



Camera di Commercio Italiana in Cina
中国意大利商会
China-Italy Chamber of Commerce

AAWG

ITALIAN COMPANIES FLY HIGH



**ITALY & CHINA:
COOPERATION IN THE
AVIATION & AEROSPACE
SECTOR**

**意大利&中国
航空航天领域的合作**

Thanks to AAWG Members for their passionate contribution.

WELCOME

Institutional Greetings

H.E. ETTORE FRANCESCO SEQUI Ambassador of Italy to the People's Republic of China

China's commercial aviation market is growing at a quick pace and will become the world's largest by 2030. An increasing number of passengers are flying within the Country and abroad for business and leisure. The Chinese aerospace industry has also made giant steps forward in the last few years. China is nowadays one of the world's leading Countries as for space activities.

Both industries are strategic for China's national policy and the Chinese Government is investing relevant resources for their further development. Italian aviation companies have a high level and a longstanding expertise in these fields and could fruitfully provide the Chinese stakeholders with advanced solutions based on the complementarities existing between our two Countries.

The Aviation and Aerospace Working Group created within the CICC has the main goal of coordinating the activities of the Italian companies in China in these two key domains as well as promoting joint projects with Chinese administrations and operators. Our common goal is now to fully implement all the measures and projects in the framework of the joint initiative "RoadTo50" before 2020, when we will be celebrating the 50th anniversary of our diplomatic relations and, at the same time, China's 13th Five Year's Plan will come to an end.



中国商业航空市场正在快速增长，到2030年中国将成为世界最大的航空市场。越来越多的乘客通过航空方式在国内和海外开展商务和休闲活动。中国航空工业近些年来也取得了重大的进展。目前中国是世界领先的开展空间活动的国家之一。航空和航天业都属于中国的战略性国策，中国政府正在投入相关资源以便获得进一步发展。

意大利的航空企业在这些领域具备高水平和丰富的专业知识，可以为中国相关从业人员提供基于两国互补性的先进解决方案。在中国意大利商会内成立的航空航天工作组，主要目标是对在华意大利企业在航空航天两个重点领域内开展的活动进行协调，同时与中国政府和企业共同推进合作项目。在意大利真蒂洛尼总理与李克强总理今年5月在京签署的《2017-2020中意合作行动计划》中，航空航天被列入优先开展合作的领域。我们的共同目标是在2020年之前 - 这一年也是中意两国庆祝建交50周年、以及中国“十三五”计划完成之时 - 在“通向中意建交50年之路”合作倡议的框架之下，全面落实各项举措和项目。

MR. AMEDEO SCARPA Director, ICE/ITA Italian Trade Agency

ICE/ITA Italian Trade Agency is the Trade Promotion Organization of the Government of Italy which promotes the internationalization of Italian companies, provides information, support and advice with the aim to promote and foster export and cooperation in all areas and increasing their presence on the international markets. We are present in China for more than 50 years, with 4 offices (respectively in Beijing, Shanghai, Guangzhou and Hong Kong), organizing a large number of promotional activities every year to enhance the economic and trade relationship between China and Italy.

In the Aviation and Aerospace sectors, Italy is one of the most forefront and competitive country worldwide, with high focus in research and development and strong support from the Italian government, who sets priorities in innovative technologies, materials and solutions for Seismology, Meteorology, Space Station Program, Lunar and Mars Mission, Earth Observation, Solar Panels, etc., dedicating specific funds and resources to these fields. Under the perspective of "Made in China 2025" and "National Plan Italian Industry 4.0", all Italian institutions in China, including ICE/ITA Italian Trade Agency, are strictly working together with Chinese institutions and counterparts, supporting Sino-Italian collaboration in aviation and aerospace sector of almost a century of story, to achieve extraordinary results in the future.

ICE/ITA意大利对外贸易委员会是意大利政府的贸易促进机构，致力于促进意大利企业的国际化，为企业 providing 信息、支持和咨询，旨在促进和加强意大利企业在各个领域的输出和国际合作，提升意大利企业在国际市场上的地位。我们进入中国50多年，分别在北京、上海、广州和香港设有办事处，每年举办大量推广活动，以加强中意经贸关系。在航空和航天领域，意大利高度重视研发，且得到政府的大力支持，是世界上最前沿和最具竞争力的国家之一。意大利政府将地震学、气象学、空间站计划、月球和火星任务、地球观测、太阳能电池组件等领域的创新技术、材料和解决方案视为重中之重，并为这些领域提供专门的资金和资源。在“中国制造2025”和“意大利工业4.0国家计划”的前景下，所有在华意大利机构，包括ICE/ITA意大利对外贸易委员会在内，都和中国机构及同行保持紧密合作，支持有着近一个世纪历史的中意航空/航天领域的合作，以期在未来取得非凡的成果。

MR. DAVIDE CUCINO

Chairman, China-Italy Chamber of Commerce (CICC)

As a Chairman of China-Italy Chamber of Commerce, I am very pleased to present the brochure "AAWG: Italian Companies Fly High" and proud to introduce the Aviation and Aerospace Working Group (AAWG), an entity borne within the CICC, that gathers the member companies present in China or with interests in China whose business is related to aviation and aerospace. This brochure represents the result of the work that companies together with Italian institutions have carried out with the aim of presenting competences and capabilities of Italian aerospace industry, from design and manufacturing to services.

Italy has always been a pioneer in the aviation and space industry, from the ingenuity of various brands manufacturing aircrafts early in the thirties of the XX century to becoming the third country in the planet to ever be able to launch a satellite.

The China-Italy Chamber of Commerce (CICC) is the only business organisation recognised by both the Italian Government (Ministry of Economic Development, MiSE) and People's Republic of China (Ministry of Civil Affairs, MoCA) that aims to boost the internationalisation and settlement of Italian business and to promote the "Made in Italy" in the PRC. Established in 1991, CICC has now offices in Beijing, Chongqing, Guangzhou, Shanghai and Suzhou. The CICC is a member of Assocamerestero, the Association of Italian Chambers of Commerce Abroad, a network of 78 Chambers in 54 Countries. CICC as a major actor of Italian promotion coordinates its activities with the Italian Diplomatic Missions in China and the offices of the Italian Trade Agency. The CICC Members are a wide representation of the Italian business community including public-invested and multinational corporations, financial institutions, small and medium-sized enterprises (both manufacturing and commercial), service companies etc.

The CICC, in cooperation with its members, has established 10 working groups covering a number of sectors considered as the most important and strategic for Italian companies in China. The Working Groups gather representatives of companies operating in the same sector or located in the same geographical area. I'd like to express my gratitude to all individuals who contributed to this one brochure, including the Coordinator of our working group, companies and staff of CICC. All the CICC accomplishments to date were made possible only thanks to their dedication.



作为中国意大利商会主席，我非常高兴地推出这本宣传册“AAWG：意大利企业在翱翔”，并自豪的介绍中国意大利商会航空航天工作组（AAWG），其中汇聚了航空航天领域已经进入中国的会员企业以及对中国市场高度关注的意大利企业。FlyHigh代表了企业与意大利体制开展合作的硕果，旨在展示意大利航空航天工业的从设计制造到服务的职责和能力。意大利一直是航空航天领域的先驱，从二十世纪二十年代早期制造各种品牌的飞行器的别具匠心，到成为地球上第三个能够发射卫星的国家。

中国意大利商会（CICC）是唯一得到意大利政府（意大利经济发展部）和中国政府（中华人民共和国民政部）共同认可的意大利企业家和专业人士组成的协会，其宗旨是推动意大利企业在华的国际化、本土化进程，提升意大利制造在中国的知名度。中国意大利商会于1991年成立于北京，现已在北京，重庆，广州，上海和苏州五个城市分设有联络办公室。

中国意大利商会隶属意大利海外商会协会。意大利海外商会协会在54个国家设立78个商会，中国意大利商会作为推广意大利的主要角色，与意大利驻华使团和意大利对外贸易委员会协调开展活动。

中国意大利商会会员企业广泛代表意大利商界，包括公共投资和跨国企业，金融机构，中小型企业（制造业和商业），服务企业等。

中国意大利商会与其会员合作，共设立了10个工作组，涵盖了多个被认为是意大利企业在中国最重要和最具战略意义的行业。工作组汇聚在同一行业运作或位于同一地理区域的企业代表。

我要感谢所有为本手册作出贡献的人士，包括工作组的协调员，会员企业，以及商会工作人员。商会取得的所取得的成就都归功于他们的奉献精神。

Successful Cooperation on Different Business Models

Aviation & Aerospace Cooperation Models

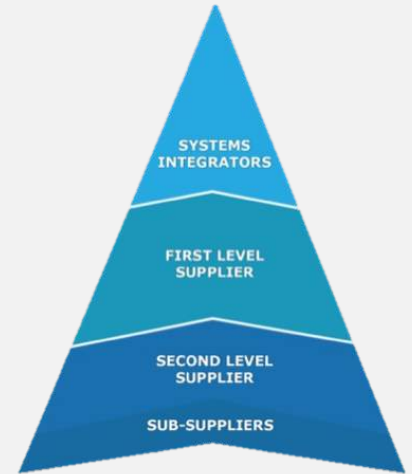
The cooperation models in the Aviation & Aerospace sector between Italy and China have been established based on a demand-offer market rule: the demand is generated by the developing Chinese economy, whereas the offer is presented by the Italian expertise in the field.

The two main cooperation models adopted refer to:

1. Supply-Chain Model
2. Value-Chain Model

The Supply-Chain Model (Picture 1) is a vertical business model that is applied to specific market segments:

1. system integrators: aircraft's engineering, coordination and final aircraft's assembly;
2. main contractors: main systems engineering, production and assembly;
3. sub-contractors: parts, components and sub-systems engineering, production and assembly.



Picture 1

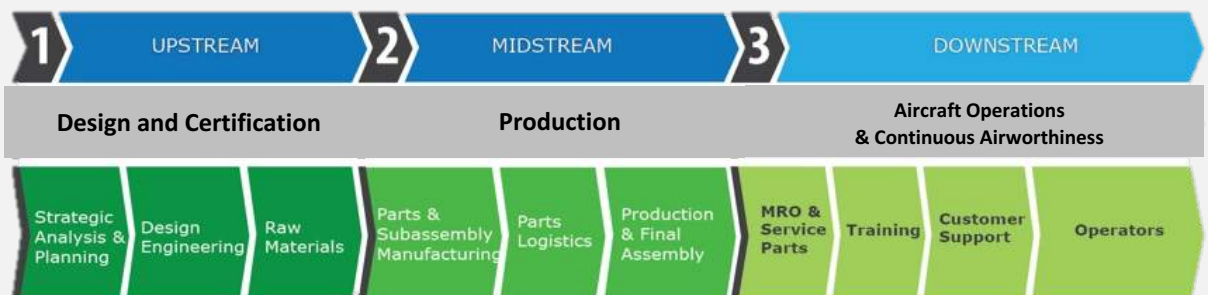
航空航天领域合作模式 中意两国在航空航天领域的合作模式的建立是以供需市场规则为基础的：需求来源于正在发展中的中国经济，然而供给由该领域的意大利专家提供。在过去三年所被采纳的这两个合作模式是指：供应链模式和价值链模式。

供应链模式（图1）是适用于特定细分市场的垂直业务模型：

1. 系统集成商：飞机工程、协调和飞机最终装配
2. 主要承包商：主要系统的工程、生产和装配
3. 分包商：零部件、部件和子系统的工程、生产和装配。

The Value-Chain Model (Picture 2) is an horizontal business model that is applied to a specific Aviation and Aerospace program and is carried out along three main streams:

1. Up-Stream: program's engineering and certification;
2. Mid-Stream: production and manufacturing;
3. Down-Stream: operations and airworthiness.



Picture 2

价值链 价值链模式（图2）是适用于特定航空航天计划的横向业务模型，它沿三个主要流程进行：

1. 上游：程序的工程和认证
2. 中游：生产和制造
3. 下游：程序操作

From 2015 to 2017, Italy and China have successfully developed cooperation programs along the following three segments:

1. Government Agencies, Authorities & Institutions,
2. System Integrators & Main Contractors,
3. Sub-Contractors & SMEs.

In 2015, Italy has joined the EU-China Aviation Partnership Project (APP) to support the cooperation between EASA and CAAC.

In 2017, the China-Italy Chamber of Commerce (CICC) successfully launched the Aviation & Aerospace Working Group (AAWG).

意中合作项目 从2015年到2017年，意大利和中国已成功发展以下合作项目：

1. 政府部门、当局和机构
2. 系统集成商和主要承包商
3. 分包商和中小型企业

在2015年，意大利加入欧盟中国航空合作计划（APP）以支持欧洲航空安全局与中国民用航空局间的合作。

在2017年，中国意大利商会（CICC）顺利成立了航空航天工作组（AAWG）。

Government Agencies, Authorities & Institutions' Cooperation Programs

Over the last few years, the Italian Space Agency (ASI) has established a close relation with the China National Space Administration (CNSA), signing a general agreement (MOU) for peaceful cooperation on space in 2013. The MOU paved the way towards a strengthened, concrete and mutually beneficial bilateral collaboration. The two Countries have also signed a specific agreement for the joint realization of the satellite China Seismo-Electromagnetic Satellite (CSES), dedicated to the observation of earthquakes from space. The satellite will be launched within the end of the year 2017.

During the visit to China of Italian State President Sergio Mattarella in 2017, ASI and the China Manned Space Agency (CMSA) signed a general agreement to promote the Italian contribution to the Chinese Space Station, which is already operational and will be fully implemented starting from 2020.

In 2014 ASI also signed a Memorandum of Understanding with the National Space Science Center (NSSC) of the Chinese Academy of Science to collaborate in the field of space science. The first Chinese scientific satellite, Dark Matter Particle Explorer (DAMPE) was launched in December 2015 and its construction benefited from a significant Italian contribution. Italy in fact provided the silicon tracker built by the National Institute of Nuclear Physics (INFN). ASI has been giving continuous support to China's manned space missions, collaborating with the China Satellite Launch Tracking and Control (CLTC) for the tracking of the orbits through the ASI base in Malindi (Kenya), i.e. the Broglio Space Center – BSC ("Centro Spaziale L. Broglio").

ASI and the Chinese Ministry of Science and Technology have also collaborated in the Moon Mapping project, dedicated to the preparation of a multidimensional map of the moon using the data of the Chinese lunar satellites.

“ The aviation and aerospace sectors are a priority within the Italy-China Strategic Partnership's Agenda, as confirmed by the 2018-2020 Action Plan. ”

H.E. Ettore Francesco Sequi
Ambassador of Italy
People's Republic of China

政府部门、当局和机构的合作项目 在过去的几年里，意大利航天局和中国国家航天局保持着密切的联系，并在2013年签署了太空空间和平合作总协议（MOU）。MOU协议旨在为坚固，具体的以及互利的双边合作铺平道路。两国还签署了具体协议，共同实现中国地震电磁卫星（CSES）用以太空中对地震进行监测。该卫星将于2017年发射。

在2017意大利共和国总统塞尔吉奥·马塔雷拉的国事访问中，意大利航天局和中国国家航天局签署了一项促进意大利对中国航空事业贡献的协议并且已经开始运作，将在2020年全面实施。

2014年，意大利航天局与中国科学院-国家空间科学中心签署了一份加强在空间科学领域合作的谅解备忘录。中国第一颗科学卫星，暗物质粒子探测器（DAMPE）于2015年的成功发射离不开意大利方的帮助。事实上，意大利提供了由国家核物理研究所（INFN）提供的硅跟踪器。ASI一直不断支持中国的载人航天任务，并与中国卫星发射与跟踪控制中心（CLTC）合作，通过ASI位于马林迪（肯尼亚）的基地，即布鲁日奥航天中心（BSC），来进行轨道跟踪。ASI和中国科技部也在月球测绘工程中合作，致力于使用中国月球卫星数据来编制月面多视图。

ITALY-CHINA PLAN OF ACTIONS

System Integrators & Main Contractors' Cooperation Programs

System Integrators & Main Contractors' Cooperation Programs

The main representative in this section is Leonardo Group, as the only Italian example of System Integrator both in the national and international sphere. In this field, Leonardo Group has developed overtime outstanding skills concerning both fixed wings platforms and spinning ones. Over the past few years it also gained experience in the field of unmanned aircraft.

The System Integrator skills include:

1. the Air Vehicle part (along with the integration of the structure with the engines and the related system),
2. the Flight Control part (comprehensive of primary flight controls and Flight Control System – Autopilot automatic systems),
3. the one about the Aircraft Management (including the Flight Management System with all CNI components – communications, navigation and identification),
4. the one concerning the Plant Management System, with all control and monitoring tools of the different systems (electrical, hydraulic, ECS ones),
5. and finally the Mission Management part, which include detectors for the correct implementation of the main operations.

These skills are employed through the use of specific technologies and/or through the integration of further tools from the main OEM concerning the field.

Regarding the branch of unmanned systems (UAS), the integration skills are extended both to the Ground Segment components, which include guiding data link, data transmission and mission control, and to those of mission planning and rehearsal, briefing and de-briefing.

These last aspects add particular value to the relevant skills acquired by Leonardo Group in the crucial field of modeling and simulation, useful also for advanced training purposes.

系统集成商与主要承包商的合作项目 莱昂纳多集团是意大利系统集成商在国内及国际环境下取得成功的典型。

在这一背景下，该集团已在包括固定翼和旋翼方面展现出相当成熟的能力，近几年也在无人机驾驶领域有所突出。集成系统的能力包括专有技术和/或第三方集成技术（主要来自原始设备制造商领域）的使用。

“Italy has always been a pioneer in the aviation and aerospace industry.”

Davide Cucino
Chairman of CICC

1. 飞行器（包括发动机及相关设备的结构一体化），
2. 飞行控制（包括从主驾驶飞行控制和自动飞行控制系统即自动驾驶仪）的一部分，
3. 飞行管理（包括通信、导航、识别的所有部件在内的飞行管理系统），
4. 包括控制部件和设备检测（电气，液压，电控系统等）的设备管理系统，
5. 任务管理，包括利用传感器来进行主要作战任务。至于无人机系统（UAS）合成能力将被扩大到地面段的组件中，包括驾。

驶数据链接、数据传输和任务控制，以及任务规划和演习、简报和通报。这些方面发挥了莱昂纳多集团在建模与仿真的决定性领域相关技能，这些技能也将应用于先进化操练中。

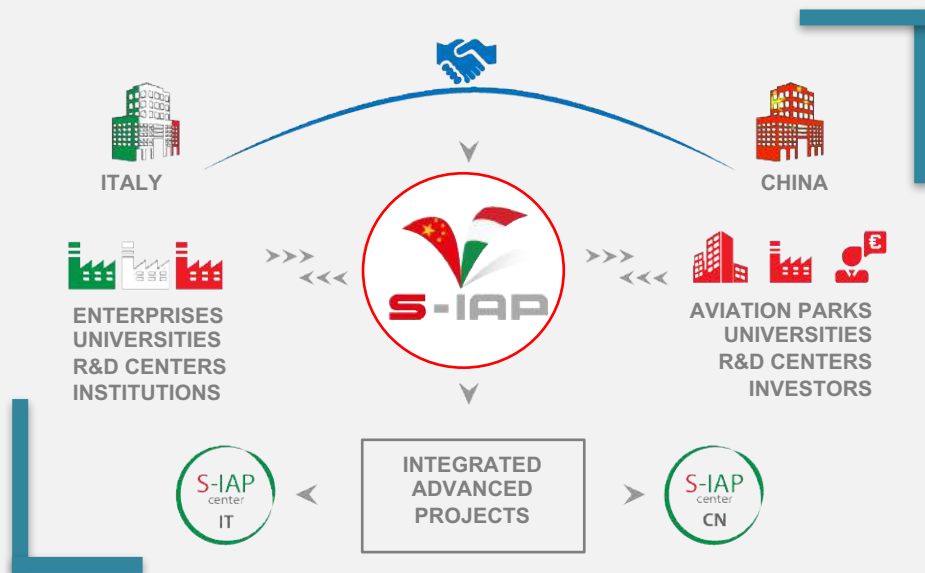
Sub-Contractors & SMEs' Cooperation Programs

The first best practice, developed as a result of the actions undertaken by Italian Aerospace Network (IAN) in recent years, and tailor-made to activate sub-contractors and SMEs' cooperation programs, is the Sino-Italian Aerospace Platform (S-IAP), whose targets are summarized as follows:

1. **Promotion:** to promote the cooperation in the field of aviation and aerospace between Italian and Chinese enterprises at a sub-contractors and SMEs' level;
2. **Incentive:** to scout for the necessary incentives for the investments required by the enterprises and the start-ups;
3. **Analysis:** to study and analyse the market trends, the demand-offer dynamics and the projects' performances;
4. **Create:** to establish communications and to create all the necessary infrastructures for those Italian and Chinese enterprises that are seeking cooperation;
5. **Guarantee:** to control that the type and quality of cooperation's programs observe international political and economical regulations.

分包商&中小型企业合作项目 从2013年至今，根据意大利航空航天企业协会（IAN）开展的最佳投资，市场研究和可行性研究报告，中意航空航天企业平台（S-IAP）作为专为分包商和中小型企业合作量身定制的项目，成为了最佳的实践项目。该项目的目标总结如下：

1. **推广：**在分包商和中小企业层面，推广促进意大利和中国企业在航空航天领域的合作；
2. **激励：**为企业和初创企业所需的投资探索必要的激励措施；
3. **分析：**研究和分析市场趋势，需求供给动态和项目成效；
4. **创建：**为正在寻求合作的意大利和中国企业建立沟通渠道和创建所有必要的基础；
5. **保证：**在遵守国际政治和经济条例前提下，控制合作方案的类型和质量。



The Sino-Italian Aerospace Platform (S-IAP) has been studied and developed by Italian and Chinese entrepreneurs, managers and professionals, it was recognized as a Sino-Italian best practice by the two Governments in 2015, financed by investors and tailor-made to support the needs of Italian and Chinese enterprises in the development of the aviation and aerospace industry. A comprehensive projects' portfolio is being developed within S-IAP. Among the main projects launched within this best practice:

- an aeronautical training academy,
- a general aviation aircraft assembly-line,
- an engine research & development centre,
- a zero-energy consumption airport concept.

中意航空航天企业平台（S-IAP）由意大利企业家，管理人员和专业人士研究开发，作为2015年两国政府的最佳实践项目，该项目由投资者资助并针对中国航空航天业的意大利和中国企业的需求量身定制。S-IAP中正在进行的项目组合总价值为3.8亿欧元。在这些项目中已经开展的主要项目包括：

- 中意航空培训学院，
- 4座飞机装配线，
- 航空发动机研发中心，
- 零能耗通用航空机场概念等。

Italy: A Key Player In The EU-China Aviation Partnership Project (APP)



Italy: a key player in the EU-China Aviation Partnership Project (APP)

Since its establishment in 2015, Italy has taken active part into the EU-China Aviation Partnership Project (APP), a 10 million euro project of the duration of 5 years (2015-2020), financed by the European Commission through the Foreign Policy Instrument. The APP outlines specific areas of cooperation with the Civil Aviation Administration of China (CAAC) to increase the perception of the European aviation industry, and with the ultimate purpose to achieve a Bilateral Aviation Safety Agreement (BASA).

The main European partner is the European Aviation Safety Agency (EASA), which has signed a management agreement with the European Union Chamber of Commerce in China (EUCCC). At the heart of the EU-China APP is the call for closer cooperation between the EU and China at an official and authority level and the linking of technical cooperation with policy dialogue. This is reflected in the APP's objective of strengthening the economic partnership between the EU and China in the civil aviation domain. The project incorporates the idea of a close cooperation between EASA and various European partners to bring out the best of European aviation expertise to the project. Likewise, on the Chinese side the project will interact with several Chinese stakeholders coordinated by CAAC.

For the first time, the European and Chinese aviation authorities, CAAC and EASA, directly implement activities together, in close cooperation with their partners. Italian members of the APP are the Embassy of Italy to the People's Republic of China, Leonardo Group and Italian Aerospace Network.

意大利：欧盟 - 中国航空合作项目（APP）的重要参与者 自2015年成立以来，意大利积极参与欧盟 - 中国航空合作项目（APP），接借助欧盟委员会的外交政策工具的资金支持，成立了一个持续5年（2015-2020年）总计1000万欧元的项目。APP概述了与中国民航局（CAAC）合作的具体领域，以增加对欧洲航空业的认知，并最终达成双边航空安全协议（BASA）。

欧洲主要的合作伙伴是欧洲航空安全局（EASA），该机构与欧盟中国商会（EUCCC）签署了管理协议。欧盟中国APP的核心是要求在官方和权威层面加强欧盟与中国的合作，并将技术合作与政策对话联系起来。这也反映在APP的目标是加强欧盟与中国在民用航空领域的经济伙伴关系。该项目融合了EASA与欧洲各国合作伙伴之间密切合作的理念，并为项目提供最好的航空专业背景知识。同样，在中方，该项目将与中国民航局协调的多个中国利益相关者进行互动。

欧盟和中国航空当局，民航总局和EASA首次密切合作，共同开展活动。APP的意大利成员包括意大利驻中华人民共和国大使馆，莱昂纳多集团和意大利航空航天网。



The Bulletin published by the China Civil Aviation Authority (CAAC) focuses its attention on the following 8 segments:

1. Civil Aviation Transportation
2. General Aviation
3. Aviation Efficiency & Financial Performance
4. Safety & Service Quality
5. Fixed Assets Investments
6. Energy Conservation & Emissions' Reduction
7. Education, Science & Technology
8. Pilots

The aviation transportation industry (passengers and cargo) has achieved 640 billion RMB in 2016 (+6.3% from 2015) and a net profit of 56.8 billion RMB (+8.7% from 2015). Investments in fixed assets (infrastructure developments and technological upgrade) have achieved 170 billion RMB (+1.7% from 2015).

Main data are introduced in the graphic here after. At the end of 2016 there were 2.950 registered commercial aircrafts in China, 218 airports (+8 from 2015), 120 air-services' bilateral agreements (44 Asia, 24 Africa, 36 Europe, 9 Americas, 7 Oceania) and 59 globally registered airlines (44 state-owned and 15 privately-owned). There are 50.504 certified commercial pilots (+4.981 from 2015). National data have recorded over 1 billion passengers in 2016 (+11.1% from 2015), among which: 551 million in the Eastern Region, 62 million in the North-Eastern Region, 102 million in the Central Region and 301 million in the Western Region.

年由中国民航局（CAAC）公布的公告重点关注以下8点：民航运输，通用航空，航空效率和财务业绩，安全和服务质量，固定资产投资，节能减排，教育、科学和技术，飞行员。2016年，航空运输业（载客和货运）达到6400亿人民币（比上年增长6.3%），净利润568亿元（比上年增长8.7%）。

固定资产投资（基础设施开发和技术升级）达到1700亿元人民币（比上年增加1.7%）。

如下是国内航空公司的市场份额：国航集团：25.3%，东方航空：20.5%，海南航空：14.8%，其他：12.2% 截止2016年底，中国共有2950架注册商用飞机、218个机场（2015年新增8个机场）、120个航空服务双边协定（亚洲44个，非洲24个，欧洲36个，美洲9个，大洋洲7个）和全球59家注册航空公司（国有44家，民营15家）。注册商业飞行员共有50504名（2015年新增4981名）。全国数据显示2016年的旅客数量超过10亿人（2015新增11.1%），其中东部地区为5亿5100万人，东北地区为6200万人，中部地区为1亿200万人，西部地区为3亿100万人。



Over 15 million tons have been domestically transported in 2016 (+7.2% from 2015). Over 9.238 million aerial transportations have been recorded in 2016 (+7.9% from 2015). Beijing Airport (PEK) has registered a traffic of 94 million passengers: for the 7th time it is the 2nd busiest airport worldwide. Shanghai Pudong Airport (PVG) is the 3rd busiest airport worldwide for the 9th consecutive year for cargo transportation.

The above listed data are aligned to the ones published by IATA, according to which China will surpass the U.S. by 2024.

2016国内运输量超过1500万吨（2015年新增7.2%）。2016年共记录了超过923万8000次的空中交通（2015年新增7.9%）。北京机场（PEK）已登记的客流量为9400万人次：第七次排名全球第二繁忙机场。

上海浦东机场（PVG）已连续第九年是全球第三繁忙的货运机场。上述数据来自国际航空运输协会IATA，并且协会预测2024年中国将超越美国。

CHINESE MAIN PLAYERS

The Growth of Strong International Players

Aviation Industry Corporation of China (AVIC) is a state-owned enterprise divided into 5 segments: Fix-wing aircraft production; Rotary-wing aircraft production; General aviation; Engines; Systems. It affiliates 12 main enterprises located in different Chinese areas (Beijing, Xi'an, Chengdu, Nanchang, Guizhou, Harbin, etc.). In march 2016, three AVIC companies were merged into a new state-owned enterprise called China Aircraft Engine Group, involved into the production of aircraft's engines.

中国航空工业集团公司（简称AVIC）是一家国有大型企业，业务领域分为以下五个部分：固定翼飞机生产，旋翼飞机生产，通用航空飞机，航空发动机，操作系统。AVIC下属12多家主要企业分布在中国不同地区（北京、西安、成都、南昌、贵州、哈尔滨、沈阳等）。2016年3月，AVIC三家下属公司合并组建中国航空发动机集团，制造生产航空发动机。

Civil Aviation Administration of China (CAAC) is the Chinese aviation authority, headquartered in Beijing, with branches in Shanghai and Xi'an. Among the companies that depend from CAAC there are: China Academy of Civil Aviation Science and Technology (Centre of Aviation Safety Technology, CAST), which is the only no-profit institute approved by the Ministry of Science & Technology (MOST) in the aviation sector. And Air Traffic Management Bureau (ATMB), which is the organization that handles air traffic.

中国民用航空总局（简称CAAC）是中国航空事业的主管机构，总部位于北京市，在上海市和西安市均设有分支机构。CAAC直属机构中包括：中国民航科学技术研究院（现航空安全技术中心，简称CAST），是航空领域唯一的，由国家科技部批准的非营利性机构，空中交通管理局（简称ATMB），是空中交通管理机构。

China Aerospace Science & Technology Corporation (CASC) is the main Chinese manufacturer of space crafts. It employs over 200.000 people and affiliates 8 research centres: CALT (China Academy of Launch Vehicle Technology); AASPT (Academy of Aerospace Solid Propulsion Technology); CAST (China Academy of Space Technology); AALPT (Academy of Aerospace Liquid Propulsion Technology); SAAT (Sichuan Academy of Aerospace Technology); SAST (Shanghai Academy of Space Flight Technology); CAAET (China Academy of Aerospace Electronics Technology); CAAA (China Academy of Aerospace Aerodynamics).

中国航天科技集团公司（CASC）是中国主要的航天器制造商。员工总数超过200,000人，下属8个研发中心：CALT（中国运载火箭技术研究院），AASPT（航空航天固体推进技术研究院），CAST（中国空间技术研究院），AALPT（航空航天液体推进技术研究院），SAAT（四川航天技术研究院），SAST（上海航天飞行技术研究院），CAAET（中国航天电子技术研究院），CAAA（中国航天空气动力技术研究院）。

China National Space Administration (CNSA) is the Chinese agency in charge of carrying out the Chinese national space programs, to administrate science and technology programs and to undertake international cooperation. It is composed of four departments: general planning, engineering, quality control and external relations. CNSA responds to the State Administration for Science, Technology and Industry for National Defence (SASTIND), Ministry of Industry & Information Technology (MIIT).

中国国家航天局（简称CNSA）负责执行国家太空计划，管理航空科技项目和开展国际航空交流合作。它由四个部门组成：总体规划、工程设计、质量控制和对外关系。中国国家航天局对应国家科学技术工业局（SASTIND）、工业和信息化部（简称MIIT）。

China Electronics Technology Group Corporation (CETC) researches, develops and produces civil and military informative and electronic systems, control systems, radars and communication systems for the aviation and aerospace industry.

中国电子科技集团公司（简称CETC）主营用于航空航天领域的民用和军事电子通信系统、控制系统、雷达通信系统。

Commercial Aircraft Corporation of China (COMAC) is a state-owned enterprise that manufactures commercial jets: ARJ21 (twin engine, single aisle commercial jet, up to 100 passengers), C919 (twin engine, single aisle, up to 190 passengers), two wide body (twin engine, double aisle): C929 (up to 290 passengers); C939 (up to 390 passengers).

中国商用飞机有限公司（COMAC）是一家制造民用喷气式飞机的大型国有企业：ARJ21：双引擎，单过道民用喷气机，最多可承载100位乘客，C919：双引擎，单过道，最多可承载190位乘客，COMAC近期推出的宽体客机（双引擎，双过道），C929（最多可承载290位乘客），C939（最多可承载390位乘客）。



Ente Nazionale per l'Aviazione Civile (ENAC) is the Italian Civil Aviation Authority, established in 1997 by Legislative Decree no.250/97 as the National Authority committed to oversee the technical regulation, the surveillance and the control in the civil aviation field. ENAC is engaged in dealing with the diverse regulatory aspects of the air transport system and performs monitoring functions related to the enforcement of the adopted rules regulating administrative and economic issues.

国家民航局 (ENAC) 是意大利民用航空政府机构，根据第250/97号法令，成立于1997年7月25日，职能是监督审视技术法规、执行民用航空领域监察和管控。ENAC负责处理航空运输系统各方面的监管工作，并对相关行政和财政规范的执行实施监督职能。

Ente Nazionale di Assistenza al Volo (ENAV) is owned by the Ministry of Economy and Finances and managed by the Ministry of Infrastructure and Transport, through ENAC, the Italian Civil Aviation Authority. Together with the Italian Air Force, the company is responsible for the provision of air traffic services (ATS) and other air navigation services in Italy. As an air navigation service provider (ANSP) it is responsible for the provision of air traffic control services (ATCS), flight information services (FIS), aeronautical information services (AIS), and issuing of weather forecasts for the airports and the airspace under its responsibility. In 2001 the agency ENAV was transformed into ENAV S.p.A., a company owned by the Italian Treasury.

国家航空救援服务公司 (ENAV) 属于意大利经济和财政部，通过意大利民航政府机构 -- 国家民航局 (ENAC)，由意大利基础设施和运输部管理。与意大利空军一起，该公司负责在意大利提供空中交通服务 (ATS) 和其他空中航行服务管制。作为空中航行服务提供商 (ANSP)，它负责提供空中交通管制服务 (ATCS)、飞行信息服务 (FIS)、航空信息服务 (AIS)，以及发布机场和其它空域的天气预报。公司名称 ENAV，是前公共机构“国家航空救援服务公司”的缩写。2001年，该机构 (ENAV) 转变为意大利财政部拥有的公司 - ENAV S.p.A.。

“ *The Italian aviation & aerospace industry is a globally recognized excellence. AAWG is the voice of the Italian excellence in China.* ”

Angelo Cecchini
AAWG Vice-Coordinator

Agenzia Spaziale Italiana (ASI) is a government agency established in 1988 to fund, regulate and coordinate space exploration activities in Italy. Operating under the Ministry of Education, Universities and Research (MIUR), the agency cooperates with numerous national and international entities which are active in aerospace research and technology, and with the Italian President of the Council of Ministers.

意大利航天局 (ASI) 是一家政府机构，成立于1988年，旨在资助、规范和协调意大利的空间探索活动。通过教育部、大学和研究机构 (MIUR)，该局与多个活跃于航空研究和技术领域的国内和国际实体，以及意大利总理合作。

ITALIAN MAIN PLAYERS

Leading Innovators

Leonardo Group is a global high-tech company and one of the worldwide leaders in Aerospace, Defense and Security.

Leonardo designs and develop products, services and integrated solutions for governments, citizens, institutions and armed forces, covering every possible field: air and land, naval and maritime, space and cyberspace.

The company counts on more than 45.000 employees, 60 production facilities operating in 20 different countries.

莱昂纳多股份公司，是国际化高科技公司，在全球航空航天、国防和安全领域处于领先地位。莱昂纳多为政府、民众、机构和武装部队设计和开发产品、服务以及综合解决方案，产品涵盖几乎每个相关领域：空中和陆地、海军和海事、空间和网络空间等。该公司的运营通过其7个部门：直升机事业部、飞机事业部、航空结构事业部、空中和空间系统事业部、陆地和海上国防电子事业部、防御系统事业部、安全和信息系统事业部，以及子公司和合资企业，其中最重要的是：Leonardo DRS 公司、Telespazio公司、Thales Alenia Space公司和MBDA公司。莱昂纳多拥有超过四万五千名员工，在20个不同的国家运营着60个生产企业。2016年收入超过120亿欧元，新订单超过200亿欧元，再加上总额约350亿欧元的积压订单，相当于近3年的生产量。

为确保竞争力和最高质量标准，公司每年将其收入的11%以上投入研发，相关领域的研发投入在世界排名第五，欧洲排名第二。



意大利航空航天企业协会 (IAN) 是由意大利的5家企业于2013年成立的非盈利组织，发展至今（2017年），意大利航空航天企业协会已经拥有了25家企业和众多专业人士。

意大利航空航天企业协会于2014年受到了意大利驻华使馆，意大利贸易委员会和中意商会的机构赞助。

IAN的主要市场是大中华区和东盟地区；IAN总部设在意大利，在中国（上海和西安）设有分公司，负责：
1) 机构关系：与政府，机构，协会，航空工业园区，市政，地区，省市建立和发展稳固的关系。
2) 营销策略与商业推广：根据中国的市场需求，为会员单位量身定制各种需求。
3) 教育活动：为飞行员和飞机技术人员建立和交付认证的培训系统和解决方案。
4) 技术支持：为航空航天项目的开发提供技术支持。

IAN的成员，专业人员，客户和合作伙伴（机构，技术和媒体）紧密的共同合作，并于近期建立了IAN工作小组旨在进行先进的工程，系统和组件，培训，机场和直升机场，航空领域等项目。

Italian Aerospace Network (IAN) is a no-profit organization composed by Italian enterprises, managers and professionals. IAN has received institutional patronage by the Embassy of Italy to the People's Republic of China, the Italian Trade Commission and the China-Italy Chamber of Commerce in 2014.

IAN's main markets are Greater China and ASEAN; IAN is headquartered in Italy and has branch offices in China (Shanghai and Xi'an) to take care of:

- 1) Institutional Relations: creating and developing relations and lobbies with Governments, Ministers, Associations, Aviation & Industrial Parks, Municipalities, Regions, Provinces and Clusters.
- 2) Marketing Strategies & Commercial Promotion: building and tailoring the offer of its Members according to the Chinese demand.
- 3) Educational Activities: creating and delivering certified training systems and solutions for pilots and aircraft's technicians.
- 4) Technical Support: to technically support the development of aviation and aerospace programs.

IAN Members, Professionals, Clients and Partners (Institutional, Technical, Media) closely work on jointly-developed projects within the recently created IAN Working Groups: advanced engineering, systems and components, training, airports and heliports, space.



Cluster Tecnologico Nazionale Aerospazio (CTNA) is a public-private association whose purpose is to develop the national aerospace sector. Its partners are:

- 1) Regional aerospace clusters (Piemonte, Lazio, Campania, Lombardia, Puglia, Umbria, Emilia-Romagna, Toscana, Sardegna) 区域航空联盟
- 2) Consiglio Nazionale delle Ricerche (CNR) 国家研究委员会(CNR)
- 3) Agenzia Spaziale Italiana (ASI) 意大利航天局(ASI)
- 4) Politecnico di Milano, Politecnico di Torino, Università di Bologna, Università di Napoli, Università di Roma, Università del Salento 一些意大利大学
- 5) Leonardo, Avio, Federazione Aziende Aerospazio, Difesa e Sicurezza (AIAD).

CTNA promotes an intelligent, modern and eco-friendly transportation system and an integrated space research system. CTNA promotes the Italian presence into European Union's space programs and affiliates the technological platform SPIN-IT (Space Innovation in Italy) and ACARE-Italia (Advisory Council for Aeronautics Research in Europe – ACARE).

意大利航天航空技术联盟(CTNA) 作为一家公私协会，主要目的在于发展国家航天航空事业，其合作单位包括在上面阐述过。CTNA致力于推广现代化的智能环保交通系统以及集成空间研究探索系统。CTNA促进意大利参与欧盟空间计划。CTNA隶属于SPIT-IT技术平台（意大利空间创新<http://www.spin-it.eu>），以及ACARE-Italia（欧洲航空研究顾问委员会 ACARE http://www.aiad.it/it/attivita_perm_acare.wp）。CTNA致力于推广现代化的智能环保交通系统以及集成空间研究探索系统。CTNA促进意大利参与欧盟空间计划。CTNA隶属于SPIT-IT技术平台（意大利空间创新），以及ACARE-Italia（欧洲航空研究顾问委员会-ACARE-）。



Italy has an excellent offer in the field of aviation and aerospace universities and polytechnics, such as: 意大利在航天航空大学及理工学院领域有很多卓越的院校可供选择，如，

- Politecnico di Torino
- Politecnico di Milano
- Università di Padova
- Università di Bologna
- Università di Pisa
- Università di Roma Tre
- Università di Napoli "Federico II"
- Seconda Università degli Studi di Napoli
- Università del Salento
- Università di Palermo
- Università di Roma "La Sapienza"

Among them, Politecnico di Milano, Università di Bologna and Università del Salento offer english-speaking courses for international students. 其中，Politecnico di Milano, Università di Bologna and Università del Salento，这几所大学都可以为国际学生提供英文课程。

A Unique Platform for Italy & China

Aviation & Aerospace Working Group (AAWG)

AAWG represents the interests of Italian companies in China working in the aviation and aerospace sector. Members of the AAWG are manufacturers, service providers and professionals, who work together to define and put in practice a program of actions to gain knowledge and market share.

AAWG aims to:

1. Communicate with the major Italian and Chinese Institutions with reference to the civil aviation, general aviation and aerospace industry;
 2. Create and keep relations with Chinese Aviation & Aerospace players, manufacturers and decision-makers that are shaping the future of the domestic aviation industry;
 3. Promote a unique brand/slogan to present the Italian companies in an original way, through a calendar of events and on-the-field activities.
 4. Take part into institutional programs and lobbying activities.
- AAWG works closely with the Embassy of Italy to the People's Republic of China, the Consulates General and the Italian Trade Agency, to support the promotion of the Italian aviation and aerospace industry.

航空航天工作小组 (AAWG)

中国意大利商会航空航天工作小组 (AAWG) 代表在中国境内经营范围直接或间接涉及航空和航天领域的意大利企业。航空航天工作组的成员工作目标是制定并参与完成工作组计划，旨在加强对在华业务的了解和加大在中国市场的份额。

航空航天工作小组将努力实现下列目标：

1. 分析研究中国政府针对民用航空、通用航空、和航天工业的政策和方针。
2. 提供活跃在航空航天领域所有中国企业、相关制造行业及为重塑未来国内航空制定蓝图的决策层的介绍
3. 创建并推广一个品牌/口号，旨在通过一系列具有原创性的活动日程和实地活动对意大利企业进行推介。
4. 参加机构项目和游说活动

AAWG的主要目的是与意大利驻中华人民共和国大使馆，意大利驻中华人民共和国领事馆和意大利贸易署密切合作，支持意大利航空航天工业的发展。AAWG会员来自组织，制造商，服务提供商和专业人士。



“I express my gratitude to all the Institutions, Members, Partners and Colleagues that support the CICC AAWG with invaluable and consistent contribution, innovative and disruptive ideas, passion and professionalism.”

Riccardo Coli
AAWG Coordinator

AVIATION AND AEROSPACE
WORKING GROUP



The cooperation between Italy and China in the Aviation & Aerospace Industry is considered by the two Governments as one of the main sectors for further development of the bilateral economic and trade relations. The Actions' Plan 2015-2017, adopted in 2014 has been implemented by the two Countries with successful results. Further progress is nonetheless expected, also thanks to the visit that the Italian State President, H.E. Sergio Mattarella carried out in several Chinese cities (Beijing, Xi'an, Shanghai and Chongqing) on February 2017, as well as to the excellent diplomatic, economic and commercial relations between the two Countries.

On that occasion the Italian and the Chinese Heads of Government adopted an Actions' Plan on the Strengthening of the Italy-China Strategic Partnership 2018-2020, which outlines specific priorities for bilateral cooperation: Aviation & Aerospace is one of them.

航空航天领域被中国和意大利两国政府视为进一步推进双边经贸关系的重点合作领域之一。2014年签署的“2015 – 2017三年行动计划”已由两国付诸实践，并取得了卓越的成果。

意大利总统塞尔吉奥·马塔雷拉于2017年2月访华并访问了北京、西安、上海和重庆等城市，两国在外交和经贸关系取都得了实足的发展，由此可以预见：中意两国在航空航天领域的合作也将进一步展开。

中意政府首脑还签署了“关于加强中意战略合作关系的行动纲领（2018-2020）”，纲领指出了双边合作的优先领域：航空航天领域是其中之一。

China's aviation industry, officially established in 1949, is organized under a series of State-Owned enterprises located all around China's major industrial provinces. Aviation industry parks, such as in Beijing, Xi'an, Chengdu, Shanghai, Shenyang, Tianjin, Nanchang, Zhuhai, etc.) have grown over the past years to welcome more foreign and privately-owned industrial projects. Aviation and aerospace industry is one of the major ten industries China will focus on and it is a priority in the China's development and reform agenda.

中国的航空产业起步于1949年，由一系列位于中国主要工业省份的国有企业组建。

北京、西安、成都、上海、沈阳、天津、南昌、珠海等航空产业园区在过去几年中不断发展，迎接更多的外资和民营工业项目。航空航天是中国未来重点关注的十大产业之一，也是中国发展和改革规划的重中之重。



Italy's Aviation & Aerospace Industry has longstanding traditions: it was born at the beginning of the 20th century thanks to the experience of a number of players (Caproni, SIAI Marchetti, AerMacchi, AerItalia, Agusta, Piaggio, Alenia, Avio) that have immediately positioned Italy at the top of the global ranking. State-owned enterprises, main-contractors, sub-contractors, clusters, associations, universities and research centres play a constructive role into the development of one of the most advanced industries worldwide.

意大利的航空航天工业传统悠久：它诞生于二十世纪初，得益于多个企业的经验和贡献（Caproni、SIAI Marchetti、AerMacchi、AerItalia、Agusta、Piaggio、Alenia、Avio），立刻排名于世界前列。国有企业、主承包商、分包商、社团、协会、大学和研究中心在全球最先进的行业发展中发挥建设性作用。





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