



## FRENCH AEROSPACE & DEFENSE INDUSTRY :

**SATELLITE 2019<sup>®</sup>**

May 6-9, 2019  
Walter E. Washington Convention Center  
Washington, DC

Participati

Participating companies  
Booth #517



**French Aerospace, Defence and Security Industry**



# GIFAS – FRENCH AEROSPACE INDUSTRIES ASSOCIATION

*The France Pavilion consists of manufacturers and services companies from the French space industry. They represent a cohesive, supportive and ambitious high-technology sector specializing in the design, development, construction and maintenance of space programs and equipment (both in the commercial and military markets) through their products, services and expertise.*

With more than 400 members, GIFAS is a professional body which brings together the main French aviation, space, defense and security players.

## **Our main objectives:**

- Represent and coordinate the industry's activities.
- Analyse and defend members' interests (trade – standardization – environment, etc.).
- Promote our aerospace excellence.

Since 1909, GIFAS and the French industry organize, every two years, the International Paris Air Show:



Le Bourget – Paris Air Show

**The world's largest and longest-running aerospace event**  
53<sup>rd</sup> Paris Air Show will be held from June 17<sup>th</sup> to 23<sup>rd</sup>, 2019

GIFAS (Groupement des Industries Françaises Aéronautiques et Spatiales), the French Aerospace Industries Association, is an industry body formed in 1908, that brings together **400 companies** ranging from the main prime contractors and system suppliers to SMEs that together form a cohesive, supportive and hard driving **high technology sector** specializing in the design, development, construction, marketing and maintenance of all **aeronautical and space programmes and equipment**, both **civilian and military**, as well as **defence and security systems** – planes, helicopters, drones, engines, devices and missiles, satellites and space launchers, major systems and equipment.



2017 revenues : €64 bn



85% to export (consolidated revenues)



2017 total orders : €68,2 bn



76% to export



190 000 people (total employed in France by GIFAS members)



+5 years secured backlog



[www.gifas.fr](http://www.gifas.fr)



[@GifasOfficiel](https://twitter.com/GifasOfficiel)



[@GifasOfficiel](https://www.facebook.com/GifasOfficiel)

**MAIN ACTIVITY :**

HIGH PRECISION BALL BEARINGS & ROTATING SYSTEMS

**ANNUAL TURNOVER (in €M) :** 16



ADR has considerable experience from more than 50 years on the space mechanisms market and fully masters this technology. The technical solutions of our high precision ball bearings and subsystems offer size and weight reduction achieving exceptional levels of performance. ADR know-how is obvious for SADM, SAPM, APM as well as for launcher pumps, valves, actuators and in moving parts of various vehicles, whether reusable or single-use. Calculation models especially developed at ADR and perfected through extensive experience guarantee a high predictive reliability of bearing behaviour.



*High precision ball bearing*



*Space qualified ball bearings*

**Contact :**  
Sonia SEQUEIRA  
Key Account Manager  
ssequiera@adr-alcen.com  
+33 (0)6 14 86 51 92

**ADR**  
**12 Chemin des Prés**  
**77810 THOMERY**  
**FRANCE**

[www.adr-alcen.com](http://www.adr-alcen.com)



**MAIN ACTIVITY :**

AEROSPACE VALLEY IS THE LEADING CLUSTER IN EUROPE FOR AERONAUTIC AND SPACE

**ANNUAL TURNOVER (in €M) :**



Created in 2005, Aerospace Valley is the most significant innovation cluster in France in the fields of aeronautics, space and embedded systems, counting with over 850 members from both the industry and the academia. With 124,000 industrial employees, Aerospace Valley territory represents around 1/3 of the French aerospace workforce. Similarly, 8,500 researchers and scientists are active within its region, thus representing 45% of the French national R&D potential in the aerospace sector. As of 2019, Aerospace Valley has obtained funding for +500 R&D projects representing an accumulated value of +1.2 billion Euro covering most scientific and technical fields related to the various sectors of aerospace.

Newspace Factory is an action leading by Aerospace Valley to promote the potential of space SMEs outside of France.



*B612: a building dedicated to innovation in space and aeronautic*



*Newspace Factory: a team to stimulate business within Space SME*

**Contact :**

Grégory PRADELS  
pradels@aerospace-valley.com  
+33 (0) 786 103 980

**Aerospace Valley**  
**3 Rue Tarfaya**  
**31405 TOULOUSE**  
**FRANCE**

[www.newspace-factory.com](http://www.newspace-factory.com)



**MAIN ACTIVITY :**

CRYOGENIC COOLING AND REFRIGERATION - GAS SYSTEMS FOR ELECTRIC PROPULSION



**ANNUAL TURNOVER (in €M) :** undisclosed amount

Air Liquide is a world leader in gases, technologies and services for Industry and Health, with more than 50 years of expertise in space cryogenics, dedicated to satellites, launchers and space exploration. Air Liquide has a large experience in space projects and space cryogenic technological developments: Ariane launchers, Melfi, Planck, Herschel, Curiosity and ExoMars programs. Experts in cryogenics for space and in gas engineering, we developed in particular, an innovative pulse tube cooling technology for satellites and onboard propellant management systems for electric propulsion. We have the ambition, the will and the expertise to engage in all major new international challenges : electric propulsion, more competitive launch vehicles, the constellation of satellites, life in space, and more.



*Pulse-Tube cryocooler  
Copyright : Air Liquide – Laurent Lelong*



*Xenon test bench  
Copyright : Air Liquide – Laurent Lelong*



*Propellant management  
assembly  
Copyright : Air Liquide – Laurent Lelong*

**Contact :**

Agnès Renard  
Head of Communications and  
Marketing / Global Markets &  
Technologies - Europe/Asia  
Phone: + 33 6 24 42 50 72  
**Air Liquide Singapore Private Limited**  
**438B Alexandra Road**  
**Block B, #07-01**  
**Alexandra Technopark**  
**Singapore 119968**

[www.advancedtech.airliquide.com](http://www.advancedtech.airliquide.com)



**MAIN ACTIVITY :**

MINIATURE HIGH-PERFORMANCE ANTENNAS FOR NANOSATELLITES AND DRONES

**ANNUAL TURNOVER (in €M) :** 0.5



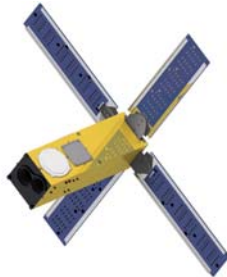
ANYWAVES designs and develops miniature high-performance antennas for Nanosatellites and Drones. ANYWAVES offers COTS CubeSats antennas in the following bands:

- S-band antenna for Telemetry and Telecommand (Tx and Rx with the best HPBW of about 90°)
- X-band antenna for Payload Telemetry

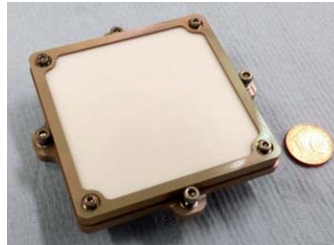
ANYWAVES also offers its antennas expertise by the development of bespoke antennas, considering the specifications of its customers with the possibility to simulate the antenna alone or on small carrier. That allows to optimize the position on the carrier and the performance of the antenna.



*CubeSat S-band Antenna*



*Eyesat - JANUS project*



*CubeSat X-band Antenna*

**Contact :**

Gregory Beddeleem  
Commercial Director  
gregory.beddeleem@anywaves.eu  
+33 (0)7 67 82 01 37

**ANYWAVES SAS**

**10 avenue de l'Europe  
31520 Ramonville Saint-Agne  
FRANCE**

[www.anywaves.eu](http://www.anywaves.eu)



**MAIN ACTIVITY :**

CABLES & INTERCONNECT SOLUTIONS FOR HIGH-TECH APPLICATIONS

**ANNUAL TURNOVER (in €M) :** 150M€ (consolidated)



Axon' Cable designs and manufactures wires, connectors, custom-designed cables, harnesses and interconnect solutions meeting the requirements of high tech markets such as defense, aeronautics, space, automotive, research centers and medical. The headquarters is located in France and the Axon' group has a truly global presence with sales and manufacturing subsidiaries worldwide.

Axon' Cable has a wealth of proven flight heritage in interconnect solutions for space applications including launchers, LEO, MEO and GEO satellites, thrusters, rovers, International Space Station equipment, mega-constellation and ground testing. Cables, cable assemblies and interconnect solutions manufactured by Axon' are able to withstand the stresses of launch and the harsh space environment.



*Versatys®, miniature power connector*



*Bus Bar, for power distribution on satellites*



*Axomach, high data rate links up to 10 Gb/s*

**Contact :**

Kevin SEELEY  
US Sales Manager  
sales@axoncable.com  
+1 847 230 7800

**Axon' Cable**

**1316 N Plum Grove Road  
Schaumburg 60173 IL  
UNITED STATES**

[www.axon-cable.com](http://www.axon-cable.com)

**French Aerospace, Defense and Security Industry**





**MAIN ACTIVITY :**

INTERNATIONAL FREIGHT FORWARDING, LOGISTICS & SUPPLY CHAIN SERVICES

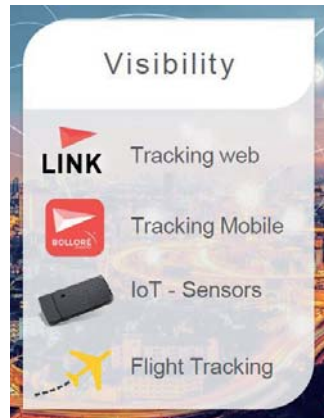
**ANNUAL TURNOVER (in €M) :** 7 934 (Y2017 BTL)



Bolloré Logistics is a global specialist in the Aerospace industry with more than 40 years of experience in all areas of this sector: aircraft & spacecraft manufacturers, engine and spare parts manufacturers, maintenance & repair providers, operators and leasing companies. We have dedicated teams and resources; customized international freight solutions and strategic services with global logistics / distribution hubs, engineering support and a 24/7 AOG network to meet the industry standards



*Delivering Satellites using AN-124*



*Multiple functions to Track and Record*



*Any Satellite, All carriers, Any Launch pads*

**Contact :**

Jérôme LE GRAND  
Aerospace Director  
jerome.legrand@bollore.com  
Mob: +336 8649 3296

**BOLLORE LOGISTICS**  
31-32 Quai de Dion Bouton  
92800 PUTEAUX  
FRANCE

[www.bollore-logistics.com](http://www.bollore-logistics.com)

French Aerospace, Defense and Security Industry



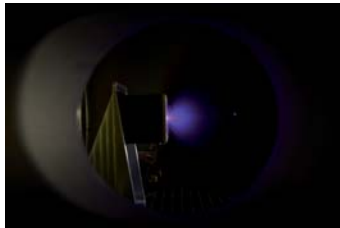
**MAIN ACTIVITY :**

SPACE MECHANISMS, ELECTRIC PROPULSION, REACTION WHEELS

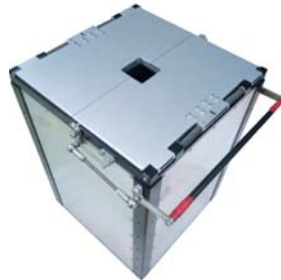
**ANNUAL TURNOVER (in €M) :** 9



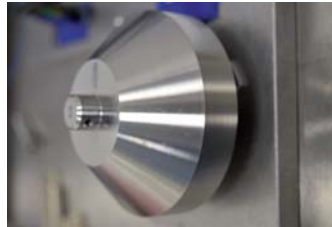
Our 40-year experience has made us a significant player in the space industry, in which our primary market includes space mechanisms and electric propulsion. We have implemented a competitive industrial facility, associated with innovative, flexible R&D teams. Among our ambitions, we want to become the European leader of micropropulsion by developing a disruptive, cheaper, mass-produced technology.



*ELECTRIC PROPULSION*



*DISPENSER 12 U*



*REACTION WHEELS*

**Contact :**

Nadia LECOMTE FOREST  
Consultante Communication  
Marketing et Presse  
n.lecomte-forest@comat-agera.com  
commercial@comat-agera.com

**COMAT**

**6 chemin de Vignalis  
31130 Flourens  
FRANCE**

[comat-agera.com](http://comat-agera.com)



## MAIN ACTIVITY :

DESIGN, INTEGRATION & OPERATION OF SPACE CRITICAL SOFTWARE & APPLICATIONS

ANNUAL TURNOVER (in €M) : 201.5



For more than 35 years, CS has been a major actor for developing and operating ground space ground segment software and applications.

- > 350 Space Engineers, worldwide activity including offices in North America (US, CAN).
- > End-to-end solutions integrating components from ground segments to user requests optimization.
- > Participation to major European Space Projects (GALILEO, COPERNICUS, EGNOS, ATV, ROSETTA, PLEIADES, CSO, SPOT / HELIOS, EGS-CC,...)
- > Innovative solutions for NEWSPACE (small satellites, constellations, Big Data, cloud computing, IA)
- > Low-Cost solutions including OPEN SOURCE products for innovation & interoperability



### Contact :

Nicolas FROUVELLE  
NEWSPACE Business Development  
nicolas.frouvelle@c-s.fr  
+33 607 554 602

### CS Space Business Unit

5 rue Brindejonc des Moulinais  
31500 Toulouse  
France

<https://uk.c-s.fr/>



**MAIN ACTIVITY :**

AEROSPACE SOLUTIONS

**ANNUAL TURNOVER (in €M) :** 36,9 (2017)



ECA Group - Aerospace Division designs, develops, manufactures and maintains in operational conditions innovative and reliable solutions for the aerospace industry - A recognized expertise of more than 30 years allowing us to meet our customers' requirements for high technology : Aircraft and Space Systems Manufacturers, Space agencies, Airlines, MROs for civil and military applications. In the areas of Space & Telecommunications, ECA Group built its skills and competencies on Testing , RF Equipment and On-board Connectivity solutions.



*PCE600 - SATELLITE LINK & PAYLOAD  
SIMULATOR*



*AIRCRAFT WIRELESS ACCESS POINT WITH  
MEDIA SERVER*



*CTR70 - TT&C TRACKING CHAIN*

**Contact :**

Christophe CHATAIN  
Space Sales Manager  
+33 6 08 85 57 51  
+33 5 62 11 17 17

**ECA GROUP - Aerospace Division**  
**ZAC de St Martin du Touch**  
**6 Impasse Alice Guy**  
**31300 TOULOUSE**  
**FRANCE**

[www.ecagroup.com](http://www.ecagroup.com)



**MAIN ACTIVITY :**

DESIGN AND MANUFACTURE BACKSHELLS AND CONNECTORS

**ANNUAL TURNOVER (in €M) : 4**



Gauthier Connectique is well known for circular and rectangular backshell for Space industries and aerospace industries:

- Rectangular backshell
- Circular backshell
- Connectors.

Quality certification : EN9100



**Contact :**

Luc SEVESTRE  
+33 6 07 80 63 86  
luc.sevestre@gauthierconnectique.com

**Gauthier connectique**  
188, rue de la Liberté  
50300 Avranches  
FRANCE

<https://www.gauthierconnectique.com/>

**MAIN ACTIVITY :**

AEROSTRUCTURES AND INTERCONNECTION SYSTEMS

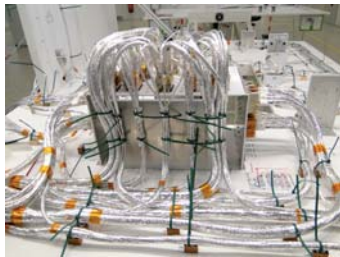
**ANNUAL TURNOVER (in €M) :** 659.2

**LATÉCOÈRE**

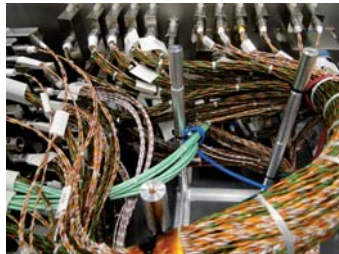
Latecoere is a tier 1 partner to major international aircraft manufacturers (Airbus, Boeing, Bombardier, Dassault Aviation, Embraer and Mitsubishi Aircraft), in all segments of the aeronautical market (commercial, regional, corporate and military aircraft), specializing in two fields:

- Aerostructures: design and manufacturing of doors and fuselage sections,
- Interconnection systems: design and manufacturing of onboard wiring, EWIS and space harnesses, avionics bays, test benches and onboard video systems, in all types of environment, including the most severe ones.

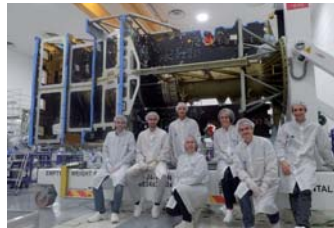
Its Space BU works on military, civil and science satellites, launchers and vehicles. With more than 350 harnesses designed and manufactured currently i



*#1 in Europe in satellite harnesses*



*Complete testing line with electrical test benches, thermal vacuum chamber, vibration test stands.*



*Full scope of work from customer specification to harness integration*

**Contact :**

Alexis FERRE

[alexis.ferre@latecoere.aero](mailto:alexis.ferre@latecoere.aero)

Nicolas WUYAM

[nicolas.wuyam@latecoere.aero](mailto:nicolas.wuyam@latecoere.aero)

**LATÉCOÈRE**

**135, rue de Périole**

**BP 25211**

**31079 Toulouse Cedex 5**

**FRANCE**

[www.latecoere.aero](http://www.latecoere.aero)

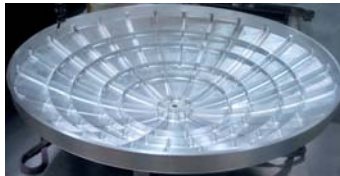
**MAIN ACTIVITY :**

HIGH-PRECISION MACHINING FOR AEROSPACE, DEFENSE, NUCLEAR, ENERGY AND AUTOMOTIVE MARKETS

**ANNUAL TURNOVER (in €M) :** 400



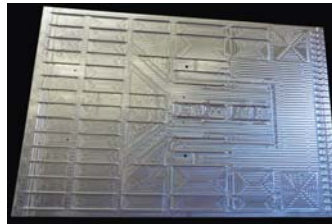
Mecachrome is a world leader in high-precision machining. Mecachrome has 13 production sites with more than 3 000 people worldwide. Mecachrome is recognized as a Tier 1 key player in design, engineering, manufacturing and assembly of high-precision parts for 80 years. Main activities of Mecachrome for Aerospace are: large structural parts for aircraft and launchers applications, rotative parts and casing for engines, cylinder head and block for automotive, gears and casing for satellites, mirrors with nano finishing for space equipment, tanks for space launcher. Mecachrome strength is to offer to its customer a large range of machining capabilities with integrated processes.



*Parabolic antenna*



*Launcher Tank*



*Launcher Structural Panel*

**Contact :**

Laurie DOUAUD  
Sales Director Engine & Space Division  
laurie.douaud@mecachromegroup.com  
+33 (0)6 03 21 03 36

**MECACHROME**

Rue de Saint-Règle - ZI de la  
Boitardière - CS 20300  
37403 Amboise Cedex  
FRANCE

[www.mecachrome.com](http://www.mecachrome.com)



**MAIN ACTIVITY :**

SPACE STRUCTURES, COMPOSITES, ENGINEERING

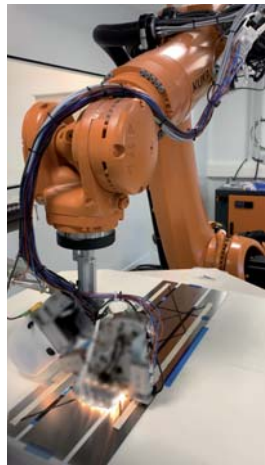
**ANNUAL TURNOVER (in €M) :** 9



The vocation of MECANO ID is the development of mechanical and thermal space subsystems. With a turnover of about \$ 10 millions and 75 people, MECANO ID is a pure space player for 24 years. With 10 others "Space Enablers", the company is part of the NewSpace Factory (<https://newspace-factory.com>), providing simple access to the French Space technology and experience. The unique in-house capabilities in engineering, composite manufacturing, and environmental testing bring high flexibility to its customers. MECANO ID can provide services and expertise as well as prime contracting fully committed to the result. After 24 years of experience, MECANO ID has developed with its customers strong ties based on respectful human relations, reliability and responsibility in commitments.



*3000 m2 Offices and Workshop dedicated to Space*



*Robotized space composite manufacturing*



*Composite antenna tower for Telecom application*

**Contact :**

Stéphane GALINIER  
Business Development Manager  
[s.galinier@mecano-id.fr](mailto:s.galinier@mecano-id.fr)  
+33 6 1505 1777

**MECANO ID**  
**9 rue Paul Charrier**  
**31100 Toulouse**  
**FRANCE**

[www.mecano-id.fr](http://www.mecano-id.fr)





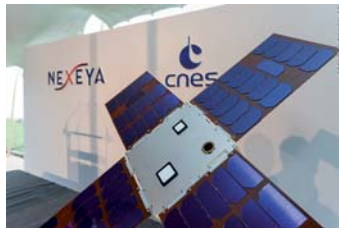
**MAIN ACTIVITY :**

A PARTNER FROM LARGE SATELLITES SUB-ASSEMBLIES TO COMPLETE SMALL SATELLITES PLATFORM

**ANNUAL TURNOVER (in €M) :** 20



NEXEYA is one of the top three European suppliers for key legacies activities : Satellite and launcher harness, Honeycomb panels, Multilayer insulation. NEXEYA asset is to merge our skills to provide complete sub-assemblies on Constellation, Earth Observation, Telecom and Science markets. NEXEYA supports space actors in the development of orbital systems by providing them solutions and guidance on their technologies



*HEMERIA - range of our nanaosatellites*



*Harnesses*



*Constellations structures IRIDIUM NEXT*

**Contact :**

Jean-Michel GOUZENES  
Space Systems Sales Manager  
jean-michel.gouzenes@nexeya.com  
33 (0)6 23 78 52 67

**NEXEYA FRANCE**

**6, rue des Frères Boudé - ZI Thibaud  
31100 TOULOUSE  
FRANCE**

[www.nexeya.com](http://www.nexeya.com)



## MAIN ACTIVITY :

INTERNATIONAL PARIS AIR SHOW



53<sup>rd</sup> INTERNATIONAL  
PARIS AIR SHOW  
LE BOURGET  
JUNE 17-23, 2019

## PRESENTATION :

The 53rd International Paris Air Show will take place from 17 to 23 June 2019. It will bring together all the players in the global industry around the latest technological innovations. The 2.381 Exhibitors, 142.000 Trade visitors, 140 Aircraft, 290 Official delegations and 3.450 worldwide journalists in 2017 reaffirm the International Paris Air Show as the largest Airshow in the world.

Innovation and digital technology in aerospace were the keywords of the 52nd edition through the new area Paris Air Lab. Featuring collaborative work from industrial groups, companies, and startups; conference debates on the future of the field; startup pitches; immersive experiences and more, the Paris Air Lab has something for everyone.

Do not miss this opportunity to be part of the industry's most outstanding and innovative event!

### KEY FIGURES

An even higher number of exhibitors:



**2,381**

exhibitors from 48 countries



### VISITORS



**180,000**  
general public  
visitors

**142,000**  
trade visitors



**THE PARIS AIR SHOW WAS  
YET AGAIN A SUCCESS,  
WITH A RECORD NUMBER  
OF EXHIBITORS**



**140**

aircraft presented  
45 of which on flying displays



### Contact :

Karima CHEHBOUN  
Deputy Sales Director  
karima.chehboun@siae.fr

SIAE  
8 rue Galilee  
75116 PARIS  
FRANCE

[www.siae.fr](http://www.siae.fr)

# FRENCH AEROSPACE INDUSTRIES ASSOCIATION



Booth #517



## PARTICIPATING COMPANIES

---

ADR  
AEROSPACE VALLEY  
AIR LIQUIDE  
ANYWAVES  
AXON CABLE  
BOLLORE LOGISTICS  
COMAT  
CS COMMUNICATION

ECA GROUP  
GAUTHIER CONNECTIQUE  
LATECOERE INTERCONNECTION SYSTEMS  
MECACHROME  
MECANO  
NEWSPACE FACTORY  
NEXEYA  
SYNTONY

*PARIS INTERNATIONAL AIRSHOW*



Groupement des Industries Françaises Aéronautiques et Spatiales



[www.gifas.fr](http://www.gifas.fr)