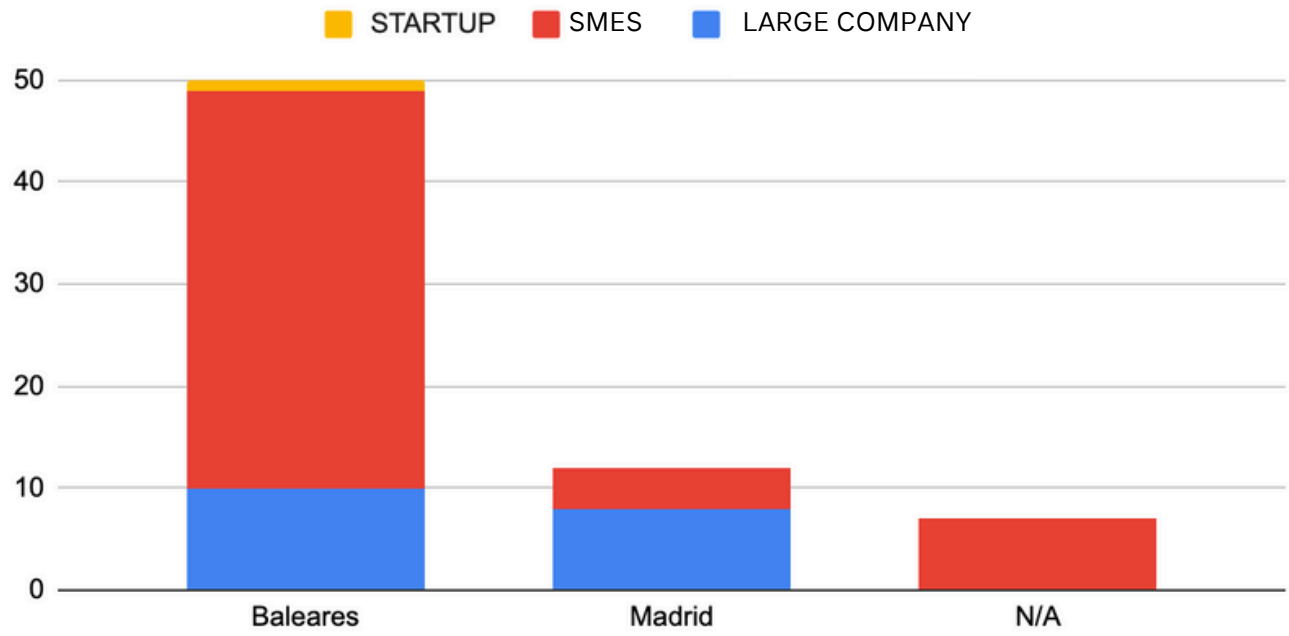
COMPANY CLASSIFICATION

72.5% of the companies are registered in the Balearic Islands with 50 companies, 17.4% are registered in the Community of Madrid with a total of 12 companies. 10.1%—comprising 7 companies—present a unique challenge as their official registrations cannot be verified.

72.5% NIF registration in the Balearic Islands
17.4% NIF registration in Madrid
10.1% unverifiable official registrations

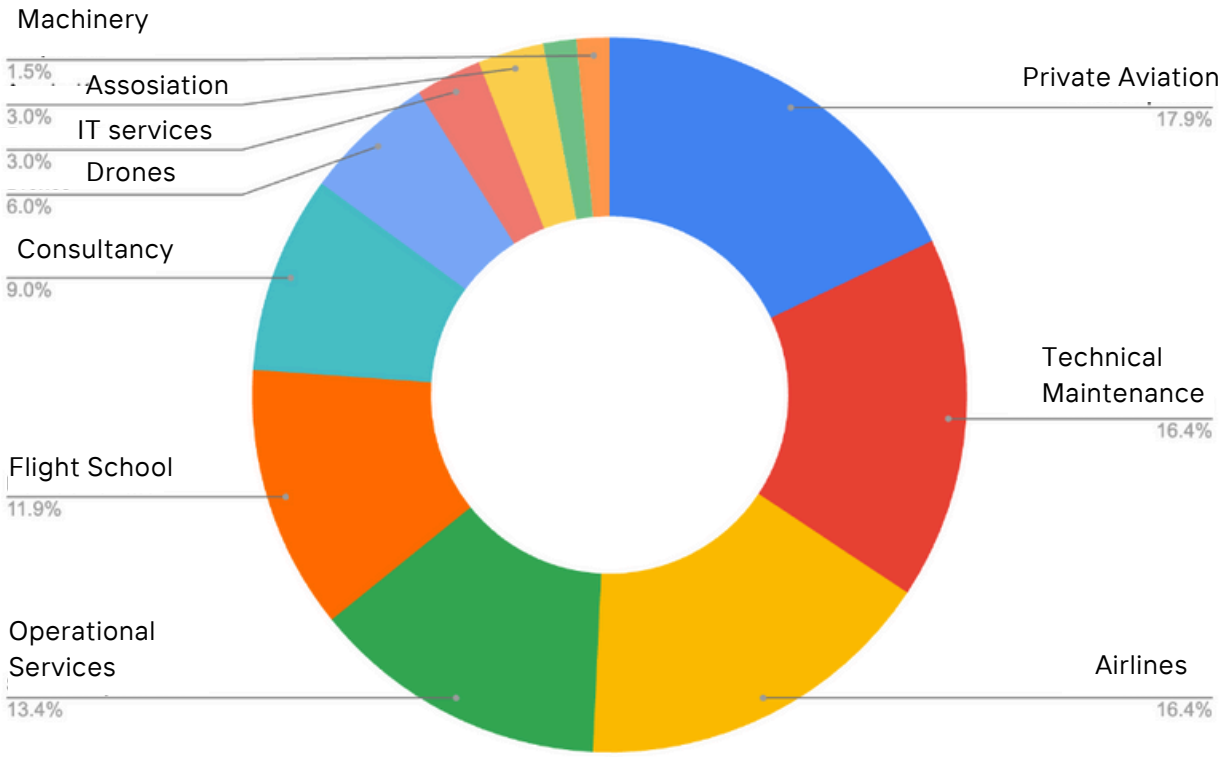


COMPANY CLASSIFICATION



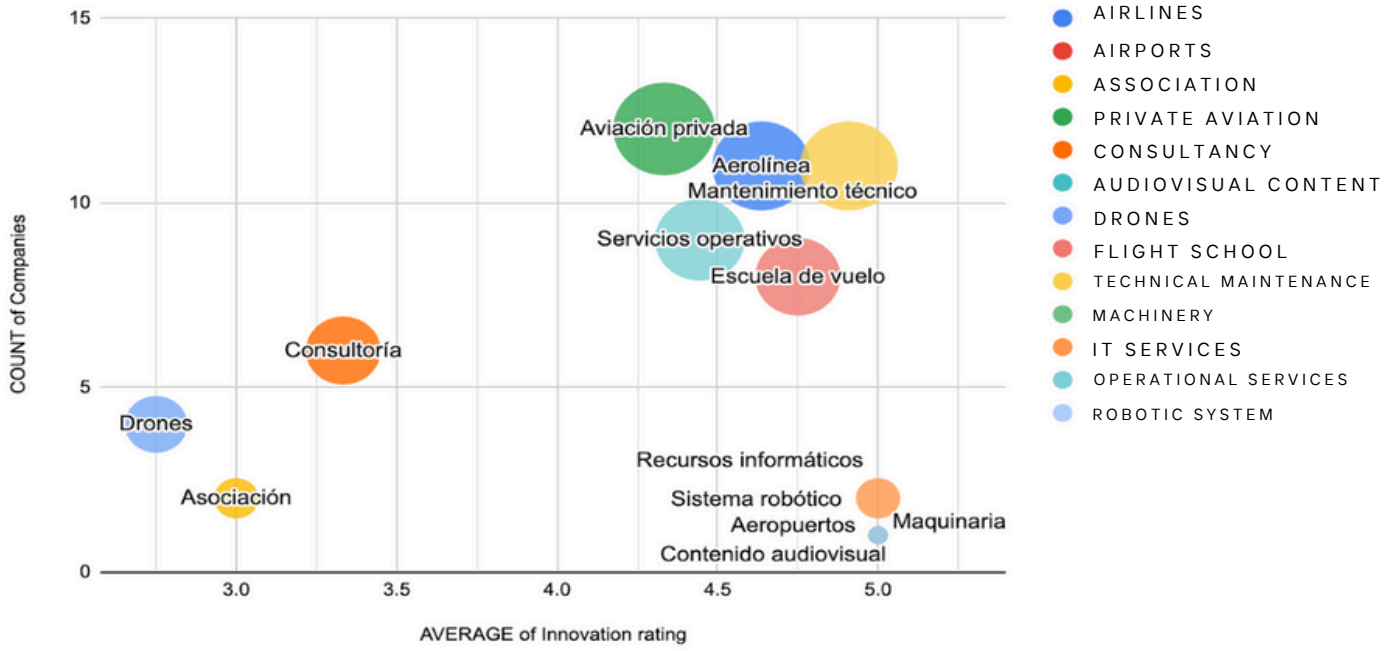
THEMES OF AEROSPACE COMPANIES IN THE BALEARIC ISLANDS

The aerospace sector in the Balearic Islands revolves around essential services in the private aviation sector:



THEMES OF AEROSPACE COMPANIES IN THE BALEARIC ISLANDS

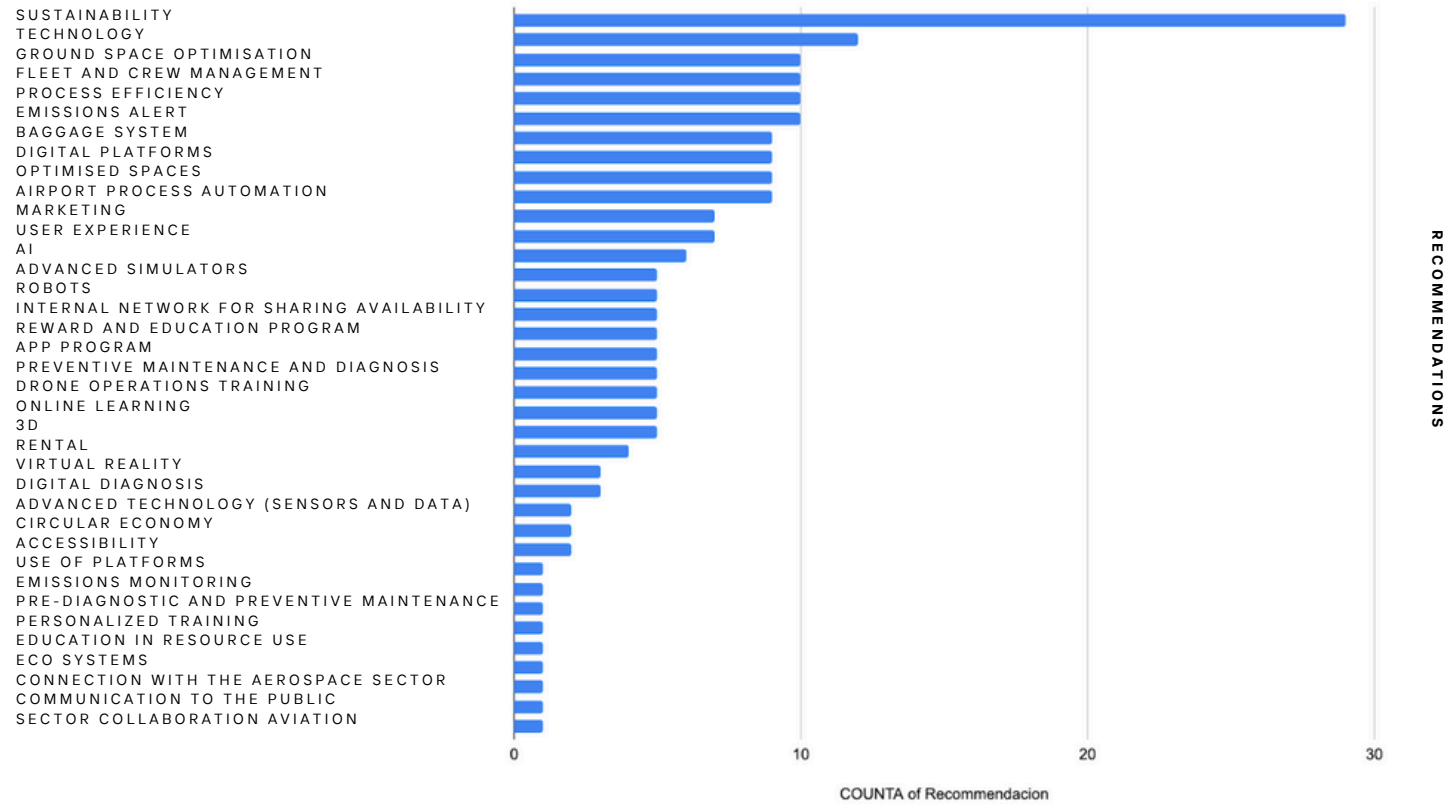
By themes and innovation level ratios:
We have analyzed the innovative potential of the aerospace companies of the companies located in the Balearic Islands, according to their innovation potential from 0 to 5, and corresponding to the number of companies per theme.



RECOMMENDATIONS FOR BRIDGING INNOVATION IN AEROSPACE

We have explored the innovation potential within the aerospace sector of the Balearic Islands, pinpointing key areas for transformation. In addition to critical sectors highlighted by IATA—like digitalization, cargo, GenAI, sustainability, data utilization, airline management, and advancing gender equality—these innovations are intricately linked with the region's tourism, transport, and software industries.

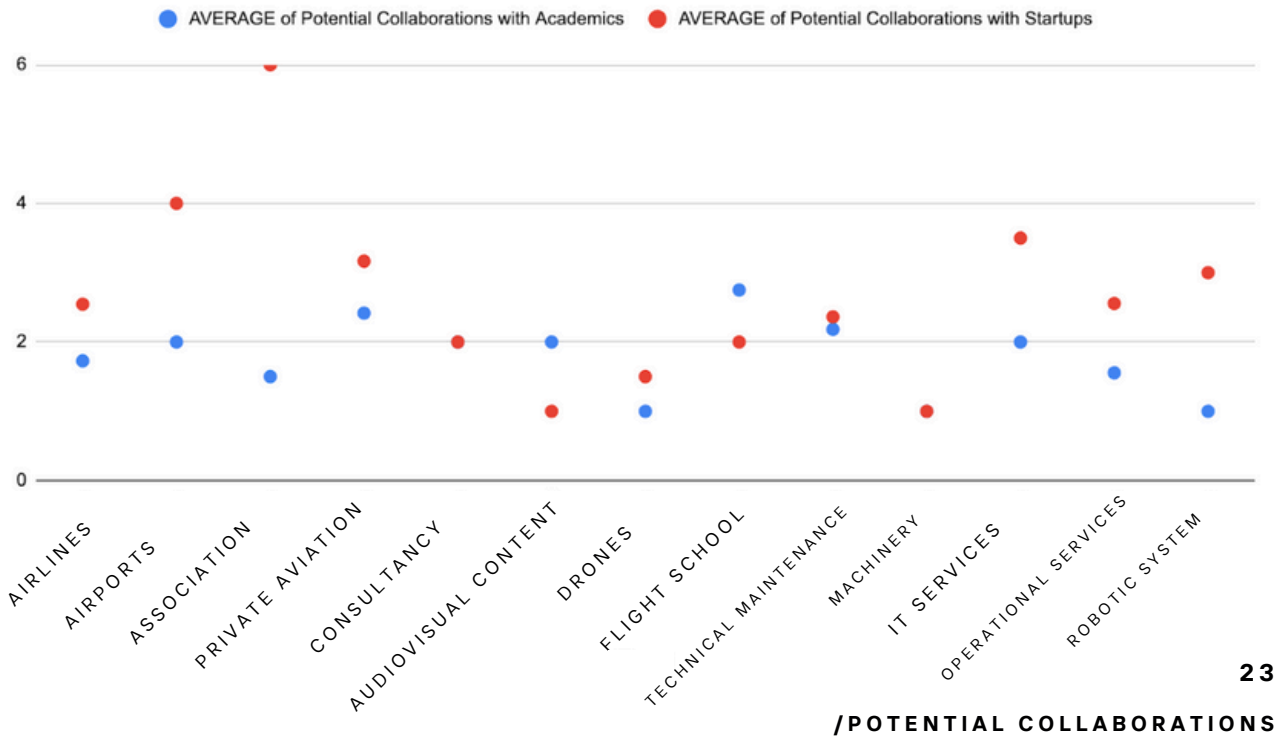
Our reports detail specific avenues for Balearic companies to innovate in aviation, such as sustainability initiatives, cutting-edge technologies, optimizing ground operations, fleet and crew management enhancements, process efficiency improvements, and emissions reduction strategies. The following graph illustrates these innovative opportunities within the Balearic aerospace sector.



POTENTIAL COLLABORATIONS BETWEEN UNIVERSITIES AND STARTUPS FOR THE INNOVATION ECOSYSTEM

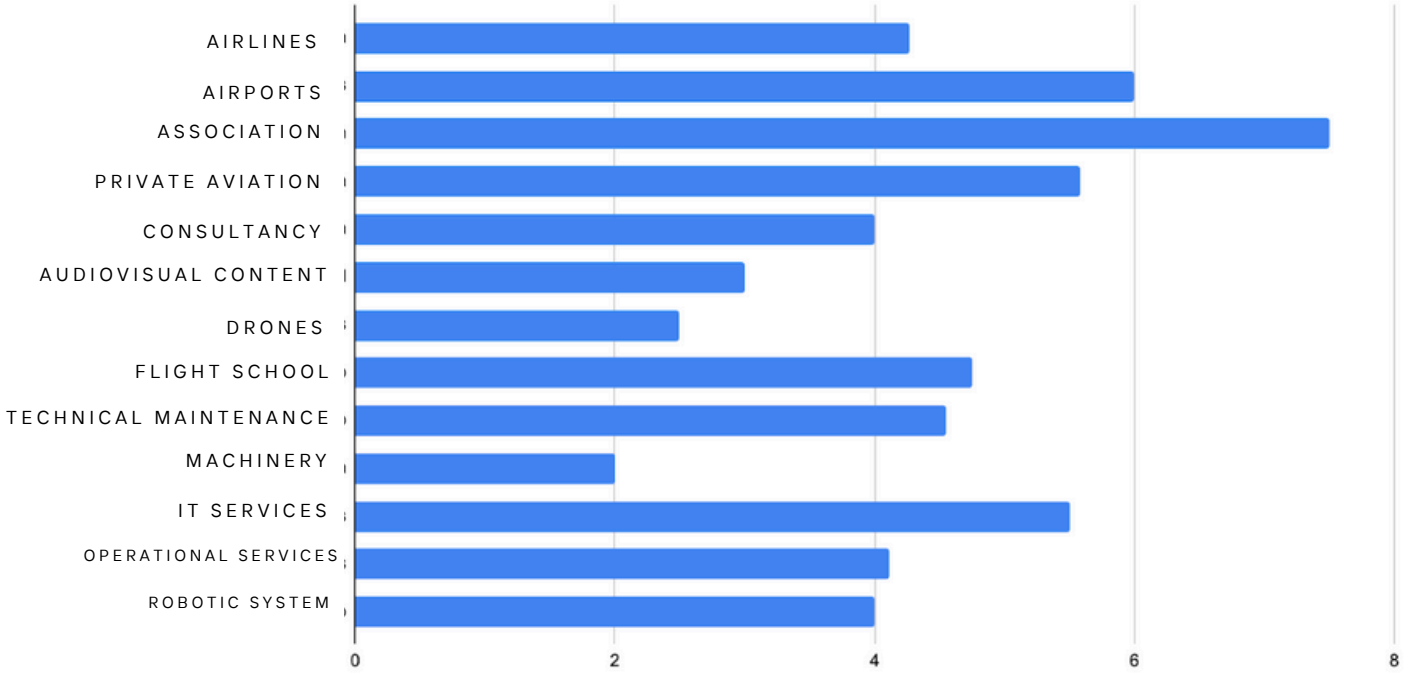
Collaboration is essential for fostering an effective innovation ecosystem. After thoroughly analyzing the focus areas of aerospace and aeronautical companies in the Balearic Islands, as well as identifying potential innovation opportunities, we have strategically mapped out opportunities for collaboration with startups and researchers across Spain.

The graph illustrates dynamic connections between startups (red dots) and researchers (blue dots). On average, Balearic companies have the potential to collaborate with 1.9 academics and 2.5 startups, highlighting robust opportunities for innovation. Impressively, 89.9% of Balearic companies have already established potential academic collaborations, while 91.3% have identified promising startup partnerships. This collaborative framework is set to drive significant advancements in the aerospace industry in the Balearic Islands and beyond.

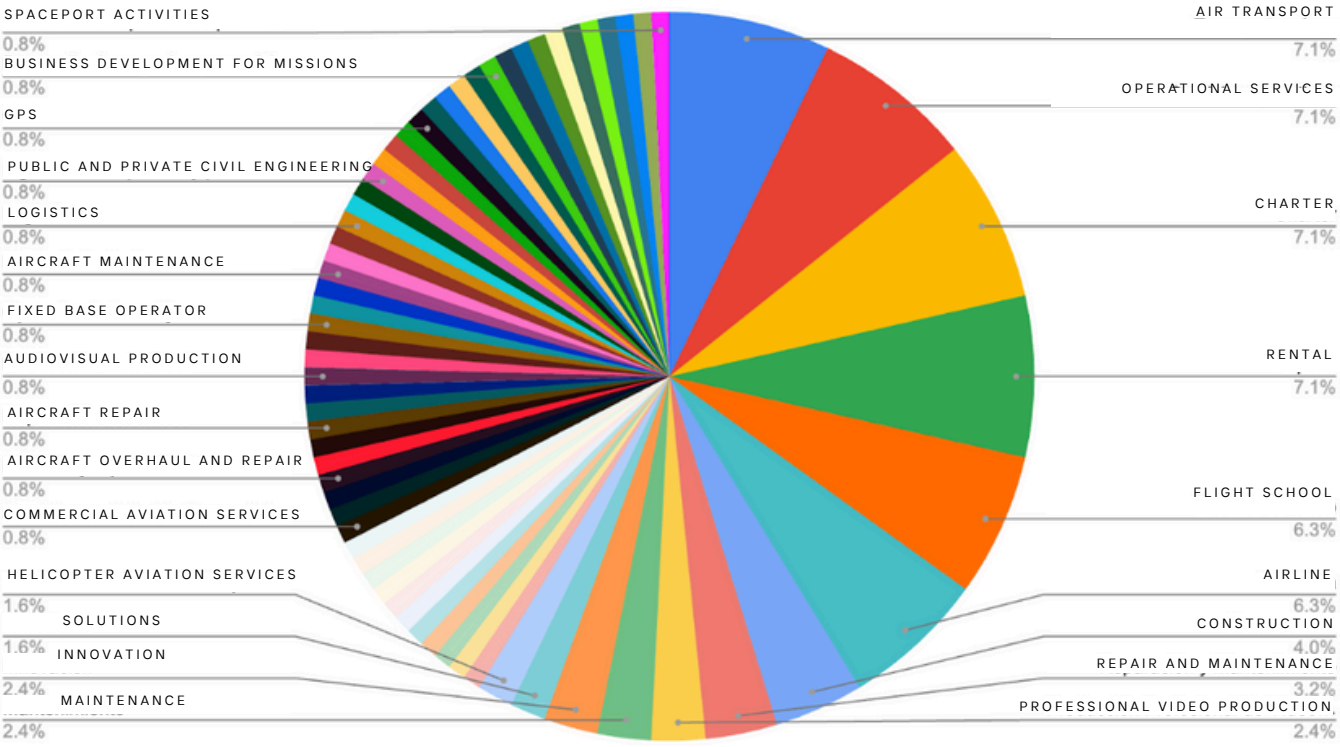


STATISTICS OF AEROSPACE COMPANIES IN THE BALEARIC ISLANDS

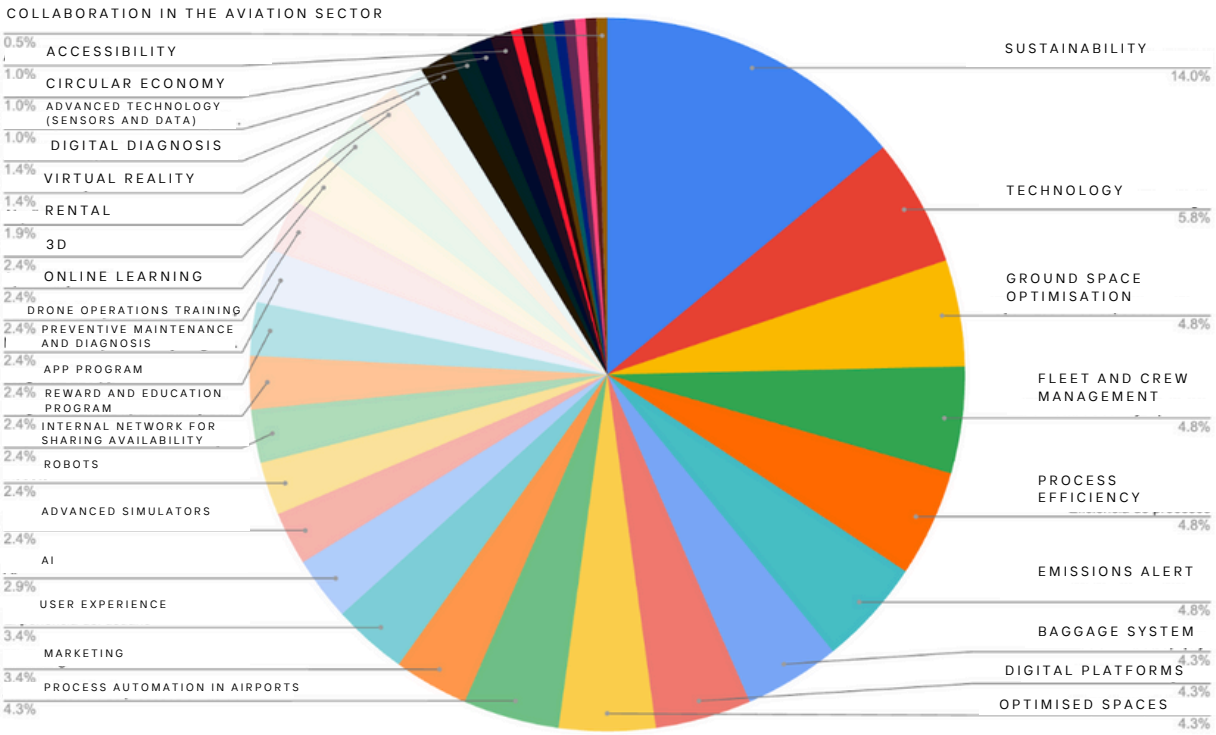
The graph illustrates the average number of collaborations between aerospace companies in the Balearic Islands, startups, and researchers across Spain. This data highlights the potential within the aerospace innovation ecosystem. Moreover, by expanding this study to include the rest of Europe, we can further enhance collaboration opportunities and drive even greater innovation within the sector.



The graph in the next page highlights the recommended collaboration topics between aerospace companies, universities, and startups in the sector:



The graph below highlights the recommended collaboration topics for aerospace companies to innovate and propel themselves to the next level, focusing on partnerships with universities and startups:



CLOSURE OF AEROSPACE COMPANIES

Between 2011 and 2020, 38 companies in the Balearic Islands' aerospace sector ceased operations. Including these closures, the total number of companies would have been 107. This indicates that the sector has experienced a 35% reduction over the past decade.

Understanding these statistics is crucial for framing the recommendations and programs detailed in this report. Our objective is to support the growth, collaboration, and innovation of aerospace companies to ensure their future relevance and strength.

Closure Trends

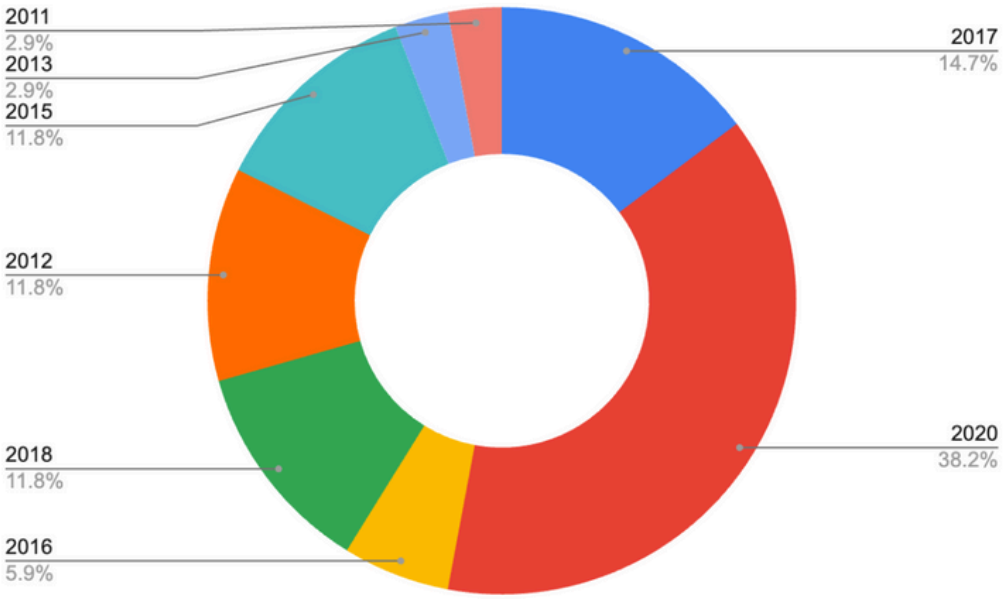
Pandemic Impact (2020): 38.2% of the total closures occurred during the first year of the pandemic.

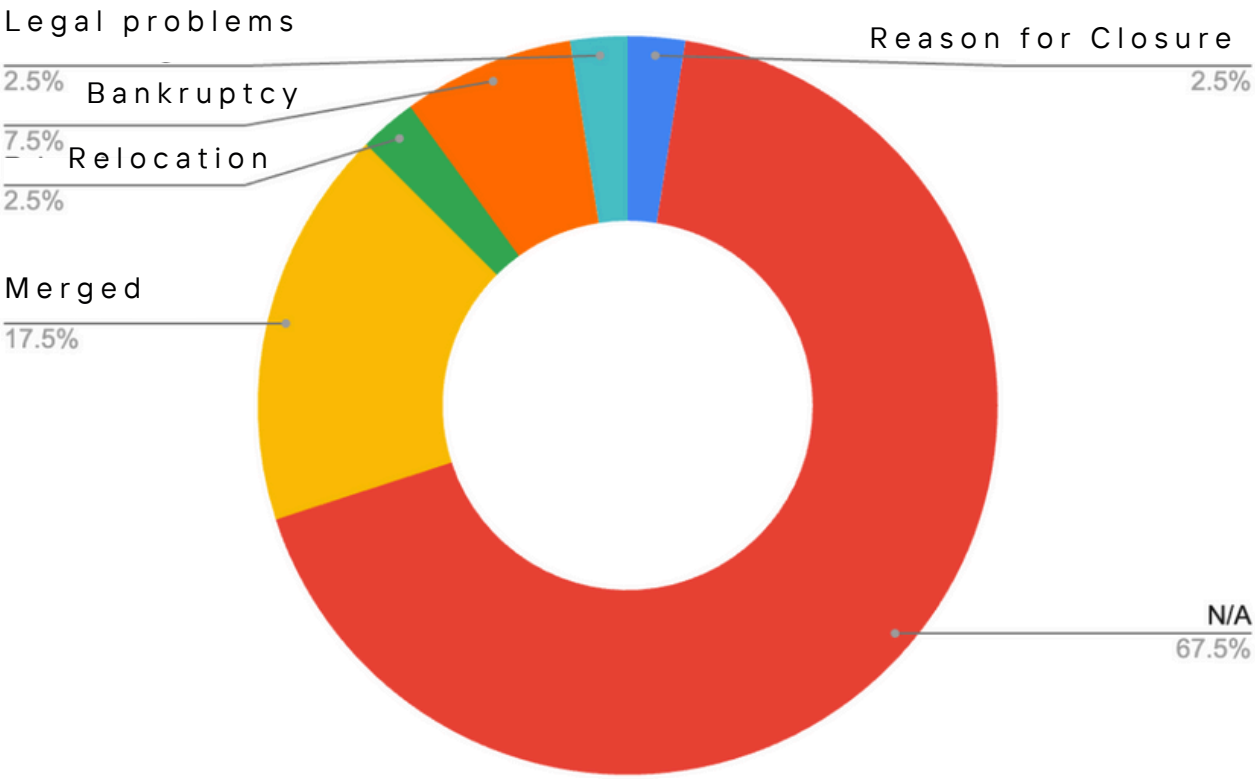
Pre-Pandemic Years: From 2016 to 2019, the closure rate fluctuated between 11-14% annually.

Earlier Years (2011-2015): The sector experienced a relatively stable period with a closure rate of just 2%.

Reasons for Closures

Among the reasons cited, 67.5% of closures have undisclosed reasons, while 17.5% merged with other companies. Additionally, 7.5% declared bankruptcy, 2.5% faced legal issues, and another 2.5% relocated.




Legal problems
2.5%
Bankruptcy
7.5%
Relocation
2.5%
Merged
17.5%
Reason for Closure
2.5%
N/A
67.5%

STATISTICS OF AEROSPACE COMPANIES IN THE BALEARIC ISLANDS

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RECOMMENDATIONS FOR INNOVATION PROGRAMS AND POLICIES IN THE AEROSPACE ECOSYSTEM

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INTRODUCTION

The aerospace sector stands as a cornerstone of national strategy, with Spain recently establishing the AEE Spanish Space Agency. Embracing the New Space era, the industry is poised for innovative aerospace solutions, blending public and private initiatives in unprecedented ways.

69 companies are driving the aerospace sector forward. In May 2023, Ibiza hosted the EuroSpaceHub Forum, gathering over 70 global experts. This year, from May 27-31, 2024, the University of the Balearic Islands, CNES, and ESA are set to host the Space Observation Symposium, focusing on Earth and Satellites.

Aerospace research tackles the challenges of extraterrestrial environments, crucial for addressing climate change and advancing the green transition across industries. Yet, urgent efforts are needed to develop eco-friendly technologies and digital solutions, ensuring the sector's evolution matches global sustainability goals.

On the other hand, there's a pressing need to develop "greener" technologies and solutions for space and aviation, along with digitizing and upskilling existing aerospace entities. As we navigate this digital and environmentally conscious era of New Space, there's a critical requirement for long-term investments in hardware and infrastructure that aren't currently covered by European or agency funding.

Recognizing this gap, the European Commission is actively addressing the issue of long-term investment in deep technology.

The European space sector has undergone significant growth in recent years, spurred by the advent of New Space. Accessibility to space has improved dramatically compared to a decade ago, fueling heightened interest from both industrial and educational perspectives. With the European space economy valued at €50 billion, research in aerospace technologies is a key priority under Horizon 2020's industrial leadership and societal challenges. Collaborative efforts between the European Commission, the European Investment Bank Group, and the European Investment Fund are combining to inject €200 million into boosting investments in the space sector.

In this context, the government of the Balearic Islands should seize various financing opportunities to leverage its strong access to the space technology ecosystem. This proactive stance will not only support sustainable growth but also foster innovation, ensuring Spain's aerospace sector remains competitive on the global stage.

Digital integration is key to fostering growth in the aerospace industry within the Balearic Islands. This involves seamlessly connecting Europe's space and aviation ecosystem, linking technology transfer offices, industry players, space accelerator networks, research centers, and universities. By leveraging financial opportunities from frameworks like Horizon Europe, venture capital programs, and InnovFin, the region can bridge the gap between academia and industry. This collaborative approach is supported by entrepreneurship programs at institutions such as ParcBIT, EBIT, FUEIB, EmprenBIT, and local companies.

Innovation in aerospace, focusing on Pillar 2 and Cluster 4 (digital, industry, and space), is guided by a mission to adapt to climate change and driven by the Sustainable Development Goals (SDGs). These include gender equality (SDG5), innovation and industry (SDG9), and partnerships for the goals (SDG17), alongside technological objectives like life on land (SDG15), life below water (SDG14), climate action (SDG13), responsible consumption and production (SDG12), sustainable cities and communities (SDG11), affordable and clean energy (SDG7), clean water and sanitation (SDG6), and good health and well-being (SDG3).

The multidisciplinary approach of space and aeronautical technologies presents numerous opportunities for research and innovation. It is recommended that the Balearic Government capitalize on this interdisciplinary nature to support aerospace companies in their digitalization, innovation, and efforts towards climate change adaptation. By exploring the diverse applications of space and aeronautical technologies, the region can align with the SDGs and promote sustainable development through green technology in space and aviation.

RECOMMENDATIONS FOR STARTING AND ESTABLISHING AN AEROSPACE INNOVATION ECOSYSTEM IN THE BALEARIC ISLANDS

1. ESTABLISH AN AEROSPACE MAKERLAB AT PARCBIT TO ENABLE EXPERIMENTATION AND PROTOTYPING FOR AVIATION, DRONES, AND SPACE TECHNOLOGIES. THIS FACILITY WILL CATER TO STARTUPS, SECTOR COMPANIES, AND RESEARCHERS FROM THE UNIVERSITY OF THE BALEARIC ISLANDS.

2. IMPLEMENT A STARTUP VISA PROGRAM AND A DIGITAL NOMAD VISA TAILORED FOR THE AEROSPACE SECTOR. THESE INITIATIVES WILL STREAMLINE ENTITY REGISTRATION IN THE BALEARIC ISLANDS AND FACILITATE THE RECRUITMENT OF AVIATION AND SPACE TALENT ESSENTIAL FOR NURTURING THE INNOVATION ECOSYSTEM.

3. DEVELOP AN ACTION PLAN AND EDUCATIONAL INITIATIVES FOCUSED ON FOSTERING AEROSPACE INNOVATION WITHIN THE BALEARIC ISLANDS. COLLABORATE WITH PINEM, CHAMBERS OF COMMERCE, INCUBATORS, ACCELERATORS, AND OTHER INNOVATION AGENCIES TO ENSURE COMPREHENSIVE SECTORAL DEVELOPMENT.

4. ESTABLISH AN AVIATION AND SPACE CLUSTER AIMED AT SUPPORTING EXISTING COMPANIES IN THE BALEARIC ISLANDS AND PROMOTING THE EMERGENCE OF NEW STARTUPS THROUGH LOCAL INCUBATORS.

5. FORGE STRATEGIC PARTNERSHIPS AMONG THE UNIVERSITY, THE NEWLY FORMED AVIATION AND SPACE INDUSTRY CLUSTER, INNOVATION AGENCIES, PRIVATE INCUBATORS, AS WELL AS INTERNATIONAL COMMUNITIES SUCH AS ENGLISH AND GERMAN-SPEAKING ENTITIES. THIS COLLABORATION SHOULD INVOLVE SMES, LARGE CORPORATIONS, STARTUPS, TECHNOLOGY CENTERS, AND VARIOUS FACULTIES OF THE UNIVERSITY (INCLUDING FUEIB, UIB, PARCBIT / EMPRENBIT / FUNDACIÓ BIT, AND DESACELERADORA).

6 ESTABLISH A COLLABORATION AGREEMENT WITH EUROSPACEHUB TO DIGITIZE AND CONNECT THE BALEARIC AVIATION AND SPACE ECOSYSTEM AND CONNECT IT WITH COMPANIES AND ACADEMICS AND OTHER EUROPEAN STARTUPS AND PROVIDE INNOVATION AND AEROSPACE TRAINING FROM OTHER EUROPEAN ECOSYSTEMS.

7 CREATE CONNECTIONS AND DIRECT COLLABORATIVE PARTNERSHIPS OF THE BALEARIC AEROSPACE ECOSYSTEM WITH THE EUROPEAN AEROSPACE ECOSYSTEMS TO CREATE BUSINESS AND INNOVATION OPPORTUNITIES FOR COMPANIES THROUGH DIGITAL PLATFORMS SUCH AS EUROSPACEHUB, AND CREATE PARTNERSHIPS WITH OTHER NETWORKS SUCH AS EPIC (THE ESA INCUBATOR NETWORK) OR INVESTOR NETWORKS SUCH AS BAE (BUSINESS ANGELS EUROPE), IAC, IAF, AND OTHER ASSOCIATIONS THAT ARE IDENTIFIED AS CRITICAL TO THE NEEDS OF BALEARIC COMPANIES. AND THROUGH AN ANNUAL PHYSICAL AND IN-PERSON EVENT SUCH AS FORUM BALEARIC SPACE & AVIATION.

8 ESTABLISH INFORMAL DIGITAL AND IN-PERSON NETWORKING ACTIVITIES AT PARCBIT WITH THE AIM OF STRENGTHENING RELATIONSHIPS BETWEEN COMPANIES THAT ARE PART OF THE AEROSPACE ECOSYSTEM WITH AN INFORMAL FORMAT: SPACE&AVIATION INNOVATION CAFE & ENSAIMADAS. THE FORMAT IS VERY SPECIFIC, ONCE A MONTH, AT THE SAME TIME, ON THE SAME DAY. DURING THE FIRST 3 MONTHS IT IS ONLY NETWORKING, THE 6 MONTHS, THE COMPANIES THAT COME TO THE EVENT PREPARE A 5-MINUTE PRESENTATION OF WHAT THEY DO, WHAT THEY NEED AND WHAT THEY OFFER. THE FOLLOWING 6 MONTHS, THE FORMAT IS THAT ONE COMPANY PROPOSES A PROBLEM AND THE REST HELPS IT SOLVE IT. AND SO IT GOES BACK TO 3 MONTHS OF JUST NETWORKING, ETC.

9 CREATE A PROGRAM OF ACTIVITIES FOR THE ACTIVATION AND MAINTENANCE OF THE AEROSPACE INNOVATION ECOSYSTEM AS AN “ONBOARDING” PLAN FOR NEW MEMBERS THAT INCLUDES WORKSHOPS, TALKS, MATERIALS, ACCESS TO DIGITAL PLATFORMS, ETC. THE SPACE&AVIATION INNOVATION CAFE & ENSAIMADAS AND “WELCOME CALLS” WHERE EACH MONTH THE AEROSPACE INNOVATION ECOSYSTEM IS INTRODUCED, AND HOW THE GOVERNMENT OF THE BALEARIC ISLANDS AND ITS ACTIVE MEMBERS OF THE ECOSYSTEM PROVIDE SUPPORT TO COMPANIES, STARTUPS AND ACADEMICS TO INNOVATE AND COLLABORATE ON AEROSPACE TOPICS.

10 DEVELOP TECHNICAL TRAINING PROGRAMS ON AEROSPACE TOPICS, OFFERED IN-PERSON AND DIGITALLY (RECORDED AND UPLOADED TO A DIGITAL PLATFORM), IN COLLABORATION WITH REGIONAL, NATIONAL, EUROPEAN, AND INTERNATIONAL UNIVERSITIES. ESTABLISH THE SPACE&AVIATION BIT-ACADEMY TO ENHANCE ACCESSIBILITY TO THE BALEARIC ISLANDS' AEROSPACE INNOVATION ECOSYSTEM.

11 ESTABLISH A PROGRAM IN SCHOOLS AND INSTITUTES “AN AEROSPACE ENGINEER IN EVERY SCHOOL” TO EDUCATE AND CREATE ROLES TO FOLLOW IN AEROSPACE ISSUES IN THE SCHOOLS AND INSTITUTES OF THE BALEARIC ISLANDS TO CREATE THE AEROSPACE INDUSTRY AND ECOSYSTEM AND STEAM TALENT .

12 ESTABLISH AN AEROSPACE INCUBATOR BETWEEN PARCBIT / EMPRENBIT / FUNDACIÓ BIT, FUEIB TO SUPPORT AEROSPACE STARTUPS, DIGITALIZATION OF AEROSPACE SMES IN THE BALEARIC ISLANDS, AND TO SUPPORT COLLABORATIVE INNOVATION PROJECTS FOR AEROSPACE COMPANIES IN THE BALEARIC ISLANDS: ENTREPRENEURSHIP, DIGITALIZATION AND COLLABORATION TO INNOVATE.

INDICATORS FOR MONITORING THE IMPLEMENTATION AND PROGRESS OF THE AEROSPACE INNOVATION ECOSYSTEM IN THE BALEARIC ISLANDS

KPIS (KEY PERFORMANCE INDICATORS)
AEROSPACE PLAN: 2030-2050

Number of startups: 4 per year.

Number of academic publications: 10 per year.

Number of collaborations between startups-university-company-governments: 10 per year.

Number of companies supported in digitalization: 5 per year.

Number of companies that have acquired the innovative SME seal: 4 per year.

CONCLUSIONS

This preliminary analysis of the aviation and space ecosystem in the Balearic Islands has shown that there are a sufficient number of companies to be supported by the innovation agencies of the Balearic Islands and by the institutions that support the business, industrial and academic, since they represent around 20% of the Spanish industry.

The impact of the EuroSpaceHub Forum held in Ibiza in May 2023 gave rise to looking and reflecting on the aerospace ecosystem in the Balearic Islands, both on the institutional side and on the part of the actors who are often “hidden” and are not visible or connected to each other. The impact of the EuroSpaceHub Forum was not only due to its celebration in the city of Ibiza, with the representation of the diversity of actors from the Balearic Islands, National, European and International including MEPs, local politicians, heads of European investment funds and of the other European institutions of space, aviation and investment together with universities, academics, companies and startups but to the media impact in the press that said event had, and which gave rise to a call for attention to public institutions, to university professors, to companies and startups.

At this time, companies, universities and startups as main actors are not connected, but neither were public institutions and innovation agencies aware that the aerospace sector in the Balearic Islands could be relevant. This analysis confirms that it is a sector to be developed both business-wise and at the level of the innovation ecosystem to support it to grow and expand, until it reaches the point of being a benchmark in Spain as a hub for new space and new aviation. To achieve this, collaborations with the Spanish and European national ecosystem are going to be decisive. The innovation department is part of the board of PERTE Aeroespacial and this strategic positioning can support the initiation of the aviation and space innovation ecosystem in the Balearic Islands.

The Factoria d’Innovació, Innobal, and current incubation and acceleration programs must support the aerospace innovation ecosystem of the Balearic Islands and be prepared to grow the recommended aerospace cluster through innovation.

The reports and recommendations are aimed at how to create the aerospace innovation ecosystem from the beginning and step by step, in order to create the aerospace cluster and support the companies that are currently the majority in aviation issues, to go one step further. and to grow companies related to the theme of space. At the same time, it is important that the digitalization strategies, support for the green transition and sustainability, and gender equality dictated by PERTE Aerospace and the European strategies for the aerospace sector are taken into account from the beginning. With this report of recommendations and the rest of the analysis of the current state of the ecosystem, the Balearic Islands begin the creation of said innovation ecosystem with these premises, since the Balearic Islands and the rest of the clusters and innovation ecosystems will benefit from the technologies and applications based on drones, satellites, and habitats on the moon and on Mars for agriculture, logistics, sustainable tourism, aeronautical repair and maintenance, manufacturing, conservation of the biodiversity of the Islands and the maritime sector. At this time there is potential to expand innovation to different technologies and applications that positively impact the economy and biodiversity of the Balearic Islands.

In conclusion, it is recommended to the Balearic Government and in particular to the innovation ministry that they begin the creation of the innovation and cluster ecosystem to support aviation and space in the Balearic Islands.

RECOMMENDATIONS FOR INNOVATION PROGRAMS AND POLICIES FOR THE AEROSPACE ECOSYSTEM IN THE BALEARIC ISLANDS

COLLABWITH

eurospacehub

ROADMAP AND NEXT STEPS FOR ESTABLISHING AN AEROSPACE INNOVATION ECOSYSTEM IN THE BALEARIC ISLANDS

APRIL 2024

For Omar Beidas Soler
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CONTENT

DESCRIPTION

To catalyze an aerospace innovation ecosystem in the Balearic Islands, this report introduces roadmaps and work plans presented in tabular formats for clarity and accessibility. The inaugural strategy outlines three pivotal steps: backing of the Balearic Government, active collaborations with existing institutions and the wider aerospace community, alongside the establishment of an aerospace cluster within the region.

Addressing the distinction between a cluster and an innovation ecosystem is crucial. A cluster is typically singularly focused on a specific industry or sector, whereas an innovation ecosystem is characterized by its multidisciplinary, multi-sectoral approach, involving diverse stakeholders collaborating to innovate and introduce new business models. The overarching goal is to cultivate a thriving environment that enhances the competitiveness and economic growth of aerospace enterprises in the Balearic Islands.

The governmental initiatives outlined aim to support both the ecosystem and the cluster, incorporating key performance indicators (KPIs), training programs, and monitoring mechanisms. Key stakeholders encompass public and private institutions, universities, major corporations, SMEs, and startups, all are integral to fostering a dynamic and sustainable aerospace innovation landscape in the region.

ACTIVATING THE AEROSPACE INNOVATION ECOSYSTEM

	Activation by the Government	**Collaborations from ParcBIT/EmprenBIT**	**Open cluster / Innovation ecosystem**
FIRST STEP	Presentation of reports Decision making to create a cluster	SBIC Barcelona SBIC Madrid Accelerate@IATA Vueling AENA EuroSpaceHub	Concrete the base of 5-10 large companies that financially support the cluster Define the cluster coordinator Define the cluster team
SECOND STEP	Integration of aerospace knowledge within the local innovation ecosystem Preparation of training and incubation programs for ParcBIT, EmprenBIT, Fundació BIT, FUEIB Introduce the new line of innovation and entrepreneurship with networking events with the actors of the ecosystem.	Airbus Ventures EBAN BAE Thales Innovation AAE IATA	Define cluster services Define the responsibilities of the cluster and other actors in the Balearic Islands Define multi-directional collaborations between the cluster and the rest of the actors in the ecosystem.
THIRD STEP	Define how the Balearic Government is going to support the innovation ecosystem and the aerospace cluster	EPIC ESA SBIC Network TEDAE Fundacion CSIC UPC UPM UPV EUESPA ESA	Define KPIs, operations, tools, activities and training Include methods for monitoring ecosystem/cluster efficiency

Efforts are necessary to enhance institutional coordination within the government, in line with resources and expertise of universities, public agencies, major corporations, SMEs, and startups. For instance, ensuring access to real-time multispectral satellite imagery is pivotal for diverse aerospace applications. Moreover, the industry must attract skilled professionals and provide specialized infrastructure such as an aerospace makerlab, essential for research, innovative development, and entrepreneurial endeavors.

To ensure the success of both the aerospace cluster and the broader innovation ecosystem, a series of strategic activities are proposed. Initiatives like the Space&Aviation Innovation Cafe & Ensaimadas will create informal spaces for ecosystem participants to connect, exchange ideas, and foster synergies. Networking sessions at ParcBIT will facilitate direct engagement between companies and institutions, encouraging collaborative ventures. Additionally, a peer-mentoring initiative will pair ecosystem members based on shared experiences or complementary strengths, facilitating knowledge transfer and easing newcomers' integration into the ecosystem and cluster network. To keep stakeholders informed and inspired, access to talks and conferences featuring experts in aviation and space will be provided, ensuring ongoing learning and development within the ecosystem.

HIGHLIGHTED SUMMARY OF THE "INNOVATION ECOSYSTEM FRAMEWORK"

Needs	Activities
Greater institutional coordination and a boost to scientific and technological research Have satellite images (multispectral) in real time of the Balearic Islands Need for talent and equipment Improve activities with different technologies such as IoT; Artificial Intelligence (any type); digitize processes; Apply sustainable and planet-friendly processes, remote sensing, digital twins Support with financial resources to provide support in talent and equipment Identify aerospace companies that want to innovate and support them Include founders or directors of aerospace companies that are registered outside the Balearic Islands Reduce the environmental impact of aviation in the Balearic Islands Connect with European companies to collaborate with university research and with other companies	Space&Aviation Innovation Cafe & Ensaimadas Peer-mentoring program between similar actors in the ecosystem between the Balearic Islands and the rest of the European aerospace ecosystems Welcome calls to welcome new members of the ecosystem virtually and in person Onboarding process to the innovation ecosystem in virtual, hybrid or in person Informal digital and in-person networking sessions at ParcBIT A 1-hour pechakucha is organized monthly, where in 5 minutes all the programs available to support innovation in the aerospace ecosystem of the Balearic Islands are introduced, such as ICEX, ParcBIT, EmprenBIT, FUEIB, University of the Balearic Islands, AEE, EBIT, INTA, CSIC Foundation. A 1-hour pechakucha is organized monthly, where in 5 minutes all the aerospace organizations of the Balearic Islands that participate in the event are introduced. Talks in person and virtually by experts in the areas of aviation and space, related to the main topics of PERTE Aerospace and the topics of the current business community of the Balearic Islands. Promote the different European aerospace financing programs, ESA challenges, Galileo, Copernicus, EGNOS, Cassini, Accelerate@IATA, EUESPA among other private industry incubation programs such as Airbus and Thales Alenia. Apart from the EIC, EIT, Erasmus+ and Horizon Europe.

Actors	Solutions
FUEIB Universidad de las Islas Baleares (Prof. Alicia Sintes, Prof. Maurici Ruiz, Prof. Joan Manuel Torres) Startups aeroespaciales (Blueguest (turismo), DSonar (software), ISQ Turística (turismo)) Emprendedores de Baleares (Open Cosmos registrada en UK, Rafel Jorda) Emprendedores de espacio en Baleares (SpaceHero registrada en UK, Deborah Dass) Empresas pymes de aviación y espacio Grandes empresas de aviación ParcBit Fundacio BIT EmprenBIT Innobal Factoria d'Innovació ICEX Cámara Oficial de Comercio, Industria, Servicios y Navegación de Mallorca, Menorca e Ibiza Pimem Mallorca, Menorca e Ibiza Mola Venture Builder Menorca Techcenter http://mothershipibiza.com Descelera Menorca IDI- Institut d'Innovació Empresarial de les Illes Balears CAEB (Confederación de Asociaciones Empresariales de Baleares) Enaire retos e incubación AENA EUESPA Accelerate@IATA	Create an aviation and space cluster Create a strategic relationship between the university Create an action and an education plan on the aviation and space cluster and ecosystem in the Balearic Islands in Pinem, and in the chambers of commerce and with the rest of the incubators, accelerators and innovation agencies. Create an aerospace incubator at FBIT Establish a program in schools and institutes "an aerospace engineer in every school" Create technical training programs on aerospace topics in person and digitally Establish a series of collaborations and partnerships with other aviation and space incubators, universities and technology centers to transfer and apply technology Establish a collaboration agreement with EuroSpaceHub to digitize and connect the Balearic aviation and space ecosystem Creation of an aerospace makerlab to facilitate prototyping and proof of concept. Create a VISA startup plan and digital nomad VISA for the aerospace sector to facilitate the registration of entities in the Balearic Islands and import talent

These roadmaps and strategic action maps propose to promote innovation through a collaborative and digitalized ecosystem. A key aspect is flexibility for entrepreneurs and with the acquisition of talent, which is one of the big problems in the “deeptech” sector, which is why we have to work on making digital residencies and innovation and entrepreneurship VISAs more flexible, so that they can reside anywhere, as long as they establish a physical office in the Balearic Islands.

Digitalization also plays a crucial role. It is proposed to digitize knowledge and access to said knowledge for re-training and re-skilling, offering masterclasses that combine the experience of industrial leaders, academics and European entrepreneurs. This digitalization will be part of the onboarding process in the innovation ecosystem, guaranteeing that all actors have access to knowledge and share their knowledge to increase collaboration, networking and access to new concepts, ideas and innovation potential. The plan maintains an inclusive and open approach, addressing the needs of local and international actors. Networking events, brainstorming and hackathons are necessary in the aerospace field to promote collaboration and exchange of knowledge and visualize the ecosystem and cluster. In addition, training programs for young talents will be created and innovation diplomas will be awarded to participants to increase the visibility of the aerospace innovation ecosystem, while meeting the needs of the aviation and space sector.

It is important to integrate large companies and the university into the ecosystem, not only work with SMEs and startups in collaboration through the public agencies of FUEIB, EmprenBIT, ParcBIT, Fundació BIT, chambers of commerce, SMEs, etc. Collaboration is key between large companies, universities, academics and SMEs to boost the growth of the sector, through the promotion of the cluster and the innovation ecosystem, inside and outside the Balearic Islands.

Officially cataloged areas and topics of the aerospace sector

The areas of work, technologies, and services of the aerospace sector that need to be innovated are listed below and then map the areas with the current state of knowledge of aviation and space companies in the Balearic Islands and the themes for innovation that have been analyzed to companies from the Balearic Islands. These areas correlatively support the Balearic tourism, agriculture, logistics and transportation, and software and ICT development sectors.

Aviation:

- Clean Sky
- Develop cleaner and more sustainable aviation technologies
- Modernize air traffic management systems to reduce fuel consumption, emissions and noise pollution
- Sustainable Aviation Fuels (SAF)
- Digitization of operations
- Cargo optimization
- Apply generative artificial intelligence (GenAI)
- Sustainability in processes, operations, maintenance
- Use of data
- Improved airline management
- Monitor travel and passenger patterns
- Increase gender equality in the industry

Space:

- Space habitats
- Humans on mars
- Resource mining in space
- Space tourism (analog astronaut training in analog rooms)
- New launch systems
- EO (Earth Observation) Nanosatellite Constellations
- Manufacturing in mini gravity and space
- Aerospace robotics
- Energy from space
- satellite services
- Nanosatellite systems
- Services, IoT, media and internet for everyone
- Geoinformation, data and services
- Components and subsystems for nanosatellites
- Suborbital flight services
- Space science/exploration data analysis
- Remote Sensing and EO (Earth Observation) Services
- Satellite navigation applications
- Satellite communications and broadcasting
- Integrated applications for satellite services
- Deep space network operations
- Mission control and payload operations
- Satellite network operations
- Launch operations
- Suborbital launches and flight operations

TOPICS AND TECHNOLOGICAL AREAS FOR THE AEROSPACE ECOSYSTEM IN THE BALEARIC ISLANDS

Priorities to innovate from the aerospace PERTE strategy

- Zero emissions aircraft uavs and aeronautical systems
- Aerostructures
- Engineering
- Reduction of the environmental impact in air transport.
- Small satellite launcher
- Atlantic Earth Observation Constellation
- Satellite and terrestrial systems for quantum communications
- Spanish Earth Observation System for Security and Defense
- R&D solutions for observation, monitoring and management of biodiversity for forest fires and in environmental complexes and natural spaces
- Sustainability, digitalization and innovation in manufacturing environments in the aerospace sector
- Development and consolidation of the Spanish aerospace supply chain
- R&D&i projects in the field of connected industry 4.0
- Digitization and automation in the ATM system
- Evolution of voice communications systems
- Evolution of secondary radar systems to mode technology in the central north region
- Automation and modernization of the flow control service
- Shared public infrastructure for R&D&I, integration, operation, flight control, testing and maintenance of high altitude pseudo-satellite platforms (HAPS), guided balloons and other unmanned aerial systems (UAS or drones)
- Modernization of contingency equipment to increase the resilience of services
- Satellite constellations
- High altitude aerostatic systems

- Efficiency and low-cost development of cubesat and nanosatellite spacecraft for satellite communications services, mainly in the private sector.
- Satellite constellations and orbital data applications that allow aerospace technology to be applied to space and other industries such as agriculture and geoinformation.
- Satellite navigation and earth observation programs.
- Upstream and downstream economic activities.
- Space missions.
- Space flight experience.
- Cubesats and nanosatellites payloads.
- Earth observation missions.

Topics for the ability to innovate

- 14.0% Sustainability
- 5.8% Technology
- 4.8% Optimization of land spaces
- 4.8% Fleet and crew management
- 4.8% Process efficiency
- 4.8% Alert to emissions
- 4.3% Luggage system
- 4.3% Digital platforms
- 4.3% Optimized spaces
- 4.3% Automation of processes in airports
- 3.4% Marketing
- 3.4% User experience
- 2.9% AI
- 2.4% Advanced simulators

Technological areas with potential to innovate

- AI
- Education in consumption and resources
- Personalized training
- Fleet and crew management
- Sustainability and Efficiency
- Alert to emissions
- Optimization of land spaces
- Pre-diagnostic and preventive maintenance
- Internal platform and network for exchanging parts availability,
- Use of 3D technology and robotics
- Digital integrated platforms
- Process automation:
  -Airports
  -Luggage system
  -Optimized spaces
- Public relations
- Advanced simulations, programs, App, Online learning, drone operations training
- Technology and Accessibility
- User Experience
- Awareness, Compensation Program and Recycling Education
- Use of sensors and data analysis
- VR, digital, diagnostic

The Balearic Islands are preparing to become a benchmark in sustainable aerospace innovation. The creation of an aerospace cluster with a designated coordinator will connect all actors and allow strategic alliances to digitize the ecosystem and generate business opportunities at the European level.

The university will play a crucial role, a strategic relationship will be created to promote technology transfer and an aerospace incubator will support startups and SMEs in the aviation and space sector. To ensure sustainability, informal events will be held and support will be provided for the creation of new businesses. A new action plan aims to promote the ecological transition of the industry, reducing its environmental impact and contributing to the fight against climate change.

ROADMAP FOR THE AEROSPACE INNOVATION ECOSYSTEM

3 months

Create an action and an education plan on the cluster and the aviation and space ecosystem in the Balearic Islands in Pinem and in the chambers of commerce and with the rest of the incubators, accelerators and innovation agencies.

Create technical training programs on aerospace topics in person and digitally.

3 months

Create a program of activities for the activation and maintenance of the aerospace innovation ecosystem such as an “onboarding” plan, networking, and other activities to activate the ecosystem.

3 months

Establish an aerospace incubator between ParcBIT/EmprenBIT/ Fundació BIT, FUEIB to support aerospace startups from the Balearic Islands.

Continuously

Establish physical and in-person informal networking activities at ParcBIT with the aim of strengthening relationships between companies and organizations that are part of the aerospace ecosystem with an informal format.

Establish a program in schools and institutes “an aerospace engineer in every school.”

1 EDUCATION PLAN

1)CREATE AN ACTION AND AN EDUCATION PLAN ON THE CLUSTER AND THE AVIATION AND SPACE ECOSYSTEM IN THE BALEARIC ISLANDS IN PINEM, AND IN THE CHAMBERS OF COMMERCE AND WITH THE REST OF THE INCUBATORS, ACCELERATORS AND INNOVATION AGENCIES, CREATE TECHNICAL TRAINING PROGRAMS ON TOPICS AEROSPACE IN PERSON AND DIGITALLY.

2 ACTIVITY PLAN

CREATE A PROGRAM OF ACTIVITIES FOR THE ACTIVATION AND MAINTENANCE OF THE AEROSPACE INNOVATION ECOSYSTEM SUCH AS AN “ONBOARDING” PLAN, NETWORKING, AND OTHER ACTIVITIES TO ACTIVATE THE ECOSYSTEM.

3 CREATE THE AVIATION AND SPACE CLUSTER

CREATE AN AVIATION AND SPACE CLUSTER TO SUPPORT EXISTING COMPANIES IN THE BALEARIC ISLANDS, AND SUPPORT THE CREATION OF STARTUPS AMONG THE BALEARIC INCUBATORS.

DESIGNATE A CLUSTER COORDINATOR.

4 AGREEMENTS AND ALLIANCES PLAN

ESTABLISH A COLLABORATION AGREEMENT WITH EUROSPACEHUB TO DIGITIZE AND CONNECT THE BALEARIC ECOSYSTEM.

CREATE A STRATEGIC RELATIONSHIP BETWEEN THE UNIVERSITY, THE NEW AVIATION AND SPECIAL CLUSTER.

CREATE DIRECT CONNECTIONS OF THE BALEARIC AEROSPACE ECOSYSTEM WITH THE EUROPEAN AEROSPACE ECOSYSTEMS TO CREATE BUSINESS OPPORTUNITIES.

5 CLUSTER AND ECOSYSTEM ACTIVATION

ESTABLISH AN AEROSPACE INCUBATOR BETWEEN PARCBIT / EMPRENBIT / FUNDACIÓ BIT, FUEIB TO SUPPORT AEROSPACE STARTUPS, DIGITALIZATION OF AEROSPACE SMES IN THE BALEARIC ISLANDS.

6 ECOSYSTEM AND CLUSTER MAINTENANCE

ESTABLISH PHYSICAL AND IN-PERSON INFORMAL NETWORKING ACTIVITIES AT PARCBIT WITH THE AIM OF STRENGTHENING RELATIONSHIPS BETWEEN COMPANIES AND ORGANIZATIONS THAT ARE PART OF THE AEROSPACE ECOSYSTEM WITH AN INFORMAL FORMAT.

ESTABLISH A PROGRAM IN SCHOOLS AND INSTITUTES “AN AEROSPACE ENGINEER IN EVERY SCHOOL.”

OPERATIONAL GOVERNANCE STRATEGY FOR THE SUCCESS OF THE AEROSPACE INNOVATION ECOSYSTEM

An innovation ecosystem is a community of members that focus on innovation and creating impact by bringing people together to collaborate. Innovation is a way of turning creativity into value, but it involves much more than simply coming up with a new idea or concept. The interaction between ecosystem members creates value through the speed of information and resource exchange. The ecosystem is a place for innovators, SMEs, academic researchers, entrepreneurs, public innovation agencies, and investors to meet, and bringing together people with a common interest leads to new forms of meaning and value creation. In this sense, we talk about the aviation and space sector and creating an innovation ecosystem that helps build relationships between the actors and people of the ecosystem, but an ecosystem is not created on its own without support, in this case from the Balearic Government.

The ecosystem has to provide value to each member or actor of the ecosystem, and the ecosystem has to have a positive impact on the aviation and special sector and also on society, with the different applications in different sectors such as agriculture, tourism, marine protection, biodiversity protection, logistics, transportation, etc. The value generated supports the growth of the aerospace ecosystem in the Balearic Islands. Additionally, the ecosystem needs to generate value in itself and around it in other clusters and ecosystems to create effective innovation and ecosystem.

Strategic-operational work map:

ACQUISITION OF MEMBERS AND ACTORS TO THE ECOSYSTEM:
It is the strategy to visualize the ecosystem, communicate the benefits, create the mental bridge between the needs and the solutions offered by the actors in the ecosystem. The result of the communication and marketing strategy is to bring members and actors closer to the aviation and space innovation ecosystem and also to the EuroSpaceHub digital platform (digital innovation ecosystem).

COMMITMENT OF MEMBERS AND ACTORS OF THE ECOSYSTEM:
This is the strategy to keep the members of the ecosystem engaged, because they not only have to be part of the ecosystem, but they have to feel connected to it, read the news, read the newsletters, participate in the events and do the training to learn.

INTERACTION BETWEEN MEMBERS AND ACTORS OF THE ECOSYSTEM:

This is the strategy to keep ecosystem members interacting with each other through collaborations, learning together, investing, creating products and solutions together.

After this analysis of the space and aviation innovation ecosystem, it is clear that the solution is not a list of startups and investors as a strategy. With this analysis, we have found the needs and solutions to carry out the strategy step by step from different perspectives and angles.

The next challenge is to meet the needs, but the biggest challenge is to create the bridge between the needs and the solutions between the actors of the aerospace innovation ecosystem and activate the first actors with the activities and the first collaboration contracts before the creation of the Balearic aerospace cluster. Although the solutions are clear and we have described them very well during this report, the connection proposal between the aerospace ecosystem of the Balearic Islands and the EuroSpaceHub digital platform. The theory is one thing and the practical way of making it a reality is another, which is the implementation, in which the EuroSpaceHub team will act as a step-by-step guide for the digitalization of the Balearic aerospace ecosystem and its integration into the innovation ecosystem. European.

COMPARISON OF THE ROADMAP FOR THE AEROSPACE INNOVATION ECOSYSTEM VS. PERTE AEROSPACE ECOSYSTEM STRATEGY

Roadmap	Aerospace PERTE for ecosystems (technical objectives)	Recommendations
1) Education plan	Create a new educational program for spatial innovation, collaboration and entrepreneurship based on best practices presented in the universities, technology centers, transfer offices, innovation centers, which are part of the consortium, including a mentoring and challenge program of the industry.	Create an action and an education plan on the cluster and the aviation and space ecosystem in the Balearic Islands in Pinem, and in the chambers of commerce and with the rest of the incubators, accelerators and innovation agencies.
1) Education plan	Create a new educational program for spatial innovation, collaboration and entrepreneurship based on best practices presented in the universities, technology centers, transfer offices, innovation centers, which are part of the consortium, including a mentoring and challenge program of the industry.	Create technical training programs on aerospace topics in person and digitally (recorded and uploaded to a digital platform for easy access to the aerospace innovation ecosystem of the Balearic Islands) together with regional, national, European and international universities: Space&Aviation BIT- Academy.

Roadmap	Aerospace PERTE for ecosystems (technical objectives)	Recommendations
2) Activity plan	Create a new educational program for spatial innovation, collaboration and entrepreneurship based on best practices presented in the universities, technology centers, transfer offices, innovation centers, which are part of the consortium, including a mentoring and challenge program of the industry.	Create a program of activities for the activation and maintenance of the aerospace innovation ecosystem as an “onboarding” plan for new members that includes workshops, talks, materials, access to digital platforms, etc. the Space&Aviation Innovation Cafe & Ensaimadas and “welcome calls” where each month the aerospace innovation ecosystem is introduced, and how the Government of the Balearic Islands and its active members of the ecosystem provide support to companies, startups and academics to innovate and collaborate on aerospace issues.
3) Create an aviation and space cluster	Reuse and connect with APIs the digital collaboration platforms for open innovation for innovation ecosystems for the space where universities, technology centers, innovation agencies, can orchestrate and collaborate with the industry and new companies and startups.	Create an aviation and space cluster to support existing companies in the Balearic Islands, and support the creation of startups among the Balearic incubators.

Roadmap Ruta	Aerospace PERTE for ecosystems (technical objectives)	Recommendations
3) Create an aviation and space cluster	Define and connect space innovation ecosystems throughout Europe, bringing together universities, incubators, industrialists, technology parks, technology centers, associations and research groups related to space through collaboration.	Create a strategic relationship between the university, the new aviation and space industry cluster and innovation agencies and private incubators and other English and German communities (the FUEIB, the UIB, ParcBIT / EmprenBIT / Fundació BIT), including SMEs, and large companies and startups and technology centers and university faculties.
4) Plan of agreements and alliances	Reuse and connect with APIs the digital collaboration platforms for open innovation for innovation ecosystems for the space where universities, technology centers, innovation agencies, can orchestrate and collaborate with the industry and new companies and startups.	Establish a collaboration agreement with EuroSpaceHub to digitize and connect the Balearic aviation and space ecosystem and connect it with companies and academics and other European startups and provide innovation and aerospace training from other European ecosystems.

Roadmap Ruta	Aerospace PERTE for ecosystems (technical objectives)	Recommendations
4) Plan of agreements and alliances	Define and connect space innovation ecosystems throughout Europe, bringing together through collaboration universities, incubators, industrialists, technology parks, technology centers, associations and research groups related to space.	Create direct connections of the Balearic aerospace ecosystem with the European aerospace ecosystems to create business and innovation opportunities for companies through digital platforms such as EuroSpaceHub, and create partnerships with other networks such as EPIC (the ESA incubator network) or from investor networks such as BAE (Business Angels Europe), IAC, IAF, and other associations that are identified as critical to the needs of Balearic companies AND through an annual physical and in-person event such as Forum Balearic Space & Aviation.
5) Activation of the cluster and ecosystem	Define and connect space innovation ecosystems throughout Europe, bringing together through collaboration universities, incubators, industrialists, technology parks, technology centers, associations and research groups related to space.	Establish an aerospace incubator between ParcBIT / EmprenBIT / Fundació BIT, FUEIB to support aerospace startups, digitalization of aerospace SMEs in the Balearic Islands, and to support collaborative innovation projects for aerospace companies in the Balearic Islands: entrepreneurship, digitalization and collaboration to innovate.

Roadmap Ruta	Aerospace PERTE for ecosystems (technical objectives)	Recommendations
6) Maintenance of the ecosystem and cluster	Define and connect space innovation ecosystems throughout Europe, bringing together through collaboration universities, incubators, industrialists, technology parks, technology centers, associations and research groups related to space.	Establish physical and in-person informal networking activities at ParcBIT with the aim of strengthening relationships between companies that are part of the aerospace ecosystem with an informal format: Space&Aviation Innovation Cafe & Ensaimadas. The format is very specific, once a month , at the same time, on the same day. During the first 3 months it is only networking, the 6 months, the companies that come to the event prepare a 5-minute presentation of what they do, what they need and what they offer. The next 6 months. , the format is that a company proposes a problem and the rest helps it solve it and so it goes back to 3 months of just networking, etc.
6) Maintenance of the ecosystem and cluster	Create a new educational program for spatial innovation, collaboration and entrepreneurship based on best practices presented in the universities, technology centers, transfer offices, innovation centers, which are part of the consortium, including a mentoring and challenge program of the industry.	Establish a program in schools and institutes “an aerospace engineer in every school” to educate and create roles to follow in aerospace issues in the schools and institutes of the Balearic Islands to create the aerospace industry and ecosystem and STEAM talent .

The implementation of the strategic plan, roadmaps, current statistics described in the various documents delivered represent a unique opportunity for the Balearic Islands. The consolidation of a prosperous aerospace ecosystem will contribute to the generation of qualified employment, the creation of startups, an increase in innovative companies, increased digitalization of aerospace companies and the promotion of economic growth in the region.

The next critical step is the creation of the aviation and space cluster. At the same time, it is recommended to begin the implementation of the proposed activities and measures to promote innovation, training and attraction of talent in aerospace. The collaboration and joint effort of all the actors involved, both public and private, will be key to transforming the Balearic Islands into a benchmark region for technological and economic transformation of aerospace innovation at a national and international level.

ROADMAP AND NEXT STEPS FOR ESTABLISHING AN AEROSPACE INNOVATION ECOSYSTEM

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REPORT ON THE RESULTS OF THE ANALYSIS OF THE AEROSPACE INNOVATION ECOSYSTEM IN THE BALEARIC ISLANDS

APRIL 2024

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CONTENT

DESCRIPTION

The Balearic Islands have an important aeronautical industrial fabric with a total of 69 companies, thanks to the important airports it houses in Palma de Mallorca and Ibiza. The Balearic Islands have the opportunity to be a relevant player in the sector and help the decentralization that has already been strengthened with the location of the Spanish Space Agency in Seville, and create opportunities for the transformation of the aeronautical industry in both aviation and space. The Balearic Islands have the potential to contribute to the economy of new space and new aviation through the creation of startups jointly with the University of the Balearic Islands, while innovating and modernizing the current industry that has been identified.

In Europe, the space sector saw significant investment growth in 2022, with total investments reaching €1 billion, up 23% from 2021. Most of the funding came from venture capital. However, European companies still face challenges, including smaller deal sizes and a concentration of capital in a small group of companies.

Aerospace activity is strategic for governments due to its strategic dual-use or non-dual use technology and because governments are ultimately responsible at the diplomatic level for commercial companies that work in aerospace areas. In the same direction, Europe wants to promote the commercial use of space in Europe, although at the same time, the government will always be responsible for what each commercial company in the country itself does operationally or strategically.

This is one of the reasons, where the relationship and communication between the Balearic Government, the Spanish Government and aerospace companies has to be fluid and in correspondence with the strategies defined in the aerospace PERTE, for example.

The European approach to space trade is quite dispersed and responsibilities are divided between many stakeholders within the EU, ESA and Member States. While the European Commission is responsible for fostering “a competitive and innovative space industry”, legislating on the commercial use of space remains the responsibility of Member States. Hence, governments are the last diplomatic and direct responsible for national commercial companies that work and operate in the aerospace field.

Therefore, a significant number of trade-related decisions remain the responsibility of Member States. At the national level, many laws have been enacted in recent years (e.g. the Austrian Space Act of 2011 or the German Satellite Data Security Act of 2007). While they allow the commercial use of space by setting standards for licensing procedures, registration of space objects or insurance, the main objective of these laws was not to create incentives to support the private sector but rather to ensure the safety of space activities and implement the commitments made in UNCOPUOS.

However, several national initiatives have been launched to specifically encourage commercial activities. For example, Luxembourg's 2017 space law provides protection and support to investors and startups in the field of space mining. In addition, the French Ministry of Higher Education and Research created CoSpace to establish concerted industrial views, technological roadmaps and support exports.

CNES also created the Space Economy Observatory to help industries cope with the COVID crisis by sharing information, targeting the right stakeholders and monitoring the market. At European level, the need for additional synergies to support commercial suppliers has been identified with the creation of EUSPA, which will be responsible for supporting market entry and creating synergies between EU flagship programmes.

The Balearic Government, which already belongs to the Spanish Aerospace PERTE, can ensure the contribution of the Balearic Islands to Spanish and European strategies on aviation and space issues and take advantage of this opportunity to establish and strengthen the industrial, scientific, entrepreneurial and innovate fabric of the Balearic Islands on issues. aviation and space. The opportunity lies between the intersection between being able to take advantage of European and national financing strategies for the aerospace sector for its innovation and its digital and sustainable transition. The European strategies where the Balearic Government can position itself and enter as a relevant actor in the contribution of said strategies are explored in detail below.

ON EUROPEAN STRATEGIES AND FUNDING

The EU space strategy focuses on strengthening the European space industry, promoting innovation and addressing global challenges such as climate change and sustainable development. The EU invests significant funds through programs such as Horizon Europe and the European Space Programme. The EU has created several investment funds (Venture Capital) through the EIF (European Investment Fund) dedicated to space. VCs investing in the space sector include Seraphim Space Investment Trust, Astropreneurs and Starburst Accelerator. The clearest mandates and how "space" is defined in terms of investment are in areas such as satellite technology, space tourism, Earth observation and space exploration.

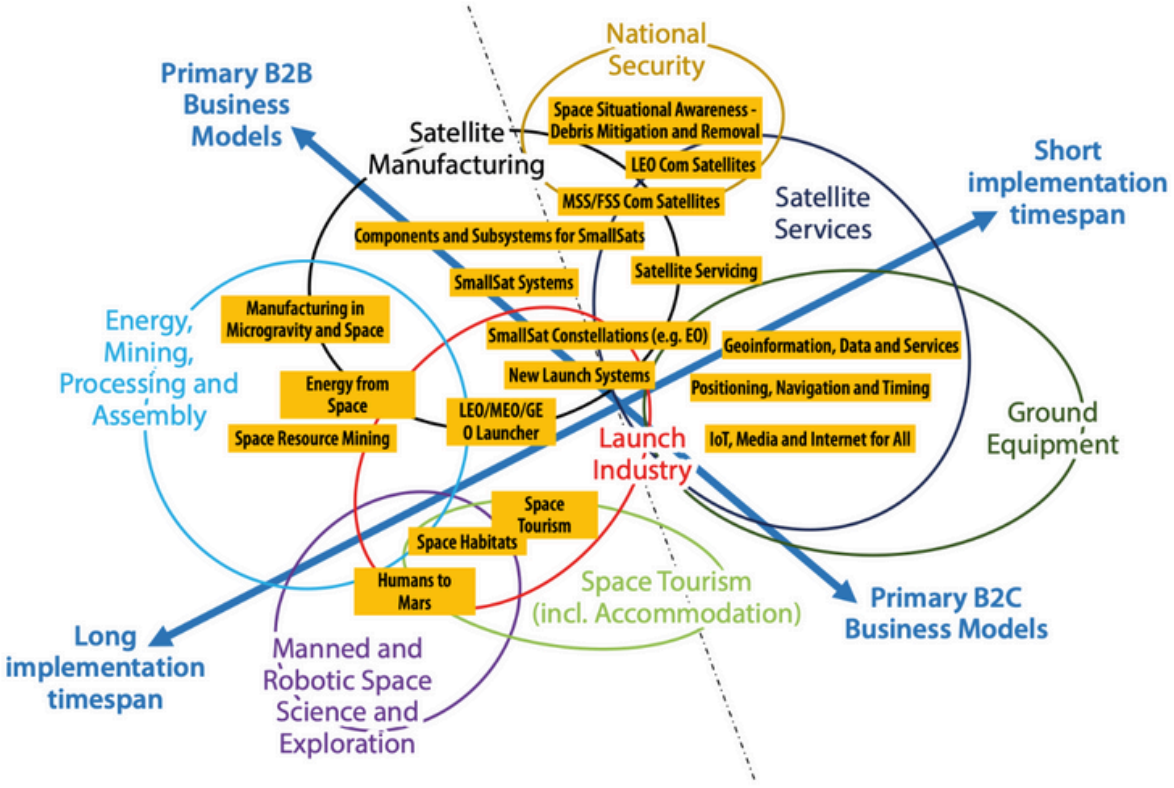


Figure 1: A landscape of space business services, business models and segments

POTENTIAL FOR INNOVATION IN SUSTAINABILITY AND BIODIVERSITY PROTECTION AND AGROECOLOGY

Green aviation initiatives

The EU has set ambitious targets to reduce greenhouse gas emissions from aviation, aiming for a 90% reduction in emissions by 2050 compared to 2005 levels. The Clean Sky Joint Technology Initiative, a public partnership -private, finances research projects aimed at developing cleaner and more sustainable aviation technologies. The EU's Single European Sky initiative aims to modernize air traffic management systems to reduce fuel consumption, emissions and noise pollution. Sustainable aviation fuels (SAF) are being promoted as an alternative to conventional fuels, and the EU aims for SAF to account for 63% of aviation fuel consumption by 2050.

In this sense, the Balearic Government, due to its strategic position on the islands and its airport in third position after Madrid and Barcelona in number of passengers with the Palma de Mallorca airport, has a unique opportunity to support ecological aviation and therefore protect the population of the Balearic Islands from noise pollution and aviation pollution, in addition to protecting its biodiversity, which is what makes the Islands unique and the key to the tourism sector. At the same time, aviation is part of the value chain of the tourism sector that supports the Balearic economy. 89.9% of companies in the aerospace sector are dedicated to aviation, with a total of 62 companies that provide support.

The innovation and collaboration strategies of the new aerospace innovation ecosystem have strong innovative potential in the area of sustainability. In this sense, the Balearic Government, due to its strategic position on the islands and its airport in third position after Madrid and Barcelona in number of passengers with the Palma de Mallorca airport, has a unique opportunity to support ecological aviation and therefore protect the population of the Balearic Islands from noise pollution and aviation pollution, in addition to protecting its biodiversity, which is what makes the Islands unique and the key to the tourism sector. At the same time, aviation is part of the value chain of the tourism sector that supports the Balearic economy. 89.9% of companies in the aerospace sector are dedicated to aviation, with a total of 62 companies that provide support. The innovation and collaboration strategies of the new aerospace innovation ecosystem have strong innovative potential in the area of sustainability.

Aerospace industry and sustainability

The EU Space Program includes initiatives to address climate change, environmental monitoring and sustainable development through satellite-based Earth observation and monitoring systems. The Copernicus program provides free and open access to data from Earth observation satellites, supporting applications in areas such as climate monitoring, natural resource management and disaster response. The EU is investing in the development of nanosatellite technology and constellation systems to enable more sustainable and cost-effective space missions. Space debris mitigation and removal technologies are being developed to address the growing problem of space debris and ensure the long-term sustainability of space activities.

Apart from AtlasPosidonia, the startup that was created with the help of the Balearic Government, the potential of startups that could be created to protect the Posidonia algae, and lizards, as examples of first projects to continue researching jointly with other sectors, clusters, and associations that aerospace solutions can be created that are necessary for the Balearic Islands. As an example, there are two topics with which you could start innovating and entrepreneurship from EmprenBIT, or the case of the environmental consulting firm Podarcis that provides drone services for its environmental projects, without being in the aerospace sector.

Topic 1

Save and protect the Posidonia Oceanica algae with satellite imagery and a system to inform the government, private vessels, public and private boats and tourists in real time.

Topic 2

Save and protect the biodiversity of lizards against snakes with a satellite system to inform the government or the associations that protect the fauna of the Islands in real time.

ENTREPRENEURSHIP AND INNOVATION

The EU's Horizon Europe program provides funding and support for research, innovation and entrepreneurship in sustainable space and aeronautical technologies. Incubators, accelerators and funding programs support startups and SMEs developing green space and aeronautical technologies, such as electric propulsion systems, recycled materials and satellite-based environmental monitoring solutions. The European Space Agency (ESA) supports the development of sustainable space technologies through its Business Incubation Centers and its Technology Transfer Programme, facilitating the transfer of space technology to non-space applications.

Here, it is recommended to align the different actors that help innovation and entrepreneurship for the creation of startups and for the support of the current industry, such as FUEIB, ParcBit, Fundació BIT, EmprenBIT, Innobal, Factoria d'Innovació, pimem and the Chambers of Commerce. Define everyone's roles to support the aerospace sector, and roadmaps for decision points from concept creation within incubation to supporting first customers and collaborations within the sector and between different sectors that are critical in Balearic Islands.

And access to adequate financing at each phase, including the gender perspective in investing in women who lead aerospace startups, with the Women TechEU Project and other deeptech financing initiatives in which they are the basis for accessing European financing, and where aerospace is part of the definition of deeptech. It is important to promote the different European aerospace financing programs, ESA challenges, Galileo, Copernicus, EGNOS, Cassini, Accelerate@IATA among other private industry incubation programs such as Airbus and Thales Alenia. Apart from the classic and basic European financing such as the EIC, EIT, Erasmus+ and Horizon Europe.

COLLABORATION AND PROMOTION OF THE DIFFERENT PROGRAMS

The Balearic Government can enrich the aviation and space innovation ecosystem with collaborations with other European and Spanish ecosystems and actors (contributing to the decentralization of the Madrid and Barcelona centers) directly, and be included in the projects, collaborative consortia classics of the sector.

Collaborations:

European space agencies, industry leaders and research institutions often collaborate on projects such as satellite missions, technology development and space exploration initiatives.

Collaborations with technology and research centers to help them market and create spin offs with entrepreneurs from the Balearic Islands. As with the CSIC Foundation, with TNO, Fraunhofer, and other Spanish and European universities that have technologies that are interesting to cover the needs and challenges of Balearic companies in different sectors. It is important to rely on technology from outside the Islands and bring it to the Balearic Islands. Talent is critical to creating a strong cluster and innovation ecosystem, and to do so, it is not only the talent that can be retrained, but also the technology.

Aerospace technology is horizontal and transversal to other sectors, and the different challenges of the industry, apart from working within the areas of aviation and space, the technology can be applied to different uses and sectors such as: Agriculture, Tourism, Naval, Construction, Real Estate, Infrastructure maintenance, Environmental protection, Urbanism and urban planning, ocean management, logistics and transportation, etc.

And the collaboration with the network of ESA BICs called EPIC, and with Accelerate@IATA, the TEDAE industrial platform, ICEX with its entrepreneurship and internationalization programs for Spanish companies in the world and other industrial accelerators such as Airbus or Thales to be able create an integration roadmap with the ecosystems from the Balearic Islands, but also at the same time create a financing and authority roadmap for startups created from the Balearic Islands.

Creating collaboration contracts with these organizations and different European regions to exchange talent, knowledge and technology. And in this way grow the innovation ecosystem in a faster and more agile way.

THE STRATEGIC-POLITICAL POSITIONING OF THE BALEARIC ISLANDS IN THE AEROSPACE SECTOR

Five recommendations from the European Investment Bank (EIB), where the Balearic Government can contribute:

1 ADOPT A STRENGTHENED EUROPEAN DEFENSE POLICY AS A DRIVER OF MARKET DEVELOPMENT IN ALL SEGMENTS OF THE SPACE BUSINESS

2 STRENGTHEN THE ECOSYSTEM OF PUBLIC SUPPORT MECHANISMS BY INTRODUCING MORE FLEXIBILITY AND MORE COMMERCIAL ORIENTATION

3 DEVELOP AND IMPLEMENT INNOVATIVE ATTRACTION MECHANISMS FROM THE PUBLIC SECTOR (FOR EXAMPLE, INNOVATIVE PROCUREMENT AND INDUSTRIAL POLICIES) TO STIMULATE TECHNOLOGICAL DEVELOPMENT AND ITS COMMERCIAL ADOPTION

4 ESTABLISH A "FINANCE FOR SPACE" FORUM WITH REPRESENTATIVES FROM THE FINANCIAL COMMUNITY, ACADEMIA, POLICYMAKERS AND INDUSTRY TO CLOSE THE INFORMATION GAP AND DEVELOP INNOVATIVE FINANCIAL SOLUTIONS FOR THE SPACE SECTOR

5 INCREASE THE VOLUME OF VENTURE CAPITAL AND CATALYZE ADDITIONAL PRIVATE INVESTMENT IN THE SECTOR

Looking ahead, Europe has a long way to go, but it is making rapid progress. The EU Commission has put forward several ambitious financial proposals for the next decade, including a €16 billion space programme, space research funded by Horizon Europe, InvestEU investment plans and an emphasis on space in the next Framework Programme. of Research of the European Union. and Innovation. If Europe is serious about consolidating its role as a global competitor in the global space ecosystem, the EU institutions will have to lead the way through innovative policies and business models that aim to achieve ambitious goals, ultimately ushering in a new era of New Space. business for the continent.

VC (venture capital) venture capitalists consider biotechnology, artificial intelligence, energy, high technology and space to be the most relevant sectors to strengthen European strategic autonomy. The Balearic aerospace innovation ecosystem will have to support the maximization of the benefits of space for society and the EU economy;

1 PROMOTING THE EUROPEAN SPACE SECTOR GLOBALLY IN A COMPETITIVE AND INNOVATIVE WAY

2 STRENGTHENING EUROPE'S AUTONOMY TO ACCESS AND USE SPACE IN A SAFE AND SECURE ENVIRONMENT;

3 STRENGTHENING EUROPE'S ROLE AS A GLOBAL ACTOR AND PROMOTING INTERNATIONAL COOPERATION.

4 INTENSIFYING EFFORTS TO SUPPORT AEROSPACE R&D ACTIVITIES, IN COOPERATION WITH MEMBER STATES AND ESA

5 STRENGTHENING THE USE OF INNOVATIVE PROCUREMENT PROCESS SCHEMES TO STIMULATE DEMAND-SIDE INNOVATION AND EXPLORING NEW APPROACHES TO LEVERAGE PRIVATE SECTOR INVESTMENTS AND INDUSTRY PARTNERSHIPS

6 INVESTMENT IN EDUCATION AND TRAINING IS REQUIRED TO HELP THE GROWTH OF THE NEW AEROSPACE ECONOMY IN THIS SENSE

7 SUPPORTING SPACE ENTREPRENEURS THROUGH EU FUNDING PROGRAMS - INTERNATIONAL

8 SUPPORTING SPACE STARTUPS, INCLUDING EXPLORING SYNERGIES WITH EU AEROSPACE FUNDING AND FACILITATING THE CREATION OF AEROSPACE CENTERS AND CLUSTERS ACROSS EUROPE

9 SUPPORTING DIGITAL TRANSFORMATION AND DIGITIZATION STRATEGIES AND THE GREEN DEAL THROUGH AEROSPACE TECHNOLOGIES, APPLICATIONS AND INNOVATION

Improving innovation and competitiveness of space sector stakeholders, driven by:

10 DEVELOPMENT OF INNOVATIVE SOLUTIONS WITHIN THE SPATIAL CONNECTIVITY INITIATIVE. AS HIGHLIGHTED ABOVE, THE EUROPEAN COMMISSION HAS PUBLISHED A SPECIFIC CALL FOR TENDERS RELATED TO THE DEVELOPMENT OF INNOVATIVE SOLUTIONS RELATED TO ACHIEVING THE OBJECTIVES OF THE SPACE SECTOR CONNECTIVITY SYSTEM BASED ON IN ADDITION, AS HIGHLIGHTED BY THE SPACE INDUSTRY STAKEHOLDERS INTERVIEWED FOR THE STUDY, THE SYSTEM WILL CONTRIBUTE TO INCREASING OPPORTUNITIES FOR THE UPSTREAM SPACE SECTOR

11 DEVELOPMENT OF SYNERGIES AND COMPLEMENTARITIES WITH EXISTING EU SPACE ACTIVITIES. FOR EXAMPLE, THE SPACE CONNECTIVITY SYSTEM COULD, AMONG OTHER IMPACTS: SUPPORT DATA SECURITY COPERNICUS SATELLITE DATA RELAY SERVICES; ENHANCE COPERNICUS DATA WITH SENSORS AND OBSERVATION CAPABILITIES; IMPROVE RESILIENCE AND ACCURACY, AND COMPLEMENT THE GALILEO EARLY WARNING SYSTEM; AND HOST ADDITIONAL PAYLOAD SPACE SENSORS TO PERFORM SST DIRECTLY FROM SPACE

Development of innovative solutions within the spatial connectivity initiative. As highlighted above, the European Commission has published a specific call for tenders related to the development of innovative solutions related to the achievement of the objectives of the space sector connectivity system to contribute to increasing opportunities for the upstream space sector.

Development of synergies and complementarities with existing EU space activities. For example, the space connectivity system could, among other impacts: support data security Copernicus satellite data relay services; enhance Copernicus data with sensors and observation capabilities; improve resilience and accuracy, and complement the Galileo early warning system; and host additional payload space sensors to perform SST directly from space.

ANALYSIS OF THE AEROSPACE ECOSYSTEM OF THE BALEARIC ISLANDS

The creation of an innovation ecosystem in the Balearic Islands has great potential to boost the local economy and generate new opportunities for entrepreneurs, academics, research and industry. It is proposed to create an innovation ecosystem in the Balearic Islands, which begins as a cluster, but with a local and international focus, where the ecosystem would not be limited to a group of companies that pay to be in a closed circle, but would be a space open and collaborative with the rest of the actors in the ecosystem and the success of the Balearic naval cluster would be taken as a model, adapting it to the aviation and space sector, where the important thing is its internationalization and giving visibility to the companies and technologies of the aerospace ecosystem to the rest of the public institutions that until now do not have this ecosystem visible as important in the Balearic Islands or even that it exists. As we have seen during this analysis, the aerospace sector brings new opportunities for entrepreneurs in the Balearic Islands and collaboration with the university to promote innovation with a balance between the participation of local and international companies.

Highlights from the current aerospace innovation ecosystem in the Balearic Islands:

In this section we highlight the strengths that the innovation ecosystem currently has, where to gain strength and apply the programs and as a starting point for different collaborations.

Academics: Prof. Alicia Sintes with more than 20 scientific publications and European projects in astrophysics and space observation, Prof. Joan Manuel Torres, with more than 3 scientific publications in astrophysics and star observation, and Prof. Maurici Ruiz with 3 publications scientific based on air transport, airports and aviation. Apart from other academics at the university who already work in the areas of aviation and space, and others who do not, but who can apply their knowledge and research to aerospace topics, such as, for example, Prof. Bartomeu Serra, who can apply his classes and his research in cybersecurity in communications between nanosatellites for example.

Current startups: 4 startups related to aerospace were incubated at EmprenBIT, but the impact and current status of these startups is unknown.

Companies registered outside of Spain: Cosmos, SpaceHero are examples of startups and SMEs where the entrepreneurs are from the Balearic Islands or live in the Balearic Islands but their companies are registered in the United Kingdom.

High percentage of aerospace companies in the Balearic Islands: they represent around 20% of the companies that work in the aerospace sector in Spain and are in the Balearic Islands, from an entrepreneurship perspective 3.4% of the startups in the aerospace sector in Spain are in the Balearic Islands, and 10 professors who research aerospace topics at the University of the Balearic Islands, representing 3.86% of academics who research in the aerospace sector in Spain. In academic topics, if we take into account the publications made by researchers from Spanish universities on astrophysics and aviation, researchers from the University of the Balearic Islands represent 16.7% of scientific publications. And if we take into account only space, then they represent 1.2%. 72.5% of the companies are small and large companies with 50 companies, 26.1% are large companies with a total of 18 companies and 1.4% are dedicated startups, with only 1 startup. 72.5% of the companies are registered in the Balearic Islands with 50 companies, 17.4% are registered in the Community of Madrid with a total of 12 companies and 10.1% representing the 7 companies that cannot be verified. Official register.

A total of 38 companies, 40% of them closed during the beginning of the pandemic in 2020 and previously with a closure ratio of 3% annually.

Aviation and space companies are currently not connected with the institutional support of the chambers of commerce, pimem, ParcBIT, Innobal, Factoria d'Innovació and FUEIB.

Chambers of commerce focus on SMEs and not on large companies or startups.

Space Symposium Event organized by CNES, and ESA with support from the University of the Balearic Islands between May 23 and June 2, 2024.

The naval and nautical cluster of the Balearic Islands began as the aviation and space cluster where no company or actor was connected, and at the moment it is one of the best clusters in the Balearic Islands.

OPPORTUNITIES FOR THE AEROSPACE INNOVATION ECOSYSTEM

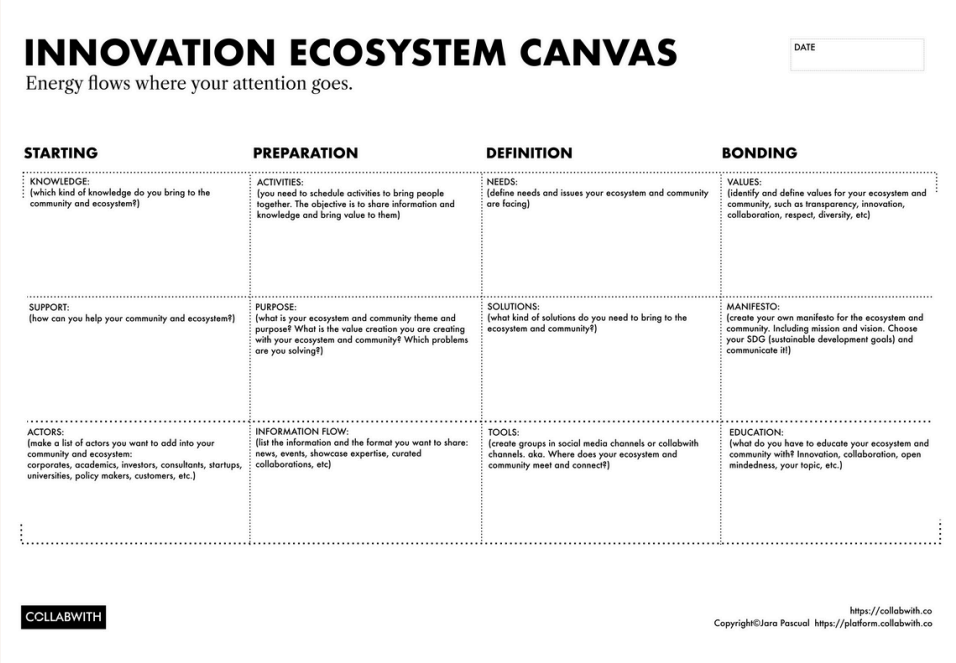
This section highlights the actions that can be done to activate the aerospace innovation ecosystem in the Balearic Islands:

- Facilitate the creation of companies and registration of aerospace companies in the Balearic Islands with incubation, acceleration and financing programs for innovation, as a requirement to enter the support programs. For example, newly registered or with a minimum of 6 months and with a forecast of being registered for the first 5 to 10 years at least after accessing the innovation programs.
- Create, facilitate and enhance digital nomad visas to attract aerospace entrepreneurs to work in the Balearic Islands and enhance the exchange of knowledge and experiences between entrepreneurs and companies.
- Facilitate virtual residencies for the creation of aerospace companies in the Balearic Islands even if the entrepreneurs live in other countries and regions, as in the case of Estonia with its e-residency.
- Create monitoring and supervision programs and support for startups incubated and created within the framework of EmprenBIT, to cover their needs and help them pass the different critical phases of growth and development of aerospace startups with the introduction of different financing and support programs. acceleration of ESA BICs, ICEX and IATA. Since aerospace startups have a global vocation since they were born in the Balearic Islands.
- Collaboration with incubators, accelerators and other investment funds in the Balearic Islands to support aerospace startups.
- Strengthen collaborations with the university, both to initiate students and support entrepreneurship and aerospace innovation. Prof. Carolyn Downs certifies through her research that companies that have students in their offices are more innovative. How to initiate collaborations to apply research, such as creating workshops between academics and companies. And in this way activate intra-ecosystem collaboration.
- Institutional support for the Balearic aerospace industry to facilitate its commercial opportunities in the region (Government-Government Agreements), Structured cooperation with the ICEX network and the embassies and innovative companies and startups of the Balearic Islands.
- Lead gender equality in the European aerospace ecosystem with activation programs for women in technology and women in STEAM from schools, institutes and universities, and also within institutions from the beginning of the creation of the cluster and innovation ecosystem.
- Coordinate events between the different actors in the aerospace innovation ecosystem to enhance the cluster and ecosystem, and give it more strength with different networking events to unite the university, startups and the industry.

- Vueling and other airlines can be the promoters and coordinators of the new aerospace cluster, while at the same time they are helped to innovate from ParcBIT together with the current SMEs and startups, academics and entrepreneurs of the Balearic Islands for their corporate venture programs, for example.
- Include communities that are not currently included as private accelerators and other English and German communities that reside and work in the Balearic Islands and can contribute to the aerospace innovation ecosystem. In this case, it is recommended to have all programs, communication and different activities in English. Since English should be a fundamental language of the aviation and space ecosystem due to its characteristics of global impact and collaboration.

Chart for the aerospace innovation ecosystem:

In this analysis study of the aerospace innovation ecosystem of the Balearic Islands, the methodology of the "Innovation Ecosystem Canvas" has been used, it is a tool to analyze the innovation ecosystem, and have an operational strategy for the ecosystem itself. Data collected from ecosystem analysis is used to view ecosystem gaps and design innovation ecosystem actions, programs, communication and strategies.



INNOVATION ECOSYSTEM CANVAS

Energy flows where your attention goes.

DATE

STARTING	PREPARATION	DEFINITION	BONDING
KNOWLEDGE: (which kind of knowledge do you bring to the community and ecosystem?)	ACTIVITIES: (you need to schedule activities to bring people together. The objective is to share information and knowledge and bring value to them)	NEEDS: (define needs and issues your ecosystem and community are facing)	VALUES: (identify and define values for your ecosystem and community, such as transparency, innovation, collaboration, respect, diversity, etc)
SUPPORT: (how can you help your community and ecosystem?)	PURPOSE: (what is your ecosystem and community theme and purpose? What is the value creation you are creating with your ecosystem and community? Which problems are you solving?)	SOLUTIONS: (what kind of solutions do you need to bring to the ecosystem and community?)	MANIFESTO: (create your own manifesto for the ecosystem and community. Including mission and vision. Choose your SDG (sustainable development goals) and communicate it!)
ACTORS: (make a list of actors you want to add into your community and ecosystem: corporates, academics, investors, consultants, startups, universities, policy makers, customers, etc.)	INFORMATION FLOW: (list the information and the format you want to share: news, events, showcase expertise, curated collaborations, etc)	TOOLS: (create groups in social media channels or collabwith channels. aka. Where does your ecosystem and community meet and connect?)	EDUCATION: (what do you have to educate your ecosystem and community with? Innovation, collaboration, open mindedness, your topic, etc.)

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INNOVATION ECOSYSTEM CHART

Next, the analysis of the aviation and space innovation ecosystem of the Balearic Islands is carried out, with the methodology of the "Innovation Ecosystem Canvas".

BEGINNING AND BASE OF THE INNOVATION ECOSYSTEM

Knowledge

Knowledge of the Balearic aviation and space innovation ecosystem is characterized by the topics of the companies that are currently defining the ecosystem, plus the topics that PERTE Aeroespacial prioritizes and the topics, technologies and applications that the European Investment Fund defines as new space and aviation to invest:

- Zero emissions aircraft UAS and aeronautical systems
- Aerostructures
- Engineering
- Reduction of the environmental impact in air transport.
- Small satellite launcher
- Atlantic Earth Observation Constellation
- Satellite and terrestrial systems for quantum communications
- Spanish Earth Observation System for Security and Defense
- R&D solutions for observation, monitoring and management of biodiversity for forest fires and in environmental complexes and natural spaces
- Sustainability, digitalization and innovation in manufacturing environments in the aerospace sector
- Development and consolidation of the Spanish aerospace supply chain
- R&D&i projects in the field of connected industry 4.0
- Digitization and automation in the ATM system
- Evolution of voice communications systems
- Evolution of secondary radar systems to mode s technology in the central north region
- Automation and modernization of the flow control service
- Shared public infrastructure for R&D&I, integration, operation, flight control, testing and maintenance of high altitude pseudo-satellite platforms (HAPS), guided balloons and other unmanned aerial systems (UAS or drones)

- Modernization of contingency equipment to increase the resilience of services
- Satellite constellations
- High altitude aerostatic systems
- The efficiency and low-cost development of Cubesat and nanosatellite spacecraft for satellite communications services, mainly in the private sector
- Satellite constellations and orbital data applications that allow aerospace technology to be applied to space and other industries such as agriculture and geoinformation
- Satellite navigation and earth observation programs.
- Upstream and downstream economic activities
- space missions
- Space flight experience
- Cubesats and nanosatellites payloads
- Earth observation missions

Support

Objectives and strategies to support the aerospace innovation ecosystem in the Balearic Islands:

- Accelerate collaboration between public and private agents to optimize the impact of their activities
- Dissemination and communication of scientific and technological results to society
- Creation of new business models and the use of technology in innovative applications
- Consolidate a future Spanish Space Technology Program
- Promote contact between Academia-Entrepreneurs-Companies
- Nuclear highly competitive environments to qualify for calls from the European Commission and ESA Consortiums led by those who propose the technology (Academy, entrepreneurs, SMEs, industry, etc)
- Structured cooperation with the ICEX network and our embassies
- Institutional support for the Spanish space industry to facilitate its commercial opportunities in the region
- Innovation activities to make the most of space technologies, infrastructure and services and measures to facilitate the adoption of solutions
- Activities aimed at harnessing the full potential of public services for citizens and businesses;
- Promote entrepreneurship through access to financing

- Develop a business-friendly space ecosystem that brings together space, digital and other sectors, and supports citizens and businesses in entrepreneurship and skills development
- Education and training activities for professionals, entrepreneurs, graduates and students to develop advanced skills
- The provision of access to processing and testing facilities for professionals and students and business owners
- Certification and standardization activities, and
- Strengthen European supply chains through broad participation of companies, SMEs and startups in particular

Actors

The actors of the aviation and space ecosystem of the Balearic Islands, who can contribute to the innovation, collaboration and objectives of the ecosystem as a whole:

- FUEIB
- University of the Balearic Islands (Prof. Alicia Sintes, Prof. Maurici Ruiz, Prof. Joan Manuel Torres)
- Aerospace startups (Blueguest (tourism), DSonar (software), ISQ Turística (tourism))
- Balearic Entrepreneurs (Open Cosmos registered in the UK, Rafel Jorda)
- Space entrepreneurs in the Balearic Islands (SpaceHero registered in the UK, Deborah Dass)
- SME aviation and space companies
- Large aviation companies
- ParcBit
- BIT Foundation
- EmprenBIT
- Innobal
- Innovation Factory
- ICEX
- AENA
- EUESPA
- Official Chamber of Commerce, Industry, Services and Navigation of Mallorca, Menorca and Ibiza
- Pimem Mallorca, Menorca and Ibiza
- Mola Venture Builder Menorca Techcenter
- http://mothershipibiza.com
- Menorca slows down
- IDI- Institute of Business Innovation of the Balearic Islands
- CAEB (Confederation of Business Associations of the Balearic Islands)
- Enaire challenges and incubation
- Accelerate@IATA

PREPARATION

Activities

The following activities are carried out for the aerospace innovation ecosystem, but can be used as a reference for other ecosystems and themes and vice versa, the activities that are already scheduled and organized within ParcBIT, EmprenBIT and Fundacio BIT must be adapted to the new innovation ecosystem that is being created and include within its own portfolio of activities, the technical needs of aviation and space.

- Space&Aviation Innovation Café & Ensaimadas
- Peer-mentoring program between similar actors in the ecosystem between the Balearic Islands and the rest of the European aerospace ecosystems
- Welcome calls to welcome new members of the ecosystem virtually and in person
- Onboarding process to the innovation ecosystem in virtual, hybrid or in person
- Informal digital and in-person networking sessions at ParcBIT
- A 1-hour pechakucha is organized monthly, where in 5 minutes all the programs available to support innovation in the aerospace ecosystem of the Balearic Islands are introduced, such as ICEX, ParcBIT, EmprenBIT, FUEIB, University of the Balearic Islands, AEE, EBIT, INTA, AENA, IATA, CSIC Foundation.
- A 1-hour pechakucha is organized monthly, where in 5 minutes all the aerospace organizations of the Balearic Islands that participate in the event are introduced.
- Talks in person and virtually by experts in the areas of aviation and space, related to the main topics of PERTE Aerospace and the topics of the current business community of the Balearic Islands.
- Promote the different European aerospace financing programs, ESA challenges, Galileo, Copernicus, EGNOS, Cassini, Accelerate@IATA, EUESPA among other private industry incubation programs such as Airbus and Thales Alenia. Apart from the EIC, EIT, Erasmus+ and Horizon Europe.

Purpose

The purpose is to create, grow, strengthen, stabilize the aviation and space innovation ecosystem in the Balearic Islands through innovation, collaboration and connection with other national, European and international ecosystems through strategic partnerships and offering them a series of services and activities and giving them access to digitalization, incubation, acceleration programs and access to public financing. The purpose is to establish greater institutional coordination and a boost to business innovation, entrepreneurship innovation and promotion and with the support of scientific and technological research.

Information flow

Information flow is defined here as the exchange of information, funding, and opportunities among ecosystem actors, leveraging the network effects within the new aerospace innovation ecosystem. This facilitates the dismantling of silos and promotes collaboration:

- Through networking events, workshops, round tables, conferences, or symposiums
- Through the connection of the local ecosystem (among itself) with the European ecosystems and actors through the EuroSpaceHub platform
- Through the newsletters of the chambers of commerce, Pimem, ParcBIT, EmprenBIT, CentreBIT, FUIEB and other public and private institutions that work to help the innovation and business ecosystem
- Organize pechakucha-type events to quickly present innovation and financing programs and also for companies and startups to present each other

DEFINITION

Needs

The needs identified within the aerospace innovation ecosystem in the Balearic Islands:

- Greater institutional coordination and a boost to scientific and technological research
- Have satellite images (multispectral) in real time of the Balearic Islands
- Need for personnel and equipment
- Improve activities with different technologies such as IoT; Artificial Intelligence (any type); digitize processes; Apply sustainable and planet-friendly processes, remote sensing, digital twins
- Support with financial resources to provide support in personnel and equipment
- Identify aerospace companies that want to innovate and support them
- Include founders or directors of aerospace companies that are registered outside the Balearic Islands
- Reduce the environmental impact of aviation in the Balearic Islands
- Connect with European companies to collaborate with university research and with other companies

Solutions

Solutions provided by the aerospace innovation ecosystem to meet the needs:

- Create an aviation and space cluster
- Create a strategic relationship between the university
- Create an action and an education plan on the aviation and space cluster and ecosystem in the Balearic Islands in Pinem, and in the chambers of commerce and with the rest of the incubators, accelerators and innovation agencies
- Create an aerospace incubator at FBIT
- Establish a program in schools and institutes “an aerospace engineer in every school”
- Create technical training programs on aerospace topics in person and digitally
- Establish a series of collaborations and partnerships with other aviation and space incubators, universities and technology centers to transfer and apply technology
- Establish a collaboration agreement with EuroSpaceHub to digitize and connect the Balearic aviation and space ecosystem
- Creation of an aerospace makerlab to facilitate prototyping and proof of concept
- Create a VISA startup plan and digital nomad VISA for the aerospace sector to facilitate the registration of entities in the Balearic Islands and import talent

Tools

Tools for developing the aerospace innovation ecosystem in the Balearic Islands need to embrace both virtual and local dimensions to harness growth and innovation through collaboration and access to global knowledge, beyond the established European aerospace hubs:

- Use of the EuroSpaceHub digital ecosystem to connect the Balearic aerospace ecosystem with the rest of the ecosystems internationally and access to knowledge and opportunities for collaboration, financing and technology transfer
- Creation of WhatsApp groups to actively energize the community of innovative companies in the aerospace ecosystem, to share links, programs, aid, etc.
- Use of video conferencing systems so that workshops and other sessions can be recorded and shared with collaborators and actors

LEGACY AND COMMITMENT

Values

The common values of the aerospace innovation ecosystem in the Balearic Islands:

- Innovation
- Collaboration
- Respect
- Diversity
- Sustainability
- Digitization
- High technology
- International aerospace diplomacy

Manifesto

The aerospace innovation ecosystem in the Balearic Islands builds on institutional coordination and is aimed at advancing scientific and technological research through vibrant collaboration with local and global entities.

Our mission is clear: to elevate the aerospace sector to prominence on the European and international stage, driving economic growth and fostering innovation. We champion the creation and support of startups in new space and aviation, empowering existing companies in the Balearic Islands to embrace cutting-edge innovation.

Aerospace technology serves as a catalyst for digital transformation and innovation across diverse sectors such as maritime, agriculture, biodiversity, tourism, circular economy, blue economy, and urban planning.

The aerospace innovation ecosystem empowers its stakeholders through strategic collaborations, consortia formation, access to public funding, networking opportunities, incubation services, and innovation facilitation via the "innovation factory" and the prestigious innobal certification for innovative SMEs. Our commitment is further strengthened by the comprehensive support provided by Fundació BIT, ParcBIT, and CentreBIT.

Education

As a nascent ecosystem, educating our stakeholders is pivotal. We are dedicated to fostering a culture of collaboration and innovation, while imparting essential aerospace knowledge:

- Fostering an ecosystem mindset, emphasizing collaboration among all stakeholders.
- Introducing aerospace technologies and their potential applications in maritime, agriculture, biodiversity, and tourism.
- Unveiling the transformative potential of aerospace innovation through digitalization, green transition, and sustainability.

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TERMINOLOGY

Technical maintenance	Refers to the set of activities and processes aimed at preserving, repairing and guaranteeing the optimal functioning of equipment, machinery, systems or infrastructure. This may include preventive, corrective and predictive maintenance.
Machinery	Refers to the set of mechanical devices used in various industrial or production processes. This can range from simple equipment to complex machinery used in sectors such as construction and manufacturing.
Drones	They are unmanned aerial vehicles that can be controlled remotely or follow a predefined route. They are used in a variety of applications, such as aerial photography and videography and surveillance.
IT resources	Refers to all resources related to computing and information technology in an organization, including hardware, software, networks, databases and information systems. Effective management of these resources is essential for the operation of any company or organization.
Operational services	They are those services that are directly related to the daily operations of a company or organization. This can include services such as logistics, inventory management, customer service, facilities management, among others.
Association	Refers to a union of individuals, companies or organizations that come together with a common purpose, such as collaboration on projects, the defense of shared interests, the exchange of knowledge or the promotion of a specific cause.
Airline	It is a company that provides air transportation services for passengers and cargo. Airlines operate a variety of aircraft and offer scheduled flights to destinations within a region or internationally.
Robotic system	Refers to a set of mechanical, electrical and digital components that work together to perform tasks in an automated manner.
Private aviation	Refers to the operation of aircraft by private owners or companies for personal or business use. This may include private airplanes, corporate jets, private helicopters, among others.
Consultancy	Refers to the provision of advisory and expertise services by professionals specialized in a specific area. Consultants can work in a variety of fields, such as business management, technology, human resources, marketing, among others, and provide recommendations and solutions adapted to the needs of their clients.
Flight school	Flight schools are specialized institutions that offer training for pilots. They provide theoretical and practical instruction, including real flights and simulators, preparing students to obtain aviation licenses and certifications.

AIRLINES

ALBASTAR, PALMA, BALEARES
IBEROJET, PALMA, BALEARES
UP FLY, PALMA, BALEARES
IBERIA, MADRID
VUELING, BARCELONA
AIR EUROPA, PALMA, BALEARES
ISLA AIR EXPRESS SL, PALMA, BALEARES
WORLD 2 FLY, PALMA, BALEARES
GOLDEN FLIGHTS AERO SL, PALMA, BALEARES
RYANAIR, IRLANDA
NORWEGIAN, NORUEGA
EASYJET, REINO UNIDO
TUI, ALEMANIA
LUFTHANSA, ALEMANIA
SUNCLASS AIRLINES, DINAMARCA
JET2, REINO UNIDO
DISCOVER AIRLINES, ALEMANIA
AUSTRIAN, AUSTRIA
AIR EXPLORE, ESLOVAKIA
LAUDA EUROPE, PALMA, BALEARES
TRANSAVIA, HOLANDA
EUROWINGS, ALEMANIA
SWIFTAIR, MADRID
SAS, SUECIA
MALTA AIR, MALTA
EXCELLENT AIR, ALEMANIA
BRITISH AIRWAYS, REINO UNIDO
VOLOTEA, BARCELONA

REPORT ON THE RESULTS OF THE ANALYSIS OF THE AEROSPACE INNOVATION ECOSYSTEM IN THE BALEARIC ISLANDS

COLLABWITH

eurospacehub

EVENT DESCRIPTION: AEROSPACE FORUM OF THE BALEARIC ISLANDS

APRIL 2024

For Omar Beidas Soler
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CONTENT

DESCRIPTION

Event organized by EuroSpaceHub, and Government of the Balearic Islands Conselleria d'Economia, Hisenda i Innovació

Proposed dates: May 27-28, 2024 during the Symposium organized by the University of the Balearic Islands with ESA and CNES. The symposium is May 27-31, 2024 or at the end of June 2024.

Duration of the event: 2 days with active sessions plus breaks.
Event open to 150 participants
Bring together international ecosystems: companies, universities, academics, startups together with local, national, European and international companies.

Values: Diversity of perspectives and experience in the panels and gender equality in the speakers.

Language: English and Spanish.

Mission: Activate the aerospace ecosystem (space and aviation) in the Balearic Islands.

OBJECTIVES

1 INTRODUCE THE BALEARIC GOVERNMENT'S AGENDA TO SUPPORT THE AEROSPACE ECOSYSTEM, INCLUDING NEW AND EXISTING PROGRAMS.

2 INTRODUCE THE EXISTING COMMUNITY OF COMPANIES, RESEARCHERS, STARTUPS AND OTHER ACTORS LOCATED IN THE BALEARIC ISLANDS.

3 INTRODUCE THE EUROPEAN EUROSPACEHUB ECOSYSTEM, AS A SUPPORT PLATFORM FOR EUROPEAN AEROSPACE ECOSYSTEMS TO COLLABORATE AND INNOVATE.

4 CREATE COLLABORATIONS BETWEEN AEROSPACE ORGANIZATIONS IN THE BALEARIC ISLANDS AND UNIVERSITIES, STARTUPS AND OTHER SPANISH AND EUROPEAN COMPANIES TO CREATE INNOVATION PROJECTS AND HELP THEM INNOVATE.

EVENT FORMAT

3 1-HOUR ROUND TABLES/PANELS:

- HOW TO SUPPORT AND GROW THE AEROSPACE ECOSYSTEM OF THE BALEARIC ISLANDS
- HOW TO CONNECT THE AEROSPACE ECOSYSTEM OF THE BALEARIC ISLANDS WITH THE REST OF THE EUROPEAN AEROSPACE ECOSYSTEM
- HOW TO FINANCE INNOVATION IN THE AEROSPACE ECOSYSTEM IN THE BALEARIC ISLANDS

2 1-HOUR WORKSHOPS:

- HOW TO COLLABORATE TO INNOVATE IN THE AEROSPACE SECTOR
- HOW TO FIND THE REAL NEEDS TO INNOVATE AND PREPARE THE ORGANIZATION FOR THE FUTURE BY CREATING NEW LINES OF BUSINESS AND DIGITIZING EXISTING ONES

1 PECHAKUCHA OF 1 HOUR, WHERE IN 5 MINUTES ALL THE PROGRAMS AVAILABLE TO SUPPORT THE INNOVATION OF THE AEROSPACE ECOSYSTEM OF THE BALEARIC ISLANDS ARE INTRODUCED, SUCH AS ICEX, PARCBIT, EMPRENBIT, FUIEB, UNIVERSITY OF THE BALEARIC ISLANDS, AEE, EBIT, INTA, CSIC FOUNDATION.

1 PECHAKUCHA OF 1 HOUR, WHERE IN 5 MINUTES ALL THE AEROSPACE ORGANIZATIONS OF THE BALEARIC ISLANDS THAT PARTICIPATE IN THE EVENT ARE INTRODUCED.

1 2-HOUR MASTERMIND: MINDSET TO UNDERTAKE AND INNOVATE WITH EMOTIONAL INTELLIGENCE AND LEADERSHIP. OUTDOOR (ALL PARTICIPANTS ARE INVITED, AND ACTIVELY PREPARE QUESTIONS TO INNOVATE, COLLABORATE AND SCALE FOR THE COLLECTIVE MASTERMIND SESSION FOR THE DURATION OF THE EVENT).

COLLABORATION BOARD: DURING THE EVENT, PARTICIPANTS CAN WRITE DOWN THE IDEAS AND NEW COLLABORATION CONCEPTS THAT ARISE DURING THE DURATION OF THE EVENT OR GENERATED THERE.

1 SESSION OF 1 HOUR COLLABORATION NEGOTIATION BETWEEN ENTITIES FROM THE BALEARIC ISLANDS WITH PREVIOUSLY MATCHED SPANISH AND EUROPEAN ENTITIES: 5 THAT HAVE BEEN PRE-SELECTED. EVENT WITH EMOTIONAL MUSIC MUSIC WITH LOCAL ARTISTS TO HELP NEGOTIATE COLLABORATION THROUGH EMOTIONAL INTELLIGENCE AND COLLABORATION BOX FOR INNOVATION.

1 SESSION OF 1 HOUR WORKING ON NEEDS ANALYSIS AND NEW BUSINESS MODELS WITH 5 THAT HAVE BEEN PRE-SELECTED. EVENT WITH EMOTIONAL MUSIC WITH LOCAL ARTISTS TO HELP CREATIVITY THROUGH EMOTIONAL INTELLIGENCE AND THE PICTURE OF NEEDS AND THE FUTURE.

NETWORKING EVENT AND DINNER WITH EMOTIONAL MUSIC WITH LOCAL ARTISTS AT PARCBIT.

AGENDA

DAY 1:

9h Welcome

9.30h Panel: How to support and grow the aerospace ecosystem of the Balearic Islands

10:30h Workshop: How to collaborate to innovate in the aerospace sector

11.30h Innovation networking coffee and ensaimadas

12h Panel: How to finance innovation in the aerospace ecosystem in the Balearic Islands

13h 1-hour Pechakucha, where in 5 minutes all the programs available to support innovation in the aerospace ecosystem of the Balearic Islands are introduced, such as ICEX, ParcBIT, EmprenBIT, FUIEB, University of the Balearic Islands, AEE, EBIT, INTA, CSIC Foundation.

AGENDA

14h Innovation networking Balearic lunch

15h Pechakucha for 1 hour, where in 5 minutes all the aerospace organizations of the Balearic Islands that participate in the event are introduced.

16h 1 hour session negotiation of collaboration between the entities of the Balearic Islands with previously matched Spanish and European entities: 5 that have been pre-selected. Event with emotional music music with local artists to help negotiate collaboration through emotional intelligence and collaboration box for innovation.

18h Networking event with emotional music with local artists at ParcBIT.

AGENDA

DAY 2:

9h Panel: How to connect the aerospace ecosystem of the Balearic Islands with the rest of the European aerospace ecosystem

10h Workshop: How to find the real needs to innovate and prepare the organization for the future by creating new lines of business and digitizing existing ones

11h 1 hour session working on analysis of needs and new business models with 5 that have been pre-selected. Event with emotional music with local artists to help creativity through emotional intelligence and the picture of needs and the future

12.30h Innovation networking coffee and ensaimadas

13h Mastermind: Mindset to undertake and innovate with emotional intelligence and leadership (all participants are invited, and actively prepare questions for the collective mastermind session during the duration of the event).


COLLABWITH


eurospacehub