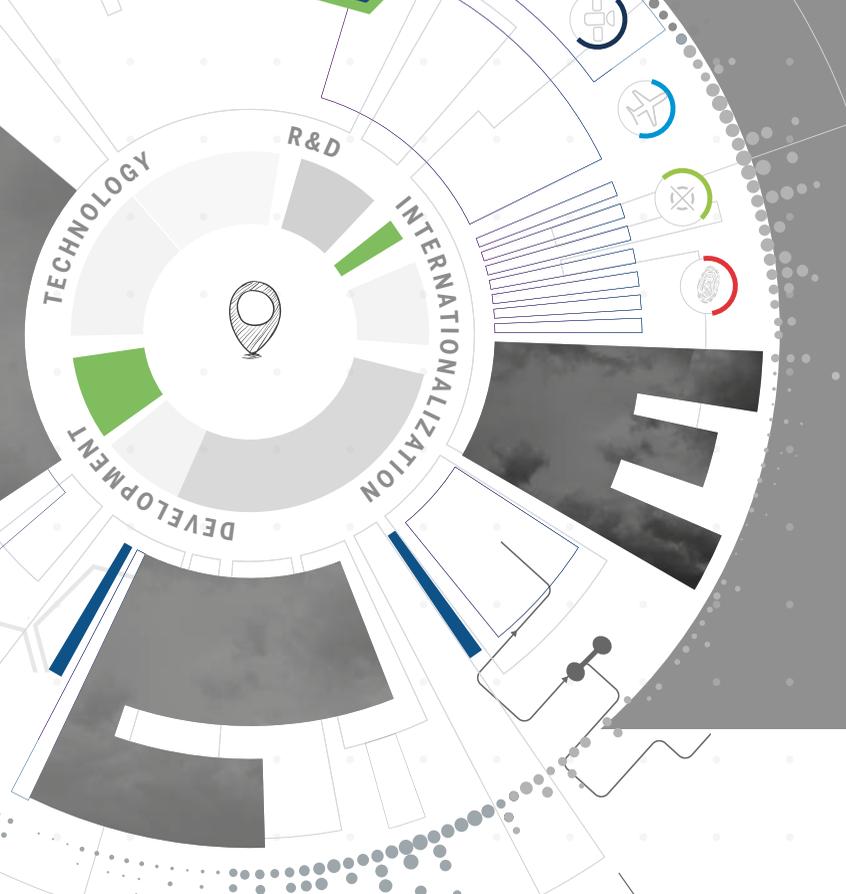
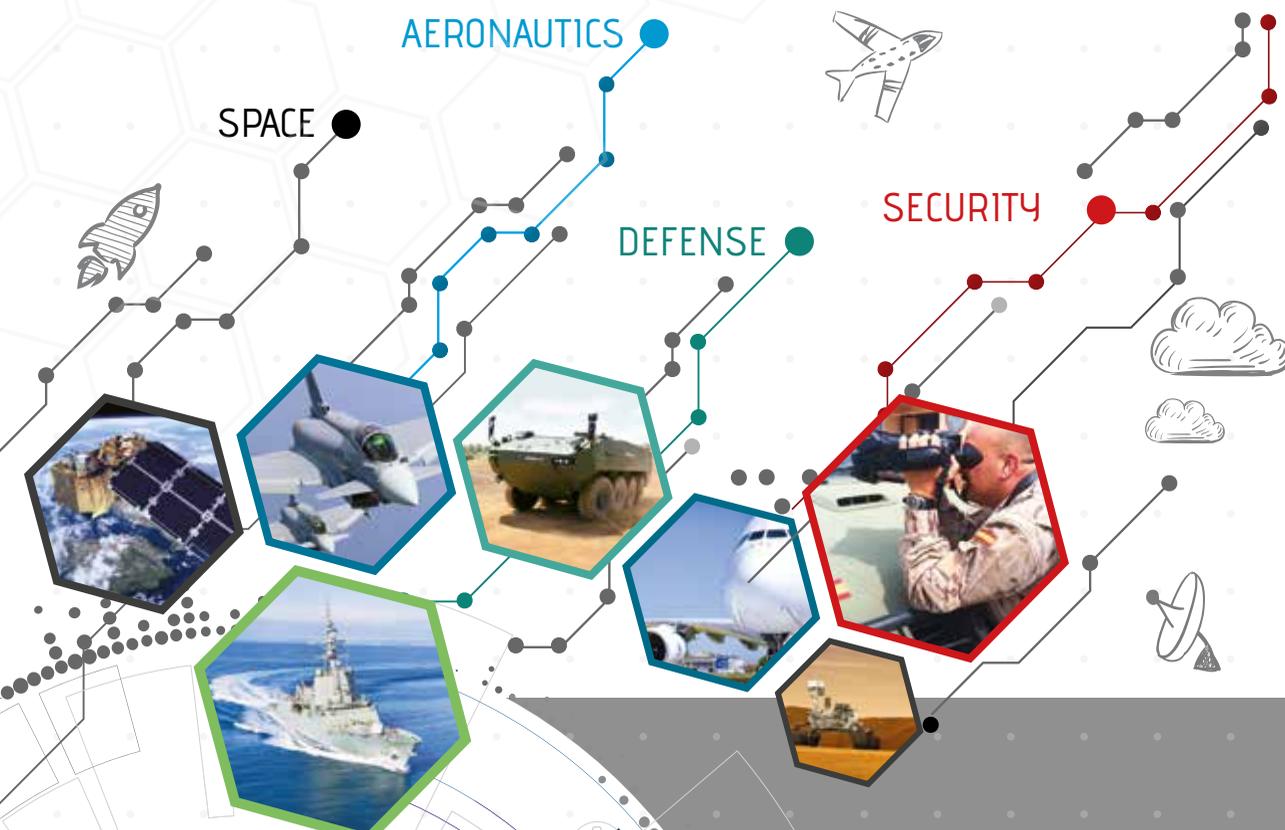


TEDAE

Defensa, Seguridad, Aeronáutica y Espacio

10 años



activities REPORT 2018





Publisher: TEDAE

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activities
REPORT
2018



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A year OF HARD WORK

FY2018 was a year of hard work for our companies and, therefore, this was true for TEDAE as well. A joint effort that puts us in the best position to face the future. For starters, this year we moved headquarters and renewed the logotype. Changes that may seem minor, but were preludes to important actions and events for the Association.

The first thing of note is that we set in motion TEDAE's 2018-2020 Strategic Plan with the purpose of transforming the many challenges (general and industry-specific) that we faced in the upcoming months into opportunities. These challenges were many and varied, but all of them of significant importance for our companies, such as digitalization and industry 4.0, access to technology financing, fostering R&D, the continuous improvement of supply chains, boosting competitiveness and the internationalization of our products, services and technologies.

Another essential line of work was raising awareness among the public opinion about all the good things that TEDAE's sectors can offer the citizenry, building relationships with mass media and increasing our participation in forums and institutions with the purpose of getting other social and economic sectors to become acquainted with us. This is something for which we have worked day after day, finding and leveraging opportunities to explain the economic, technological and social benefits generated by our industries to society.

Analyzing our accomplishments sector per sector, in Defense, the Government approved an historical investment plan of over 12 billion Euros for the modernization of the Armed Forces, which implies a significant boost to our defense industry. Our country's commitment to the European defense

policy was cemented through EDAP and the European Defence Fund, which, as of the publication of this summary, is already taking its first -yet solid- steps toward the integration of a common industry base.

In Security, milestones were reached in the configuration of a specific, proprietary industrial sector; a task that has become a priority objective for the association. It is also worth noting that, for the first time in TEDAE's history, we are publishing figures for this sector which, even though modest, it is our hope that they will grow and become more solid in the upcoming years.

A major breakthrough for the Aeronautical Industry -the sector with the highest turnover in the Association- was undoubtedly the presentation of its Sectoral Agenda, developed in collaboration with the Ministry of Industry, Commerce and Tourism, and for which the Administration and companies have jointly designed a roadmap for a better development of what is a strategic sector for Spain, which is facing years that will be paramount for its future.

OUR COMMITMENT WILL
REMAIN BEING AT THE
SERVICE OF SPAIN,
OUR ARMED FORCES,
AND OUR STATE'S LAW
ENFORCEMENT AGENCIES

And in Space, last fiscal year was a year of breakthroughs and, most of all, preparation for important milestones in the immediate future, such as the presentation of the Sectoral Agenda for the space sector, as well as the preparations for the ESA Ministerial Council to be held in Seville and the first *Congreso Nacional de Espacio* (National Space Congress) to be held in Madrid - both during FY2019.

Also worth noting is the preparation and launch of FEINDEF, the first International Defense and Security Fair organized in Spain, during the last quarter of the year, in a joint effort between TEDAE and AESMIDE



(the Association of Public Administration Contractors), with the support of the Ministry of Defense, which was significantly well-received by companies and institutions alike. So much so that the space that had been hired had to be expanded, since after only a few days most booths had already been booked. This confirmed that Spain was in need of its own Fair to showcase to the world its technological capabilities, with a focus on Europe.

And we bid the year farewell with an event that was truly emotional for us: our upcoming 10th anniversary in 2019 and the first TEDAE Awards event, because we must never forget that the history of our Association is the history of people... men and women who have worked throughout the years in our companies - some of them over a century old.

In summary, truly promising times that come with exciting challenges that lie ahead after this year of hard work. It is a given that our commitment will remain being at the service of Spain, our Armed Forces and our State's Law Enforcement Agencies. The TEDAE team, the Advisory Council, the Board of Directors and the various Commissions, Committees and Work groups will keep working day after day to grow our Association and, especially, to serve our members, which is TEDAE's ultimate goal.

JAIME DE RÁBAGO
PRESIDENT OF TEDAE





02 SECTOR FIGURES

activities
REPORT
2018



INNOVATION
9%
OF THE TURNOVER

TURNOVER
11.838
BILLION EUROS



INDUSTRIAL GDP¹
6.1%

GDP¹
1%



MAIN FIGURES
TEDAE

EXPORTS²
66%
OF THE TURNOVER



EMPLOYEES
56,999



PRODUCTIVITY

TIMES THE NATIONAL
AVERAGE
3.4



COMPANY SIZE
BREAKDOWN

70% | **23%** | **7%**
SMALL-CAPS | MID-CAPS | LARGE-CAPS

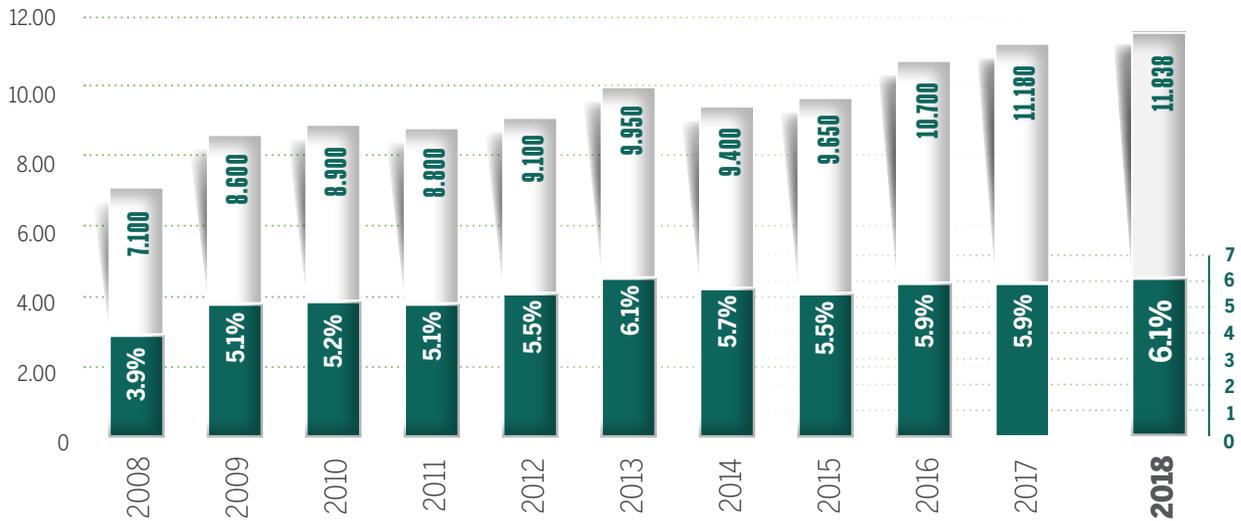


¹ CALCULATED AS TOTAL TURNOVER VS. GDP

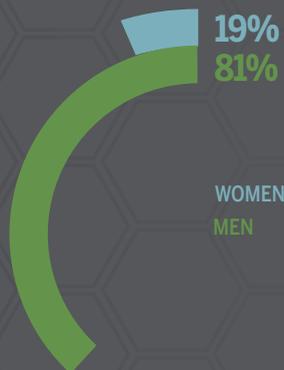
² THERE IS NO OFFICIAL SECOMEX DATA AVAILABLE AS OF THE PRINT DATE OF THIS PUBLICATION

TURNOVER PER TEDAE SECTOR

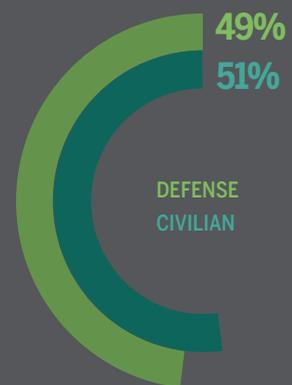
TURNOVER (BILLION EUROS) % OF INDUSTRIAL GDP¹



EMPLOYMENT PER GENDER

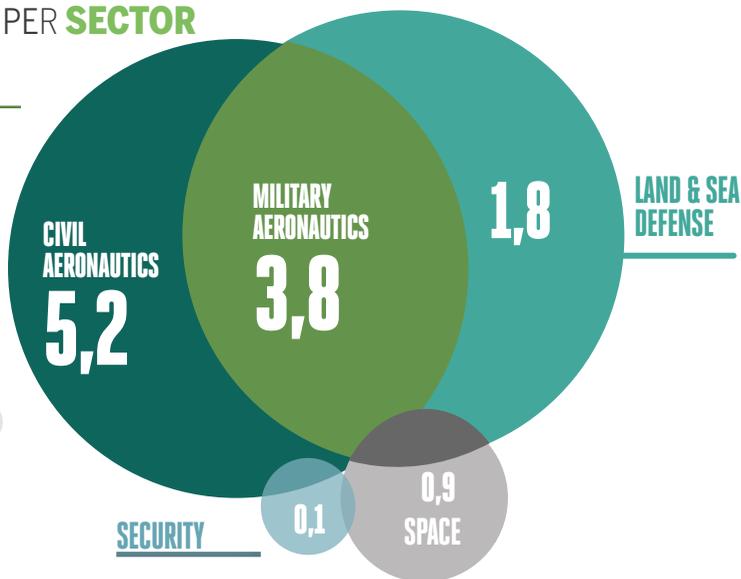


MARKET BREAKDOWN

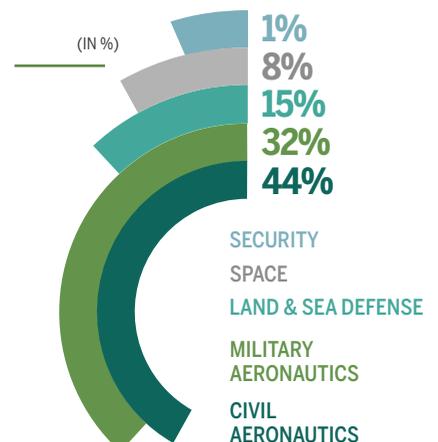


TURNOVER PER SECTOR

(IN BILLION EUROS)



(IN %)







03 THE ASSOCIATION

activities
REPORT
2018



The purpose of the structure of TEDAE is to foster:

- The generation of value in a global environment.
- The competitiveness of all member sectors.
- Industrial leadership.
- The common interest of all four industrial sectors with a focus on the diversity and nuances of each technological field.

The organization operates around a vertical axis that is composed of 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 those that are six times larger than SMEs as per the Recommendation of the European Commission, as well as of two representatives of the mid-cap and small-cap companies of the Association.

One of its many functions is to act as a leading institutional representative before the administration and international organizations. Its members are:

ADVISORY BOARD

- **Jaime de Rábago**
President of TEDAE
- **Iñaki López**
President of AERNNOVA
AEROSPACE, S.A.
- **Jorge Caro**
General Secretary of Military Aircraft,
AIRBUS DEFENCE & SPACE, S.A.U.
- **Alberto Gutiérrez**
Head of AIRBUS SPAIN,
AIRBUS OPERATIONS S.L.

* As of March 31, 2019

TEDAE



MEMBERS OF THE ADVISORY BOARD (LEFT TO RIGHT): Luis Furnells (CEO of TECNOBIT S.L.), Manuel Escalante (Defense & Security Director of INDRA SISTEMAS, S.A.), Jaime de Rábago (President of TEDAE), Antonio Bueno (Europe Vice-President and Managing Director of GENERAL DYNAMICS EUROPEAN LAND SYSTEMS SANTA BÁRBARA SISTEMAS, S.A.), Igor Amantegui (CEO of CENTUM SOLUTIONS S.L.) and Carlos Alzola (Managing Director of ITP Aero, S.A.U.).

OTHER MEMBERS OF THE ADVISORY BOARD: Iñaki López (President of AERNNOVA AEROSPACE, S.A.), Jorge Caro (General Secretary of Military Aircraft at AIRBUS DEFENCE & SPACE, S.A.U.), Alberto Gutiérrez (Head of AIRBUS SPAIN at AIRBUS OPERATIONS S.L.), Susana Sarriá (President of NAVANTIA S.A.) and Ginés Clemente (Managing Director of ACITURRI AERONÁUTICA, S.L.).

- **Igor Amantegui**
CEO of CENTUM SOLUTIONS S.L.
- **Antonio Bueno**
Europe Vice-President and Managing Director of GENERAL DYNAMICS EUROPEAN LAND SYSTEMS SANTA BÁRBARA SISTEMAS, S.A.
- **Manuel Escalante**
Defense & Security Director of INDRA SISTEMAS, S.A.
- **Carlos Alzola**
Managing Director of ITP Aero, S. A. U.
- **Susana Sarriá**
President of NAVANTIA S.A.
- **Luis Furnells**
CEO of TECNOBIT S.L.
- **Ginés Clemente**
Managing Director of ACITURRI AERONÁUTICA, S.L.



BOARD OF DIRECTORS

The board of directors is the collegial body in charge of leading and managing the Association, acting under the control of the General Meeting.

It is composed of the president of the Association, the sector vice-presidents, at least fourteen voting members -who must belong to full member companies- and the secretary of the association. Its members are:

- **Jaime de Rábago**
President of TEDAE
- **César Ramos**
Managing Director of TEDAE
- **Clara Tébar**
TEDAE Operations Secretary / Director

VICE-PRESIDENTS

- **Alfredo Martínez - Menéndez**
Aeronautics Vice-President of TEDAE. AIRBUS Spain.
- **Jorge Potti**
Space Vice-President of TEDAE. GMV INNOVATING SOLUTIONS, S.L.
- **Fernando Barbero**
Security Vice-President of TEDAE. INDRA SISTEMAS, S.A.
- **Javier Pradere**
Defense Vice-President of TEDAE. NAVANTIA, S.A. (until May, 2019).
- **Susana Lapique**
Defense Vice-President of TEDAE. NAVANTIA, S.A. (since May, 2019).

MEMBERS OF THE BOARD OF DIRECTORS (LEFT TO RIGHT): Carlos Gómez-Múgica (AIRBUS DEFENCE & SPACE S.A.U.), César Ramos (Managing Director of TEDAE), Francisco Javier Fernández de Retana (AERNNOVA AEROSPACE, S.A.), Susana Lapique (Defense Vice-President of TEDAE, NAVANTIA, S.A. (since May, 2019), Alfredo Martínez - Menéndez (Aeronautics Vice-President of TEDAE, AIRBUS Spain), Clara Tébar (TEDAE Operations Secretary / Director), Miguel Ángel Tapia (EUROPAVIA ESPAÑA, S.A.), Jaime de Rábago (President of TEDAE), Javier Romero (NAVANTIA, S.A.), María de la Malla (CENTUM SOLUTIONS, S.L.), Jorge García (INDRA SISTEMAS, S.A.) and Luis Furnells (TECNOBIT S.L.).

OTHER MEMBERS OF THE BOARD OF DIRECTORS: Jorge Potti (Space Vice-President of TEDAE, GMV INNOVATING SOLUTIONS, S.L.), Fernando Barbero (Security Vice-President of TEDAE, INDRA SISTEMAS, S.A.), Javier Pradere (Defense Vice-President of TEDAE, NAVANTIA, S.A. (until May, 2019), Manuel Huertas (AIRBUS OPERATIONS, S.L.), Fernando Varela (AIRBUS DEFENCE & SPACE, S.A.U.), Manuel de Oliveira (EVERIS AEROSPAZIAL Y DEFENSA S.L.), Pedro Sallent (EXPAL SYSTEMS S.A.), Ángel de Álvaro (GENERAL DYNAMICS EUROPEAN LAND SYSTEMS SANTA BÁRBARA SISTEMAS, S.A.), Plácido Márquez (ITP Aero, S.A.U.) and Santiago Hernández (SENER GRUPO DE INGENIERÍA, S.A.).



VOTING MEMBERS

- **Francisco Javier Fernández de Retana**
AERNNOVA AEROSPACE, S.A.
- **Carlos Gómez-Múgica**
AIRBUS DEFENCE & SPACE S.A.U.
- **Manuel Huertas**
AIRBUS OPERATIONS, S.L.
- **Fernando Varela**
AIRBUS DEFENCE & SPACE, S.A.U.
- **María de la Malla**
CENTUM SOLUTIONS, S.L.
- **Miguel Ángel Tapia**
EUROPAVIA ESPAÑA, S.A.
- **Manuel de Oliveira**
EVERIS AEROESPACIAL Y DEFENSA S.L.
- **Pedro Sallent**
EXPAL SYSTEMS S.A.
- **Ángel de Álvaro**
GENERAL DYNAMICS EUROPEAN LAND SYSTEMS SANTA BÁRBARA SISTEMAS, S.A.
- **Jorge García**
INDRA SISTEMAS, S.A.
- **Plácido Márquez**
ITP Aero, S. A. U.
- **Javier Romero**
NAVANTIA, S.A.
- **Santiago Hernández**
SENER GRUPO DE INGENIERÍA, S.A.
- **Luis Furnells**
TECNOBIT S.L.

The Board holds ordinary meetings every two months, and also meets upon the request of at least one-third of its members. It is in charge of overseeing the everyday management of Association matters.





04 SECTORS

activities
REPORT
2018



INNOVATION
11%
OF THE TURNOVER



TURNOVER
4.946
BILLION EUROS
turnover

INDUSTRIAL GDP¹
2.6%



MAIN FIGURES DEFENSE

EXPORTS ²
60%
OF THE TURNOVER



EMPLOYEES
20,519



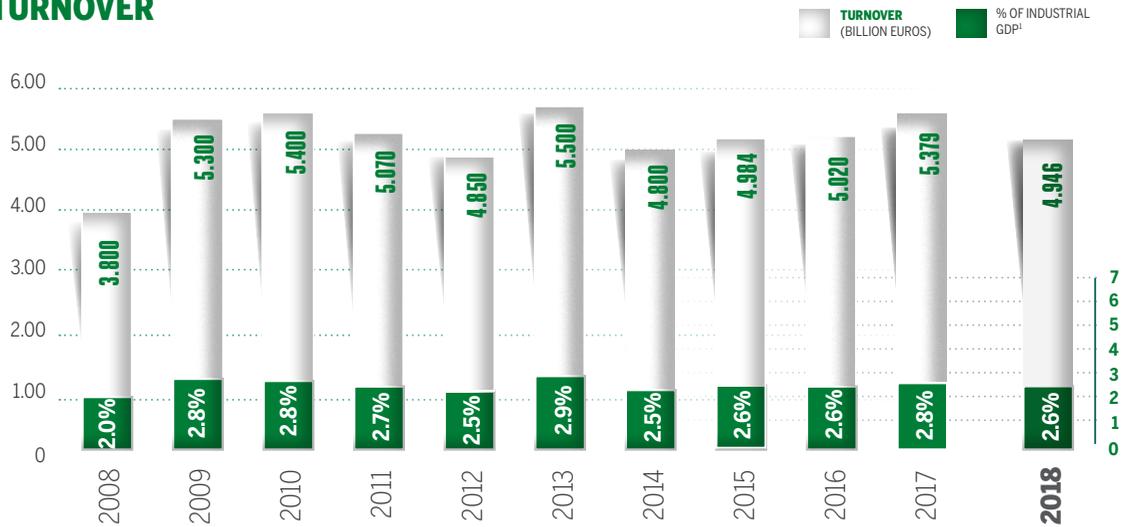
PRODUCTIVITY
3.9
TIMES THE NATIONAL
AVERAGE



¹ CALCULATED AS TOTAL TURNOVER
VS. GDP

² THERE IS NO OFFICIAL SECOMEX DATA
AVAILABLE AS OF THE PRINT DATE OF
THIS PUBLICATION

TURNOVER



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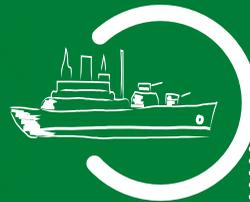
SALES PER SEGMENT



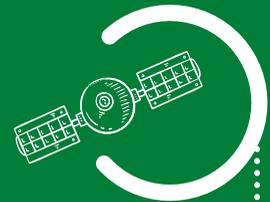
64%
AERONAUTICS



19%
LAND

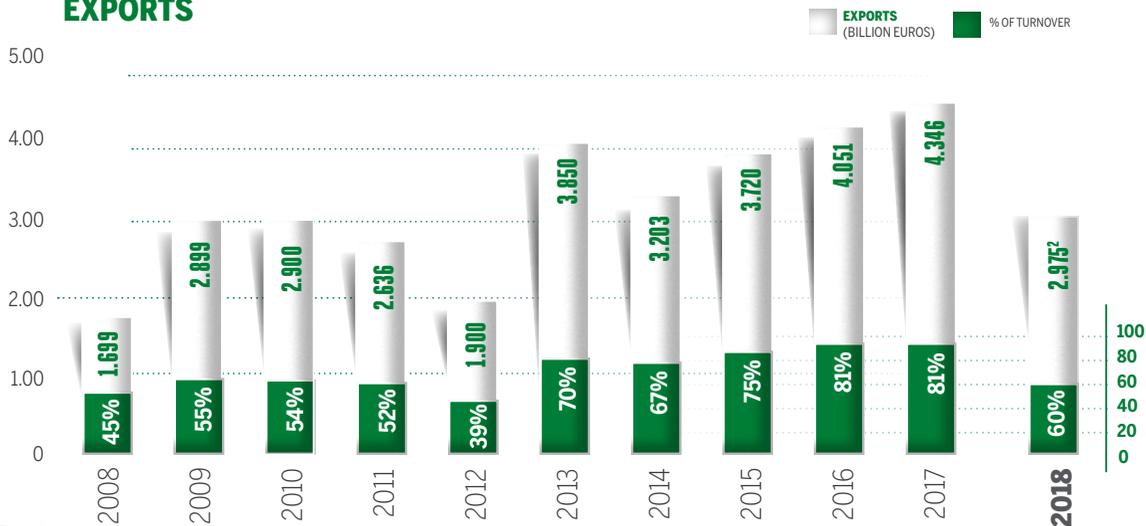


16%
SEA



1%
SPACE

EXPORTS



11111 0
0100 01

TECHNOLOGY

Defense

2018 saw the conception of the EDIDP Programme in Europe

Just as 2017 stood out as the year in which the Preparatory Action on Defence Research (PADR) launched its first few calls for proposal, 2018 was the year of the conception of the European Defence Industrial Development Programme (EDIDP), as well as the year in which the European Defence Fund (EDF) entered a decisive phase. Furthermore, the launch of new Armed Forces modernization programmes have set the stage for the development of the Spanish defense sector in 2018.

Continuing the work started in 2017, and wide aware of the need to be part of the conception and development of those highly important initiatives for the sector from the very start, the defense industry has engaged in intense coordination efforts with Public Administrations and other major stakeholders with the purpose of fostering and guaranteeing the participation of Spain in European actions.

.....



First of all, TEDAE continued with its participation in the European Defence Action Plan (EDAP) Interministerial Group and the PLATIN-TEDAE Coordination Group, both of them conceived with the purpose of maintaining a joint effort and a flow of information that enabled all stakeholders to have a shared view.

In addition, being aware of the great importance that generating leading European consortiums would have in the future, TEDAE organized several European events to facilitate networking among companies and other stakeholders in countries of the European Union. In line with this, both the NIAG (Nato Industrial Advisory Group) Plenary Session held in February and the Spanish Week of the European Session for Armament Officials (SERA) held in April counted with Industry Days for the generation of networking. Likewise, a meeting was held with French companies within the framework of Eurosatory 2018, organized in collaboration with GICAT (Group of Land & Air-Land Defence and Security Industries).

TEDAE organized several European events to facilitate networking among companies

During this year, the R&D Committee continued its monitoring, positioning and coordination efforts in relation to European initiatives jointly with Public Administrations - a task that TEDAE has leveraged to strengthen its communication, information, consultation, reporting and monitoring actions in relation with EDAP.

Worth noting among the most important communication efforts are the organization of the First Defence Forum with Jorge Domecq, Director of EDA (European Defence Agency) and Javier Solana, Former Senior Representative for Foreign Policy and Public Security. In addition, the Defence Communication Group continued working on updating talking points and providing support to the engagement of the association in communication actions.



In the field of foreign support and internationalization, TEDAE's Technological-Industrial Defense Task Force worked jointly with OFICAEX on a day-to-day basis, while also organizing the Spanish Halls in Eurosatory (Paris, June 2018) and EDEX (Cairo, December 2018). Additionally, TEDAE accompanied the Official Spanish Delegation -headed by SEDEF- in its visit to the KADEX Fair (Astana, Kazakhstan, May 2018). Lastly, the Industrial Seminar was held for yet another year at the 2018 Course for Defense Attachés and Advisors.

The Defense Commission was also proud to learn about the announcement of the 1st edition of the International Defense Fair (FEINDEF), jointly organized by AESMIDE and TEDAE with the support of the Ministry of Defense, and engaged in follow-up actions to ensure the success of this event.

At a European level, of special note are our participation in the Strategic Groups of the AeroSpace and Defence Industries Association of Europe (ASD), our presence in the NIAG and the follow-up and coordination of ongoing actions in the Lol (Letter of Intent), OCCAR (Organisation for Joint Armament Cooperation), NATO and EDA.

Our disclosure of figures, high added value communication efforts and our coordination of industry-related initiatives with the Ministry of Defense are other activities in which TEDAE has engaged in 2018 in the field of Defense.

Javier Pradere

**Defense Vice-President of
TEDAE**



THE EVOLUTION of the international political landscape and the changes that took place at a national level set the pace for the Defense Commission during 2018.

In regard to the international landscape, there are three defining situations of note. The first one is the position of the United States in Europe. As of late, it has been characterized by the pressure of the western superpower on NATO countries with the purpose of accomplishing a greater commitment to defense. The second one, a possible shift in the European model as a result of the Brexit, has brought about a reflection on the need for a stronger European Union that can better adapt to the challenges of the 21st century, in line with a global Defense and Security. Lastly, the launch of the European Defence Action Plan (EDAP), and more importantly, the conception of a European Defence Fund (EDF) expected to start operations in 2021, imply a new way to see Europe and a new paradigm based on the development of joint defense capabilities.

At a national level, the change of government during the summer is something that cannot be

overlooked. This new situation implied generating closer institutional relations with the purpose of moving forward with the approval of the New Modernization Programmes of the Armed Forces.

As a consequence of all of the aforementioned changes, and after the renewal of the Defense executive Commission, a reform of the Rules of Procedure of this commission was set in motion to enable an expansion of its Executive Board, so as to be prepared to face the new challenges of the sector.

In this regard, and given the significant number of issues to be addressed, several Work Groups were assembled, including one focused on FEINDEF whose goal would be to follow-up and provide advice on anything related to this event, whose first edition is to be held in 2019. The other work groups included one focused on Cost Assessment, and others focused on Industrial Defense Strategy, Contracting and Supply Chain. All of these groups would be able to handle issues as current as the new initiatives to finance the development of capabilities in Europe, the reform of Regulations for defense exports and the organization of the International Defense Fair (FEINDEF).



Defence

In regard to this, it should be noted that TEDAE also continued its involvement in the EDAP Interministerial Group and the PLATIN-TEDAE Coordination Group, in addition to organizing several European events that facilitated networking among companies and other stakeholders from European Union countries. During Eurosatory we met with French companies - an event that was organized in collaboration with GICAT (Group of Land & Air-Land Defence and Security Industries). The same took place during the Industry Days, the NIAG (Nato Industrial Advisory Group) Plenary Session and the Spanish Week of the European Session for Armament Officials.

After almost 40 years working in the sector, I would like to once again express my gratitude for the high level of support and participation by members -both within the Defense Commission and its new expanded Leadership-, as well as for the excellent work performed by the Committees and their leaders.

And lastly, I would like to thank the TEDAE team for its fantastic support and collaboration, which have been instrumental in the undertakings of this Commission and its Leadership, as well as the Spanish Administration for its excellent disposition toward this Commission, and NAVANTIA for lending us their facilities to hold our meetings.



INNOVATION
9%
OF THE TURNOVER



TURNOVER
9.029
BILLION EUROS
turnover



INDUSTRIAL GDP¹
4.7%

MAIN FIGURES AERONAUTICS



EXPORTS
67%
OF THE TURNOVER



EMPLOYEES
43,265



PRODUCTIVITY
3.4
TIMES THE NATIONAL
AVERAGE

¹ CALCULATED AS TOTAL TURNOVER
VS. GDP

TURNOVER



PRODUCTION CENTERS SPANISH COMPANIES CERTIFIED IN AERONAUTICS

679

PRODUCTION CENTERS



42%

58%

DEFENSE
CIVILIAN

GROWTH SECTOR SIZE PROGRESS

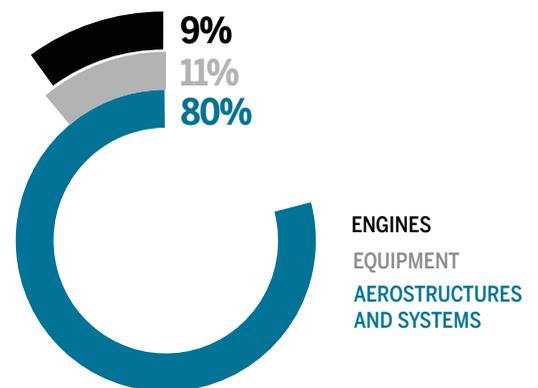


2000
TURNOVER
2.050
BILLION EUROS

2008
TURNOVER
5.000
BILLION EUROS

2018
TURNOVER
9.029
BILLION EUROS

SALES PER SEGMENT



TECHNOLOGY

.....

Aeronautics

The most important milestone attained in 2018 was the introduction of the Sectoral Agenda



The most important milestone attained in 2018 was the introduction of the *Sectoral Agenda of the Aeronautics Industry* in collaboration with Reyes Maroto, Ministry of Industry, Commerce and Tourism, on December 4th at the offices of the Ministry. This event was attended by over 120 representatives from industries and the most important aeronautical institutions.

.....

The Agenda, developed in close collaboration with the Ministry, includes a detailed analysis of the current state of the aeronautical industrial sector and its impact on the Spanish economy. It also proposes specific institutional incentive and support measures that include a long-term support program specifically designed for the aeronautical sector, financing models with aid measures that are in line with those of the European landscape, and, as part of the EU R&D Framework, the implementation of an educational structure of excellence, an active participation in digitalization programs toward Industry 4.0 and the coordination with administrations.

For its part, the R&D Committee has been actively involved in the development of the Aeronautical Research Strategic Agenda in collaboration with the Spanish Aerospace Technology Platform (*Spanish Aerospace Technology Platform*, PAE). In the context of Europe, industry monitoring and positioning efforts have been undertaken in relation to the design of the new “*Horizon Europe*” framework program. In this regard, one important development is the drafting of the TEDAE aeronautics positioning document as part of the 9th Framework Program, presented before the CDTI in May.

The Supply Chain and SME Committee has prioritized the initiatives related to the transition of the sector toward Industry 4.0. In this regard, it has monitored the engagement of companies with the HADA (Digital Advanced Self-Diagnosis) tool of the MINCOTUR. Presentations by experts were also held on the subject of digital transformation trends in the sector. Lastly, the committee has continued its work in cooperation with the SPACE España association with the purpose of increasing the competitiveness of the Spanish supply chain.

The Services Committee also remained quite active in 2018. During this year, the first edition of the Aeronautics MRO Technology Trends Workshop, held in April at the main offices of ALTRAN, was attended by representatives of over 22 companies of this sub-sector with the aim of encouraging networking and fostering

technological cooperation projects in the field of aircraft maintenance. The committee also developed the “*Catálogo de Fichas de Servicios Aeronáuticos de la Industria Española*” (Spanish Industry Aeronautical Services Catalog) which lists the services offered by 22 companies of the Association and started drafting the “*Análisis del Sector Servicios Aeronáuticos en España*” (Analysis of the Spanish Aeronautical Services Sector) document.

The activities of the Aviation Committee were divided into three lines of work. First, the priorities of companies in the field of aviation were identified and defined. Second, work was performed toward the preparation of the “*El Sector Industrial de los RPAs de Defensa y Seguridad en España*” (The Defense & Security RPA Industrial Sector in Spain) document. Lastly, the committee monitored the Civil Aviation Business Unit (CABU) in relation to matters that affect the Spanish industry.

Among the efforts of the Communication Work Group, worth noting are the monitoring of sectoral milestones and the preparation of press releases and advertising in relation to the workshops and documents prepared by the Aeronautical Commission.

For yet another year, TEDAE attended the most important gatherings of the aeronautical sector, including ADM Seville in May -where the Association had its own booth- and UNVEX, held in León by the end of the same month, where TEDAE took part in the Industrial Outlook Conference.

In the field of internationalization, we organized the Spanish Hall of FIDAE 2018, held in April in Chile - the country that hosts the most important aerospace sector fair in Latin America. The Spanish Hall enjoyed the presence of 9 exhibitors and was visited by a great number of national and international delegations during the fair.





Alfredo Martínez-Menéndez

**Aeronautics Vice-President of
TEDAE**

WITHOUT A DOUBT, THE PRESENTATION of the “Sectoral Agenda of the Aeronautics Industry” by Minister Maroto was the most important event of 2018 in relation to the sector, and a major accomplishment for the Aeronautical area of the Association.

Now comes the time to set it in motion and create the necessary conditions for the accomplishment of the planned objectives. In this regard, it is important to note that, like many others, the “Aeronautics Industry” requires the coordination of various ministerial

departments for its development, given that it is conditioned by highly diverse cross-cutting fields.

R&D, emissions and waste, training -both professional and academic-, aviation regulations, REACH, military programs and, undoubtedly, the management of financial resources to provide support and enable future developments, will condition the development of the sector during the next few years, which is why these issues must be faced in a coordinated manner at government level.



Aeronautics

Commercial Aviation

As for Commercial Aviation, contracts have been entered into for the purchase of 1,640 aircraft* in 2018. Based on this, we could say that it is a transition year when compared to the 1,300 of 2016, but being far from the more than 2,000 units of 2017 and even further from the 3,000 purchases at the turn of the decade.

If we focus on deliveries, the numbers keep growing and, once again, a record has been broken with 1,628 deliveries (Boeing 808, Airbus 800, Embraer 22). There is no doubt that the efforts of manufacturers -both in relation to the optimization of their facilities and the structure of the supply chains- are leading to levels of deliveries that were unthinkable only a decade ago, though this is logically resulting in significant strains in the management of deliveries both for major manufacturers and their supply chains and for motorists.

With these purchase and delivery figures, the backlog remains in the ballpark of 8 years which, while positive for the sector, is still a handicap for airlines that sometimes cannot meet their seating demands that, lest we forget, are expected to double during the following 20 years, requiring approximately 37,000 new aircraft. This can only mean that manufacturers must optimize even more all of their resources -both internal and external- in order to attain these numbers in a way that is satisfactory to their clients.

() Aircraft with more than 100 seats*

Defense Aeronautics

While the decisions made during Q4 2018 by the Ministry of Defense in relation to the purchase of aviation material have not been quite as expected, they will keep many TEDAE companies busy:

- Purchase of 12 Chinook helicopters to maintain the heavy-lift helicopter capabilities.
- 2nd batch of NH90, 23 helicopters, to complete the number of units that had initially been targeted.
- Increased expenditure limit for the Eurofighter to avoid obsolescence and update operational capabilities.

As for the new European Euro Male and FCAS programs, necessary steps have been taken for their development and industrialization in relation to the national industry.

Additionally, and regarding the initiatives of the European Union to strengthen the Defense industry, the regulation related to EDIDP (2019/2020 European Defence Industrial Development Programme) was approved by mid-2018, and during the last quarter of the year headway was made toward the preparation of its Work Programme (WP) which, for the aeronautics sector in particular, involves at least 5 "working topics," one of them being MALE REPAS via a direct award.

In June of 2018, the Commission approved the creation of the European Defence Fund (EDF) in full, with € 13 Bn. supplied by the EU for the next 7 years, plus € 28 Bn. supplied by Member States, for the purpose of supporting research, technology and defense development efforts, working as a catalyst of an innovative and competitive technological and industrial foundation. In late 2018 the European Commission published the EDF Regulation, to be debated in the "Trilogue" in 2019.



INNOVATION
11%
OF THE TURNOVER



TURNOVER
155
BILLION Euros
turnover

PRODUCTIVITY
TIMES THE NATIONAL
AVERAGE

2.6



MAIN FIGURES SECURITY

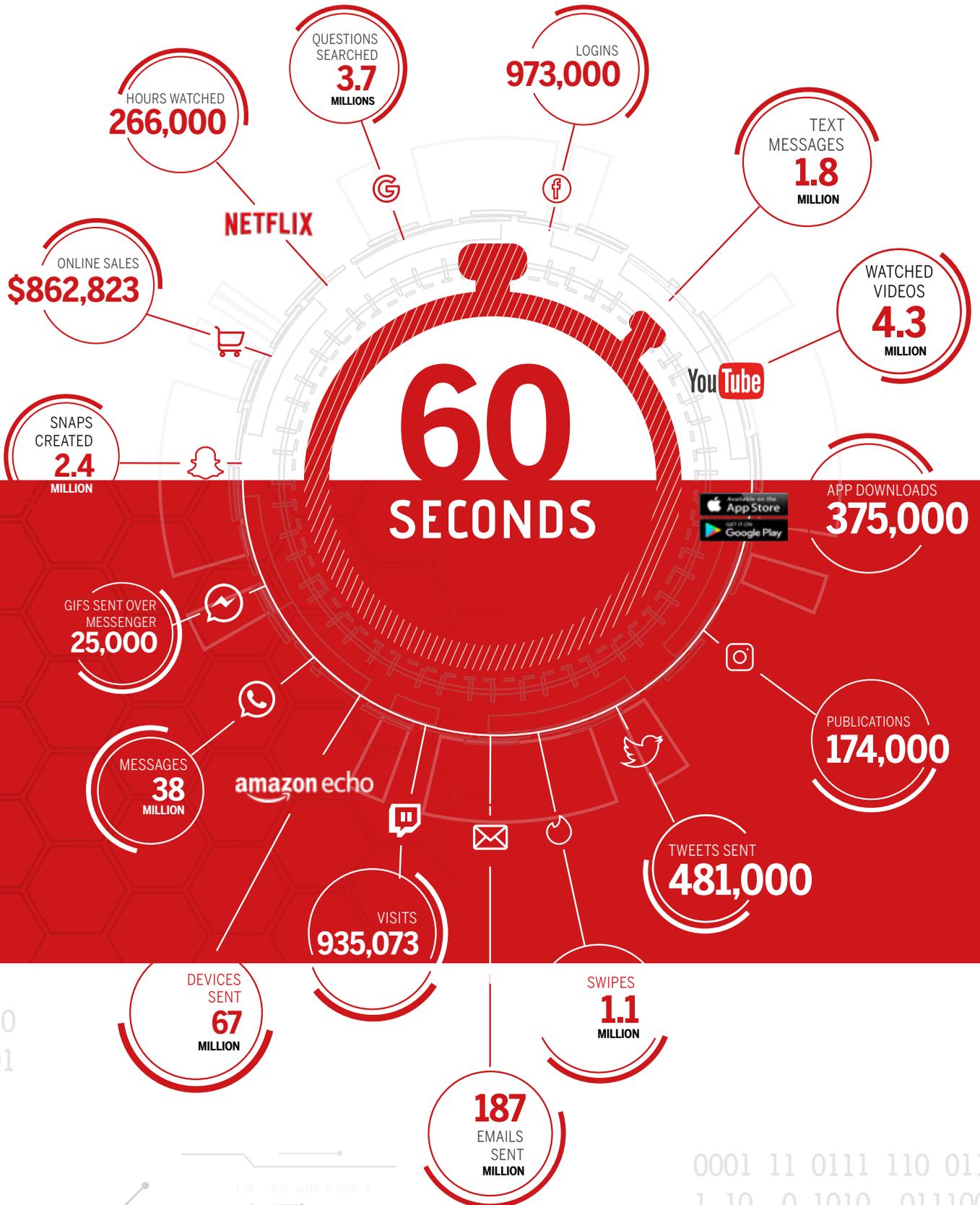
EXPORTS
22%
OF THE TURNOVER



EMPLOYEES
974



WHAT HAPPENED ON THE INTERNET EVERY MINUTE OF 2018?



SOURCE: @LORILEWIS / @OFFICIALLYCHADD

TECHNOLOGY

.....

Security

TEDAE continues its collaboration with the CDTI (Centre for the Development of Industrial Technology) for the promotion of the Horizon 2020 program



In the last few years, Spain has been one of the countries with the highest commitment to increasing the safety of its citizens, which has become a key issue in any 21st century society. In an ever-changing environment of technology 4.0, which is pervasive across Spain and Europe, it is paramount to find new methods to improve national security strategies, in a joint effort between industry and the administration toward establishing far-reaching goals.

Nowadays, security can no longer focus solely on conventional threats, because they are now different, more varied and increasingly elaborate, making it necessary to generate broader, more complex and specific strategies to combat them.

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Spain has been one of the countries with the highest commitment to increasing the safety of its citizens

Lately, the differences between internal Security operations and others targeting external threats are not so clearly defined. One of the boundaries used to be related to the organizations that had jurisdiction on each matter, with Law Enforcement Agencies being in charge of domestic actions and the Armed Forces being charged with facing external threats.

The truth is that since the introduction of technology in every aspect of modern society, Security has been forced to stay up-to-date and advance at the same pace. Law Enforcement Agencies have been forced to introduce new operational capabilities to increase the security and protection of the citizenry. But enhancing the operational capabilities of LEAs requires knowing their needs, which is why a Community of Users has been created by several Government organizations so that each end user of the security sector is able to define their needs and the main lines of work that require investment to generate a solid security industrial framework in our country.

Succeeding in the creation of this structured and solid Security framework in Spain requires having a National Security Strategy that integrates all government organizations involved, as well as the industry. With sights on this goal, TEDAE is working on the development of a Technological Industrial Security Plan (PTIS), in line with those of the main countries of the European Union (France, Germany, Italy, United Kingdom and Sweden, among others). Major advances were made throughout 2018 in defining the strategic axes of this Plan, while also contacting several Public Administration organizations to present the lines of work of the Association, obtaining feedback by experts in the field of Security.

Additionally, TEDAE continued its collaboration with the Ministry of the Interior to maintain the communication between industry agents and the operators of their technologies. Furthermore, the lines of communication with other stakeholders such as the Spanish Armed Forces remain open, given that their collaboration is essential to move forward on matters such as border control and maritime security.

Another top-priority matter for the Security Sector, both in Spain and across the globe, is Cybersecurity. No one could have imagined ten years ago the major impact that Internet has today in the life of every citizen. Nor how one of the most transcendent inventions in history is leading to new types of threats and crimes that are today cataloged as cyberterrorism.



At TEDAE we are well aware of the importance of these types of threats, which is why we created a cybersecurity work group that, during 2018, held the first TEDAE Cybersecurity Workshop in collaboration with the CCN (National Cryptologic Center), which was attended by major experts in the field of Cybersecurity. The Cybersecurity Group aims to collaborate to the extent possible with educational institutions in the field, fostering the creation of talent and steering the characteristics of this education to guarantee the availability of properly trained personnel to companies of this sector, as well as to position the TEDAE Cybersecurity Group as the go-to nexus before all other stakeholders in the sector.

Elsewhere, TEDAE continues its collaboration with the CDTI (Centre for the Development of Industrial Technology) toward the promotion of the Horizon 2020 program and its Safe Society challenge in support of its companies, considering innovation as a key element for their advancement and increased competitiveness.

Fernando Barbero

Security Vice-President of
TEDAE



2018 BROUGHT WITH IT a period of challenges and intense activities for the Commission, but also a period of change that mainly resulted in the renewal of the Executive Board, with the arrival of new members of the association to this body, who guaranteed a strengthening of the group's capabilities and ambitions.

The Commission continued its work toward the development of a Technological Industrial Security Plan (PTIS). Major strides were made throughout 2018 toward defining the contents of the Plan. Special attention was given to the need to increase the knowledge regarding the scope and size of the sector, identifying and prioritizing related technologies while contacting various bodies of the Public Administration with the purpose of introducing them to the lines of work of the Association. The main contents and objectives of the PTIS were explained at the Industry Commission of the Congress of Deputies on the occasion of our visit to the institution by the end of last year. We also started contacting the Community of Security Users (CoU), which operates under the wing of the SDG-SICS, to explore possible collaborations with the community of Law Enforcement Agencies and other users.

The activities of TEDAE's Cybersecurity Group continued throughout the year. In 2018, the first Cybersecurity workshop organized by Tedae was held, in collaboration with the National Cryptologic Center: the event attracted a wide attendance of relevant institutions and companies of the sector. Throughout the year, the group held a series of meetings for the furtherance of its program, which resulted in a significant expansion of the working fields and its goals, specifically in regard to the standardization and certification of cybersecurity products.

All of these activities, which were made possible by the continued collaboration of the members of the Commission, have always remained in line with its objectives and mission: to foster the furtherance of Technological Capabilities in the field of Security to address the needs and challenges of Law Enforcement Agencies and other stakeholders whose responsibilities include the protection of society, and to contribute toward a wider and more solid industrial foundation within this market.

Security

2018 brought with it a period of challenges and intense activities for the Security Commission

The Security Commission has been working on the development of a Technological Industrial Security Plan (PTIS)

.....



INNOVATION
11%
OF THE TURNOVER



TURNOVER
867
MILLION
turnover



INDUSTRIAL GDP¹
0.4%

MAIN FIGURES SPACE



EXPORTS
83%
OF THE TURNOVER



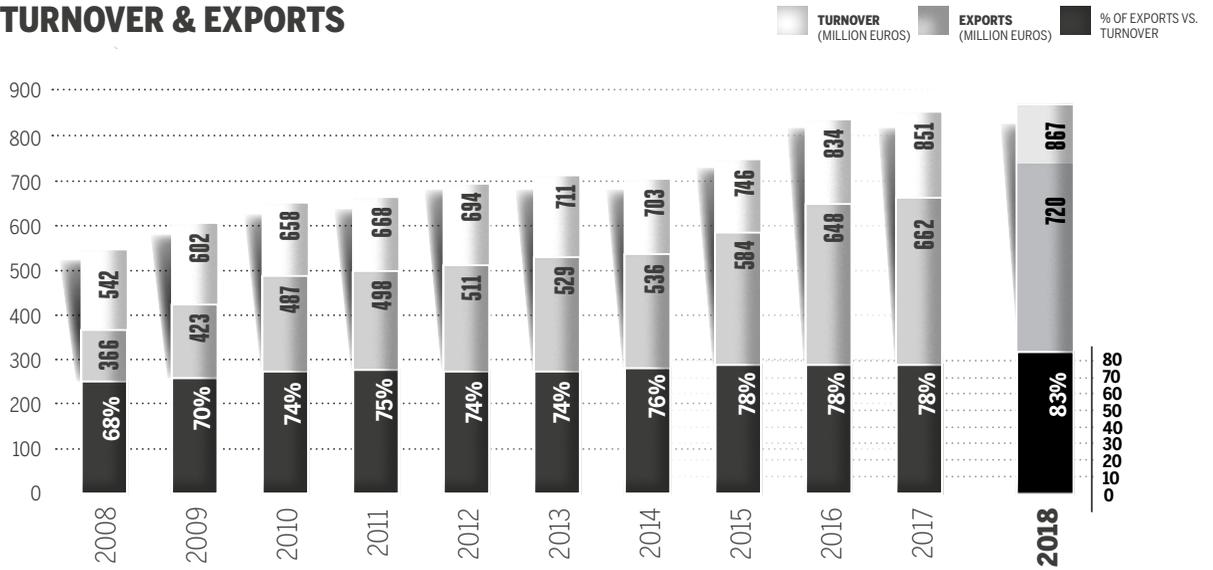
EMPLOYEES
3,909



PRODUCTIVITY
3.6
TIMES THE NATIONAL
AVERAGE

¹ CALCULATED AS TOTAL TURNOVER VS. GDP

TURNOVER & EXPORTS



TOP 10 EUROPEAN COUNTRIES RANKED BY NUMBER OF EMPLOYEES



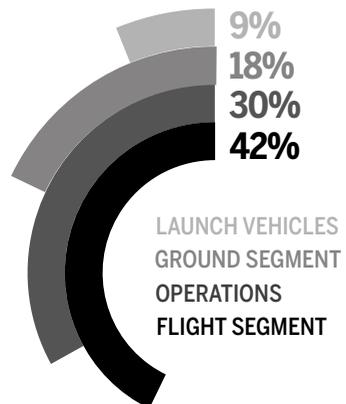
GROWTH SECTOR SIZE PROGRESS

2006
TURNOVER
434 MILLION
EUROS



2018
TURNOVER
867 MILLION
EUROS

SALES PER SEGMENT

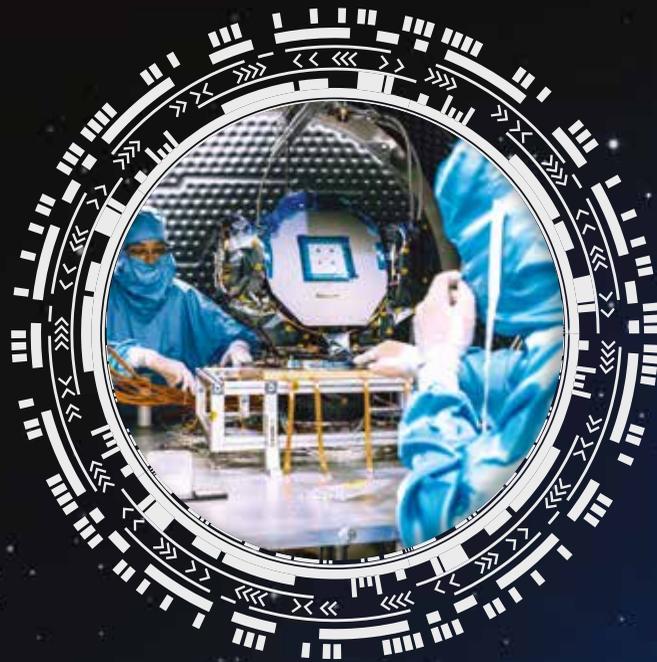


TECHNOLOGY

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Space

In 2018 Spain started charing the ESA Ministerial Council in preparation of the upcoming assembly of this Council to be held in 2019, where a common space strategy for ESA member states is to be approved.



Within this landscape, the Space Commission of TEDAE had a very active role throughout the year in representing the interests of the Spanish space sector, continuing its efforts to convey the need to count with a Space industry policy and stressing the importance of the industry's commission through the Space Policy committees, R&D, Applications and supply chain and the various work groups.

Throughout the year, the Space Policy Committee has implemented a working plan in close collaboration with the Administration, drafting the contents of the Spanish Space Sector Agenda and participating in different meetings and gatherings with various organizations and institutions related to space in our country.

The companies of the Commission also participate in the Spanish Aerospace Platform through the R&D Committee, whose members have a very active role both in the drafting of the Space R&D Strategic Agenda and in relation to its efforts in the work groups.

For its part, the Applications Committee has engaged in efforts to prepare a Study on the Space Applications expected to see the light of day in 2019, in collaboration with the Autonomous University of Madrid,

.....

In regard to communication, during 2018 we have continued to work with the purpose of advocating the benefits of the space sector in our day to day and of reaching the public opinion. Other commendable actions were the presentation of the Sector's Statistics, which show a growth that is 8.4 times faster than that of the rest of the Spanish economy, and the publication of the 2017 Space Yearbook containing the most important events and protagonists for that year, which was presented before specialized media outlets during a gathering at TEDAE.



The Space Commission of TEDAE had a very active role throughout the year in representing the interests of the Spanish space sector

This is in addition to the publication of *Revista Proespacio*, which contains reports, news and interviews with people of interest for the sector, who give their different outlooks and show us different perspectives, such as astronaut Pedro Duque, who would three months later be appointed Minister of Science, Innovation and Universities.

Several press releases were published during the year regarding the participation of the Spanish space industry in the most important international programs and missions, as well as touching on other interesting events.

Worth noting is the long-expected launch of PAZ, the Spanish Earth Observation radar satellite that was sent to orbit aboard a Falcon 9 launched from the United States Vandenberg launch complex on February 28. March saw the launch of the Hispasat 30W-6 satellite from Cape Canaveral, which will contribute to the reduction of the digital gap in the north of Africa, Latin America or the Iberian Peninsula; and the Sentinel 3B satellite for the study of oceans and vegetation, which would one month later send its first image of the Wedell Sea in Antarctica as part of the Copernicus Program.

During the second half of the year, four new Galileo satellites (23-26) were launched aboard an Ariane 5 rocket, expanding the total coverage of the satellite constellation to a level never seen before by ESA, and on October 20 the BepiColombo mission to Mercury was launched to research the innermost planet of the Solar System and collect data as of yet unknown to the scientific community.

All of these milestones are evidence of the significance of an industry that takes part in important missions and programs that, from space, make life on Earth easier, encouraging progress in our society, improving communications, fostering security and contributing to scientific development and economic growth, turning the space industry into an international beacon of technological development.

Jorge Potti

Space Vice-President of
TEDAE



IN EARLY 2018 we witnessed the long-expected launch of PAZ, the Spanish Earth Observation radar satellite, which reached its orbital station in February of 2018. One month later, the Hispasat 30W-6 was launched, which will contribute to the reduction of the digital gap in the north of Africa, Latin America and the Iberian Peninsula. The following month came the turn of the Sentinel 3B satellite -part of the European Copernicus program for the study of oceans and vegetation-, which one month later would send its first image of Weddel Sea in Antarctica. The second half of the year saw the successful launch of four new Galileo satellites (23-26) aboard an Ariane 5 rocket, thereby expanding the total coverage of the largest satellite constellation ever launched by ESA and coming very close to completing Galileo - the most ambitious Space program in history. In the science arena, on October 20 the BepiColombo Mission to Mercury set off on its journey to research the innermost planet of the Solar System and collect data as of yet unknown to the scientific community.

The Spanish space industry has played a major part in all of these missions. And they also show us the increasing impact that the space sector has on the economy, security and wellbeing of the citizenry, improving communications, security, and helping combat climate change, providing

positioning and reference systems when needed and boosting scientific knowledge.

2018 has seen preparatory activities with sights on the Ministerial Meeting of the ESA to be held in Seville on November 27 and 28 of 2019, which has been dubbed *Space19+*. During this meeting, ESA member states will approve and commit to space programs that will materialize during upcoming years.

Within this landscape, the TEDAE Space Commission has had a very active role in representing the interests of the Spanish space sector throughout the year, continuing its efforts to convey the need to have a Space industry policy and stressing the importance of the industry. A work plan has been set in motion in 2018 jointly with the Administration to develop the content of the Spanish Space Sector Agenda. Spain's contribution to the ESA is the pillar that supports the sector and is of paramount importance for the future of our industry. With Space 19+, Spain must therefore reach a level of contribution to the Agency's programs that is at least on par with our GDP.



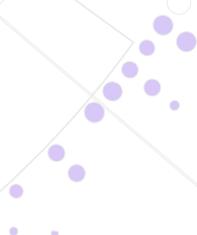
Space

IN EARLY 2018 we witnessed the long-expected launch of PAZ

The TEDAE Space Commission has had a very active role in representing the interests of the Spanish space sector.

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05 CROSS-CUTTING AREAS

activities
REPORT
2018

CROSS-CUTTING AREAS

Quality



TEDAE IS PARTICIPATING in the development of the Aerospace and Defense Certification Scheme (ICOP Scheme), a worldwide certification scheme that the Association is leading in Spain, establishing the terms of reference, operational policies and general requirements that will apply to the Certification Body Management Committee (CBMC) of TEDAE within the framework of the European Sector

of the International Aerospace Quality Group (IAQG).

In addition, it establishes the requirements of the Aviation, Space and Defense Quality Management System Certification Programs deployed by TEDAE, developing procedures and rules to complement the procedures and rules of the IAQG/EAQG where applicable, and identifying and

supporting the resources involved in various activities - mainly related to oversight and monitoring. Within this system, TEDAE is responsible for approving the certification entities authorized by the National Accreditation Body (ENAC) through CBMC -the supervisory organization of the Scheme in Spain. Furthermore, TEDAE has the responsibility of authenticating the auditors in Spain



through the Auditor Authentication Body (AAB).

TEDAE's goals in relation to Quality during 2018 have included resuming the activities of the TEDAE Quality Committee and maintaining the leadership of TEDAE in the Aerospace and Defense Certification Scheme (ICOP Scheme) by promoting and supporting activities associated with this Scheme.

With sights on accomplishing these goals, several lines of work have started being implemented under the supervision of the CBMC of TEDAE. In this regard, it is worth noting that as of the end of 2018, there are a total of 671 certified sites in Spain, with 114 certified sites that have been certified by certification bodies that are not under the control of TEDAE.

83% (557 sites out of 671) have been certified by Certification Bodies approved by the CBMC of TEDAE, and 17% (114 sites out of 671) have been certified by Certification Bodies that have not been approved by the CBMC of TEDAE.

In the year 2018 a total of 253 sites corresponding to 174 certificates have

been certified/had their certificate renewed; in addition, the AAB of TEDAE has performed a total of 29 authentications/re-authentications of aerospace auditors; Certification bodies and the ENAC have been subject to oversight; we have validated the translation of the new courses established by the IAQG in line with the 9100:2016 and 9020:2016 standards and we have maintained our relationship with the ENAC and the Spanish Quality Association (AEC), among other activities, which have enabled TEDAE to gain a solid footing in the administration of the Scheme.

The activities of the Quality Committee have been resumed in 2018. This Committee has set in motion four Work Groups on the following issues:

- ❑ Risk Management
- ❑ Third-party Service purchases
- ❑ Root cause; Human factors
- ❑ Falsified products
- ❑ Product safety

All of these groups have been launched and started working during FY2018.

CROSS-CUTTING AREAS

Communication

ANOTHER YEAR OF COMMUNICATION

2018 is a year that consolidated the efforts of TEDAE toward an effective and open communication, both internal among its members and external with society, with the purpose of reaching broader audiences with the accounts of activities and benefits offered by TEDAE member companies to all citizens.

One of the most important events of the year for TEDAE is the “*Encuentro Anual TEDAE Perspectivas 2018*” (TEDAE Annual Meeting 2018 Perspectives) that, for the second year in a row brought

together the executives of member companies of the association to share future expectations and priorities, while also finding a common view on the most important challenges of the four sectors (Defense, Security, Aeronautics and Space). The gathering was attended by many government representatives, organizations and institutions related to TEDAE sectors, and this time around -as was also the case on the first edition-, it was attended by Agustín Conde, Defense Secretary of State, and Begoña Cristeto, Secretary General of Industry and SMEs.

THE FIRST TEDAE AWARDS were held in late October on the occasion of the 10th anniversary of the Association, with the purpose of recognizing people and institutions whose technical, managerial, entrepreneurial, communicational or academic efforts significantly contribute to the advancement of the Defense, Aeronautics, Security and Space industry and technologies, divided into six categories -one for each sector plus one to Lifetime Professional Achievement and one to Professional Future.

In addition, the presentation of the 1st edition of FEINDEF, the International Defense Fair organized by TEDAE and AESMIDE with the support of the Ministry of Defense, left no doubt about the communicational component of the fair. While the objective of the event is to project the industrial, technological and R&D capabilities of the country internationally in the field of defense and security, and it is targeted at the various defense and security stakeholders in Europe and the national and international market, the Fair ultimately intends to bring the defense culture to the citizens so that they learn what the defense industry has to offer to the benefit of their wellbeing and security. The fair was presented in late November at the Rafael de Pino Foundation, a presentation that was attended by authorities such as Ángel Olivares, Defense Secretary

of State; Admiral Santiago Ramón González, Weaponry and Materiel Director (DGAM); and Gerardo Sánchez Revenga and Jaime de Rábago, presidents of the AESMIDE and TEDAE associations. The event gathered together a significant share of the industry and a number of media outlets.

Worth a special mention is the Meeting organized by Nueva Economía Forum -with the sponsorship of TEDAE- with Jorge Domecq, General Manager of the European Defence Agency in relation to the European Defence Action Plan, presented by Javier Solana, former Secretary General of NATO and former High Representative of the Union for Foreign Affairs and Security Policy.

2018 has also been a year in which the dedication and commitment of the defense, security, aeronautics and space communication groups have made significant strides toward the final objective of having the citizenry know first hand the activities performed by member companies. These groups, composed of personnel of communication departments of member companies, meet throughout the year to share ideas, propose initiatives and develop outreach actions. They are therefore an important communicational asset that makes TEDAE proud.

**ABC NEWSPAPER
JUNE 2018**

Interview with Jaime de Rábago, president of TEDAE: "For the industry it is vital to activate the Defense investment cycle"

**EL PAÍS NEWSPAPER
JULY 2018**

"Spain is the fifth country in Europe with the highest number of employees in the space sector"

**LA VANGUARDIA NEWSPAPER
OCTOBER 2018**

"The upcoming mission to Mercury is 8% Spanish"

**AIRE MAGAZINE Nº 79
NOVEMBER 2018**

"Sectoral presentation of the Aeronautics Industry Agenda"



IN MASS MEDIA

In addition to those that were already mentioned, other events that caught the attention of the media were the General Assembly -that this year was attended by Ángel Olivares, Defense Secretary of State-, the "Situación y Futuro del Sector Aeronáutico Militar en España" session (Situation and Future of the Military Aeronautical Sector in Spain), the presentation of the figures for 2017, a meeting with students organized by TEDAE member companies of the Space industry -in collaboration with CaixaForum Madrid on the occasion of the World Space Week- and NEW SPACE SPAIN 2018 in Vigo.

The launch of the Paz satellite; the presentation of the Sectoral Agenda of the Aeronautics Industry developed by TEDAE and the Ministry of Industry, Commerce and Tourism; the participation of the association in the Aerospace & Defence Meeting (ADM) in Seville and the 1st TEDAE Cybersecurity workshop also saw significant coverage in both general and specialized media outlets.

The Spainsat NG satellites, the Bepicolombo mission, MetOp-C, the Galileo or Cheops European Satellite Navigation System and, more specifically, the involvement of

the Spanish space industry in these missions, were some of the space milestones picked up by the media.

Spain's participation in international fairs is always widely covered by the media; this time around TEDAE coordinated Spain's activities in EDEX 2018 in Egypt, Eurosatory 2018, KADEX, FIDAE and Satellite 2018.

PUBLICATIONS

Two issues of the ProEspacio magazine were published in 2018, both as a printed and electronic version in Spanish and English. Both editions counted with the experience and vision of professional experts such as Pedro Duque, astronaut and Minister of Science, Innovation and Universities; Luis Gómez, CEO of Alter Technology TÜV Nord, Héctor Guerrero, of the General Sub-directorate of Space Systems of the National Institute of Aerospace Technology (INTA); Fernando Alejandro Martínez, Defense Chief of Staff (JEMAD) and Army General; Fernando del Rey, CEO of CRISA; and Jaime de Rábago, president of TEDAE. These issues included reports on interesting subjects, such as the space goal of reaching Mars or Moon settlement by humans through the use of spaceships.



SECTORAL AGENDA OF THE AERONAUTICS INDUSTRY
DECEMBER 2018



SPACE SECTOR YEARBOOK 2017
OCTOBER 2018

The Sectoral Agenda of the Aeronautics Industry was presented in December, which includes a detailed analysis of the current state of the aeronautical industrial sector, and its impact on the Spanish economy. This publication

proposes objectives that include duplicating the turnover to reach 1% of the GDP by 2025, strengthening and internationalizing the industrial fabric of the aeronautical value chain,

consolidating the export share at 80% of the turnover and participating in European defense industrial projects, among other ambitious and optimistic goals.

WEB AND SOCIAL MEDIA (www.tedae.org)

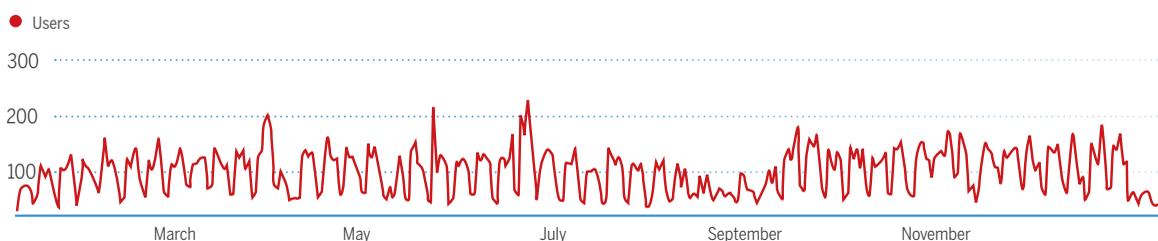
Thanks to having added novel and interesting contents for all kinds of audiences to TEDAE's website, both the number of visits (almost 130,000) and the number of new users (23,490 visitors) surpassed those of the previous year.

LINKEDIN

The Association's LinkedIn page has also hit a record audience. This year, our account has reached an average of 250 visitors per day and gained approximately 800 new followers, exceeding a total of 1,000 followers whose profiles are mostly considered to be our target audience.

AUDIENCE OVERVIEW

OVERVIEW





CATALOG OF AERONAUTICAL SERVICES
MAY 2018



REACH 2018 SUPPLY CHAIN INFORMATION RECOMMENDATIONS
JUNE 2018



REVISTA ESPACIO 39 / 40
MARCH AND AUGUST 2018

Other documents edited by the association this year were the Space Yearbook 2017, Reach 2018 supply chain information recommendations, the Catalog of Aeronautical Services

and the Code of Ethics and Good Governance of TEDAE as a digital version, which describes the commitment of the Association to ethics and transparency across all

of its spheres of action and acts as a guideline for TEDAE professionals and governance bodies in their day to day.

TWITTER

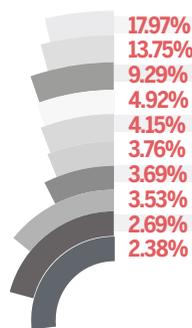
December marked one year since the launch of the account of the ProEspacio magazine (@EspacioTEDAE), whose results have been highly satisfactory, ending the year with 260 new followers and therefore meeting the objectives set when the decision was made to engage with this social network. Some of the material that can be found in our profile includes contents of the magazine, recent events or highlights related to space and shared tweets by ESA, NASA, INTA, universities and space authorities. Things can only get better from here.

VISITOR PROFILE

Period: Apr. 1st 2018 - Dec. 30th 2018

MAIN SECTORS

Data for: Sector

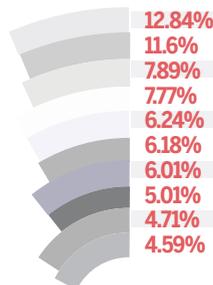


VISITORS

234	AEROSPACE AND AVIATION INDUSTRY
179	INFORMATION TECHNOLOGY AND SERVICES
121	DEFENSE AND SPACE DEPARTMENT
64	AERONAUTICS / AVIATION
54	HIGHER EDUCATION
49	INDUSTRIAL OR MECHANICAL ENGINEERING
48	MARKETING AND ADVERTISING
46	PUBLIC RELATIONS AND COMMUNICATION
35	GOVERNMENT ADMINISTRATION
31	TELECOMMUNICATIONS

MAIN ACTIVITIES

Data for: Activity



VISITORS

218	CORPORATE DEVELOPMENT
197	ENGINEERING
134	OPERATIONS
132	INFORMATION TECHNOLOGY
106	MASS MEDIA
105	EDUCATION
102	SALES
85	QUALITY CONTROL
80	MARKETING
78	PROGRAM AND PROJECT MANAGEMENT

CROSS-CUTTING AREAS

Environment

THROUGHOUT 2018, the main line of work of the Environment Committee consisted in the monitoring and dissemination of the national and European environmental regulations that impact the four sectors of TEDAE.

Worth noting are the monitoring efforts performed in relation to the Climate Change and Energy Transition Bill (*Ley de Cambio Climático y Transición Energética*), Royal Decree 818/2018 (a transposition of Directive 2016/2284 on the reduction of national emissions of certain atmospheric pollutants), Royal

Decree-Law 18/2017 on the matter of non-financial information and diversity, and legal initiatives on Circular Economy, among others.

Work was also performed in the revision of environment management technical standards (International: ISO and National: UNE).

Efforts of the Chemical Substances Regulation Workgroup included the REACH 2018 Document, which was published to components of the Supply Chain, the joint coordination

efforts with the REACH Exemption Unit of the MINISDEF, the monitoring of chromate authorizations and the 2nd REACH revision started by the European Commission.

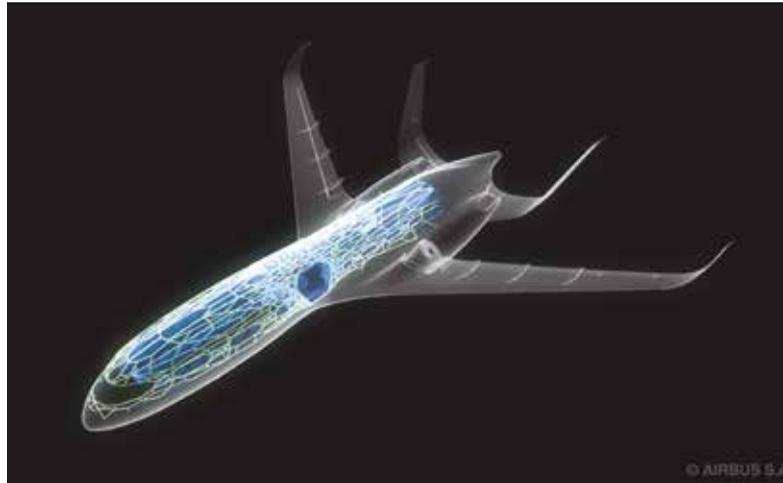
The following documents related to the positioning of the sector were also drafted:

- Letter stating our position in relation to the consult on the development of the Product Category Rules (PCR) for the preparation of an Environmental Product Statement for Business Jets.



- Document stating our position in relation to the 9th proposal for the inclusion of substances in annex XIV of REACH.

In addition, representatives of the Committee participated in the following ASD bodies: Environment Commission (AIRBUS and ITP AERO) and REACH Implementation Working Group (Héroux-Devtek).







06 TEDAE AND UNIVERSITIES

activities
REPORT
2018

THE RELATIONSHIP BETWEEN TEDAE AND THE

Universities

DURING THE YEAR 2018 TEDAE performed a study in collaboration with universities with the purpose of developing an internal plan of action.

The ultimate purpose of this action is to further the relationship of TEDAE with universities and have them participate in initiatives of the Association, in the understanding that this collaborative relationship is highly beneficial for the growth of TEDAE sectors. It is important to continue strengthening this company-university relationship with the purpose of increasing the productivity and competitiveness of our sectors through innovation, and extend this goal so that it serves as a means to boost technology for all other areas of our society.

Mainly, four types of collaboration agreements have been considered: internships (practical student experience in companies), classes (funded by companies), collaboration in R&D projects (jointly between companies and universities) and masters degree scholarships (the company funds masters courses at a university).

All other collaborations, contests and awards, courses, seminars, specific collaborations and other projects have been outlined in the “Others” section of the table on page 58.

With this goal in mind, 33 of our companies have provided us with information showing a total of 91 universities that have some form of agreement with a TEDAE company across a total of 278 covenants. Almost 50% of these covenants

were entered into with the 11 universities with the highest number of collaborations, as shown in the table sorted based on this variable on page 58.

Regarding “internships,” we must point out that only the agreements are listed, but not the number of internships per agreement. In other



words, if a company has a specific number of student internships for a given university it will count as a single covenant.



In illustrate this data, the breakdown of the types of collaboration agreements entered into with universities shows that approximately half of them are related to internships, followed far behind by collaborations related to R&D projects (16%), seminars (10%) and lastly masters degree scholarships (4%).

There is a total of 11 masters scholarships broken down as shown in the chart on the next page.

Three of the TEDAE sectors are included among them, with most of them being related to Defense (approximately 30% of the total), another one related to Space Engineering and yet another one to Aeronautics.

As already mentioned, the presence of TEDAE companies in universities must be treated as a priority matter, with an active participation and working in both directions under

one same goal: the transfer of technological knowledge. This will favor insertion in the working market and, ultimately, the collective development and growth of our sectors, which are deeply rooted in technology and innovation.

**33 OF OUR COMPANIES
HAVE PROVIDED US WITH
INFORMATION ABOUT THEIR
COLLABORATIONS, SHOWING
A TOTAL OF 91 UNIVERSITIES
THAT HAVE SOME FORM OF
AGREEMENT WITH A TEDAE
COMPANY**

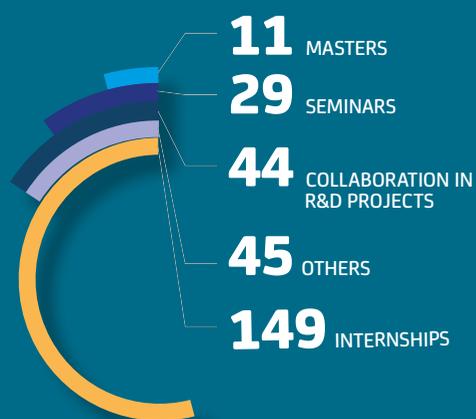
Lastly, the rest of the collaborations are shown. The table on the following page contains the less-common -yet equally important- agreements, which include awards and contests, seminars, courses, specific collaborations and other projects.

Nº	UNIVERSITY	TOTAL	Type of collaboration agreement				
			Internship	Collaboration in R&D projects	Seminars	Masters	Others
1	Polytechnic University of Madrid	29	15	4	3	1	6
2	Charles III University of Madrid	21	11	5	2	1	2
3	Seville University	12	3	1	2	1	5
4	Autonomous University of Madrid	11	5	2	2	1	1
5	Alcalá de Henares University	10	7	1	2	0	0
6	Complutense University	10	6	2	0	1	1
7	Rey Juan Carlos University	9	6	0	1	1	1
8	Polytechnic University of Valencia	9	2	4	1	1	1
9	Navarra Public University	9	3	1	2	0	3
10	Madrid European University	7	6	0	1	0	0
11	Polytechnic University of Catalonia	7	3	1	1	1	1
12	Polytechnic University of Cartagena	6	1	1	2	0	2
13	University of Málaga	6	1	1	1	0	3
14	University of Cádiz	5	3	0	0	0	2
15	University of León	5	3	1	0	0	1
16	Comillas Pontifical University	5	3	0	1	1	0
17	University of Valladolid	4	3	0	0	0	1
18	UNED (National Distance Education University)	4	1	0	1	0	2
19	University of Pompeu Fabra	4	2	1	0	0	1
20	University of Vigo	4	4	0	0	0	0
21	University of the Basque Country	4	4	0	0	0	0
22	University of Murcia	4	2	0	0	1	1
23	Alfonso X El Sabio University	3	1	2	0	0	0
24	University of La Rioja	3	3	0	0	0	0
25	University of Zaragoza	3	1	0	1	1	0
26	Open University of Catalonia	3	1	1	0	0	1
27	University of Burgos	3	2	0	0	0	1
28	University of Granada	3	3	0	0	0	0
29	University of Las Palmas	3	3	0	0	0	0
30	University of Castilla-La Mancha	3	2	0	0	0	1
31	Autonomous University of Barcelona	2	2	0	0	0	0
32	University of Barcelona	2	1	1	0	0	0
33	UDIMA (Universidad a Distancia de Madrid)	2	0	2	0	0	0
34	University of Deusto	2	1	0	1	0	0
35	Miguel Hernández de Elche University	2	2	0	0	0	0
36	University of Lleida	2	2	0	0	0	0
37	UIMP (Menéndez Pelayo International University)	2	1	0	0	0	1
38	University of Cantabria	2	2	0	0	0	0
39	Other universities with a single agreement	53	28	13	5	0	7
TOTAL		278	149	44	29	11	45

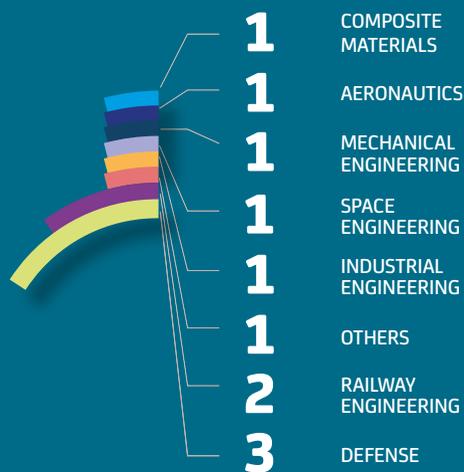
Source: own data. TEDAE

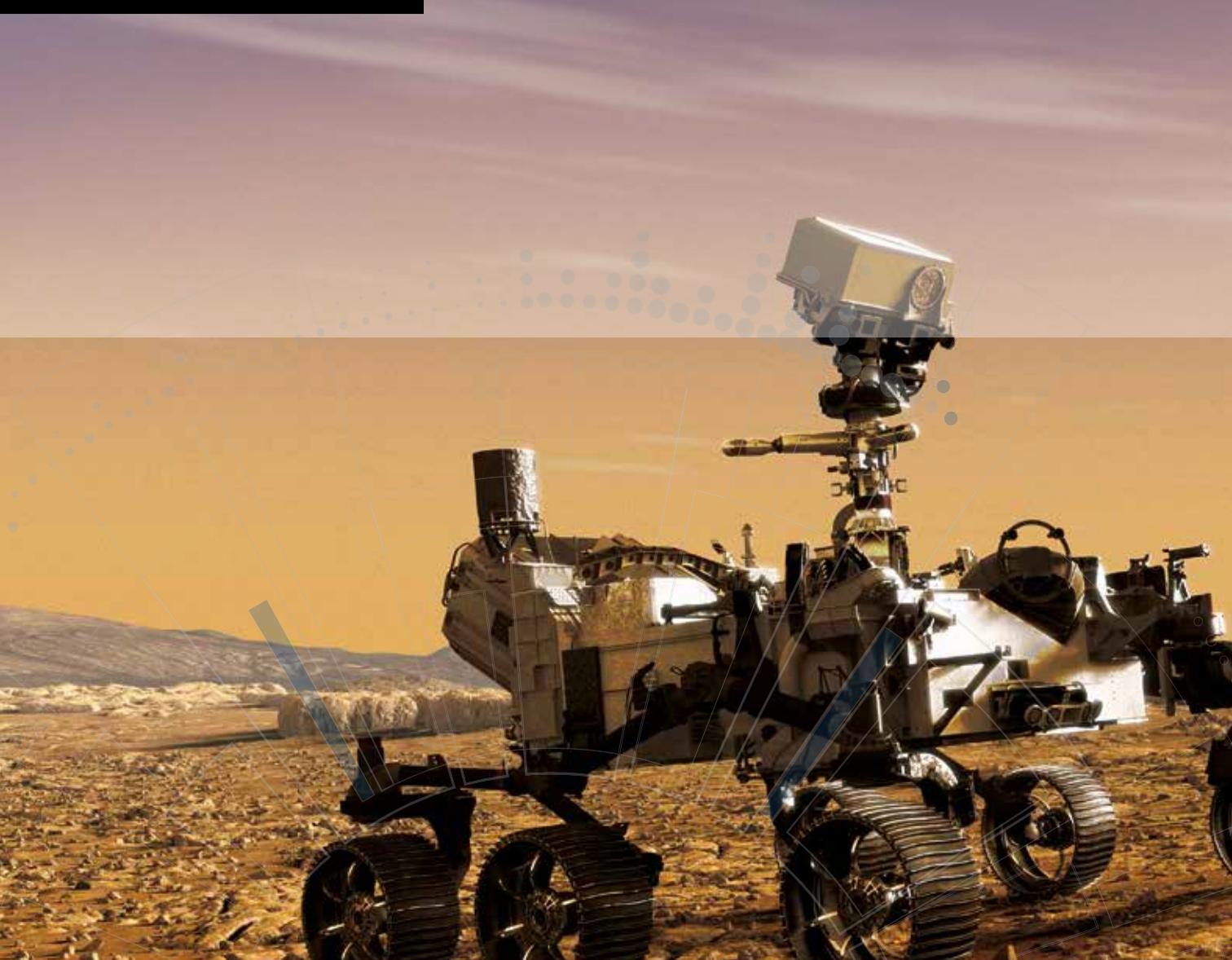


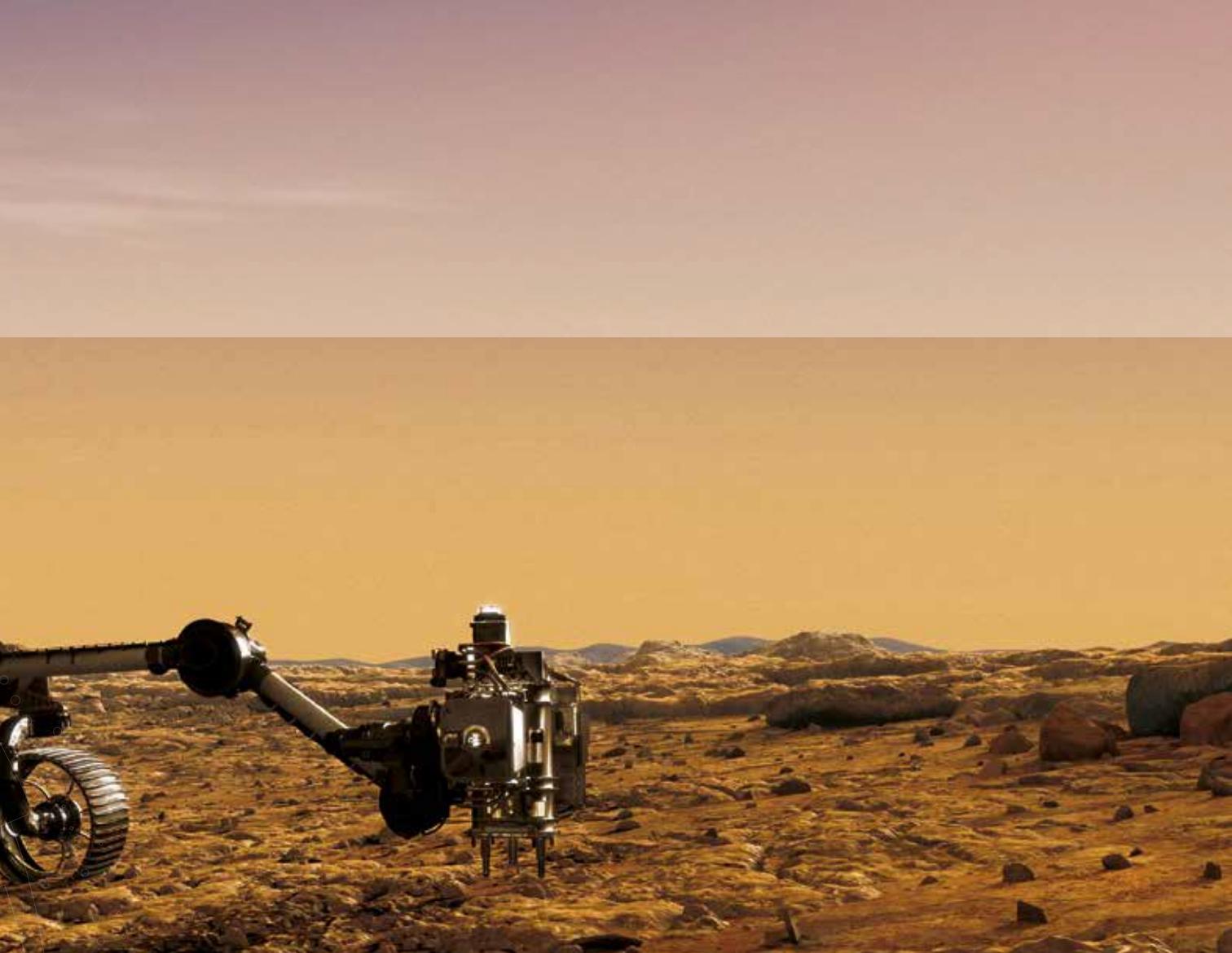
TYPES OF COLLABORATION AGREEMENTS



MASTERS DEGREE IN:







07 ACTIVITIES

activities
REPORT
2018

activities_JANUARY

NEW PRESIDENT appointed at TEDAE

In January, Jaime de Rábago replaced Adolfo Menéndez as President of the Spanish Association of Defense, Security, Aeronautics and Space Technology Companies (TEDAE), whose term ended last year.

TEDAE member companies praised the great work of Adolfo Menéndez during his four years leading the Association and once again thanked



him for the commitment and effort displayed during his term - a period in which he strengthened the growth of the Association despite the ever-changing landscape experienced by the Defense, Aeronautics, Security and Space industries, while consolidating a leadership model of higher efficiency and operativity and increasing transparency.

The new president appointed by the Board of Directors of the Association, who is an Industrial Engineer graduated from ICAI and École Centrale Paris also has a professional background related to the technological sectors that are part of TEDAE, as well as to the corporate world, technology and entrepreneurship. Jaime de Rábago, former CEO of NAVANTIA, has advocated for the advancement of various entrepreneurship and technology transfer initiatives, and worked as General Secretary of the Spanish Confederation of Mutual Guarantee Companies (SGR-CESGAR), Vice-Chancellor of the National Engineering School of ICAI (where he has also been an associate professor for over 20 years) and Vice-President of the Industrialization Commission of the

Spanish Institute of Engineering.

The Board of Directors of TEDAE has thanked Adolfo Menéndez for his great work while chairing the Association, consolidating a membership model that is better equipped to face the new challenges that will have to be addressed by the Defense, Aeronautics, Security and Space industrial sectors, and has congratulated the new President with the full confidence that he will lead this new era of the Association with enthusiasm and acumen.

January

PRESENTATION OF THE European Summit on Unmanned Systems for Security and Defense (UNVEX S&D)

UNVEX Security & Defense -the first European summit on military drones- was announced on January 18 in Madrid. The summit, a must for anyone related to the field of military autonomous vehicle technologies and

remotely piloted air systems (UAV/ RPAS), was held at the new Exhibition Hall of León in May.

The opening event was attended by executives of the defense sector,

top Armed Forces officials and accredited military attachés in Spain.

During the announcement of the event, the CEO of IDS, Ángel Macho,

was accompanied by the General Director of Armament and Materiel (DIGAM), Lieutenant General Juan Manuel García Montaño; the Mayor of León, Antonio Silván; and other representatives from the Ministry of Defense, The Junta of Castile and León and the Spanish Association of Defense, Security, Aeronautics and Space Technology Companies (TEDAE).



The fifth edition of UNVEX Security & Defense 2018 counts with the support and presence of the UAS International Association (Auvsí), the Spanish RPAS Association

UNVEX 2018 SECURITY & DEFENSE 2018 León (España) 29-31 Mayo 2018

(Aerpas) and the General Secretariat of Industry of the Ministry of Economy.

The fair, held in May in León, was also attended by the Joint Chiefs of Staff (Emacon); the Directorate-General for Armament and Materiel (DGAM); the Army; the Air Force; the Navy; the Military Emergency Unit (UME); the Spanish Association of Defense, Security, Aeronautics and Space Technology Companies (Tedae); the Association of Public Administration Contractors (Aesmide) and the Junta of Castile and León.

Silván highlighted the corporate focus of the event, given that the technology of the remotely piloted and autonomous systems provide “immense possibilities to grow and an industry that has a major R&D component, which generates quality employment and added value.”

This 2018 edition focused on air, land and sea remotely piloted and autonomous systems, and also counted with a static exhibit of platforms, equipment and components, as well as specialized workshops with speakers of great renown both nationally and internationally.

EVENT “How to advance through innovation” organized by the SEPI Foundation



The Minister of Treasury and Public Administration, Cristóbal Montoro, inaugurated last January 22 the “How to advance through innovation” single-subject talk, held at the Los Peñascales Campus of the SEPI Foundation, which was

presented by the President of the Sociedad Estatal de Participaciones Industriales (SEPI), Pilar Platero.

Former Minister Cristina Garmendia, now President of the COTEC Foundation and sponsor

THE GENERAL SECRETARY of Industry and SMEs, Begoña Cristeto, meets TEDAE

PARTICIPATION of TEDAE in the Top Level Work Group Meeting on EDAP (European Defence Action Plan)

activities_JANUARY

of the SEPI Foundation was one of the speakers at this event, with her keynote "Innovation for a more humane future."

The event also included a debate on "The digital challenge: a corporate look" that was moderated by the president of the EFE Agency, José Antonio Vera, and saw the participation of the Presidents of INDRA (Fernando Abril-Martorell), Red Eléctrica de España (José Folgado) and NAVANTIA (Esteban García Vilasánchez).

"ROBOTIZATION
IS CHANGING THE
NATURE OF LABOR."

During his talk, the Minister referred to the R&D efforts undertaken by the State, with a budget that is in accordance with our GDP and in line with the rest of Europe, and also mentioned the important tax incentives that exist to boost innovation. In this regard, he pointed out the essential role of innovation

in consolidating the welfare state, national defense and the safety of the citizenry, all of them duties of the State.

During her presentation, President of SEPI Pilar Platero highlighted the importance of this innovation event, of the speakers and of the guests, many of which play a major role in relation to innovation at each of their organizations.

During her talk, Cristina Garmendia stated that, in order for innovation to take place, change, know-how and value generation must be present - an innovation that is leading to the transition from analogical to digital, from a linear production model to a circular one, from tangible to intangible.

She also pointed out that robotization is changing the nature of labor, and at the same time highlighted that almost every position has a human factor that is hard to replace. Garmendia also mentioned the importance of digital education since, as she stated, 90% of employments require digital skills nowadays. In this regard, she pointed out that 77% of the companies say that one problem that they have when trying to stay competitive is a lack of digital skills among their employees.



THE PRESIDENT of TEDAE visits FIDAMC

Jaime de Rábago visited the facilities of FIDAMC (Foundation for Research, Development and Application of Composite Materials) in Getafe (Madrid).

Jacinto Tortosa, General Director of the Foundation, showed the President of TEDAE and the General Director of the Association, César Ramos, the activities that are currently being performed by FIDAMC, as well as the strategy of the organization to remain the leading composite material research center at an international level for the foreseeable future.

JAIME DE RÁBAGO, President of TEDAE, meets with the General Director of the Civil Guard, José Manuel Holgado Merino

VISIT of the Secretary General of NATO, Jens Stoltenberg

His Majesty the King, President Mariano Rajoy and the Minister of Defense, María Dolores de Cospedal, received the Secretary General of NATO, Jens Stoltenberg, in his official visit to Spain on January 26.

Among other issues, Mariano Rajoy and Jens Stoltenberg discussed the upcoming Meeting of Heads of State and/or Government to be held in July in Brussels. This meeting will touch on issues such as the way in which the organization approaches the challenges of the southern front of the Euro-Atlantic region, the role of NATO in the fight against terrorism and the

defense investment commitments to balance responsibilities among the 28 allies. They also reviewed the situation in areas in the close vicinity of NATO, eastern Europe, northern Africa and the Middle East.

The Secretary General of the Atlantic Alliance closed his official agenda with a conference titled "NATO: Continually Adapting to A Changing World" at the *Centro Superior de Estudios de la Defensa Nacional (CESEDEN)*, which was attended by the Minister of Defense and the JEMAD, Army General Alejandro, and other authorities and industry representatives, including the President of TEDAE.



The main idea conveyed by this conference was that NATO continually adapts with the purpose of keeping citizens safe and face new challenges in a way that guarantees success.



ANNUAL Reception of ASD

Hosted by the General Secretary of ASD, Jan Pie, the main representatives of EU institutions and aerospace & defense industries met in Brussels yet again in a unique networking opportunity, which saw

the attendance of the President of TEDAE, Jaime de Rábago, as well as various representatives of Spanish companies.



activities_ FEBRUARY

TEDAE ORGANIZES the 1st Cybersecurity Workshop

The Security Commission of TEDAE held the 1st Cybersecurity Workshop on February 6 in Madrid, which focused mainly on the industrial sector and was attended by over sixty visitors from different Government organizations and companies.

between public and private organizations at a tactical and strategic level, to obtain technological capabilities by leveraging the development of domestic technologies to prevent the dependence on other countries and to stimulate public-private cooperation by encouraging the exchange of information via secure procedures and channels.

Fernando Barbero, Security Vice-President of TEDAE, and the Delegate of the Cybersecurity Group, Miguel Ángel Thomas, presented the activities and work objectives of this technological area of the Association to foster the offer of security and cybersecurity technology, the synergy between member companies and the development of new capabilities.

Next, Javier Candau, Head of the Cybersecurity Department of the National Cryptologic Center (CCN), addressed the issue of Cybersecurity in Strategic National Industrial Sectors. After exposing

the dimensions of our security system and highlighting the importance of concepts such as cyber resilience, cyber intelligence, hybrid warfare and cyber sabotage, he explained the role of the CCN and the CNI in the protection of cybersecurity in Spain.

The Workshop ended with two round tables. In the first one, representatives from GMV, Tecnalia, Álava Ingenieros and DF Epicom debated on technology and solutions applied to cybersecurity in the industrial landscape. Lastly, executives of Autek, Everis Aeroespacial y Defensa, Indra and Alter Technology Tüv Nord discussed the certification and accreditation of products and processes, as well as associated regulations.

February

During the opening event, Jaime de Rábago, President of TEDAE, highlighted that nowadays information and communication systems are configured like a nervous system that supports each and every company operation. "Digitalization affects every aspect of a company," Rábago added. "The security of those systems, the safeguarding of the information that they process must be integrated all throughout the organization. We could say that cybersecurity in our industries is not just a matter of competitiveness, but rather supports all other benefits offered by the technology of Industry 4.0."

Regarding the landscape of increasing threats of criminal activities in the cyberspace, the President of TEDAE highlighted the need to prioritize the implementation of active measures in the field of cybersecurity to strengthen the coordination



PARTICIPATION OF THE PRESIDENT OF TEDAE in the Informational Breakfast organized by Executive Fórum España with the Defense Chief of Staff

Executive Fórum España, jointly with Accenture, held an informational breakfast in Madrid on February 12, with the participation of the Defense Chief of Staff (JEMAD), Army General Fernando Alejandro Martínez.

The Armed Forces are a guarantee of sovereignty, independence, territorial integrity, constitutional order, progress, wellbeing and international relevance.

Alejandro assured that the economic issue will be one of the key points of the new Long-Term Objective of the Forces that the Ministry of Defense is already working on, with the goal of defining and making plans around the needs of the Armed Forces.

In addition, Alejandro anticipated that work is underway on a plan for the future of the Armed Forces with sights on 2030, to be submitted

the Armed Forces with the objective of strengthening the cyberdefense and intelligence, as well as other fields, such as communications.

After assuring that “we have Armed Forces that are effective” but need constant adaptation and innovation, he highlighted that no one could doubt Spain’s commitment to security, in reference to the participation in missions abroad and their contribution to the fight against terrorism.

Furthermore, he forecasted that the future of combat will involve a hybrid warfare in the presence of civilian population, in urban combat and with a pervasive technological component, while he pointed out that NATO and the EU are organizations that will lead the way in security.

The JEMAD also highlighted the importance of R&D in the military world and said that a national defense industry must be encouraged.



The General highlighted that, in the following years, “we will require a commitment to a stable funding that must be adequately agreed upon” for the acquisition of capabilities and the training of personnel.

to the Minister of Defense, María Dolores de Cospedal.

He also announced that, as the long-term plan is greenlit, his department is working on other aspects to revise the structure of

EUROPEAN Defence Industrial Development Programme (EDIDP) positioning meeting

TEDAE MEETS with the Head of OCCAR – EA (Organisation for Joint Armament Cooperation - Executive Administration)

TEDAE VISITS the Commerce Secretary of State (MINECO), Marisa Ponzela

ANNUAL GATHERING of TEDAE “Perspectivas 2018”

The President of Tedae (Spanish Association of Defense, Security, Aeronautics and Space Technology Companies), Jaime de Rábago, last February 14 gathered together the executives of member companies of the Association to “share the forecasts and priorities that will steer our activity this year,

“Our working priorities for 2018 include highly important matters, such as the upcoming Europe Research Framework Program and our Scientific, Technical and Innovation State Research Program. Defense companies, for their part, are ready to contribute to the development of the European

the Association as an essential tool to act as a proxy between our members and the Administration. And he closed by saying that one of the keys to progress in our country lies in our abilities to progress in our industrial technology, innovating not only in relation to products, but also in relation to processes. “The experience gained throughout these years and our accomplishments show that technology is the clear tie that binds us all. Together we do more than each of us would individually.”



and also find a common stance before the many (and major) challenges that industrial sectors will face during the following years, which we must turn into opportunities for our companies and Spain.”

De Rábago said that “with reasonably optimistic national and international perspectives, our industries are preparing to adapt to the growing digitalization with the conviction that the industrial fabric is the foundation of growth in the most developed countries, and that there is a need to continue advancing in our competitiveness and the internationalization of our products, services and technologies for defense, security, aeronautics and space.”

industrial strategy related to the European Defense Plan, and are also heedful of the new investment cycle that our Ministry of Defense is currently defining. While the Security sector is gaining ground in the field of Cybersecurity, aeronautical companies are prioritizing the Aeronautics Sectoral Agenda and the R&D Support Program and the space industry is closely following its Sectoral Agenda and the launch of its corresponding industrial policy.”

The President of TEDAE thanked his predecessors for their involvement and efforts as heads of the Association, including Julián García Vargas for kick-starting TEDAE nine years ago today, and Adolfo Menéndez for consolidating

The gathering, which was attended by a number of representatives from the Government, organizations and institutions related to TEDAE sectors, was closed by Agustín Conde, Defense Secretary of State, and Begoña Cristeto, Secretary General of Industry and SMEs. Jaime de Rábago thanked their presence in the name of the TEDAE member companies, since it implied a recognition to the daily efforts and contributions of these sectors to the advancement of the industrial activity and the wellbeing of the citizenry.

THE INDUSTRY OF THE FUTURE WILL EITHER BE DIGITAL OR CEASE TO EXIST.

Begoña Cristeto, Secretary General of Industry and SMEs, begun her speech by thanking TEDAE for its work and highlighting the objective that it shares with the Ministry in encouraging the growth and higher participation of the sectors that compose the Association in industry. After underscoring the good outlook of the aeronautical sector, guaranteeing a workload to

last the next ten years, and pointing out to the great momentum gained by the Spanish space industry, “mostly thanks to the ESA programs, but not less importantly due to the funds allocated by the European Commission to Space programs such as Galileo, Copernicus or H2020,” she referred to the National Earth Observation Program, whose first satellite, Paz, is expected to be launched next Saturday - a significant step for Spain, “that will be completed with another one called Ingenio, which, I expect, is to be launched in less than two years.”

The Secretary General of Industry also pointed out that “the industry of the future will either be digital or cease to exist. The greatest challenge faced by industry is this revolution that is taking place in industry 4.0 and digitalization.”

THE INVESTMENT CYCLE IS NOW A REALITY

Agustín Conde, Defense Secretary of State, stated that his time in the Ministry of Defense has allowed him to get closely familiarized with the technologies and products made by TEDAE companies, “which makes me even prouder of my country.” “It has taken us a decade to recover up to pre-crisis GDP levels, and Spain is growing at a rate that is close to 3%,” he added. “Today we are starting to look with ambition at the things we want to do. The investment cycle is now a reality that will need to adjust to the planning needs. A new cycle that must be leveraged to give an even greater boost to our technological sector.” He highlighted the change brought about in the European landscape: “the PESCO and the

“OUR INDUSTRIES ARE PREPARING TO ADAPT TO THE GROWING DIGITALIZATION”

various windows of capabilities are now a reality. We need to be prepared for this new European era. We need for our industry to be agile to take part of international consortiums so that our country recovers its investments as profits. And here, TEDAE plays a major part as a driver, coordinator and gathering place.

THE CDTI in collaboration with TEDAE, organizes an Infoday, “Horizon 2020 EU Framework Programme 2018 Secure Societies Call”

The CDTI (Centre for the Development of Industrial Technology), a government-operated corporation operating under the Ministry of Science, Innovation and Universities, in collaboration with TEDAE, organized an Informational Day related to the 2018 Secure Societies Call - H2020 in Madrid on February 20, with the purpose of providing information in relation to this Call to Spanish entities.

With the purpose of providing information on the consortiums for the Call, the CDTI invited French entities to join the event - in particular the part related to Business to Business.

The informational day was held during the morning, and a “Business to Business” event had been planned for the afternoon, in collaboration with the French

Security National Point of Contact, the GICAT association, the Madrimasd Foundation (members of the Europe Enterprise Network) and the Security Commission of TEDAE, where meetings between organizations were encouraged to facilitate the constitution of consortiums.



PARTICIPATION of the President of TEDAE, Jaime de Rábago, in the XIX Course for General Staff of the Armed Forces



The General Sub-director of Planning and Programs, Pedro Fuster, together with the Technical Director of Aesmide, Divisional General Maximino Robles and the President of Tedale, Jaime de Rábago, took part of the Panel on the Spanish defense industry of the XIX Course for General Staff of the Armed Forces at CESEDEN (Centro Superior de Estudios de la Defensa Nacional).

The purpose of the Course for General Staff of the Armed Forces is to train future General Staff officers to fill positions at national and international General Staff offices, at the Central Body of the Ministry of Defense, and other organizations of the Public Administration where their presence may be necessary, as well as at the multinational security and defense organizations of which Spain is a part.

The duration of the course is one academic year, from September to June. The course has four phases: Basic, National Defense and Operation Planning, a Specific phase for each branch of the Armed Forces and the Civil Guard, and a Practical phase.

PARTICIPATION OF TEDAE in the University-Company Technological Collaboration Success Story Presentation organized by the Spanish Institute of Engineering

The University, Education and Company Committee of the Spanish Institute of Engineering (CUFE) has divided into several work groups. One of them is the "Technological Networking" group, whose main purpose is for expert engineers from companies, University professors/researchers and stakeholders to strengthen the technical collaboration efforts between universities and companies by means of specific agreements, mixed centers, Start-Ups, financial support to R&D and internship at companies of Doctoral students, among others.

The first task for the Group was to organize a specific outreach event. After presenting some University-Company Technological Collaboration Success Story, they had the idea of organizing a set of Presentations on this issue. The first one was held on November 6, 2017, and this one, held on February 28 was the second one.

The event was attended by companies such as Airbus D&S and Indra, the *Escuela Técnica Superior de Ingenieros de Telecomunicación* of the Polytechnic University of Madrid (ETSIT – UPM), the Director of Aerial Communication and Navigation System Strategy (CNS), Javier Tejerina, and Pablo Acedo, Director of the Department of Electronic Technology of the Charles III University of Madrid, among others.



INSTITUTO DE LA INGENIERIA
DE ESPAÑA

THE PRESIDENT OF TEDAE, Jaime de Rábago, met with the President of SEPI, Pilar Platero

MEETING of the President of the CEOE, Juan Rosell, with the President of TEDAE, Jaime de Rábago

VISIT of the President of TEDAE, Jaime de Rábago, to the Madrid Aerospace Cluster

TEDAE HOSTS the Plenary Session of the NATO Industrial Advisory Group (NIAG) at the Infantry Academy of Toledo

The Plenary Session of the NATO Industrial Advisory Group (NIAG) organized by TEDAE ended last February 28, which gathered delegations from 26 allied countries and over twenty Spanish companies at the Infantry Academy of Toledo. The sessions began on Monday led by the General Director of Armament and Materiel (DGAM), Lieutenant General Juan Manuel García Montaño, the Director of the Infantry Academy, Colonel Francisco Javier Marcos, and the Chairman of NIAG, John Jansen.

The second Session focused on Industry and started with a speech on Industrial Collaboration within the framework of NATO by the President of TEDAE, Jaime de Rábago, and Divisional General Felipe de la Plaza, Assistant Director of International Relations of the DGAM. During the morning, 24 Spanish defense companies were given the opportunity to showcase their latest capabilities, technologies and products to the foreign delegations of the NATO Industrial Advisory Group (NIAG).

The B2B meeting session between our companies, the NIAG delegations and the companies from their corresponding countries that visited Toledo was held later, with the goal of exploring paths for multinational cooperation and increase the knowledge on the industrial base and the national technology capabilities in relation to NATO programs.



activities_MARCH

TEDAE Industrial Session at the 2018 Course for Spanish Defense Attachés and Advisors

Like previous years, this edition of the Course for Defense Attachés and Advisors dedicated a Session to learning about technological novelties and services developed by Spanish Defense companies, as well as about their corporate goals for each region of the international market.



Directorate of Defense Policy) was opened by Colonel Jesús Sánchez Loureiro, Chief of Plans and Bilateral Relations of OFICAEX, and gathered the military attachés and advisors that will soon be assigned to Spanish embassies in over 20 countries and international organizations.

held a meeting session with military attachés, sitting at several tables organized per geographic region. The Industrial Session ended with an interesting discussion between the attachés and the representatives and executives of the participating companies.

For yet another year, organizers and participants were satisfied by the sharing of experiences enabled by this Industrial Session, with sights on a higher presence of our industry in the global market.

March

This Session, organized by TEDAE in collaboration with the DGAM (General Directorate of Weapons) and the DIGENPOL (General

As in previous editions, after the speech by the President of TEDAE, Jaime de Rábago, on the characteristics and capabilities of the Spanish defense industrial sector, the participating companies

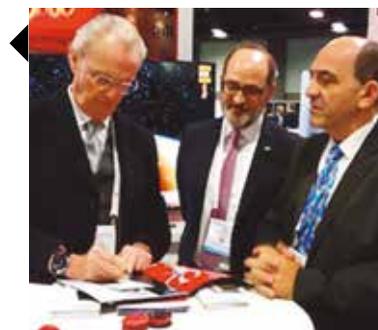
TEDAE COORDINATES the participation of Spain in Satellite 2018

Jaime de Rábago, President of TEDAE (Spanish Association of Defense, Security, Aeronautics and Space Technology Companies) accompanied the Spanish technology companies that attended Satellite 2018, the most important global satellite technology event held in Washington since March 12, and which, until March 15, gathered together the main

companies, professionals, experts and innovation trendsetters of the satellite and aerospace sector from over 100 countries around the globe.

The Spanish participation, coordinated by TEDAE, was composed of ARQUIMEA, GMV, HISPASAT, SENER and TTI - all of them aerospace and telecommunication companies at

the vanguard of technology, with a solid position of leadership in the international market.



Along its 35 editions, this event has become the most important event worldwide on satellite services for different sectors, both due to the innovative products that were presented by the 350 exhibitor

companies and the high level of the conference program that saw the participation of corporate experts and leaders of renown, and it gives us a snapshot of what satellites will look like in the future.

The participation of Spain in Satellite 2018 was sponsored by ICEX España Exportación e Inversiones.



INDUSTRIAL DAY with India

Last March 21, the OFICAEX held an industrial day with a delegation from India at the CESEDEN.

Companies from AESMIDE and TEDAE were given the opportunity to showcase their capabilities before the Indian Delegation and the many Indian companies present.

The Industrial Day was graced by the presence of the General Director of Armament and Materiel (DIGAM), Lieutenant General Juan Manuel García Montaño, and the Ambassador to India in Spain, B. Venkatesh Varma, as well as César Ramos, General Director of TEDAE in representation of the Association of corporations.



MEETING of the President of the Spanish Quality Association (AEC) with the President of TEDAE

JAIME DE RÁBAGO,
President of TEDAE, visits the Spanish Ambassador and the Defense Attaché in Washington

THE PRESIDENT OF TEDAE
meets with Germán López Iglesias, Director General of the Police

SPANISH NATIONAL DAY

The Spanish companies celebrated this day with a reception at the Spanish Hall in the company of representatives from diplomatic corps, the industry and the armed forces of several countries.

Jaime de Rábago, President of TEDAE, traveled to Santiago de Chile to accompany the Spanish companies that attended this edition of FIDAE and celebrate the Spanish National Day with a

reception at the Hall. This reception also enjoyed the presence of the Ambassador to Spain in Chile, Carlos Robles, and the delegations of the Spanish Ministry of Defense and our Air Force, who visited the Latin American Fair, led by the Head of OFICAEX and the General Chief of Logistics Support Command, respectively.

The event was also attended by Chilean authorities, members of the armed forces and official delegations from countries such

as Argentina, Ecuador, Brazil, Paraguay and Peru, among others, as well as the European Union.

The companies that composed the Spanish Hall were satisfied with the institutional support that they had received during this event and had a positive outlook about their presence in the Fair - a place that allowed them to generate new industrial contacts and open up new business opportunities in the Latin American market.

TEDAE SPONSORS the *Foro Nueva Economía* with the participation of the Director of the European Defence Agency (EDA), Jorge Domecq



Jorge Domecq explained last April 3 at the *Foro de la Nueva Economía* (Forum of the New Economy), which was sponsored by TEDAE, that the European Defence Agency is looking for an autonomous European defense that does not clash with NATO. "Because, economically, this is not something that we can indulge in, and because there are members of the European

Union that are also members of the Alliance.

The Director of the EDA reminded the importance of investing more in defense "with cooperation as a rule," keeping in mind the needs of the national defense industry, and called on EU countries to have a better "join" spending in Defense, to be able to coordinate resources

and be more efficient. And, as an example, he added that where Europe has six frigates, the U.S. has one, and that there are four European tanks for every U.S. tank.

Domecq highlighted that today, in Europe, 74% of citizens want the European Union to do more in regard to defense, and now our leaders consider that the defense of our territory, our citizens, our open societies is a priority. "The first time that the European Council dedicated 40 minutes to talk about defense," he remembered, "was not long ago, in 2013. But now this has changed radically, because security in and around Europe has worsened, with transnational threats that no European country can face on its own." And, jokingly, he added that right now in Europe there are only two types of countries: countries that are small, and countries that don't know that they are.

In addition, the top authority of EDA expressed his concern over the 22% drop in R&D experienced during the last ten years in Europe, given that without an increase

in innovation spending, it would be unlikely to have a competitive European technological base. And he highlighted that Spain is one of the “greatest contributors” to international missions, has a presence in the main European defense organizations and agencies and is one of the founding countries of PESCO. And he called on Spain to make a decisive commitment to defense cooperation and to take part in defining the European priorities on the matter.

Jorge Domecq closed his speech by forecasting that the European Union has still five to ten years to go until it attains the necessary military means to face the security challenges that are upon us and structure the industrial base that is necessary for our defense. “The Permanent Structured Cooperation (PESCO), the Coordinated Annual Review on Defence (CARD) and the European Defence Fund (EDF) are important tools, but we need to combine them and execute them. We hope that they generate the necessary trust among member States to give way to a united defense.”

AN OPPORTUNITY FOR THE SPANISH INDUSTRY

Jaime de Rábago, president of TEDAE, closed the event by thanking everyone present for their support “in a moment that is undoubtedly decisive for Spain and our Defense industry. But also because this event has allowed us to communicate to other audiences -beyond those that are professionally and traditionally related to the sector- the enormous importance of sharing the need to place Defense among the priorities of the European agenda.”

De Rábago highlighted the importance of the new scenario in which we find ourselves immersed, where Defense and Security have become elements for cohesion and vertebration in Europe. “A scenario that is being worked on toward structuring a European industrial and technological base that is more integrated, thereby stimulating economic growth, employment and innovation.” And he pointed out to the opportunity that this new European defense policy approach implies toward strengthening the Spanish industrial fabric, for the Spanish industry to increase

its technological capabilities and positioning on international markets.

The president of TEDAE expressed his contentment in relation to the fact that the European Union overcame a historical anomaly that dated back many years, committing to financing Defense and its industry, “and that it has a clear stance toward achieving an industry that is more European, more technological and more competitive that our companies want to be a part of due to their technological calling and leadership.”

And he concluded by stressing that TEDAE considers it a priority to make a greater communication effort to explain to society the economic, technological and social benefit provided by our industries. “It is for this reason that we consider initiatives such as those that have brought us here today to be of utmost importance. Because the purpose of this communication effort is no other than to reflect our uncompromising commitment as an industry, and its purpose is for our fellow citizens to get to know us better and join our shared efforts to guarantee the safety and defense of our society and our democratic values.”

THE MANAGING DIRECTOR OF TEDAE, César Ramos, met with the Colombian Association of Aerospace Manufacturers (ACOPAER)

MEETING of the President of TEDAE, Jaime de Rábago, with the Chief Executive of the European Defence Agency, Jorge Domecq

MEETING with the General Director of NSPA, Peter Dohmen, at CESEDEN, organized by the DGAM with the attendance of the Managing Director of TEDAE, César Ramos, in representation of the Association

THE SPANISH Aerospace Technology Platform (PAE) holds its General Meeting at CDTI



The President of PAE, Plácido Márquez, member of the Board of Directors of TEDAE, inaugurated the General Meeting of the Spanish Aerospace platform and the General Director of CDTI thanked this institution for the serious and necessary work related to the Strategic R&D Agendas that were presented during the morning of last April 13.

With these words, the General Director of CDTI, Francisco Marín, inaugurated the General Meeting of the Spanish Aerospace Platform - a meeting where PAE presented the Aeronautics and Space Strategic R&D Agendas that contain the technological roadmaps identified by the many experts that took part in their development.

The General Director of CDTI thanked the Platform for the proposals and suggestions brought up by these two Agendas and stated that the "Aerospace Platform has done its job and now the challenge is ours. We need to quickly define what we want to improve to increase our share in manufacturing and production." Marín added that the 2017-2020 R&D State Plan allows

CDTI to create instruments to address strategic problems. "Now has come the time to act, and these two Strategic R&D Agendas are a serious and necessary work that will help us establish support formulas, knowing the needs and suggestions that you have identified in collaboration with technology centers, academia and companies that are part of the Aerospace Platform, because failing to do so would be a mistake."

The goal of these documents drafted by PAE is to convey a strategic position and the most important aerospace R&D support needs in our country to the governments of Spain and Europe and to research and development managers, as well as to share these needs, trends and R&D priorities with stakeholders related the value chains of each product, so that it serves as an effective tool in decision making.

Airbus's Silvia Lazcano was in charge of presenting the Aeronautics R&D Strategic Agenda, while Indra's Guillermo Monzón presented the Space version of the Agenda. Both of them highlighted that these

documents aim to address the needs and shortcomings of the sector's national R&D ecosystem, encouraging its positioning and serving as a common workspace to direct the strategy of R&D agents and companies. "The goal," they said, "is to identify specific measures and bestow them with credibility."

The PAE Meeting was attended by almost a hundred representatives from companies of the Spanish aerospace sector, universities and member technology centers, and also joined by several representatives from the Ministry of Economy, Industry and Competitiveness and the Centre for the Development of Industrial Technology (CDTI), who discussed the various lines of financing and support to competitiveness/connected industry 4.0, as well as the Research & Development Framework Programs implemented by the European Union in the fields of aeronautics and space.

activities _ APRIL

SPEECH of the Managing Director of TEDAE, César Ramos, at the 26th Logistics Top-Level Management Course at the *Centro Superior de Estudios de la Defensa Nacional (CESEDEN)*

The purpose of the logistics top-level management course of the Armed Forces Higher Education School of the Ministry of Defense (ESFAS) is to complement the training of personnel assigned to top-level logistics management positions and civilians performing managerial functions in companies related to Defense, increasing their skills and resources to face the complex challenges of Top-Level Logistics Management.

This course is attended by Senior Officers of the Armed Forces who are currently, or may in the future, occupy top-level logistics management positions both in agencies of the Ministry of Defense and in organizations that deal with



logistics in the Army, Navy and the Civil Guard.

It is also attended by non-military higher education graduates with

managerial responsibilities at major companies related to the Defense sector.

TEDAE HOSTS the 1st Aircraft Maintenance Technology Trends Workshop

Last April 17, the Services Committee of TEDAE held the first Aircraft Maintenance Technology Trends Workshop at the Insite Innovation Centre of ALTRAN.

The purpose of the event was to encourage networking and foster technological collaboration projects in the field of aircraft maintenance, and was hosted by the President of TEDAE, Jaime de Rábago.

During the session, over 30 participants from various companies had the opportunity to present their solutions and capabilities across different technological issues that are transforming the MRO market, such as new inspections and their certification, augmented reality and digitalization and document



managers for heavy maintenance.

The Services Committee of the Aeronautics Commission of TEDAE is comprised of the most important companies in the aeronautical

services sector, including MRO, Product Support, and Engineering and Testing Services, among others.

INDUSTRY DAY at the Spanish week of SERA (European Session for Armament Officials) 2018

Last April 23 and 24, La Marañosa, San Martín de la Vega (Madrid) was home to the Spanish week of the European Session for Armament Officials (SERA) hosted by the French *Institut des Hautes Études de Défense Nationale* –IHEDN– in our country in collaboration with the DGAM (Directorate-General for Armament and Materiel), which also hosted the Industry Day.

After welcoming General Monforte, General Sub-Director of Land Systems at INTA, at the La Marañosa facilities, home of the Industry Day, General López González, Head of the Foreign Support Office of the Ministry of Defense, gave a speech.

The head of the OFICAEX praised the high level of the Spanish defense industry and highlighted the optimism and responsibility with which the Ministry of Defense and the Spanish industry faced the opportunities for international cooperation brought about by the European Common Security and Defence Policy and PESCO.

Next, the President of TEDAE, Jaime de Rábago, referred to the collaboration and intelligence needed to address the challenging landscape of the defense industry. "We need to support our governments," he said. "It is

our responsibility to create an adequate environment for the participation and involvement of industries, and to be prepared to offer an adequate response." De Rábago added that companies should contribute toward the initial development of defense programs that are better suited to satisfy the needs of our armies, to prepare to provide innovative and competitive solutions at an industrial and technological level, and also to generate a corporate environment that is in line with the industrial policies of our countries and allies.

During the morning, 20 Spanish defense companies had the

opportunity to showcase their latest technologies and products to representative from European countries such as Norway, the Netherlands, France, Italy and Lithuania, among others.

SERA attendees also had the opportunity to visit the exhibition of products and technologies presented by the companies, gaining a better knowledge of the industrial base and technological capabilities of the country in relation to international programs.



activities_ MAY

THE PRESIDENT OF TEDAE, Jaime de Rábago, attends the presentation of the DSEI+d 18 Congress and the ISDEFE I+D+i Awards Book

The General Sub-Directorate of Planning, Technology and Innovation of the Directorate-General for Armament and Materiel and the Directorate-General for Recruitment and Military Education of the Ministry of Defense held the 6th National Defense and Security R&D Congress (DESEi+d 2018) at the

Last May 7, Vice Admiral Jesús Manrique Braojos made the official presentation.

In line with previous editions, the Ministry of Defense continues with this initiative that has been held very year since 2013. This congress has become a gathering forum for academia, researchers, corporations, law enforcement agencies and the armed forces, fostering their inter-relation and encouraging the generation of synergies among them. The results of the most recent research works related to Defense and Security will be presented from a scientific and technological standpoint during this Congress, facilitating the sharing of experiences, ideas and research projects across the many fields of knowledge.

technological projects, either individually or as part of a joint effort. The clear pragmatic and goal-oriented character of defense and security R&D, which aims to transfer the latest technological breakthroughs to systems employed by law enforcement agencies and the armed forces in their missions, added to the fast-moving technological advances and the existence of multiple R&D initiatives aimed at addressing technological challenges of the sector, makes it necessary to count with a major event where all parties involved can share their capabilities, needs and interest to engage in collaborative efforts.

The ISDEFE I+D+i Awards Book was presented during the same event, where Jesús Alonso, Director of this institution, analyzed the two calls for entries of the ISDEFE award and its contribution to the congress. He included a summary of the subjects addressed by the 10 finalists and information regarding the evaluation committees.

Army Horse Academy in Valladolid on November 20, 21 and 22 of 2018, in collaboration with Defense Universities and ISDEFE (*Ingeniería de Sistemas para la Defensa de España*).

A rich ecosystem of entities formed by universities, research centers, SMEs and major companies has developed during the last decade at a national level, offering innovative technological capabilities that continuously engage in new



TEDAE at Aerospace & Defence meeting ADM Sevilla 2018

The President of Andalusia, Susana Díaz, inaugurated the event that set off ADM Sevilla 2018, a major international aeronautics, space and defense gathering that, from May 15 to 18, allowed visitors to have an overview of these industrial sectors and learn about their latest capabilities and technologies.

President Susana Díaz expressed her satisfaction over the fact that Andalusia is the second most important aeronautical region in Spain, and the first one in relation to exports, reiterating the institutional support of her government to the aerospace industry. "We have strength because our universities are anticipating the future to compete with other world powers, while we are consolidating an 11% investment on R&D, becoming an option for the present and the future. We will implement the new aeronautical strategic plan because we see a window of opportunity that Andalusia wants to take advantage of. The future is undoubtedly in innovation, education, in an effort for internationalization and in adding value. Andalusia is changing so that citizens have more rights and opportunities. The data is right there. Today we are already selling to the world more aeronautical products than virgin olive oil."

Next, the President of TEDAE, Jaime de Rábago, moderator of the first debate of the day on Civil Aeronautics, pointed out that by 2035, 45,000 new aircraft will be needed to meet air traffic demands, which doubles every 15 years. "Industries must be prepared to face this challenge, because without a doubt, the business paradigm will change. Development times



will need to be halved, we will need higher production rates at the same low cost, and without forgetting about the unavoidable noise, fuel consumption and CO2 emission reductions." De Rábago also highlighted that collective success requires leveraging as much as possible digitalization and the transformation of the production system to make it more efficient and flexible, having the capability to apply this to the entire supply chain. New business models, the changes that are taking place within industrial organizations as a result of the implementation of industry 4.0 and new technologies such as augmented reality, the use of drones, Big Data and virtual reality were other subjects that were discussed.

INDRA, HISDESAT, ALTER TECHNOLOGY and ITP AERO, together with important speakers of the Andalusian government, universities and research centers, also took part of the other scheduled round tables on the subject of aeronautical services required by military operators and the new space ecosystem.

A day of conferences and round tables where economist José Carlos Díez, professor of the University of Alcalá (Madrid) and regular collaborator at various media outlets, gave a speech on the "Economic Approach to the aeronautical and space sector."

The second roundtable revolved around Military Aeronautics.



Representatives of TEDAE companies such as ALTRAN, AIRBUS DEFENCE AND SPACE,

Moderated by José Sánchez Serrano, Director of Defense Logistics and Aerial Vehicles at

activities_MAY

Indra, Marta Gimeno, Executive Director of Defense at ITP Aero, and General Salvador Álvarez Pascual, of the General Sub-directorate of Program Management of the DGAM of the Ministry of Defense, detailed the new needs of military operators in regard to maintenance and aeronautical services.

Space and the new space ecosystem were the spotlight of the third and last roundtable of the day. Carlos Gómez Camacho, Professor at the *Escuela Técnica Superior de Ingeniería de Sevilla*, moderated Sebastián Catolfi-Salvoni, Business Development Executive of Hisdesat, Demetrio López, Director of Innovation of Alter Technology, and Esperanza Caro, General Director of Economy and Commerce at the Seville City Hall.

Lastly, the President of *Sevilla Futura*, Antonio Conde, gave closure to the talks with a conference on "Innovation Open to Digital Transformation."

TEDAE and its member companies also participated in bilateral

meetings at the many scheduled workshops and conferences, where they discussed current events and opportunities for the defense, aeronautics and space sectors.

TEDAE also wanted to take advantage of ADM Sevilla 2018 to hold the Aeronautics Commission meeting, where, in addition to reviewing the activities of the various Committees that are part of it -R&D, Supply Chain, Services, Aviation and Communication- during these two months, they analyzed the steps to follow for the presentation of the Aeronautical Agenda by the General Secretariat of Industry as part of the Industry Strategic Framework. According to Alfredo Martínez, Aeronautics Vice-President of TEDAE, "this Agenda defines the sector's landscape and should serve as an essential reference for the implementation of a Strategic Plan that provides specific funds that are on par with those of our European competitors within the EU R&D Framework, and also as a prospective timeline and budgetary commitment that allows

for the development of research programs rather than mere projects. The implementation of this Plan is already essential, given the international commitments that the sector is aiming for."

Until May 18, ADM Sevilla 2018 was the meeting place of more than 1,100 professionals from over 350 trailblazing companies, providers and subcontractors from 28 countries, turning Seville into the world capital of Aeronautics and Space during these days and consolidating Andalusia and Spain as a beacon of the international aerospace sector. The event was also attended by the President of TEDAE, Jaime de Rábago, in representation of the Association.

1ST ARMY - CORPORATE Forum "Fuerzas Terrestres 2035" organized by *Fundación Museo del Ejército*

From May 21 to 23, the Toledo Army Museum hosted the First Army-Corporate Forum organized by *Fundación Museo del Ejército* (Army Museum Foundation) with the tagline "Founding a safe future" and titled "Fuerzas Terrestres 2035" (Land Forces 2035).

The inauguration was in charge of the Defense Secretary of State, Agustín Conde, in the company of the Army Chief of Staff, Army General Francisco J. Varela.





This Forum, which was attended by the President of TEDAE, Jaime de Rábago, implied a new approach when compared to the traditional events that the Army Logistic Support Command had been organizing until now, and had the novelty of being a forum that allowed for an open and direct dialogue for the sharing of information between the Army and companies of the

defense sector. The Army discussed its capability requirements to respond to the challenges of the future operational landscape of 2035, while the companies had the opportunity to explain the value of the future technological developments that they are working on, so that both stakeholders could find a common line of planning, research and development.

The conferences program included presentations by companies and military experts on selected subjects. It was complemented by an area where companies exhibited their materials, at the Eastern esplanade of the Alcázar of Toledo.

The main mission of the *Fundación Museo del Ejército* is to support the dissemination of a Defense culture and awareness among all sectors of society. The corporate world related to the Defense industry is a strategic sector for Spain that, however, traditionally relates to the Army as per a client-supplier dynamic.

The Foundation considers that, in order to raise awareness in relation to Defense among our corporate fabric, it is essential for companies to know in advance the future requirements of the Army as an essential component of Defense.

TEDAE and the APDEF renew their collaboration agreement

The Presidents of the Defense Journalist Association (APDEF), Emilio Andreu, and of TEDAE, Jaime de Rábago, renewed their collaboration for the sponsorship of the Annual Awards given by this association.

In its latest edition, APDEF gave awards to the Association of Family Members of Yak-42 Victims, the

director of the *Instituto de Estudios Estratégicos*, General Miguel Ángel Ballesteros, and the Chief of the Bétera High Availability Land Headquarters, José Gan Pampols.



TEDAE participates in UNVEX Security & Defense 2018

A new edition of UNVEX Security & Defense -a security and defense unmanned aerial vehicle international event- was held from May 29 to 31 at the León Exhibition Center.

After the General Director of Armament and Materiel, Admiral Santiago Ramón González, welcomed everyone and inaugurated the event, the President of TEDAE participated in a round of talks on Industrial Perspectives, moderated by Pedro Fúster, General Sub-Director of Defense Inspection, Regulation, and Industrial Strategy, which also saw the participation of representatives



and that, according to the President of TEDAE, will face important challenges, such as “the integration of these systems into the airspace, improvements in communication and security against cyberattacks and higher interoperability standards; challenges that will require a collaboration with public administrations as an essential component.”

During his speech, De Rábago anticipated that TEDAE is working on a document related to the strategic vision of RPAS in Spain, to be presented soon, and highlighted that Spain has the technological and industrial capacity to take a leading role in this sector, “as shown by the significant participation of the Spanish industry in major ongoing European programs, such as MALE RPAS (EUROMALE), the OCEAN 2020 consortium, U-Space and projects of the European Defence Agency, among others, as well as the experience shown by our companies in areas such as specific flight simulators, communication

systems and land segment, the integration of RPAs into non-segregated airspace and the manufacturing of aerostructures.”

The President of TEDAE pointed out to the R&D ecosystem -industry, universities and technology centers- in relation to these new technologies in our countries as a great opportunity for the future development of the sector, along with the fact that many of these platforms could be used both in defense and in the civil sector.

UNVEX 2018 also included a round of conferences, an exhibition where the industry showcased the latest technological solutions, and a program of real-world demonstrations at the Conde de Gazola and Virgen del Camino military bases, both of them in the vicinity of León.

“SPAIN HAS THE TECHNOLOGICAL AND INDUSTRIAL CAPACITY TO TAKE A LEADING ROLE IN THIS SECTOR.”

from INDRA, AIRBUS D&S, THALES and the General Directorate of Single Market, Entrepreneurship and Small Businesses –DG GROW– of the European Commission.

The President of TEDAE, Jaime de Rábago, highlighted the growth that is being experienced by RPAS (remotely piloted aircraft) in relation to the entire aircraft fleet - a sector that, by 2050, will have jumped from its current 5% to 25%,

THE SEDEF and the Spanish industry were present at KADEX 2018

The Defense Secretary of State attended Kadex (Kazakhstan) 2018 -a defense fair that was held from May 23 to 26 in Astana, Kazakhstan- in support of the Spanish companies that took part of the fair.

Accompanied by the President of TEDAE, Jaime de Rábago, and various representatives from the Ministry of Defense, Agustín Conde visited the booths of Spanish companies such as DEIMOS IMAGING, AIRBUS S&S and SAES, among others, and inaugurated the Spain and Kazakhstan Defense Industry Day that was held as part of the event.

The SEDEF also seized this opportunity to hold bilateral



meetings with several Kazakh authorities and the president of the Kazakhstan Engineering holding, as

well as to build a closer relationship with the country's Ministry of Defense and Aerospace Industry.



THE PRESIDENT OF TEDAE VISITS the Managing Director of EXTENDA, Vanessa Bernard

ASD (Aerospace and Defence Industries Association of Europe) holds its Annual Convention and BOARD Meeting with the presence of the President of TEDAE

TEDAE presents its figures for 2017

The turnover of the defense, aeronautics and space TEDAE member companies reached 11.18 billion euros in 2017, which implies a 4.5% rise when compared to the previous fiscal year. In line with this trend, employment grew by 1% (56,404 professionals), and so did exports – 9.289 billion euros vs. 8.881 in 2016–, remaining at 83% of the turnover.



June

The industry that composes the Association contributed a 0.9% of the Gross Domestic Product (5.9% of the industrial GDP) and increased its investment in R&D, raising it to 11%. In fact, 7.4% of the spending on innovation in Spain is made by TEDAE sectors.

According to the statement of the President of TEDAE, Jaime de Rábago, during the presentation of the economic figures of the aeronautics, defense and space industries for 2017, this information once again confirms that it is a major contributor to the domestic economy in terms of turnover, qualified labor, generation of advanced technology and transfer to other sectors. "Another piece of information worth noting," he said, "about TEDAE companies

is that they have grown 8.4 times more than the rest of the Spanish economy during these last ten years, demonstrating its resilience to adverse economic cycles."

De Rábago said that TEDAE companies are authentic "State Industries," strategic for the economy and the progress of Spain. "It is clear to us that our challenges," he said, "are specialization, R&D, competitiveness, the effectiveness of supply chains, and gaining ground on the European and international market. And we will overcome them with the greatest commitment and enthusiasm. But given the high technological content of our products and services -and because technology development and amortization times are long-, and the fierce competitiveness of international markets, we need the support of our governments. A support that translates into strategies and policies that support innovation, transcend legislatures and provide the stability that these industries need to develop competitive technologies."

After offering the full support of the association that he presides to the new government "who we are committed to work with toward the future development of our sectors and the progress of Spain," Jaime de Rábago expressed that TEDAE sectors trust the new government representatives to keep in mind the value that we add to the economy and our citizens, to keep advancing the industrial and R&D strategies, and to execute the investments that had been announced for the modernization of the operational capabilities of the Armed Forces and Law Enforcement Agencies."

DEFENSE

By the end of 2017, the turnover of defense companies amounted to 5.379 billion euros, growing by 7.1% in relation to 2016, which employment rose by 2.3%, exceeding 22,800 employed professionals.

Javier Pradere, Defense Vice-President of TEDAE, explained that 68% of the turnover corresponds to aeronautics, 9.2% to electronics and information technologies, 7.7% to naval sectors, 6.5% to land sectors, 1.8% to space, and the remainder to missiles, armament and others. And he praised the 9.9% in R&D invested by the defense industry in relation to the acquired level of technological leadership. "A leadership that," he pointed out, "is vulnerable to a lack of momentum, since defense systems require continuous updating."

Javier Pradere stated that the future priorities of Spanish defense and security companies include playing a part in the European industrial base outlined in the European Defence Plan, the PESCO, and participating in equal conditions in the future European defense market, as well as the new investment cycle for the modernization of the defense and security capabilities after 10 years without new programs. And he also highlighted that now, more than ever, the clear and decisive support of the governments is vital for the industry: "plans for the acquisition and maintenance of defense and security material, the definition of financing instruments, plans for the support of R&D and industrial strategies depend on them."

AERONAUTICS

The aeronautical industry has doubled its turnover since 2007 (3.9 to 8.947 billion euros) and is 3.4 times more productive than the Spanish average. In 2017 it grew by 4.6%, with a turnover of 8.947 billion euros, 52% of which are from civil aviation and 48% from military aviation. Overall, it has grown in every respect, as did employment -by 1.7%-, continuing the uninterrupted rising trend of the last few years, which according to Alfredo Martínez-Menéndez, Aeronautics Vice-President of

Last year, the Spanish space sector grew by 2%, with a turnover of 851 million euros, which implies a slight increase in relation to 2016. 43% of the turnover corresponded to the flight segment, 33% to operators, 18% to the ground segment and 6% to launch vehicles.

Jorge Potti, Space Vice-President of TEDAE, pointed out that our industry is ranked 5th in Europe and that the 19 TEDAE space companies have created systems and equipment that are aboard a large share of the space devices that are currently in orbit.

“NOW, MORE THAN EVER, THE CLEAR AND DECISIVE SUPPORT OF THE GOVERNMENTS IS VITAL FOR THE INDUSTRY”

come to an end when the following ministerial meeting of the agency is held in our country - an event where Spanish companies hope that Spain takes part in planned programs at a level that is in line with its GDP.



TEDAE, are the consequence of “investments made during the last few years.”

Alfredo Martínez-Menéndez stressed that, in order to compete in equal conditions with companies of our ecosystem, it is necessary to have institutional instruments to support the aeronautical industry that are on par with those implemented in France, Germany and the United Kingdom; “countries that are our competitors, since we are one of the few countries that are capable of producing an aircraft in its entirety - from design to manufacturing.”

“The Spanish industrial sector,” Potti added, “has a great potential for growth in the mid and long term. The Upstream market -flight equipment, ground facilities- and the market of space technology applications (Downstream), as well as the so-called New Space, which will facilitate and make access to space more affordable, will be a boon for the sector.”

SPACE

2017 saw the beginning of Spain’s presidency over the ESA (European Space Agency) council, which will

THE DEFENSE Secretary of State closes the TEDAE General Meeting



"This industrial sector is a strategic, fundamental asset to national defense and security." These were the words used by the Defense Secretary of State, Ángel Olivares, in his closure speech at the TEDAE General Meeting (Spanish Association of Defense, Security, Aeronautics and Space Technology Companies) held last June 27 in Madrid. "As the Minister said," he continued, "we consider Defense to be a duty of the State, and as such, it must offer stability and certainty."

The Secretary of State praised the efforts undertaken by TEDAE companies during difficult years, increasing their competitiveness, improving costs and expanding their horizons, accomplishing objectives that were unthinkable not long ago. "An exporting effort that counts with the full support of the Government, and even more so of the Ministry of Defense," Ángel Olivares added.

Regarding the expectations of the Armed Forces and the industry

in relation to the possibility of catering to the operational needs of the armed forces, the Secretary of State anticipated that any decision made will have a global and coherent vision that matches operational needs with economic capabilities, and that industrial and technological aspects will always be taken into account. "We want the Defense budget to maintain a growing trend," he said, "which will allow for the adoption of necessary measures to mitigate the effects of our shortcomings as a result of economic restrictions. This is necessary for responsibility reasons, for security reasons, and to support our partners and allies, whose defense efforts are greater than ours."

The President of TEDAE, Jaime de Rábago, thanked Ángel Olivares and the various representatives from the Administration and State Agencies for their presence at the Meeting of TEDAE, given that for our defense, aeronautics, security and space industries it is of the utmost

importance to know that they have the support of our Government. "A support that we will respond to in kind, as couldn't be any other way, reiterating our full collaboration with the Government and the new ministry officials to work together toward the progress of Spain."

"The good results of FY2017, which we have published a few days ago," the President of TEDAE added, "reflect the number of great things that our companies offer to the Spanish citizenry and Spain's progress in terms of economic growth, employment and technological sovereignty - companies whose turnover increased by 4.5% in relation to the previous year and who contributed to the GDP by 0.9%; a 5.9% of the industrial GDP." Jaime de Rábago pointed out that the Association intends to foster the best future development of our sectors, but also to convince society that our companies are true State industries, given their strategic value for the Spanish economy."

As mandated, the Meeting of TEDAE also renewed its Board of Directors, which, for the next two years, will be composed of AIRBUS DEFENCE & SPACE, AIRBUS OPERATIONS, AERNNOVA, ITP AERO, INDRA, NAVANTIA, SBS GDLS, EXPAL, TECNOBIT, SENER, EVERIS, CENTUM and EUROPAVIA.

THE COLEGIO OFICIAL de Ingenieros Navales y Oceánicos (COIN) celebrates its 50th Anniversary

The *Colegio Oficial de Ingenieros Navales y Oceánicos* (Official School of Naval and Ocean Engineers, COIN) celebrated its 50th Anniversary with a series of events dedicated to the role of women in Naval and Ocean Engineering, since they represent 10% (and 25% in the 30-39 year-old range) of graduates.

These events offered the opportunity to get to know the experiences of female naval engineers, such as that of the first woman in the *Escuela Superior de Ingenieros Navales* and of a former Director of Sea Rescue. In addition, the issue of equality was discussed in a roundtable that saw the participation of both male and female engineers.

Carlos del Álamo Jiménez, president of the *Instituto de la Ingeniería de España*, and Luis Vilches Collado, Dean and President of the School and the *Asociación de Ingenieros Navales y Oceánicos de España* inaugurated the event.



Carlos del Álamo praised the activity of naval engineers both in relation to this anniversary and for their engagement with the UPCI (*Unión Profesional de Colegios de Ingenieros*) and the *Instituto de la Ingeniería de España*. He highlighted that the shortage of women in engineering implies a loss of key human resources for the development of society.

Luis Vilches stated that the technology and industrial sectors need women that offer a different outlook in a sector that has been traditionally male, at a moment in which innovation and creativity are essential to remain competitive. We need the best engineers that we can train, and for this we need to count with the half of the population that are women.

The closing event was held at the *Instituto de la Ingeniería de España*, which has all traditional engineering associations among its members, and was attended by male and female naval engineers, female political representatives and the first woman to ever preside the WFEO (World Federation of Engineering Organisations) and the *Instituto de la Ingeniería de España*, María Jesús Prieto Laffargue, who gave the closing speech. TEDAE was represented by its President, Jaime de Rábago.

THE PRESIDENT OF TEDAE attends the 30th Anniversary of The Boston Consulting Group in Spain

TEDAE meets the Director of the Department of Companies and Organizations, Javier Calderón, and with the Head of Foreign Relations of CEOE, Óscar Bocos

TALK by César Ramos, General Director of TEDAE, at the Information Day on Permanent Structured Cooperation (PESCO) organized by the DGAM – CDTI

An Information Day on PESCO (Permanent Structured Cooperation) was held last June 8 at the CDTI, organized by the DGAM and the CDTI, where PESCO projects and Spain's participation in them was presented by Divisional General Felipe de la Plaza (General Sub-Director of Foreign Relations) of the DGAM – Ministry of Defense.

Other issues discussed were the role of the AESMIDE and TEDAE Associations and the presentation of the Project led by Spain: "EU command & control system" by INDRA and GMV.



2018 ENGINEER of the Year Award Event



The *Colegio Oficial de Ingenieros Aeronáuticos de España* (COIAE) has awarded Aeronautical Engineer Moisés Fernández, Sub-Director of Coordination and Planning of the National Institute of Aerospace Technology (INTA), the "Ingeniero del Año 2018" (2018 Engineer of the Year) award.

The award was presented at the annual dinner of the *Colegio Oficial de Ingenieros Aeronáuticos de*

España las June 8 in Madrid, which was attended by Jaime de Rábago, in representation of TEDAE.

With this award, COIAE intends to recognize his over forty-year career in the military, having attained the rank of Divisional General - the highest of the Air Force Engineer Corps. Moisés Fernández is a regular collaborator of COIAE and is currently part of the advisory committee that is working on the proposal for a national aeronautics strategic plan.

Since 2015, Fernández holds the position of Sub-Director of Coordination and Planning of the National Institute of Aerospace Technology. Furthermore, he represents the INTA in several technology and science forums, which include *Fundación Círculo de Tecnologías para la Defensa y la*

Seguridad, the Spanish Aerospace Technology Platform, the European Space Research Establishments (ESRE) and the Committee on Space Research (COSPAR).

He was awarded the Grand Cross of Aeronautical Merit, the Grand Cross of Saint Hermenegild, three Aeronautical Merit medals, and the Cross, Commander and Commander with Star of Saint Hermenegild.

The *Colegio Oficial de Ingenieros Aeronáuticos de España* created this award on the occasion of its 50th anniversary. Its purpose is to annually recognize the professional career of outstanding aeronautical engineers, as well as to raise awareness about the profession and its professionals, highlighting its contribution to the Spanish industry.

SPANISH Hall at EUROSATORY 2018

Eurosatory, the most important land & air-land defense and security international fair showcased the latest technologies and products from around the world in Paris from June 11 to 15..

In this edition, Eurosatory gathered together over 1500 companies from all over the world and was attended by over 50.000 professionals from over 140 countries.

The Spanish defense industry had its own hall, organized by TEDAE (Spanish Association of Defense, Security, Aeronautics and Space Technology Companies) with the support of ICEX, exhibiting the

latest technologies by companies such as ESCRIBANO MECHANICAL AND ENGINEERING, GAPTEK, INDRA, INSTALAZA, NAVANTIA,

SAPA PLACENCIA, TECNOBIT, TSD INTERNATIONAL, URO, MADES, EXPAL and GDELS SANTA BÁRBARA SISTEMAS.



The Spanish Hall demonstrated the high technological level of our industry, whose products and services have a solid footing in international markets.

The Spanish Ambassador in France, Fernando Carderera, in the company of the General Sub-Director of Foreign Relations of the Ministry of Defense, General Felipe de la Plaza; the General Sub-Director of Program Management, General Salvador Álvarez; and the Head of the Foreign Support Office (OFICAEX), General Luis Manuel López, visited Eurosatory to give their institutional support to the Spanish companies.

The Spanish Hall showcased a wide range of products and services, including rapid deployment buildings, hangars and warehouses;



drone detection and jamming systems; advanced high-reliability and communication electronic systems; weapon systems; high-performance transmissions and a wide range of armored, tactical, all-terrain and land surveillance vehicles.

TEDAE member defense companies export 81% of their turnover to 89 countries, ranking our industry as the 7th in the world. An essential piece of information that explain its high competitiveness is the fact

that it reinvests 11% of its turnover in R&D, being aware that technological leadership is its most competitive characteristic. Our industrial fabric is one of the few in the world that is present in the entire product cycle: development, manufacturing, integration and maintenance. The Spanish industry has excellent products and competitive technological niches across all areas: land, sea, air and space.

HISPANIC DAY AT EUROSATORY 2018

In the reception held at Eurosatory, the General Director of Armament and Materiel of the Ministry of Defense, Admiral Santiago González,

claimed that it is necessary to encourage a solid Spanish industrial fabric that contributes to building a European industrial base that supports the Armed Forces in their mission, guaranteeing the peace and the democratic values.

Admiral González added that “we need to keep working in the same direction, opening a common space for defense in Europe, fostering a new European defense culture and leveraging industrial alliances between different countries. We

need clear plans outlining mid and long-term military needs as well as a solid institutional support.”

The DiGAM, in the company of Jaime de Rábago, President of TEDAE, and Javier Pradere, Defense Vice-President of the Association, visited the various booths of the Spanish Hall.

The Hispanic Day also saw the participation of the Minister-Counsellor of the Spanish Embassy, Alfonso Tena; the Head of the Army Logistic Support Command, Lieutenant General Pardo de Santallana, and official delegations of the Ministry of Defense and other countries.

COGES RECOGNIZES TEDAE'S WORK IN EUROSATORY

Patrick Colas, General Director of COGES, *Comisariado Général des Expositions et Salons* (dependent on the Group of Land & Air-Land Defence and Security Industries, GICAT) and organizer of Eurosatory, presented Jaime de Rábago with a medal as recognition for the work performed by TEDAE these last few years in organizing the Spanish Hall in the Fair.



activities_JUNE

IX PREMIOS de la Asociación de Periodistas de Defensa (APDEF), sponsored by TEDAE



Last June 18, the *Asociación de Periodistas de Defensa* (Defense Journalist Association, APDEF) held the award ceremony of its traditional annual awards at the “El Olivar de Castillejo” Foundation in Madrid.

In this ninth edition, the “Especial APDEF” award was presented

to Commander Miguel Ángel Franco for risking his life to save a group of civilians from a terrorist attack in Mali. The “Bernardo Álvarez del Manzano” award was presented to Carmen Romero, NATO Deputy Assistant Secretary General for Public Diplomacy. And the “Trayectoria” (Lifetime Achievement) award was presented

to Lieutenant Colonel Carlos Benito, coordinator of the War Journalist Course of *Escuela de Guerra del Ejército de Tierra* (Army School of Warfare).

The event, sponsored -among others- by TEDAE, was attended by the Minister of Defense, Margarita Robles; the Defense Chief of Staff JEMAD, General Fernando Alejandro; the General Director of CNI, Félix Sanz Roldán, and important representatives from the Armed Forces, the Ministry of Defense, the *Cortes Generales* and the industry.

APDEF was created in 2009 to defend citizens’ right to information on matters of defense, to foster the technical education of journalism professionals and to improve institutional relations.

40TH EDITION of the Premios Ejército del Aire

Last June 21, the Minister of Defense, Margarita Robles, hosted the XL *Premios Ejército del Aire* awards at the Air Force Headquarters, under the slogan ‘Únete a nuestro equipo’ (Join our team) - a phrase fitting of an event that is touched by the experience of personalities of the civilian world who have known firsthand the feeling of joining our military aviation.

This year’s edition was presented by Mamen Asencio, a journalist of Radio Nacional de España, whose first few words highlighted the “life experience that working with the Air Force means.”

The audience -which included Jaime de Rábago in representation of TEDAE, in addition to representatives from sponsoring companies- enjoyed videos showing the experiences of renowned persons such as Atresmedia journalist Roberto Brasero or YouTube celebrity professor David Calle. Brasero felt the responsibility of participating in an alert day in the 12th Wing up close, and experienced firsthand the tension of a ‘scramble’ aboard an F-18. For his part, David Calle experienced flying aboard a C-101 of the *Academia General del Aire*, where he lived several days as a regular student.

The direct account provided by these experiences spiced up a gala where the artistic and journalistic inspiration still elicited by the Air Force has once again been evidenced. The many awards presented during the evening displayed the prestige of an award ceremony that celebrates its first 40 years on 2018 - a milestone that was captured in a short audiovisual presentation.

Awards were presented in disciplines such as Aircraft Modeling, Aeromodelling, Dioramas, Children’s Modeling, Painting, Narrative, Photography, Sport



Values, University Aerospace Research and Promotion of Aeronautical Culture. Awards were also presented to Aeronautics and Astronautics Magazines.

INVITATION to the 9th Space Telecommunications Meeting organized by Hispasat

Last June 28, the Menéndez Pelayo International University (UIMP) in Santander hosted the 9th Space Telecommunications Meeting organized by HISPASAT, titled "Transformation in the satellite sector: disruption and innovation."

For two days, top executives from the most important national and international companies of the sector analyzed the changes experienced by satellite telecommunications and the importance of innovation as a generator of new business opportunities.

As a first, the event counted with the participation of startups dedicated to the satellite sector, who shared their vision. The President of TEDAE, Jaime de Rábago, attended in representation of the Association.

The opening event was hosted by the Secretary General of Coordination of Scientific Policy of the Ministry of Science, Innovation and Universities, Rafael Rodrigo, who explained that in the upcoming years we will "witness the launch of satellites designed and integrated in Spain. Such is the case of the Ingenio Earth observation satellite, or missions carried out within the framework of the European

Space Agency." Rodrigo highlighted the important leap that this will imply "for the Spanish industry and the recognition of its coming of age in the field of space technology. Hispasat is a clear example of this effort, and today we can boast about having one of the ten largest telecommunication satellite operators in the world in Spain, with 11 satellites in flight, which constitutes a strategic asset for our economy. During the next few years we have a magnificent opportunity to improve the position of Spain in the group of space-faring nations on the basis of a close collaboration between public investment and private capital."

For her part, the President of HISPASAT, Elena Pisonero, pointed out that "we live in a time of rapid transformation, mostly brought about by social changes generated by communication technologies, which have allowed people to communicate anywhere, anytime. The future is yet to be written, and it is important for us to have the ability to be drivers of success in connectivity, instead of falling behind. And for this, it is necessary to generate new projects and reconfigure business

models without waiting until the end of the satellites' service life."

Pisonero highlighted that this new road for the space industry, where sectors get intertwined with each other, must be traversed in good company. "We need the traditional family of the satellite sector, but



we also need to include new stakeholders that challenge the status quo and provide fresh ideas and a new vision to experiment in new landscapes," she assured. For the President of Hispasat, it is paramount to think about the end users and develop forward-looking solutions that respond to the needs of people, "and we need to do so with new travel companions - startups and other sectors that help us redefine the value chain," she concluded.

TEDAE ORGANIZES the “EIB financing opportunities in TEDAE sectors” workshop

Last July 10, representatives from the European Investment Bank held a meeting with TEDAE companies and members of the Ministry of Defense at *Club Financiero Génova* in Madrid to explain the financing opportunities offered by this institution specifically to the defense and security sectors, which had until not long ago been excluded from these credit lines.



July

César Ramos, Managing Director of TEDAE, thanked the EIB for its presentation before the attending companies to inform them how the institution works and in what way Spanish defense and security companies can now access this method of financing.

Emilio de la Guardia, EIB Assistant Director of the Bank & Corporation Division, explained that these criteria have changed as a result of the European Defense and Security

Program, and that there is a new policy of the European Investment Bank on the matter in place. “We act as a catalyst of financing from other banks. We rely on the commercial banking network, offering guarantees of 50% of the cost of a project to get them financed by the banks. We give the project a seal of quality and solvency.” De la Guardia added that the new policy of the EIB in relation to security and defense covers the financing of R&D projects related to double-use technology, infrastructure security, research, cybersecurity and biodefense, updating the criteria for eligibility of project lines.

Elisabetta Zorzi, EIB Head of Security and Defense, explained that the institution can support projects

that relate to some of the priorities of the European institution: SMEs, environment, infrastructure and innovation. However, weapons and munitions are excluded, as well as military or police infrastructure and equipment. “After this meeting with Spanish defense companies we will learn about their specific needs, and with this information we will be able to see how we can provide them with financial support.”

The session ended with a round of bilateral meetings between representatives of TEDAE companies and representatives from the European Investment Bank.

TEDAE VISITS the Sectoral Secretary of Transportation Material, Electronics and ICT, Juan Antonio Vázquez

THE PRESIDENT OF TEDAE, JAIME DE RÁBAGO, MEETS with the new Secretary General of Industry and SMEs, Raúl Blanco and his new Director, Galo Gutiérrez

PRESENTATION of the Report drafted by IDS: “Analysis of the Defense and Security Budgets in Spain in 2018”

Last July, the IDS publishing house, in collaboration with TEDAE, presented the Eleventh edition of the report entitled “Analysis of the Defense and Security Budgets in Spain in 2018.”

The new report, developed by Ret. Air Force Quartermaster Divisional General and PhD. in Economics José Lorenzo Jiménez Bastida, who was in charge of the military part of the report; and Quartermaster Lieutenant Colonel and BSc. in Economics Germán Martín Casares, is a detailed study that explains the different budget items that the Central Administration allocates this 2018 to the Ministries of Defense and the Interior, which came into force this month. In addition to analyzing the planned

spending in Defense and Security for this fiscal year, the report explains its progression during the last few years, comparing it against European countries and the NATO landscape. The work focuses on the allocation of security and defense items that have been approved, but also studies updated Defense spending data for NATO countries, which can be used to compare investments in this sector.

Among other facts, it also contains the variation in spending on personnel and investments in other countries, as well as the situation of foreign Law Enforcement Agencies (France, Italy, Portugal and Germany), comparing spending per agent in Spain with that of other countries in the region.

This work -over 120 pages long- is accompanied by a myriad of historical economic series - comprehensive comparison charts that illustrate the most important variables of the new budgets and the variation of economic data for previous fiscal years in relation to the matter being analyzed.

The event, which was held at the Madrid Press Association, was attended by officials in charge of economic matters of related ministries and the defense industry, as well as representatives from political parties, and it was presented by Jaime de Rábago, President of TEDAE.



activities_ SEPTEMBER

TEDAE LAUNCHES an acronym search application

The day-to-day of the four industrial sectors that compose TEDAE is swarmed with acronyms that reference organizations, institutions, instruments and programs related to defense, aeronautics, security and space. They see extensive use and, often times, hamper the comprehension of many documents or sector initiatives. With the goal of addressing this issue, TEDAE has created a useful application that



contains acronyms for our sector, with over 1000 entries in its first release.

The application is available for both iOS and Android mobile devices, and can be downloaded to the APPLICATIONS menu of the mobile device (via Play Store or App Store) using the keyword TEDAE.

Searches can be made by entering the acronym, or navigating the

categories and sub-categories that they are classified into. After finding the acronym, you will be able to see its meaning and translation, if the term is not in Spanish.

If an acronym is entered but not found, the user will be able to suggest its addition using an automated message. In addition, the side menu contains a suggestions option, where you may also submit to us any acronym that you believe to be useful.

VISIT of the President of TEDAE, Jaime de Rábago, to Vicente Fernández Guerrero, new President of *Sociedad Estatal de Participaciones Industriales (SEPI)*

September

8TH MEETING of the Foundation and AGFITEL 2017 Awards Ceremony



Last September 10, the Anastasio de Gracia Foundation (FITEL) held its 8th Annual Meeting at the conference hall of the *Casa del Pueblo* of UGT at Avd. de América in Madrid. The event was attended, among others, by the Minister of Development, José Luis Ábalos; the Ambassador to France, Yves Saint-Geours; the Secretary General of UGT, José María Álvarez and the President of TEDAE, Jaime de Rábago.

Every year, the AGFITEL foundation holds a meeting that brings together the Trustees and Honorary Trustees of the Foundation; many guests from diverse areas such as companies, politics, culture, research and sports; and the media.

The Anastasio de Gracia 2017 Awards were presented during the Meeting, which recognize the commitment of individuals, institutions and companies to social and labor rights through their activities in the public administration or companies; in culture and in artistic creations, and this year round it was awarded to José Sacristán, Proactiva Open Arms, Miguel Poveda and Javier Fernández.

As in previous years, the Foundation recognized a country -in this case, France- for “the historical, cultural and human ties that bind us together” and “its role in exile after the Civil War,” which was received by its Ambassador, Yves Saint-Geours, and presented by Pedro Luis Hojas, President of AGFITEL and Secretary General of UGT-FICA, jointly with Minister Ábalos.

The 8th Meeting ended with a speech by Pedro L. Hojas, praising the work performed by the Foundation and its commitment to continuing creating spaces for debate and reflexion that contribute to the improvement of society.

ARPA CELEBRATES its 50th Anniversary

Last September 13, TEDAE attended the 50th Anniversary of ARPA, where they commemorated the long track record of hard work of this company, which was founded in 1968 by Antonio Arpa. For 50 years, ARPA has been designing and manufacturing integral solutions applied to the entire logistics cycle of a campaign.



CELEBRATION of the 20th Anniversary of the Organisation for Joint Armament Cooperation (OCCAR)



The twentieth anniversary of the signature of the OCCAR Convention and the official inauguration of its new facilities in Bonn were celebrated last September 20. The event consisted of a ribbon cutting by the President of the Supervisory Board, LtGen Debaene, and the Director of OCCAR, Divisional General Arturo Alfonso-Meirinho, who has been at the helm of OCCAR since mid-2016. The event was attended by Jaime de Rábago, President of TEDAE.

During their speeches, the speakers highlighted the mission that the OCCAR Convention assigned to

the new Organization: to foster cooperation, improve efficiency and reduce costs of armament programs. The objective was to obtain the defense systems that were necessary to overcome Europe's deficiencies in military capabilities.

20 years later, the vision of the founding fathers of OCCAR in relation to a European security and defense identity is now a reality.

The Organization grew from the first 5 defense acquisition programs up to today's 13, with a value of over 60 million euros and the participation of 6 Member States and 7 Non-

Member States. The participation of Finland, Lithuania, Luxembourg, Poland, Slovenia, the Netherlands and Turkey in some of the programs is a testament to the flexibility and accessibility of OCCAR for all European nations.

As a result of the commitment of the Member States and other States participating in the program, new programs have been planned, which will join existing ones. It is for this reason that new facilities have been inaugurated, expanding the physical capacity and technical capabilities in Bonn. This will allow the requirements of new and existing programs to be met, which may result in new investment cycles by European nations and the initiatives of the European Commission.

Nowadays, this European organization is a nexus for six European countries -as well as other seven that take part of certain programs- and manages 14 armament projects, including the A400M military transport aircraft and the Tiger attack helicopter.

activities_ SEPTEMBER

TEDAE PROMOTES the 2018 Global SOF Symposium in Madrid

The 2018 Global SOF Symposium-Europe, an international conference that focuses on Special Forces, was held from September 25 to 27 of 2018 at the Marriot Hotel in Madrid. This edition revolved around the special operations communities of Europe, North Africa and Latin America, and the problems that they share. This was a unique opportunity to meet other stakeholders of this field, and was sponsored by the Spanish Special Operations Joint Command (MCOS).

The event was organized by the Global SOF Foundation, a North American nonprofit organization headquartered in Florida that focuses on the special operations

community, and was promoted by TEDAE and the Spanish Defense industry.

Its goal is to act as a think tank and convey to members of the political and industrial arena the importance of having Special Operations Forces (SOF) that are well-prepared and well-equipped, as well to offer its support to the community of active duty and retired SOF members. Its members are organizations with interests in this field as well as individuals - many of them active duty or retired members of the special forces of over 50 countries.

This third GLOBAL SOF Symposium brought together representatives from the armed forces and governments, journalists and members of non-government organizations from 22 countries.

RECEPTION of the Saudi National Day



On September 24, the Ambassador to Saudi Arabia, Prince Mansour Bin Khalid A. Alfarhan Al-Saud, in the company of ambassadors to the Arab League, Oman, Palestine, Egypt and Sudan, held a multitudinous reception to commemorate the Saudi National Day at Hotel Villa Magna in Madrid.

The event was attended by members of the foreign diplomatic

corps in Spain, as well as members of the Spanish nobility, politics, sciences, culture, armed forces, journalists and the corporate world. The President of TEDAE, Jaime de Rábago, attended in representation of the Association's member companies.

The guests to this great social event included the ambassadors to France, China, Oman, Tunisia, Andorra, Russia, Venezuela, Palestine, Azerbaijan, Egypt and Sudan, among others.

As customary, the Saudi host delighted the hundreds of guests with an assortment of traditional dishes from his country.

TEDAE ATTENDS the Fórum Europa Informational Breakfast with the participation of Fernando Alonso, President of AIRBUS Spain



Last September 25, Nueva Economía Fórum held an Informational Breakfast of Fórum España, an event that was sponsored by Asisa and Red Eléctrica de España, and had the President of Airbus Spain as a speaker.

During his speech, Fernando Alonso reiterated his request for a strategic plan for the Spanish aerospace sector, as well as an adequate and long-term economic policy, also highlighting the need for Europe to have a common defense policy, and asking for companies to work more closely with each other, pointing to the fact that in international calls for bids, Europe does not only compete over contracts against the United States, but it also does so against Europe. The attendees included Jaime de Rábago, President of TEDAE, in representation of the association.

INVITATION to the “Universe 4.0. Impact on Organizations” conference as part of the 8th edition of Navy Week



A roundtable titled “Universe 4.0. Impact on Organizations,” organized by the AJAL, Admiral Salvador M. Delgado Moreno, was held last September 25 at the main lecture hall of the *Centro Superior de Estudios de la Defensa* (CESEDEN). This event was part of the program of the eighth edition of Navy Week in Madrid, which focused on debating the impact of new technologies on the culture of organizations, with a special emphasis on economic aspects, personnel management and influence on military organizations.

Navy Week was born eight years ago with the purpose of raising

awareness among the citizens about the undeniable magnitude of Spain’s seas, bringing the Navy closer to the population and fostering a Defense Culture in society.

After the opening event hosted by Admiral General Teodoro López Calderón, the Secretary General of Industry and SME, Raúl Blanco Díaz, gave an introductory conference where, after discussing the current situation of the Spanish industry, he reflected on the main perspectives for the future, ending with the most pressing policies and lines of action of the Secretariat-General of Industry and SMEs of the Ministry of Industry.

Speeches were given by Professor Daniel Lacalle, who delved on economic aspects; José María Fernández Ortega, Director of Digital Transformation of the El Corte Inglés group -who presented his vision on the impact on human resources-; and

lastly, Admiral Manuel Garat Caramé, who presented the Navy’s vision in relation to the 4.0 challenge, all of them moderated by Vice-Admiral Marcial Gamboa Pérez-Pardo, Director of Maintenance of the Directorate of Logistic Support.

The event, conceived as an activity that was open to the general public, was attended by many military authorities, as well as a number of representatives from national industries and corporations. Jaime de Rábago attended in representation of TEDAE.

MEETING organized by the Navy League of the United States, with the participation of the President of TEDAE under the title “The influence of the U.S. in the Spanish Defense Industry: past, present and future”

2ND INDUSTRIA Conecta 4.0 Congress

The second edition of CIC4.0, which was held last September 26, brought together over 1000 ‘on-site’ guests at the Madrid Municipal Conference Center, plus 700 professionals via streaming, in what has been the second meeting of all professionals, institutions and companies that are committed to digital transformation in our industry.

This is a great event for sharing knowledge and experiences, where the greatest challenges of the industry toward digital transformation, the latest technology trends and their application in major industrial



sectors are discussed - a great event to know before anyone else the best practices of cutting-edge companies and the gigantic opportunities that the new and disruptive landscape of industry 4.0 has to offer.

With first-rate speakers and experts, as well as eight exclusive themed halls,

the Industria Conectada 4.0 Congress is a landmark annual event that fosters industry 4.0 in our country.

The event is sponsored by the Ministry of Industry, Commerce and Tourism, with the support of companies such as Accenture, AENOR, Grupo Siro, Indra, SEAT, Siemens and Telefónica, and the collaboration of the Madrid City Hall and the Spanish Association for Quality.

The President of TEDAE, Jaime de Rábago, attended the event in representation of the Association.

activities_ OCTOBER

TEDAE ATTENDS the Informational Breakfast of Fórum Europa, with the presence of the Minister of Industry, Commerce and Tourism, Reyes Maroto



Forum Europa organized an Informational Breakfast sponsored by ASISA, REE and Grupo Villar Mir, which was attended by the President of TEDAE, Jaime de Rábago.

The Minister of Industry, Commerce and Tourism, Reyes Maroto, took part of this Breakfast, which was held las October 1, and stated that the Government will introduce a new Industry Law with the purpose of “addressing the challenges of the 21st century” and modernize the one that is

currently in effect and dates back to 1992. Maroto said that modifying this law is necessary since, despite all the changes experienced by the industry, “we have a law that dates back to the last century.”

Furthermore, she reminded that the Government is also working on an agenda for the Spanish industry with sights on 2030, focused on fostering industry 4.0 by supporting digital

entrepreneurship and emerging industries, with the purpose of assisting traditional companies in their technological and digital transformation.

In addition, she pointed out that a Commerce 4.0 Observatory will be created “as a forum for dialog and analysis of the sector in its digitalization process” to try to leverage “the opportunities that the online market offers to small businesses.”

INVITATION to the German Unity Day reception

The German Unity Day (*Tag der Deutschen Einheit* in German) is a German national holiday that is celebrated on October 3, commemorating the anniversary of the effective reunification of Germany in 1990, as outlined in the Einigungsvertrag - a contract entered into between the governments of the Federal Republic of Germany and the German Democratic Republic.

The event was attended by members of the diplomatic corps in Spain, the German community living in Spain, businessmen and institutional guests.

The President of TEDAE, Jaime de Rábago, attended in representation of the Association.

TEDAE ATTENDS the Informational Breakfast of Fórum Europa, with the presence of the Minister of Science, Innovation and Universities

INSTALAZA celebrates its 75th Anniversary

TEDAE ATTENDS the Informational Breakfast of Executive Forum España with the General Director of Armament and Materiel

SER MEETING: Defense and Aeronautical Industry – Seville

Last October 2, the Cajasol Foundation was home to the first edition of the SER Meetings on Defense and the Aeronautical Industry, organized by *Cadena SER Andalucía* in collaboration with the Andalusian Foundation for Aerospace Development (FADA), Airbus and Santa Bárbara, which saw the participation of leading companies in the sector and public administrations, with the presence of the Defense Secretary of State of the Government during the closing event.

Andalusia is the second most-important Defense industry community after Madrid, and is a leader in the aeronautical and aerospace sector, with sales in excess of 3 billion euros in 2017 - half of those of the entire country.

The conferences, which were attended by the President of TEDAE, Jaime de Rábago, were inaugurated by the Employment Advisor, Javier

Carnero, after the welcoming speech by the Director of *Cadena SER Andalucía*, Antonio Yélamo. Next, the Director of Operations of Military Aircraft Airbus Defence and Space, Alberto Gutiérrez, gave a talk about the aeronautical sector. The meeting continued with a roundtable that saw the participation of Javier González de Retana, Director of Institutional Relations of Aernnova Andalucía; Antonio Ramírez, General Manager of Inespasa (Grupo UMI); and Antonio Gómez Guillamón, General Manager of

Aertec Solutions. The debate on the future of the aeronautical industry was moderated by the President of FADA, Pilar Serrano.

After the conferences, the sessions continued with a talk about the Defense sector by the CEO of General Dynamics Santa Bárbara Sistemas, Antonio Bueno.

The closing speech was in charge of the Defense Secretary of State of the Spanish Government, Ángel Olivares.



CALL FOR ENTRIES for the 1st Edition of the TEDAE Awards

TEDAE celebrates the 10th anniversary of the Association by establishing annual awards to be presented starting

2019, with the purpose of recognizing individuals and institutions whose technical, managerial, corporate,

lecturing or academic work makes a significant contribution to the development of Defense, Aeronautics, Security and Space industries and technologies.



The call for entries to take part of the TEDAE Awards covers six different awards –Lifetime Achievement; defense, aeronautics, security and space categories; and a Future Professional award.

The awards ceremony took place during the first few months of 2019, coinciding with the celebration of the 10th Anniversary of the Association.

activities_ OCTOBER

INVITATION TO THE INFORMATIONAL BREAKFAST of Executive Forum España with the General Director of Armament and Materiel



Last October 5, the General Director of Armament and Materiel (DIGAM), Admiral Santiago Ramón González Gómez, took part of an informational breakfast organized by Executive Forum and sponsored by ITP Aero and Thales, who also participated in the event. During the meeting, held at the Palace Hotel in Madrid, the DIGAM recounted the current state and role of the materiel and armament policy within the general context of defense.

Marta Gimeno García-Andrade, Defense Director of ITP Aero, and

José Sarnito, Defense Director of Thales, joined the General Director in his speech. González Gómez begun his speech by highlighting that the main purpose of the Directorate-General for Armament and Materiel (DGAM) "is none other than to address the needs of the Armed Forces as per the resources that the different governments provide to the Ministry of Defense."

In addition, on several occasions the DIGAM referred to the need to stay committed to the development of a defense industry that is "modern and competitive," which is essential

for the Armed Forces to stay trained and successfully accomplish their mission. On several occasions, he also related the development of a cutting-edge defense industry with the generation of employment and wealth, and the creation of innovations in other types of industries, adding that "anything that is innovative in the civilian world can be used by the military, and almost every innovation of the military world can be adapted to the civilian world."

In relation to the budget allocated to the Ministry of Defense and the development of industry, the DIGAM stated that Spain cannot renounce its role as a European power, and that "we must not only be prepared for known threats," but that it is also necessary to innovate to face the unknown. In line with this, he claimed that the Ministry of Defense intends to reach 1.5% of the GDP allocated to defense by 2024, exceeding the current one percent.

The President of TEDAE attended the event in representation of the Association.

TEDAE ATTENDS THE INFORMATIONAL BREAKFAST hosted by Nueva Economía Forum with the spokesman of the Citizens Parliamentary Group in Assembly of Madrid, Ignacio Aguado

THE CESEDEN INVITES TEDAE to the "Defense Industry" conference



PARTICIPATION OF TEDAE AT THE “Challenges and Opportunities of the Andalusian Aerospace Sector, A Corporate Vision” conference-breakfast organized by the Chamber of Commerce of Seville and the HÉLICE Cluster

The President of Andalucía Aerospace of the Hélice Cluster, Antonio Gómez Guillamón, participated last October 10 in the forums of the Chamber of Commerce of Seville Foundation with a conference on the “Challenges and Opportunities of the Andalusian Aerospace Sector, A Corporate Vision.”

The President of Andalucía Aerospace, Hélice Cluster, was introduced by Jaime de Rábago, President of TEDAE (Spanish Association of Defense, Security, Aeronautics and Space Technology Companies), who assured that “the aerospace sector is strategic for Andalusia, since it offers wealth, prestige and international recognition, which is why it requires a regional Strategic Plan that should go hand-in-hand with the national one.”

A Strategic Plan about which the President of Andalucía Aerospace, Antonio Gómez Guillamón, said, “we need to show that it is singular, which is why it deserves to be treated as strategic. The aerospace world is a world that requires a strategy so that we can all defend the cluster, the sector, and work together (...) Andalusia cannot find its way without a strategic plan. We are asking for a common strategy that we can all execute together in order to advance.”

While he stated that AIRBUS is the sector’s main driver, which leads to an “excessive” dependence, it must become a “fortress for a projection into other industries.”

Gómez Guillamón mostly spoke about the challenges that are related to making a “diagnosis of

the Andalusian aerospace sector, the new scenarios with thriving countries that may become great drivers, such as China,” and about the future, which, he assures, “is encouraging, given the increase in air traffic of the last few years.”

In relation to Andalusia, the President of Andalucía Aerospace stated that “it has a territorial potential and a driving force such as AIRBUS, with industrial plants in Cádiz and Seville, and also with leading industries in other provinces such as Málaga and Jaén, where cutting-edge technology is being developed.”

Gómez Guillamón assured that despite there being no programs in the horizon, “the sector is experiencing an attractive time, given the growing technological revolution that offers new business opportunities.”

“Aviation is becoming increasingly more complex and technological with each passing day, which means that industry requires companies that are more innovative and prepared - that is the challenge that we all face: opening up to new products, ranging from unmanned aviation, drones and satellites, to systems that reduce carbon emissions to mitigate the impact on climate, etc.”

In this regard, Gómez Guillamón pointed out that “Andalusia must become a sectoral leader in experimentation with unmanned and unconventional aircraft in southern Europe.”

Overall, “Andalusia has the opportunity to be designated as an

Aerospace industrial park so as to allure more industries in addition to Airbus.”

To accomplish all of this, Gómez Guillamón insisted on the need to attract talent. “Digital evolution in everything, and advances that



go beyond traditional academic education, means that we must look for talent and brilliant individuals with new skills.”

In this regard, the President of the Chamber of Commerce of Seville, Francisco Herrero, conveyed the interest of the Chamber on the sector, which he called of ‘major interest’. This is why, with the support of Airbus, the University of Seville, the Andalusia Technological and Aeronautical Park and the Hélice Foundation, “we implemented the first Aerospace Technology Transfer Incubator in Europe, a project that is funded by European Funds through the Incyde Foundation. A place where entrepreneurs and companies that are interested in the sector find a landscape tailored to their needs to be able to create and develop their business project.”

activities_ OCTOBER

TEDAE ORGANIZES a meeting among students as part of World Space Week 2018: "Space connects us"



Last October 10, TEDAE member companies, in collaboration with CaixaForum Madrid, joined the activities scheduled for World Space Week 2018 by organizing a gathering among over a hundred students and professionals of the space sector.

Over a hundred high school, trade school and university students had the opportunity to ask questions directly to individuals who work in this sector.

Javier Armentia, the Director of the Pamplona Planetarium; César

Ramos, Managing Director of TEDAE, and six professionals of this industry responded to the questions that they were asked, to better explain why space and space research are important, and how they make our lives easier.

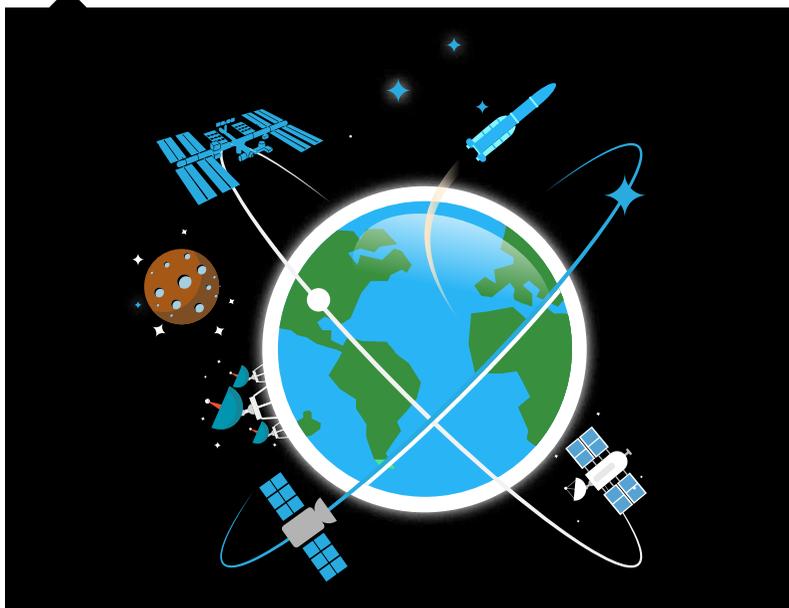
World Space Week is the most important annual event in relation to the space uses and technology. This week forges the workforce of tomorrow by inspiring students, shows the explicit support of the public opinion to the space program, educates the public in relation to space activities and fosters international cooperation in the dissemination and education related to space. Since 2007, over 94 countries have participated in over 2,250 events, with over 1.3 million attendees.

PARTICIPATION OF TEDAE IN THE EVENT organized by *Fundación Círculo de Tecnologías para la Defensa y la Seguridad*: "Situation and future of the military aeronautical sector in Spain"



Last October 17, *Fundación Círculo de Tecnologías* held an event on the "Situation and future of the military aeronautical sector in Spain," which discussed its main challenges looking toward the future, and the direction that it should take, as well as the actions that are necessary and required by the industry and the Administration to maintain already-developed capabilities, guaranteeing the sovereignty and autonomy of our country in this field.

The gathering was attended by a number of representatives from the Government and the Armed Forces, and the closing speech was in charge of Santiago Ramón González, General Director of Armament and Materiel of the Ministry of Defense. The Managing Director of TEDAE, César Ramos, also participated in this event with a conference on The Spanish Aeronautical Sector: "Capabilities and Challenges."



AESMIDE AND TEDAE organize the 1st edition of the International Defense Fair –FEINDEF– to project the capabilities of their industries toward the international arena

TEDAE (Spanish Association of Defense, Security, Aeronautics and Space Technology Companies) and AESMIDE (Association of Public Administration Contractors), with the support of the Ministry of Defense, have decided to jointly organize the International Defense Fair, which will open its doors to the public in Madrid on May of 2019.

The purpose of the event is to project the national industrial, technological and R&D capabilities in the field of defense and security to the world, and targets the various stakeholders of defense and security in Europe and the international market, but also our supply chain and research centers. The Fair will also bring the defense culture closer to the citizens, for them to learn how the defense industry contributes to their wellbeing and safety.

The International Defense Fair is structured as a multi-sector gathering, mostly targeted at countries of the European Union, Latin America, Middle East and northern Africa. From May 29 to 31 next year, it will showcase the high competitive value of our technologies and capabilities to Europe and the international

markets, while offering an integral vision of the advances that are taking place in Europe toward the development of the EU Common Security and Defence Policy. It will also be a good opportunity to further integration trends in industrial consortiums of the European defense market (PESCO, EDAP).

The 1st Spanish Defense Fair will exhibit the latest products and technologies that guarantee the operativity and protection of the Armed Forces and Law Enforcement Agencies, which includes developments in fields as diverse as personal protection equipment; food; energy; weaponry; cyberdefense & cybersecurity; infrastructure; space; the internet of things; Big Data; aerial, sea and land platforms; logistics; RPAS; electronic systems and clothing.

At the same time, conferences and workshops will be held dealing with new developments and technologies, market trends and forecast of future needs of the Armed Forces and Law Enforcement Agencies, which will also discuss issues that are shared by other economic sectors, such as



data protection, financing and the environment.

The International Defense Fair will be a major driver for a strategic sector that offers the capabilities and technological solutions to guarantee the operativity of the Armed Forces and Law Enforcement Agencies, as well as their personal protection during their missions, which highly contributes to the economy, safety and technological sovereignty of Spain.

activities_ NOVEMBER

MEETING WITH THE OFFICIAL

South Korean delegation at the Ministry of Defense

Last November 13, a bilateral meeting was held at the *Centro Superior de Estudios de la Defensa nacional* (CESEDEN) between Korean and Spanish companies with the purpose of studying

collaboration opportunities between both countries.

The President of TEDAE, Jaime de Rábago, attended in representation of the Spanish Association of

Defense, Security, Aeronautics and Space Technology Companies.

November

Last November 16, the Defense Secretary of State, Ángel Olivares, the Director of Armament and Materiel (DIGAM), Admiral Santiago Ramón González, and the presidents of the AESMIDE and TEDAE sectoral associations, Gerardo Sánchez Revenga and Jaime de Rábago, presented the first International Defense Fair (FEINDEF) to take place from May 29 to 31.

The DIGAM highlighted that the fair “constitutes an ambitious endeavor, but a very necessary one for Spain,” and its purpose is to offer an “integral vision of the advances that are taking place in Europe toward the development of the Common Security and Defence Policy.” Admiral González also stated that “through the efforts of industry, and everyone’s, Spain will maintain a competitive industrial sector that is well-positioned internationally.”

During the presentation, which included speeches by the Sub-

OFFICIAL PRESENTATION OF FEINDEF

(International Defense Fair) at the Rafael del Pino Auditorium



Director of Foreign Relations of the DGAM, Divisional General Felipe de la Plaza, and the Head of the Institutional Support Core of the Ministry of Defense for the Fair, Brigade General José Conde de Arjona, the opportunity that this international fair implies was especially mentioned.

FEINDEF is the first International Defense Fair that is hosted in Spain in collaboration with the two sectoral associations and the support of the Ministry of Defense and the Interior,

European policy

In this regard, the Defense Secretary of State, who gave the

closing speech, highlighted that the Spanish industry needs to “increase its internationalization” so as to benefit from the new European policies in an “environment that is as changing as it is demanding,” pointing out that new technologies need to adapt to this new reality. Furthermore, he emphasized the importance of this event, stressing that “there is no safe and powerful Defense if there is no industry backing it up.”

FEINDEF has a very close relationship with Europe, toward positioning Spain in European consortiums within the framework of the European Defence Action Plan (EDAP).

PARTICIPATION OF TEDAE IN THE 11TH EDITION OF THE “Six current challenges for Peace and International Safety” seminar, organized by the King Juan Carlos University and CESEDEN

TEDAE, participated in yet another edition of the Seminar organized by the King Juan Carlos University and CESEDEN, entitled “Six current challenges for Peace and

International Safety.” Before the future professionals and leaders of our country, its Managing Director, César Ramos, discussed the macro-trends that are to shape the

new geo-strategic and economic landscapes that we will face, and the technological challenges that will address those challenges for a safer society.

THE PRESIDENT OF TEDAE, Jaime de Rábago, attends the AESMIDE “Administration and Companies before the challenges of the future” Debate Forum

Last November 13, AESMIDE hosted its sixteenth edition of its Debate Forum, where they analyzed and shared the challenges that the Government and companies must face, as well as the new landscapes of the Defense industry, with a spotlight on technology. The President of TEDAE, Jaime de Rábago, attended the forum, accompanying member companies.



The Secretary General of Digital Public Administration, Fernando de Pablo Martín, stated that “the digital transition of the Public Administration requires a change of mentality and an effort at an organizational and structural level.” De Pablo also stressed that, in Spain, technology is “a cohesive element” and that Spanish regulations on the matter are quite advanced. More specifically, he pointed out that “Spain is the second European country when it comes to an open data structure.”

Industrial and SME support policy

The General Director of Industry, Galo Gutiérrez Monzonís, detailed

the active SME support programs. In Spain, SMEs make up 99% of the corporate fabric.

More specifically, the industrial competitiveness strengthening program has granted “loans for 2.394 billion euros.” Galo Gutiérrez highlighted that “the goal of industry 4.0 is to be the driver of digital transformation.”

The event also saw the participation of Jordi Sevilla Segura, President of Red Eléctrica, with his talk on “Economy and Company,” as well as a roundtable that gathered representatives from companies and organizations involved in this digital transformation process, moderated by the General Director of *Instituto*

de Ingeniería del Conocimiento, Alberto Barrientos.

Gerardo Sánchez Revenga, President of AESMIDE, was in charge of closing the event, which brought together over 220 guests that included private company representatives, and representatives from public companies, local and autonomous government authorities, and officials from the Public Administration and Armed Forces high command.

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PRESENTATION OF “Honorary Member” medals to Ignacio Sánchez Galán and Jorge Sendagorta, in an award ceremony organized by *Instituto de la Ingeniería de España*

In his capacity as the President of TEDAE, last November 13 Jaime de Rábago attended the award ceremony where the “Honorary Member” medals of the *Instituto de la Ingeniería de España* were presented.

This time around, the award was presented to Ignacio Sánchez Galán

(President of Iberdrola) and Jorge Sendagorta (President of Sener).

Through these awards, *Instituto de la Ingeniería de España* aims to raise awareness among the public about their long and successful careers dedicated to engineering, and sincerely recognize their aptitudes, skills and capabilities as engineers.



TEDAE ATTENDS the lunch-talk organized by *Foro de Innovación y Tecnología del Círculo de Empresarios de Galicia*, titled “The Aerospace and Defense Industry from a Corporate Outlook. A global vision.”

The President of TEDAE, Jaime de Rábago, took part as a guest of the Forum organized by the *Círculo de Empresarios de Galicia*, where he had the opportunity of raising awareness about the technological capabilities of Galician companies in these strategic sectors and the role that they play as drivers of technological innovation toward the growth of our national economy.



CEOE ELECTORAL Assembly

As a member of CEOE, TEDAE attended its Electoral Assembly, represented by its President, Jaime de Rábago.



TEDAE PARTICIPATES IN the “Defense Industries: Importance of the defense policy in the Spanish economy” event at the *Instituto de la Ingeniería de España*

The President of TEDAE, Jaime de Rábago, took part of an event organized by the *Instituto de Ingeniería de España*, titled “Defense Industries: Importance of the defense policy in the Spanish economy.” This event served as an opportunity to highlight the need for a State policy in a sector as strategic as Defense.



TEDAE PARTICIPATES IN A DEBATE ON the future of the aerospace industry in Spain with a female voice, organized by the “Ellas Vuelan Alto” Association

Last November 22, the “Ellas Vuelan Alto” Association (EVA) held an event with all-women speakers that discussed the future of the aerospace sector and the aircraft industry in Spain.

Teresa Busto, President of “Ellas Vuelan Alto,” welcomed all attendees before the official inauguration, which was hosted by Soledad Murillo, Equality Secretary of State.

Four major issues were analyzed during the event by four female professionals of the aerospace

sector in executive positions:

“Present and Future of Air Transport in Spain,” by Celia Muñoz, Iberia Sales Director for USA, Europe, Africa and the Middle East.

“The importance of entrepreneurship in the future of the industry,” by Cristina de Bustos, General Manager of CITD.

“Situation of the aeronautical industry in Spain,” by Clara Tébar, Director of Operations of TEDAE.

“The need for a strategic aerospace plan in Spain,” by Estefanía Matesanz, Secretary of EVA.

The closing event was headed by Galo Gutiérrez, General Director of Industry and SMEs.



activities_ DECEMBER

SPANISH Hall at EDEX 2018

Last December 3, the President of the Arab Republic of Egypt, Abdel Fattah El Sisi inaugurated the first edition of Egypt Defence Expo (EDEX), which brought together over 300 exhibitors at the Cairo International Convention Center until December 5.

For three days, EINSA, ESCRIBANO MECHANICAL & ENGINEERING, EVERIS, HISDESAT and INDRA showcased their technologies and

products at the Spanish Hall -which was organized by TEDAE with the support of ICEX- not only to representatives of the Armed Forces of Egypt, but also to over 10,000 professionals and government, army and law enforcement agency representatives from the Middle East and northern Africa that attended EDEX 2018.

The Managing Director of TEDAE, César Ramos, traveled to El Cairo accompanied by an official delegation of the Ministry of Defense, led by the Head of the Foreign Support Office (OFICAEX), General Luis Manuel López, and General José Conde de Arjona, so visit the Spanish Hall and give their institutional support to the companies.

The Spanish companies that were present at EDEX 2018 were also visited during the first day by the Ambassador to Spain in Egypt,



Ramón Gil-Casares; Economic and Trade Advisor to the Embassy, Luis Orgaz; and the Defense Attaché, Colonel Fernando Fuster.

The companies of the Spanish Hall had the opportunity to display their technological leadership in a wide range of products and services across all areas: land, sea, air and space.

December

TEDAE ATTENDS the 17th Edition of the 2018 EVERIS Entrepreneurship Awards

Last December 3, the President of TEDAE, Jaime de Rábago, attended the ceremony of the 17th Everis Awards.

The Everis Foundation once again recognized innovation and research by supporting the effort and entrepreneurship of the Neosistec start-up, that was selected as the winner thanks to its project, NaviLens.

Unlike other markers such as the famous QR codes, NaviLens, designed specifically for mobiles, has a powerful algorithm based on Artificial Vision that is capable of

detecting multiple markers at long distances in milliseconds, even when moving, and without the need to focus. What does this mean? That this system can help people suffering from blindness or poor vision to navigate interiors with complete autonomy. As a pilot test, NaviLens is being used by visually impaired people.

With a track record of 17 years, the Everis Awards currently enjoy an unprecedented international recognition, which is evident by the more than 1,000 entries presented during 2018 from over 20 countries.

However, Spain is home to the six finalist projects, which included the following categories:

- Biotechnology & Health: Echophone (Madrid) and MJN Neuroserveis (Barcelona).
- IT and Digital Economy: FOXid (Madrid) and NaviLens (Murcia).
- Industry & Energy: VENvrontech (Barcelona) and Alén Space (Vigo).

For Noemí Sanín, President of the Everis Foundation, "this 17th edition of our Awards is another step in our commitment to supporting

technological projects that aim to improve our society. Proof of this is the winning project, thanks to which visually impaired people can find their way around unassisted

THESE AWARDS HAVE AN INTERNATIONAL APPEAL

in places that they have not memorized and especially in places where there is no GPS signal (such as the subway, trains or airports)."

In addition, Pedro Duque, Minister of Science, Innovation and Universities, highlighted that we "have a very high scientific level in Spain. It is a leading country in science, but what we still have to do is take a step forward in research



and share knowledge with society. This is why I encourage the Everis Foundation to continue with their project in Spain and to keep working together."

PRESENTATION de la Sectoral Agenda of the Aeronautics Industry



Last December 4, the Minister of Industry, Commerce and Tourism, Reyes Maroto, and the President of TEDAE, Jaime de Rábago

presented the Sectoral Agenda of the Aeronautics Industry before a number of representatives of various sectors of the Aeronautical

industry. A sector that Reyes Maroto qualified as strategic for the government, "that has a clear commitment with industry to increase its weight up to 20% of the GDP, which is an objective of the EU. In only five months we have move forward with the sectoral agendas -to include up to 13-; something that the previous administration had already started preparing. And we are aiming for the General Government Budget for 2019 to show the support that we want to give to industry."

The Minister stated that when getting to know the internal workings of the aeronautical sector, or entering an Airbus MRTT Tanker, she is impressed by seeing the technology that it requires, and that

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one of its key support mechanisms is the significant spending in R&D. "Spain," she added, "is one of the few countries that has a presence in the complete industrial cycle of an aircraft - a capability that we must maintain. The Agenda will guide us in this road, and I hope that we can see results soon."

The President of TEDAE was optimistic about the guidelines contained in the Agenda, "a roadmap designed in close collaboration with the Ministry of Industry, Commerce and Tourism that outlines the best path toward the future development of the Spanish aeronautical industry - a strategic sector for the progress of the Spanish economy."

The Sectoral Agenda of the Aeronautics Industry contains a detailed analysis of the current situation of the aeronautical industrial sector, and its impact on the Spanish economy. A sector that, as stated by Jaime de Rábago, has demonstrated a great strength in adverse economic cycles, maintaining a constant growth throughout the latest years, increasing its contribution to industrial GDP from 2% to 4.7% in the last 10 years. "A sector," he added, "that is also present all across the nation, and especially in the communities of Madrid, Andalusia, Basque Country, Castile-La Mancha and Galicia."

After pointing out that the international outlook of the aeronautical sector is quite positive, both when it comes to market and to defense, de Rábago stressed that the sector must prepare for this significant growth. "It is estimated that by 2036, over 35,000 new commercial transport aircraft will be required, endowed with the latest technological advances, targeting zero emissions with propulsion systems that are more efficient, more electric and an increasingly lower weight, as well as more silent. Air traffic will grow more than twofold during the next 20 years, requiring new simulation and air traffic control equipment. All of this will generate major opportunities for the national aeronautical industry, provided that we maintain the leaderships and participations in European consortiums. The implementation of this Agenda is precisely about setting objectives and designing support measures that help us prepare to keep growing in the future, leveraging the opportunities in the horizon. Even more so when the European States around us, who are aware of this fact, have generated specific public programs to support their respective aeronautical sectors."

The objectives outlined in the Sectoral Agenda of the Aeronautics Industry include increasing the turnover up to 1% of the GDP

by 2025, strengthening and internationalizing the industrial fabric of the aeronautical value chain, consolidating the weight of exports at 80% of the turnover, and participating in European defense industrial projects. As well as strengthening technological capabilities with a significant increase in R&D investment, equalizing the average productivity per employee of the Spanish industry with that of the European industry by 2025, increasing the presence in high value-added activities and products and, lastly, improving the coordination between public actors of the aeronautical arena.

It also includes a proposal for specific institutional encouragement and support measures, which include a specific long-term assistance program for the aeronautical sector, given that aeronautical programs imply long development times; financing models with aids that are on par with the European landscape and the EU R&D Framework; the implementation of an educational structure of excellence; the active participation in digitalization programs toward Industry 4.0 and the coordination with administrations.

DO YOU KNOW the code of Ethics and Good Governance?



During the General Meeting of 2018, TEDAE's Code of Ethics was enacted, which outlines the commitment of the Association with ethics and transparency across all of its areas of influence and serves as a guideline for

the actions of professionals and governing bodies of TEDAE in its day-to-day operations.

It is inspired on the principles of zero tolerance with corruption, respect, honesty and ethical commitment,

compliance with regulations, institutional collaboration and autonomy, service, transparency, good workings, prudence and diligence in the administration of resources, planning, monitoring and sustainability.





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OUTREACH

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2018

TEDAE

Outreach

IN THE PERFORMANCE OF ITS ACTIVITIES, TEDAE considers it paramount to engage in a permanent dialogue with all administrations, and public and private national and international organizations toward the development of industrial strategies and policies that affect the defense, aeronautics, security and space sectors.

And surely, TEDAE maintains a fluid relationship with the heads of different bodies of the

Ministries of Defense, Economy, Industry and Competitiveness; Foreign Affairs and Cooperation; the Interior; Treasury and Public Administration; the Ministry of Science, Innovation and Universities and the Congress and Senate.

It also engages with other national and international associations and institutions, has a presence in them, and additionally shares perspectives and experiences with them.

PAE (SPANISH AEROSPACE TECHNOLOGY PLATFORM)

PAE (Spanish Aerospace Technology Platform) has continued growing and continuing its functions last year, and TEDAE has continued with its role in its technical secretariat. At the moment, PAE is composed of 23 major companies, 30 small and mid-cap companies of all sizes, 16 technology centers and 20 universities or their departments. In addition, both the CDTI and the State Research Agency are part of its Administrative Council.

During the last year, PAE has drafted - as part of a joint effort between the various organizations that compose it - the executive summaries of the Aeronautics and Space Strategic R&D Agencies that define the main lines of action for research, development and innovation in aeronautics and space that must be implemented in Spain with the purpose of remaining competitive in the aerospace sector and face the socio-economic challenges before us. Both executive summaries - available at the PAE website - will become detailed documents with clear technological guidelines for 2019.

In addition, PAE has performed studies in relation to:

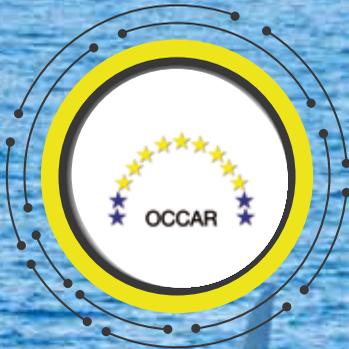
- Industrial priorities for R&D on materials for aerospace applications, publishing a document that contains 55 priorities supported by industry and an annex where technology centers and universities outline their lines of research for each of these priorities.

- Industrial priorities for R&D on additive manufacturing, with 16 priorities in a first edition that is to be revised and expanded in 2019.

- Skills of the collaborative interdisciplinary engineers of the future: a skills model has been developed, which includes 55 vertical (sector-specific) and horizontal (generic) skills, and it has been the subject of a discussion by a number of representative companies of our sector in order to weigh the necessary skills and publish a document in 2019 containing recommendations in relation to the training of future sector professionals.

- The R&D capabilities of PAE entities, classified based on their aeronautical and space taxonomies with the purpose of having a clear snapshot of the sector in Spain in relation to its innovation capabilities.

Lastly, the PAE has acted as an organization that represents the aerospace sector in R&D matters before the Administration (by preparing reports and participating in several initiatives, such as the *Transfiere 2018 Fair*) and has collaborated with the aeronautics and space R&D committees of TEDAE and other Spanish technology platforms, as well as other organizations who are interested in R&D.





CEOE

The Association joined the Spanish Confederation of Employers' Organizations (CEOE) to assist with its international expansion.

This aims to constitute a joint effort to optimize the expansion of defense, security, aeronautics and space companies in the competitive international markets, maintaining their participation and activities in different arenas and forums that defend the industrial interest of related companies and give more momentum to the Spanish economy.

The Association of Defense Journalists (APDEF)

The Association of Defense Journalists (APDEF) was founded in 2009 by a group of writers specialized in defense, with the purpose of encouraging the technical training of professionals that cover this type of information, as well as to increase the institutional relations with the Ministry of Defense and the military authorities. According to its founding document, the goals of the association are to "guarantee the dignity of journalists and defend their professional interests." APDEF and TEDAE have, for many years now, been engaged in a collaboration agreement for the sponsorship of the Annual Awards presented by this association, which has been renewed once again this year.

APDEF organizes seminars and informational meetings with repre-

sentatives of the Ministry of Defense, the three branches of the Armed Forces and defense companies, but also presents annual awards in recognition of individuals and institutions that are related to its journalistic activities. In 2018, during the ninth edition of these awards, the "Especial APDEF" Award was presented to Commander Miguel Ángel Franco; the "Bernardo Álvarez del Manzano" Award was presented to Carmen Romero, NATO Deputy Assistant Secretary General for Public Diplomacy; and the "Lifetime Achievement" Award was received by Lieutenant Colonel Carlos Benito, coordinator of the course for Correspondents of the *Escuela de Guerra del Ejército de Tierra* (Army School of Warfare).

ELLAS VUELAN ALTO

Ellas Vuelan Alto is an association of female engineers, pilots, journalists, lawyers, professors and other professionals that met in March, 2018 with the purpose of raising awareness and increasing the female involvement in this sector -aviation-, disseminate the existing professional opportunities, foster equality and create female

influencers among younger audiences who focus on STEM studies (Science, Technology, Engineering and Mathematics).

EVA's goal of acting in the political, university, corporate and Government realm to foster values of integration and inclusion and eliminate any kind

of discrimination against women in the aerospace sector is based on the vision of equality of the Charter of the United Nations. This vision is shared by TEDAE, which is why it has become an associate member of EVA.

ASD

The AeroSpace and Defence Industries Association of Europe (ASD) is the most important nexus with European institutions in all industrial matters related to the defense, security, aeronautics and space sectors.

Its main mission is to boost the competitive development of the industries that it represents in Europe, creating and maintaining a close relationship with European institutions and international organizations.

TEDAE is a member of ASD and coordinates and positions the interests of the Spanish defense, security, aeronautics and space industries in Europe through its active participation in its decision-making bodies, Business Units, Committees and Work Groups. As

such, in 2018 over 50 Spanish industrial experts participated in the different forums organized by the European Association.

The role of Spain in ASD is strengthened by the presence of AIRBUS, INDRA and NAVANTIA as members of this association.

Through this participation, TEDAE conveys the interests of the four industrial sectors that it represents to gain an early and solid footing in any initiative that may be defining the future of these sectors within the framework of the European Union.

In line with this, TEDAE has conveyed the national point of view of the industry in relation to matters as relevant for

the future of TEDAE sectors as the Preparatory Action on Defence Research (PADR), the conception of the European Defence Industrial Development Programme (EDIDP) and the European Defence Fund (EDF), the SME Support Policies, the relations of the European Commission with the European space and defense agencies and, above all, the presence of the Spanish industry in international consortiums for industrial cooperation within the framework of European defense funding initiatives, among others. Ongoing initiatives of the Research and Technology Committee in relation to the positioning of aeronautical interests as part of the 9th Framework Programme have also been monitored.



NATO

The NIAG (NATO Industry Advisory Group) is a work group of NATO's CNAD (Conference of National Armaments Directors) at a MAG (Main Armament Groups) level. The NIAG provides access to NATO to over 5000 companies, 80% of which are SMEs. TEDAE channels and fosters Spanish participation in this group.

The NIAG relates industries with the NCIA and NSPA agencies, and acts as a nexus between industries and the Allied Command Transformation (ACT). The NIAG and the STO (Scientific and Technical Organization) exchange information and coordinate their agendas. The NIAG collaborates with the DI (Defence Investment) in the FNIE (framework for NATO Industry

Engagement) and TADIC (Transatlantic Defence Industry Cooperation).

In addition, the NIAG acts as a nexus between industry and NATO in the pre-competitive phases of the NDPP (NATO Defense Planning Process). NIAG's actions result in feasibility studies and high-level consultancy for the decision-making bodies of NATO. In 2018, the NIAG has brought together over 500 industrial experts to analyze the NATO's priorities in critical areas: Target Mensuration, ATC/CNS requirements, Multi-statics and low Frequency Active Sonar, etc.

TEDAE is a member of the COMSE (Preparatory Follow-up Commissions) of the CNAD of the DGAM - Directorate-

General for Armament and Materiel - through the Spanish national delegation in the NIAG.

Worth noting is that TEDAE organized the NIAG Plenary Session from February 26 to 28 at the Infantry Academy of Toledo, where NIAG delegations had the opportunity to interact during an Industry Day held on February 28 with several Spanish companies, with the purpose of finding business opportunities and generating new partners within the context of European initiatives for the financing of the Defense sector.



EDA

The European Defence Agency -EDA- is an intergovernmental organization under the wing of the European Council whose purpose is to harmonize the Defense capabilities of Member States and facilitate the coordination of acquisition programs.

EDA's role as a leading player and its relevance in the development of European Defense capabilities has been on the rise during 2018. The launch of PESCO and the EDAP and the relationship of their programs with the CARD (Coordinated Annual Review on Defence) and the revision of the Capability Development Plan (CDP) and its priorities, put EDA at the forefront of the coordination efforts and the management and governance of Defense research projects.

In this regard, has delegated an essential role to the EDA in relation to

the management of the Preparatory Action on Defence Research and the development of the European Defence Action Plan (EDAP) through the application of the European Defence Fund (EDF).

Work has continued on the Overarching Strategic Research Agenda (OSRA) and the prioritization of the so-called Technological Building Blocks (TBBs) with the purpose of guiding and advising all sectors involved in the conception of instruments which could finance the defense sector.

A number of Key Strategic Activities (KSA) have been selected based on the aforementioned to identify critical technological activities for which encouraging investment is considered to be important. The EDA has also encouraged the support of SMEs as part of the policy for the improvement

of access to the transnational supply chains of European primes.

As an NDIA (National Defence Industry Association) and a member of ASD, TEDAE has channeled the national interests on the working programs, EDA calls for bids and the prioritization of the TBBs, within the framework of the OSRA tool. The actions of TEDAE in relation to EDA, the Commission and ASD are also coordinated with the Ministry of Defense in the form of periodical meetings and a continuous exchange of information.

Some of the most important EDA ongoing capability acquisition programs are: AAR (Air-to-Air Refueling), MALE RPAS (support for the development of the European remotely piloted aircraft program), Cybersecurity, Satellite Communications and Main Battle Tank (MTB).

LOI

The purpose of the intergovernmental "Letter of Intent" (LOI) between Germany, Spain, France, Italy, United Kingdom and Sweden is to coordinate industrial Defense policies for the improvement of the Technological and Industrial Defense Base in Europe.

The LOI directly affects the activities of the European Commission when designing actions related to the development of EU Directives, the manner in which EDAP adapts to the characteristics of the Defense sectors and national competencies.

TEDAE participated as an NDIA (National Defence Industry Association) in the meetings of the EXCO and the CIM (Collaborative Industry Matters) Group of the Work Groups (IWG).

OCCAR

OCCAR is a treaty between the most important European nations for the acquisition of defense material. As per the mandates of the nations (variable geometry for each case), the OCCAR-EA (Executive Agency) is in charge of the acquisition of systems. In relation to the new EDAP and

PESCO European programs, OCCAR acts as a nexus for the governance of acquisitions. Together with EDA, they are instruments to further the EU/ NATO collaboration.

TEDAE is a part of ODIG (OCCAR Defence Industry Group), together with

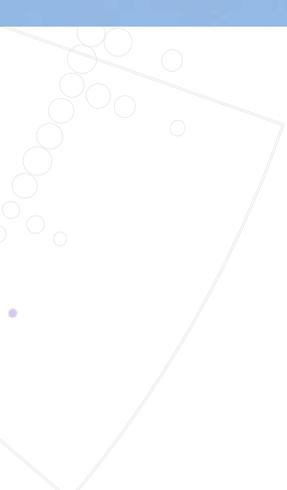
NDIAs of Belgium, France, Germany, Italy and the United Kingdom. ODIG collaborates with OCCAR-EA through the efforts of the OICP (Contracts) and OILSP (Logistics) sub-groups.





09 PROJECTED ACTIVITIES

activities
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2018



TEDAE 2019

DEFENSE COMMISSION

MAIN OBJECTIVES

- Furtherance and development of an industrial strategy in Europe: EDF (event organization) and PESCO
 - Coordination with Public Administrations
 - Positioning of TEDAE in ASD/EUROPE
 - Relationship with Parliamentary Groups: national and European
- Furtherance and positioning of the industry in the Defense Budgets for 2019: funding
- International Defense Fair (FEINDEF)



OBJECTIVES OF THE TECHNOLOGICAL- INDUSTRIAL DEFENSE COMMITTEES

• European Affairs Committee and NATO

- REIN-TEDAE Coordination Group
- Furtherance and positioning in all matters related to European initiatives for the funding of the development of defense capabilities within the framework of the European Defence Fund (EDF), the Permanent Structured Cooperation (PESCO) and ongoing NATO affairs
- Participation in international forums and international organizations: Furtherance of initiatives (EDA, OCCAR, Lol, NATO - NIAG)

- Dissemination Document: The Development of Defense Capabilities within the 2021-2027 Framework Program

- Analysis of the corporate and financial structures of the defense sector

• Funding Committee

- Ad-Hoc Group for the furtherance and positioning of the industry in Defense Budgets and other funding initiatives



- **R&D Committee**

- PLATIN-TEDAE Coordination Group
- Furtherance and positioning of any initiatives of interest related to Defense R&D both nationally and within Europe
- Disclosure Document: Defense Research within the 2021-2027 Framework Programme

- **Internationalization Committee**

- 2019 Internationalization Plan coordinated with OFICAEX
- Development of the procedure for the sharing of information between TEDAE and OFICAEX
- Industrial Day at the Attaché and Defense Advisor Course 2019
- Joint participation in Defense Fairs

- **Communications Group**

- TEDAE meeting with specialized and financial media
- Second TEDAE Defense Forum
- Informational meetings with government representatives
- 2018 Sectoral Report of the Defense Industry
- Support for the TEDAE /FEINDEF Communications Plan

AERONAUTICS COMMISSION

MAIN GOALS

- **R&D Boost:** Implementation of a sectoral assistance program for Aeronautical R&D
- **Regional Cooperation:** Increase cooperation with regional aeronautical clusters

OBJECTIVES OF THE TECHNOLOGICAL-INDUSTRIAL AERONAUTICAL COMMITTEES

• **Aeronautical R&D Committee**

- EUROPEAN FRONT. Participation in Horizon Europe. Drafting of manuals and guides for FP9
- NATIONAL FRONT. Remain at the service of the development of national programs, Contribute to the State's R&D Strategy and Plan

• **Supply Chain and SME Committee**

- Transition to Industry 4.0 / Digital Transformation: Sectoral Diagnosis
- Supply Chain Meeting / Sector Perspectives
- Cooperation with SPACE España

• **Services Committee**

- MRO Technology Trends Workshops
- Contact with the regulatory body: Roadmap for the digitalization of Aeronautical Services
- Approach to other industrial sectors (automotive, etc.) with the purpose of sharing experiences and study possible collaborations as part of Industry 4.0.

• **Aviation Committee**

- RPAS FRONT: Document of the RPAS Industrial Sector. Relationship with Security / Defense and civil institutional stakeholders

- ASD FRONT: Monitoring of the Civil Aviation Business Unit – CABU

- AVIATION FRONT: Relationship with institutional stakeholders within the realm of Civil Aviation. 2017 Transport and Infrastructure Innovation Plan. DAFO Matrix Onboard Equipment and Avionics in Spain.

• **Communications Work Group**

- Leverage the momentum of Science Week (November 2019) by organizing a dissemination event aimed at students
- identification of forums, institutions, universities and opinion leaders related with aeronautics to use as a platform for communication
- Support and collaboration with the Ellas Vuelan Alto –EVA– association
- Presentation of the Aeronautical Sector in Spain and its impact on the Spanish economy
- Sectoral gathering with specialized and financial media
- 2018 aeronautical sector report: snapshot and analysis of the sector



SECURITY COMMISSION

MAIN OBJECTIVES

- **Development of the Technological Industrial Security Plan (PTIS)**
- **Institutional relations**
- **Furtherance of the R&D initiatives related with security (National/European)**
- **Outreach**
 - International Security Event with the Police and the Civil Guard
 - Presentation of the PTIS (Technological Industrial Security Plan)

OBJECTIVES OF THE TECHNOLOGICAL-INDUSTRIAL SECURITY GROUPS

- **Cybersecurity Group**
 - Continue with the positioning of the Group within the national cybersecurity ecosystem
 - Networking and participation in forums: Meetings with stakeholders that are active in the field of cybersecurity (INCIBE, MC, Agenda Digital, State Secretariat of Security, DSN and Police and Civil Guard)
 - Cybersecurity '19 Event
 - Participation in the Standardization Technical Committee: "Cybersecurity and personal data protection"
- **Communications Group**
 - Implementation of the Group
 - Identification of communication actions
 - Collaboration with the Characterization of the Security Sector



SPACE COMMISSION

MAIN OBJECTIVES

- Ministerial Conference
- National Space Congress
- Position Document
- Furtherance of the National Space Plan
- Relationship with new members

OBJECTIVES OF THE TECHNOLOGICAL-INDUSTRIAL SPACE COMMITTEES

• Cross-cutting actions

- Strategic Plan
- Revista ProEspacio (Magazine) -3 editions-
- National Space Congress
- 2018 Space Yearbook
- Meetings with the Press

• Committee Objectives

- Space Policy Committee:
 - Trends document
 - Position Document

□ R&D Committee:

- Guaranteeing that R&D is in line with the interests of the Spanish Space Industry
- Participation in the Spanish Aerospace Platform
- Revision of the Space R&D Plan (PAE)
- Industrial R&D collaboration group (PAE)

□ Applications Committee:

- Study on Space Applications and their impact on the Spanish economy and society
- Define the position of the industry in relation to this market





COMMUNICATION

- **Identification of target audiences to be included in our communication efforts**
- ***Perspectivas 2019* TEDAE Gathering**
- **Start working on *Aula TEDAE***
- **TEDAE Awards: constitution of the Jury and Award Ceremony**
- **International Defense Fair (FEINDEF): talking points and communication plan**
- **Industry day with companies**
- **Meetings with general and specialized media**
- **Meetings with government officials and political parties**
- **Web and social networks: more activity across different platforms and profiles (Twitter and LinkedIn)**
- **Quarterly newsletter: TEDAE News**
- **Coordination of the sectoral communication groups**

QUALITY

MAIN OBJECTIVES

- **Consolidation of the activities of the Quality Committee**
- **Identification, management and development of quality and cost improvement initiatives that are aligned with the IAQG**
- **Furtherance, management and coordination of TEDAE's ICOP Scheme**

OBJECTIVES OF THE QUALITY WORK GROUPS

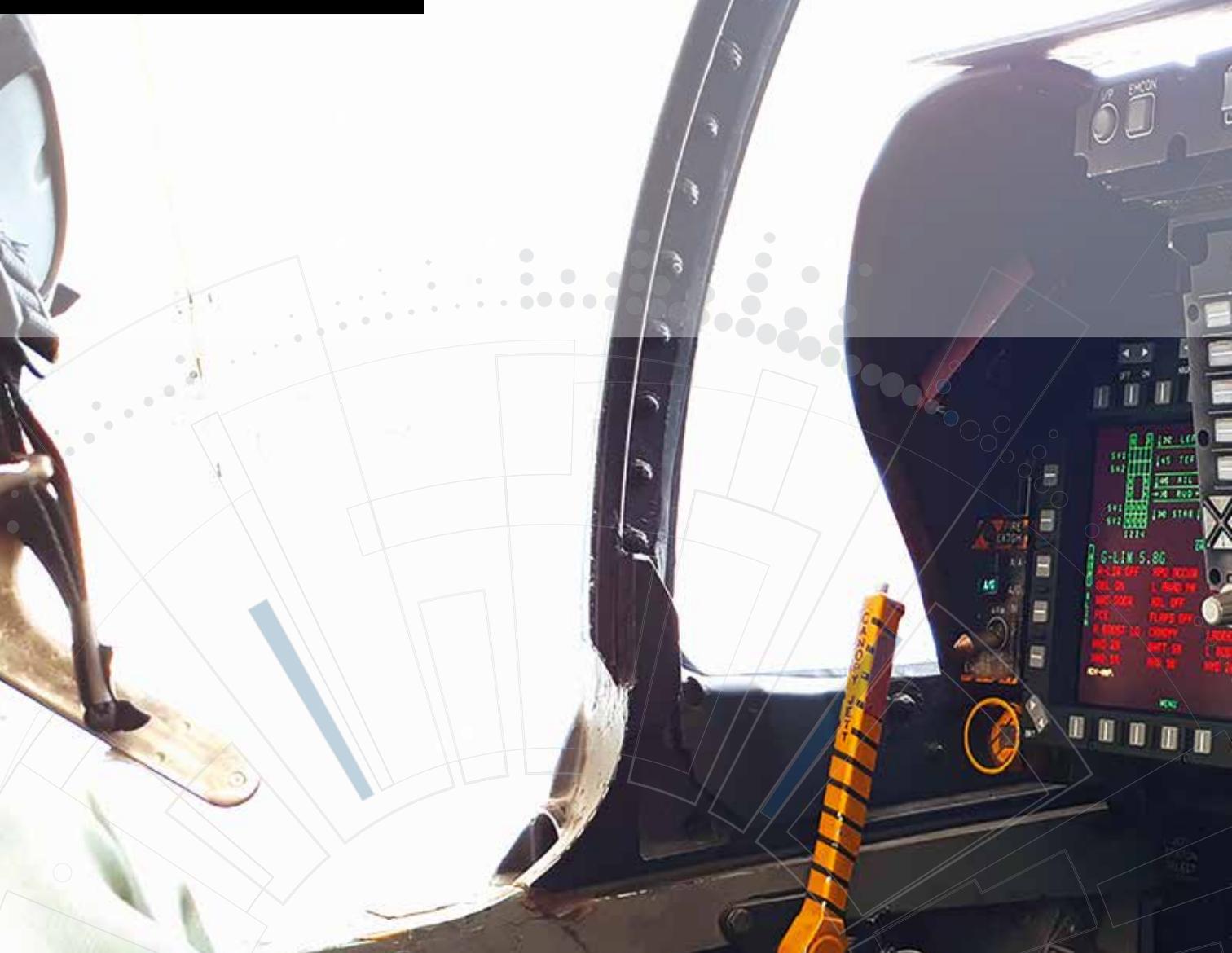
- **Design and presentation of the different Work Groups**
 - Risk management
 - Management process, externally-bought products and services
 - Root cause analysis, problem solving: including the human factor requirement contained in the new 9100 standard
 - Forgery prevention
 - Product safety

COORDINATION WITH THE DEFENSE AND AEROSPACE COMMITTEES OF THE SPANISH ASSOCIATION FOR QUALITY (AEC)

ENVIRONMENT

OBJECTIVES (ENCOMPASSING THE 4 COMMISSIONS)

- **Monitoring of environmental regulations and environmental technical standards that impact the four TEDAE sectors**
- **Participation in the bodies of ASD**
 - Environment Commission
 - REACH Implementation Working Group
- **Relations with the Ministry for Ecological Transition**
 - Gen. Dir. of Quality and Environment Evaluation and Natural Environment / Sec. Gen. of Quality and Industrial Environment
 - CARACAL Representatives
- **Risk mitigation in the implementation of the REACH / CLP Regulation in the sector in Spain**
 - Monitoring of the progress of authorization files; dissemination and explanation to the supply chain





10 MEMBERS

activities
REPORT
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members



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ACATEC

Production of metallic parts via numerical control machining for the aeronautical sector up to a size of 2,500 mm.

Surface treatment of aluminum, titanium and steels. Mounting of horizontal stabilizers and other aeronautical sub-assemblies.



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ACITURRI AERONÁUTICA

Aciturri is a Tier 1 supplier of structural assemblies for Airbus, Boeing and Embraer and a component supplier for major engine manufacturers. With a track record of over 40 years, the company designs, manufactures and integrates aerostructures and engine components based on composite materials, metallic technologies and additive manufacturing technologies. Aciturri has over 1,450 employees in Spain and Portugal, engineering centers, metallic component manufacturing facilities, composite material manufacturing centers and an aeronautical integration center.



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AERNNOVA AEROSPACE

Aernnova is a leading company that specializes in the design and manufacturing of aerostructures and components such as wings, fuselages, stabilizers and moving surfaces for major OEMs. Aernnova completely takes charge of programs at any phase of a product's life cycle, which includes: concept and detailed design, prototype manufacturing, testing and certification processes, mass production, international supplier management and post-sales. We can also take charge of these activities partially, accommodating the needs of our clients. Aernnova is the leading TIER 1 supplier of aerostructures in Spain.

AERTEC SOLUTIONS

AERTEC Solutions is an international engineering and consulting company specialized in aeronautics. Established in 1997, today its activities relate to the aeronautical, defense and airport industry. It has engaged in business with over 130 airports across 40 countries of the five continents, and is the most aeronautical engineering and consulting company of the airport.

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.

aertec
SOLUTIONS

Aerospace & Aviation

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AIRBUS

Airbus is a world leader in aeronautics, space and related services. In 2018 it generated a turnover of 64 billion euros (over 5 billion euros in Spain in 2017) with a staff of approximately 134,000 employees, 12,000 of which are in Spain.

Airbus offers the widest selection of passenger aircraft ranging from 100 to over 600 seats. In addition, it is a European leader in the manufacturing of combat, transport, tanker and mission-specific aircraft, as well as the first European space company. When it comes to helicopters, Airbus offers the most efficient solutions in the world of civilian and military helicopters.

Airbus is the first aeronautical manufacturer to have obtained the ISO14001 certification for its plants, products and services.

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AIRTFICIAL AEROSPACE & DEFENSE

Airtificial Aerospace & Defense is a multi-technology company dedicated to the following activities:

- Design, development and manufacturing of electronic equipment and electrical systems
- Development of systems for the conversion into unmanned platforms
- Manufacturing of parts and subassemblies made out of composite materials. Structures equipped with sensors.
- Production, software development, equipment and robotic solution engineering services

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ÁLAVA INGENIEROS

Álava Ingenieros offers innovative solutions through the application of new technologies in the collection of data from the physical world. We generate value-added information for decision making, offering efficiency, quality, reliability, safety and sustainability, which results in better business results for our clients. We sell advanced products and technological solutions and take care of related services (distribution, advice, implementation, training, maintenance and support). The company has 6 areas: Communications; Testing; Photonics, Image & Nanotechnology; Safety; Instruments & Calibration and Sea, Land and Environment Technologies.

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ALTER TECHNOLOGY TÜV NORD

ALTER TECHNOLOGY is a company that focuses on quality and offers supplies, engineering services and testing services for components and electronics designed to operate in a hostile environment where failure is not an option.

Space electronic components need to constantly operate under stress, and must do so adequately throughout the entire service life of the satellite, which may be many years. In order to guarantee that the strict requirements of the project are met, the components are subjected to conditions that are similar to those that will be experienced during the mission: vibrations, extreme temperatures, radiation and effort; mechanical and endurance requirements are tested. These tests are performed at various levels of integration with the satellites, starting at an individual electronic component level so as to guarantee that they are able to perform and survive throughout the entire service life of the satellite.

ALTRAN ESPAÑA

Altran is the undisputed world leader in engineering and R&D services. The company offers its clients an unmatched value proposal to address their needs for transformation and innovation. Altran works alongside its clients from the initial concept to industrialization, to invent the products and services of tomorrow. For over 35 years, the company has offered its experience in the Aerospace, Automotive, Defense, Energy, Life Sciences, Railway and Telecommunications sectors, among others. With the acquisition of Aricent, the company extends this leadership to Semiconductors, Digital Experience and Design. In 2018, Grupo Altran generated a revenue of 2.9 billion euros. With a staff of over 47,000 employees, Altran is present in over 30 countries.



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APPLUS+ LABORATORIES

Applus+ is a leading company in testing, inspection and certification. Its Applus+ Laboratories Division is a worldwide provider of testing and engineering solutions for major aeronautical manufacturers and their Tier 1 suppliers.

Structural Testing:

Applus+ counts with a structural testing laboratory that is a leader in its segment and specializes in high-load testing (up to 15 MN). Its capabilities enable it to perform anything from coupon testing to “full-scale” tests.

Material Testing:

- Applus+ Laboratories has Nadcap-accredited material laboratories in Spain, France, Germany, USA and China, recognized by the most important manufacturers of the aeronautical and space sector (aircraft, helicopters and land vehicles).

Engineering:

Its engineering teams develop turnkey projects that include test benches and facilities, automated non-destructive inspection systems and forming processes.



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ARITEX CADING

ARITEX was founded in 1961 as a leading supplier of tools, tooling and automated solutions for the automotive industry. In 2001, the company diversified and started also working for the aeronautical sector, currently being a TIER 1 supplier for both sectors, delivering turnkey automated assembly lines that include automated measuring, automated drilling and riveting machines and AGVs, integrating cutting-edge technologies for carbon fiber application solutions. Since 2016, ARITEX is a member of AVIC GROUP.



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ARQUIMEA INGENIERÍA

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 smart mechanisms, integrated circuits, sensors and monitoring systems, autonomous systems and robotics. Our products are especially targeted at the Space, Aeronautics, Nuclear, Renewable Energy, Telecommunications, Industry, Geoengineering, Mining and Public Works 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 global corporation composed of various companies that share the same passion for technology and whose mission is to develop and apply innovative solutions based on technology and transfer them to any sector of society where they may offer a solution or advancement.

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AUTEK INGENIERÍA

Autek is a Spanish cybersecurity company that specializes in the secure exchange of information between differing security domains (cross-domain solutions) with a track record of over 20 years in the development of information security projects and solutions for public sector and defense organizations, as well as critical infrastructures. We have two lines of products: the PSTgateways secure application-level gateways and the PSTdiode hardware data diode. Several products are Common Criteria certified up to EAL4+ and included in the Catalog of ICT Security Products of the National Cryptologic Center.

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AYESA AIR CONTROL

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.

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CENTUM

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.



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CIMPA / SOPRA STERIA

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.



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CRISA (AN AIRBUS DEFENCE AND SPACE COMPANY)

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.

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DAS PHOTONICS

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.



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DEIMOS IMAGING

Deimos Imaging is a geoinformation company that owns and operates the Deimos-1 and Deimos-2 satellites. Furthermore, Deimos Imaging provides access to a virtual constellation of over 30 optical and radar Earth observation satellites, and processes and distributes a wide range of geographical information products, as well as customizable solutions.



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We are also Tier 1 suppliers of major OEMs in the field of aircraft part manufacturing (metal and composites).



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EINSA, EQUIPOS INDUSTRIALES DE MANUTENCIÓN

EINSA is a Spanish-held company established in 1979, with a track record of over 30 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.

ELEC NOR DEIMOS

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, Elecnor Deimos develops UAVs and air navigation and coastal surveillance systems.



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ESCRIBANO MECHANICAL AND ENGINEERING, S.L.

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

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 advanced observation and tracking, security and border surveillance.

Escribano can manufacture mechanical, optical and electronic components with facilities that, in 2019, will double our current 14,000 m² and a staff of over 250 employees.



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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. 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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Aeroespacial
y Defensa



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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. 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.



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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. 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.



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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.

FORMECAL

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.



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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.

GENERAL DYNAMICS

European Land Systems
Santa Bárbara Sistemas

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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, France, USA, Malaysia, Poland, Portugal, UK 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, the main provider of C4I command & control systems for the Spanish Army, and the most important provider of Cybersecurity solutions and services, as well as telematic systems for public transportation in the country.



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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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HÉROUX-DEVTEK SPAIN (CESA)

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

Production of hydraulic, electromechanical, mechanical and 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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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. 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.



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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.

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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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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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. During FY2018, Indra saw a turnover of 3.104 billion euros. 43,000 employees, a local presence in 46 countries and business operations in over 140 countries.



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INDUSTRIAL OLMAR

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.

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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 Aestis, 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.

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INSYTE



For over 30 years, INSYTE has specialized in the industrialization and assembly of circuit boards and electronic equipment, as well as design, 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 electrical, functional and environmental. Our company specializes in the assembly of equipment for systems that are critical or have to operate in harsh environments. Traceability, continuous improvement, process adjustments, six-sigma and 8D. 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 cabinet & rack cabling.

We have cutting-edge assembly, verification and testing facilities to guarantee the quality and reliability of our work. Lifetime product support. Obsolescence management. Repairs and post-sales.

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ITP AERO



ITP Aero is a leader in its market, currently being the company with the ninth highest sales in the world in the field of engines and aeronautical components, and ranked among the top hundred companies in the aeronautical sector (Top 100 Aerospace Companies, PwC and Flight International). The company has production centers in Spain, Great Britain, Malta, United States, India and Mexico, and a staff of 3,600 employees.

Among other activities, ITP Aero is dedicated to the design, research & development, manufacturing and casting, assembly and testing of aircraft engines. Our company provides in-service support for a wide range of regional aircraft engines, as well as helicopters, industrial engines and defense applications. ITP Aero operates as a corporate unit within the Rolls-Royce Group.

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LEONARDO HISPANIA

Leonardo Hispania, formerly OTO Melara Ibérica, is a Center of Excellence of the Leonardo Group in Spain. Established in November of 2003 to support the Defense Division of Leonardo (OTO Melara) in the territory, the company has become a cornerstone in the field of national defense, with a team of highly-qualified professionals with significant experience in various sectors.

Leonardo Hispania has acquired a new role within the Italian multinational, consisting of supporting the entire product portfolio of the Group in the country. Its main goal is to further and expand the civilian and military solutions of Leonardo in Spain, and for this, it collaborates with the most important Spanish companies.



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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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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.

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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MECÁNICA DE PRECISIÓN TEJEDOR

MECÁNICA DE PRECISIÓN 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.



MECÁNICA DE PRECISIÓN TEJEDOR, S.A.
Empresa fundada en 1948/

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MTORRES

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.



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MYC

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.

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



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NAMMO PALENCIA

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

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.



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NAVANTIA

Navantia is a consolidated company in the field of military naval construction and one of the few that can offer design, development, construction, integrated platform management systems, propulsion and combat systems.

The company offers a global service to the client, which includes life cycle support and extends the service life of vessels. 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.



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NÚCLEO

Núcleo is an international company that offers personalized "turnkey" Solutions for communication & control projects. With a track record of over 50 years, the company serves the Aeronautical, Energy & Environment, Security & Defense, Maritime, Railway, Mining and Oil & Gas sectors.

Núcleo offers high value-added generating solutions, relies on internationalization, innovation and the development of proprietary strategic products, and has a strong commitment with the environment and sustainability.

PIEDRAFITA

For over 30 years, Piedrafita has been dedicated to technical excellence, improving the mobility of space vehicles in the harshest of environments. Our commitment with the client and results obtained throughout the years have turned us into a reliable provider for all major land platform integrators both nationally and internationally.

Our product portfolio includes a wide range of bleeding-edge rotary and linear dampers for tracked or wheeled vehicles.

We also offer on board testing services under real extreme conditions, which is essential when developing and/or certifying any vehicle. We also put at your disposal our experience in the certification of mechanical and electronic equipment as per any military standard.

Discover DefPower, our onboard vehicle electrical power management and distribution brand.

Our range of solid-state PDU (Power Distribution Unit) is considered to be “state of the art” around the world. Its simple integration facilitates the design, manufacturing and certification of the electric architecture of any vehicle with increasingly encompassing and demanding electrical requirements.



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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 50 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 financial 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.

Recently, PLD Space has successfully performed the first recovery drop test of the MIURA 5 first stage demonstrator.



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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 (United States, Germany, France and Australia) 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.



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ROHDE & SCHWARZ ESPAÑA

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.



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

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.

SAFRAN ENGINEERING SERVICES

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.



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SAINSEL SISTEMAS NAVALES

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.

Sainsel

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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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SUMMARY
OF ACTIVITIES
2018_TEDAE

157

members



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SENER

SENER is a private engineering and technology group founded in 1956 that aims to offer its clients the most advanced technological solutions, internationally recognized thanks to its independence and commitment to innovation and quality.

SENER provides Aerospace, Engineering and Construction services, in addition to participate with companies of the Energy and Environment field. SENER has a track record of 50 years in the Aerospace industry and is a top-level provider in Space, Defense and Science. Since 1967, the company has supplied equipment and systems for satellites and space vehicles of NASA, ESA, JAXA and Roscosmos, and nowadays has a major role in the commercial market (telecommunications and New Space).

SERTEC

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.

TECNALIA

We are a leading Center for Research and Technological Development in Europe. We collaborate with companies so that they can be more competitive and generate wealth and employment.

We do this thanks to a committed team of people who are passionate about technology, and to our great potential in R&D and advanced services.

Our mission is what brings us together: transforming technology into GDP. And our vision is what differentiates us: being agents for the transformation of the industry.

- Propulsion
- Launch Vehicles
- Satellite structure advanced systems
- Packing
- Technology transfer
- Tribology mechanisms
- Microgravity instruments for Orbital Infrastructure

TECNATOM

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.



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TECNOBIT GRUPO OESÍA

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 electronic 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: Vision Computing, Optronics, Tactical Communications, Encryption, Onboard Avionics, Space and Simulation.



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TELESPAZIO IBÉRICA

Telespazio Ibérica, the Spanish branch of Grupo Telespazio, 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.



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THALES ALENIA SPACE ESPAÑA

Thales Alenia Space is a leading Spanish company in the satellite segment and the undisputed choice in Spain for payloads involving telecommunications and optical observation instruments. With 30 years in the business, the company has participated in close to 600 satellites, interplanetary probes and space vehicles for space agencies and satellite operators around the world. We export 98% 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 close to 4,000 devices and space systems produced in our facilities have accrued thousands of years of operation in orbit.

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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
- RPAS systems
- Intelligent Surveillance (ISR) and anti-drone (CUAS) systems
- Aeronautical and radio beacon systems for air navigation

Thales is a leader in technological solutions applied to defense, aeronautics, security, transport and space. Thales España is a center for expertise in Space, Critical Infrastructure Security and Transportation.

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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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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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COLLABORATORS

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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FUNDACIÓN HÉLICE

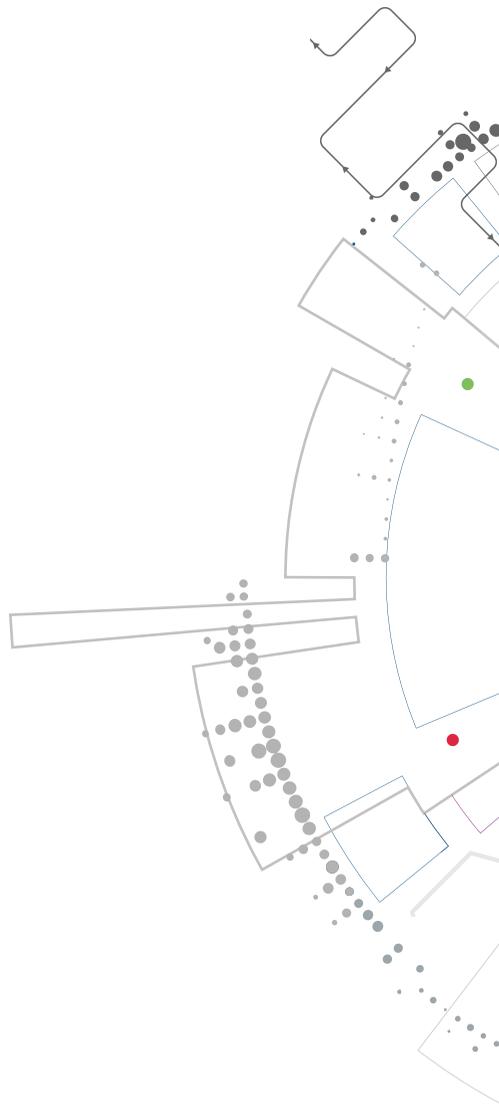
Founded in 2004, as an Andalusian aerospace cluster, the Foundation represents all stakeholders of the sector: Universities, Technology Centers, SMEs, Airbus, the Regional Administration, Business Organizations and Syndicates. Fundación Hélice was created to disseminate the Andalusian aerospace activities and the aeronautical culture, to make the voice of the Andalusian Aerospace Cluster be heard in international national and international forums and to work toward the strengthening of the cluster. Its activities include: Trade Missions and international events, publications, training sessions, studies and electronic management.



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