

TEDAE

activities

report

AERONAUTICS
DEFENSE
SECURITY
SPACE

2018

activities
report
2019

activities

report

2019

Editor: TEDAE

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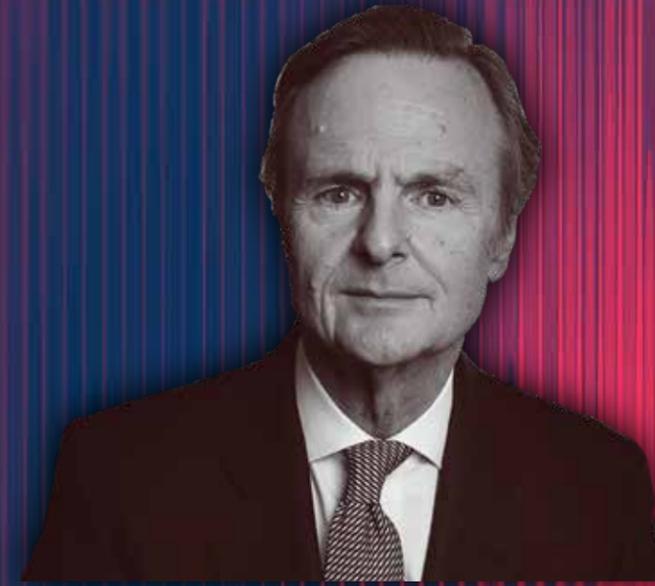
ART & DESIGN DIRECTOR:
EXPOMARK 2020

CHAP.		PAGE
01	Message from the president	6
02	Sector figures	8
03	The Association	12
04	Sectors	16
05	Cross-cutting areas	32
06	Tedae and universities	40
07	Activities	44
08	FEINDEF	58
09	TEDAE Awards	64
10	Congreso del Espacio (Space Congress)	72
11	TEDAE Outreach	78
12	Plan of activities 2020	86
13	Associate members	94

index

Working on what we believe in

I want these, my first few words, to express my gratitude for the trust that you have put in me. I have had a close bond with the sector that you are a part of, and you make up an important industrial fabric for Spain that, as you know, I value and admire.



IT IS FOR THIS REASON that it is a great pride for me to be the leader of an association such as TEDAE, which, through its technologies, represents the best of its people's talents, an ambition for constant improvement, and the conviction that what we do is aimed at improving the wellbeing of our society. This implies an exciting challenge that -rest assured- I intend to face to the best of my abilities.

2019 was a special year for the association, which celebrated its first ten years of existence. A decade that coincided with world economic and financial crises, but which saw the consolidation of our collaborative work, a long-term vision, a sectoral commitment and the will to prosper.

There is no doubt that today's vibrant TEDAE is the result of the commitment of all the companies that you are a part of, and of your firm conviction that, when there are shared goals, the best way to achieve them is to pursue them in unity. I would be remiss if I did not remember those who came before me and who were a fundamental part of what we are today - Jaime de Rábago, Adolfo Menéndez and in particular our honorary President, Julián García Vargas.

The pages of this Summary of Activities are a testament to TEDAE's will to be the voice of the aeronautics, defense, security and space sectors. As a liaison with the various bodies related to our industries, we have participated in events and conferences, reaching out to other European and international associations or working jointly with trade unions.

In 2019 TEDAE commissioned hard-hitting projects. In collaboration with the Ministry of Defense and AESMIDE, TEDAE organized FEINDEF - the first International Defense and Security Fair. This, in addition to the "*Congreso Nacional de Espacio*" ("National Space Congress"), which brought together major players of the national and international space sector. In addition, the association presented its first Awards to recognize persons and institutions that have made fundamental contributions to the furtherance of our sectors.

But this is not enough. We want to further our presence abroad, becoming a useful component in the making of decisions that foster the necessary support measures for our sectors to be a pillar of the Spanish economy. We want to serve

our members with the goal of becoming protagonists in the new European Union, with the Spanish industry being at the forefront of the main European programs, such as Horizon Europe and the European Defence Fund, consolidating our presence in the European Space Agency. In summary, we want to generate the response that our companies expect so as to be able to compete under more favorable conditions.

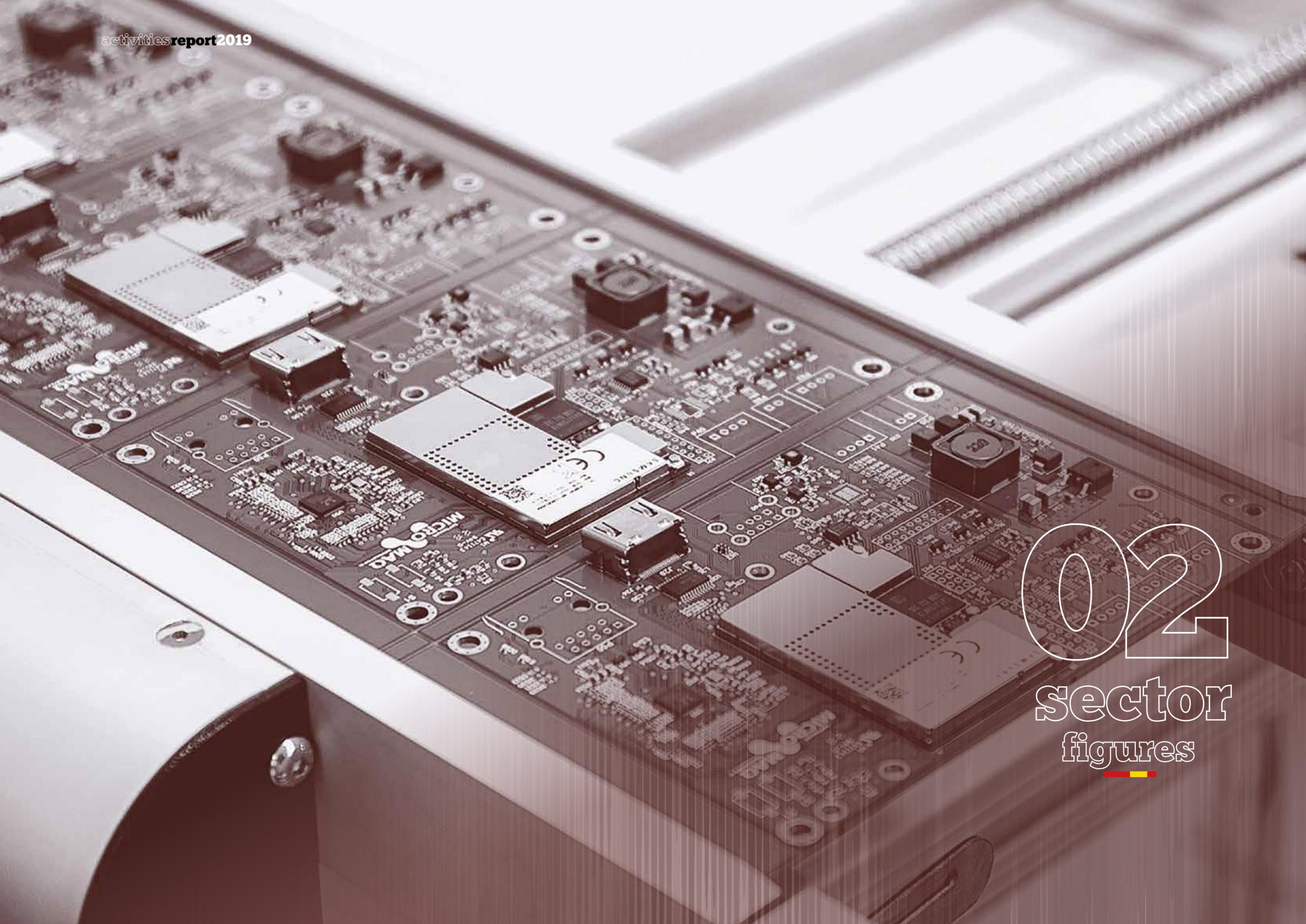
Major challenges and exciting projects lie ahead of us. And while it is true that the COVID-19 crisis has hit us hard, both at a human and an economic level, now more than ever we must clearly identify the engines that will enable us to restart our economy tomorrow. The aeronautics and defense sectors have, and will, provide Spain with proprietary technology that guarantees the supply of essential products that are needed at any given time, and must be one of the pillars that drive the economic recovery.

Never in our history as an industry have cooperation and coordination been more important. We are aware that, in the future, the fact of focusing the products that we develop on the protection and needs of people, and the ability of our industries to

prepare for upcoming crises, will be differentiating factors in our sector.

It is time to overcome uncertainty and keep working on what we believe in. This is our daily commitment and it is my intention to work on it shoulder to shoulder with you.

Ricardo Martí Fluxá
PRESIDENT OF TEDAE



02

sector
figures



2019

employment per gender



market breakdown



INDUSTRIAL GDP



GDP



PRODUCTIVITY

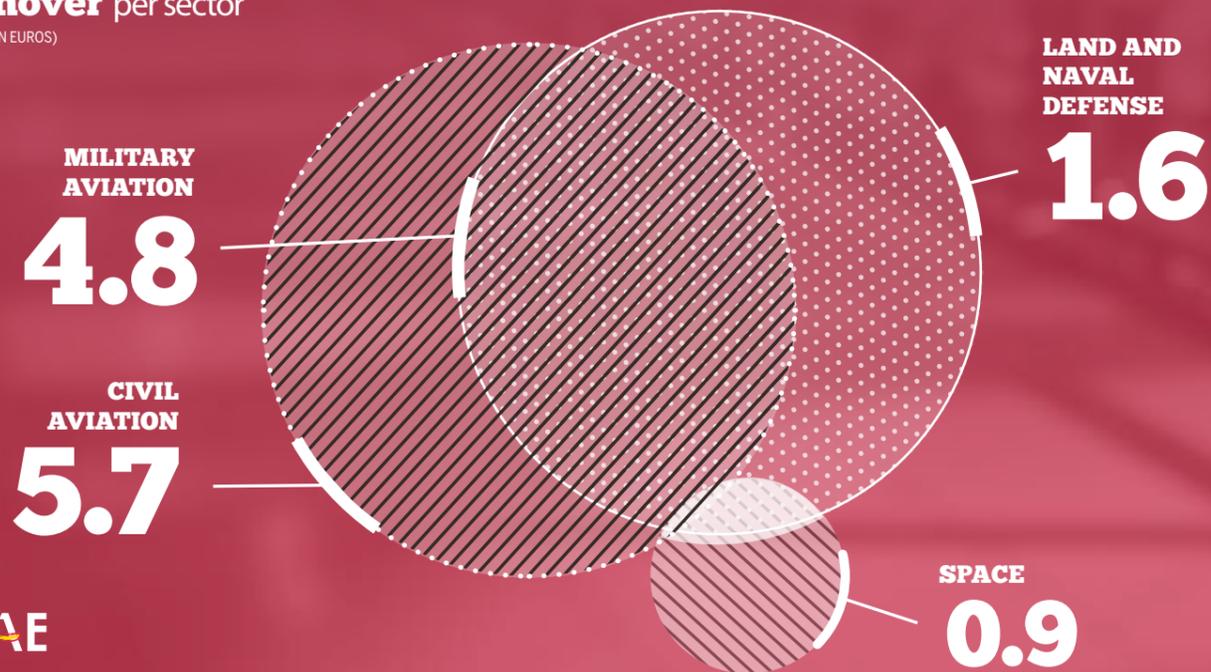


Company size breakdown



main figures TEDAE

turnover per sector (IN BILLION EUROS)



INNOVATION

9%

OF THE TURNOVER

TURNOVER

13.04

turnover

EXPORTS

71%

OF THE TURNOVER

EMPLOYEES

57,618

TEDAE turnover

and its contribution to the Industrial GDP



TEDAE

Source: own work. Data: TEDAE INE

2019



03

the association

STRUCTURE AND FUNCTIONING

The structure of TEDAE aims to foster:

- The creation of value in a global environment.
- Competitiveness as a whole.
- Industrial leadership.
- The common interest of the four industrial sectors, with a focus on the diversity and nuances of each technological field.

The organization is built around a vertical axis formed by the General

Meeting, the Board of Directors, the Advisory Board and the Office of the President.*

The General Meeting is composed of all of its members and meets at least once a year.

The Advisory Board is composed of sponsor companies and companies that exceed the size of an SME -as per the Recommendation of the European Commission- by six times, as well

as two representatives of MID-CAP and SMALL-CAP companies of the Association.

Among others, the association acts as the maximum institutional representative before the administration and international organizations. It is composed of the following:

Advisory Board

- **Ricardo Martí Fluxá**
President
- **Iñaki López**
President of AERNNOVA AEROSPACE, S.A.
- **Alberto Gutiérrez**
President of AIRBUS in SPAIN of AIRBUS OPERATIONS S.L.
- **Jorge Caro**
General Secretary of Military Aircraft, AIRBUS DEFENCE & SPACE, S.A.U.
- **Igor Amantegui**
CEO of CENTUM SOLUTIONS S.L.
- **Juan Escriña**
Executive Director-General of GENERAL DYNAMICS EUROPEAN LAND SYSTEMS SANTA BÁRBARA SISTEMAS, S.A.
- **Manuel Escalante**
Director of Defense and Security of INDRA SISTEMAS, S.A.
- **Carlos Alzola**
General Director of ITP Aero S.A.U.
- **Susana Sarriá**

In the rest of the structure of the Association, the hierarchy is "circular" among peers, with each of the four sectors having their own leadership for a greater efficiency in regard to results and priorities.

* As of March 31, 2020

Board of Directors

The Board of Directors is a governing body that leads and manages the Association and acts under the control of the General Meeting.

It holds ordinary meetings every two months and upon request by at least one-third of its members. It is responsible for overseeing the everyday management of the Association's affairs.

It is composed of the president of the Association, the sectoral vice presidents, a minimum of fourteen voting members -who must be full-member companies- and the secretary of the association. It is composed of:

- **Ricardo Martí Fluxá**
President
- **César Ramos**
General Director
- **Clara Tébar**
Director of Operations / Secretary

Vice Presidents

- **Alfredo Menéndez**
Vice president of Aeronautics of TEDAE. AIRBUS in Spain.
- **Fernando Barbero**
Vice president of Security of TEDAE. INDRA SISTEMAS, S.A.

- **Jorge Potti**
Vice president of Space of TEDAE. GMV INNOVATING SOLUTIONS, S.L.
- **Susana Lapique**
Vice president of Defense of TEDAE. NAVANTIA, S.A.

Voting Members

- **Francisco Javier Fernández de Retana**
AERNNOVA AEROSPACE, S.A.
- **Ángel de Álvaro**
GENERAL DYNAMICS EUROPEAN LAND SYSTEMS SANTA BÁRBARA SISTEMAS, S.A.

- **Carlos Gómez-Múgica**
AIRBUS DEFENCE & SPACE S.A.U.
- **Jorge García**
INDRA SISTEMAS, S.A.

- **Fernando Varela**
AIRBUS DEFENCE & SPACE, S.A.U.
- **Plácido Márquez**
ITP Aero S.A.U.

- **Manuel Huertas**
AIRBUS OPERATIONS, S.L.
- **Javier Romero**
NAVANTIA, S.A.

- **Igor Amantegui**
CENTUM SOLUTIONS, S.L.
- **Rafael Orbe**
SENER AEROESPACIAL, S.A.

- **Miguel Ángel Tapia**
EUROPAVIA ESPAÑA, S.A.
- **Luis Furnells**
TECNOBIT S.L.

- **Manuel de Oliveira**
EVERIS AEROESPACIAL Y DEFENSA S.L.

- **Pedro Sallent**
EXPAL SYSTEMS S.A.

defense

aeronautics

security

space



04

sectors



AERONAUTICS, MORE THAN EVER, MUST BE A SUSTAINABLE EXAMPLE OF PUBLIC-PRIVATE COLLABORATION

2019 has not been a good year for aviation or, consequently, the sectors that support this activity, such as aeronautics. It may seem as if 2019 wanted to forewarn us about what we never thought would happen -the crash of a sector with a steady growth and robust foundations, and that its challenge was to find the necessary capabilities to face the existing demand.

The year started with an announcement by Airbus that it would shut down the production of its A380 -a true hallmark of aviation. The difficulties to capitalize on the engine upgrade in regard to efficiency, Emirates' decision to reduce the number of orders and the cancellations by Qantas ultimately led the program to a dead end. Logically, this fact set the stage for a reduction in the workload of companies working for the program (albeit with a logical delay), many of which grew under its wing given the characteristics of a program that increased Spain's participation twofold.

The B737 Max crisis and the grounding

of flights in almost all countries implied a significant slowdown that hampered the supply chain, which found itself in trouble when, at the end of the year, the company announced that it would temporarily stop manufacturing the model in 2020 due to the grounding by the American certifying/regulating authority (FAA).

The A400M also reduced its delivery pace, with an associated reduction in the workload; the "Global Baseline" signature with the governments took place in June. Even so, the program kept moving toward the certification of the agreed-upon capabilities and it saw use in different scenarios throughout the year.

The arrival of Spain in the FCAS/NGWS program in September was, without a doubt -and regardless of the potential complexities of its structuring-, the best piece of news of the year, and it should enable the Spanish industry to become a full-fledged participant in the most important military aviation program of the next few decades.



Lastly, the signature of the "Joint declaration for a Sustainable Aviation" by the heads of technology of the 7 most important companies in the world brings us a hope that, as professionals of the sector, we must embrace, developing the necessary technologies, and, as citizens and participants, applauding what could be considered to be an important step toward a better future for the environment without undermining mobility.

During 2019, the electric aviation technology demonstrators were practically completed, which yielded important conclusions in relation to the "trade off" of propulsion energies.

When taking a quantitative look at the contracts and deliveries, even though the aforementioned 737 Max crisis also had its impact, hitting Boeing numbers hard, agreements have been entered into to

a degree that allows companies to keep their order books flowing.

New order figures reached 768 for Airbus (747 in 2018) and 54 units for Boeing (893 in 2018). Deliveries by Airbus once again hit an all-time high, which delivered 863 aircraft, including the 48 A220 after integration of the C Series into the family (800 in 2018) and 380 deliveries for Boeing, when in 2018 it had delivered 806 aircraft.

In regard to the activities and accomplishments of the aeronautical sector, there is no doubt that the most significant event was the agreement reached with the main regional clusters -Andalucía Aerospace, HEGAN (Basque Country), Madrid Aerospace and AERA (Aragon)- to be part of the Commission and thereby be able to work closely and identify synergies and actions that lead to the development of the Spanish aeronautical sector as a whole.

In the field of R&D, meetings were held with the Ministry of Science and Innovation and the Spanish Aerospace Platform to participate in the review and

improvement of the National Science and Technology Strategy. Furthermore, in the European arena, we worked on the development of the new "Horizon Europe" Framework Program and on the Horizon 2020 aeronautics survey.

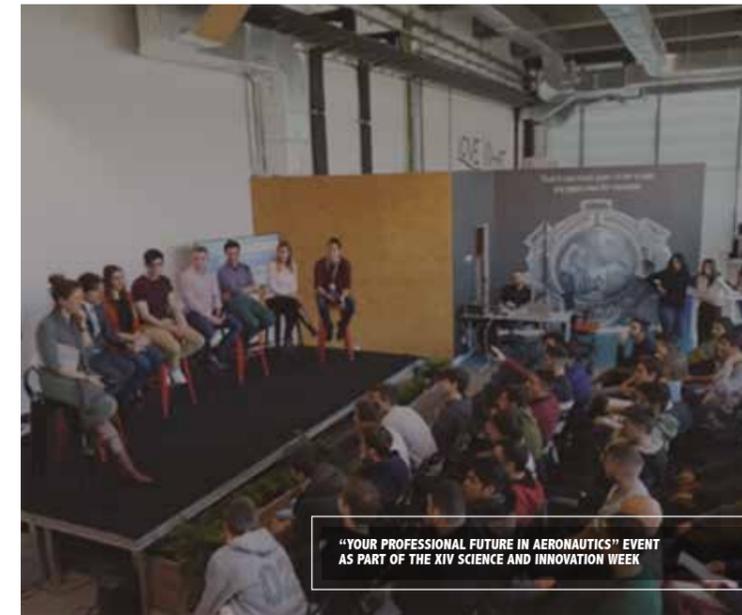
The most important event in relation to the Supply Chain Committee was the "Challenges and Opportunities of the aeronautical industry" meeting, where attendees discussed the upcoming challenges and outlook for the industry, as well as the potential opportunities for the various sub-sectors of aeronautics.

The Aviation Committee's re-engagement with the Ministry of Transportation to address Aviation matters was a major achievement, as was the execution of the "Industrial RPAS Sector in Spain" document.

Lastly, the Services Committee presented the report prepared by the "Aeronautical Services Sector" Committee.

In regard to events, in addition to those

mentioned specifically in each of the working forums, a meeting on PT was held, which was attended by major stakeholders, companies, the Chamber of Commerce of Spain and the Ministry of Education and Professional Training. We also participated in the Science Week of the Community of Madrid.



"YOUR PROFESSIONAL FUTURE IN AERONAUTICS" EVENT AS PART OF THE XIV SCIENCE AND INNOVATION WEEK

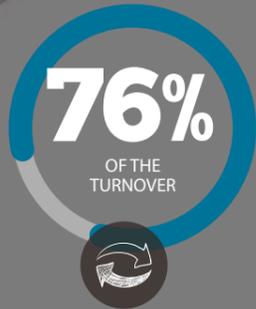
Alfredo Martínez
VICE PRESIDENT OF AERONAUTICS OF TEDAE

2019

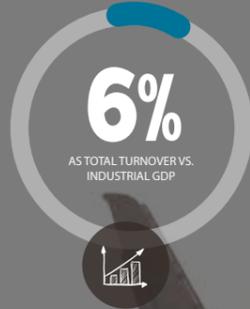
innovation



exports



industrial GDP



productivity



turnover

and its contribution to the Industrial GDP



main figures

employees



44,685
JOBS

aeronautics
TEDAE

DEFENSE

46%
OF THE TURNOVER

CIVILIAN

54%
OF THE TURNOVER

PRODUCTION CENTERS

696

2
TIMES THE SIZE
IN 2009

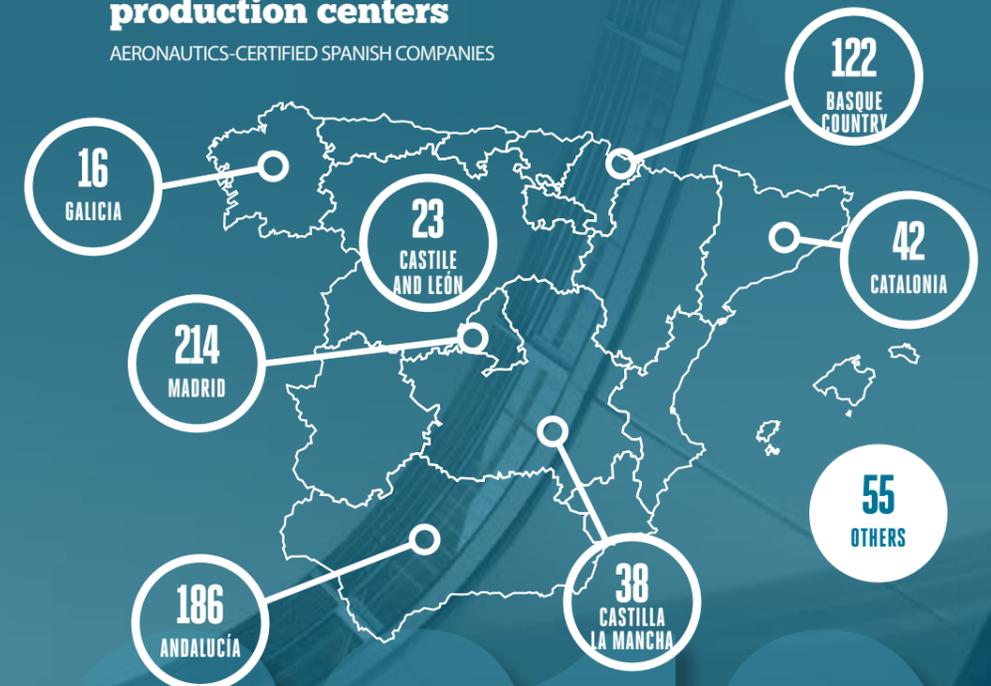
turnover

10.523

BILLION EUROS TURNOVER

production centers

AERONAUTICS-CERTIFIED SPANISH COMPANIES



TEDAE

Source: own work. Data: TEDAE INE

2019

2019, SPANISH INDUSTRY SUCCESS STORY, THE ROAD TO THE EDF AND THE STRENGTHENING OF THE EUROPEAN DEFENSE POLICY, AND THE LAUNCH OF FEINDEF

The Defense industry is one of the many resources of our Armed Forces and a strategic ally in responding to the new challenges in Security and Defense that they must face. Additionally, it is an economic driver for Spain due to its ability to innovate, and a creator of stable, quality jobs. This is a purely export-oriented sector characterized by strong territorial roots, constituting the industrial backbone of places in our land where it would not be the economic actor that it currently is if it were not present, bolstering other sectors. This territorial development goes hand-in-hand with a major technological development, since the Defense Industry has invested -and is investing- a significant amount of its turnover in R&D.

Aware of the importance of the European policies in the future of its sector, as well as the strategic importance of the European Defense Fund, the Defense Commission has continued to work in close collaboration with the Ministry of Defense and other essential stakeholders with the purpose of fostering the leadership of Spain and its Defense industry in European initiatives, which are increasingly ambitious and relevant.

TEDAE's participation in the Inter Ministerial Working Group of EDAP (European Defence Action Plan), led by the Ministry of Defense and with the participation of representatives from all Ministries, has allowed us to have an in-depth knowledge of the status of the European initiatives and to paint a picture of the industry with sights on taking joint steps to ensure Spain's leadership in the new European Defense market.

The R&D committee continued working on following-up on all initiatives that drive innovation in Defense both domestically and in Europe, as well as within the NATO framework. Furthermore, its collaboration with the General Subdirector of Planning, Technology and Innovation of the Ministry of Defense through its TEDAE Work Coordination Group, created to determine the best information and communication channels with the industry in relation to innovation in Defense and with the purpose of attaining a relevant presence of Spanish companies in the EDIDP (European defence industrial development programme) and Preparatory Action on Defence Research (PADR) awardee



consortiums was of the highest priority throughout the entire year.

The 2019 call for bids of the EDIDP program was a success as a result of this national coordination. 40 proposals from around 350 European organizations -35 of them Spanish- were received.

In the field of foreign support and the internationalization of the sector, the Internationalization Committee worked closely with the Office of Foreign Support (OFICAEX) of the Ministry of Defense in the planning of its annual activities, as well as with the ICEX, to identify the Defense industry internationalization actions that require support: the presence of the industry in the Spanish Hall of the following fairs: IDEX (Abu Dhabi, February 2019), SITDEF (Lima, May 2019) and EXPODEFENSA (Bogota, December 2019).

For yet another year, we have organized jointly with the OFICAEX the Industry Day within the 2019 Course for Spanish

Defense Attachés and Advisors and the Industrial Technological Days with countries such as Israel, Portugal and South Korea.

The first edition of the International Defense and Security Exhibition FEINDEF, jointly organized by TEDAE and AESMIDE, with the unwavering support of the Ministry of Defense, was launched with the goal of becoming a leading fair in Europe thanks to Spain's strategic geographic location and its tight-knit business relations, mainly with the European Union and Mediterranean-North Africa regions, Latin America and the Middle East. Furthermore, it aims to become a forum that allows for the opportunity to showcase the collaborative trends of the European Defense Market, fostering bilateral meetings within the framework of the PESCO and the EDAP with sights on strengthening the European Defense industry and supply chains.

FEINDEF, which was held from May 29 through 31 in Madrid, was a milestone for the sector and for Spain, seeing the participation of over 40 international delegations, enabling all companies to showcase their capabilities. And this fair is here to stay - the next edition is expected

to be held in 2021.

The most important communication actions included a breakfast with Josep Borrell days before taking office as the High Representative of the Union for Foreign Affairs and Security Policy of the European Commission. In addition, the Defense Communications Group continued bringing its support for the performance of communication actions related to the Defense sector.

Within Europe, worth noting is the participation of member companies in the Defense Business Unit, Sectoral Groups, Committees and ASD Work Groups, with sights on positioning the interests of the Spanish industry in Europe, in addition to participating in other initiatives within the framework of the EDA (European Defence Agency).

In regard to NATO, TEDAE industries were represented through the collaboration with the head of the NIAG Delegation (NATO Industry Advisory Group) and the participation in their Pre-Feasibility Studies.

The growing interest in issues related to the European Union is reflected in the fact that TEDAE companies are increasingly

setting up permanent representation delegations in Brussels.

The remaining activities undertaken by TEDAE in 2019 in the field of Defense included the presentation of figures, high-value communication efforts and the coordination of initiatives related to the industry with the Ministry of Defense.

As a final note, I would like to thank all the companies of the Defense Commission and, in particular, the Executive members, for your collaboration and commitment with the consolidation of our shared project.



INDUSTRY DAYS AT NATO'S NSPA AGENCY (LUXEMBOURG)

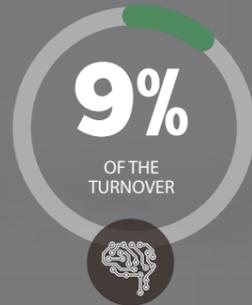
Susana Lapique
VICE PRESIDENT OF
DEFENSE OF TEDAE

2019

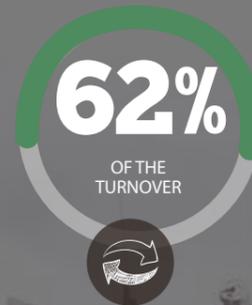
turnover and its contribution to the industrial GDP



innovation



exports



industrial GDP



productivity



main figures defense and security

employees



AERONAUTICS

73%

LAND

9%

SEA

15%

SPACE

1.5%

SECURITY

1.5%
OF THE TURNOVER

exports



turnover

6.561

BILLION EUROS
TURNOVER

TEDAE

2019, A YEAR OF GREAT CHALLENGES AND GOOD RESULTS FOR THE SPANISH SPACE SECTOR

WE HELD THE FIRST SPACE CONGRESS, PRESENTED THE SECTORAL AGENDA OF THE SPANISH SPACE INDUSTRY AND CLOSED THE YEAR WITH THE ESA MINISTERIAL MEETING IN SEVILLE.



The Space Commission had a very active role throughout the year in representing the interests of the space sector. The ESA Ministerial Council held in Seville, where Spain played a major role by being at the helm of ESA since 2016, has given a good closure to a bustling year.

During 2019, the Space Policy Committee has focused its activity in designing and presenting the Sectoral Agenda of the Spanish Space Industry, as well as in organizing the first Space Congress, in close collaboration with the Government and the most important bodies and institutions related to the space sector in Spain.

The companies of the Commission continued their collaboration with the Spanish Aerospace Platform -PAE- through the R&D Committee, both in

relation to the design of the Strategic Space R&D Agenda and to their participation in the work groups. For its part, the Applications Committee continued making headway in their Study of Space Applications and their impact on the Spanish Economy, which is being undertaken in collaboration with the Autonomous University of Madrid.

The first edition of the Space Congress took place in October in Madrid, sponsored by TEDAE jointly with the INTA (*Instituto Nacional de Técnica Aeroespacial «Esteban Terradas»*), the CDTI (Centre for the Development of Industrial Technology), the CSIC (*Consejo Superior de Investigaciones Científicas*), the National Geographic Institute of the Ministry of Transportation, Mobility and Urban Agenda and the Ministry of Defense, in addition to the European Space Agency

(ESA), the European Global Navigation Satellite System Agency (GSA), ENAIRE, the Spanish Institute of Engineering and the *Instituto de Empresa* as collaborating institutions. With approximately 600 attendees from every field, it brought together top-level speakers of the national and European space sector. The congress highlighted the consolidation of the sector as an economic and innovation driver for Spain, as well as its strategic role in Defense, and implied a decisive step toward taking space to the citizens. The Minister of Science and Innovation, Pedro Duque, gave the closing speech of the Congress in the company of Michel Mayor, who had recently been awarded the Nobel Prize in Physics and who has contributed to the design of the Cheops satellite -the first ESA mission integrated in Spain and launched to space in late

2019.

Space Congress was also the stage for the presentation of the Sectoral Agenda of the Spanish Space Industry, in the hands of the Secretary General of Industry and SME, Raúl Blanco. The document came to light after an arduous work by the companies of the TEDAE Space Commission, in collaboration with the Ministries of Industry, Commerce and Tourism, and Science and Innovation. Its chapters analyze the Spanish Space Sector and its position in the international landscape, describe the economic characteristics of the global space landscape and, lastly, propose a package of measures that will allow for the deployment of the full potential of our industrial fabric and will boost the entire Spanish Space community.

In regard to communication, work has continued during 2019 to publicize the benefits of the space sector on our day-to-day and reach the public opinion. A few months before Space Congress, several communication channels were

created, dedicated to offering news on new developments -the Website of the Congress, Twitter and YouTube. Other actions worth noting were the presentation of the Sector Statistics and the publication of the 2018 Space Yearbook, containing the most important events and protagonists of the year. This, in addition to a publication in the Proespacio Magazine, with interviews with major players in the sector who offered different insights, news and reports that paint a picture of the current state of the Sector and showcase the leading role played by Spain.

The European Space Agency Ministerial Meeting, held in Seville in late November, was a great success that will undoubtedly contribute to a higher and better development of the European space industry. The leading role of Spain, which was at the end of its presidency in 2016, and the great work of its delegation, translate into an unprecedented level of participation in Earth observation, telecommunications and integrated applications, space

exploration, launch vehicles, space safety, planetary defense and Space surveillance, in addition to the participation in different programs.

To sum up, the Spanish Space Industry could not have imagined a better way to give closure to a bustling year, which leaves the door open to a good outlook in which to continue working as a leading sector in the fields of scientific development and cutting-edge technology, a strong driver of economic growth, progress and social wellbeing.



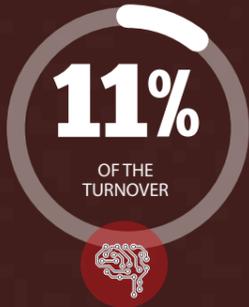
EUROPEAN SPACE AGENCY MINISTERIAL MEETING HELD IN LATE NOVEMBER (SEVILLE)



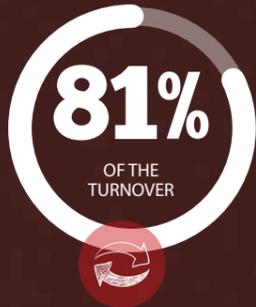
Jorge Potti
VICE PRESIDENT OF SPACE OF TEDAE

2019

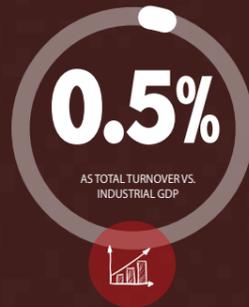
innovation



exports



industrial GDP



productivity



turnover



main figures

space TEDAE

employees



4,230
JOBS

LAUNCH VEHICLES

8%

GROUND SEGMENT

25%

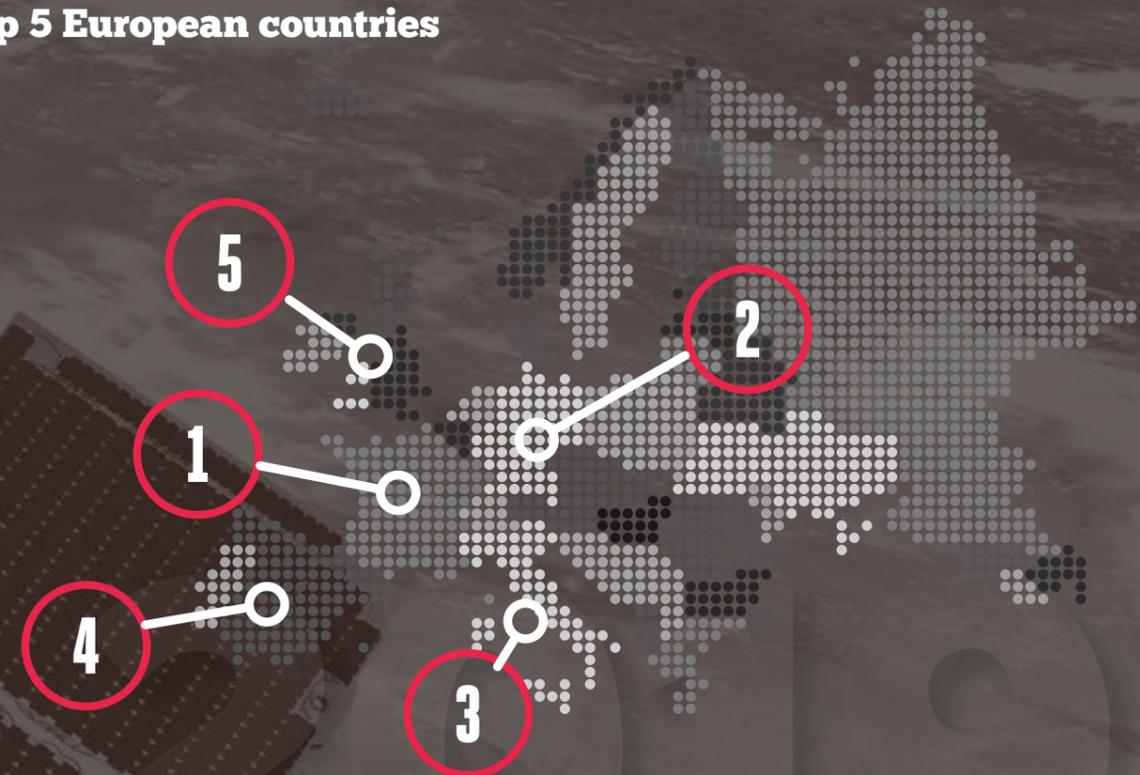
OPERATORS

29%

FLIGHT SEGMENT

38%

top 5 European countries



turnover

863

MILLION EUROS
TURNOVER

TEDAE

quality
environment
communication

05

cross-cutting
areas



TEDAE PARTICIPATES in the development of the Aerospace and Defense Certification Scheme (ICOP Scheme) -a worldwide certification scheme- and acts as its leader in Spain, establishing the terms of reference, operational policies and general requirements applicable to the Certification Body Management Committee (CBMC) of TEDAE within the framework of the European Sector of the International Aerospace Quality Group (IAQG).

Furthermore, it establishes the requirements that apply to the Certification Programs of the Aviation, Space and Defense Quality Control Systems implemented by TEDAE, developing, where applicable, procedures and rules to complement the procedures

and rules of the IAQG/EAQG and identifying and supporting the resources committed to the performance of various activities -mainly surveillance and tracking. Within this system, TEDAE, through the CBMC (the governing body of the Scheme in Spain), is responsible for the approval of the certification bodies licensed by the *Entidad Nacional de Acreditación* (ENAC). In addition, TEDAE is responsible in Spain for authenticating auditors through the Auditor Authentication Body (AAB).

Moreover, TEDAE is part of the *Comité Mixto de Industrias de Defensa*, CMDIN, within the framework of the PECAL/AQAP Certification Scheme.

TEDAE's objectives in regard to Quality

during 2019 have been to publicize the results of the Work Groups of the TEDAE Quality Committee and maintaining TEDAE's leadership in the Aerospace and Defense Certification Scheme (ICOP Scheme) by promoting and supporting activities related to this Scheme.

In order to meet these objectives, we have implemented several lines of action, all of them under the supervision of the TEDAE's CBMC. Here it is worth noting that there are a total of 696 certified sites in Spain.

83% (576 sites out of 696) of the sites have been certified by TEDAE's CBMC-approved Certification Bodies, and 17% (120 sites out of 696) of the sites have been certified

by Certification Bodies that have not been approved by TEDAE's CBMC.

During 2019 a total of 161 certificates have been issued/renewed; in addition, TEDAE's AAB has performed a total of 11 aerospace auditor authentications/re-authentications; Certification bodies and ENAC have been subjected to supervisions, and we have maintained relations with the ENAC and the Spanish Quality Association (AEC), among other actions which have enabled TEDAE to consolidate in the administration of the Scheme. TEDAE continued to participate in the Committees of the Spanish Quality Association -AEC: Aerospace Committee and Defense Industry and Services Committee.

2019 saw the completion of activities of the Quality Committee Work Groups, with the publication of Guides and booklets related to the following topics:

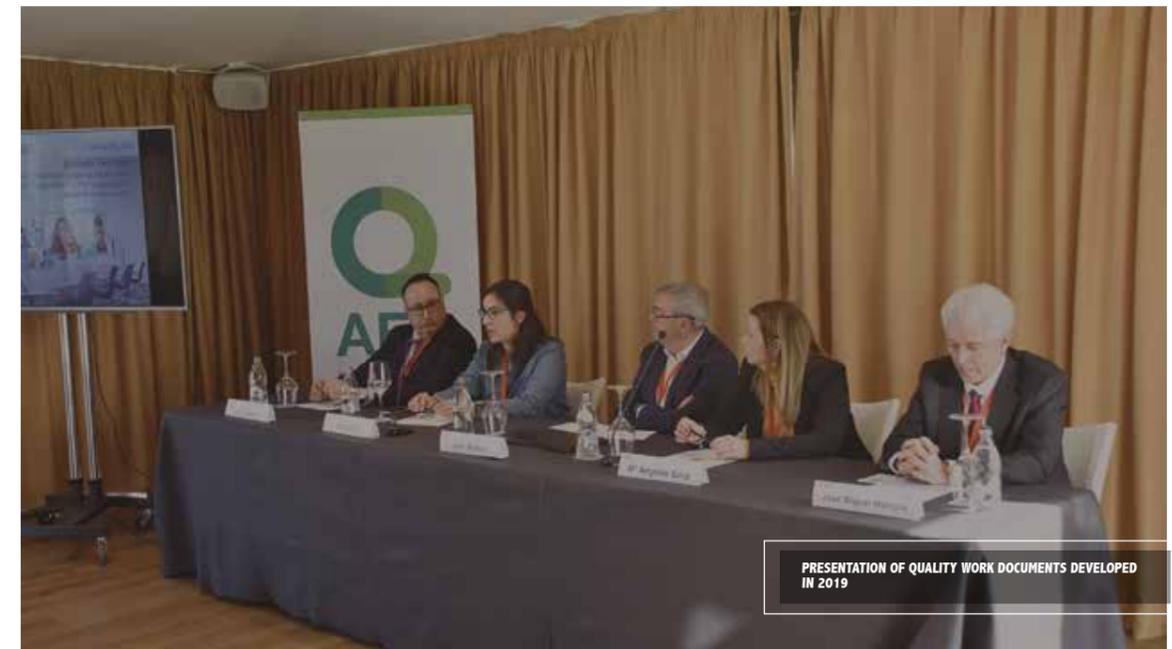
- External Service purchases
- Root cause; human factors
- Counterfeit products
- Product safety

Additional activities within the framework of the ICOP aerospace scheme undertaken during this period:

- IAQG audit of the Spanish CBMC
- Hosting of OP Assessors Day at TEDAE offices: June 27, 2019
- Meeting with the Scheme Certification Bodies: October

8, 2019

- Review of two of the most important standards of the ICOP Scheme: 9104-001 and 9104-003
- AAB meeting on November 28 to prepare observations related to standard 9104-003



PRESENTATION OF QUALITY WORK DOCUMENTS DEVELOPED IN 2019

“ TEDAE is responsible for the approval of the certification bodies licensed by the *Entidad Nacional de Acreditación* (ENAC)

THE ENVIRONMENT

Committee held four plenary meetings throughout 2019 where it had the opportunity to analyze new environmental regulations that impact the four sectors of TEDAE.

Out of the various regulations on the matter, given their importance, the new developments related to the REACH European Regulation on Chemicals were coordinated by the Chemical

Regulation Work Group -working under the supervision of the committee- with the purpose of reducing the impact of this regulation on the Spanish Supply Chain and guarantee compliance with it.

The efforts undertaken by this Work Group include following-up on the requests for authorization of chromates, the follow-up of the addition of new substances to the lists of high concern

and the Defense initiatives in coordination with the Unit of Exemptions of the MINISDEF, among others.

In regard to the relations between the Committee and the Government, worth noting is a meeting with the Waste SG and the Air Quality and Industrial Environment SG of the MITECO, where we had the opportunity of getting to know the state of the transposition of the Directive on Circular Economy and

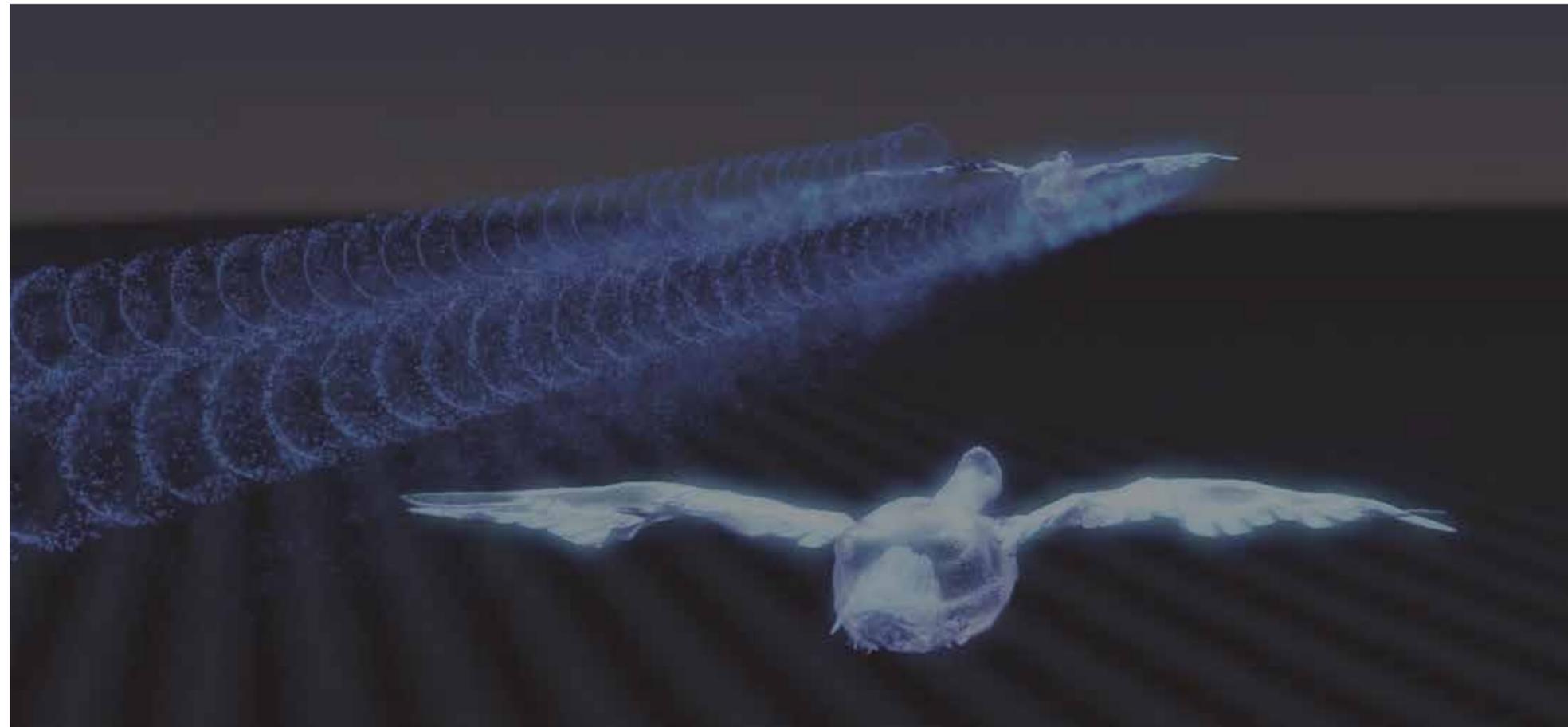
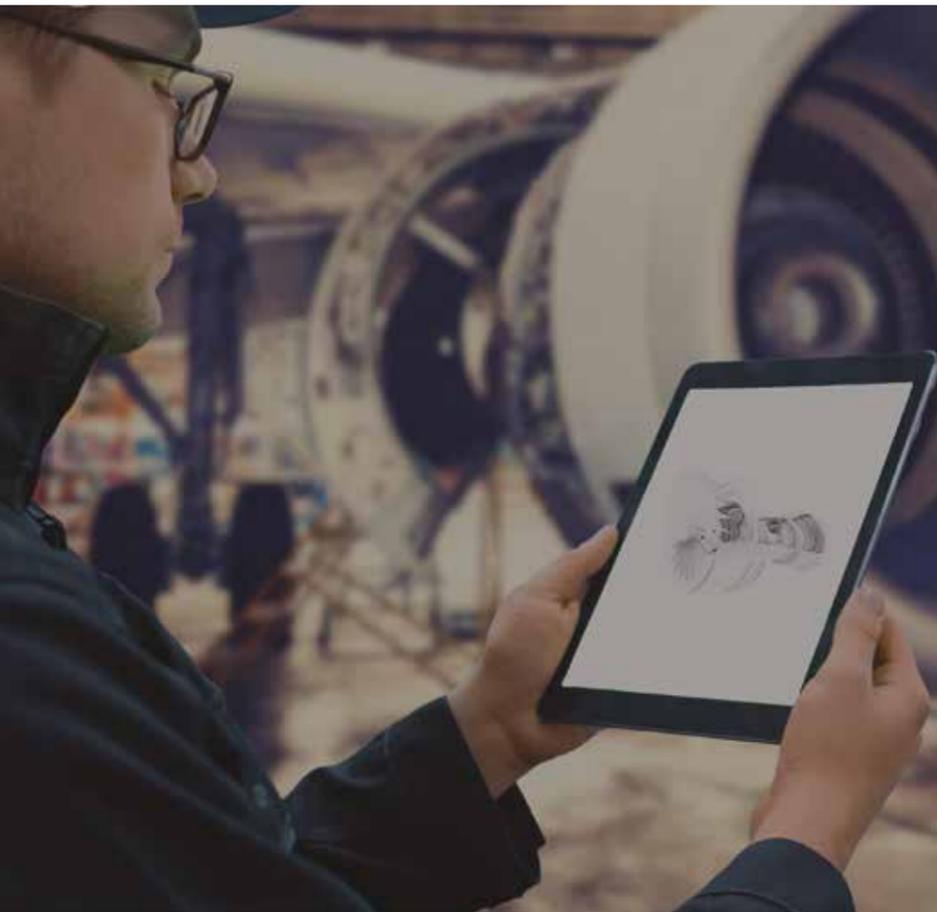
convey the main concerns of TEDAE sectors.

The European affairs were coordinated by Spanish representatives in ASD bodies: Environment Commission (AIRBUS and ITP AERO) and the REACH Work Group (Héroux Devtek).

Other actions undertaken by this Committee in 2019 included a meeting with the International Aerospace

Environmental Group (IAEG) and a visit to NAVANTIA facilities (San Fernando, Cádiz).

“ The European affairs were coordinated by Spanish representatives in ASD bodies: Environment Commission and the REACH Work Group



ANOTHER YEAR OF OUTREACH EFFORTS

In 2019, TEDAE has continued its efforts to inform, convey and share the benefits offered by its companies to society and the way in which they contribute to economic progress in Spain, with an ever-growing audience. This year, on the occasion of its ten-year anniversary, TEDAE created a new publication - the "Noticias TEDAE" quarterly newsletter.

MEDIA

In 2019 we organized several meetings with specialized media, financial and general news outlets and agencies with the purpose of presenting TEDAE's figures for 2018, as well as with Foro Arekuna, APDEF (*Asociación Periodistas de Defensa*) and APIE (*Asociación de Periodistas de Información Económica*).

Likewise, throughout the year, several

spokespersons of the Association have engaged with different media outlets giving interviews or statements, including specialized media such as Infodefensa, Infoespacial, Periódico Aire, Fly News, Hispaviación, Expansión or general news outlets such as El País, ABC, COPE, La Sexta Informativos, RNE and Julia en la Onda, as well as news agencies such as Agencia EFE, Europa

Press and Servimedia.

PUBLICATIONS

Revista ProEspacio

Four issues of the ProEspacio magazine were published in 2019, both in print and digitally and in Spanish and English. These issues contained interesting reports on Cheops, the first Spanish-led

ESA satellite; Galileo, the European satellite navigation system; and the centers in Spain: Spain Congress and Space19+, and the ESA Ministerial Council held in Seville in late November. It also included interviews with important personalities such as Günther Hasinger, ESA Science

Director; Jordi Puig-Suari, precursor of NewSpace and co-inventor of the CubeSats; Johann-Dietrich Wörner, ESA Director General; Javier Ponce, director general of CDTI and Pedro Duque, minister of Science, Innovation and Universities.

"Noticias TEDAE" Newsletter

The "Noticias TEDAE" newsletter launched this year garnered over 1,700 subscribers since its first issue. Three issues were released throughout the year with novel content related to the four sectors, including reports, interviews and analysis with expert opinions.

Other publications: 2018 Spanish Space Industry Yearbook, Sectoral Agenda of the Spanish Space Industry, The Aeronautical Service Sector in Spain, and specific publications for members. We continued distributing legal bulletins, TEDAE Innova, InfoTEDAE and the international press summaries.

Web and Social Networks (www.tedae.org)

This year, TEDAE's website has undergone a more visually-oriented change,

which make interaction easier. During 2019, our website has received approximately 45,000 visits, and the number of new visitors has increased. A total of 30,700 users visited the web portal of the association and each of our sections.

LINKEDIN

Audience numbers of the association's LinkedIn page have considerably grown in 2019. This year, our account has reached an average of 4,307 visitors per day (both on mobile and desktop computers) and gained approximately 1,200 new followers, reaching a total of 2,880 followers.

TWITTER

The Twitter profile of the ProEspacio Magazine (@SpaceTEDAE), which is fed with magazine contents, current events and important Space-related news, has reached almost 5,000 visitors to the profile in 2019, ending the year with 541 followers.



Noticias TEDAE n°3 (October 2019).



Revista ProEspacio n°41 (January 2019).



Revista ProEspacio n°43 (September 2019).



Revista ProEspacio n°42 (July 2019).



El sector servicios aeronáuticos en España (June 2019).

VISITOR characteristics
Period: Apr 1, 2019 - Dec 30, 2019

MAIN SECTORS	VISITORS	PERCENTAGE
649	AEROSPACE AND AVIATION INDUSTRY	18.20%
441	IT SERVICES AND TECHNOLOGIES	12.37%
357	DEFENSE AND SPACE DEPARTMENT	10.01%
193	INDUSTRIAL OR MECHANICAL ENGINEERING	5.41%
185	AERONAUTICS / AVIATION	5.19%
94	NONPROFIT ORGANIZATION ADMINISTRATION	2.64%
91	HIGHER EDUCATION	2.55%
90	MARKETING AND ADVERTISING	2.52%
76	TELECOMMUNICATIONS	2.13%
68	EVENT SERVICES	1.91%

Data for: Sector

MAIN ROLE	VISITORS	PERCENTAGE
511	BUSINESS DEVELOPMENT	13.45%
424	ENGINEERING	11.16%
341	OPERATIONS	8.98%
312	MEDIA	8.21%
292	INFORMATION TECHNOLOGY	7.69%
271	SALES	7.13%
223	MARKETING	5.87%
212	PROGRAM AND PROJECT MANAGEMENT	5.58%
193	EDUCATION	5.08%
162	CONSULTING	4.26%

Data for: Role

outreach



06

tedae and

universities



° INSTITUTION	Types of collaboration agreements				
	Scholarship	Masters	Collaboration in R&D projects	Seminars	Others
1 Polytechnic University of Madrid	68	6	12	4	4
2 Seville University	25	1	3	2	1
3 Alcalá de Henares University	21	1	3	2	1
4 University of Valladolid	18	0	3	0	0
5 Rey Juan Carlos University	13	0	1	0	1
6 Complutense University of Madrid	12	1	1	0	1
7 Autonomous University of Barcelona	11	0	1	0	1
8 Polytechnic University of Catalonia	11	0	4	0	1
9 Castile-La Manche University	11	5	3	0	9
10 Spain Business School	10	0	0	0	0
11 Charles III University	10	13	10	3	4
12 Fundación Universidad Empresa	8	3	0	0	0
13 Madrid European University	8	0	0	0	0
14 Comillas Pontifical University	7	0	0	1	3
15 Autonomous University of Madrid	7	1	3	0	1
16 University of Málaga	5	0	1	0	1
17 University of the Basque Country	5	12	3	1	3
18 University of Granada	5	1	2	0	1
19 CEU San Pablo	5	0	0	0	0
20 Polytechnic University of Valencia	5	0	2	0	1
21 University of Cádiz	5	0	0	1	1
22 UNED (National Distance Education University)	4	0	1	0	1
23 Nebrija University	4	0	2	0	1
24 Navarra Public University	3	3	1	0	1
25 University of Barcelona	3	0	0	0	0
26 University of Deusto	3	1	2	0	1
27 ITAérea Aeronautical Business School	3	0	0	0	0
28 INS Escola del Treball	3	0	0	0	0
29 Miguel Hernández de Elche University	2	0	1	0	0
30 Escuela de Diseño Mecánico (EDDM)	2	0	2	0	0
31 Mondragon University	2	2	3	0	0
32 University of Huelva	2	1	0	0	0
33 C.D.P ADA	2	0	0	0	0
34 Pablo de Olavide University	2	0	0	0	0
35 INS Terrasa	2	0	0	0	0
36 IES GREDOS SAN DIEGO	2	0	0	0	0
37 IES BARAJAS	2	0	0	0	0
38 ICEX	2	0	0	0	0
39 University of A Coruña	2	0	12	1	1
40 University of León	2	0	2	2	1
Other institutions (50 in total)	44	2	24	5	25
TOTAL	361	53	102	22	65

THE RELATIONSHIP BETWEEN TEDAE AND UNIVERSITIES

In the year 2018, an initiative was born in TEDAE calling for the performance of an internal analysis related to the relationship between the Association and Universities. TEDAE's 2018 Summary of Activities contains the first edition of this study, which led to highly valuable conclusions.

The study is based on the analysis of information provided by the association's companies regarding their relationship with universities and business schools with which they engage in stable collaborative efforts.

The main purpose of this study is to foster relationships between TEDAE and Universities and to encourage the cooperation between them, since it is deemed to be a fundamental collaboration that strengthens the growth of TEDAE sectors. Better relationships between the industry and academia translates into an increase in the productivity of our sectors, fostering innovation and productivity, and extending this goal to serve as a guide to boost technology in other areas of our society.

This year round, the analysis contains information provided by 36 companies of the Association which have engaged with a total of 90 universities, business schools, training centers and technology centers, which have collaborated with any TEDAE company, entering into a total of 603 agreements or covenants. Four types of agreements/covenants have been taken into account; namely: scholarships, seminars, masters and collaborations in R&D projects. The remaining collaborations, contests and prizes, courses, talks, specific collaborations and other projects have been grouped in the generic item labelled "others."

The results obtained this year, just like last year's, show that almost 50% of

collaborations mostly revolve around 10 universities. The reference table shows the main universities and business schools arranged from a higher to a lower number of collaborations.

Regarding the scholarships, it is worth noting that these only include the agreements, but not the number of scholarships per agreement. In other words, if a company has a specific number of student scholarships for a university, it will only show as one agreement.

Analyzing the data on a graph, it is clear that half of the industry-uni-

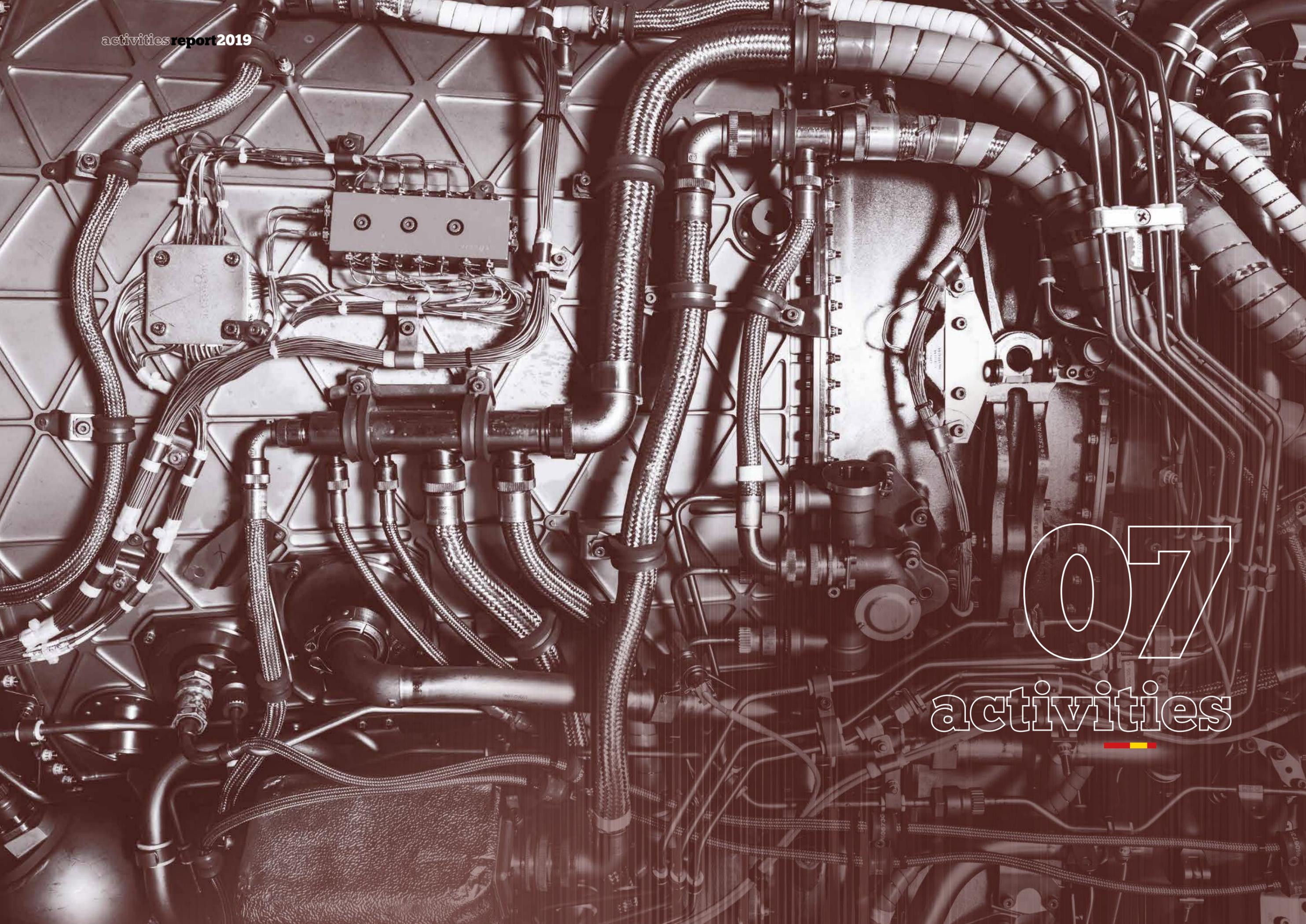
previously stated, industry-university collaborations are a key factor in the development of our sectors, since they are closely linked to the development of technology and innovation. The transfer of knowledge favors an adequate development and sector growth, in addition to facilitating integration into the workforce.

Types of collaboration agreements



versity collaboration agreements are related to scholarships (59.9%), followed far behind by collaborations in R&D projects (16.9%). In the third place, we can find "Others", which groups together highly diverse collaborations and amounts to 10.8% of the total. Finally, we can find the masters (8.8%) and seminars (3.6%).

By comparing with last year's data, we can see a clear trend to increase the number of relationships with training and research institutions. As



07

activities

TEDAE in the space sector technical day in Poland

A space sector technical day was held in early January in Warsaw, organized by the ICEX, España Exportación e Inversiones, and the Spanish Economic and Business Office in Poland, under the honorary sponsorship of the Ministry of Business and Technology and the Polish Space Agency. TEDAE, the CDTI and the Polish Space Industry Association (SpacePL) worked jointly in the organization of this event, which was attended by 31 companies (9 from Spain and 22 from Poland).

The purpose of this event was to present the strategic plans for the aerospace sector of both countries and showcase the potential of Spain and Poland as



collaborators in space-related technological developments, fostering the cooperation between companies of both countries, which engaged in 110

business meetings.

January

Meeting with the Director General of Research, Development and Innovation to convey TEDAE's objectives in the field of R&D

TEDAE explores cooperation opportunities with the Indian Defense Attaché

The Director of OCCAR meets with TEDAE to share initiatives related to the European defense landscape

TEDAE attends the opening event of the demonstration phase of the "Govsatcom Pooling and Sharing" Program of the European Defense Agency

The Defense Secretary of State meets with the Advisory Board of TEDAE

TEDAE in the annual reception of ASD presenting the European industry objectives for the year



The "Perspectivas 2019" ("Outlook 2019") Annual TEDAE Meeting brought together the directors of member companies to share the objectives and

priorities identified by TEDAE for the year. This meeting was attended by the Defense Secretary of State and the Secretary General of Industry and SMEs,

"Perspectivas 2019" Annual TEDAE meeting

as well as a significant number of representatives from various organizations and institutions related to defense, security, aeronautics and space.

In collaboration with AESMIDE and the support of the Ministry of Defense, this year would see the organization of the first International Defense and Security Fair -FEINDEF- and the National Space Congress before the ESA Ministerial Meeting in Seville.

February

Leading players of the sector participate in the II Cybersecurity Day organized by TEDAE

A first, TEDAE organizes a Spanish Hall in IDEX Abu Dhabi

The APDEF brings its journalists together to learn about the lines of work of TEDAE

TEDAE participates in Foro AREKUNA, conveys industry challenges

The Industry Commission of the Congress of Deputies visits TEDAE companies

TEDAE participates in event on the PAZ satellite defense and security applications

In collaboration with the National Police and the Civil Guard, TEDAE organizes the international security days

The 2019 International Security Days were held in *Centro de Tecnologías de la Seguridad (CETSE)* and touched on security technological solutions. This event brought together over 125 renowned experts from institutions and organizations charged with protecting the safety of citizens, as well as cutting-edge companies.

This event represents an unmatched opportunity to further the cooperation between Law Enforcement Bodies and Forces and the private sector -companies- in the fight against the main threats to our safety.



We wish to thank the participation and support of the Police Director General, the Civil Guard Director General, the Director of the CNPIC, the Chief of the *Cuerpo Nacional de Policía* and the Advisor to the Ministry of the Interior of the Permanent Representation of

Spain to the EU, among others.

March

TEDAE bring together the Spanish aeronautical industry to analyze its challenges and opportunities

Spanish Defense Attachés and Advisors receive TEDAE industries to learn about their business activities abroad

10 years of TEDAE and 1st edition of its awards recognizing distinguished persons and institutions

TEDAE becomes a member of Asociación Ellas Vuelan Alto (EVA)

The President of ICO welcomes TEDAE in a meeting to explore means of financing for its sectors

TEDAE accompanies its defense companies at the Industrial Days of the NATO NSPA Agency

The Ministry of Defense and TEDAE companies meet in an Industrial Day with Israeli companies



TEDAE took part in an event in Seville jointly organized by the *Confederación de Empresarios de Andalucía* and the *Asociación para el Progreso de la Dirección* to analyze the new challenges of the Andalusian aerospace sector. The gathering brought together a

significant number of businesspersons, government officials, and institutions related to the aeronautical and space sectors. During the event, subjects such as the future of the aerospace industry, the constraints to competitiveness in the Spanish industry and

TEDAE in an event on the new challenges of the Andalusian aerospace sector

the new challenges of manufacturing were discussed.

The event was also attended by companies, which conveyed the challenges faced by their industries in their day-to-day.

April

The General Subdirectorate of PLATIN invites TEDAE to its information day on the European Defense Fund and 2019 Calls for Bids

Ellas Vuelan Alto organizes a session on Innovation in the Aerospace Sector and turns to TEDAE to learn about its vision

The Executive Director of EDA meets with TEDAE and other National Defense and ASD Associations

TEDAE's Cybersecurity Group meets with the Joint Commander in charge of Cyberdefense

The CESEDEN invites TEDAE to give a conference on the defense industry as part of its Advanced Logistics Management Course

TEDAE attends the "defense policy" debate session alongside the main political parties

First edition of the Spanish International Defense and Security Fair

FEINDEF, the International Defense and Security Fair organized by TEDAE and AESMIDE with the support of the Ministry of Defense, showcased the Spanish and European Defense and Security industry on May 29, 30 and 31. The main companies of the sector displayed their innovative technological developments and novelties for the Armed Forces and Law Enforcement Bodies and Forces of the future in Hall 8 of IFEMA.

By the end of the first edition of FEINDEF, the level of attendance was a complete success, since the event welcomed over 10,000 professional visitors.

The three days that the event lasted



included product presentations, the signing of agreements and plenty of Spanish technology witnessed by the 48 official delegations from 32 countries that visited the Fair.

TEDAE and its companies want to give their sincere thanks for the enormous

support of the Spanish government, which has turned the first edition of FEINDEF into a resounding success.

May

The Ambassador of Spain in Washington meets with TEDAE space companies on the occasion of the Satellite Fair

TEDAE coordinates the Spanish Hall of SITDEF Lima

The Asociación de periodistas de Información Económica meets with TEDAE to know how its sectors contribute to the Spanish economy

TEDAE joins the CESEDEN in its first Security and Defense Day for media professionals

TEDAE organizes the Annual ASD Convention and its General Meeting in Spain



TEDAE organized an event to foster the consolidation and growth of professional training in the aerospace sector. The memorandum for the support of the development of professional training by the Spanish aerospace sector was presented during this event, with the goal of fostering -with

the support of competent bodies-training plans tailored to the needs of current-day industry and facilitate the implementation of a true professional training system in the aerospace sector, as well as help maintain the sector's competitiveness.

Event fostering the consolidation and growth of professional training by the Spanish aerospace sector

This Memorandum was signed by TEDAE, the most important aeronautical companies -Airbus, Aernnova, Alestis, Aciturri, ITP Aero and Héroux Devtek- and the regional clusters of Madrid, Basque Country, Andalusia and Castile-La Manche. Its goal is to bolster training -a goal identified as a major priority in the Sectoral Agenda of the Aeronautical Industry developed by TEDAE in collaboration with the Ministry of Industry, Commerce and Tourism.

June

The Secretary General of Industry and SME gives the closing speech at the General Meeting of TEDAE

TEDAE's Defense Commission meets with representatives of the European Commission to discuss the European Defense Fund

TEDAE organizes the Spanish Hall of the Paris Air Show in Paris

The APDEF renews its agreement with TEDAE to sponsor its annual Awards

TEDAE presents its report on aeronautical services

Media informed of TEDAE sector figures in yet another year of significant contributions to the Spanish economy

Defense Industry Day in Portugal

TEDAE participated in a bilateral meeting that includes an industry day in Portugal, where they discussed the strategic vision of the Spanish and Portugal defense Industry. During the Industry Day, which saw meetings between companies, attendees also touched on the methods of cooperation between European countries and, in particular, with the Portuguese industry.

The bilateral meeting also saw the participation of the Directors General of Weapons and Materiel of Spain and Portugal, among other authorities.



Public event presenting the open proposal for a “common progressivist program” by the Secretary General of the PSOE

programs continuously adapt to the needs of the industry and the competitive aeronautical market with flexibility and speed.

Pedro Sánchez, Acting President, accompanied by the acting Minister of Education and Professional Training, met with social organizations linked to professional training, -among them,

TEDAE- to share thoughts and proposals.

During this meeting, TEDAE highlighted that it is a priority for the aeronautical sector to have professional training

July

TEDAE participated in the first event of the Space Generation Advisory Council aimed at young talent looking to work in the space sector

TEDAE commissions the Autonomous University of Madrid to perform a study of the socioeconomic impact of space applications

University of Jaén invites TEDAE as an expert to debate the challenges and advantages of Spain’s participation in the defense of Europe

TEDAE conveys to the Director of AESA the needs of the aeronautical sector in regard to regulations

September

TEDAE participates in a technology day on “new technologies to face the threats of the future” organized by the Ministry of Defense and the Polytechnic University of Madrid

AMETIC joins forces with TEDAE during its Santander summer course to participate in a day on “satellites as a key element for security and defense and government applications”

TEDAE accompanies the Núcleo de Apoyo Institucional of FEINDEF of the Ministry of Defense in its visit to the DSEI Fair in Londres

National Space Congress

With the support and collaboration of the CDTI, the CSIC, the INTA and the DGAM, TEDAE organized the first National Space Congress, which for two days brought together over 450 professionals and researchers of the national and European space sector to debate on the future challenges faced by the space sector, with the participation of top-level speakers.

The Congress enjoyed a fantastic closing ceremony: Pedro Duque, Acting Minister of Science, Innovation and Universities was joined by Michel Mayor, who had been recently awarded the Nobel Prize in Physics, and received a warm round of applause by the attendees.



Informational breakfast with Josep Borrell

of the Union for Foreign Affairs and Security Policy, and who presented his vision regarding the “Europe of Defense and Security.”

During his speech, Borrell touched on the importance of having an industrial capability, while it is fundamental to previously improve civilian and military missions. “There is no defense without capabilities, and there will be no defense-oriented Europe without a competitive European market on the matter,” which is why he highlighted that it is fundamental to count with an innovative and developed industry “that is up to par with our ambition.”



In collaboration with TEDAE, Executive Forum organized an informational breakfast with the Acting Minister of

Foreign Affairs, European Union and Cooperation, Josep Borrell, who would later become the High Representative

October

For yet another year, TEDAE joins Rey Juan Carlos University and the CESEDEN in its Seminar on “security and defense perspectives in an ever-changing world”

The Korean Kotra agency in collaboration with TEDAE organize an industrial day with companies from both countries and the support of the Ministry of Defense

TEDAE and Fundación Anastasio de Gracia - FITEL organize a Spanish defense industry day: employment, innovation and territorial cohesion

The Defense Secretary of State meets with TEDAE’s Advisory Board

TEDAE attends the II industry day on the F-110 organized by Navantia

The CESEDEN invites TEDAE to participate in its Asia-Pacific Course

TEDAE participates in the forum on New Space organized in Seville

TEDAE participates in the Spanish-French Aerospace Industry Day moderating a debate on the challenges and possibilities for industrial collaboration

The Secretary General of Industry and SME receives TEDAE

TEDAE participates in the plenary meeting of the National Community of Security Users

The CESEDEN invites TEDAE to give a conference on the defense industry as part of its National Defense Course for the youth.

The Ministry of Defense invites TEDAE to participate in the DESEI+d Congress on Defense and Security

The Rey Juan Carlos University and the CESEDEN present TEDAE with the “Francisco Villamartin” Security and Defense Course award

As part of the Science and Innovation Week, TEDAE organizes the “your professional future in the Aeronautic Industry” day for the youth

General Meeting of PAE

The *Plataforma Aeroespacial Española* (Spanish Aerospace Platform, PAE), held its General Meeting and presented the 2019-2030 Spanish Aeronautics Strategic Research, Development and Innovation Agenda. The Acting Minister of Science, Innovation and Universities, Pedro Duque, gave the closing speech of the Meeting, which also saw the participation of the Director General of R&D and directors of the CDTI, the Technology Innovation Center for Development itdUPM and the State Research Agency.



The Strategic Agenda—a result of efforts by a group of industries, universities and technological centers that represent the Spanish aeronautical sector—aims to be a roadmap for Spain’s R&D in aeronautics, and its objective is

twofold: to serve as a guide for any public administration with interest in supporting aeronautical R&D in defining its sectoral support plans, and to serve the organizations of the sector itself with sights on organizing

their R&D efforts in a coordinated and synergic manner.

December

TEDAE organizes the Expodefensa Spanish Hall in Bogota

TEDAE joins COIAE in its “the aeronautical sector as a key sector for the development of Spain” event

TEDAE attends the XIII CCN-CERT TIC Security Days



08

feindef



**FEINDEF
FIRST EDITION**



Targeted at a professional audience both from the industry and from the Armed Forces, Law Enforcement and institutions

The first edition of the International Defence and Security Exhibition (FEINDEF) was held in Madrid from May 29 to 31. Targeted at a professional audience both from the industry and from the Armed Forces, Law Enforcement and related institutions, these three days also helped in bringing the defense and security culture closer to society.

And not only to society -also to the supply chain, research centers and academia. FEINDEF acted as a showroom to display to the world the Spanish defense and security technological and R&D capabilities, as well as to foster the international collaboration brought about by the new European

Defense political framework.

Organized by TEDAE and AESMIDE, FEINDEF enjoyed a great institutional support: a significant support by the Ministry of Defense, as well as the Ministry of the Interior, the Ministry of Foreign Affairs, European Union and Cooperation, the Ministry of Industry, Commerce and Tourism, the Ministry of Science, Innovation and Universities, the CDTI, the ICEX, the European Commission, the CEOE, the SEPI, the National Intelligence Center and the Madrid Security and Emergency Agency.

GREAT TURNOUT

Data shows that FEINDEF exceeded expectations when it comes to objectives. Almost a total of 13,000 people visited the fair, which occupied hall 8 of IFEMA, with an area of 14,000 meters dedicated to the exhibition.

Reports indicate that nearly 700 authorities, delegations, commissions and international delegations had the opportunity to visit the fair.

Worth noting is that 46 international delegations from 30 countries, as well as four international Agencies, took

part of the event, as well as 15 bilateral institutions. A total of 157 companies were represented, out of which 134 has their own booth. And over 40 registered national and international media outlets gave coverage to the fair, with reports, interviews and news.



INTERNATIONAL PRESENCE

19% of the total attendees were international companies -a total of 26 foreign companies from 11 countries: Germany, Austria, Belgium, South Korea, Slovakia, United States, France, Israel, Italy, United Kingdom and the Czech Republic.

Top-level state officials visited and took an interest in the new developments showcased in FEINDEF, such as the head of Defense, Margarita Robles; the Minister of Science, Innovation and Universities, Pedro Duque; the Defense Secretary of State, Ángel Olivares; the Director

General of Weapons and Materiel, Admiral Santiago González Gómez; the Security Secretary of State, Ana Botella; the Secretary of State for European Affairs, Fernando Valenzuela, and the Chiefs of Staff of the Army and the Navy.

A PROGRAM FULL OF ACTIVITIES

FEINDEF had a complete program of Forums and Conferences including forums on Employment, Innovation and Women, where the most prestigious experts discussed important issues related to the sector, such as innovation and dual-use technologies. Other events on the agenda comprised interesting conferences and roundtables on future perspectives for the industry, including the growing segments of Space and Cyberspace, and the talk given by

the director of the CNI, Félix San Roldán, on cybersecurity with a domestic and European outlook. Another event was the Defence & Security Innovation Brokerage (DSiB) forum, aimed at fostering the sharing of ideas within the sector, which saw the presentation of 20 initiatives by researchers and companies within the framework of the European Defence Action Plan (EDAP).



“ The date is already set for the second edition: May 19 to 22, 2021



09
TEDAE
awards





10TH ANNIVERSARY OF THE ASSOCIATION

February 2019 marked ten years since defense, security, aeronautics and space companies came together as one single voice in the industry before the Government, institutions, European and international organizations and society as a whole. Since then, TEDAE has worked with the goal of giving visibility to the industrial sectors that it represents and support Spain's economic growth, addressing the needs of all clients who use the technologies developed by its companies.



A BENCHMARK AWARD IN THE SECTOR

TEDAE celebrated the 10th anniversary of the Association by creating an annual set of Awards starting 2019, with the purpose of recognizing persons and institutions whose technical, managerial, corporate, outreach-related or academic work implies a significant contribution to the development of the defense, aeronautics, security and space industry and technology.

With these awards, the association aimed to highlight the work of the persons or institutions who have contributed to the development of the industrial sectors represented by TEDAE.

TEDAE represents companies that design, develop, manufacture and sell products and services that are strategic for the defense, aeronautics, security and space industries. TEDAE companies put their technologies at the service of society, sharing common goals: the progress toward a cutting-edge Spanish R&D, skilled labor and a social return on investment. They are, therefore, a powerful technological and economic driver, and play a major role in strengthening the Spanish industrial fabric. They also hold a strong position in the international market thanks to a combination of innovation, internationalization and institutional support.



“ With these awards, the association aimed to highlight the work of the persons or institutions who have contributed to the development of the industrial sectors represented by TEDAE.

AWARD RECIPIENTS

The TEDAE Awards comprised six different awards -Lifetime Achievement; Defense, Aeronautics, Security and Space categories; and a Future Professional award.

Estefanía Matesanz, Dean of *Colegio Oficial de Ingenieros Aeronáuticos de España*, received the Future Professional award; the Defense award was received by Antonio Rodríguez Rodríguez; and the Security award was presented to the Civil Guard, which in 2019 will have been guaranteeing the protection of citizens for 175 years.

Manuel Torres, president and founder of the MTorres Group, was presented with the TEDAE Aeronautics Award, and astrophysicist Álvaro Giménez received the Space Award. Lastly, the TEDAE Lifetime Achievement Award was presented to Pedro Pintó, a true pioneer of the space sector in Spain and teacher of many of current-day directives of the aerospace industry.

THE CEREMONY

The first edition of the 2019 TEDAE Awards ceremony took place in March 28, 2019 -an event where the Association celebrated the 10-year anniversary since its creation.

This ceremony was attended by representatives from several industrial sectors and members of the civil society, since it was also aimed at conveying the benefits that TEDAE companies provide to citizens' wellbeing.

The event brought together over 250 representatives of the corporate world, of Government and of institutions related to defense, security, aeronautics and space.

awards

“ **The TEDAE Awards aim to recognize six categories: Lifetime Achievement; Defense, Aeronautics, Security and Space; and a Future Professional award**

CLOSING CEREMONY

The Security Secretary of State, Ana María Botella, gave the closing speech, congratulating TEDAE for its 10th anniversary and for the initiative of creating the awards. In her speech, Botella highlighted the spirit of progress conveyed by the companies of TEDAE sectors, which have a high degree of technology and R&D components, and encouraged them to continue making contributions with that innovating spirit, because that is what the country needs.



Álvaro Giménez
Director General of the CSIC General Foundation

Presented with
the “Space”
award



Antonio Rodríguez
PhD in Telecommunications Engineering

Presented with
the “Defense”
award



Estefanía Matesanz
Dean of *Colegio Oficial de Ingenieros Aeronáuticos de España*

Presented with
the “Future
Professional”
award



Civil Guard
Director General Félix Vicente Azón

Presented with
the “Security”
award



Manuel Torres
President and Founder of MTorres Group

Presented with
the “Aeronautics”
award



Pedro Pintó
PhD in Aeronautical Engineering

Presented with
the “Lifetime
Achievement”
award



“ In her closing speech, the Security Secretary of State highlighted the spirit of progress conveyed by companies of TEDAE sectors



Premios **TEDAE**



“ The event brought together over 250 representatives of the corporate world, of Government and of institutions related to defense, security, aeronautics and space





MÁS ALLÁ
DE LOS LÍMITES

CONGRESO
DEL ESPACIO
MADRID 2019



10
congreso del
Espacio



**CONGRESO
DEL ESPACIO**



The I *Congreso del Espacio* (Space Congress) was held on October 9 and 10 in Madrid -an unprecedented event that set the stage for debates and reflections on the future national and European challenges of the space sector for the nearly 600 professionals that attended the gathering.

The Congress was organized by TEDAE in collaboration with the CDTI, the CSIC, the INTA, the National Geographic Institute and the Ministry of Defense. It also saw the participation of the ESA, the *Instituto de Ingeniería de España*, the European Global Navigation Satellite System Agency, Enaire and the *Instituto de Empresa*.

TOP-LEVEL TALKS

The first edition of the Congress saw conferences and talks by prestigious, renowned authorities of the national and international space sector, including Rafael Rodrigo, secretary general of Scientific Policy Coordination of the Ministry of Science, Innovation and University, who talked about "Spain and Space, a success story." Other participants, such as ESA director general Johann-Dietrich Wörner and Carlo des Dorides, executive director of the European Global Navigation Satellite Systems Agency (GSA),

explained the vision of the European Global Navigation Satellite Systems Agency (GSA). In addition, Javier Ponce, director general of the CDTI, spoke about "Space as an economic and innovation driver," while Augusto González, European Commission advisor on navigation activities, talked about the space strategy of the European Union.

“ The Congress was organized by TEDAE in collaboration with the CDTI, the CSIC, the INTA, the IGN and the Ministry of Defense

ROUNDTABLES

The Congress organized a total of 6 roundtables spread over two days, which saw the participation of renowned experts and professionals in the field who debated and addressed issues such as space exploration, Earth observation, the role of satellites in extending connectivity and development, satellite navigation, Space as yet another environment of defense, and the future of Space.

A CLOSING CEREMONY WITH A SPECIAL GUEST

The closing ceremony of the congress was the perfect occasion to present the Sectoral Agenda of the Spanish Space Industry, designed by the Space commission of TEDAE in collaboration with the Ministry of Industry, Commerce and Tourism and the Ministry of Science, Innovation and Universities. The Minister of Science, Innovation and Universities gave the closing speech in the company of a surprise guest as

the icing on the cake -Michel Mayor, recently awarded the Nobel Prize in Physics, who was in Spain when presented with the prize. Without a doubt, a well-deserved ending to months and months of work. The next congress will take place in 2021, with work already underway.



“ The Sectoral Agenda of the Spanish Space Industry was presented during the congress





11

TEDAE

outreach



With the purpose of fulfilling our main objective of being the voice of our member companies, TEDAE maintain a permanent dialogue with all national and international administrations, and public and private organizations involved in the development of industrial strategies and policies that affect the defense, aeronautics, security and space sectors.

We are in permanent contact with the heads of different bodies -mainly those of the Ministries of Industry,

Commerce and Tourism; Defense; Interior; Science and Innovation; Ecological Transition and Demographic Challenge; Foreign Affairs; and European Union and Cooperation; and the Congress and Senate.

In addition to these efforts, TEDAE also engages with other associations and entities both of Spain and foreign, with which it shares experiences and goals. Below we outline our main efforts.

in Spain

SPANISH AEROSPACE TECHNOLOGY PLATFORM, PAE

TEDAE participates in the Spanish Aerospace Technology Platform, PAE, where it is part of its technical secretariat as a representative body of the aerospace sector in matters of R&D before the Government and, especially, as a consultant in the new 2021-2027 Science and Technology Strategy.

During the last few years, the collaboration has grown between the Platform and TEDAE's aeronautical and space R&D committees, as well as other Spanish technological platforms and organizations interested in R&D.

Currently, the PAE is composed of 23 large-caps, 25 SMEs, 15 technology centers and 17 universities -or their departments-, and both the CDTI and the State Research Agency are part of its Management Council.

During the last year, the PAE has, as a collaborative effort of the various organizations that comprise it, designed the Strategic Aeronautics R&D Agenda and updated the executive summary of the Strategic

Space R&D Agenda. Both agendas define, in broad terms, the lines of action of research, development and innovation in aeronautics and



space that Spain must undertake to remain competitive in the aerospace sector and face the socio-economic challenges ahead.

2019 saw the completion of the study of industrial R&D priorities in the field of additive manufacturing, with 18 priorities having been identified and a breakdown of the lines of research of 14 technology centers and universities for each of

those industrial priorities.

To face the new 2019-2020 PAE working period, new work groups

have been created in addition to those previously in existence for the design of objectives of the Strategic R&D Agendas. The publication of updated catalogs on infrastructures and application capabilities of the Spanish aerospace sector, among other actions, are in the plans.

The Association has joined CEOE as the main representative of Spanish companies before the Govern-



ment, Government bodies, unions, political parties and international institutions, with the purpose of

fostering their presence abroad and optimize their representation activities, as well as to support their international expansion.

The goal is to achieve a unified line of action to optimize the expansion of defense, aeronautics, security and space companies into the competitive international markets, maintaining their participation and activities across the various realms and forums in defense of the industrial interests of members companies, thereby invigorating the Spanish economy.

CONFEDERACIÓN ESPAÑOLA DE ORGANIZACIONES EMPRESARIALES, CEOE

SPANISH ASSOCIATION FOR QUALITY, AEC



The Spanish Association for Quality, AEC, works closely with TEDAE on tasks related to industrial quality -particularly in regard to the Aerospace Certification Scheme, for which TEDAE has commissioned it to perform administrative tasks under its supervision.

Furthermore, both organizations collaborate in various ways in matters of communication, the promotion of good practices, and the transfer of knowledge, in addition to consulting each other on matters related to their activities.

REGIONAL AVIATION CLUSTERS

Even though there has always been a relationship between the main aviation clusters and TEDAE, this relationship was cemented last year through the agreement entered into with Andalucía Aerospace (Andalusia), HEGAN (Basque Country), Madrid Aerospace (Madrid), and AERA (Aragón) to join the Aeronautical Commission of TEDAE.

The purpose of this collaboration is to cooperate more closely and identify synergies and actions toward the development of the Spanish aeronautical sector as a whole, coordinating any and all initiatives of interest to the sector.



ASOCIACIÓN ELLAS VUELAN ALTO, EVA

TEDAE is an associate member of Asociación Ellas Vuelan Alto (“Women Fly High Association”), EVA, with which it shares its mission of acting to foster the consolidation and visibility of women in the Spanish aerospace sector in all realms, using as a basis the vision of equality of the Charter of the United Nations.

EVA’s objectives include increasing the participation of women in public and professional life, developing projects that provide visibility to women and recognize their skills, working toward equality between women and men in a manner that is inclusive and aims to encourage a common social and economic development, eliminating any form of discrimination, incentivizing the



creation of women’s networks in companies of the aerospace sector and fostering aerospace sector

professions among the new generations of girls and young women.

TEDAE sponsors the Annual Awards of Asociación de Periodistas de Defensa (“Defense Journalist Association”), APDEF, whose goal is to encourage the technical training of professionals that cover this field of information “guaranteeing the dignity of journalists and defending their professional interests.”

Every year, through its Annual Awards, APDEF recognizes people and institutions related to journalism. In 2019, its tenth edition, the “Especial APDEF” award was presented to the EUTM-Mali Protection Force; the “Bernardo Álvarez del Manzano” award was received by the Communications Office of the Spanish Air Force,

and the “Trayectoria” (“Lifetime Achievement”) award went to military women, coinciding with the thirtieth anniversary of the international Spanish missions. Other related events included seminars

and informational gatherings organized by the association with representatives of the Ministry of Defense, the Army, the Navy and the Air Force, as well as defense companies.



outside of Spain

AEROSPACE AND DEFENCE INDUSTRIES ASSOCIATION OF EUROPE, ASD

TEDAE is a member of *Aerospace and Defence Industries Association of Europe, ASD*, which acts as the most important representative before European institutions in all industrial matters related to the defense, security, aeronautics and space sectors.

The interests of the Spanish industry in Europe are coordinated and positioned through ASD, by means of our participation and that of our companies in their governance bodies,

business units, commissions, committees and work groups. In 2019, over 50 industry experts from TEDAE member companies participated in various forums of the European Association, conveying our interests.

The role of Spain in ASD is strengthened thanks to AIRBUS, INDRA and NAVANTIA being members of the Association alongside TEDAE.

Among the most important issues

where TEDAE Industries influence the European landscape through ASD, we can find: the Preparatory Action on Defence Research, the design of the European Defence Industrial Development Programme and the European Defence Fund, SME support policies, the dealings with the European Commission and European Space and Defense agencies, environmental regulations, and the new *Horizon Europe* framework program.

EUROPEAN DEFENCE AGENCY, EDA

By appointment by the Ministry of Defense, TEDAE participates as a National Defense Industry Association in the *European Defence Agency, EDA*, channeling Spanish interests in working programs and in the Agency's calls for bids. These actions are previously coordinated with the Ministry of Defense in periodic meetings and with a permanent exchange of information.

EDA is an intergovernmental organization under the wing of the Council of the European Union, whose main task is to harmonize and encourage the defense capabilities of the Member States and facilitate coordination in acquisition programs. Its activities in 2019 included the development of the *Strategic Context Cases, SCC*, which will guide the

implementation of the European Union's capability development priorities as approved in 2018.

With sights on continually increasing the cooperation and coordination between Member States in the field of defense, the EDA designed the *Cooperative Financial Mechanism (CFM)* to improve project financing conditions. In 2019, the Agency has also encouraged the military mobility between States with the creation of the *Cross Border Movement Permission* signed by 25 Member States.



ORGANISATION FOR JOINT ARMAMENT CO-OPERATION, OCCAR

TEDAE is part of the Defense Industry Group of OCCAR, ODIG, alongside the National Defense Industry Associations of Germany, Belgium, France, Italy and the United Kingdom. This industrial group collaborates with OCCAR by performing tasks corresponding to the OICP (Contracts) and OILSP (Logistics) sub-groups.

The Organisation for Joint Armament Cooperation, OCCAR, is a treaty between the main European nations for the acquisition of defense material, and is charged by these nations with acquiring weapon systems. OCCAR is part of the latest European developments, the *European Defence Fund* and the *Permanent Structured Cooperation* as a representative



for the governance of acquisitions. In conjunction with EDA, they are instruments for the collaboration

between the European Union and NATO.

NATO INDUSTRIAL ADVISORY GROUP, NATO

By appointment of the Ministry of Defense, TEDAE participates in the *NATO Industrial Advisory Group, NIAG*, which gathers together over 5,000 companies (80% are SMEs), to channel and convey the Spanish industrial interests within this Group.

The NIAG is a channel by which industries can communicate with the acquisitions and communication agencies of NATO and with the *Conference of National Armaments Directors, CNAD*. The actions of this industrial Group involve high-level feasibility and consultancy studies for decision-making bodies of NATO, many of them at the request of the CNAD.

In 2019, the NIAG has gathered together over 500 industrial experts to analyze the priorities of NATO in critical areas, and TEDAE has secured a high participation of its companies, having positioned a national delegate as Vice President of the Group, increasing Spain's visibility in NATO.

LETTER OF INTENT/Framework AGREEMENT, LOI /FA

group, CIM, and the *Industrial Work Group, IWG*, of the *LoI/FA* in representation of the interests of the Spanish Defense Industry.

The *Letter of Intent and Framework Agreement, LoI/FA*, is an intergovernmental treaty that references an Agreement signed in July 27, 2000 between Germany, Spain, France, Italy, United Kingdom and Sweden with the objective of facilitating the restructuring of the European defense industry and to promote a more competitive technological and industrial base. The *LoI* works together with the *European Commission* and the *EDA* in defining the new European defense market.



By appointment by the Ministry of Defense, TEDAE participates as a National Defense Industry

Association in meetings of the *Executive Committee, EXCO*, of the *Industrial Cooperation Affairs*



12
plan of
activities
2020

Main objectives

- Consolidate the position of the Spanish industry in the European Defence Fund.
- Develop a shared internationalization strategy between the Industry and the State.
- Communicate the economic, technological and social benefits of investments in the Defense Industry.
- Work toward turning FEINDEF into a benchmark international fair.

Objectives of the Technological-Industrial Defense committees

European Affairs and NATO Committee

- Foster industrial meetings that encourage the grouping of consortiums.

Financing Committee

- Follow-up and positioning of the Industry in Defense Budgets and other national/European funding initiatives.

R&D Committee

- Follow-up and positioning of Defense R&D-related initiatives in coordination with the General Subdirectorate of PLATIN of the Ministry of Defense.

Internationalization Committee

- Develop the 2020 Internationalization Plan and its content in coordination with the Office of Foreign Support of the General Subdirectorate of Foreign Relations of the Ministry of Defense.
- Group the Participation in Defense Fairs in a Spanish Hall.

Communications Group

- Develop the 2020 Communication Plan and its different actions for the publishing of information and the current state of the Defense industry.

Objectives of the Technological-Industrial Aeronautics committees

Aeronautics R&D Committee

- Foster the participation in the *Horizon Europe* program and contribute to the development of national programs and the dissemination of the Spanish Science, Technology and Innovation Strategy.
- Coordination of the PAE for the development of aeronautic R&D initiatives.
- Coordinate efforts with the aviation clusters in sectoral initiatives.

Supply Chain and SME Committee

- Coordination with the Ministry of

- Industry, Commerce and Tourism to encourage the transition to Industry 4.0.
- Cooperation with SPACE España for the engagement in aeronautical supply chain activities.
- Foster the implementation of the *Título de FP* (Professional Training Diploma) in the manufacture of composite materials.

Services Committee

- Follow-up and analysis of regulations that affect the implementation of new aeronautical services.
- Foster training in aeronautical services.

Aviation Committee

- Coordination with the Ministry of the Interior and the Ministry of Defense in relation to the regulation of RPAs.
- Participation in the Advisory Board on RPAs of the *Agencia Estatal de Seguridad Aérea* (Spanish Aviation Safety and Security Agency, AESA).
- Participation in the Civil Aviation Business Unit of the ASD association.

Communication Work Group

- Develop the 2020 Communication Plan and its various actions aimed at publishing information and the current state of the aeronautical Industry.

Main Objectives

- Collaborate in the development of the Sectoral Agenda of the Aeronautics Industry and in fostering R&D support actions in coordination with the Spanish *Plataforma Tecnológica Aeroespacial*, PAE.
- Coordinate collaboration strategies with regional aviation clusters.
- Foster the implementation of tools that support digital transformation in Aeronautics.
- Foster the inclusion of fields related to the manufacturing of composite materials and aeronautical services in Study Plans.



Main objectives

- Foster the development of a Technological Industrial Security Plan.
- Support the definition and realization of R&D initiatives in the field of security, especially in relation to the *Horizon Europe program*.
- Further the development of the cybersecurity industry.
- Consolidate the cooperation with major players of the Security industry.

Objectives of the Technological-Industrial Security groups

Cybersecurity Group

- Coordination with the most important cybersecurity industry agents.
- Optimize the process of accessing available financing for R&D.
- Foster the process of internationalization and presence by TEDAE companies in foreign markets.
- Collaborate with training institutions in the field of cybersecurity.

Communication Group

- Develop the 2020 Communication Plan and its various actions aimed at publishing information and the current

state of the security and cybersecurity Industry.
 ■ Organize annual industrial days in collaboration with the National Police and the Civil Guard.

Objectives of the Technological-Industrial Space committees

Space Policy Committee

- Design the industry outlook in relation to the trends that will influence Spanish technology in the future.

R&D Committee

- Coordination with the PAE to establish and publish Space R&D priorities.

Applications Committee

- Determine the position of the space Industry in the applications market and its socioeconomic impact.

Communication Group

- Develop the 2020 Communication Plan and its various actions aimed at

publishing information and the current state of the space Industry.
 ■ Organize the *Congreso Nacional de Espacio 2021 (2021 Space Congress)*.

Main objectives

- Collaborate in the development of the National Space Plan.
- Analyze space applications and their impact in the economy and society.
- Identify space trends that will influence upcoming technological developments.
- Organize the *Congreso Nacional de Espacio 2021 (2021 Space Congress)*.



quality committee

Main objectives

- Identification, support and development of initiatives aimed at improving quality and costs, aligned with the International Aerospace Quality Group, IAQG.
- Follow-up, support and coordination of the ICOP Scheme in Spain for the harmonization of aerospace quality standards.
- Coordination and participation in the CMDIN Defense-Industry Committee of the General Subdirectorate of Industrial Inspection, Regulation and Strategy of the Ministry.
- Identify the interests of TEDAE industries by determining the outlook in relation to each issue or procedure, especially in

- relation to the new 9104-001 and 9104-003 standards.
- Coordination with the Defense and Aerospace Committees of the Spanish Association for Quality, AEC, in relation to common and non-common activities.

environment committee

Main objectives

- Coordination with the Ministry for Ecological Transition and Demographic Challenge; in particular with the General Directorate of Quality and Environmental Evaluation and with the representatives of CARACAL.
- Follow-up of environmental regulations that impact the four TEDAE sectors and the technical environmental regulation.
- Follow-up of the implementation of the REACH / CLP regulation in the Spanish industry and of the addition of new substances into the "high concern list".
- Participation in the Environmental Commission and the Work Group tasked with implementing the REACH regulation of the ASD European Association.



Main objectives

- Harmonize the activities and objectives of the sectoral communication groups of TEDAE.
- Increase the presence of our industrial sectors in the media.
- Further our activity through meetings and gatherings with specialized media, influencers and communicators aimed at establishing a more fluid communication.
- Consolidate the digital profile of TEDAE through the web portal

- and social networks.
- Publication of the ProEspacio magazine and TEDAE's quarterly newsletter.



13
associate
members





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AERTEC SOLUTIONS

AERTEC Solutions is an international engineering and consulting company specialized in aeronautics. Established in 1997, today it is involved in the airport and aeronautical industries, in addition to aerospace and defense systems.

It has engaged in business with over 160 airports across 40 countries of the five continents.

The company is a Tier 1 supplier of the Airbus Group in manufacturing engineering and program management for its civil and military aircraft. Worth noting is its involvement in major international aeronautical programs, such as the Beluga, the A380, the A350XWB, the A400M, A320 and the A330MRTT, among others.

We design aerospace systems for aircraft, unmanned aerial vehicles, and highly dynamic vehicles, both civilian and military. The company offers light tactical RPAS designed in-house and with proprietary technology, such as the TARSIS 75 and TARSIS 25, for observation and surveillance applications.

We offer aviation consulting, engineering and design services to sector stakeholders: airport operators, construction companies, service providers, airlines, government agencies, investors and financial institutions.

The company is composed of a team of over 650 aeronautical experts and we have offices in Spain, United Kingdom, Germany, Colombia and the United States..

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AIRBUS



Airbus is a world leader in aeronautics, space and related services. In 2019 it generated a turnover of 70 billion euros (over 6 billion euros in Spain) with a staff of approximately 135,000 employees, 12,000 of which are in Spain.

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ALPHA SECURITY AND DEFENSE



Alpha Security and Defense is a leader in the manufacturing of UAV tactical helicopters outfitted with internal combustion engines and advanced UAV engineering services. Alpha Security and Defense is a division of Alpha Unmanned Systems. Founded in 2014, it is an independent, privately-held company headquartered in Madrid, Spain and 100% created with Spanish capital.

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The company is an international leader in the field of high-reliability electronics, and one of the main actors in the COTS sector for New Space applications. Furthermore, it is a pioneer in the provision of testing services for small satellites, and is the only independent company in the world to offer all necessary processes to certify anything from basic electronic components to the flight segment.

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Altran is the world leader in engineering and R&D services. The company offers its clients a unique value proposal to address their transformation and innovation challenges. Altran works alongside its clients from the initial concept to industrialization, to develop the products and services of tomorrow. Altran has been working for over 35 years with the main players of a number of sectors: Automotive, Aeronautics, Space, Defense & Navy, Rail, Infrastructure and Transportation, Energy, Industry and Consumer Products, Life Sciences, Communications, Semiconductors and Electronics, Software and Internet, Financial Services and Public Sector. Altran has over 50,000 employees who operate in over 30 countries.

Altran is an integral part of Capgemini, global leader in consulting services, digital transformation, technology and engineering. The Group is at the forefront of innovation, engaging with all clients in the evolving cloud and digital world as well as platforms. Based on its solid track-record of over 50 years and its significant industry-specific experience, Capgemini enables organizations to carry out their business projects through a series of services that range from strategy to operations. Capgemini is convinced that the business value of a technology stems from people. Today, it is a multicultural company composed of a team of 270,000 in almost 50 countries. Alongside Altran, the Group reported a turnover of 17 billion euros in 2019. People matter, results count.

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ARQUIMEA INGENIERÍA

ARQUIMEA

ARQUIMEA is a technological company that designs, develops and sells innovative products and services. We specialize in electronic, microelectronic and electromechanical components and systems, such as actuators and mechanisms, integrated circuits, sensors, monitoring, automation and robotics. We offer our high-reliability solutions to the space, aeronautical, engineering, renewable energy, telecommunications, industry and geoenvironment sectors.

ARQUIMEA is a leading European supplier of mechanisms based on Shape-Memory Alloys (SMA) and integrated circuits (ASICs) that are resistant to radiation. ARQUIMEA is part of ARQUIMEA GROUP, a multi-sectoral technology group composed of various companies that share the same passion for technology. Their mission is to address the needs of society through innovative, technology-based solutions.

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+34 91 689 80 94
info@arquimea.com

www.arquimea.com

AUTEK INGENIERÍA

autek

Autek is a Spanish manufacturer of cybersecurity products specialized in the secure exchange of information between differing security domains (cross-domain solutions). It has a track record of over 20 years in the development of information security solutions for public sector organizations, defense, and critical infrastructures.

The company has developed a proprietary technology of perimeter protection devices which is commercialized through two lines of products: the 'PSTgateways' secure application-level gateways and the 'PSTdiode' hardware data diode. Several products are Common Criteria certified and included in the Catalog of ICT Security Products of the CCN. We work closely with our clients in the development of new solutions for any issue involving a safe exchange of information.

Avda. de Burgos, 9 - Oficina 1
28036 - Madrid (Spain)

+34 91 597 46 29
info@autek.es

www.autek.es



AYESA AIR CONTROL

C/ Marie Curie, 2 - Edificio Ayesa
41092 - Seville (Spain)

+34 954 467 046
aac@ayesaaircontrol.com

Ayesa Air Control is a company dedicated to providing aeronautical engineering services. Our technical capabilities encompass the entire life cycle of a product, going from design (which we can certify under our DOA EASA Part21J approval), through manufacturing engineering (our true specialization), to post-sales services and MRO. We work on all Airbus programs and a few major ones for Boeing and Embraer, such as the 777, 737, 787 and E-190. We are leaders in process and assembly line transformation consulting, including concepts of industry 4.0.

www.ayesa.com



CENTUM

Parque Científico y Tecnológico de
TecnoGetafe
Avda. Rita Levi Montalcini, 3
28906 - Getafe (Madrid, Spain)

+34 91 184 03 96
info@centum.com

CENTUM is a group of companies with a presence in Spain, Germany and Brazil, with a track record of more than 10 years developing technological engineering services, solutions and products specialized in communication, control and signals intelligence for the Aerospace, Defense, Emergency, Security and Telecommunications sector.

www.centum.com



CIMPA / SOPRA STERIA

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+34 91 112 80 00
info@cimpa.com
info_es@soprasteria.com

CIMPA is among the most important providers of Product Life cycle Management (PLM) services across Europe, and since 2015 it is a subsidiary of Sopra Steria, a European leader in digital transformation with one of the longest commercial portfolios in the market. Sopra Steria offers its clients the Aeroline vertical team - a transnational organization dedicated to addressing the needs of the aerospace sector, which has been recently strengthened by the addition of CIMPA. Sopra Steria and CIMPA are partners in technology and digital strategy of the most important manufacturers and suppliers of the European aerospace business.

www.cimpa.com / www.soprasteria.es



CRISA (AN AIRBUS DEFENCE AND SPACE COMPANY)

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28760 - Tres Cantos (Madrid, Spain)

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Crisa, an Airbus Defence and Space company, is one of the most important suppliers of complex onboard electronics for space. Over 30 years of experience and 1100 units in orbit in more than 200 missions are a testament to the capabilities of Crisa in the design and manufacturing of complex electronic equipment for satellites and launch vehicles.

www.crisa.es / www.airbusdefenceandspace.com



DAS PHOTONICS

Ciudad Politécnica de la Innovation
Camino de Vera s/n, Edificio 8F
46022 - Valencia (Spain)

+34 96 355 61 50
contact@dasphotonics.com

DAS Photonics is a technology-based company that focuses on the development of innovative products based on proprietary photonic technology for high-performance sectors, such as Defense, Aeronautics and Space. DAS Photonics covers all phases of a product's life cycle - from design to manufacturing, integration and commercialization. Its portfolio includes comprehensive solutions for areas of application such as Electronic Warfare and Electronic Intelligence in the Defense sector, and photonic frequency converters, optical beamformers for antennas and optical uplinks for Space applications.

www.dasphotonics.com

DEIMOS SPACE



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info@elecnor-deimos.com

Elecnor Deimos, a company that is present in sectors such as space, aeronautics, defense, security, transportation and information technology, offers cutting-edge solutions covering design, development and maintenance throughout the entire life cycle.

In space, Deimos participates in the space segment (complete satellites and sub-systems), launch vehicles, ground segment and satellite navigation and space surveillance solutions. In the aeronautics and maritime sectors, Deimos develops air navigation and coastal surveillance systems.

www.elecnor-deimos.com

DELTA VIGO - DELTA GROUP SPAIN



Established in 1947, Delta Vigo owns 4 plants and a total floor space of 100,000 m² to perform all processes -100% in-house- related to capital goods and the manufacturing of flight components in facilities that have a large capacity and bleeding-edge machinery.

Two of our plants specialize in process engineering and mechanical design, including industrial automation and robotics for the integration of production lines. We are a benchmark in integral production process industrialization solutions, offering the highest added value to our clients by delivering turnkey projects of the highest difficulty. The remaining two top-level centers are focused on the manufacturing and inspection of flight components (titanium, aluminum and special steels) and composites with proprietary technology -a result of our constant investment in R&D-, for the most important OEMs.

www.deltagroupspain.es

Parque Tecnológico de Vigo, Calle C
36314 Vigo - Pontevedra (Spain)

+34 98 648 70 44

EINSA, EQUIPOS INDUSTRIALES DE MANUTENCIÓN



EINSA is a Spanish-held company established in 1979, with a track record of over 40 years in the aviation industry. During this time, it has become a leader in the design, manufacturing, installation and post-sale of the most advanced aviation ground support vehicles, both civilian and military, as well as of tactical and logistical vehicles.

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28802 - Alcalá de Henares
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info@einsa.es

www.einsa.es

EQUIPOS MÓVILES DE CAMPAÑA ARPA



Since its foundation in 1968, EQUIPOS MÓVILES DE CAMPAÑA ARPA has specialized in the design, development, engineering, production and maintenance of Logistic Solutions for markets such as defense, civilian, healthcare, emergencies and catastrophes, offering these solutions in the form of various types of mobile platforms and modular constructions for all kinds of services and infrastructures required for deployments.

This allows us to offer mobilization support to any military, healthcare or humanitarian operator, providing essential goods and the mounting of global infrastructure for complex systems such as living quarters, refugee camps, field hospitals, military camps and any type of fast deployment for emergencies and catastrophes. One of the main values of ARPA EMC is the ability to create synergies through the extraordinary potential of its engineering in the development of complete projects. With a range of over 300 products, it provides tailor-made solutions to civilian and military Organizations in over 50 countries. Since the year 2002, ARPA EMC owns modern manufacturing facilities with a floor area of over 26,000 m², out of which 13,000 m² are allocated to Production, Mounting and Quality Control.

www.arpaemc.com

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ESCRIBANO MECHANICAL AND ENGINEERING

ESCRIBANO MECHANICAL AND ENGINEERING, S.L., world leader in precision machining for the aerospace and defense sectors that designs, develops and integrally manufactures complex defense and security systems in its facilities of Alcalá de Henares.

Avda. Punto ES, 10 Tecnoalcalá
28805 - Alcalá de Henares
(Madrid, Spain)

Its main lines of business include its Remote Controlled Weapon Station for small and medium-caliber land, sea and air applications, as well as its electro-optical systems for defense and security applications, which include: advanced observation, target tracking, search and detection of shipwrecks, border surveillance...

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M: +34 659 90 31 16
Teresa.cabazon@eme-es.com

Escribano can manufacture mechanical, optical and electronic components in its facilities with a floor area of over 30,000 m2 and a staff of over 340 employees.

www.escribano.aero



EUROPAVIA ESPAÑA

Europavia is a company dedicated to the management of MRO logistics, the maintenance of aeronautical equipment and the distribution and commercial promotion of cutting-edge equipment and systems in the European aeronautical, defense, space and infrastructure market.

C/ Jorge Juan, 30
28001 - Madrid (Spain)

Since 1965, it has worked with the most important clients of the markets that it serves. With a sizable product and service portfolio, it counts with a number of references in every sector where it operates.

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www.europavia.es



EVERIS AEROESPACIAL, DEFENSA Y SEGURIDAD

Everis Aeroespacial, Defensa y Seguridad offers global solutions for the implementation of critical systems, integrating innovative technologies resulting both from in-house developments or outsourced SMEs, as well as technological partners with which the company has engaged in joint ventures.

Camino Fuente de la Mora, 1
28050 - Madrid (Spain)

The company combines the strength of the Everis brand with the flexibility and capability to adapt of its technological SMEs. In this way, it can offer the market unique products and services in fields such as robotics, unmanned vehicles, cybersecurity, satellite systems and simulation, among others.

+34 91 749 00 00
aerospaceanddefense@everis.com

aerospacialydefense.everis.com



EXPAL SYSTEMS

EXPAL Systems is a global defense and security company. It offers first-rate technological products, services and solutions to address the current and future requirements of the land, sea and air branches of the Armed Forces.

Avda. Del Partenón, 16
28042 - Madrid (Spain)

The company works with leading companies in the sector and armed forces from over 60 countries, offering safety, precision and the most advanced systems from any mission. EXPAL manages the entire life cycle of the defense systems: R&D, engineering, manufacturing, integration, training and maintenance, all the way through the final demilitarization phase.

+34 91 722 02 35
expal@expalsystems.com

www.expalsystems.com

EXPLEO



Grupo Expleo covers the entire life cycle, offering integral 'end-to-end' engineering, quality-related services and management consulting for digital transformation. Our mission is to help our clients in leveraging technological change to successfully develop innovations, helping them obtain a competitive advantage and improve the life of people across the globe. Expleo is active across various sectors, such as Aerospace, Automotive, Transportation, Banking & Financial Services, Defense and Energy. With an annual turnover of 1.1 billion euros and 15,000 employees, we currently operate in 25 countries.

Expleo carries out its activities in Spain, working for major industrial groups. We specialize in systems and software engineering, product design and processes, manufacturing engineering, quality and supply chain management. Digital transformation is at the core of our strategy, through the implementation of more connected, agile and efficient tools, embracing industry 4.0.

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generalspain@expleogroup.com

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FORMECAL - GRUPO AMPER



Formecal has a track record of 35 years in the forging, precision machining and assembly of components, with major clients in the aeronautical, railway and automotive industries. We stand out due to the quality of our products, manufactured with extreme care, which allows us to tackle projects related to aeronautical components that involve stringent technical demands.

Pol. Ind. Las Avenidas - Avda. Doce, 12
28991 - Torrejón de la Calzada
(Madrid, Spain)

+34 91 810 61 49
formecal@formecal.com

www.formecal.com

GDELS - SANTA BÁRBARA SISTEMAS



GDELS-SBS designs, produces, sells and maintains defense equipment, such as armored vehicles, artillery, missiles, weapons and munitions. The company is part of General Dynamics European Land Systems (GDELS), also headquartered in Madrid and the European branch of the Combat Systems Division of General Dynamics. We perform our business activities and provide client services all around the world - particularly in NATO countries.

P.E. Cristalía - Edificio 7/8,
Vía de los Poblados, 3
28033 - Madrid (Spain)

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info.sbs@gdels.com

www.gdels.com

GMV



Privately held technological group founded in 1984 that operates in the Aerospace, Defense & Security, Cybersecurity, ITS, Automotive, Healthcare, Telecommunications and Information Technology sectors. The company has branches in Germany, Colombia, Spain, USA, France, Netherlands, Malaysia, Poland, Portugal, United Kingdom and Romania.

65% of its turnover comes from international projects across the five continents and its growth strategy is based on continuous innovation, dedicating 10% of its turnover to R&D.

At the time, GMV is the first independent provider of Ground Control Systems for commercial telecommunications satellite operators, a European leader of Navigation Systems (EGNOS and Galileo) in the Ground Segment; an international leader in the supply of C4ISR solutions, military navigation and avionics; the most important provider of Cybersecurity solutions and services, as well as telematic systems for public transportation in the country; and a trusted provider of software, services and telematic systems for the automotive sector.

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GTD

With a track record of over 30 years, we are a cutting-edge technology company committed to the design, integration and operation of mission-critical complex applications and systems across the globe.

Our experienced team develops projects that involve a significant technical complexity, as well as next-gen systems for the space, defense & security, aeronautics, energy, scientific facility, critical infrastructure and sea port sectors, which makes GTD the perfect choice for our clients' projects.

Quality, excellence and the reliability of our team have always been our priorities.

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08005 - Barcelona (Spain)

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gtd-bcn@gtd.es

www.gtd.eu



HÉROUX-DEVTEK SPAIN (CESA)

Equipment and accessory (proprietary or third-party) design, manufacture, assembly, certification, repair and product support for aeronautical civilian or military programs.

Production of electronic control units for hydraulic and electromechanical actuation systems. Production of pneumatic systems; landing gears, flight controls, fuel system equipment and air-to-air refueling systems for the aerospace and defense industry.

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28906 - Getafe (Madrid, Spain)

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contactcesa@herouxdevtek.com

www.cesa.aero



HISDESAT

Operator of satellite-based government services in the field of defense, security, intelligence and foreign affairs. The company provides secure satellite communication services to government organizations of several countries (in the X and Ka band) via SpainSat and Xtar-Eur. The company is currently engaged in the new SPAINSAT-NG Program.

Satellite-based Earth observation capabilities via PAZ and Ingenio, which provide night and day images under any meteorological condition. The satellite vessel traffic information system (AIS) provides information on vessel traffic across the globe in real time. 24x7x365 ground control center for operational satellites

Paseo de la Castellana, 149, Planta 5ª
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www.hisdesat.es



HISPASAT

HISPASAT is comprised of companies with a presence in both Spain and Latin America, where its Brazilian branch, HISPAMAR, is located. HISPASAT is a leader in the dissemination and distribution of audiovisual contents in Spanish and Portuguese, including the transmission of major Direct-To-Home (DTH) and Hi-Def Television (HDTV) digital platforms. HISPASAT also provides broadband and satellite connectivity services -which include access to the Internet, mobility and extension of cellphone networks-, as well as other value-added solutions, to governments, corporations and telecommunication operators in America, Europe and northern Africa. HISPASAT is one of the most important companies in the world in its sector based on its turnover and the main communication bridge between Europe and America.

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HV SISTEMAS



HV Sistemas is an engineering company that specializes in tailor-made electronic solutions through the design, development and manufacturing of electronic equipment and systems. Our capabilities focus on analogical, digital and RF electronics, data acquisition and transmission, communication protocols, cryptography and digital signal processing.

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C/ Teide, 4 Núcleo 1
28703 - San Sebastián de los Reyes
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hv@hvsistemas.es

www.hvsistemas.es

IBERESPACIO (IBÉRICA DEL ESPACIO)



IberEspacio offers products based on "Heat Pipe" and "Loop Heat Pipe" two-phase components for the thermal management of satellites and other space-faring vehicles, as well as structural equipment with thermal capabilities. IberEspacio performs the concept design, engineering, manufacturing and testing of thermal systems for current satellites, as well as the development and qualification of new systems for the next generation of satellite platforms. The company exports 90% of its production to 17 countries.

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28850 - Torrejón de Ardoz
(Madrid, Spain)

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www.iberespacio.es

INDRA



Indra (www.indracompany.com) is one of the most important technology and consulting companies in the world, and a technological partner in key business operations of its clients across the globe. The company is a world leader in the provision of proprietary solutions for specific segments of the Transportation and Defense markets, and a leading digital transformation and Information Technology consulting company in Spain and Latin America through its Minsait branch. Its business model is based on an integral offer of proprietary products with an end-to-end, high value approach and a high innovation component. By the end of FY2019, Indra saw a turnover of 3.204 billion euros, had over 49,000 employees, a local presence in 46 countries and business operations in over 140 countries.

Avda. de Bruselas, 35
28108 - Alcobendas (Madrid, Spain)

+34 91 480 50 00
indra@indra.es

www.indracompany.com

INESPASA



Founded in Seville in 1986, INESPASA is a leading company in the development, design, manufacturing and assembly of tooling, aeronautical part machining and assembly of sub-assemblies. The company focuses its activities in the aerospace sector, with clients that are the most important trailblazing companies in the aeronautical industry, such as Airbus Defence & Space, Airbus Commercial Aircraft, Boeing, Airbus Helicopters, Bombardier, Embraer, as well as the Alestis, Aernnova, Aciturri, CTRM, OGMA and Spirit Aerosystems Tier 1 suppliers for Boeing and Rolls Royce work packages. It has participated -and still does- in the development of turnkey tooling packages and aviation parts for the A380, A350, A300, A310 MRTT, A320, A330, A400M, C-212, CN-235, C-295, B-717, B-737 B-777, Eurofighter 2000, Falcon 7X, Bombardier CRJ-700 & CRJ-900, C-Series, Global, Lear 75, Challenger, Embraer Legacy 450/500 and KC390 programs. The company has an R&D department composed of highly experienced professionals in the sector, as well as young graduates who are versed in the latest technologies. Inespasa is located in Aerópolis, where it has two industrial plants. Main Activities: R&D Projects, design and manufacturing of tooling, manufacturing of elementals and sub-assemblies. Specializations / Technology • Manufacturing of machined components • Assembly of sub-assemblies • Turnkey tooling projects • Turnkey custom solutions.

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INSTALAZA

INSTALAZA, S.A. is a bleeding-edge company that applies the latest technologies in the design, development and manufacturing of equipment and material to offer effective solutions for Infantry. The professional experience of Instalaza, founded in 1943, has been proven time and again as a supplier of the Armed Forces of Spain and other countries around the world. Its products have always been subjected to the most stringent quality controls, to offer the best performance at all times - even under the harshest conditions. In addition, products and equipment offered by Instalaza equip the armed forces of countries across the globe, with outstanding results and the highest efficiency and effectiveness.

C/ Monreal, 27
50002 - Zaragoza (Spain)

+34 976 293 422
instalaza@instalaza.es

www.instalaza.es



INSYTE

INSYTE (1987) is a provider that specializes in the industrialization and assembly of electronic systems and cabling at the service of the avionics, defense, naval, medical, railway, professional telecommunications (radar, RF, etc.) and industrial sectors. We perform all kinds of tests, including environmental testing. Our company specializes in the assembly of equipment and circuit boards for systems that are critical or have to operate in harsh environments.

Personnel qualified as per the IPC- 610, J- STD, IPC-7711/21 class 3 standards.

Manufacturing of harness assemblies as per IPC-WHMA620 standards and fiber optics, certified by FOA.

We have cutting-edge assembly, verification and testing facilities to guarantee the quality and reliability of our work.

Lifetime product support. Obsolescence management.

We have the capability of developing designs as per customer specifications.

C/ Calidad, 6.
Pol. Ind. Los Olivos
28906 Getafe (Madrid, Spain)

+ 34 91 601 09 91
insyte@insyte.es

www.insyte.es



ITP AERO

ITP Aero is Spain's aviation engine and component company, and the ninth company in the sector worldwide. With over 30 years of sustained growth, the company is committed to innovation and the development of proprietary technology as a major competitive advantage.

ITP Aero is present throughout the entire lifecycle of an aviation engine -from R&D to in-service support-, and counts with over 4,000 employees in five countries and a turnover of 983 million euros in 2019. ITP Aero is a corporate entity of the Rolls-Royce Group.

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LEONARDO HISPANIA

Leonardo Hispania is the Center for Excellence of Grupo Leonardo in Spain.

The company, which was established in November of 2003 under the name OTO MELARA Ibérica and was engaged in the production, integration, logistical support and post-sales support of the turret of the Centauro vehicle, in service with the Spanish Army, in late 2018 took over a new role as Leonardo Hispania, which consists of positioning itself as a point of contact of Grupo Leonardo in Spain and offer support to its entire product portfolio, in addition to offering its highest level of production in Spanish territory, thereby bestowing the domestic industry network with technology and Know-How. These efforts are carried out in its over 3,000 m2 production plant located in Loriguilla, Valencia.

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MADES



ELECTRONICS MANUFACTURING SERVICE. Established in 1990, MADES is a leading supplier of precision electronic systems and subsystems for the Aerospace, Defense and Industrial markets. Our services include the development, industrialization, manufacturing, testing, integration and life cycle support of electronic systems. Our modern, first-class factory in Málaga, Spain, has over 5,000 square meters where over 100 engineers, technicians and qualified employees work.

MADES manufactures complex systems for its clients, which include actuator, communications, control electronics, sensor, mission system, surveillance, telemetry, radar, radio frequency, power electronics, electro-optics and target identification systems, among many others.

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www.mades.es

MASA



MECANIZACIONES AERONÁUTICAS, SA (MASA) specializes in the manufacturing of finished and installed metallic parts for the aerospace industry. The high level of stringency across the various departments of MASA allow us to offer a complete part manufacturing process to the aeronautical industry; from the sizable team of engineers who perform the management, design and calculation, through the manufacturing with cutting-edge high-speed technology, to the finishing of parts with surface treatments and paints. A great team that works as one to offer an integral and professional service that is in line with the highest quality standards.

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26150 - Agoncillo (La Rioja, Spain)

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masa@masa.aero

www.masa.aero

MBDA



MBDA is a European leader in the missile and missile system sector and one of the three largest companies in the sector worldwide. MBDA is the only group that is able to act throughout the entire life cycle of its products. 45 missile and countermeasure systems that cover the entire range of operational needs of the three branches of the armed forces. Two of the most important strengths of MBDA are the multinational collaboration in Europe for the development of joint projects and the continuous support to the Ministry of Defense in the development and fulfillment of its national defense policies. MBDA is owned by AIRBUS (37.5%), BAE Systems (37.5%) and LEONARDO (25%).

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28020 Madrid (Spain)

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MBDA.ES@mbda-systems.com

www.mbda-systems.com

MECÁNICA DE PRECIÓN TEJEDOR



MECÁNICA DE PRECIÓN TEJEDOR S.A. manufactures a wide range of CNC machined parts, mechanically-welded sub-assemblies and performs their assembly for the military industry. Land platforms: turret components, night vision equipment and elevation systems for combat and non-combat vehicles. Munitions: the company participates in different missile programs, manufacturing components for bombs, howitzers and grenades of various calibers. Navy: manufacturing of mechanical parts of periscopes (PercoSub program). Aviation: manufacturing of various components for unmanned air vehicles. Certifications: UNE-EN ISO 9001-2015, PECAL/AQUAP 2110 and UNE-EN ISO 3834-2.

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www.mptejedor.com



MTORRES

Ctra. Pamplona - Huesca km 9
31119 - Torres de Elorz
(Navarra, Spain)

MTorres is composed of several companies dedicated to the design, manufacturing and installation of special machine tools for the manufacturing of aeronautical components, as well as toolings and their assembly systems. Our product range covers from the machining of individual components to the assembly of the final product, both in metal and in composite materials.

+34 94 831 78 11 / +34 94 831 79 52
info@mtorres.com

www.mtorres.com



MYC

Pol. Ind. San Marcos
C/ Casto Loarce, 10
28906 - Getafe (Madrid, Spain)

MYC focuses on aeronautical production, and specializes in production engineering and assembly. We manage entire production processes, covering every stage: process engineering, design and manufacturing of tooling, subassembly manufacturing and logistics, assembly, delivery and certification of a final product.

+34 91 684 60 10

MYC also focuses its activities on other industrial sectors, such as space, automotive, railway and defense, offering experience, flexibility, quality, speed and mobility.

www.myc-aeronautica.com



NAMMO PALENCIA

Plaza Rabí Sem Tob, s/n
34004 - Palencia (Spain)

Nammo Palencia supports the Spanish armed forces and its allies by providing them with small and medium-caliber combat munitions and training.

+34 97 916 55 70
napa@nammo.com

Our cutting-edge products, manufactured with dedication, precision and care, are drivers of innovation across every sector. The company is part of the operations of Nammo Spain, within Nammo Group, which has a presence all around the world.

www.nammo.com



NAVANTIA

C/ Velázquez, 132
28006 - Madrid (Spain)

Navantia is a world leader in the design, manufacturing and integration of high-tech military vessels. Additionally, its lines of work include the design and manufacturing of Combat and Command & Control systems, as well as Integrated Platform Management Systems, Fire Control Units and Propulsion Systems; in addition to Supporting the Lifecycle of all of its products. While its main operations focus on the naval realm, Navantia designs and manufactures systems for the Army and Air Force.

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navantia@navantia.es

Navantia also engages in vessel repair, which includes planned maintenance work and conversion and modernization programs.

The most important clients of Navantia include the navies of Spain, United States, Australia, Turkey, Norway and India. During the last 10 years, Navantia has built frigates, LHDs and OPVs. At the time the company is working on the most important programs of the Spanish Navy: the F-110 frigates and S-80 submarines.

www.navantia.es



NÚCLEO - GRUPO AMPER

C/ Virgilio, 2 - Edificio 4.
(Ciudad de la Imagen)
28223 Pozuelo de Alarcón, Madrid

Núcleo – Grupo Amper offers personalized turnkey solutions in communications & control projects for the Aeronautics, Maritime, Industrial Control, Energy, Environment, Security and Defense industries.

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Grupo Amper, a technological multi-national company, also has a Security line of business that involves the development of technological systems and solutions to guarantee the security and interoperability of systems, equipment, services and processes. The company has a significant experience in the development and integration of physical and logical security systems for the protection of infrastructures, borders, control centers, etc.

www.nucleocc.com

OLMAR | AUTOCLAVES & ADDITIVE MANUFACTURING



Founded in the year 1945, Olmar S.A. is a family business and a leader in the manufacturing of autoclaves, ovens and control systems for the curing of composite materials, mainly operating in the aeronautical and space sector.

Olmar performs its business activities in Gijón (Asturias), an enclave with a strong business tradition that offers the best communications for its national and international operations, with exports that exceed 90% of its production. The company has just launched its new Cold Spraying Additive Technology division, offering its clients the largest booth in Europe for this application.

www.olmar.com

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PIEDRAFITA



For over 30 years, Piedrafita has been dedicated to technical excellence, improving the mobility of space vehicles in the harshest of environments with a significant experience in land platform integrators both nationally and internationally. Our product portfolio:

- Wide range of rotary and linear dampers for tracked and wheeled vehicles
- Vehicle onboard data acquisition under real, extreme conditions. Rugged loggers and vehicle use diagnostics systems for all kinds of platforms
- Solid-state based power distribution units (DefPower brand). Power distribution units (MILPDU) certified as per military standards. Their simple integration facilitates the design, manufacturing and certification of the electric architecture of any vehicle with increasingly encompassing and demanding electrical requirements

www.piedrafita.com

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PLD SPACE



PLD Space is a Spanish company that develops reusable space launch vehicles. The company was founded in 2011 by Raúl Torres and Raúl Verdú in Elche, where its headquarters are located. Since then, the company has grown from two to over 40 employees. PLD Space is working on the development of two vehicles: the sub-orbital MIURA 1 launch vehicle and the orbital MIURA 5 launch vehicle. Since 2012, PLD Space has received the technical and economic support of major companies of the technology sector, such as GMV and ACITURRI. In addition, the company has received private funding from JME Venture Capital, among others.

In 2019, PLD Space successfully performed the first recovery drop test of the MIURA 5 first stage demonstrator. In addition, in early 2020 it has successfully performed a complete test of the TEPREL-B rocket motor for the MIURA 1 mission, being the first liquid propellant rocket motor developed in Spain.

www.pldspace.com

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contact@pldspace.com

RELATS



Relats is a Catalan family business with a strong international presence, founded in 1957 in Caldes de Montbui (Barcelona) by Vicenç Relats Arimón. Relats is present in five continents with six production plants (Catalonia-Spain, China, Mexico, Morocco, Vietnam and Romania), technical and commercial offices around the world (Japan, United States, Germany and France) and a distribution center in Japan.

Relats works with companies that supply the main components for international brands of the aerospace, automotive, railway, electrical, home appliance and renewable energy sectors.

www.relats.com

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ROHDE & SCHWARZ ESPAÑA

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Rohde & Schwarz is an international group of companies headquartered in Munich (Germany), with a presence in over 70 countries around the world. It has a staff of 12,500 employees and an annual turnover of 2.2 billion EUR. With a track record of over 85 years, R&S develops, manufactures and integrates communications and intelligence solutions for security and national defense in the military and civilian arena, in addition to cyber security solutions and tailor-made testing equipment and systems for the correct operation and maximum performance of radar, navigation, communications, electronic warfare and ATC systems. The company has a technical assistance and calibration center in Madrid, as well as an engineering team that specializes in the development of "turnkey" projects involving integration, installation, start-up, testing protocols and training.

www.rohde-schwarz.es



SAES - S.A. DE ELECTRÓNICA SUBMARINA, S.M.E.

Ctra. Algameca, s/n
30205 - Cartagena (Murcia, Spain)

+34 96 850 82 14
saes@electronica-submarina.com

With a track record of over 30 years in the naval sector, we offer cutting-edge technology and tailor-made solutions to the military and civilian sectors. Cost-effectiveness and reliability define our systems, in service all around the world.

- Sonar systems for submarines and surface vessels.
- Intruder detection sonars for underwater protection and surveillance.
- Acoustic classification and intelligence systems.
- ASW systems for air and naval platforms.
- Measurement, control and simulation of underwater signatures.
- Multi-influence sea mines and mines for special forces.
- Simulation and training.
- Engineering services and courses.

www.electronica-submarina.com



SAFRAN ENGINEERING SERVICES

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alberto.cadenas@safrangroup.com

A company of SAFRAN Group, composed of over 3,000 engineerings, working in aerospace and automotive sector, covering the entire life cycle of a product: design, calculation, testing, modeling, simulation, processes, materials, production support and post-sales. Continuous innovation and improvement are the pillars of SAFRAN ENGINEERING SERVICES.

www.safrangroup.com



SAINSEL SISTEMAS NAVALES

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Company partially owned by Navantia and Indra. Sainsel is a leader in Integrated Navigation Systems (ECDIS/WECDIS) and Bridges for both military and merchant vessels, as well as Surveillance and Operations Systems for SAR (Search and Rescue).

Sainsel also supplies equipment and modernization solutions for Combat Systems of surface vessels and submarines. For the aeronautical sector, the company offers a wide range of processing and display equipment for use aboard aircraft, which include 3D and panoramic displays, cockpit displays, EFBs and mission processors.

www.sainsel.es

SAPA PLACENCIA



SAPA PLACENCIA is the oldest company in the Defense Sector (1575). As a technological leader in vehicle mobility, it develops and manufactures its own products in the field of armored vehicles.

Mobility: High-performance transmissions for heavy vehicles, which improve their mobility and efficiency.

Energy management: Power units and power generators, as well as onboard control electronics.

Anti-air defense: Modernization and manufacture of Oerlikon Twin Gun@ 35/90 anti-air artillery systems.

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SEGULA TECHNOLOGIES ESPAÑA



SEGULA Technologies is an engineering group with an international presence that boosts competitiveness across the main industrial sectors: Automotive, Energy & Environment, Aeronautics, Naval & Defense, Railway and Oil & Gas.

With operations in 30 countries and 140 offices around the world, the Group fosters a close relationship with its clients thanks to the experience of its 12,000 employees. As a leading engineering specialist who places innovation at the core of its strategy, SEGULA Technologies carries out large-scale engineering projects that range from technical studies to industrialization and production.

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www.segula.es

SENER



For over 50 years, SENER Aeroespacial has been a tier one supplier of high performance aerospace systems for Space, Defense and Science.

The company develops subsystems and equipment with a high added value across four fields: electromechanical, communication, optomechanical and navigation & control systems. In Space, the company participates in the most important ESA and NASA programs (Euclid, MTG, Solar Orbiter, JUICE, Proba-3, Hubble, Galileo, Rosetta, Gaia, Herschel and Planck, IXV, BepiColombo, Mars 2020...); furthermore, in the commercial space market, it is a world leader in the supply of Telemetry & Telecommand (TTC) antennas, and a regular supplier of all kinds of antennas, passive and active radio frequency equipment for the most important communications satellite manufacturers - even in programs of the so-called "New Space."

In Defense, the company is part of the European missile programs, offers helicopter modernization services (AB-212) and is part of the consortium that -alongside GMV and TecnoBit- makes up the pillar of NGWS 'Remote Carriers' in Spain. In Science, the company is a regular supplier of the ESO European Southern Observatory and is part of major astronomy programs involving land telescope components. Lastly, in ATC & Broadcast, it is a supplier of antennas and passive equipment.

SENER Aeroespacial has a turnover of 120 M€ with a staff of 700 professionals. A company of the SENER engineering and technology group.

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SERTEC

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Sertec is a Spanish company with a track record of 20 years. Its main activities revolve around engineering, testing and structure instrumentation, composite materials, tooling and control systems, as well as automation and systems (UAVs and antennas).

Sertec's work focuses on turnkey projects, including engineering services such as analysis, design, development, management, system manufacturing management, equipment, tools and complex structures applicable to the aeronautical, aerospace, defense, simulation, railway, naval, automotive and nuclear industries.

www.sertec.net



SISTEMAS DE CONTROL REMOTO

C/ Isla de la Palma, 36 - Naves 8 y 9
28703 San Sebastián de los Reyes - Madrid

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SCR is a leading Spanish company in the design, production and operation of unmanned aerial, land and naval systems. Throughout its 25 years of operations, SCR has sold over 900 platforms and performed over 2,500 flights for domestic and foreign clients. The company is also part of grupo everis Aeroespacial, Defensa y Seguridad (everis ADS), a benchmark company in the Spanish Defense and Security industry. Some of the unmanned vehicles offered by SCR include:

Target Drones: platforms specifically designed for the development, testing and training of Armed Forces defense systems.

UAS: unmanned systems for intelligence, surveillance and monitoring.

In addition to specific products, SCR offers consulting and engineering services, information processing services, national and international operations, training and component post-sales.

www.scrdrones.com



TECHNOLOGY & SECURITY DEVELOPMENTS

Pol. Ind. C/ Los Jaboneros, 14
13640 Herencia - Ciudad Real

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TDS has a track-record of over 30 years in the design, development and production of special, tailor-made security vehicles in Spain, such as: armored vehicles, military and police vehicles. Our products are being used by clients of over 80 countries in Europe, Africa, the Middle-East and America, and we provide each of them with training, local post-sales services and any technical solution they require. We specialize in tailor-made developments and projects, undertaken in close collaboration with armies and law enforcement agencies, involving both mobile security, and fixed and temporary construction projects.

www.tsdinternational.com



TECNALIA

Parque Tecnológico de San Sebastián
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TECNALIA is a leading private Technology Research & Development Center in Europe with over 1,400 researchers. We help companies become more competitive. Our mission is transforming technology into GDP.

In the space sector, TECNALIA offers technology in the form of advanced materials and manufacturing processes for space components, taking Industry 4.0 (AM, robotics, automation, VR/AR, AI) to space component manufacturers to reduce the time and cost of their processes.

TECNALIA has certified multifunctional composite housings for onboard electronics and solid lubricants for space mechanisms. In addition, TECNALIA is a user of operational meteorology space data, extreme weather emergency management, and integrates Earth observation data with local measurements on urban pollution maps and climate change impact measurements.

www.tecnalia.com

TECNATOM



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www.tecnatom.es

Tecnatom is a Spanish multinational company that specializes in engineering, with a presence in 32 countries and a track record of over 60 years in Nondestructive Testing (NDT). The company has cutting-edge proprietary technology for ultrasonic testing and Eddy current testing, which it constantly updates and improves thanks to its R&D activities.

Tecnatom Group has positioned itself as a leading company in the aeronautical and industrial market thanks to the supply of automated testing systems, NDT equipment and technical services.

www.tecnatom-ndt.com

TECNOBIT GRUPO OESÍA



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TECNOBIT - Grupo Oesía is a 100% privately held, 100% Spanish high-technology company that has been in business for over 40 years as an international leader in advanced engineering services and equipment for Aeronautics, Security and Defense. TECNOBIT designs, develops, manufactures and maintains the most innovative systems within its main lines of business: Optronics, Tactical Communications, Vision Computing, Encryption, Onboard Avionics, Cybersecurity, Space and Simulation.

www.grupooesia.com

TELESPAZIO IBÉRICA



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Telespazio Ibérica, a Spanish company with over 20 years in the market, provides services that encompass the entire cycle of territory asset management - from the generation of cartographic data with the latest aerial and satellite technologies, to the development of IT solutions. These applications combine GIS and mobility and include georeferencing and business data entry, as well as the generation of orthophotos and thematic maps based on satellite images. The extensive product portfolio of Telespazio Ibérica includes highly technological markets (Energy & Utilities, Public Administrations, Defense, Transportation and Emergencies), offering solutions in the fields of geo-information, satellite communications and integral management of user services related to satellite navigation systems.

www.telespazio.es

THALES ALENIA SPACE ESPAÑA



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comunicacion.space@thalesaleniaspace.com

Thales Alenia Space is a leading Spanish company in the satellite segment and the undisputed choice in Spain in payloads for telecommunications satellites and optical Earth observation instruments. With 31 years in the business, the company has participated in over 600 satellites, interplanetary probes and space vehicles for space agencies and satellite operators around the world. We export 90% of our sales. With over 300 highly-qualified employees and a clear commitment to R&D, the company develops state-of-the-art technology and is a leader in advanced systems, including communications, Earth observation, science and navigation. Our over 4,000 devices and space systems produced in our facilities have accrued 200,000,000 hours of operation in orbit.

www.thalesaleniaspace.com

THALES THALES PROGRAMAS DE ELECTRÓNICA Y COMUNICACIONES

Thales Programas de Electrónica y Comunicaciones is a subsidiary 100% owned by Thales España that serves the defense, security and aeronautics sector. Undertakings, design, production, integration and maintenance related to:

- Command, Control & Communications Systems (C4I)
- Force protection systems
- Intelligent Surveillance (ISR) and anti-drone (CUAS) systems
- Aeronautical and radio beacon systems for air navigation

Thales is a global technology player that develops today the world of tomorrow. The company offers solutions, services and products to clients in the aeronautics, space, transportation, security and digital identity and defense markets. With 83,000 employees in 68 countries, Thales generated sales for 19 billion euros in 2019. Thales invests in digital technologies: connectivity, Big Data, artificial intelligence and cybersecurity, to accompany companies, organizations and governments in their most decisive moments.

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TRIGO GROUP

TRIGO supplies quality services to the aerospace and defense sectors all throughout the supply chain. It has a presence in 25 countries with a team of over 10,000 professionals. The company offers services such as:

- Global support for supplier development
- Product testing and quality certification
- Quality engineering and consulting
- Quality and maintenance of means of production: calibrations, periodic inspections, integral maintenance, control of production means and associated documentation, transfer and movement of means of production, special measurements using laser technology.

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www.trigo-group.com/en/industries/aerospace



URO, VEHÍCULOS ESPECIALES (UROVESA)

URO, Vehículos Especiales, S.A. (UROVESA) is a company whose main activity is the design, manufacturing and sale of special all-terrain vehicles for military and/or industrial use, with a complete product range that includes tactical vehicles, all-terrain trucks, high-mobility vehicles, armored vehicles and more.

As part of its main activities, the company also provides technical assistance for our all-terrain vehicles (land platform), including their equipment and replacement parts.

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The following companies have joined TEDAE after March 31: INSTER Tecnología y Comunicaciones, INTEGRASYS and TEMAI Ingenieros.

collaborators

AERA



AERA is a Cluster established in 2007 that brings together the main actors of the aeronautics and space sector of Aragon, including businesses and Aragonese R&D centers and institutions, with the following goals:

- Group and coordinate existing capabilities throughout the entire value chain of the aeronautical sector in Aragon with the purpose of empowering and invigorating each part of this chain.
- Participate in the international aeronautical market through a global offer.

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ANDALUCÍA AEROSPACE



Andalucía Aerospace Cluster is a private association created to represent all aerospace companies of Andalusia. One of the main objectives of this cluster is to contribute to the strengthening and positioning of its member companies in the national and international aerospace sector. The purpose of the cluster is to foster a sustainable technological development and business excellence in the aerospace industrial fabric of Andalusia through the synergy of member companies and the training and education of sector professionals. Lastly, the cluster acts as an institutional representative in national and international governmental and other types of organizations.

Parque Tecnológico Aeroespacial de Andalucía. C/Ingeniero Rafael Rubio Elola, 1 (Centro de Empresas). 2ª Pl. Of. M.2.4. Oeste, 41309 La Rinconada (Seville - Spain)

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HEGAN



HEGAN - Basque Aerospace Cluster- is a nonprofit private association that brings together the Basque aeronautic and space sector, created with the mission of representing and strengthening the sector to facilitate its short, medium and long-term competitiveness through the cooperation and innovation between companies and other stakeholders, offering a joint response to its strategic challenges.

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MADRID AEROSPACE



The Madrid Aerospace Cluster is a private association whose mission is to contribute to the development of the aerospace sector in the Madrid region, promote innovation and the technical development of the aerospace industry, and support the participation of its members in European projects. Its members include major companies, SMEs, universities and research centers.

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www.tedae.org

activities report

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