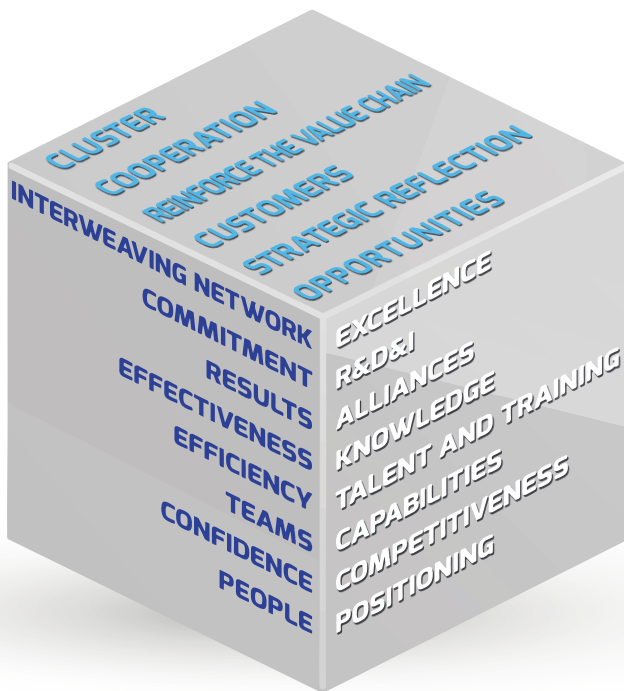


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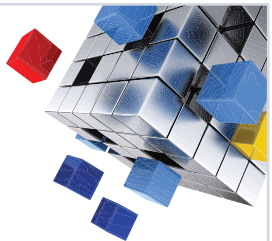


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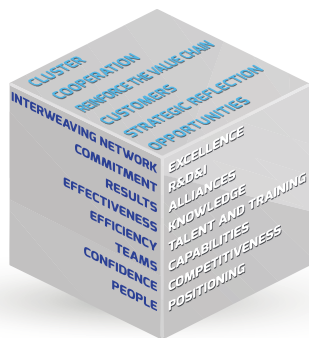
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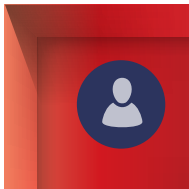
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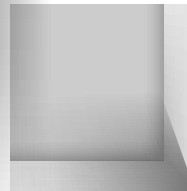


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THE CLUSTER ASSOCIATION



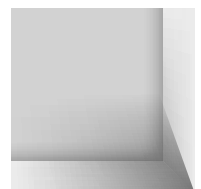
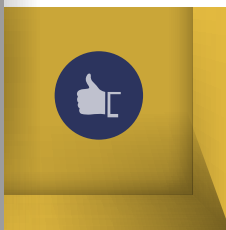
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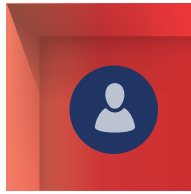
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01

PRESENTATION



It is always an honour and a source of pride for me to present this report and on this occasion it is especially pleasing to write these lines as they demonstrate that the industry to which so many people dedicate their work on a daily basis continues to show signs of good health.

With a growth in turnover of virtually 2% over 2013, the member companies of the HEGAN Aeronautics and Space Cluster of the Basque Country once again had a good year in 2014 with total sales figures amounting to 1,755 million euros in all their plants located throughout the world. Jobs, in turn, increased by 1% to 12,546. Employment in the production centres located in the Basque Country grew by 4.4% to 4,278, offering quality, highly qualified jobs.

For the second consecutive year, total exports passed the 1,000 million euro mark, reaching a figure of 1,139 million euros and representing 65% of their total turnover. Companies located in the United Kingdom are the main destinations for our products, followed by Germany and the United States.

Being largely dependent on the development stage of the programmes in which we are taking part, R&D investment has held its own with regard to previous year, reaching 165 million euros and representing 9.4% of turnover. The high level of self financing practiced by our companies amounts to 86% and 11% of their personnel is involved in R&D activities: 1,442 people!

Moreover, with regard to the future, the major airlines forecast an annual increase in demand of 5% over the next 20 years, which always involves an increase in the production of aircraft.

Some of the major events that will have a favourable effect on the industry of the Basque Country in the coming years include the roll-out of the Embraer KC-390 transport aircraft; the first delivery of the wide fuselage aircraft, the Airbus A350 XWB, destined to become the top player in the commercial aviation business of this manufacturer over the coming decades, in which 33 of our associate companies are taking part; and the increase in the production rates of the Boeing 787 Dreamliner in which twenty of HEGAN's members are involved. In the regional aviation sector, Embraer's new E-2s and the CSeries of Bombardier are about to be launched. Mo-

reover, the sector continues to strengthen and diversify its position thanks to its participation in new business aviation programmes such as Beechcraft and Gulfstream.

What can we deduce from all this? That we continue to grow; that our strategic locations have allowed us not only to maintain employment in the Basque Country but to increase it; that we maintain our competitiveness, our commitment and service to society; and that our companies enjoy strong positions in the aeronautics market with their participation in new programmes.

Logically, the sector aims to continue maintaining and improving its competitiveness. And among the main challenges that we face, one of the most important is the permanent development of the sector, spurred on by greater and greater technological requirements (greater aircraft safety, more environmentally friendly aircraft that are lighter and consume less) that are having a great impact on production companies. Moreover, we must seek to maintain the leadership of Tier-1 companies in technology and innovation and develop the value chain, so that all agents contribute to our aim of securing an excellent industry. Some of the variables to be taken into account in our development include: the need to have extraordinary financial means in order to be able to launch new programmes, develop understandings with labour representatives to increase competitiveness with the cooperation of all involved, and continue to diversify the portfolio of companies, with their entry in new aeronautical markets and programmes, by taking advantage of the externalisation of the work of large manufacturers.

The HEGAN Association maintains its commitment to finding solutions through cooperation to face up to these challenges and during 2014 we have continued to deploy our 2013-2016 strategic reflection. We invite you to read about this and the main activities of our associates set out in this document. Many thanks.

Iñaki LOPEZ GANDASEGUI
President

José JUEZ LANGARA
Managing Director

PRESENTACIÓN

Siempre resulta un honor y un orgullo poder presentar esta memoria anual y en esta ocasión nos resulta especialmente satisfactorio escribir estas líneas pues muestran que la industria a la que tantas personas dedican su trabajo diario mantiene síntomas de buena salud.

Con un crecimiento de la facturación de prácticamente el 2% sobre 2013, las empresas asociadas en el Cluster de Aeronáutica y Espacio del País Vasco - HEGAN - han vuelto a sumar un buen ejercicio 2014 hasta alcanzar una cifra de ventas de 1.755 millones de euros en todas sus plantas repartidas por todo el mundo. El empleo, a su vez, ha crecido un 1% hasta los 12.546 empleados. Este crecimiento, en los centros de Euskadi fue del 4,4%, hasta llegar a emplear la cifra record de 4.278 personas, siendo un empleo de calidad y altamente cualificado.

Las exportaciones totales superaron por segundo año consecutivo los 1.000 millones de euros, alcanzando la cifra de 1.139 millones de euros, el 65% de la facturación total. Las empresas ubicadas en Reino Unido son los principales destinos de los trabajos, seguidas de las de Alemania y Estados Unidos.

La inversión en I+D se ha mantenido con respecto al año pasado, en consonancia con las fases de los diferentes programas en los que participamos, y han alcanzado los 165 millones de euros que representa el 9,4% de la facturación. De esa cantidad el elevado esfuerzo de autofinanciación de las empresas alcanza el 86% y el total de la I+D lo sacan adelante el 11% de su personal: ¡1.442 personas!

Además, en cuanto al futuro, las previsiones realizadas por las líneas aéreas hablan de un incremento anual de la demanda aérea del 5% durante los próximos veinte años, lo que siempre conlleva un incremento de la producción de aviones.

Entre los hitos del ejercicio que afectarán favorablemente en los próximos años a la industria de Euskadi cabe mencionar el roll-out -presentación oficial- del avión de transporte Embraer KC-390; la primera entrega del avión de fuselaje ancho Airbus A350 XWB, llamado a convertirse en el principal protagonista del negocio de aviación comercial de ese fabricante en las próximas décadas, y en el que participan 33 de nuestras asociadas; el aumento de la tasa de producción del Boeing 787 Dreamliner en la que participan una veintena de miembros de HEGAN. En el segmento de aviación regional, se prepara el lanzamiento de los nuevos E-2 de Embraer y el CSeries de Bombardier. Y por otra parte, el sector continúa fortaleciendo y diversificando su posición con la entrada en nuevos programas de aviación de negocios como Beechcraft o Gulfstream.

¿Qué podemos deducir de todo esto? Que seguimos creciendo; que nuestras localizaciones estratégicas han permitido no sólo mantener el empleo en Euskadi, sino aumentarlo; que mantenemos la competitividad, el compromiso y el servicio hacia la sociedad; y que nuestras empresas tienen una buena posición en el mercado aeronáutico, con participación en nuevos programas.

Lógicamente, el objetivo del sector es seguir manteniendo y mejorando esa competitividad. Y entre los principales retos con que nos enfrentamos, destacamos la evolución permanente del sector, aguijoneado por grandes exigencias tecnológicas -mayor seguridad de las aeronaves, aviones más respetuosos para el medio ambiente, con menor peso y consumo- que impactan a las empresas productoras. Además, debemos seguir manteniendo el liderazgo de los Tier-1 en tecnología e innovación y desarrollar la cadena de valor, para que todos los agentes contribuyan con su aportación al objetivo de conseguir una industria excelente. La necesidad de contar con medidas financieras extraordinarias para poder abordar el lanzamiento de nuevos programas, el entendimiento con los agentes laborales para construir competitividad entre todos, y el continuar la diversificación de la cartera de las empresas, con la entrada en mercados y programas aeronáuticos nuevos, aprovechando la externalización de trabajo de los grandes fabricantes son otras variables a tener en cuenta en nuestro devenir.

Desde la asociación HEGAN, mantenemos el compromiso de hallar soluciones en cooperación a estos retos y durante el 2014 hemos seguido desplegando nuestra reflexión estratégica 2013-2016. Os invitamos a que las conozcáis, junto a las principales actividades de nuestros asociados, con la lectura de este documento. Muchas gracias.

AURKEZPENA

Beti bezala, ohore handiz eta harrotasunez aurkeztu nahi dizuegu urteko txosten hau. Eta oraingoan, gainera, atsegin handiz idatzi ditugu lerro hauek, horrenbeste pertsonak beren eguneroko lana eskaintzen dioten industria honek osasun ona duela erakusten baitute.

Fakturazioa % 2 hazi da 2013koarekin alderatuta, eta Euskadiko Aeronautika eta Espazioko HEGAN Kluster Elkartearen -HEGAN- biltzen diren enpresek ekitaldi ona izan dute 2014ko hau: 1.755 milioi euroko salmentak lortu dituzte munduan zehar banatuta dituzten planta guztietan. Enplegua ere % 1 hazi da, eta 12.546 langile izatera iritsi gara. Hazkunde hori % 4,4koa izan da Euskadiko zentroetan, eta 4.278 langile izatera iritsi gara, orain arteko marka guztiak hautsiz; kalitatezko enplegua da, goi-mailako prestakuntza duena.

Esportazioek 1.000 milioi euroko muga gainditu dute bigarren urtez, eta 1.139 milioi euroko zifrara iritsi dira, fakturazio osoaren % 65era. Erresuma Batuan kokatuko enpresak dira lanen helmuga nagusiak, eta horien ondotik, Alemanian eta Estatu Batuetan kokatutakoak datoz.

I+G arloko inbertsioari eutsi egin zaio iazkoarekin alderatuta, parte hartzen dugun programen faseekin bat etorrita, eta 165 milioi eurora iritsi da, hots, fakturazioaren % 9,4ra. Zenbateko horren % 86 enpresek autofinantzatzeko egiten duten ahalegin izugarriari dagokio, eta I+G osoa langileen % 11ri esker gauzatzen da: 1.442 pertsona!

Gainera, etorkizunari begira eta aireko lineek egindako aurreikuspenen araber, % 5 haziko da urtero aireko eskaria datozen hogeitau urteetan, eta horrek hegazkinen produkzioa areagotzea dakar beti.

Datozen urteetan Euskadiko industrian eragin onuragarria izango duten mugarrin artean, honako hauek azpimarratu behar dira: Embraer KC-390 garrariorako hegazkinaren roll-out ekitaldia -aurkezpen ofiziala- egin da; Airbus A350 XWB fuselaje zabaleko hegazkinaren lehen ereduaren entregatu da, datozen hamarkadetan ekoizle horrek abiazio komertzialean duen negozioan protagonista nagusia izango dena, hain zuzen, eta gure elkartearen 33 enpresek hartzen dute parte hegazkin horren ekoizpenean; Boeing 787 Dreamliner hegazkinaren produkzio-tasa igo egin da, eta HEGANeko hogeiki kide inguruk hartzen dute parte zeregin horretan. Eskualdeko hegazkinen esparruari dagokionez, Embraer etxearen E-2 eta Bombardier etxearen CSeries hegazkin berriak merkatuzko prestatzeko ari gara. Eta, bestalde, sektorea bere posizioa indartzeko eta zabalduz doa, negozio-hegazkinen programa berriak sartu baitira, hala nola Beechcraft edo Gulfstream.

Aurreko guztia kontuan hartuta, zer ondoriozta dezakegu? Hazten jarraitzen dugula; gure kokapen estrategikoek, Euskadin enpleguari eusteko aukera emateaz gain, enplegua sustatzeko aukera eman digutela; lehiakortasunari, konpromisoari eta gizartearekiko zerbitzuari eusten diegula; eta gure enpresek aeronautikaren merkatuan leku ona betetzen dutela, programa berrietan parte hartuta.

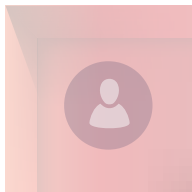
Logikoki, sektorearen helburua lehiakortasun horri eustea eta berori hobetzea da. Eta aurrez aurre ditugun eronken artean, sektorearen etengabeko bilakaera azpimarratu nahi dugu, gero eta exijentzia teknologiko handiagoak baititu -aireontzien segurtasun handiagoa, ingurumena gehiago errespetatzen duten hegazkinak, pisu eta kontsumo gutxiagokoak-, eta horrek eragina baitu enpresa ekoizleetan. Gainera, teknologiaren eta berrikuntzaren esparruan, Tier-1 mailako lidergoari eutsi behar diogu, eta balio-katea garatu behar dugu eragile guztien ekarpenaren bidez, industria bikaina lortzen laguntzeko. Programa berriak abian jartzeko aparteko neurri finantzarioak izatea, guztien artean lehiakortasuna eratzeko lan-munduko eragileekin ongi moldatzea, eta aeronautikaren merkatu eta programa berrietan sartuz eta ekoizle handien lana kanporatuz enpresen zorroa zabaltzen jarraitzea dira gure bilakaeran kontuan hartu beharreko beste aldagai batzuk.

HEGAN elkarteak lankidetzan oinarrituta erronka horiei irtenbidea bilatzeko konpromisoari eusten diogu, eta 2013tik 2016ra bitarteko gure gogoeta estrategikoa hedatzen jarraitu dugu 2014. urtean. Dokumentu hau irakurri, gonbidapena egin nahi dizuegu berori eta gure bazkideen jardura nagusiak ezagutzeko. Mila esker.

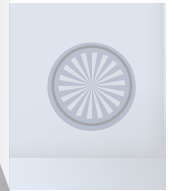
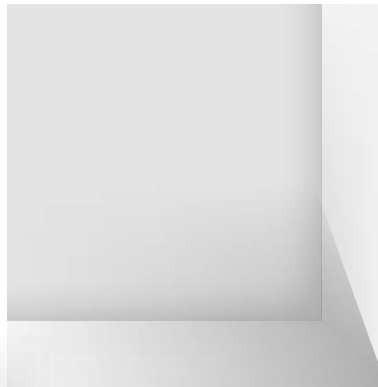
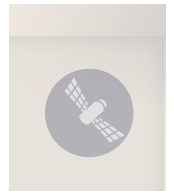
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THE CLUSTER ASSOCIATION

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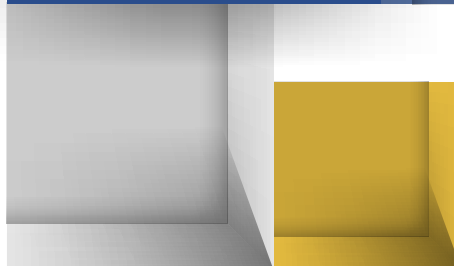


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ORGANIZACIÓN

hegan es una asociación privada sin ánimo de lucro que agrupa al sector aeronáutico y espacial vasco, creada con el fin de potenciarlo, promoverlo y estimularlo.

Su misión, como Asociación Cluster, es el de representar y dinamizar el sector, para facilitar su competitividad a corto, medio y largo plazo mediante la cooperación y la innovación entre empresas y otros agentes, dando respuestas en colaboración a los retos estratégicos del mismo.

Asamblea General

Es el máximo órgano de la Asociación. Está integrada por todos los socios y es, por tanto, el foro de expresión de la voluntad de estos.

Junta Directiva

Es el Órgano Colegiado de Administración y Dirección. Sus miembros en 2014, designados por la Asamblea General, fueron:

Iñaki López Gandásegui –President-, AERNNOVA
 Ignacio Mataix –Vice President-, ITP
 Jorge Unda –Secretary-, SENER
 Íñigo Ezquerro, ALTRAN
 Iñaki Tellechea, SPRI / BASQUE GOVERNMENT
 Borja Emparan, WEC
 José Juez Langara, HEGAN

Comité Ejecutivo

Este comité, delegado de la Junta Directiva, actúa como órgano de seguimiento estratégico de las actuaciones de la Asociación Cluster, se reúne trimestralmente y sus miembros 2014 fueron:

Jon Larrinaga –Presidente-, AERNNOVA
 Íñigo Ezquerro, ALTRAN
 Eduardo Junkera, DMP
 Plácido Márquez, ITP
 Koldobika Grajales, LTK GRUPO
 Javier Viñals, SENER
 Susana Larrea, SPRI / BASQUE GOVERNMENT
 Borja Emparan, WEC
 José Juez Langara, Director de HEGAN
 Martín Fernández Loizaga, Director adjunto de HEGAN

Grupos de trabajo

Desde 2005, los comités permanentes de HEGAN sufrieron una reestructuración pasando a ser grupos de trabajo temporales y flexibles dedicados específicamente a actividades puntuales y reportando al Comité Ejecutivo. Estos grupos de trabajo se crean y desaparecen a voluntad de los asociados y según sus necesidades específicas del momento.

Equipo de HEGAN

El equipo permanente de la Asociación es el siguiente:

Mentxu Díaz, Responsable de Administración
 Martín Fernández Loizaga, Director Adjunto
 Jose Juez Langara, Director
 Ana Rodríguez, Responsable de Operaciones
 Ana Villate, Responsable de Proyectos en Cooperación

ANTOLAMENDUA

Aeronautika eta espazioaren sektoreko euskal enpresak biltzen dituen irabazi asmorik gabeko elkarte pribatua da HEGAN, sektore hori indartzeko, sustatzeko eta bultzatzeko sortutakoa.

Sektorea ordezkatzeko eta dinamizatzea da Kluster Elkartearen misioa, horrela, enpresen eta beste eragile batzuen arteko lankidetzaren eta berrikuntzaren bidez, sektorearen lehiakortasuna sendotzeko, sektoreko dema estrategikoei lankidetzan oinarritutako erantzuna eskainiz.

Biltzar Nagusia

Hauxe da elkarteeko organo gorena. Bazkide guztiak osatzen dute, eta, beraz, bazkideen asmoak eta gogoak adierazteko foroa da.

Zuzendaritza-Batzordea

Administrazio- eta zuzendaritza-taldeko organoa da. Honako hauek dira bertako kideak, Batzar Nagusiak 2014rako izendatutakoak:

Iñaki López Gandásegui –Lehendakaria-, AERNNOVA
 Ignacio Mataix –Lehendakariordea-, ITP
 Jorge Unda –Idazkaria-, SENER
 Íñigo Ezquerro, ALTRAN
 Iñaki Tellechea, SPRI / BASQUE GOVERNMENT
 Borja Emparan, WEC
 José Juez Langara, HEGAN

Batzorde Betearazlea

Zuzendaritza Batzordearen ordezkari den talde hau Kluster Elkartearen jardueren jarraipen estrategikorako organo gisa aritzen da. Hiru hilabeteen behin biltzen da, eta 2014an, hauek izan dira batzorde horretako kideak:

Jon Larrinaga –Lehendakaria-, AERNNOVA
 Íñigo Ezquerro, ALTRAN
 Eduardo Junkera, DMP
 Plácido Márquez, ITP
 Koldobika Grajales, LTK TALDEA
 Javier Viñals, SENER
 Susana Larrea, SPRI / BASQUE GOVERNMENT
 Borja Emparan, WEC
 José Juez Langara, HEGANeko zuzendaria
 Martín Fernández Loizaga, HEGANeko zuzendari laguntzailea

Lantaldeak

2005. urtetik aurrera, berregituratu egin ziren HEGANeko batzorde iraunkorrak, eta, horien orde, ekintza zehatzetara zuzendutako behin-behineko lantalde malguak sortu ziren, Batzorde Betearazleari ere laguntza emanez horrela. Lantalde horiek bazkideen beharren arabera sortzen eta desagertzen dira, une bakoitzean beroriek dituzten ikuspegi eta iritziak aintzat hartuta.

HEGANeko Taldea

Honako hauek osatzen dute elkarteeko talde iraunkorra:

Mentxu Díaz, Administrazio-arduraduna
 Martín Fernández Loizaga, Zuzendari laguntzailea
 Jose Juez Langara, Zuzendaria
 Ana Rodríguez, eragiketa-Saileko arduraduna
 Ana Villate, kooperazio-Proiektuen arduraduna

hegan is a private, non-profit association that groups together the Basque Aeronautics and space sector, created with the aim of fostering, promoting and stimulating this sector.

As a Cluster Association, its aim is to represent and stimulate this sector to ensure its competitiveness in the short, medium and long-term through the co-operation and innovation between companies and other agents, as a response to its strategic challenges in collaboration.

GENERAL ASSEMBLY

This is the highest-ranking body of the Association. It is made up of all member companies and is therefore the body that represents their wishes.

BOARD OF DIRECTORS

This is the Collegial Body of Administration and Management. Appointed by the General Assembly, its members in 2014 were as follows:

Iñaki López Gandásegui –President-, AERNNOVA
 Ignacio Mataix –Vice President-, ITP
 Jorge Unda –Secretary-, SENER
 Iñigo Ezquerri, ALTRAN
 Iñaki Tellechea, SPRI / BASQUE GOVERNMENT
 Borja Emparan, WEC
 José Juez Langara, HEGAN



General Assembly 2014

EXECUTIVE COMMITTEE

This committee, delegated by the Board of Directors, is the executive body in the activities pursued by the Cluster. It meets on a two-monthly basis and its members in 2014 were as follows:

Jon Larrinaga –President-, AERNNOVA
 Iñigo Ezquerri, ALTRAN
 Eduardo Junkera, DMP
 Plácido Márquez, ITP
 Koldobika Grajales, LTK GRUPO
 Javier Viñals, SENER
 Susana Larrea, SPRI / BASQUE GOVERNMENT
 Borja Emparan, WEC
 José Juez Langara - Managing Director of HEGAN
 Martín Fernández Loizaga, Deputy Director of HEGAN

WORKING GROUPS

As of 2005, the permanent committees of HEGAN were restructured into temporary and flexible workgroups dedicated to a number of specific activities, reporting to the Executive Committee. These workgroups are created and dissolved according to the wishes of associate members and in accordance with their specific needs at each moment in time.

HEGAN'S TEAM

Members of the permanent team of the Association are as follows:

- Mentxu Díaz, Administration Supervisor
- Martín Fernández Loizaga, Deputy Director
- Jose Juez Langara, Managing Director
- Ana Rodríguez, Head of Operations
- Ana Villate, Cooperation Projects Manager



HEGAN 2014

Como comentamos hace ya dos años en estas mismas líneas, en la primavera de 2012 comenzamos otro proceso de reflexión estratégica. El proceso nos marcó las líneas de trabajo generales que iremos desplegando en acciones concretas hasta el año 2016.

Fue un proceso rápido, y efectivo, no en vano en otoño de 2012 ya teníamos detectados los retos del sector, aquellos en los cuales la existencia de HEGAN podía aportar valor al socio:

- Reforzar la cadena de valor
- Mejorar el posicionamiento ante ciertos clientes
- Representar al Sector
- Aportar contexto para la toma de decisiones estratégicas
- Generar, retener y atraer talento
- Formación específica

Y con una idea que estaba presente para trabajar en todos ellos: la cultura de cooperación.

También se realizó una revisión completa de la organización y desde entonces se trabaja por procesos y proyectos. En 2014 se ha dado una nueva revisión al modelo que ahora obedece a este diagrama:



Si bien, en estos dos años hemos tratado de poner foco en los dos primeros retos, aquellos que vemos ligados directamente a la mejora de la competitividad de los asociados, también se ha trabajado en los demás –todos se alimentan entre sí– y éstas han sido las actividades más significativas en el año 2014:

Reforzar la cadena de valor (R1)

- Apoyo al nacimiento del Centro de Fabricación Avanzada en el ámbito aeroespacial cuyo objetivo principal es la demostración de tecnología de fabricación avanzada que permite la transferencia rápida al entorno productivo de resultados de la investigación básica y aplicada.
- Puesta en marcha de nuestras Comunidades de aprendizaje –proceso de capacitación conjunta compartiendo aprendiendo con otros profesionales de roles similares– en el que han participado 8 gerentes de diferentes empresas.
- Refuerzo de la cadena de valor de aeroestructuras a través de la innovación empresarial entre varios suministradores.
- Apoyo al proyecto europeo SPACE liderado por AIRBUS para la mejora competitiva de la supply chain en aeroestructuras, se ha aceptado a HEGAN como Socio Honorario de esta iniciativa y se han adherido 7 socios de HEGAN.
- Seguimiento a las oportunidades de seguros de responsabilidad civil, COMPITTE HEGAN de SRC aero reduciendo costes en los seguros de los socios.

HEGAN 2014

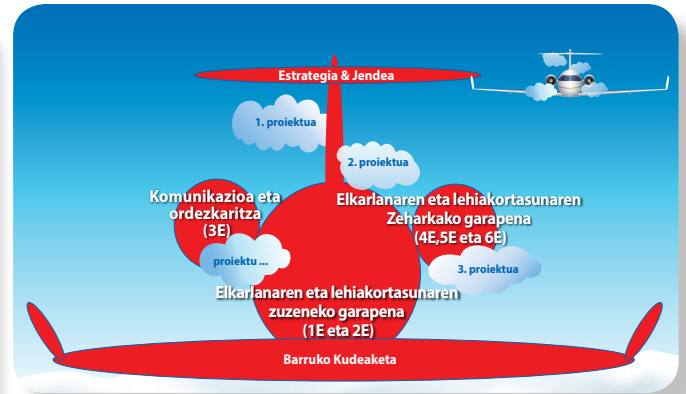
Duela bi urte adierazi genuenaren ildotik, gogoeta-prozesu estrategiko berri bat lantzen hasi ginen 2012ko udaberrian. 2016. urtera arteko lan-ildoak zehaztu zizkigun prozesu horrek, hain zuzen.

Prozesu bizkor eta eraginkorra izan zen, eta 2012ko udazkenerako jada haute-manda genituen sektorearen erronkak, HEGANek egin zezakeen balio-ekarpena adierazten zuten erronkak, alegia:

- Balio-katea sendotzea
- Zenbait bezerorekin betetzen dugun lekua hobetzea
- Sektorea ordezkatzea
- Erabaki estrategikoak hartzeko testuingurua eskaintzea
- Talentua sortzea, atxikitzea eta erakartzea
- Prestakuntza espezifikoak

Eta bazen ideia nagusi bat ere, horietan guztietan landu beharko zena: lankidetzaren kultura.

Antolamendua ere osorik berrikusi zen, eta, harrezkero, prozesu eta proiektuen bidez lan egiten da. 2014an, eredu berrikusi da, eta honako diagrama hau zehaztu da:



Azken bi urteotan arreta bereziki lehenengo bi erronketan jarri badugu ere, hots, zuzenean bazkideen lehiakortasunarekin lotuta daudenetan, gainerako erronketan ere lan egin dugu –elkar elikatzen dute guztiak–; hauek izan dira, hain zuzen, 2014. urteko jarduerara esanguratsuenak:

Balio-katea sendotzea (1E)

- Aire eta espazioaren esparruan fabrikazio zentro aurreratu bat sortzen lagundu da; fabrikazio aurreratuaren teknologiak erakustea du xede zentro horrek, kontuan hartuta oinarritzko ikerketaren eta ikerketa aplikatuaren emaitzak ekoizpen-ingurura azkar transferitzeko aukera ematen duela.
- Ikaskuntza-komunitateak abian jarri dira elkarrekin batera trebatzeko prozesua, antzeko rola duten profesionalen partekatuz eta ikasiz. Hainbat enpresatako 8 kudeatzailek hartu dute parte horietan.
- Aire-egituren balio-katea sendotu da, hainbat hornitzaileen arteko enpresa-berrikuntzaren bidez.
- AIRBUS buru den Europako SPACE proiektuari, aire-egituren hornidura-katearen lehiakortasuna hobetzea xede duenari, babesa eman zaio; ekimen horretan, Ohorezko Bazkide gisa onartu da HEGAN, eta HEGANeko 7 bazkidek batu zaizkio.
- Erantzukizun zibileko aseguruaren aukerak aztertu dira, COMPITTEren eta HEGANen arteko SRC Aero-ri dagokionez, eta bazkideen aseguruaren kostuak murriztu dira.
- Banco Sabadellekin sinatutako hitzarmenaren jarraipena egin da; dagoeneko 6 bazkidek (3 prozesuan) eta bazkide ez diren 8k onura ateratu diote elkarrekin hartutako irtenbide ekonomiko horri.

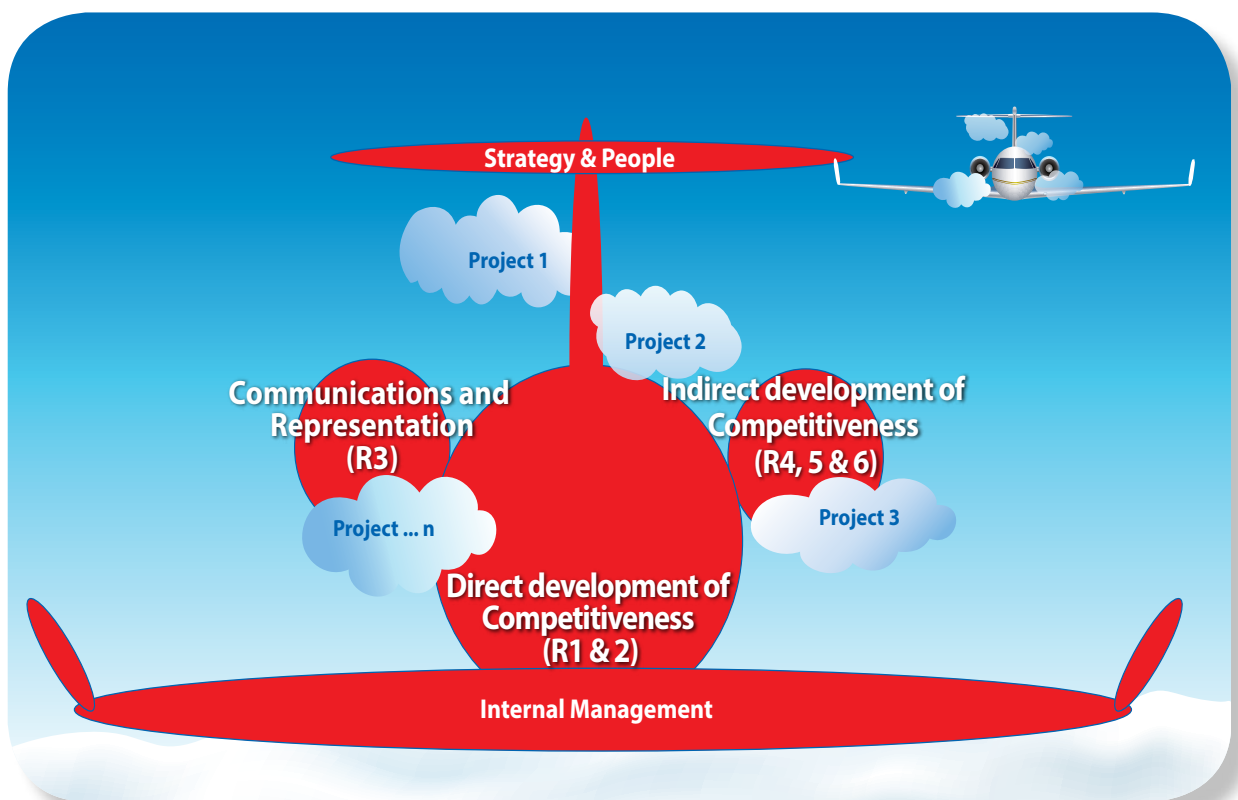
As we indicated two years ago in this section, in Spring 2012 we began another process of strategic reflection. This process set out the general lines of action to be developed until 2015.

It was a rapid and effective process. Not surprisingly, by the autumn of 2012, we had already detected the challenges facing the sector for which HEGAN could provide its members with support:

- Strengthen the value chain
- Improve our position with certain clients
- Represent the sector
- Provide background information for strategic decision-making
- Generate, retain and attract talent
- Specific training

And all of these activities were based on a common principle: the culture of cooperation.

A complete review was also made of our organisation. Since then we have worked according to processes and projects. In 2014, a new version of the model was drawn up, which looks like this:



Although during this two-year period we have tried to focus on the first two challenges (those we considered to be linked directly to improving the competitiveness of our members), we have also worked on the others (they are all inter-dependent). These were the most significant activities in 2014:

- Seguimiento del acuerdo con el Banco Sabadell siendo ya 6 socias (3 en proceso) y 8 no-socias las que se han beneficiado de esta solución económica conjunta.

Posicionamiento con ciertos clientes (R2)

- Posicionamiento estratégico de un grupo de empresas con un cliente objetivo, se ha preparado un proceso piloto y se ha conseguido establecer un grupo de interés para acceder con ofertas conjuntas a la empresa en cuestión.
- Soporte a la participación en BM y Ferias con la participación en AIRTEC Frankfurt y AEROMART Toulouse junto con las Cámaras Vascas. Cerrado el proyecto PARIS AIR SHOW 2013 y preparando la edición 2015.
- AEROTRENDS: cerrada la valoración del evento del 2013 y preparando la edición del 2015.

Comunicación y representación (R3)

- Imagen y comunicación del cluster con nuevos contenidos web, nuevo informe anual digital mediante microsite y diferente catálogo de promoción. Relación con medios, notas de prensa, entrevistas y artículos en función de noticias del sector. Se ha duplicado las apariciones en medios de 2013.
- Entrevistas y negociación con potenciales socios.

Dar contexto para la toma de decisiones estratégicas (R4)

- Continuamos con el Soporte permanente a la herramienta "Sistema de Inteligencia Competitiva del Cluster", duplicando el número de usuarios.
- Participamos en el EAQG (European Aerospace Quality Group) desde el año 2003.

Generar, retener y atraer talento (R5) y crear formación específica del sector (R6)

- Participación en jornadas y eventos que vinculan talento y aportan formación, colaborando con HETEL –asociación de centros privados de FP de Euskadi- para definir áreas de trabajo de la FP para el sector aero y coordinando otras actuaciones con BIZKAIA TALENT, entidad impulsada por el Departamento de Promoción Económica de la Diputación Foral de Bizkaia (DFB-BFA) para atraer, vincular y retener talento en el área Bilbao-Bizkaia-País Vasco.
- Seguimiento a la participación de HEGAN, a través de IMH (Instituto de Máquina Herramienta) y HETEL, en el proyecto SKILLS HUB que tiene como fin intercambiar experiencias europeas en el mundo de la FP.
- Firmado un acuerdo entre Gobierno Vasco (EJGV), DFB-BFA, Universidad del País Vasco (UPV-EHU) y HEGAN para el aula aeronáutica de la UPV por otros cuatro años, con compromiso de las empresas mediante becas, prácticas y aportación económica al aula.

Generar cultura de cooperación (R7) y otras actividades de mejora interna

- Acciones en cooperación para la gestión de los grupos de trabajo y el soporte a la gestión interna de la asociación. Reuniones efectivas y de valor para los participantes de dichos grupos de trabajo, comités, JD, asambleas y sesión de socios con una organización centrada en las personas.
- Además ese año, ha sido el de la acreditación Bronze de nuestro sistema de gestión por parte del European Secretariat for Cluster Analysis, y la incorporación de tres socios más: BOST, DYFA y EYHER.

Zenbait bezerorekin betetzen dugun lekua (2E)

- Xede den bezeroarekiko estrategikoki posizionatzeko prozesu pilotu bat prestatu da, eta interes-talde bat sortzea lortu da, berorregana eskaintza bateratu batekin jotzeko.

- BM-n eta azoketan dugun parte-hartzea sustatu da: Frankfurteko AIRTEC ekitaldian eta Tolosako (Frantzia) AEROMART azokan izan gara, euskal ganbarekin batera. PARIS AIR SHOW 2013 proiektua itxi da, eta 2015eko edizioa prestatzen ari dira.

- AEROTRENDS: 2013ko ekitaldiari buruzko balioespena itxi da, eta 2015eko edizioa prestatzen ari dira.

Komunikazioa eta ordezkaritza (3E)

- Klusterraren irudiaren eta komunikazioaren arloan, eduki berriak txertatu dira webgunean. Microsite teknologiaren bidez, urteko txosten digital berria egin da, eta sustapen-katalogoa ere aldatu egin da. Hedabideekin harremanetan egon gara, eta prentsa-oharrak, elkarrizketak eta artikulak argitaratu dira, sektoreko berrien arabera. Agerraldiak bikoiztu egin dira, 2013. urtean egin zirenekin alderatuta.

- Elkarrizketak eta negoziazioak egin dira bazkide potentzialekin.

Erabaki estrategikoak hartzeko testuingurua eskaintzea (4E)

- "Klusterraren Adimen Lehiakorrekako Sistema" tresnari etengabe laguntzen ari gara, eta erabiltzaile kopurua bikoiztu egin da.
- EAQG taldean (European Aerospace Quality Group) parte hartzen ari gara 2003. urtetik.

Talentua sortzea, atxikitzea eta erakartzea (5E) eta sektoreko prestakuntza espezifikoaren sortzea (6E)

- Talentua biltzen eta prestakuntza eskaintzen duten jardunaldietan eta ekitaldietan parte hartu dugu; Gizarte Ekimeneko Lanbide Heziketako Ikastetxeen Elkartearekin (HETEL) elkarlanean jardun dugu, aeronautikako sektorerako Lanbide Heziketako lan-esparruak definitzeko; BIZKAIA TALENT-ekin ere beste jarduketa batzuk koordinatu dira; Bizkaiko Foru Aldundiaren (DFB-BFA) Sustapen Ekonomikorako Sailak bultzatuta eratu zen elkarte hori, Bilbo-Bizkaia-Euskal Herria eremura talentua erakartzeko, elkartzeko eta eusteko.

- SKILLS HUB proiektuan, Lanbide Heziketaren munduan Europako esperientziak trukatzeko xede duen proiektu horretan, IMH-ren (Makina Erremintaren Institutua) eta HETEL-en bidez HEGANek izandako parte-hartzearen jarraipena egin da.

- Eusko Jaurlaritzak, Bizkaiko Foru Aldundiak, Euskal Herriko Unibertsitateak (EHU) eta HEGANek hitzarmena sinatu dute EHUKo aeronautikako gelarako, beste lau urterako; diru-laguntzak emateko, praktikak eskaintzeko eta gelarako ekarpen ekonomikoa egiteko konpromisoa hartu dute enpresek.

Lankidetzan oinarritutako kultura bat sortzea (7E) eta elkarte baretatik hobetzeko beste jarduerak batzuk

- Lantaldeak kudeatzeko, lankidetzan oinarritutako jarduerak egin dira, eta elkartearen barruko kudeaketari lagundu zaio. Lantalde horietako partaideentzat bilera eraginkorrak eta baliagarriak egin dira, eta batzordearen bilerak, Zuzendaritza Batzordekoak, biltzarrak eta bazkideen saioak ere egin dira, pertsonengan oinarritutako antolamenduarekin, betiere.

- Gainera, gure kudeaketa-sistemak European Secretariat for Cluster Analysis erakundearen Bronze egiaztagiria lortu du urte horretan; eta horrez gain, beste hiru bazkide ere sartu dira elkartearen: BOST, DYFA eta EYHER.

STRENGTHEN THE VALUE CHAIN (R1)

- Support for the setting up of an Advanced Training Centre in the field of aerospace, the main aim of which is to demonstrate advanced manufacturing technologies that allow rapid transfer of the results of basic and applied research to the production environment.
- Put our apprenticeship communities into motion (a joint process of training, sharing learning with other similar professional roles), in which 8 general managers from different companies have taken part.

POSITIONING WITH CERTAIN CLIENTS (R2)

- Strategic positioning of a group of companies with a target client. A pilot process has been prepared and an interest group has been set up to approach the company in question with joint offers.

STRENGTHEN THE VALUE CHAIN (R1)

- Strengthen the aero structures value chain through business innovation among several suppliers.
- Support for the European SPACE Project lead by AIRBUS to improve the competitiveness of the aero structures supply chain. HEGAN has been accepted as Honorary Partner of this initiative to which 7 HEGAN members have joined.

- Monitoring of the civil responsibility insurance opportunities agreed upon by COMPITTE HEGAN and SRC aero to reduce the insurance costs of our members.
- Monitoring of the agreement with Banco Sabadell. Six members (3 in process) and 8 non-members have benefited from this joint economic solution.

POSITIONING WITH CERTAIN CLIENTS (R2)

- AEROTRENDS: The assessment of the 2013 event has been completed and the 2015 event is being prepared.

COMMUNICATIONS AND REPRESENTATION (R3)

- Cluster image and communications: new website contents, new digital annual report by means of Microsite and modified promotional catalogue. Relations with the media, press releases, interviews and articles covering news in the sector. The number of appearances in the media have doubled those in 2013.
- Interviews and negotiations with potential members.

COMMUNICATIONS AND REPRESENTATION (R3)

PROVIDE BACKGROUND INFORMATION FOR STRATEGIC DECISION-MAKING (R4)

- We continue to provide permanent support for the “Competitive Intelligence System of the Cluster”, doubling the number of users.
- We have taken part in the EAQG (European Aerospace Quality Group) since 2003.

GENERATE, KEEP AND ATTRACT TALENT (R5) AND CREATE SPECIFIC SECTOR TRAINING (R6)

- Monitoring the participation of HEGAN, through IMH (Machine Tool Institute) and HETEL, in the SKILLS HUB Project that aims to exchange European experiences in the world of vocational training.
- An agreement has been signed between the Basque Government (EJGV), DFB-BFA, University of the Basque Country (UPV-EHU) and HEGAN to extend the aeronautics course of the Basque University for another four years with the contribution of companies in the form of grants, internships and economic support.

GENERATE A CULTURE OF COOPERATION (R7) AND OTHER INTERNAL IMPROVEMENT ACTIVITIES

- Actions in cooperation for the management of work groups and support for the internal management of the association. Useful and effective meetings for the participants of these work groups, committees, board of management, assemblies and members meetings with a person-centred organisation.
- Moreover, this year has seen the awarding by the European Secretariat for Cluster Analysis of the Bronze medal and the incorporation of three more members: BOST, DYFA and EYHER.

PROVIDE BACKGROUND INFORMATION FOR STRATEGIC DECISION-MAKING (R4)

GENERATE, KEEP AND ATTRACT TALENT (R5) AND CREATE SPECIFIC SECTOR TRAINING (R6)

- Participation in talent-related shows and events and the provision of training, in collaboration with HETEL – association of private vocational training centres of the Basque Country – to define areas of vocational training work for the aero sector and coordinating other activities with BIZKAIA TALENT, an entity promoted by the Department of Economic Promotion of the Provincial Council of Bizkaia (DFB-BFA) to attract and keep talent in the Bilbao-Bizkaia-Basque Country area.

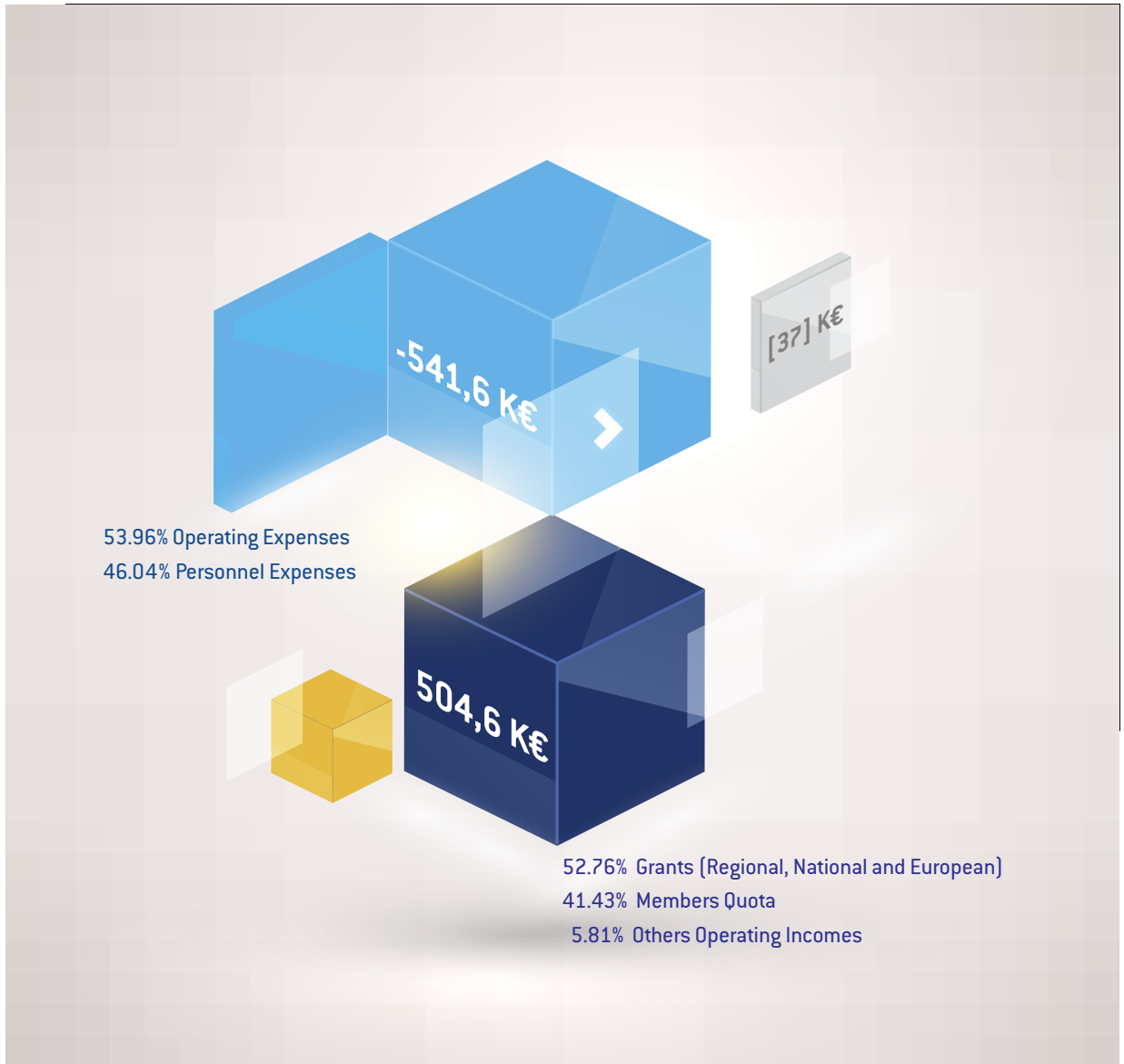
GENERATE A CULTURE OF COOPERATION (R7) AND OTHER INTERNAL IMPROVEMENT ACTIVITIES

GENERAL ASSEMBLY 2014



ANNUAL ACCOUNTS

• THE ASSOCIATION'S 2014



• THE ASSOCIATION'S BALANCE SHEET

TOTAL: 243.55K€

Net assets: 18%

> 03

THE CLUSTER MEMBERS

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* Non-members-photos courtesy of Airbus Group, Boeing, Bombardier, Embraer, ESA, Eurojet, Honeywell, Pratt & Whitney, Rolls-Royce and Sikorsky

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VALUE CHAIN



VALUE CHAIN



CAPABILITIES

	ACTUURRI	AERINNOVA	AEROMECC	AEROSPACE ENG. GR.	AIBE	ALESTIS	ALFA PRECISION CASTING	ALTRAN	ARATZ	ASTORKIA	AYZAR	BATZ	BOST	BURDINBERRI	BURULAN	DANOBAT G	DMP
AIRFRAME, ENGINE AND SPACE: SYSTEMS AND COMPONENTS																	
Systems integration	●	●			●												
Conceptual design		●				●											
Detail design engineering	●	●			●	●	●	●					●			●	●
Big components assembly	●	●			●												
Medium components assembly	●	●	●		●		●	●	●				●			●	●
Small components assembly	●	●	●		●	●	●	●	●				●	●	●	●	●
Materials supply and management	●	●			●		●					●					
Special cutting and drilling		●			●												●
Production solutions for internal movements and works in heights																	
Robotics, automation & production systems	●	●			●								●	●		●	
Aeroengine metallic component manufacturing	●		●		●	●	●				●	●			●	●	●
Airframe metallic component manufacturing	●	●	●		●	●		●	●	●	●		●		●	●	●
Space metallic component manufacturing	●	●	●		●	●		●	●	●	●		●		●	●	●
Manufacturing engineering and CAD-CAM-CAE	●	●	●		●	●		●	●	●	●		●		●	●	●
High precision machining	●	●	●		●		●	●			●	●	●	●	●	●	●
Sheet metal work		●			●						●						
Metallic tooling design and manufacturing	●	●	●	●	●	●		●	●			●	●	●	●	●	●
Investment casting					●												
Thermal and surface treatments	●	●			●						●				●		
Thermal spray																	
Composites engineering	●	●			●		●										
Composites manufacturing	●	●			●		●										
Composites tooling design	●	●			●		●	●						●			●
Composites tooling manufacturing	●	●			●		●							●			●
Metrology advanced services and equipment												●					
Non-destructive testing	●	●			●		●	●			●			●			●
Testing and certification		●			●		●										
Engine maintenance repair & overhaul																	
Airframe maintenance repair & overhaul		●															
Systems & Equipment maintenance repair & overhaul				●													
Aeronautic Logistic Services																	
EQUIPMENT, AVIONICS AND OTHERS																	
UAS Design Engineering and Support		●					●										
Equipment Design engineering	●	●			●		●										●
Avionics Space and Defence Systems SW and HW																	
Test benches and Simulation Systems																	
Mechanical systems	●	●					●	●									●
Control and electronic systems																	
High precision rubbers																	
Machine-tools for metallic processing													●			●	
Machine-tools for composite processing													●			●	
Machine-tools for aeroengine MRO																	●
EN9100	Members are EN9100 certified																
NADCAP	100% of special processes are NADCAP certified																

CAPABILITIES

GROUP	DYFA	ELECTROHILO	ETHER	GRUPO TTT	INDUSTRIAS GALINDO	ITP	KORTA	LTK GRUPO	MATRICI	MESTMA	METRALTEC	NIVAC	NOVALTI	NUTER	ORBITAL AEROSPACE	SARIKI	SENER	STIEGEL	SISTEPLANT	TECNASA	TEY	WEC	CTA	IK4	TECNALIA		
				●																							Systems integration
				●																							Conceptual design
				●																							Detail design engineering
				●																							Big components assembly
				●																							Medium components assembly
				●																							Small components assembly
				●																							Materials supply and management
				●																							Special cutting and drilling
				●																							Production solutions for internal movements and works in height
				●																							Robotics, automation & production systems
				●																							Aeroengine metallic component manufacturing
				●																							Airframe metallic component manufacturing
				●																							Space metallic component manufacturing
				●																							Manufacturing engineering and CAD-CAM-CAE
				●																							High precision machining
				●																							Sheet metal work
				●																							Metallic tooling design and manufacturing
				●																							Investment casting
				●																							Thermal and surface treatments
				●																							Thermal spray
				●																							Composites engineering
				●																							Composites manufacturing
				●																							Composites tooling design
				●																							Composites tooling manufacturing
				●																							Metrology advanced services and equipment
				●																							Non-destructive testing
				●																							Testing and certification
				●																							Engine maintenance repair & overhaul
				●																							Airframe maintenance repair & overhaul
				●																							Systems & Equipment maintenance repair & overhaul
				●																							Aeronautic Logistic Services
				●																							UAS Design Engineering and Support
				●																							Equipment Design engineering
				●																							Avionics Space and Defence Systems SW and HW
				●																							Test benches and Simulation Systems
				●																							Mechanical systems
				●																							Control and electronic systems
				●																							High precision rubbers
				●																							Machine-tools for metallic processing
				●																							Machine-tools for composite processing
				●																							Machine-tools for aeroengine MRO

AIRFRAME, ENGINE AND SPACE: SYSTEMS AND COMPONENTS

EQUIPMENT, AVIONICS AND OTHERS

100 certified since 2005
are NADCAP certified since 2007

EN9100
NADCAP

INDUSTRY

R&D
Organizations





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03.3.7
MANUFACTURING, PROCESSES,
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EMBRAER E-JETS E2



BURULAN



DYFA



EMBRAER KC-390



SIKORSKY S-92



EYHER



ALESTIS



GENERAL DESCRIPTION OF THE PRODUCT/SERVICE	DIRECT CLIENT	OEM	MODEL
ACITURRI			
Stringer and coatings & Landing gear door	AIRBUS MILITARY	AIRBUS	A320
Section 18 structural assembly	AIRBUS MILITARY	AIRBUS	A320
HTP Torsion box	AIRBUS OPERATIONS	AIRBUS	A320
Leading edge of HTP assembly	AIRBUS MILITARY	AIRBUS	A330
Passenger door structural assembly	ALESTIS	AIRBUS	A330
Leading edge of horizontal stabilizer assembly	AIRBUS MILITARY	AIRBUS	A340
HTP Tips & Passenger door structural assembly	AIRBUS MILITARY	AIRBUS	A340
VTP	AIRBUS OPERATIONS	AIRBUS	A350 XWB
Internal structure of S19	AIRBUS OPERATIONS	AIRBUS	A350 XWB
Belly Fairing (Zones 0,1, 2 , 3.1, 3.2, 3.3 y 4)	AIRBUS MILITARY	AIRBUS	A380
Wing Ribs and HTP, Tail rudder	AIRBUS OPERATIONS	AIRBUS	A380
Sponsons	DAHER-SOCATA	AIRBUS MILITARY	A400M
Spar	AIRBUS FRANCE	AIRBUS MILITARY	A400M
Flap and Vanes	AIRBUS GERMANY	AIRBUS MILITARY	A400M
Central Box: structural assembly and equipment & Tip wings integration	AIRBUS MILITARY	AIRBUS MILITARY	CN235, C295
Rudder Components & Integration	AIRBUS MILITARY	BOEING	737
Elevators and HTP	AIRBUS MILITARY	DASSAULT	FALCON 7X
Wing to Fuselage Fairing	EMBRAER	EMBRAER	KC-390
Sponsons and VT	FOKKER	EUROCOPTER	NH 90
Composite components	AIRBUS MILITARY	EUROFIGHTER	TYPHOON
Auxiliary Fuel Tanks	AIRBUS MILITARY	EUROFIGHTER	TYPHOON
AERNNOVA			
Elevators Assy /Main Landing Gear Doors Assy / Horizontal Stab. Spars / Fus. Section 18 Covers / Interior "dado" panels	AIRBUS	AIRBUS	A320
Elevator Components / Karman Fairings. Design Maintenance and Manufacturing of Main Landing Gear Doors Assy	AIRBUS	AIRBUS	A330/A340
Conceptual and detailed design & manufacturing of HTP horizontal stabiliser fixed parts and Elevators - Risk Partner	AIRBUS	AIRBUS	A350 XWB
Conceptual and detailed design & manufacturing of MLG Pressure bulkhead	STELIA	AIRBUS	A350 XWB
Build to print Rudder	AIRBUS	AIRBUS	A350 XWB
Horizontal Stabilizer: Design and Manufacturing of Leading Edges, Trailing Edges and Box Joint	AIRBUS	AIRBUS	A380
Rear Fuselage - Section 19: Design & manufacturing of Internal Metallic Structure, including attachment fittings to Vertical Stabilizer	AIRBUS	AIRBUS	A380

AEROSTRUCTURES

GENERAL DESCRIPTION OF THE PRODUCT/SERVICE	DIRECT CLIENT	OEM	MODEL
Stiffeners and angle bars S19.1 / trailing edge covers HTTP (composite)	AIRBUS	AIRBUS	A380
Skin Panels Assembly S-19 (Built to Print)	AIRBUS	AIRBUS	A380
Stringers / tip HTTP / wing stringers (composite)	AIRBUS DS	AIRBUS DS	A400M
Forward landing gear traps/ engine housings (composite)	AIRBUS DS	AIRBUS DS	CN235, C295
Upper structure manufacturing	AIRBUS HELICOPTERS	AIRBUS HELICOPTERS	EC 225 /725 Super Puma
Lower structure manufacturing	AIRBUS HELICOPTERS	AIRBUS HELICOPTERS	EC 225 /725 Super Puma
Tail Cone manufacturing	AIRBUS HELICOPTERS	AIRBUS HELICOPTERS	EC 225 /725 Super Puma
Tail Cone manufacturing	HELIBRAS	AIRBUS HELICOPTERS	EC 225 /725 Super Puma
Build to print Fuselage	AGUSTA WESTLAND	AIRBUS HELICOPTERS	NH 90
Rear fuselage (composite)	AIRBUS HELICOPTERS	AIRBUS HELICOPTERS	TIGRE
Spoilers	STELIA	ATR	ATR 72
Build to print of Fully equipped Wings	TEXTRON AVIATION - BEECHCRAFT	BEECHCRAFT	KING AIR / BARON / BONANZA
Manufacture of FTVs / Cabin, Tailcone, Horizontal Stabilizer	BELL	BELL	505 JRX
Conceptual engineering Wing Insparr Ribs and structures for sections 11, 12 and 42	BOEING	BOEING	747-8I/F
Manufacturing of complete Tail section (vertical and horizontal stabilisers) and elevators	BOMBARDIER	BOMBARDIER	CRJ Family
Design & Manufacturing of Central Wing Box (composite)	BOMBARDIER	BOMBARDIER	CSeries
Design & Manufacturing Tail Cone (composite)	BOMBARDIER	BOMBARDIER	CSeries
Design & manufacturing of complete Tail section (vertical and horizontal stabilizers), rudder and elevators - Risk Partner	EMBRAER	EMBRAER	E-JET Family/ LINEAGE 1000
Design & manufacturing of rear fuselage - Risk Partner	EMBRAER	EMBRAER	E-JET Family/ LINEAGE 1000
Design & manufacturing of complete wings-Risk Partner	EMBRAER	EMBRAER	ERJ Family
Design & manufacturing of nacelles - Risk Partner	EMBRAER	EMBRAER	ERJ Family
Design & manufacturing of wing to fuselage fairings -Risk Sharing Partner- Partially Tranfered to Embraer	EMBRAER	EMBRAER	ERJ Family
Design & manufacturing of complete wings - Risk Partner	EMBRAER	EMBRAER	LEGACY Family
Design & manufacturing of nacelles -Risk Partner	EMBRAER	EMBRAER	LEGACY Family
Design & manufacturing of wing to fuselage fairings -Risk Partner- Partially Tranfered to Embraer	EMBRAER	EMBRAER	LEGACY Family
Design & manufacturing of rear fuselage - Risk Partner	EMBRAER	EMBRAER	LINEAGE 1000
Design & manufacturing of Flaps, Ailerons and Rudder	EMBRAER	EMBRAER	KC-390

GENERAL DESCRIPTION OF THE PRODUCT/SERVICE	DIRECT CLIENT	OEM	MODEL
Design of Rear Fuselage, Pylon, Cargo Ramp and Upper Door	EMBRAER	EMBRAER	KC-390
Design of Wing Box	EMBRAER	EMBRAER	KC-390
Design of Cockpit	EMBRAER	EMBRAER	E-JETS E2 Family
Design of Cockpit	EMBRAER	EMBRAER	E-JETS E2 Family
Wing covers, housings and conduits (composite)	EUROFIGHTER	EUROFIGHTER	TYPHOON
Design & manufacturing of the equipped transition section and tail cone - Risk Partner	SIKORSKY	SIKORSKY	S-92 / H-92
Design & manufacturing of the HS - Risk Partner	SIKORSKY	SIKORSKY	S-92 / H-92
Design & manufacturing of the main rotor pylon, fairings and engine cowlings - Risk Partner	SIKORSKY	SIKORSKY	S-92 / H-92
AEROMECH			
Structural door components. Contract with Latecoere for the manufacture of 44 types of door parts	SEVERAL	BOEING	787
Motor pylon supports	SEVERAL	BOMBARDIER	Q-Series
Horizontal stabilizer structure & Structural components front section	SEVERAL	DASSAULT	FALCON 5X
Door structural components	Several	EMBRAER	170/175/190/195
Pylon Rib	Several	AIRBUS	A320
AIBE			
Precision machining of components	MTORRES	Several	Miscellaneous
ALESTIS			
BBAA HTP & VTP	ACITURRI	AIRBUS	A320
TIP's HTP	AIRBUS	AIRBUS	A320
TTP's	AERNNOVA	AIRBUS	A320
TIP's HTP	AIRBUS DS	AIRBUS	A330
PAX Door	AIRBUS	AIRBUS	A330
Ribs HTP	AIRBUS	AIRBUS	A330
Belly Fairing - Risk Partner	AIRBUS	AIRBUS	A350 XWB
S19.1 - Risk Partner	AIRBUS	AIRBUS	A350 XWB
MLGD / S19.1 / Rear Fairing	AIRBUS	AIRBUS	A380
Belly Fairing (Structure)	AIRBUS DS	AIRBUS	A380
Assembly tasks	AIRBUS DS	AIRBUS DS	A330MRTT
Elevator	AIRBUS DS	AIRBUS DS	A400M
Cowlings	AIRBUS DS	AIRBUS DS	A400M
Rear fuselage	AIRBUS DS	AIRBUS DS	CN235, C295
HTP / VTP	AIRBUS DS	AIRBUS DS	CN235, C295
Tips & Strakelet	BOEING	BOEING	737

AEROSTRUCTURES

GENERAL DESCRIPTION OF THE PRODUCT/SERVICE	DIRECT CLIENT	OEM	MODEL
Aileron	AIRBUS DS	BOEING	777
Flaperon	AIRBUS DS	BOEING	777
Winglet	EMBRAER	EMBRAER	190/195
Wingstub	EMBRAER	EMBRAER	190/195
Central Fuselage	EMBRAER	EMBRAER	LEGACY450/500
Empennage & Wings	EMBRAER	EMBRAER	LEGACY450/500
Composite parts	EMBRAER	EMBRAER	LEGACY450/500
ALFA PRECISION CASTING			
Secondary structure components	TAI	AIRBUS	A320ceo
Secondary structure components	AIRBUS	AIRBUS	A320neo/ceo / A330
Secondary structure components	AIRBUS DS	AIRBUS DS	C235,C295, EUROFIGHTER TYPHOON
ALTRAN			
Weights and mass engineering	AIRBUS	AIRBUS	A30X
Certification BF A350	ALESTIS	AIRBUS	A350 XWB
Design wing Ailerons and spoilers	AIRBUS	AIRBUS	A350 XWB
Certification S12	STELIA	AIRBUS	A350 XWB
Support engineering HNC	AIRBUS	AIRBUS	A350 XWB
Support engineering HNC Fan Cowls	AIRBUS	AIRBUS	A380
Supplier management Tier1 and Tier2	AIRBUS	AIRBUS	AIRBUS Families
Development of processes and materials HTP and S19	AIRBUS	AIRBUS	AIRBUS Families
Structural Dimensioning Cockpit	AIRBUS	AIRBUS	Green Regional Aircraft
Assembly engineering	AIRBUS	AIRBUS DS	A330 MRTT
Nacelle fatigue analysis	AIRBUS	AIRBUS DS	A400M
Manufacturing tool design KC390	EMBRAER	EMBRAER	KC-390
ARATZ			
Composite Tooling	AIRBUS	AIRBUS	A350 XWB
LAY UP TOOLING	AIRBUS	AIRBUS	A350 XWB
Assembly tooling	AIRBUS	AIRBUS	AIRBUS Families
Assembly tooling	DASSAULT	DASSAULT	FALCON Family
Composite Tooling	BOMBARDIER	BOMBARDIER	CSERIES CS100
ASTORKIA			
Structural components	AERNNOVA	AIRBUS	AIRBUS Families
Structural components	SEVERAL	BOEING	747 / 787
Structural components	AERNNOVA	BOMBARDIER	CRJ700/900
Structural components	AERNNOVA	EMBRAER	EMBRAER Families
AYZAR			
Heat treatments	BURDINBERRI	AIRBUS	AIRBUS Families
Heat treatments	ACITURRI	AIRBUS	AIRBUS Families

GENERAL DESCRIPTION OF THE PRODUCT/SERVICE	DIRECT CLIENT	OEM	MODEL
BURDINBERRI			
RTM Fuselage frame S19	ACITURRI	AIRBUS	A350 XWB
Rototaping and curing S19 V1000	REDUCTIA AEROSPACE	AIRBUS	A350 XWB
Fan cowl invar curing tool	AIRBUS	AIRBUS	A380
Control devices	REDUCTIA AEROSPACE	EMBRAER	190E2
Wings curing	REDUCTIA AEROSPACE	BOMBARDIER	Cseries CS100
BURULAN			
Manufacturing of components, surface treatments, assemblies	AERNNOVA	AIRBUS	AIRBUS Families
Manufacturing of components, surface treatments, assemblies	AERNNOVA	BOMBARDIER	CRJ700/900
Manufacturing of components, surface treatments, assemblies	AERNNOVA	BOMBARDIER	Cseries Family
Manufacturing of components, surface treatments, assembly, ball joint stapling	AERNNOVA	EMBRAER	E-JET Family
Manufacturing of components, surface treatments, assemblies	AERNNOVA	SIKORSKY	H-92
CTA			
Integral THSA door frame test	AIRBUS	AIRBUS	A350 XWB
S19 stringer run-out test	AIRBUS	AIRBUS	A350 XWB
Galley Installation Static Tests	AIRBUS	AIRBUS	A350 XWB
Pylon Attachment Tension Fitting	AIRBUS	AIRBUS	A350 XWB
WLC stringer run-out test	AIRBUS	AIRBUS	A350 XWB
Support 2 continuous rib test	AIRBUS	AIRBUS	A350 XWB
S19.1 firewall fireproof test	ALESTIS	AIRBUS	A350 XWB
Fire certification tests of interior materials	DIEHL AIRCABIN	AIRBUS	A350 XWB
Fire certification tests of interior materials	TCI CABIN INTERIOR	AIRBUS	A350 XWB
Fire certification tests of interior materials	BOEING R&T EUROPE	BOEING	Airlines
Cseries 4-Bay Fail safety Test	AERNNOVA	BOMBARDIER	Cseries
Cseries CWB In-Cut Out Test	AERNNOVA	BOMBARDIER	Cseries
Panel buckling test	STELIA	BOMBARDIER	GLOBAL 7000
Panel residual strength test	STELIA	BOMBARDIER	GLOBAL 7000
E2 Flap Supports Structural Test	ASCO INDUSTRIES	EMBRAER	E-Jets E2
Flap inboard test	AERNNOVA	EMBRAER	KC-390
Aileron & Rudder tests	AERNNOVA	EMBRAER	KC-390
Forward wing tests	SIP	PIAGGIO	P180-MPA3
Flap tests	SIP	PIAGGIO	P180-MPA3
Metallic fitting tests	SIP	PIAGGIO	P180-MPA3
Fire certification tests of interior materials	AIR NOSTRUM LAM	Several	Airlines
Fire certification tests of interior materials	DIEHL AEROSPACE	Several	Airlines
Fire certification tests of interior materials	IACOBUCCI HF AEROSPACE	Several	Airlines
Fire certification tests of interior materials	HUTCHINSON-CENTRE DE RECHERCHE	Several	Airlines
Fire certification tests of interior materials	COMPOSITE INDUSTRIES	Several	Airlines
Fire certification tests of interior materials	PMV INDUSTRIES	Several	Airlines

AEROSTRUCTURES

GENERAL DESCRIPTION OF THE PRODUCT/SERVICE	DIRECT CLIENT	OEM	MODEL
Fire certification tests of interior materials	JCB AERO	Several	Airlines
Fire certification tests of interior materials	INDUSTRIAL NEO-TEX	Several	Airlines
Fire certification tests of interior materials	PINTA INSULATION	Several	Airlines
Fire certification tests of interior materials	VELCRO EUROPE	Several	Airlines
Fire certification tests of interior materials	ROMTEX ANJOU AERONAUTIQUE	Several	Airlines
Fire certification tests of interior materials	SN CENTRAIR	Several	Airlines
Fire certification tests of interior materials	DESSO	Several	Airlines
DYFA			
Machining of components	ACITURRI	AIRBUS	A350XWB
Tooling for Aeronautical manufacturing	AIRBUS	AIRBUS	A320/330/400M
Tooling for aeronautical Assembly	AIRBUS HELICOPTERS	AIRBUS HELICOPTERS	NH90
Tooling for aeronautical Assembly	AIRBUS	DASSAULT	Falcon 7X
Machining of Composite (Carbon fiber / Fiberglass) & Metallic components	AERNNNOVA	EMBRAER	ERJ170/190, KC-390
Machining of Composite (Carbon fiber / Fiberglass) & Metallic components	Several	Several	Miscellaneous
EYHER			
Removal platforms for curing tool moulds inspections	MTORRES	AIRBUS	A320
Work-in-heights-platforms for joint rudder manufacturing	SERRA	EMBRAER	170/190
Omnidirectional vehicle with an integrated lifting mechanism	SENER	EMBRAER	KC-390
Work-in-heights-platforms for wind fuselage junction	MTORRES	EMBRAER	KC-390
GRUPO TTT			
Heat and surface treatments	SONACA	AIRBUS	AIRBUS Families
Heat and surface treatments	AERNNNOVA	AIRBUS	AIRBUS Families
Heat and surface Treatments	AIRBUS DS	AIRBUS DS	AIRBUS DS Families
Heat and surface treatments	AERNNNOVA	AIRBUS HELICOPTERS	AIRBUS HELICOPTERS Families
Heat and surface treatments	BHR Helicopter	BHR Helicopter	F360, F290
Heat and surface treatments	Several	BOEING	737 / 777 / 787
Heat and surface treatments	Several	BOMBARDIER	BOMBARDIER Families
Heat and Surface treatments	SONACA	DASSAULT	FALCON Family
Heat and surface treatments	AERNNNOVA	EMBRAER	EMBRAER Families
Heat and surface treatments	AERNNNOVA	SIKORSKY	S-92
Heat and surface treatments	SKF	Several	Miscellaneous
INDUSTRIAS GALINDO			
Tooling manufacturing	INESPASA	AIRBUS	A350 XWB
Tooling manufacturing	ALESTIS	AIRBUS	A350 XWB
Tooling manufacturing	AERNNNOVA	AIRBUS	A380
Tooling manufacturing	ALESTIS	BOEING	787

GENERAL DESCRIPTION OF THE PRODUCT/SERVICE	DIRECT CLIENT	OEM	MODEL
Tooling manufacturing	AERNNOVA	EMBRAER	E-JET Family
Tooling manufacturing	CTA	Several	Miscellaneous
LTK GRUPO			
Special Aerospace Logistics: Transport, Stock, Handling, Quality control...	AIRBUS	AIRBUS	AIRBUS Families
Special Aerospace Logistics: Transport, Stock, Handling, Quality control...	AIRBUS DS	AIRBUS DS	A400M/330 MRTT
Special Aerospace Logistics: Transport, Stock, Handling, Quality control...	AIRBUS DS	AIRBUS DS	CN235, C295
Special Aerospace Logistics: Transport, Stock, Handling, Quality control...	ALESTIS	EMBRAER	E-JET Family
MATRICI			
Tooling for carbonfiber and metallic parts	AIRBUS OPERATIONS	AIRBUS	Miscellaneous
Tooling for carbonfiber and metallic parts	AIRBUS DS	AIRBUS DS	Miscellaneous
Tooling for carbonfiber and metallic parts	AERNNOVA	Several	Miscellaneous
Tooling for carbonfiber and metallic parts	OPTIMAL	Several	Miscellaneous
MESIMA			
Materials management and supply	BURULAN	EMBRAER	EMBRAER Families
Materials management and supply	AIRBUS DS	Several	Miscellaneous
METRALTEC			
Manufacture and assembly of elements (Sheet metal working, machining, heat and surface treatments, painting)	FIBERTECNIC	AIRBUS	A320
Manufacture and assembly of elements (Sheet metal working, machining, heat and surface treatments, painting)	AERNNOVA	AIRBUS	A380
Manufacture of elementary parts and assembly (sheet metal, machining, heat and surface treatments, painting)	AERNNOVA	BOMBARDIER	CRJ Family, CSERIES
Manufacture of elementary parts and assemblies (sheet metal, machining, heat treatments and surface treatments, painting)	AERNNOVA	EMBRAER	EMBRAER Families
Manufacture of elementary parts (sheet metal, machining, heat treatment, surface treatment, painting)	FIBERTECNIC	EUROFIGHTER	TYPHOON
Manufacture of elementary parts and assemblies (sheet metal, machining, heat treatments and surface treatments, painting)	AERNNOVA	SIKORSKY	S-92
Manufacture of elementary parts and assemblies (sheet metal, machining, heat treatments and surface treatments, painting)	MTORRES	Several	Miscellaneous
METROLOGÍA SARIKI			
Measurement Equipment and Consultancy -supply, maintenance, training and software programming-	AIRGRUP / CONSUR	AIRBUS	Miscellaneous
Measurement Equipment and Consultancy -supply, maintenance, training and software programming-	MTORRES	Several	Miscellaneous

AEROSTRUCTURES

GENERAL DESCRIPTION OF THE PRODUCT/SERVICE	DIRECT CLIENT	OEM	MODEL
NOVALTI			
Landing gear trap	AIRBUS	AIRBUS	A380
Belly Fairing components	AIRBUS	AIRBUS	A380
Belly Fairing components	Several	AIRBUS	A350XWB
Structural components	Several	EMBRAER	KC-390
NUTER			
Structural components	AERNNNOVA	AIRBUS	A380
Components	AERNNNOVA	BOMBARDIER	CRJ Family
Structural components	AERNNNOVA	EMBRAER	ERJ Family / E-JET Family
Structural components	AERNNNOVA	SIRKOSKY	S-92
SENER			
Removal of inserts from leading edge	AIRBUS	AIRBUS	A320
Auxiliary tools for the wing flap assembly in two airbus models	STRATA	AIRBUS	A330, A340
Fatigue analysis and damage tolerance	AIRBUS	AIRBUS	A340/600
Design, construction, installation, transport and start up of the system in which the carbon fibre laminates of the wing stringer positioning line are generated	ARITEX	AIRBUS	A350 XWB
Conceptual design of the Belly Fairing	AIRBUS	AIRBUS	A350 XWB
Engineering of the front area of the Belly Fairing and pre-plateau stage of section 19.1	ALESTIS	AIRBUS	A350 XWB
Conceptual design of the landing gear. Pre-plateau stage	AIRBUS	AIRBUS	A350 XWB
Design and production of HTP assembly stations 70 and 71	THYSSEN GERMANY	AIRBUS	A350 XWB
HTP box for the Getafe production line	AIRBUS	AIRBUS	A350 XWB
Development of main landing gear traps: justification of strength corresponding to new flight mode groups up to the test support	AIRBUS	AIRBUS	A380
Development of Belly Fairing and support work	AIRBUS	AIRBUS	A380
Detailed design of parts such as the elevator for the cargo version	AIRBUS	AIRBUS	A380
Four access platforms for drilling the upper and lower shells of section S19	AIRBUS	AIRBUS	A380
Fuel access covers (FTAC) & Definition of a new design for fuel access covers (FTAC)	AIRBUS DS	AIRBUS DS	A400M
HTP box	AIRBUS DS	AIRBUS DS	A400M
Phase 4 of the Internal Noise Reduction Program	AIRBUS DS	AIRBUS DS	C295 Persuader
HTP box	BOEING	BOEING	787

GENERAL DESCRIPTION OF THE PRODUCT/SERVICE	DIRECT CLIENT	OEM	MODEL
Cseries Wing equipment station elevators	BOMBARIDER	BOMBARIDER	CSeries
Handling system for big mobile aircraft parts	EMBRAER	EMBRAER	KC-390
SISTEPLANT			
Manufacturing Execution System implementation	MTORRES	UAC	Irkut MS-21
Engineering and industrialisation of A350 Belly Faring Assembly Line	ALESTIS	AIRBUS	A350 XWB
Manufacturing Execution System implementation	ALETSIS	AIRBUS	A350 XWB
Manufacturing Execution System implementation	AIRBUS POLAND	AIRBUS	Miscellaneous
Job Instructions definition and standardization	AIRGRUP	Several	Miscellaneous
5Ss in welding area	AIRGRUP	Several	Miscellaneous
Lead-time parameterization in order to maximize plant capacity	AIRGRUP	Several	Miscellaneous
TEY			
Heat treatments	CESA	AIRBUS	AIRBUS Families
Heat treatments	AIRBUS DS	AIRBUS DS	AIRBUS DS Families
Heat treatments	AERNOVA	SIKORSKY	S-92
Heat treatments	ACITURRI	AIRBUS	AIRBUS Families

ENGINES



03.3.1
AEROSTRUCTURES

03.3.2
ENGINES

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MANUFACTURING, PROCESSES,
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PRATT & WHITNEY PW1000G



METROLOGÍA SARIKI



SIEGEL



EUROJET EJ200



ROLLS-ROYCE TRENT 1000



EYHER



TURBOMECA ARRIEL

General Description of the Product/ service	DIRECT CLIENT	OEM	ENGINE MODEL	PLATFORMS
ACITURRI				
Mounting Rings, Thermals and fittings	ITP	EUROJET	EJ200	EUROFIGHTER TYPHOON
Components	WEC	EUROJET	EJ200	EUROFIGHTER TYPHOON
Housings	ITP	GENERAL ELECTRIC	F414	BOEING F/A-18E/F
Struts	ITP	GENERAL ELECTRIC	GE90-115	BOEING 777
End Fittings	SL Engineering	ROLLS-ROYCE	Several	Several
Lugs and vanes	ITP	ROLLS-ROYCE	TP400	AIRBUS A400M
Lugs and vanes & T.Match	ITP	ROLLS-ROYCE	TRENT 1000	BOEING 787
Housings	ITP	ROLLS-ROYCE	TRENT 500	AIRBUS A340
Housings	ITP	ROLLS-ROYCE	TRENT 700	AIRBUS A330
Lugs and vanes	ITP	ROLLS-ROYCE	TRENT 900	AIRBUS A380
Lugs and vanes	ITP	ROLLS-ROYCE	TRENT XWB	AIRBUS A350
AEROMECH				
Support ring	Several	CFM International	CFM56	AIRBUS A320 / BOEING 737
LPT rings	ITP	EUROJET	EJ200	EUROFIGHTER TYPHOON
Turbine casing & Thermal	ITP	Several	Several	Miscellaneous
Engine exhaust zone	Several	SNECMA	Sylvercrest	FALCON 5X, CESSNA Citation
AIBE				
Design and manufacturing of clamping systems and fixtures for machining processes and special machines	ITP	GENERAL ELECTRIC	GE90	BOEING 777
Design and manufacturing of clamping systems and fixtures for machining processes and special machines	ITP	ROLLS-ROYCE	TRENT Family	Miscellaneous
ARATZ				
Machined parts	ITP	ROLLS-ROYCE	TRENT 700	AIRBUS A330
ASTORKIA				
Engine components	ITP	ROLLS-ROYCE	TRENT Family	Miscellaneous
Engine components	ITP	ROLLS-ROYCE	TP400	AIRBUS A400M
AYZAR				
Heat treatments	ACITURRI	Several	Several	Miscellaneous
BATZ				
Hot formed panels for special alloys	WEC	ROLLS-ROYCE	Trent 900	AIRBUS A380
Hot formed panels for special alloys	WEC	ROLLS-ROYCE	Trent 1000	BOEING 787

ENGINES

General Description of the Product/ service	DIRECT CLIENT	OEM	ENGINE MODEL	PLATFORMS
CTA				
Aerodynamic Technology Acquisition Rig Programme	ITP	Several	Several	Miscellaneous
DANOBAT				
Vertical grinding Machine-Tools for aeroengine manufacturing	ITP	Several	Several	Miscellaneous
DMP				
Carter parts	PCB	CFM International	CFM56	AIRBUS A320 / BOEING 737
Thrust struts	Several	EA	GP7200	AIRBUS A380
Main shaft Ge90	AUBERT&DUVAL	GENERAL ELECTRIC	GE90	BOEING 777
Thrust struts	Several	ROLLS-ROYCE	TRENT 900	AIRBUS A380
Thrust struts	SEVERAL	SEVERAL	SAM146	SSJ100
Main transmission gears	TURBOMECA	TURBOMECA	ALL RANGE	Miscellaneous
Accessory transmission gears	TURBOMECA	TURBOMECA	ALL RANGE	Miscellaneous
Transmission shafts Curvic-Coupling	TURBOMECA	TURBOMECA	ARRIEL / MAKILA	AIRBUS HELICOPTERS DAUPHIN / SUPERPUMA
HP turbine discs	AEROTECH	TURBOMECA	ARRIEL / MAKILA	AIRBUS HELICOPTERS DAUPHIN / SUPERPUMA
Transmission shafts Curvic-Coupling	TURBOMECA	TURBOMECA	ARRIUS	AIRBUS HELICOPTERS EC135
Shaft	ITP	TURBOMECA	MTR390	AIRBUS HELICOPTERS TIGRE
ELECTROHILO				
TEC segmentation	ITP	EUROJET	EJ200	EUROFIGHTER TYPHOON
Strut manufacture	ITP	MTRI	MTR390-E	AIRBUS HELICOPTERS TIGRE
Inner vanes stubs machining (spark erosion) and Vanes edge cutting (wire)	ITP	EPI	TP400	AIRBUS A400M
Edging of VANES and BCVs	ITP	ROLLS-ROYCE	TRENT 1000	BOEING 787
HUB drill, Separation Top Core Vane, Vanes erosion	ITP	ROLLS-ROYCE	TRENT 900	AIRBUS A380
Edging of VANES and BCVs	ITP	ROLLS-ROYCE	TRENT XWB	AIRBUS A350XWB
GRUPO TTT				
Heat and Surface treatments	Several	EUROJET	EJ200	EUROFIGHTER TYPHOON
Heat and surface treatments	ITP	ROLLS-ROYCE	Several	Miscellaneous
Heat and surface treatments	SNECMA	SNECMA	Several	Miscellaneous
Heat and surface treatments	Several	TURBOMECA	Several	Miscellaneous

General Description of the Product/ service	DIRECT CLIENT	OEM	ENGINE MODEL	PLATFORMS
Heat and surface treatments	HISPANO SUIZA	Several	Several	Miscellaneous
INDUSTRIAS GALINDO				
Manufacturing of Tooling for LPT Components (inter stage seals)	ITP	ROLLS-ROYCE	TRENT XWB	AIRBUS A350XWB
Manufacturing of Tooling for turbine shafts and static components	ITP	Several	Several	Miscellaneous
Design of Cutting Tools	ITP	Several	Several	Miscellaneous
Design of Cutting Tools	MECACHROME	Several	Several	Miscellaneous
Manufacturing of Tooling for LPT Components (inter stage seals)	PCB	Several	Several	Miscellaneous
ITP				
Lost wax casting super alloys for Turbine	SNECMA	CFM International	CFM56	AIRBUS A320 / BOEING 737
Lost wax casting super alloys for Turbine	MTU	EA	GP7000	AIRBUS A380
Design and manufacture of low pressure turbine (LPT) - Member of EPI Consortium	EPI	EPI	TP400	AIRBUS A400M
Design and manufacture of the Front Frame and Exhaust System - Member of the EPI Consortium	EPI	EPI	TP400	AIRBUS A400M
Manufacture of Externals - Member of EPI Consortium	EPI	EPI	TP400	AIRBUS A400M
Final assembly of engine - Member of EPI Consortium	EPI	EPI	TP400	AIRBUS A400M
Lost wax casting super alloys for intermediate pressure turbine	ROLLS-ROYCE	EPI	TP400	AIRBUS A400M
Lost wax casting super alloys for the LPT	ITP	EPI	TP400	AIRBUS A400M
Design and manufacture of the Diffuser cones and By-Pass Module - Member of the EUROJET Consortium	NETMA	EUROJET	EJ200	EUROFIGHTER TYPHOON
Design and manufacture of the post burner duct and variable nozzle - Member of the EUROJET Consortium	NETMA	EUROJET	EJ200	EUROFIGHTER TYPHOON
Manufacture of Externals - Member of the EUROJET Consortium	NETMA	EUROJET	EJ200	EUROFIGHTER TYPHOON
Final assembly of the engine - Member of the EUROJET Consortium	NETMA	EUROJET	EJ200	EUROFIGHTER TYPHOON
Lost wax casting super alloys - nozzle	ITP	EUROJET	EJ200	EUROFIGHTER TYPHOON
Lost wax casting super alloys - low pressure turbine	ITP	EUROJET	EJ200	EUROFIGHTER TYPHOON
Components	GENERAL ELECTRIC	GENERAL ELECTRIC	CF34-10	EMBRAER 190/ LINEAGE 1000

ENGINES

General Description of the Product/ service	DIRECT CLIENT	OEM	ENGINE MODEL	PLATFORMS
Manufacture of rear turbine structure	GENERAL ELECTRIC	GENERAL ELECTRIC	GE90-115	BOEING 777
Structural components	HONEYWELL	HONEYWELL	HTF7000	BOMBARDIER CHALLENGER 300
Design and manufacture of three LPT - Member of the MTRI Consortium	MTRI	MTRI	MTR390-E	AIRBUS HELICOPTERS TIGRE
Final assembly of the engine - Member of the MTRI Consortium	MTRI	MTRI	MTR390-E	AIRBUS HELICOPTERS TIGRE
Lost wax casting super alloys - low pressure turbine	ITP	MTRI	MTR390-E	AIRBUS HELICOPTERS TIGRE
Lost wax casting super alloys for Turbine	SNECMA	POWERJET	SaM146	SUKHOI SUPERJET 100
Modules manufacturing	PRATT & WHITNEY	PRATT & WHITNEY	PW1000G	CSeries/MRJ90/MS-21/A320neo
Components manufacturing	PRATT & WHITNEY CANADA	PRATT & WHITNEY	PW535E	EMBRAER PHENOM 300
Parts of external equipment of engine	ROLLS-ROYCE	ROLLS-ROYCE	BR725	GULFSTREAM G650
Design and validation of the ROLL POST	ROLLS-ROYCE	ROLLS-ROYCE	F136	LOCKHEED MARTIN F-35
Design and manufacture of low pressure turbine (LPT) - Risk Partner	ROLLS-ROYCE	ROLLS-ROYCE	TRENT 1000	BOEING 787
Design and manufacture of Rear Frame - Risk Partner	ROLLS-ROYCE	ROLLS-ROYCE	TRENT 1000	BOEING 787
Lost wax casting super alloys for the LPT	ITP	ROLLS-ROYCE	TRENT 1000	BOEING 787
Lost wax casting super alloys for the intermediate pressure turbine	ROLLS-ROYCE	ROLLS-ROYCE	TRENT 1000	BOEING 787
Design and manufacture of low pressure turbine (LPT) - Risk Partner	ROLLS-ROYCE	ROLLS-ROYCE	TRENT 500	AIRBUS A340
Design and manufacture of the Rear Frame - Risk Partner	ROLLS-ROYCE	ROLLS-ROYCE	TRENT 500	AIRBUS A340
Lost wax casting super alloys for the LPT	ITP	ROLLS-ROYCE	TRENT 500	AIRBUS A340
Assembly of the LPT and component manufacture	ROLLS-ROYCE	ROLLS-ROYCE	TRENT 700	AIRBUS A330
Lost wax casting super alloys for the intermediate pressure turbine	ROLLS-ROYCE	ROLLS-ROYCE	TRENT 700	AIRBUS A330
Design and manufacture of the low pressure turbine (LPT) - Risk Partner	ROLLS-ROYCE	ROLLS-ROYCE	TRENT 900	AIRBUS A380
Design and manufacture of the Rear Frame - Risk Partner	ROLLS-ROYCE	ROLLS-ROYCE	TRENT 900	AIRBUS A380
Lost wax casting super alloys for the LPT	ITP	ROLLS-ROYCE	TREBNT 900	AIRBUS A380
Lost wax casting super alloys for the intermediate pressure turbine	ROLLS-ROYCE	ROLLS-ROYCE	TRENT 900	AIRBUS A380

General Description of the Product/ service	DIRECT CLIENT	OEM	ENGINE MODEL	PLATFORMS
Design and manufacture of the low pressure turbine (LPT) - Risk Partner	ROLLS-ROYCE	ROLLS-ROYCE	TRENT XWB	AIRBUS A350XWB
Design and manufacture of the Rear Frame - Risk Partner	ROLLS-ROYCE	ROLLS-ROYCE	TRENT XWB	AIRBUS A350XWB
Lost wax casting super alloys for the LPT	ITP	ROLLS-ROYCE	TRENT XWB	AIRBUS A350XWB
Lost wax casting super alloys for the intermediate pressure turbine	ROLLS-ROYCE	ROLLS-ROYCE	TRENT XWB	AIRBUS A350XWB
MATRICI				
Tooling for metallic parts	ITP	ROLLS-ROYCE	TRENT 900	AIRBUS A380
Metallic Forming Components	ITP	ROLLS-ROYCE	TRENT 900	AIRBUS A380
MESIMA				
Materials management and supply	ITP	ROLLS-ROYCE	Several	Miscellaneous
Materials management and supply	WEC	Several	Several	Miscellaneous
METROLOGÍA SARIKI				
Measurement Equipment and Consultancy -supply, maintenance, training and software programming-	ITP	SEVERAL	SEVERAL	MISCELLANEOUS
Measurement Equipment and Consultancy -supply, maintenance, training and software programming-	MECANIZADOS IÑIGUEZ	Several	Several	Miscellaneous
Measurement Equipment and Consultancy -supply, maintenance, training and software programming-	DMP	Several	Several	Miscellaneous
NOVALTI				
Components for the LPT	ITP	EPI	TP400	AIRBUS A400M
Components	ITP	EUROJET	EJ200	EUROFIGHTER TYPHOON
Engine components	ITP	MTRI	MTR390-E	AIRBUS HELICOPTERS TIGRE
Components	ITP	ROLLS-ROYCE	Trent 500	AIRBUS A340
Components for the LPT	ITP	ROLLS-ROYCE	TRENT family	Miscellaneous
NUTER				
Fittings	ITP	EUROJET	EJ200	EUROFIGHTER TYPHOON
Fittings	ITP	EPI	TP400	AIRBUS A400M
Fittings	ITP	ROLLS-ROYCE	TRENT Family	Miscellaneous
Airfolds & Small Parts	ITP	P&W	SEVERAL	MISCELLANEOUS
SENER				
Test gantry	ITP	EPI	TP400	AIRBUS A400M
Test bench at Bordeaux (France)	ITP	EPI	TP400	AIRBUS A400M
SIEGEL				
Components	ITP	EPI	TP400	AIRBUS A400M

ENGINES

General Description of the Product/ service	DIRECT CLIENT	OEM	ENGINE MODEL	PLATFORMS
Components	ITP	EUROJET	EJ200	EUROFIGHTER TYPHOON
Machined Components	ITP	PRATT & WHITNEY	Several	Miscellaneous
Machined Components	ITP	ROLLS-ROYCE	TRENT Family	Miscellaneous
Machined Components	ITP	GE AVIATION	CT7 T-700	Miscellaneous
SISTEPLANT				
Manufacturing Execution System imple- mentation	PCB	Several	Several	Miscellaneous
TEY				
Heat treatments	SENER	EPI	TP400	AIRBUS A400M
Heat treatments	ACITURRI	ITP	TRENT1000	Miscellaneous
Heat treatments	ITP	ROLLS-ROYCE	TRENT Family	Miscellaneous
Heat treatments	DMP	TURBOMECA	Several	Miscellaneous
Heat treatments	TURBOMECA	TURBOMECA	Several	Miscellaneous
Heat treatments	WEC	Several	Several	Miscellaneous
WEC				
Ducts for external equipment of engine	ITP	ROLLS-ROYCE	BR 715	BOEING 717
Parts of external equipment of engine	SNECMA	CFM International	CFM56	AIRBUS A320 / BOEING 737
Parts of external equipment of engine	SNECMA	CFM International	LEAP	AIRBUS A320NEO / BOEING 737MAX
Exhaust nozzle parts	ITP	EUROJET	EJ200	EUROFIGHTER TYPHOON
TEC parts	ITP	EUROJET	EJ200	EUROFIGHTER TYPHOON
Parts of external equipment of engine	ITP	EUROJET	EJ200	EUROFIGHTER TYPHOON
Parts of external equipment of engine	SNECMA	GENERAL ELECTRIC	GE90-115k	BOEING 777
Fabricated vanes for TEC/TBH	Several	PRATT&WHITNEY	GTF	Miscellaneous
Rings, annular components, combustion chamber components	HONEYWELL	HONEYWELL	Several	Miscellaneous
TEC Front Cases	GKN Aerospace Engine Systems	ROLLS-ROYCE	Several	Miscellaneous
Parts for engine cooling devices	SNECMA	SNECMA	SILVERCREST	DASSAULT FALCON 5X
Parts of external equipment of engine	ITP	EPI	TP400	AIRBUS A400M
Structural parts	ITP	ROLLS-ROYCE	TRENT 1000	BOEING 787
Structural parts	ITP	ROLLS-ROYCE	TRENT 500	AIRBUS A340
Parts of external equipment of engine	ITP	ROLLS-ROYCE	TRENT 900	AIRBUS A380
Parts of external equipment of engine	ITP	ROLLS-ROYCE	TRENT Family	Miscellaneous
Structural parts	ITP	ROLLS-ROYCE	TRENT XWB	AIRBUS A350



03.3.1
AEROSTRUCTURES

03.3.2
ENGINES

03.3.3
SYSTEMS AND
EQUIPMENT

03.3.4
SPACE

03.3.5
MAINTENANCE

03.3.6
AIRCRAFT AND SPACE ENGINEERING
R&D PROJECTS

03.3.7
MANUFACTURING, PROCESSES,
MATERIALS AND OTHER R&D PROJECTS



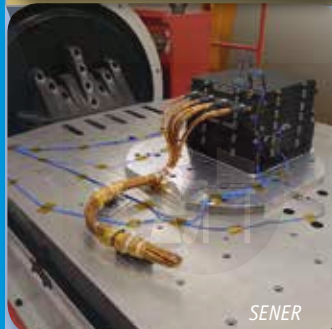
ORBITAL AEROSPACE



AIRBUS A350XWB



ALFA PRECISION CASTING



SENER



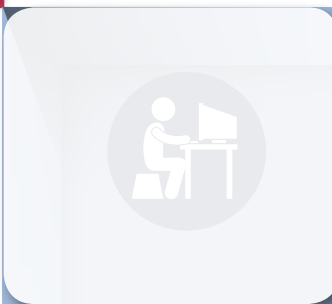
AIRBUS DS-C295



TECNASA



GRUPO TTT



SYSTEMS AND EQUIPMENT

General Description of the Product/service	DIRECT CLIENT	SYSTEM / EQUIPMENT	PLATFORMS
ACITURRI			
Hydraulic Tanks	CESA	Hydraulic System	AIRBUS A380
Equipped elements	RATIER FIGEAC	Turboprop systems	Several
AERNOVA			
Logistic Container manufacturing	DIEHL BGT DEFENCE	IRIS-T	Miscellaneous
AEROMECH			
Nose and main landing gear components	Several	Landing Gear	AIRBUS C295
Main landing gear components	Several	Landing Gear	AIRBUS CN235
ALFA PRECISION CASTING			
Conduits- Air Fittings (Lost wax casting superalloys)	LIEBHERR AEROSPACE	AIR CONDITIONING	AIRBUS A320NEO/ CEO /BOEING 787 / CSERIES / COMAC / KC395 / EJET / G7000
Optronic equipment housings (Lost wax casting aluminium)	ZODIAC AEROSPACE	Engines-Actuators- Electronical equip- ments	A320 / A330 / A380
Optronic equipment housings (Lost wax casting aluminium)	THALES GROUP	Engines-Actuators- Electronical equipments	A320 / A330 / A380
Optronic equipment housings (Lost wax casting aluminium)	SAGEM DEFENSE	OPTRONIC SYSTEMS TV-THERMOGRAPHY	AIRBUS HELICOPTERS NH90
Optronic equipment housings (Lost wax casting aluminium)	SAGEM DEFENSE	Optronic systems TV-Thermography	DASSAULT RAPHALE
Radar housings (Lost wax casting aluminium)	INDRA	Radars	EUROFIGHTER TYPHOON
Conduits- Air Fittings (Lost wax casting superalloys)	IAI	Air conditioning	GULFSTREAM 280
ALTRAN			
Training and Simulators	AIRBUS	Simulators	AIRBUS A320/A340/ A380
Landing Gear	CESA	Landing Gear	AIRBUS A400M
Landing gear design	AIRBUS DS	Landing Gear	AIRBUS A320/380/400M
Door actuator dimensioning	CESA	DOORS	AIRBUS A400M
Harness design	AIRBUS DS	Electrical system	C295 CH01
Autopilot Development	SOLAR IMPULSE	SOLAR IMPULSE	PT60M
Support in the development and mission of the APU	AIRBUS	AIRBUS	Miscellaneous
CTA			
MLG retraction actuator test	CESA	Landing Gear	AIRBUS A350 XWB
Landing gear actuators system test	CESA	Landing Gear	AIRBUS A400M
Flow Servovalve tests	ZODIAC	Servovalve	MITSUBISHI MRJ
Main and Tail Rotor Endurance Tests	INDRA	Rotor	PELÍCANO
DANOBAT GROUP			
Grinding Machine-Tolls for Landing Gears	MESSIER-BUGATTI- DOWTY	Landig Gear	Miscellaneous

General Description of the Product/service	DIRECT CLIENT	SYSTEM / EQUIPMENT	PLATFORMS
DMP			
Landing gear components	CESA	Cylinders	AIRBUS A330
Shock Absorber	MESSIER-BUGATTI-DOWTY	MLG	AIRBUS A330/A340
Shock Absorber	MESSIER-BUGATTI-DOWTY	MLG	AIRBUS A350XWB
Actuation systems	CESA	Several	AIRBUS CN235/C295
Shock Absorber	MESSIER-BUGATTI-DOWTY	NLG & MLG	BOEING 787
Main rotor servocontrol kit	GOODRICH	Main rotor	AIRBUS HELICOPTERS DAUPHIN
Main rotor servocontrol kit	GOODRICH	Main rotor	AIRBUS HELICOPTERS ECUREUIL
Balancier équipé	MESSIER-BUGATTI-DOWTY	Main rotor	AIRBUS HELICOPTERS SUPER PUMA
Landing gear components	CESA	Balancier	AIRBUS HELICOPTERS TIGRE
Main transmission components	AIRBUS DS	Main rotor	AIRBUS HELICOPTERS X4
Flight control & actuation systems	CESA	Several	EUROFIGHTER TYPHOON
Engine actuation systems	CESA	EJ200	EUROFIGHTER TYPHOON
Actuation systems	CESA	Several	SIKORSKY S92
INDUSTRIAS GALINDO			
Tooling manufacturing	WEC	Several	Miscellaneous
GRUPO TTT			
Heat and surface treatments	MESSIER-BUGATTI-DOWTY	Landing Gear	AIRBUS Families
Heat and surface treatments	MESSIER-BUGATTI-DOWTY	Brakes	AIRBUS Families
Heat and surface treatments	HISPANO SUIZA	Systems	Miscellaneous
Heat and surface treatments	IAI	Systems	Miscellaneous
Heat and surface treatments	BHR Helicopter	Systems	F360, F290
Heat and surface treatments	Several	Landing Gear	SIKORSKY
Heat and surface treatments	GOODRICH	Systems	Miscellaneous
KORTA			
Ball screws/Trapezoidal screws	SENER	Actuators	Miscellaneous
Ball screws	RAC Brasil	Actuators	Miscellaneous
MATRICI			
Tooling for metallic parts	AUBERT DUVAL	Landing gear	BOEING 737
METRALTEC			
Manufacture of elementary parts and assemblies (sheet metal, machining, heat treatments and surface treatments, painting)	SENER	Several	Miscellaneous

SYSTEMS AND EQUIPMENT

General Description of the Product/service	DIRECT CLIENT	SYSTEM / EQUIPMENT	PLATFORMS
NOVALTI			
Oil flow test bench	ITP	Several	AIRBUS HELICOPTERS TIGRE
Hydraulic and pneumatic test bench	ITP	Several	BOEING 787
NUTER			
Components	CESA	AIRBUS	AIRBUS A330/A350XWB
Components	CESA	AIRBUS DS	AIRBUS A400M
ORBITAL AEROSPACE			
System integration test bench and supportability for Ground and Flight test	E2S AIRBUS DS	Air to Air Refuelling	AIRBUS A330-MRTT
SW Multifunction Control Display and BOOM Control and Computing System	E2S AIRBUS DS	BOOM	AIRBUS A330-MRTT
MTF Model and Test Support	AIRBUS DS	Military Test Facilities	AIRBUS A400M
Verification and validation of DASS Display Capabilities	AIRBUS DS	Mission Management System	AIRBUS A400M
Design, implementation and integration of critical SW on board --> Communication Management System	E2S AIRBUS DS	Mission Management System	AIRBUS A400M
SW and Firmware design and testing	E2S AIRBUS DS	Audio Management System	AIRBUS A400M
Mission Management System and Communication system verification, validation, certification and test bench integration	E2S AIRBUS DS	Military Test Facilities	AIRBUS A400M
SW development, integraton and certification of Tactical Situation System	AIRBUS DS	Tactical Situation Management	AIRBUS A400M
Flight Test and Analysis Defence Aided System	E2S AIRBUS DS	DASS	AIRBUS A400M
Low Level testing for D0178B certification of Mission Management System	E2S AIRBUS DS	Communication System	AIRBUS A400M
Design, Implementation, Certificatiton and Integration of Critical SW on board --> Cargo Load Management and Aerial delivery	E2S AIRBUS DS	Mission Management System	AIRBUS A400M
Design, implementation, certificatiton and integration of critical SW on board --> MIDS Datalink	E2S AIRBUS DS	Mission Management System	AIRBUS A400M
Test Bench Development and production for Tactical Situation Management System	AIRBUS DS	Test Benches	EC725
Test Bench Development and production for Avionics systems	EMBRAER	Test Benches	EC725
Fligh Control System Simulation SW	AIRBUS DS	FCS	EUROFIGHTER TYPHOON
Flight Control System SW and SW/HW Integration, Verification and Validation	AIRBUS DS	Testing	EUROFIGHTER TYPHOON
Avionics Flight Test Telemetry	E2S AIRBUS DS	Flight Tests Telemetry	MRTT / A400M / EUROFIGHTER

General Description of the Product/service	DIRECT CLIENT	SYSTEM / EQUIPMENT	PLATFORMS
SENER			
Program to extend the life of the Spanish Navy's AB212 helicopters	Head of Logistics Support (JAL) - Spanish Navy	BELL	AB-212
Image management unit for two Tactical Recognition systems (RecceLite or Litening Pods)	ZEISS OPTRONICS	IPU 2 / IPU 3	Defence aircrafts
Production of the Control Section of aerodynamic fins and fixed wings (Air - Air version)	DBD	IRIS-T	Defence aircrafts
Development and qualification of the Control Section of aerodynamic fins (Surface Launch version)	DBD	IRIS-T	Ground equipment
Development, qualification, industrialisation and production of the Control Section of aerodynamic fins	MBDA-UK	METEOR	Defence aircrafts
Stabilized Mirror Unit (SMU) of the sight	SAAB Dynamics	RBS 70 NG	Ground equipment
FASS subsystem of drive and control of aerodynamic fins	TAURUS SYSTEMS GMBH	TAURUS KEPD 350	Defence aircrafts
Integration of the TAURUS KEPD 350 in the EF18 and acquisition of units	MALOG	TAURUS KEPD 350	Defence aircrafts
179 missile actuator subsystem units and ground support equipment for the South Korean air force	TAURUS Systems GmbH	TAURUS KEPD 350K	Defence aircrafts
SISTEPLANT			
Investigation on Intelligent health monitoring technologies applied to actuators	SENER	Several	Miscellaneous
TECNALIA			
Man-Machine interfaces for the AIRBUS plants in PUERTO REAL, GETAFE and STADE	AIRBUS	Equipment and software	AIRBUS families
Drilling and riveting robots autocalibration software	AIRBUS	Equipment and software	AIRBUS families
TECNASA			
Firing Handles	MARTIN-BAKER	Ejection Seats	Defence aircrafts
O-RINGS	MARTIN-BAKER	Ejection Seats	Defence aircrafts
JIGS	MARTIN-BAKER	Ejection Seats	Defence aircrafts
TEY			
Heat treatments	CESA	Several	Miscellaneous
Heat treatments	AIRBUS DS	Several	Miscellaneous
Heat treatments	SENER	Several	Miscellaneous
Heat treatments	DMP	Several	Miscellaneous
Heat treatments	MESSIER BUGATTY DOWTY	Landing Gears	Miscellaneous
WEC			
Connection box	SNECMA	Several	AIRBUS A320
Air Bleed equipment parts	HONEYWELL	Air Conditioning	"AIRBUS A320/330 DASSAULT F7X"
Air Bleed equipment parts	LIEBHERR	Air Conditioning	AIRBUS A320/330/400M, CSeries
Air Bleed equipment parts	LIEBHERR	Air Conditioning	AIRBUS A320neo
Thrust Reverser parts	AIRCELLE	Systems	AIRBUS A380
Air Bleed equipment parts	LIEBHERR	Air Conditioning	AIRBUS A400M
Air Bleed equipment parts	LIEBHERR	Air Conditioning	BOEING 747-8

SPACE



03.3.1
AEROSTRUCTURES

03.3.2
ENGINES

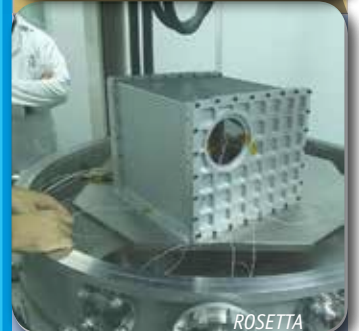
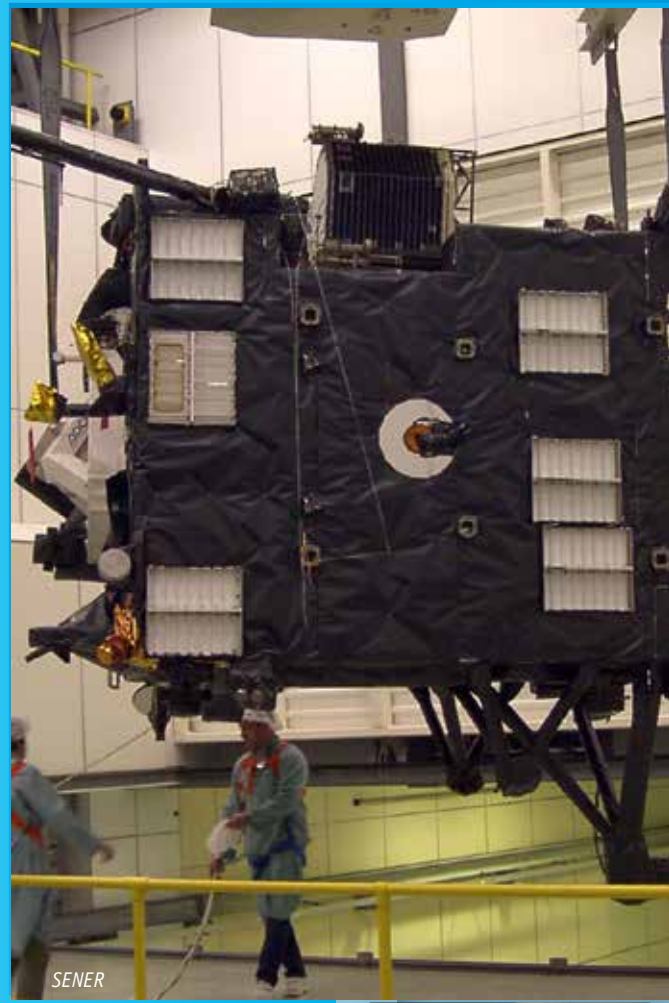
03.3.3
SYSTEMS AND
EQUIPMENT

03.3.4
SPACE

03.3.5
MAINTENANCE

03.3.6
AIRCRAFT AND SPACE ENGINEERING
R&D PROJECTS

03.3.7
MANUFACTURING, PROCESSES,
MATERIALS AND OTHER R&D PROJECTS



General Description of the Product/service	DIRECT CLIENT	SYSTEM / EQUIPMENT	PLATFORMS
AIBE			
Precision machining of components	SENER	Several	Miscellaneous
ALTRAN			
Structural dimensioning	AIRBUS DS	Reflectors	AMAZONAS4
Structural dimensioning	AIRBUS DS	Launcher	ARIANNE 5 / ARIANNE 6
Structural dimensioning	AIRBUS DS	Reflectors, Panels and Top Floor Antennas	EUCLID
ARATZ			
Machined Components	Several	Several	Miscellaneous
Components for satellite antennas	Several	Several	Miscellaneous
CTA			
Antenna climatic tests	SENER	Antenna	BEPICOLOMBO
Lander impact tests	SENER	Lander	EXOMARS
Antenna tests	RYMSA	Antenna	GALILEO
Spacecom satellite heat pipes system	IBERESPACIO	Heat pipes system	TESAT SATELLITE
DMP			
Cryomotor	CEA	Satellite	EUCLID
DYFA			
CAD.CAM , Satellite Panel Machining and Dimensional Control	Several	Satellites	Miscellaneous
GRUPO TTT			
Heat and surface treatments	AIRBUS DS	Propulsion systems	Ariane
Heat and surface treatments	SENER	Systems	Miscellaneous
INDUSTRIAS GALINDO			
Tooling manufacturing	THALES ALENIA SPACE	Collars	CSO SATELLITE
ITP			
Super alloy components for space shuttle engine	SNECMA	Shuttle	ARIANE 5
MATRICI			
Tooling for carbonfiber and metallic parts	AIRBUS DS	Several	Miscellaneous
METRALTEC			
Manufacture of elementary parts and assemblies (sheet metal, machining, heat treatments and surface treatments, painting)	SENER	Several	Miscellaneous
NOVALTI			
On-board components and mechanical systems	THALES ALENIA SPACE	Several	IRIDIUM
On-board components and mechanical systems	ESA	Several	Miscellaneous

SPACE

General Description of the Product/service	DIRECT CLIENT	SYSTEM / EQUIPMENT	PLATFORMS
NUTER			
Components	SENER	Several	GAIA
Components	SENER	Several	METEOSAT
ORBITAL AEROSPACE			
Avionics System SW Demonstrator based on RTEMS	ESA	Avionics System	RTEMS
Full design and development of Scientific Instrument and launch to Space	UAM	IR Camera System	EUSO-Balloon
DOORs Data Base Maintenance	EUMETSAT	Meteorological satellite	METEOSAT THIRD GENERATION
IRCAM System Definition	UAM	IR Camera System	JEM-EUSO
SENER			
Analysis of different alternatives for planetary vehicle landing gear	ESA	Planetary exploration ship -Scientific Mission	AURORA - Mars Sample Return Mission
ALMA Amplitude Calibration Device (ACD)	European Southern Observatory (ESO)	Robotic Arm for the ALMA antennas	Atacama Large Millimeter/submillimeter Array (ALMA)
Mechanism that separates the magnetic disturbance magnetometer of the satellites, as well as the accompanying mobile arm	ESA / AIRBUS DS	Planetary exploration ship -Scientific Mission	BEPICOLOMBO
Communication antennas sub-system (HGA & MGA)	ESA / THALES ALENIA SPACE	Planetary exploration ship -Scientific Mission	BEPICOLOMBO
Main system contractor	ESA	MARES system to investigate muscular atrophy caused by weightlessness	COLUMBUS
Main contractor and responsible for the support structure and of the help system at the exit of the Rover (SES) onto the Martian surface	ESA /THALES ALENIA SPACE	Planetary exploration ship -Scientific Mission	EXOMARS
Raman LIBS instrument	INTA / CAB	Planetary exploration ship -Scientific Mission	EXOMARS
Deployable parasol, precision pointing mechanism in three axes plus two more times of the M2MM mirror of the optical system.	ESA / AIRBUS DS	Observation satellites - Scientific Mission	GAIA
Attitude and orbit complete control system (AOCS/GNC)	ESA / THALES ALENIA SPACE	Observation satellites - Scientific Mission	HERSCHEL - PLANCK
In-flight demonstration study of all the functions of the mechanism and Guidance, Navigation and Control system (GNC)	ESA - ESTEC	Docking and joining mechanism -Navigation	IBDM (International Berthing and Docking Mechanism)
FixBox for the ISS	ESA	Fixation Box for a vegetal biology experiment to be performed at the ISS	ISS - International Space Station
Complete Guidance, Navigation and Flight control subsystem (GNC)	ESA	Intermediate experimental vehicle for re-entry into atmosphere	IXV
High gain antenna pointing mechanisms (HGAG) of the Rover	NASA / AIRBUS DS	Planetary exploration ship -Scientific Mission	MARS SCIENCE LABORATORY

General Description of the Product/service	DIRECT CLIENT	SYSTEM / EQUIPMENT	PLATFORMS
Technical and engineering assistance in the project	ESA	MELISSA project for developing a life-support system for long duration space travel and planetary bases.	MELISSA
Development model of the visible camera scanner	ESA / EADS AIRBUS DS	Observation satellite	METEOSAT THIRD GENERATION
Scan assembly (FCI and IRS SCA) and the Calibration and Obturation Mechanism (FCI and IRS COM)	Kayser-Threde	Observation satellite	METEOSAT THIRD GENERATION
Attitude and orbit control system, Special Check Out Equipment (AOCS SCOE)	OHB System	Observation satellite	METEOSAT THIRD GENERATION
Attitude Determination and Control system (ADCS)	INTA	Pico-satellite - Navigation	OPTOS
Complete formation flying system (FF)	ESA	Set of small satellites - Navigation	PROBA 3
Main contractor of the formation flying system	ESA	Formation flying system	PROBA 3
Main contractor of the entire program	ESA	Phases C/D and E1	PROBA 3
Radar deployment system	ESA / AIRBUS DS	Observation satellite - Scientific Mission	SENTINEL 1
Calibration mechanism	ESA / AIRBUS DS	Observation satellite - Scientific Mission	SENTINEL 2
Design and verification of a swinging mechanism or FMD (Flip Mirror Device)	ESA / JENA OPTRONIK	Observation satellite -Sentinel 3-	SENTINEL 3
Optical instrument: engineering work of systems and optical and thermal-structural design	ESA / AIRBUS DS	Optical instrument - Observation satellite	SEOSAT / INGENIO
Communication antennas sub-system	ESA / AIRBUS DS	Scientific Mission	SOLAR ORBITER
Feedthroughs, doors and mechanism subsystem	ESA / AIRBUS DS	Scientific Mission	SOLAR ORBITER
EPD (Energetic and Surathermal PArticle Detector Analyzer) instrument	ESA / UNIVERSIDAD DE ALCALÁ DE HENARES	Scientific Mission	SOLAR ORBITER
Instrument Boom	ESA / AIRBUS DS	Scientific Mission	SOLAR ORBITER
So-Phi Instrument	ESA / IAA	Scientific Mission	SOLAR ORBITER
Actuator system for the JST telescope's panoramic camera	Institute of Astronomy, Geophysics and Atmospheric Science of Sao Paulo University	JPCam camera actuator system	T250 or JST (Javalambre Survey Telescope)
Feasibility study of the ISSIS instrument (Imaging and Slitless Spectroscopy Instrument for Surveys)	CDTI	Optical instrument - Observation satellite	World Space Observatory - Ultra Violet (WSO-UV)
Structural Thermal Model (STM) of the ISSIS instrument (Imaging and Slitless Spectroscopy Instrument for Surveys)	INASAN / ROSCOSMOS / CDTI	Optical instrument - Observation satellite	World Space Observatory - Ultra Violet (WSO-UV)

SPACE

General Description of the Product/service	DIRECT CLIENT	SYSTEM / EQUIPMENT	PLATFORMS
TECNALIA			
PCM materials for launchers	ESA	Avionics	ARIANE
THERCOBOX: Thermally Conductive RTM Carbon Fibre Reinforced Polymer	ESA	Launchers Power control electronics	ARIANE
ALUCRYO: Advanced Aluminium-Based Material for cryo-reservoir applications	ESA	Cryogenic tanks	ARIANE
HPMMC: Metal Matrix Composites as high performance metallic material (TRP)	ESA	Structures	ARIANE
Graphene for thermal heat sinks in active RF microelectronics	ESA	TC/TC electronics	GALILEO
Solid lubricants for harmonic drive	ESA	Mechanism	GALILEO
Hybrid-MMCs: Development an characterization of advanced metal matrix composites	ESA	Satellite Structures	PROBA3
ESA Technology Transfer Broker	ESA	Several	Several
TEY			
Heat treatments	AIRBUS DS	Several	Miscellaneous
Heat treatments	INDRA	Several	Miscellaneous
Heat treatments	SENER	Several	ASTRIUM
WEC			
Mechanical parts for Vulcain engine	AVIO AERO	Vulcain engine	ARIANE 5



03.3.1 AEROSTRUCTURES

03.3.2 ENGINES

03.3.3 SYSTEMS AND EQUIPMENT

03.3.4 SPACE

03.3.5 MAINTENANCE

03.3.6 AIRCRAFT AND SPACE ENGINEERING R&D PROJECTS

03.3.7 MANUFACTURING, PROCESSES, MATERIALS AND OTHER R&D PROJECTS



BOEING 737



AEROSPACE ENGINEERING GROUP



BOMBARDIER CRJ1000



HONEYWELL TPE331



TECNASA



ROLLS-ROYCE TRENT500

MAINTENANCE

General Description of the Product/service	DIRECT CLIENT	SYSTEM / EQUIPMENT	PLATFORMS
AEROSPACE ENGINEERING GROUP			
Overhaul and repair of electrical components	MRO, OPERATORS, AIR FORCES, TRADING COMPANIES	Electrical systems	A320/A340/737/747/757/767/C212/CN235/C295/MD80/C130/P3/ATR/FOKKER/CRJ/EMBRAER...
Overhaul and repair of hydraulic components	MRO, OPERATORS, AIR FORCES, TRADING COMPANIES	Hydraulic systems	A320/A340/737/747/757/767/C212/CN235/C295/MD80/C130/P3/ATR/FOKKER/CRJ/EMBRAER...
Overhaul and repair of electrical components	MRO, OPERATORS, AIR FORCES, TRADING COMPANIES	Fuel systems	A320/A340/737/747/757/767/C212/CN235/C295/MD80/C130/P3/ATR/FOKKER/CRJ/EMBRAER...
Overhaul and repair of avionics components	MRO, OPERATORS, AIR FORCES, TRADING COMPANIES	Avionics systems	Miscellaneous
AERNOVA			
Technical assistance & Sales of spares 24H/365d	AIRBUS	MLGD, HTP, Fuselage, etc	AIRBUS Families
Composite & metal structure repairs	AIRBUS	MLGD, Elevators	AIRBUS Families
Sales of spares 24H/365d	TEXTRON AVIATION - BEECHCRAFT	wings, flaps, ailerons, etc	BEECHCRAFT Families
Composite & metal structure repairs	BOMBARDIER	Tips, fairings, panels, etc	BOMBARDIER Families
Technical assistance & Sales of spares 24H/365d	BOMBARDIER	Empenage, fairings, elevators	BOMBARDIER Families
Composite & Metal structure repairs	EMBRAER	Elevators, Rudders	EMBRAER E-JETS
Composite & Metal structure repairs	EMBRAER	Flaps, Ailerons, Wing tips, MLGD, etc	EMBRAER ERJ Family / Legacy Family
Technical assistance & Sales of spares 24H/365d	EMBRAER	Structures and mobile surfaces	EMBRAER Families
Inspections, special processes and re-qualifications	Operators	Several	Miscellaneous
Technical assistance & Sales of spares 24H/365d	Operators	Several	Miscellaneous
Composite & metal structure repairs and modifications	Operators	Several	Miscellaneous
Design of repairs	OEM & Operators	Several	Miscellaneous
Design of GSEs	OEM & Operators	Several	Miscellaneous
sales of GSEs	OEM & Operators	Several	Miscellaneous
Maintainability, Reliability Analysis	OEM	Several	Miscellaneous
Technical Publications, SRM, AMM, ITEM, SB, etc	OEM	Several	Miscellaneous

MAINTENANCE

General Description of the Product/service	DIRECT CLIENT	SYSTEM / EQUIPMENT	PLATFORMS
Modifications at Final Assembly of OEMs	OEM	Several	Miscellaneous
Composite & Metal structure repairs	SIKORSKY	Doors, cowlings, stabilisers	SIKORSKY S-92/ H92
Technical assistance & Sales of spares 24H/365d	SIKORSKY	Doors, cowlings, stabilisers	SIKORSKY S-92/ H92
ALTRAN			
Supportability and Maintainability Management	AIRBUS DS	Several	AIRBUS A330
Supportability and Maintainability Management	AIRBUS DS	Several	AIRBUS A400M
Supportability and Maintainability Management	AIRBUS DS	Several	AIRBUS C295
DANOBAT			
Grinding Machine-Tools for aeroengine MRO	MRO Operators	Engines	Miscellaneous
GRUPO TTT			
Heat and surface treatments	MESSIER-SERVICE	several	Miscellaneous
ITP			
Resolving incidents	ROLLS-ROYCE	RR Trent 700	AIRBUS A330
Resolving incidents	ROLLS-ROYCE	RR Trent 500	AIRBUS A340
Resolving incidents	ROLLS-ROYCE	RR BR717	BOEING 717
Full Maintenance, Inspection and Repair of the F404 -engine, modules and components- & engine and accessories test	Spanish Ministry of Defence	GE F404	BOEING F/A-18
Full Maintenance, Inspection and Repair of the TFE731 -engine, modules and components- & engine and accessories test	Spanish Ministry of Defence	HONEYWELL TFE731	CASA C101
Full Maintenance, Inspection and Repair of the TPE331 -engine, modules and components- & engine and accessories test	Spanish Ministry of Defence	HONEYWELL TPE331	CASA C212
Full Maintenance, Inspection and Repair of the ATAR -engine, modules and components- & engine and accessories test	Spanish Ministry of Defence	SNECMA ATAR	DASSAULT MIRAGE Families
Full Maintenance, Inspection and Repair of the PW206 -engine, modules and components- & engine and accessories test	Several	P&W PW206	AIRBUS HELICOPTERS EC135
Full Maintenance, Inspection and Repair of the EJ200 -engine, modules and components- & engine and accessories test	Spanish Ministry of Defence	EUROJET EJ200	EUROFIGHTER TYPHOON

MAINTENANCE

General Description of the Product/service	DIRECT CLIENT	SYSTEM / EQUIPMENT	PLATFORMS
Full Maintenance, Inspection and Repair of the T56 -engine, modules and components- & engine and accessories test	Spanish Ministry of Defence	RR T56	LOOCKHEED MARTIN C130
Full Maintenance, Inspection and Repair of the T56 -engine, modules and components- & engine and accessories test	Spanish Ministry of Defence	RR T56	LOOCKHEED MARTIN P-3
Full Maintenance, Inspection and Repair of the J85 -engine, modules and components- & engine and accessories test	Spanish Ministry of Defence	GE J85	NORTHROP F-5
Full Maintenance, Inspection and Repair of the TPE331 -engine, modules and components- & engine and accessories test	ROYAL AIR FORCE	HONEYWELL TPE331	SHORT TUCANO
ORBITAL AEROSPACE			
Mission Planning and Maintenance Portable platform in Android	E2S AIRBUS DS	Maintenance System	A300 / A310
SISTEPLANT			
Maintenance management	MALOG	Several	Miscellaneous
TAMOIN			
Engine disassembly and overhaul	IBERIA Maintenance	CFM Int. CMF56	AIRBUS A320 / BOEING 737
Engine disassembly and overhaul	IBERIA Maintenance	P&W JT8D	McDONNELL DOUGLAS MD80 Series

AIRCRAFT AND SPACE ENGINEERING R&D PROJECTS



03.3.1
AEROSTRUCTURES

03.3.2
ENGINES

03.3.3
SYSTEMS AND
EQUIPMENT

03.3.4
SPACE

03.3.5
MAINTENANCE

**03.3.6
AIRCRAFT AND SPACE ENGINEERING
R&D PROJECTS**

03.3.7
MANUFACTURING, PROCESSES,
MATERIALS AND OTHER R&D PROJECTS



Bizkaia Science and Technology Park



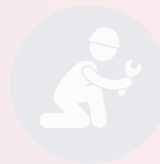
Alava Technology Park



San Sebastian Technology Park



Garaia Innovation Centre



AIRCRAFT AND SPACE ENGINEERING R&D PROJECTS

ACRONYM and/or NAME OF THE PROJECT and brief description	PROJECT SUMMARY / RELEVANT DETAILS / CONSORTIUMS	CALL
ACTURRI		
E-SEMA	Development of Electric Smart Actuator for Gas Turbine Engine	European - CLEAN SKY
HP-SMART-EMA	Development of High Performance Electromechanical Actuators	European - CLEAN SKY
NICE TRIP (Novel Innovative Competitive Effective Tilt Rotor Integrated Project): convertible aircraft-helicopter	Development of a Tilt-Rotor prototype	European - FP6
TARGET	Sustainable and intelligent technology for composite structure manufacturing	National-CENT
AERNOVA		
SFWA	Smart Fixed Wing Aircraft. High accuracy wing assemblies for Natural Laminar Flow	European - CLEAN SKY
AFLONEXT	Maturation of an integrated set of active flow, load and noise control technologies for the next generation of active wing	European - FP7
CAPPADOCIA	Coordination Action Pro "Production, Avionics, Design" on Cost-efficiency in Aeronautics	European - FP7
DAEDALOS	Dynamics in Aircraft Engineering Design and Analysis for Light Optimized Structures	European - FP7
FLYBAG2	Aircraft Interiors for blasting resistance	European - FP7
HIPOCRATES	European project for self-healing aeronautical composites	European - FP7
LOWFLIP	Low cost flexible integrated composite process	European - FP7
MERINDA	METHODOLOGY TO DESIGN COMPOSITE STRUCTURES RESISTANT TO INTRA- AND INTERLAMINAR DAMAGE (STATIC & FATIGUE)	European- ERANET (AIRTN)
SARISTU	Smart intelligent aircraft structures	European - FP7
ABORDA	optimizAción del proceso de diseño completo de la estructura BORDe de Ataque aeronáutico	National - RETOS - Ministry Edu.
IMPRIME	Strategic Advances in Materials by means of digital printing	National - RETOS - Ministry Edu.
PERIGEO	Out of autoclave UAV airframe development	National - INNPRONTA- CDTI
PRONTAS	Out of autoclave wing for a solar power UAV	National - INNPACTO
INNGAS	Integrated structure for Gas Vehicles	Regional - ETORGAI - Basque calls
PROSAVE2	Advanced Systems research for a more eco- friendly aircraft	Regional- GAITEK - Basque calls
ALTRAN		
ARIADNA	Composites Cockpit Acoustic Simulatio	Regional- GAITEK - Basque calls
WILPRO	Aerodynamic Design of Large Telescopes	Others
DeSUAVS	Supersonic Target UV Design	Others
VR Flow	3D View of Aerodynamic Simulation	Others

AIRCRAFT AND SPACE ENGINEERING R&D PROJECTS

ACRONYM and/or NAME OF THE PROJECT and brief description	PROJECT SUMMARY / RELEVANT DETAILS / CONSORTIUMS	CALL
CTA		
E-SEMA	E-SEMA: Development of Electric Smart Actuator for gas turbine engines	European - CLEAN SKY
WINDDOM	Wing Structural Test Development Method	European - CLEAN SKY
VITAL	Aerodynamics: Environmentally Friendly Aero Engine	European - FP6
DREAM	Aerodynamics: Validation of Radical Engine Architecture	European - FP7
E-BREAK	Engine Breakthrough Components and Subsystems	European - FP7
ENOVAL	Engine Module Validators	European - FP7
FUTURE	Aerodynamics: Flutter-Free Turbomachinery Blades	European - FP7
LEMCOTEC	Low Emissions Core-Engine Technologies	European - FP7
VIBRATION	Global in flight health monitoring platform for composite aerostructures based on advanced VIBRATION based methods	European - FP7
OPENAER	Aerodynamics: New aircraft and engine configurations for the future system of air transport	National-CENIT
SPACECAP IV	Development of the spatial technologies	Regional - DFA - Basque calls
AIRHEM-III	Health Monitoring in Aeronautical structures ; Consortium coordinated by CTA	Regional - ETORTEK - Basque calls
SUMOCAR	Development of new mobile aircraft surfaces in carbon fibre	Regional -ETORGAI - Basque calls
ITP		
SAGE	Advanced propulsion plants: Development of new concepts for the future generation of aircraft propulsion plants in accordance with the environmental requirements established by ACARE.	European - CLEAN SKY
AIDA - Agressive Intermediate Duct Aerodynamics for Competitive and Environmentally Jet Engines	Aerodynamics: Development of transition ducts between compressors and between turbines in order to reduce consumption and noise emitted by turbomachinery.	European - FP6
MAGPI - Main Annulus Gas Path Interactions	Interaction of secondary flows with the main flow and effects of cavities in turbomachinery.	European - FP6
PREMECCY - Protective Methods for Combined Cycle Fatigue in Gas Turbines	Fatigue prediction: Study of mechanisms and prediction of fatigue in turbomachinery	European - FP6
TATMO - Turbulence and Transition Modelling for Specigla Turbomachinery	Aerodynamics: Improvements in efficiency by means of non-stationary at aerodynamic analysis	European - FP6
VITAL - Environmentally Friendly Aero Engine	Advanced propulsion plants: Integrated project. Substantial reductions in emissions (-18% of CO ₂) and noise (-6dB).	European - FP6
DREAM - Validation of Radical Engine Architecture Systems	Advanced propulsion plants: Study of new architectures for propulsion plants based on the open-rotor concept	European - FP7
EBREAK - Engine Breakthrough Components and Subsystems	Advanced sealing technologies and oil systems, Engine variability and thermomechanical behaviour, Health monitoring, High temperature materials and abrasives, Light weight material	European - FP7

AIRCRAFT AND SPACE ENGINEERING R&D PROJECTS

ACRONYM and/or NAME OF THE PROJECT and brief description	PROJECT SUMMARY / RELEVANT DETAILS / CONSORTIUMS	CALL
ELUBSYS - Engine Lubrication System Technologies	New lubrication technologies in gas turbines	European - FP7
ERICKA - Engine Representative Internal Cooling and Applications	Technologies for turbine refrigeration	European - FP7
FACTOR - Full Aerothermal Combustor – Turbine Interaction Research	Combustor-turbine interactions design, High-pressure turbine, specific fuel consumption reduction, European test facility, aerodynamic and aerothermal measurement, design simulation	European - FP7
FUTURE - Flutter-Free Turbomachinery Blades	Aerodynamics: Technological development to reduce the flutter phenomenon in turbomachinery blade crowns	European - FP7
LEMCOTEC - Low emissions Core-Engine Technologies	Improvement of core-engine thermal efficiency	European - FP7
OPENAIR - Optimisation for low Environmental Noise Impact Aircraft	Technologies for reducing noise in aircraft	European - FP7
MASIR - Advanced Noiseless Machining	Noise reduction: Techniques to reduce noise in industrial environments engaged in the precision machining and well-being of parts.	National Calls
OPENAER - New engine and aircraft configurations for the future air transport system	Aerodynamics, Methods, Materials, Mechanical design, Manufacture and Control.: Development of technologies for the design and manufacture of components in the hot area of an aeronautical gas turbine in "open-rotor" configuration	National-CENIT
PROSAVE: Eco-efficient aircraft	Leader: CESA	National-CENIT
TAG - Feasibility studies for the development of general aviation turbines	Feasibility studies for the development of low pressure turbines, structures and external components in turbines for general aviation	National - SAE
NOISE MEASUREMENT - Optimisation and validation of techniques for the advanced measurement of noise in a jet engine.	Advanced instrumentation: Optimisation and validation of techniques for the advanced measurement of noise in a jet engine.	Regional - Madrid Region calls
SACMI - Advanced Control and Monitoring System of ITP	Control systems: Development of a control system applied to the fuel control unit of an aeronautical engine.	Regional - Madrid Region calls
KORTA		
GRA	Ball screws - CESA	European - CLEAN SKY
NOVALTI		
TOWARDSTIMACH	NOVALTI-UNI. MONDRAGON	European - MANUNET
PAINT	NOVALTI-ITP-UPV/EHU	Regional-ETORTEK - Basque calls
ORBITAL AEROSPACE		
CRYSTAL (ARTEMIS)	CRITICAL sYSTEM engineering AccELeration	European - ARTEMIS
UAV-RTEMS	Design and development of a UAV (Unmanned Air Vehicle) D0-178B certifiable Health Monitoring System based on RTEMS real-time operating system.	European - ESA TTP
OPENSYS	Design and development of an application programming interface for the communication between IMA partitions and Cockpit Display System	National - CDTI
PLATHW	Design and development of a D0-254 certifiable, cost-effective and multipurpose Hardware platform for Avionics subsystem applications.	National - AVANZA

AIRCRAFT AND SPACE ENGINEERING R&D PROJECTS

ACRONYM and/or NAME OF THE PROJECT and brief description	PROJECT SUMMARY / RELEVANT DETAILS / CONSORTIUMS	CALL
SENER		
E-SEMA - Development of Electric Smart Actuator for gas turbine engines	Development of prototypes for airplane motor actuators Collaboration with TECNALIA, CTA, ACITURRI and MACCON.	European - CLEAN SKY
PEGASUS - Flight Qualification of Deployable Radiator using Two Phase Technology	The main objective of this project is to develop a Deployable Thermal Radiator (DPR) based on Loop Heat Pipes Qualification Model. This includes the design, manufacturing and flight qualification testing to achieve a Technological Readiness Level (TRL) 8. Collaboration with IBERESPACIO, Thales Alenia Space France, Thales Alenia Space Italy, Active Space Technologies and TECNALIA. SENER will contribute with the development of the Deployment Mechanism of the DPR.	European - H2020
Robotic arm for extravehicular activities in space	Robot arm	European - ESA
Health Monitoring in Control and Actuation Systems - ACTUATION 2015	Control, diagnosis, and prognosis of the operating function of actuators in order to optimize their operation	European - FP7
ELSA - European Levitated Sphere Actuator	Improving European capacity to independently manufacture commercial and scientific satellites by bringing a new actuator for attitude and orbit control systems to a higher level of maturity. Collaboration with CSEM, Maxon, SABCA, CBK and RedShift	European - FP7
LEOSWEEP - Improving Low Earth Orbit Security With Enhanced Electric Propulsion	Develop key technology for the implementation of the Ion Beam Shepherd (IBS) concept and demonstrate the technological feasibility of a first active removal mission of a Ukrainian rocket upper stage, prove its economic viability, and propose a convincing legal and policy implementation to "kick-start" large-scale active debris removal activities in Ukraine, Europe and other space faring nations in the future. Collaboration with UPM, TransMIT, ITM, DRL, SDOY, DME, ISLC, Southampton University, CNRS and UC3M.	European - FP7
WIMAAS - Wide Maritime Area Airborne Surveillance program	Future Unified European Maritime Surveillance System. Collaboration with INTA.	European - FP7
AGCFO	Operations on the ground and in captive flight in an air-transported microlauncher	National - SAE
FCU WSO	UV camera for world space observatory	National - SAE
MICRODIS	Microelectronic devices for space instrumentation	National - IDC
SCIMIS	Feasibility study for scientific missions	National - IDC
SOL-2	Optical communications for deep space missions	National - SAE
HDR qualification with potentiometers	HDR qualification with potentiometers	Others
Image navigation	Image navigation	Others
SISTEPLANT		
PLATINO - HADA - UAV convertible aircraft-helicopter	Led by INTA, Sisteplant provides the health monitoring system	National-CDTI
SIMAP - UAV healthmonitoring system	Design of health monitoring system for UAV	National-CDTI
TECNO-I PLANT	Definition of a new paradigm for aerospace components manufacturing: intelligent manufacturing, extremely agile flow, leading edge technologies	Others / Internal Developmet

AIRCRAFT AND SPACE ENGINEERING R&D PROJECTS

ACRONYM and/or NAME OF THE PROJECT and brief description	PROJECT SUMMARY / RELEVANT DETAILS / CONSORTIUMS	CALL
TECNALIA		
ARMLIGHT	Design, development and manufacturing of EMA and test setup for advanced landing gear system actuation	European - CLEANSKY
E-SEMA	Development of Electric Smart Actuator for gas turbine engines	European - CLEANSKY
FLIGHT-EMA	Advanced Flight Control System- Design, development and manufacturing of an EMA with associated ECU and dedicated Test Bench	European - CLEANSKY
HP-SMARTEMA	Development of high power density electrical actuators	European - CLEANSKY
LIGHTBOX	Lightweight Composite Bus System Housing for Extreme Environments	European - CLEANSKY
SEALEDBOX	Aerospace Housing for extreme environment	European - CLEANSKY
TESTHEMAS	Design and Implementation of a Load Simulator Rig and Ground Test Bench Adaptation Kit for a HEMAS Test Rig	European - CLEANSKY
ALICIA	Electronics for transport: Development of the new cabin concept and optimisation of operations under all conditions	European - FP7-AAT
ACTUATION 2015- Integrated modular actuation systems for the future all-electric aircraft	"ACTUATION 2015 aims to develop and validate a common set of standardised, modular and scalable EMA resources for all actuators and all types of aircraft. Coordinator: GOODRICH ACTUATION SYSTEMS SAS. Some other participants: AIRBUS, ALENIA, SENER, HISPANO SUIZA, CESA, etc"	European - FP7-AAT
ESPOSA - Integrated approach to efficient propulsion and related aircraft systems for small-size aircraft	"Development and integration of novel design and manufacture technologies for a range of small gas turbine engines up to approx. 1000 kW. Coordinator: PRVNI BRNENSKA STROJIRNA VELKA BITES A.S. Some other participants: AVIO S.P.A, MOTOR SICH JSC, HONEYWELL INTERNATIONAL SRO, PIAGGIO AERO INDUSTRIES SPA, FRAUNHOFER-GESELLSCHAFT ZUR FOERDERUNG DER ANGEWANDTEN FORSCHUNG E.V, etc"	European - FP7-AAT
HAMLET	Solid lubricants for space mechanism	European - FP7-Space
HYDRA	TPS thermal protection systems for MSR Mars and Moon mission based in ablative materials	European - FP7-Space
ROVE	Exomars rove vehicle re-design by using multifunctional technologies for the mobility system, power and solar panels integrated into composite chassis	European - FP7-Space
SARISTU- Integrated approach to smart airframe structures	"The project proposal concerns the challenges posed by the physical integration of smart intelligent structural concepts. Coordinator: AIRBUS OPERATIONS GMBH. Some other participants: ALENIA AERONAUTICA SPA, AERNNOVA, SAAB AKTIEBOLAG, SHORT BROTHERS PLC, GKN Aerospace Services Limited, etc"	European - FP7-AAT
SIDER	Radiation shielding for spacecraft structures by using nanomaterials.	European - FP7-Space
SMARTESS	Mars entry Thermal protection system based in advanced materials	European - FP7-Space

AIRCRAFT AND SPACE ENGINEERING R&D PROJECTS

ACRONYM and/or NAME OF THE PROJECT and brief description	PROJECT SUMMARY / RELEVANT DETAILS / CONSORTIUMS	CALL
SOLARNET	SOLARNET brings together and integrate the major European research infrastructures in the field of high-resolution solar physics, in order to promote their coordinated use and development. This network is participated by all pertinent European research institutions, infrastructures and data repositories. Private companies and non-European organizations are also involved in this worldwide initiative.	European - FP7-INFRA
THOR- Innovative thermal management concepts for thermal protection of future space vehicles	Design, develop, implement, test and validate disruptive thermal management concepts for atmospheric entry of space vehicles. Partners: DLR, TECNALIA, TUBITAK, FLUID GRAVITY ENGINEERING, SCUOLA UNIVERSITARIA PROFESSIONALE DELLA SVIZZERA ITALIANA, AEROSPACE AND ADVANCED COMPOSITES GMBH, THALES ALENIA SPACE, JAXA	European - FP7-Space
APSAT- satellite applications for public policy and sustainable development	APSAT aims at demonstrating the efficiency of innovative satellite services for the general public and public bodies managing territories. Tecnia develops SAFEMOUNTAIN - Through its website and smartphone application, SafeMountain provides the mountaineer with services to prepare a secured trip to the mountains as well as realtime onsite information. Partners: Aerospace Valley, CTAE, INESC, Tecnia, etc	European - INTERREG
PROMETEO	Fire detection system by using new telecom architecture	National - INNPRONTA
ADAM- Desarrollo de Automatización para Movilidad Autónoma	Development of automation for autonomous mobility	National- INNPRONTA
AIRHEM -2-	Electronics for transport: Health Monitoring for structures	Regional - ETORTEK - Basque calls
TEY		
Heat treatments	ITP projects	Others
WEC		
EUSKESTUR - Laser Welding	New generation for engine radial structures	Regional - ETORGAI - Basque calls
HEGOAK	Vanes manufacturing	Regional - SPRI
GREENAIR: swifiting to new processes for fabricated componentes	Cold forming processes to lower carbone footprint	Others / Internal development

MANUFACTURING, PROCESSES, MATERIALS AND OTHER R&D PROJECTS



03.3.1
AEROSTRUCTURES

03.3.2
ENGINES

03.3.3
SYSTEMS AND
EQUIPMENT

03.3.4
SPACE

03.3.5
MAINTENANCE

03.3.6
AIRCRAFT AND SPACE ENGINEERING
R&D PROJECTS

03.3.7
MANUFACTURING, PROCESSES,
MATERIALS AND OTHER R&D PROJECTS



MANUFACTURING, PROCESSES, MATERIALS AND OTHER R&D PROJECTS

ACRONYM and/or NAME OF THE PROJECT and brief description	PROJECT SUMMARY / RELEVANT DETAILS / CONSORTIUMS	CALL
ACITURRI		
EMC2-Factory	Eco Manufactured transportation means from Clean and Competitive Factory	European - FP7-FoF
AERNOVA		
SARISTU	New Materials for Morphing and SHM	European - FP7
DAMTEX	Ultra-thin, non-conventional carbon fibre laminates	National - AirTN
COMPLEX	Extension of manufacturing and inspection in critical areas of composite material AERO STRUCTURES	National - RETOS - Ministry Edu.
CURVED	Composite processes simulation	National - PID
ISOP	Peen Forming Optimisation	National - PID
NANOPROT	Nano-cerami material development	National - INNPACTO
NANOPROT	Nano ceramic coatings	National - RETOS - Ministry Edu.
PEEN FORMING II	Development of peen forming for metallic structures	National - PID
SUPERCALCULUS	Advanced numerical simulations	National - PID
TEMPROCEN	New automation technologies for metal empennage processes	National - CIEN
ATEA-AERO	New automated composite processes for landing gear doors	Regional - ETORGAI - Basque calls
CVD DIAMANTE	New and more efficient cutting tools for light alloys	Regional- GAITEK - Basque calls
DESTACAR	Development of high performance technologies for the manufacture of multimaterial components	Regional- Interconnecta - Galicia calls
DINA	Neutronic Reserch Disks development	Regional- GAITEK - Basque calls
ESTAVRIL	New composite development for light weight railway trains	Regional - ETORGAI - Basque calls
EUSKADI	Advanced manufacture with additive processes and equipment made in Basque Country	Regional - ETORGAI - Basque calls
HIMAT	Super light weight structures for zero emissions vehicle	Regional- GAITEK - Basque calls
INTEGRA	Advanced Inertia Wheels Developments	Regional- GAITEK - Basque calls
SUMOCAR	New composite architectures for control surfaces and ground testing validation	Regional - ETORGAI - Basque calls
ULTRACAP	Development, Testing and Validation of ULTRA-precise and ULTRA-repetitive Retractable Positioning Cannons for assembling wing-type aeronautical structures	Regional- GAITEK - Basque calls
UNHIMEC	New families of aeronautical substructures with Metal-Coumpound hybrid joints	Regional- GAITEK - Basque calls
VECTURA	New Aerostructures Assembly and Painting Technologies	Regional- Interconnecta - Andalucia calls

MANUFACTURING, PROCESSES, MATERIALS AND OTHER R&D PROJECTS

ACRONYM and/or NAME OF THE PROJECT and brief description	PROJECT SUMMARY / RELEVANT DETAILS / CONSORTIUMS	CALL
BURULAN		
Internal Development	CNC CENTER FOR TITANIUM	Others
Internal Development	CNC CENTER FOR LARGER PARTS	Others
GRUPO TTT		
PRO-SURFACE	Leader: CESA	National-RETOS
IK4		
AEROBEAM	Development of Stator Vanes for Avioindustry	European - CLEANSKY
LIGHTWELD	Characterization of metallurgical joining technologies for Al, Al-Li and Mg joints	European - CLEANSKY
NESMONIC	Net shape Hot Isostatic Pressing of IN718	European - CLEANSKY
RORC	Rolled only IN718 ring-shaped components	European - CLEANSKY
SENTRY	Sustainable Dismantling and Recycling of Metallic Aerostructures	European - CLEANSKY
TIFFAN	Manufacturing by SLM of a titanium fan wheel	European - CLEANSKY
WELDMINDT	Open rotor engine WELDED parts insp using MIniaturized NDT	European - CLEANSKY
WILDCRAFT	Design, development and testing of a proof-of-concept demonstrator of a Wireless Sensor Network (WSN) aimed at applications in the aerospace industry	European - CLEANSKY
ACTUATION2015	Development and validation for the standardisation and modularity of EMA in all system (flight control, landing systems, etc.) to reduce general costs of LCC, improved reliability, maturing of technology, weight reduction.	European - FP7
AMCOR	Additive Manufacturing for Wear and Corrosion Applications	European - FP7
DREAMS	Distributed REal-Time Architecture for Mixed Criticality Systems	European-FP7-ICT
DYNXPERS	PLUG AND PRODUCE COMPONENT FOR OPTIMUM DYNAMIC PERFORMANCE SYSTEM	European - FP7
EASE R3	EASE-R3— Integrated framework for a cost-effective and ease of Repair, Renovation and, Re-use of machine tools within modern factory	European - FP7
E-BREAK	Engine Breakthrough Components and Subsystems	European - FP7-AAT
ENEPLAN	ENERGY EFFICIENT PROCESS PLANNING SYSTEM	European - FP7
ENOVAL	ENgine mOdules VALidator	European - FP7-AAT
HINMICO	"IDEKO. HINMICO— High throughput integrated technologies for multimaterial functional Micro Components"	European - FP7

MANUFACTURING, PROCESSES, MATERIALS AND OTHER R&D PROJECTS

ACRONYM and/or NAME OF THE PROJECT and brief description	PROJECT SUMMARY / RELEVANT DETAILS / CONSORTIUMS	CALL
HIPPOCAMP	High power impulse plasma power operations for the creation of advanced metallic parts-additive technologies, high power plasma for nanocomposites manufacturing	European - FP7 MNP
IN-LIGHT	Development of electrochromic aircraft Window. EADS	European - FP7
INTEFIX	Intelligent fixtures for the manufacturing of low rigidity components (utillajes inteligentes adaptativos)	European - FP7
MERLIN	Development of Aero Engine Component Manufacturing using Laser Additive Manufacturing	European - FP7-Transport
METALMORFOSIS	MetalMorphosis— Optimization of joining processes for new automotive metal-composite hybrid parts	European - FP7
MIDEMMA	MIDEMMA— Minimizing Defects in Micro-Manufacturing Applications	European - FP7
MULTIPARTES	Multicores partitioning for Trusted Embedded Systems	European-FP7-ICT
POCO	Polymer-Matrix Composites based on Carbon Nanotubes (Functionalized, Aligned and Confined)	European - FP7
POPJIM	Plug & produce joint interface modules: machine dynamic behaviour control mechatronics	European - FP7
PROXIMA	Probabilistic real-time control of mixed-criticality multicore and manycore systems	European-FP7-ICT
AEROLICA	Intelligent structures: development and validation of monitoring systems and identification of damage with application in aeronautics and marine wind turbine plants	National - Basic research
ENDAC	New Generation of Highly automated non-destructive estimation solutions for high impact sectors	National - INNPACTO
ENGRANA	Development of flexible and advanced processes for the manufacture of high performance and high responsibility gears. DMP	National - INNPACTO
GRINPACT	Development and application of variable speed technologies in grinding	National - INNPACTO
PROSAVE2	Research project in advanced systems for eco-efficient aircraft	National - CENIT
RC2	Quick and cost-cutting manufacturing of functional prototypes for gas turbines made of pile up metallic layers: rapid manufacture of aeronautical turbine blades by means of laser cladding techniques	National - PROFIT
ATEA AERO	New generation of landing gear door for future single-aisle aircraft.	Regional - ETORGAI - Basque calls
COMPSOFT	Development of software for overall solution in automated manufacture of structural composite components	Regional - GAITEK - Basque calls
ECOFAB	New eco-efficient processes for strategic industrial sectors	Regional - ETORGAI - Basque calls
EUSKESTUR	Basque collaboration project for the manufacture of a new generation of radial turbine structures: modelling of manufacturing process to reduce development time and improve cathode design / PECM Engineering, ITP	Regional - ETORGAI - Basque calls
INPRORET	Productivity increase and new manufacturing challenges	Regional - ETORTEK - Basque calls

MANUFACTURING, PROCESSES, MATERIALS AND OTHER R&D PROJECTS

ACRONYM and/or NAME OF THE PROJECT and brief description	PROJECT SUMMARY / RELEVANT DETAILS / CONSORTIUMS	CALL
LASCLEAN	Laser surface cleaning in industrial applications. Iner-róbótica, PCB	Regional - GAITEK - Basque calls
OPTICAM	Development and implementation in CAD/CAM of models for the simulation of machining processes. AyS, Bundinberri, Talleres Aratz	Regional - GAITEK - Basque calls
PAINT- Polo Aeronáutico para la Innovación en Turbinas	Optimisation of the laser additive process for compres-sor geometries. Development of Aero Engine Component Manufacturing using Laser Additive Manufacturing. ITP	Regional - ETORGAI - Basque calls
PRECISUS	Ultrasonic assisted drilling for high precision holes in aeronautics. Industrias Laip	Regional - GAITEK - Basque calls
PROFUTURE	Development of technologies and processes focussed on the factory of the future. ITP	Regional - ETORTEK - Basque calls
SOFT-MDM	Solutions to improve the dynamic behaviour in support structures for multidimensional measurements	Regional - GAITEK - Basque calls
V3	Integrated configuration platform of the grinding process based on variable speed strategies and grinding wheel monitoring	Regional - GAITEK - Basque calls
SURFER	Development of laser technology applications in the modi-fication and finishing of functional surfaces. AIN, AIMME, AIDO	Others
ELARA	gEnelralization to assembly oriented authority Augmented ReAlity	Others
ITP		
FANTASIA - Flexible and Near-Net-Shape Generative Manufacture Chains and Repair Techniques for Complex Shaped Aero Engine Parts	Repair: advanced processes. New manufacturing and repair techniques based on LMD (Laser Metal Deposition) and LDF (Laser Direct Forming)	European - FP6
VERDI - Virtual Engineering for Robust Manufacturing with Design Integration	Process simulation: Production of scrap during the develo-pment stage (virtual tests) and reduction of engine weight (emission reduction)	European - FP6
ACCENT - Adaptive Control of Manufacturing Processes for a New Generation of Jet Engine Components	Process simulation: Development of adaptive control tech-nologies for terrible machine component oriented manu-facturing processes	European - FP7
INTEFIX - Intelligent Fixtures for the manufacturing of low rigidity components	Fixture, intelligent, control, sensor, actuator, mechatronic, adaptronic, simulation, monitoring, machining, vibration, deformation, set-up	European - FP7
MERLIN - Development of Aero Engine Component Manufacture using Laser Additive Manufacturing	The concept of the MERLIN project is to reduce the environmental impact of air transport using Additive Manufacturing (AM) techniques in the manufacture of civil aero engines.	European - FP7
ALEXANDRIA	Development of Damage Inspection Techniques and Methodologies and New Generation Dimensional Metrology for the Aeronautics, Railways, Naval and Wind Power sectors.	National - MICIN
DESAFIO	Development of High Reliability Manufacturing Systems for rotating parts with High Surface Integrity Requirements.	National - MICIN
MATERIALES - Oxycarbide layers of multicomponent silicon on metal alloys surfaces by plasma spray	Development of the application of coatings by means of plasma spray	National - PROFIT
RAMPE - Alternative coatings to heavy metals (RAMPE)	Residue removal: Development of alternative coatings for removing Cr-VI	National - PROFIT

MANUFACTURING, PROCESSES, MATERIALS AND OTHER R&D PROJECTS

ACRONYM and/or NAME OF THE PROJECT and brief description	PROJECT SUMMARY / RELEVANT DETAILS / CONSORTIUMS	CALL
DIALPE - Fatigue life design and verification of the vibration behaviour of gas turbine monocrystal blades	Mechanical technology: Study of fatigue and service life behaviour of small size monocrystal blades for a gas turbine.	Regional - Madrid calls
EUSKESTUR	Manufacturing technologies: Development of Basque excellence pole for the manufacture of radial structures for aeronautical turbines	Regional - Basque Calls
GENESYS		Regional - Basque Calls
PAINT - Polo Aeronautico para la Innovación en Turbinas	High Performance Manufacturing	Regional - Basque Calls
SAGER - Large-scale Energy Storage Systems for the Electricity Grid	Development of energy storage technologies.	Regional - Basque Calls
VANCAST - Next Generation Nozzle Guide Vane Design and Casting Technology	Technologies for the Design and Casting of the New Generation of Low-pressure Turbine Blades.	Regional - Basque Calls
METROLOGÍA SARIKI		
DICON- Development of new advanced dimensional control systems in manufacturing processes of high-impact sectors	ITP, SARIKI, IDEKO, DANOBAT, SORALUCE, UNIVERSIDAD DE ZARAGOZA, METROMECHANICA, USC	National - INNPACTO
NOVALTI		
Turbine blades for test RIGs	PTB4++, PTB8, PTB9	Others
ORBITAL AEROSPACE		
Test benches complete Simulation, Adquisition and monitoring SW/HW Environmet	System that provides a common environment for running design models, simulations and real equipment to support testing and / or simulation of avionic equipment subsystem or system.	National - CDTI
SENER		
High precision linear actuator (HPLA)	High precision Linear Actuator based on own design, applicable to deployment mechanisms	European - ESA GSTP
Test bench	Generic testbed for Guidance, Navigation and Control systems (GNC / AOCS)	European - ESA
TheraEDGE Diagnostic Equipment	Point-of-care testing equipment for respiratory infections, based on the identification of DNA	European - FP7
RESTAURAC	Development of a demonstrator for the restoration of degraded images due to high compression levels 2008	National - COINCIDENTE
Component admissibles in carbon fibre and fatigue life of hybrid structures	Definition of component admissibles in carbon fibre and the effects on the fatigue life of hybrid structures	Others
AUTOPLAK	Automatic sample inoculation and streaking system for Petri dishes in microbiology laboratories	Others
HECTOR system	Autonomous cleaning system for central-receiver-tower power plants	Others
Miniaturised Deployment Regulator MDR	Regulator appropriate for the deployment of small appendices or mini satellite panels	Others
M-SPEC	Multi-spectrometer for the molecular multiplexed diagnosis in vitro	Others
New developments in composite material manufacturing systems	Flexible stacking machine for pattern fabric materials	Others

MANUFACTURING, PROCESSES, MATERIALS AND OTHER R&D PROJECTS

ACRONYM and/or NAME OF THE PROJECT and brief description	PROJECT SUMMARY / RELEVANT DETAILS / CONSORTIUMS	CALL
New developments in composite material manufacturing systems	Manufacturing of fabric reinforced polymer matrix through a combination of liquid infusion and hot drape forming	Others
PARIS system	Autonomous cleaning system for parabolic trough plants	Others
Rotary Actuator with potentiometers (HDRA_P)	Rotating actuator for space applications (HDRA) incorporating angular position sensors (potentiometers).	Others
SISTEPLANT		
ICARO - composite aerostructures	Industrialisation in advanced materials - Led by Airbus, research into materials and manufacturing systems for aerostructures	National - CDTI
TECNALIA		
ALT	Formulation and characterization of new aluminium alloys produced by ingot metallurgy for high temperature applications (250°C)	European - CLEANSKY
APRIL	Development of advanced preforms for LCM technologies	European - CLEANSKY
HIMMOVAL	High speed metallic material removal under acceptable surface integrity for rotating frame	European - CLEANSKY
MAGNOLYA	Advanced environmentally friendly chemical surface treatments for cast magnesium helicopter transmission alloys preservation	European - CLEANSKY
SPECIMEN	Study on the processing and the performance of cyanate ester composites towards the optimization of harsh service environments	European - CLEANSKY
SUSRAC	Sustainable recycling of aircraft composites	European - CLEANSKY
ADVITAC - Advanced integrated composite tail cone	Development of new composite materials and technologies for the tail cone of future regional aircraft / DAHER Aerospace, Coriolis, FRT, Univ. Cranfield...	European - FP7-AAT
AMAZE	FP7 - FoF-ICT-NMP -Collaboration with the European Space Agency (ESA), AVIOprop, AVIO S.p.A, Thales Alenia Space, BAE Systems and Bombardier.	European - FP7
BETS	Deorbiting satellite based on electromagnetic tethers	European - FP7-Space
CABLEBOT	FP7 - FoF-ICT-NMP - Parallel Cable Robotics for Improving Maintenance and Logistics of Large-Scale Products. Collaboration with EADS	European - FP7
ELECTRICAL	Novel aeronautical multifunctional composite structures with buk electrical conductivity and self-sensing capabilities(Airbus, Univ. Patras, Aernnova, EADS, Short Brothers, Arkema, etc	European - FP7-AAT
EMC2	FP7 - FoF-ICT-NMP -Eco Manufactured transportation means from Clean and Competitive Factory. Collaboration with SPASA - ACITURRI AERONAUTICA	European - FP7
HELM- High-frequency Electro-magnetic Technologies for Advanved Processing of Ceramic Matrix Composites and Graphite Expansion	Processing and manufacture of advanced ceramics (ceramic matrix composites) for different industrial sector(including Aerospace). 20 partners: Warrant Group S.r.l, Brembo SGL Carbon Ceramic Brakes S.p.A., Snecma Propulsion Solide , TIMCAL SA , EADS Deutschland GmbH, TECNALIA, etc	European - FP7
HIPOCRATES	Self-healing polymers for concepts on self-repaired aeronautical composite. Coordinator: TECNALIA. Some other partners: University of Patras, University of Bristol, GMI SAS, Aernnova...	European - FP7-AAT

MANUFACTURING, PROCESSES, MATERIALS AND OTHER R&D PROJECTS

ACRONYM and/or NAME OF THE PROJECT and brief description	PROJECT SUMMARY / RELEVANT DETAILS / CONSORTIUMS	CALL
IAPETUS - Innovative repair of aerospace structures with curing optimization & life cycle monitoring abilities	Development of structural repair processes by means of new materials and technologies / Huntsman, Inasco, HAI, DAHER, Univ. Patras...	European - FP7-AAT
LOCOMACHS	Low Cost Manufacturing & Assembly of Composite and Hybrid Structures. Coordinator: SAAB. Participants: Airbus, GKN Aerospace, Dassault, IAI, DLR, NLR, Tecnomat, Dassault, Bombardier, etc.	European - FP7-AAT
MAAXIMUS- More Affordable Aircraft through eXtended, Integrated and Mature nUmerical Sizing	Fast development and right-first time validation of a highly-optimised composite fuselage thanks to a coordinated effort between virtual structure development and composite technology. Coordinator: AIRBUS. Some other partners: BOMBARDIER; SONACA; TAI; DLR, INASCO, etc	European - FP7-AAT
REFORM	FP7 - FoF-ICT-NMP -Resource-Efficient Factory Of recyclable Manufacturing composite components. Collaboration with the University of Sheffield - Department of Advanced Manufacturing Research Centre (AMRC) and Formtech Composites Limited.	European - FP7
PROSAVE2- Proyecto de investigación en sistemas avanzados para un avión más eco-eficiente.	"Development of new technologies for aeronautic systems and sub-systems " Collaborations with CESA, AERNNOVA, TTT, etc"	National - CENIT
TARGET- Tecnologías Inteligentes y Medioambientalmente Sostenibles para la Generación de Estructuras en materiales compuestos	Development of new technologies for future aircraft in composite/ Collaborations with AIRBUS, AERNNOVA, EADS-CASA, SAIREM, M-TORRES	National - CENIT
ATEA-AERO-Nueva generación de puerta de tren de aterrizaje para futuro avión de pasillo único	Development of new landing gear door structure	Regional - Basque Calls
DOLOMITE	Development of intelligent assembly systems for the aeronautic industry	Regional - Andalucía Calls
FUTURASSY	Development of robotics solutions for assembly of CFRP aerostructures. Airbus, Tecnalía, Universidad de Cadiz, Universidad de Sevilla, CATEC	Regional - Andalucía Calls
PAINT-Polo aeronáutico vasco de innovación para la fabricación de turbinas de gas		Regional - Basque Calls
SIMVA-Desarrollo de sistemas innovadores de mandos de vuelo para aviones de transporte y regionales de nueva generación	Development of new flight control systems	Regional - Andalucía Calls
VECTURA	New aerostructures assembly and painting technologies	Regional - Andalucía Calls
TEY		
Heat treatments	SENER projects	Others

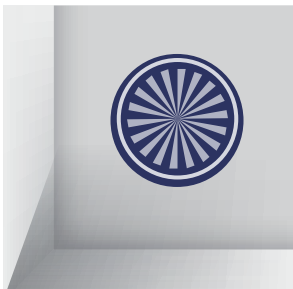
LEADING PROGRAMMES

AIRBUS A350XWB	AERNOVA, ACITURRI, ALESTIS (Risk Partners)
AIRBUS A380	AERNOVA, ACITURRI, ALESTIS, NOVALTI (Risk Partners)
AIRBUS A400M	ACITURRI, ALESTIS (Risk Partners)
BOEING 747-8I /F/ Dreamlifter	AERNOVA
BOMBARDIER CSeries, CRJ Family	AERNOVA
DASSAULT Falcon 7X	ACITURRI, ALESTIS (Risk Partners)
EMBRAER ERJ, E-JET, E-JET E2 FAMILIES	AERNOVA (Risk Partner)
EMBRAER KC-390	ACITURRI, AERNOVA
EMBRAER Legacy, Phenom	ALESTIS (Risk Partner)
EPI TP400	ITP (Consortium Member)
ESA SOLAR ORBITER, MTG, PROBA-3	SENER
EUROJET EJ200	ITP (Consortium Member)
MTRI MTR390E	ITP (Consortium Member)
PRATT & WHITNEY PW1000G	ITP (Risk Partner)
ROLLS ROYCE Trent 500 /900 /1000	ACITURRI, ITP (Risk Partners)
ROLLS ROYCE Trent XWB	ITP (Risk Partner)
SIKORSKY S-92	AERNOVA (Risk Partner)
TURBOMECA (All range)	DMP (Exclusive transversal agreement for special gears)

CURRENT AND FORMER PROGRAMMES & CLIENTS

**Aerostructures**

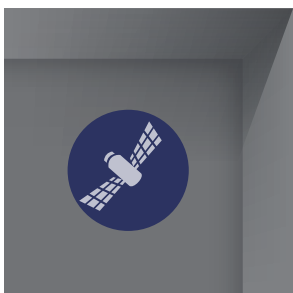
AIRBUS A300/310/318/319/320/320neo,ceo/321/330/350XWB/380. **AIRBUS DS** A330MRTT/400M, CN235, C295. **AIRBUS HELICOPTERS** AS332, EC135, NH90, TIGRE. **ATR** 42, 72. **BELL** 505 JRX. **BEECHCRAFT** BARON / BONANZA / KING AIR. **BOEING** 737, 747-LCF, 747-8I/F, 787, E-3 AWACS. **BOMBARDIER** Q-Series, CRJ Family, CSeries. **CASA** C101/212. **DAHER-SOCATA** TBM700. **DASSAULT** FALCON 5/7X. **DORNIER** DO728. **EMBRAER** ERJ135/ 140/ 145/ 145LR/ 145XR, LEGACY, 170/ 175/ 190/ 195, E175/190/195-E2, LINEAGE, KC-390, PHENOM. **EUROFIGHTER** TYPHOON. **SIKORSKY** S-92. **SINO SWEARINGEN** SJ30.

**Engines**

EPI TP400. **EUROJET** EJ200. **GENERAL ELECTRIC** CF700, CT7, F404/ 414, GE90-14/ 115, J79, LM2500, T700. **HONEYWELL** AS907, HTF7000, Lycoming T53/55, Garrett TPE331/TFE731, TF50. **MTRI** MTR390E. **PRATT & WHITNEY** F135, JT8-STD / 200, PT6 / T3, PW535 /150/810/1000G. **ROLLS-ROYCE** BR710/715, RB211, TRENT MT30/50, TRENT 500/ 700/ 800/ 900/1000/XWB. **ROLLS-ROYCE NORTH AMERICA** A250, A601K, M250, T63. **SNECMA** ATAR, 9KPLUS/09C/09K50, CFM 56, SaM146, Silvercrest. **TURBOMECA** ARRIEL, MAKILA, ARRIUS.

**Systems & Equipment**

AIRBUS Military, AIRCELLE, ALENIA, BAE Systems, BOMBARDIER, CESA, DIEHL-BGT, EADS, EUROCOPTER, EUROFIGHTER, GOODRICH, HONEYWELL, INDRA, LATECOERE, LIEBHERR, MARTIN-BAKER, MBDA, MESSIER-BUGATTI-DOWTY, RATIER FIGEAC, ROLLS-ROYCE, SAGEM, SIKORSKY, THALES, ZODIAC AEROSPACE.

**Space**

ESA/NASA ARTEMIS, AURORA, CLUSTER, CX-OLEV, EGNOS, ENVISAT, EUREKA,GAIA,GTAB,HERMES,HERCHEL-PLANCK, HUBBLE SPACE TELESCOPE, HIPPARCOS, INTEGRAL, ISEE-B/COLUMBUS/CRV, METOP, MSG, MTG, PROBA-3, ROSETTA, SOHO, SOLAR ORBITER, SPACELAB, ULISSES, XMM-NEWTON.

OTHERS AMC21, AMOS3, ARABSAT 4A/B, ARIANESPACE, ASTRA1M, ASTRIUM, CIEL-2, CHINASAT9, EXPRESS AM33/44, GE 1i/2i, GALAXY 17, GALILEO, HELIOS I/II, HISPASAT 1C/D, KOREASAT5, METEOSAT, MINISAT, NETLANDER, OLYMPUS, PLEIADES, SPOT-4, SYRACUSE 3B, SUPERBIRD7, SPAINSAT, TURKSAT 3A, YAMAL 200.

FACTS AND FIGURES

TOTAL HEGAN MEMBERS DIMENSION: IN 2014

Members aggregate turnover and employment

1,755 million € and **12,546 people**

(directly generated in all of their worldwide facilities)

PLACE	Turnover (M€)	△ 2013/14	Employment	△ 2013/14
Basque Country	874	8.2%	4,278	4.4%
Rest of Spain	697	3.9%	6,287	- 0.5%
Rest of the World	184	-24%	1,981	- 1%
TOTAL	1,755	2%	12,546	1%

2014	M€	% over Sales	Average % over Sales since 1993
MEMBERS R&D INVESTMENT	165	9.4%	16.4%
MEMBERS EXPORTS	1,139	64.9%	70.3%

HEGAN MEMBERS DIMENSION: In the Basque Country

1.2% of the GDP (*)	5.6% of the Industrial GDP (*)	2.1% of the Industrial EMPLOYMENT (*)
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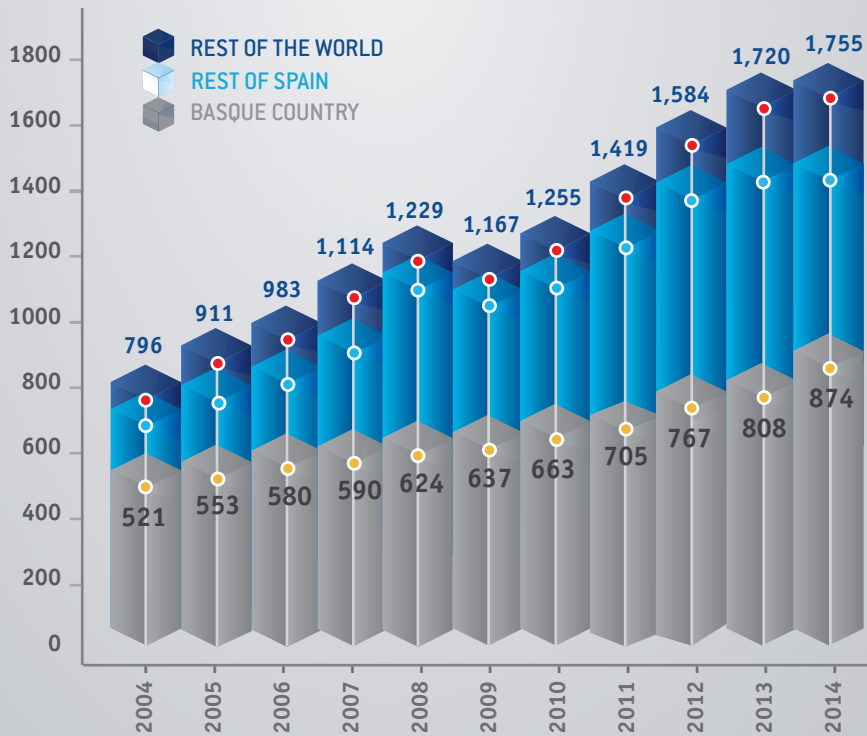
HEGAN MEMBERS DIMENSION: in Spain

15.8% of the SPANISH (**)	1% of the EUROPEAN (***)	23.5% of the SPANISH (**)	1.9% of the EUROPEAN (***)	18.3% of the SPANISH (**)	1% of the EUROPEAN (***)
aerospace TURNOVER		aerospace EMPLOYMENT		aerospace R&D INVESTMENT	

75 Aerospace Organizations in the natural cluster

- | | | |
|---|--|---|
| 9 Global Companies
Aerostructures, Engines, Space
Engineering, Logistics,
Processes Solutions, Treatments | 59 SMEs
Products, Processes, and Advanced
Services for Aerostructures, Engines,
Systems, Space and Equipment | 1 Aerospace R&D
centre
Certification
Testing and R&D |
| 2 R&D Corporations
with
12 R&D Centres
with aerospace
activities | 4 Universities
ETSIB: Master in
Aeronautics
Master in Space | 179 FACILITIES
102 in the Basque Country
52 in the rest of Spain
24 abroad (Brazil, China, France, Germany,
India, Malta, Mexico, Poland, Portugal,
Romania, UK, USA) |

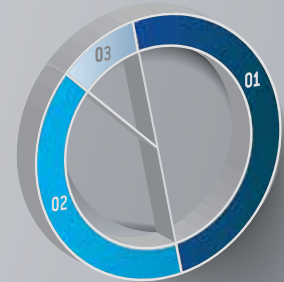
AGGREGATE TURNOVER IN M€ [2004-2014]



TURNOVER

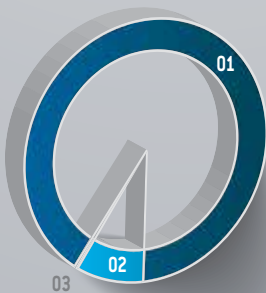
GEOGRAPHICAL DISTRIBUTION OF TURNOVER

01 BASQUE COUNTRY	50%
02 REST OF SPAIN	40%
03 REST OF THE WORLD	10%



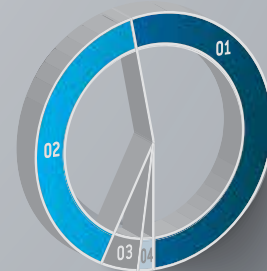
TURNOVER ACCORDING TO MEMBER SIZE

01 TIER 1 (5 ORGANIZATIONS)	89,7%
02 REST OF INDUSTRY (31 COMPANIES)	10,0%
03 R&D CENTRES (3 ENTITIES)	0,3%



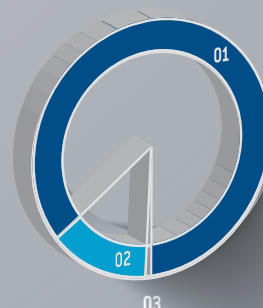
TURNOVER ACCORDING TO SUBSECTORS

01 AEROSTRUCTURES	53%
02 ENGINES	40%
03 SYSTEMS & EQUIPMENTS	5%
04 SPACE	2%

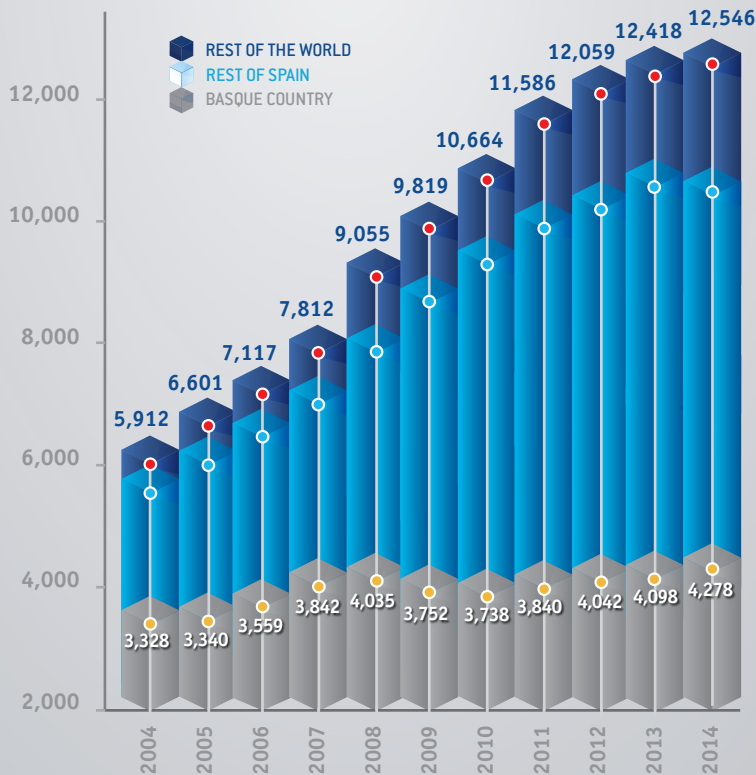


EUSKADI - BASQUE COUNTRY BASQUE TURNOVER (M€) ACCORDING TO MEMBER SIZE

01 FACILITIES >250 EMPLOYEES	742 M€
02 REST OF INDUSTRY	126 M€
03 R&D CENTRES	6 M€

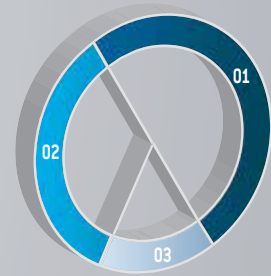


EMPLOYMENT



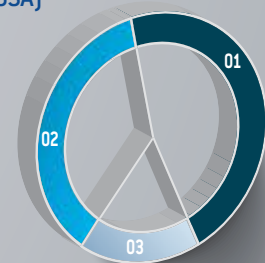
GEOGRAPHICAL DISTRIBUTION OF JOBS

- 01 BASQUE COUNTRY 34%
- 02 REST OF SPAIN 50%
- 03 REST OF THE WORLD 16%



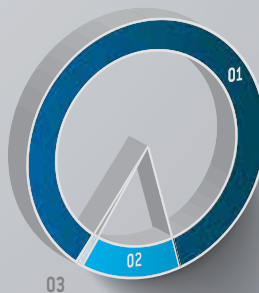
MEMBERS FACILITIES

- 01 BASQUE COUNTRY 68
- 02 REST OF SPAIN 53
- 03 ABROAD (Brazil, China, France, Germany, India, Malta, Mexico, Poland, Portugal, Romania, UK, USA) 24



EMPLOYMENT ACCORDING TO MEMBER SIZE

- 01 TIER 1 (5 Organizations) 85,5%
- 02 REST OF INDUSTRY (31 Companies) 13,6%
- 03 R&D CENTRES (3 Entities) 0,9%

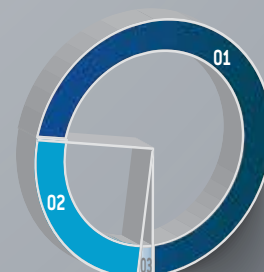


EMPLOYMENT ACCORDING TO QUALIFICATION



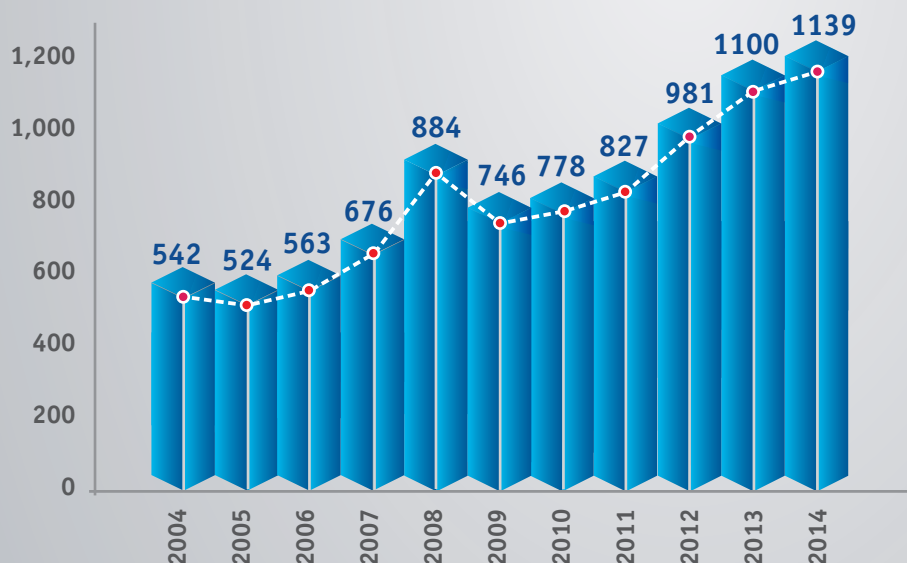
EUSKADI - BASQUE COUNTRY BASQUE EMPLOYMENT ACCORDING TO MEMBER SIZE

- 01 FACILITIES >250 EMPLOYEES 3,073
- 02 REST OF INDUSTRY 1,096
- 03 R&D CENTRES 109



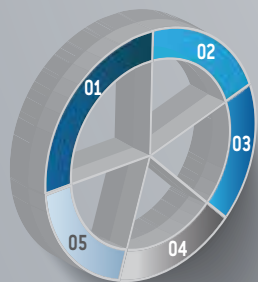
03.5.3

EXPORTS IN M€



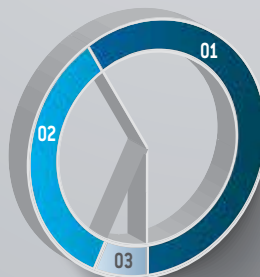
EXPORTS ACCORDING TO COUNTRIES

01 UK	25.3%
02 GERMANY	21.1%
03 USA	18.3%
04 BRAZIL	11%
05 OTHERS COUNTRIES	24.2%



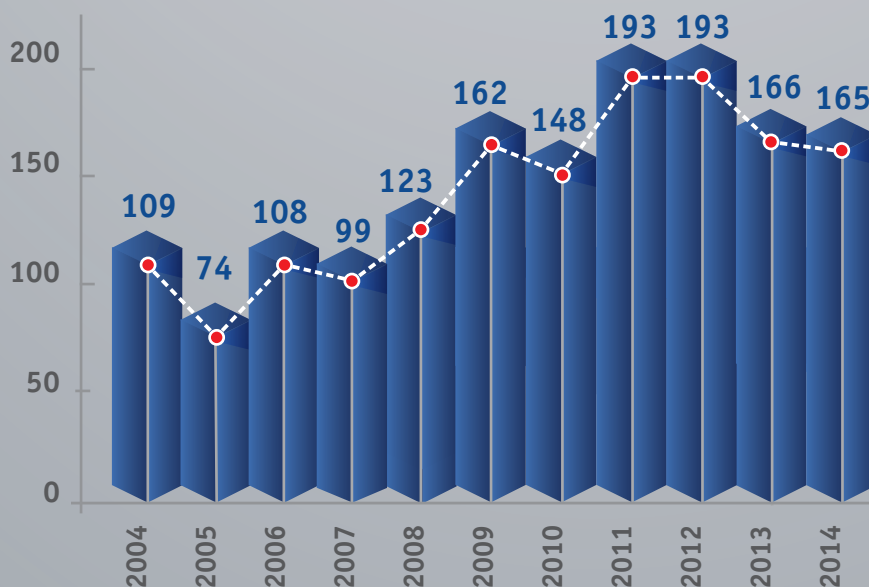
EXPORTS ACCORDING TO CONTINENTS

01 EUROPE	59%
02 AMERICAS	34%
03 REST	7%



R&D IN M€

03.5.4



OVER SALES

9.4%

SELF-FINANCING

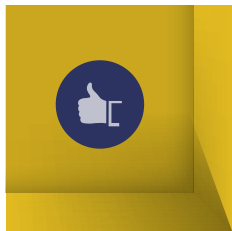
86%

PERSONNEL WITH R&D ACTIVITIES

1,442

> 04

ACKNOWLEDGEMENTS



We would like to end this Annual Report by pointing out that December 2014 marked the halfway point of the last 2013-16 strategic reflection.

The overall figures for the sector and the expectations for the coming years continue to be upbeat. The work of thousands of people in compliance with their professional duties is the essential ingredient that makes all this possible.

In our association we continue to extend our network of cooperation: company bosses who contribute their time and efforts in order to develop their roles, professionals sharing spaces of trust, missions and business meetings..., in short, people who see that competing and cooperating is possible when we break down mental barriers with a spirit of openness, trust, involvement, commitment, courage, generosity, etc.

Thanks once again for your positive attitude: Let's continue building our society!



AGRADECIMIENTOS

Y ponemos fin a este Informe Anual del año cuyo final marca el ecuador la última reflexión estratégica 2013-16.

Los grandes números resultantes y las expectativas siguen siendo positivas un año más: el trabajo de miles de personas cumpliendo con su responsabilidad profesional diaria son los mimbres con los que se confeccionan estos cestos.

Y en la asociación seguimos tratando de entretejer la red: directivos de empresas compartiendo tiempo y esfuerzo para el desarrollo de su rol, profesionales compartiendo espacios de confianza, misiones y business meetings... , en definitiva, personas viviendo que competir y cooperar es posible y que se logra cuando se sabe vencer las barreras mentales con apertura, confianza, implicación, compromiso, valentía, generosidad...

Gracias una vez más por esa actitud: ¡sigamos construyendo sociedad!

ESKER ONEZ

Horrela, amaiera ematen diogu urteko txostenari; iritsi gara, beraz, 2013-2016ko gogoeta estrategikoaren erdiko puntura.

Aurten, berriro ere, oso positiboak izan dira lortutako emaitza handiak eta igurikimenak: egunero beren erantzukizun profesionala betetzen jardun duten milaka pertsona horiek dira, hain zuzen, saski horiek egiteko aukera eman duten zumeak.

Elkartean, sarea ehuntzeko ahaleginean jarraitzen dugu: enpresetako zuzendaritzako kideak elkarrekin denbora eta ahalegina partekatzen ari dira, beren rola garatzeko; profesionalak gogoz ari dira konfiantzako guneak, misioak eta negozio-bilerak elkarrekin lantzen... Hau da, aldi berean lehian eta elkarlanean aritzea posible dela erakutsi digute guztiak, eta hori guztia lortzeko buruko hesiak gainditu behar direla ikusarazi digute, irrikiak izanez, konfiantza izanez, inplikatur, konpromisoa hartuz, ausartak izanez, eskuzabaltasunez jokatur...

Mila esker berriro ere jarrera horrengatik: jarrai dezagun gizartea eraikitzen!

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