

Aerospace and Defence Industries

KEY FACTS & FIGURES 2015



Introduction and Methodology



In 2015 ASD member associations were spread across 19 European countries: 16 of them in the EU plus Norway, Switzerland and Turkey.

Data for the aeronautics, land and naval defence sectors are sourced via a well-established process used for the collection of ASD's "Facts and Figures". ASD statistics include the data provided by National Associations for the purpose of publication by ASD only at a European consolidated level. A very limited number of figures relate to available sources for the purpose of cross-check. The perimeter is different from that of EU, EDA or NATO. Analysis for cross-check and coherence was conducted by comparing publicly-available sources such as major companies' reports, national and European trade reports and international third sources. Long-term comparisons instead of year-to-year should be considered for defence due to fluctuations of currency rates, budget allocations/ planning and contracts spanned over many years.

ASD figures are adjusted in order to offset any double-counting related to military aeronautics. Data are unconsolidated, with the exception of space sales only for 2015, and in nominal terms. Foreign exchange effects are accounted, meaning fluctuation of currency exchange rates (increased \$ strength and slump in the value of the pound). As regards 2015, UK adopted a different methodology for calculation based on national statistics.

Note that the ASD Facts and Figures does not include the thousands of suppliers to the aeronautics, space and defence sectors throughout Europe, which are not members of ASD or whose main interests do not fall into the scope of ASD sectors. They neither specify information on dual use nor the security sector whose perimeter has not yet been fully defined.

The definition of aeronautics includes civil and military aeronautics. The definition of defence, in the meaning of European Defence Industry as defined by ASD, combines all sectors, i.e. military aeronautics and space, land and naval.

Major Trends in the European Aerospace and Defence Industry

2015 was another year of growth for our industry, which remains sustainable and competitive, against the uncertainties and slowdown of the European economy and manufacturing. The European ASD industry experienced improved performances such as growth in revenues, export and market competitiveness.

In 2015, the European aerospace and defence industries achieved a turnover of 222 billion euro showing an increase of 11% in comparison with 2014 mainly due to growth in the aeronautics sector, with an increase of 17% in civil activities due to export sales and of 5% in military sales mainly in the land and naval sectors.

A continued stability of investments in R&D is noted, assumed in the range of 20 billion euro, with an equally split between civil and military activities allowing a valuable return (see exports trend) which need to be pre-

served in the future facing increased competition from third government investments and competitors.

As regards exports, export deliveries were the driver for growth in civil aeronautics (2014–2015: from 65 to 74 billion euro exports) of which 46 billion euro extra-EU. Total exports include final sales of finished products and components and intra-EU industry sales ranging 25-30 billion euro. Export account to an average of 75% of total sales in civil aeronautics, its trend has been driving the overall growth of the sector. In line with the global military demand, a similar trend took place in Europe with military exports which accounted in 2014–2015 a 50% increase of value of orders (continuing in 2016), higher than the average of the last 5 years. Deliveries are assumed to reach the level of 40 billion euro, with a 60:40 ratio between extra and intra-EU sales. This includes final items and parts to industries.

(Official sources and extrapolation from associations)

Key Characteristics for the Year 2015

54% Civil
46% Military

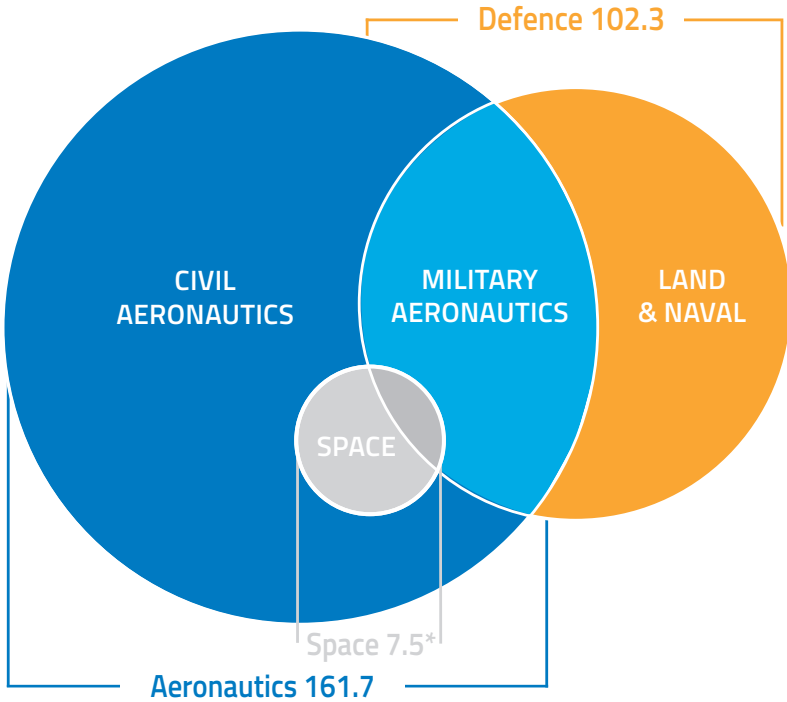


R&D expenditure **20 BILLION EURO**
of which... **16 billion euro in Aeronautics**

TURNOVER **222 BILLION EURO**
Direct employment **847,700** of which:
Aeronautics 552,265 (2/3 civil, 1/3 military)
Land & Naval 257,000 ▪ Space 38,435*

Synoptic Chart of ASD Sectors for the Year 2015

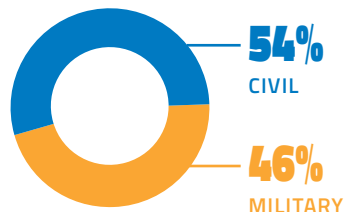
Sales in billion euro



Total: 222.2 billion euro

Total civil activities: 119.9 billion euro

Total military activities: 102.3 billion euro



*© 2016 by Eurospace, consolidated data

Key Figures

Aeronautics Sector

Aeronautics (including civil and military activities) turnover level represents 161.7 billion euro compared to 140.5 billion euro in 2014. Civil aeronautics shows a significant increase of 23% with a turnover amounting to 113.4 billion euro, compared to 91.6 billion euro in 2014. Military aeronautics shows stability with a turnover amounting to 48.3 billion euro in 2015.

Defence Sector

Military turnover for all sectors (Aeronautics, Land & Naval Defence, Space) stands at 102.3 billion euro. Defence Land & Naval turnover has increased by 12%.

In the understanding of ASD, the European Defence Industry is defined as an aggregate of companies based in Europe (out-of-Europe subsidiaries are not accounted). We therefore encounter different dimensions, levels of maturity, technological levels, positions in the value chain, autonomy and strategies. The outcome is scattered, diversified, sometimes homogeneous. The bulk of the European Defence Industry is made of advanced system companies in most capability domains in the Lo6 plus Poland and Turkey; the other providers operate in technology niches and in the supply chain. Numbers vary significantly among countries, national sources and methodologies as well; in light of such a diversified context, it seems inappropriate to extract conclusions valid for all.

Key figures of the European Defence Industry indicate 2015 sales over 100 billion euro, with an estimated 430,000 direct workforces. The historical series of revenues, provided by National Associations, shows a progressive and slight growth in nominal terms.

European Defence Industry Turnover Trends

	2010	2011	2012	2013	2014	2015
Nominal billion euro	94	92	95	98	97	102

An analysis of trends in real terms translates into rather stable revenues, showing resilience during economic austerity. Since 2010, the European defence industry revenues have been affected by an estimated 12 billion euro decline of defence investments in Europe, with some uptick starting from 2015

on, however not yet reversing the past decline.

In parallel, the growing global demand for defence equipment was reflected by the European industry with a sustained trend of export orders and deliveries of advanced products promoted by R&D investments, mainly dating back from past decades. Exports are expected to translate into higher revenues in the long-term, even in an uncertain and internationally competitive context.

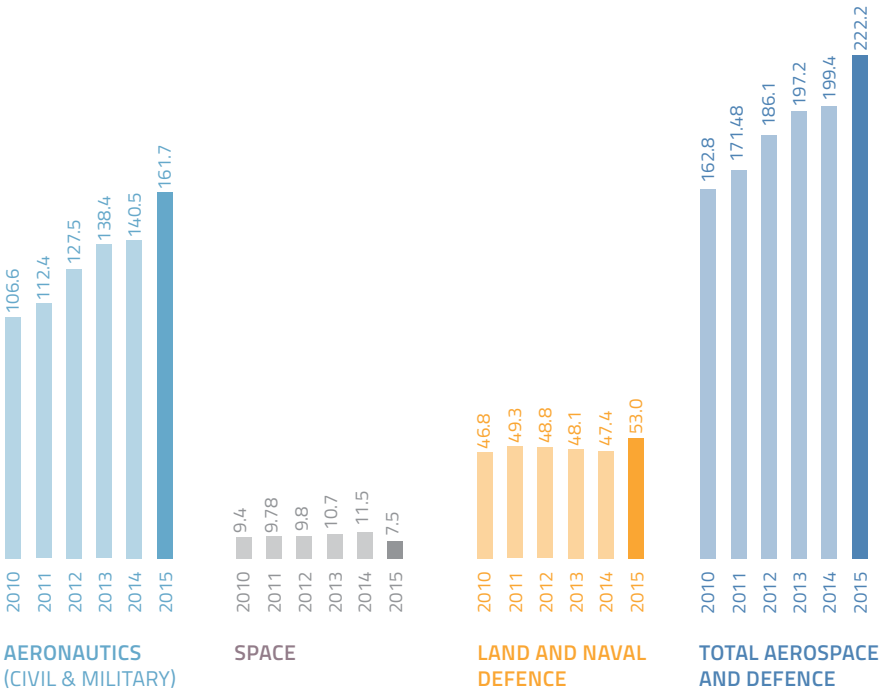
These factors show that the European defence industry is an important contributor to the European economy and strategic autonomy. Whether the present situation will continue to be sustainable depends primarily in the availability of adequate investments for research, development and innovation.

Supply Chain

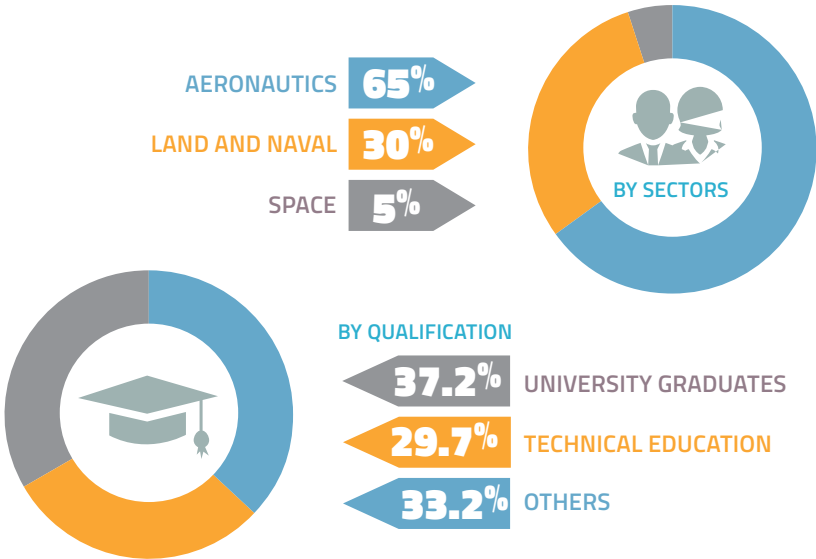
Supply chain is estimated to represent one third of total revenues combining large groups, SMEs and start-ups.

ASD Sector Turnover Breakdown 2010–2015

Billion euro



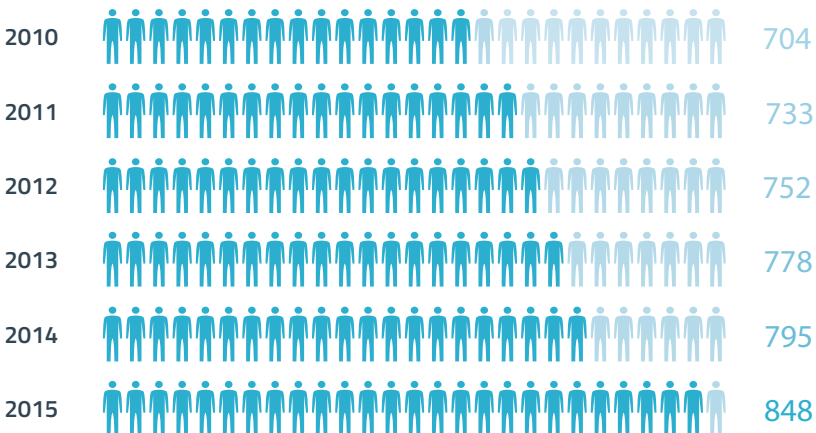
Aerospace and Defence 2015 Employment Breakdown



Note: Data available and proportions only valid for AIAD, GIFAS, TEDAE, ADS.

Aerospace and Defence Industry Employment Between 2010 and 2015

Employees (‘000)



Employment in ASD industries reached 847.700 in 2015.

Aerospace Industry Global Overview 2015

CANADA
88,961
EMPLOYMENT



22.4 bn USD
REVENUES



US
487,600
EMPLOYMENT



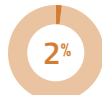
227 bn USD
REVENUES



BRAZIL
25,500
EMPLOYMENT



6.9 bn USD
REVENUES



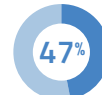
RUSSIA
23,000
EMPLOYMENT



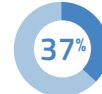
10.97 bn USD
REVENUES



EU
590,700
EMPLOYMENT



170 bn USD
REVENUES



JAPAN
36,000
EMPLOYMENT



17.4 bn USD
REVENUES



US vs. Europe Aerospace & Defence 2015 Comparison

	US	EU
Unconsolidated Revenues (€ Bn)	547	222
Exports	128	115
Employees	1 700 000	848 000

ASD National Associations

AUSTRIA	AAI ASW	Austrian Aeronautics Industries Group Austrian Defence & Security Industry Group
BELGIUM	Agoria BSDI	Aeronautics Enterprise Group Belgian Security & Defence Industry
BULGARIA	BDIA	Bulgarian Defence Industry Association
CZECH REPUBLIC	ALV CR AOBP	Association of Aviation Manufacturers of the Czech Republic Defence and Security Industry Association of the Czech Republic
DENMARK	FAD	Danish Defence & Security Industries Association
FINLAND	AFDA	Association of Finnish Defence and Aerospace Industries
FRANCE	GIFAS	French Aerospace Industries Association
GERMANY	BDLI BDSV	German Aerospace Industries Association Federation of German Security & Defence Industries
GREECE	HASDIG	Hellenic Aerospace & Defence Industries Group
ITALY	AIAD	Italian Industries Federation for Aerospace Defence & Security
NETHERLANDS	NAI NIDV	Netherlands Aerospace Group + Fokker Netherlands Defence Manufacturers Association
NORWAY	FSI	Norwegian Defence and Security Industries Association
POLAND	APAI	Association of Polish Aviation Industry
PORTUGAL	AED Portugal	Portuguese Association of Defence related Industries & New Technologies Companies
SPAIN	TEDAE	Spanish Association for Defence, Security and Space Technologies
SWEDEN	SAI SOFF	Swedish Aerospace Industries Association Swedish Security and Defence Industry Association
SWITZERLAND	SWISSMEM	Division for Aeronautics, Security and Defence
TURKEY	SaSaD	Turkish Defense and Aerospace Industry Manufacturers Association
UNITED KINGDOM	ADS	Advancing UK Aerospace, Defence & Security Industries

About ASD

The AeroSpace and Defence Industries Association of Europe (ASD) represents the aeronautics, space, security and defence industries in Europe. It raises awareness and promotes the values of its members to the European institutions. The essence of the Association is to provide a single platform for the development of joint positions for the industries it represents.

ASD is located in the heart of Brussels. Our membership comprises of 14 major European aerospace and defence companies and 26 national associations from 19 countries.

Our company members are: Airbus, Airbus Defence & Space, Airbus Group, Airbus Helicopters, BAE Systems, Dassault Aviation, Indra, Leonardo, Leonardo Helicopters, MBDA, Rolls-Royce, SAAB, Safran and Thales. The national associations represent industries in: Austria, Belgium, Bulgaria, Czech Republic, Denmark, Finland, France, Germany, Greece, Italy, Norway, Poland, Portugal, Spain, Sweden, Switzerland, The Netherlands, Turkey, and The United Kingdom.

Contribution

The ASD Facts and Figures 2015 result from the contribution of the National Associations that are members of ASD, with ASD as coordinator. Process coordination and data analysis were performed by Fabrizio Braghini, Chairman of ASD Data Analysis Committee. Pierre Lionnet, ASD-Euro-space Research Director, provided space data and advice.

Editor: AeroSpace and Defence Industries Association of Europe, Communication Manager, Marine D'Hollander.



Rue Montoyer 10, 1000 Brussels
Tel +32 2 775 81 10 | Fax +32 2 775 81 12
info@asd-europe.org | www.asd-europe.org

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