and the C295/CN235 as well as Unmanned Aerial Systems and their associated services.

- Space Systems covers the full range of civil and defence space systems. Its satellite system solutions for telecommunications, earth observation, navigation and science include spacecraft, ground segments and payloads. As the European prime contractor for launchers, orbital systems and space exploration, its key systems include Ariane launchers, the French deterrence force and the European participation to the International Space Station ISS. In 2015, a 50/50 joint venture was launched with Safran named Airbus Safran Launchers (“ASL”), bringing together space launchers expertise from both companies. From 30 June 2016, both companies contributed their respective industrial launcher assets into the ASL joint venture including the deterrence activities. ASL has thus become a fully operational integrated company.

- Communications, Intelligence & Security (CIS) manages a portfolio of business including secure communications, cyber security and intelligence solutions and services (which links earth observation services and defence solutions). In addition, CIS houses a dedicated unit for new business development in commercial markets, leveraging Airbus Defence and Space innovations, products and capabilities. CIS customers range from governments to small companies and individuals. It is organised around three Business Clusters. The clusters combine business with close technical proximity to ensure a coherent management across all activities. Namely, they are Secure Communications, Intelligence and Cyber. Within the Business Cluster Intelligence, Defence Systems answers a key need of our Defence customers: it processes data from platforms, transforming that data into intelligence, providing valuable feedback on customer needs and mission optimisation to our Division platforms. Based on the defence Command, Control, Communications, Computers, and Intelligence (C4I) capabilities bundled in Defence Systems, CIS holds the know-how for defence systems design and integration enabling connectivity of various defence platforms. Business Clusters are run and/or develop business with a high level of independence taking into account the specificities of these businesses. The commercial satellite communication services sale was closed in May 2016.

**Strategy**

The strategic ambition of Airbus Defence and Space is to be a strong and international leader in “Smart AeroSpace and Defence solutions for a more secure and connected world”. The Division aims to preserve a leading position in Europe and build an international footprint in selected countries, delivering benchmark financial performance and sustainable growth.

Airbus Defence and Space is taking steps to finalise its divestment of non-core activities and invest primarily in future organic growth on the core business: Space, Military Aircraft and related Systems and Services, while strategic growth options are also being defined.

**Military Aircraft.** Airbus Defence and Space is capitalising on its strong market position in transport, mission and combat aircraft and related services. In heavy transport, the focus will be on completing the development and delivery of the A400M airlifter to its launch customers while ramping up sales campaigns in order to address the significant demand expected for this aircraft worldwide. For light and medium transport, Airbus derivatives – including the highly successful A330 MRTT (multi-role tanker transport) – and the Eurofighter Typhoon combat aircraft, further export opportunities will be pursued while investing in future capability growth and innovation both for products and services. Airbus Defence and Space is also aiming at establishing a substantive presence in the market for Unmanned Aerial Systems (UAS) building up an innovative UAS portfolio for commercial and military applications.

**Space.** Airbus Defence and Space has taken a major step towards future competitiveness in space transportation with the creation of ASL, which will be responsible for developing, producing and marketing the next-generation European launcher, Ariane 6. These activities will now be carried out autonomously by ASL. As a leading manufacturer of telecommunications and Earth observation, navigation and science (ENS) satellites, as well as orbital and space exploration systems, Airbus Defence and Space is continuously investing in innovation to ensure its future positioning in these core segments. In addition, the ability to provide space-related services through its Communications, Intelligence & Security (CIS) business line, as well as space electronics equipment, enables Airbus Defence and Space to offer fully integrated space solutions to its customers.

**Related Systems and Services.** Airbus Defence and Space will reinforce its competitive position by building up a digital ecosystem around our aerospace platforms and by further developing its portfolio in fast-growing markets such as Cyber for Governments and critical industries, end-to-end Secure Connectivity and Intelligence.

**Missiles** are a growing and profitable business, in which Airbus Defence and Space already has a strong presence through its participation in the leading European missile maker, MBDA, as well as through its ASL joint venture.

**Market**

Airbus Defence and Space is mainly active in public and para-public markets. As a general trend, defence budgets in Europe are set to gradually increase, triggered by heightened security risks and reinforced by recent discussions on the NATO commitments. In addition, the implementation of the European Defence Action Plan of November 2016 would provide new sales opportunities through members’ collaborative procurement mechanisms. Market access outside the home countries may be subject to restrictions or preconditions such as national content. Nevertheless, Airbus Defence and Space, in conjunction with Airbus, is well-placed to benefit from growth potential in defence across its platforms.
Military Aircraft

Customers

The Military Aircraft Business Line with its products Combat Aircraft, Military Transport Aircraft, Mission Aircraft, Unmanned Aerial Systems and related services supplies the public sector, mainly armed forces.

Customer relationships in this segment are characterised by their long-term, strategic nature and long decision-making cycles. Once a contract is signed, its life span including considerable services business often amounts to decades.

Customers in the home countries of Airbus Defence and Space currently face budget pressures. However, this pressure may be progressively alleviated by national commitments to increase defence spending over the next few years. Ageing material leads to the need for some ongoing or upcoming procurement decisions.

Unmanned Aerial Systems could lead to diversification into commercial markets. It is also a sector in which Europe has a strong need for investment, which could set the stage for new cooperation programmes. France, Germany, Italy and Spain have signalled their intention to cooperate on a medium altitude, long endurance Unmanned Aerial System and Airbus Defence and Space is participating in the two-year definition study of the system.

Competitors

The market for military aircraft is dominated by large- and medium-sized American and European companies capable of complex system integration. Among the competitive factors are affordability, technical and management capability, the ability to develop and implement complex, integrated system architectures and the ability to provide solutions to customers. In particular special mission aircraft, such as heavy tankers, are derived from existing aircraft platforms. Adapting them requires thorough knowledge of the basic airframe, which generally only the aircraft manufacturer possesses. The skills necessary for the overall systems integration into the aircraft are extensive and the number of participants in the world market is very limited.

The main competitors in military transport and mission aircraft include Boeing, Lockheed Martin, Leonardo, UAC, Kawasaki, Ilyushin and AVIC.

Heavy military transport (> 14t payload) has been driven historically by US policy and budget decisions, and therefore has been dominated by US manufacturers. The A400M represents the Company’s entry into this market, at a time when nations are expected to begin replacing their existing fleets.

The major combat aircraft activities are taking place through the contribution to the Eurofighter Typhoon programme jointly with the consortium partner companies BAE Systems and Leonardo. Competitors in the segment of combat aircraft include Boeing, Dassault, Lockheed Martin, Saab and Sukhoi.

In the Unmanned Aerial Systems market segment, Israeli and US firms are well established and other European companies such as BAE Systems, Dassault and Thales compete for new European projects. The market itself features strong growth with significant opportunities in Europe and Asia Pacific.

Market Trends

The sale of aircraft is expected to remain sound in the transport and special mission aircraft segments and even grow considerably for the heavy transport segment, where the A400M occupies a unique position.

In 2016 a contract for the supply of 28 units to Kuwait was secured for the Eurofighter Typhoon consortium. A number of further sales are expected, prolonging the Eurofighter Typhoon production life.

Unmanned Aerial Systems have a very promising growth potential. Market structures in this segment are not clearly set out yet and will see some movement, including a new European collaborative programme.

After-Sales Services are an important business for Military Aircraft and are undergoing strong growth in line with the deliveries of A400M and A330 MRTT on top of the existing robust revenue stream associated with Eurofighter Typhoon support.

Space Systems

Public Sector: Satellites, Space Infrastructure, Launchers, Deterrence

In the public market for Earth observation, scientific / exploration and navigation satellites, competition in Europe is organised on a national and multinational level, primarily through the European Space Agency (ESA), the European Commission (EC) and national space agencies.

Decisions at the latest ESA Ministerial Conferences and under EC Horizon 2020 paved the way for future European programmes in which Airbus Defence and Space does or may seek to participate. There is also important export demand for Earth observation systems, for which the Company is a leading provider. The export market is expected to continue growing over the medium-term.

For military customers, demand for telecommunication and observation satellites has increased in recent years.

The equipment segment can rely on a stable European market, with potential growth to come from developing space countries as well as the US.

The orbital infrastructure segment comprises manned and unmanned space systems mainly used for space exploration, i.e. scientific missions. Demand for orbital infrastructure systems originates solely from publicly funded space agencies, in particular from ESA, NASA, Roscosmos (Russia) and NASA.
(Japan). Such systems are usually built in cooperation with international partners. The International Space Station (ISS), together with related vehicle and equipment development programmes and services, constitutes the predominant field of activity in this segment and Airbus Defence and Space leads as prime contractor on industrial level the European contribution to the international Space Station ISS. Airbus Defence and Space is involved in NASA’s Orion project as the prime contractor for the European contribution: the mission-critical service module of the MPCV (Multi-purpose Crew Vehicle) Orion spacecraft, which will allow astronauts to fly beyond low Earth orbit for the first time since the American Apollo programme.

The joint venture ASL is prime contractor for the Ariane 5 launcher system, with responsibility for the delivery to Arianespace of a complete and fully tested vehicle. It also supplies all Ariane 5 stages, equipment bay, the flight software as well as numerous sub-assemblies. ASL is contracted for the development of the future Ariane 6 launcher, planned for first launch in 2020 and is the prime contractor responsible for the development, manufacturing and maintenance of the French dexterity systems.

Commercial Sector: Telecommunications Satellites, Launch Services

The commercial telecommunication satellite market is very competitive, with customer decisions primarily based on price, technical expertise and track record. The main competitors for telecommunications satellites are Boeing, Lockheed Martin, MDA and Orbital in the US, Thales Alenia Space in France and Italy, and Information Satellite Systems Reshetnev in Russia. The market for telecommunications satellites is expected to remain largely stable over the coming years at a level of approximately 20 orders per year on average.

The market for commercial launch services continues to evolve. Competitive pressure is increasing in light of other competitors entering or coming back into the market. ASL provides a complete range of launch services with the Ariane, Soyuz, Vega and Rockot launchers. Competitors for launch services include ILS, SpaceX, ULA, Sea Launch and CGWIC. The accessible market to Arianespace for commercial launch services for geostationary satellites is expected to remain stable at around 20 payloads per year. However, due to various factors (such as technology advances and consolidation of customers), this figure remains volatile. This market does not include institutional launch services for the US, Russian or Chinese military and governmental agencies.

In 2015 Airbus Defence and Space announced the creation of OneWeb Satellites JV, an equally owned company with OneWeb that will design and build 900+ satellites for the OneWeb constellation programme. This satellite constellation aims to provide competitive global internet access. This participation is entrepreneurial in nature and is meant to drive innovation in a new space market. In 2016, OneWeb Satellites JV selected a manufacturing site in Florida, US.

Communications, Intelligence & Security (CIS)

The business line Communications, Intelligence and Security (CIS) brings together the growing but increasingly competitive market for satellite and terrestrial communication, intelligence and security services and solutions. CIS serves a common customer base which includes governments, defence institutions, security and public safety agencies, as well as commercial sectors such as transportation (maritime, aviation, road), energy (oil, gas, electricity), mining and agriculture.

This business line is divided into three clusters: Intelligence, Secure Communications and Cyber Security.

Through its Secure Communications cluster, Airbus Defence and Space is also a leader in governmental satellite communications. This cluster offers a full portfolio of mobile and fixed satellite communication and terrestrial secure communications solutions for application at sea, on land and in the air. Customers are Ministries of Defence, Ministries of Interior and NGOs.

Airbus Defence and Space is also a leading provider of cybersecurity products and services including consultancy services in Europe. The market growth is driven by an exponential increase of cyber-attacks, the increase in use of connected assets and global digital transformation. Customers are governments and private companies with a high grade security requirement.

In addition to the business clusters, CIS also houses New Business which is a business accelerator taking existing capabilities anywhere in the Division to new markets not traditionally served. The goal is to form stable and sustainable new business bringing profitable revenue to Airbus Defence and Space on a scale significant to the Division within five years.

Airbus Defence and Space has good market position in Europe in all businesses areas covered by CIS.

CIS focuses on public customers such as armed forces for government satellite communications, where we have long-term relationships with our customers. Whereas budget pressures on public expenditure, are high in Europe, investment into the services and solutions offered by CIS is likely to continue in the
face of new global security threats, a re-emphasis on defence and security and the growth in demand for digital services. CIS has the objective to develop and scale digital services e.g. new services based on data generated by existing Airbus Defence and Space products, to generate significant profitable revenues.

**Products and Services**

**Military Aircraft**

*A400M — Heavy military transport.* The A400M is designed to be the most capable new generation airlifter on the market today. It is designed to meet the needs of the world’s Armed Forces and other potential operators for military, humanitarian and peacekeeping missions in the 21st century. The A400M is designed to do the job of three different types of military transport and tanker aircraft conceived for different types of missions: Tactical (short to medium range airlifter capability with short, soft and austere field operating performance), strategic (longer range missions for outsized loads), as well as tactical tanker.

A total of 174 aircraft have been ordered so far by the seven launch customer nations Belgium, France, Germany, Luxembourg, Spain, Turkey, the UK and one export customer, Malaysia. Type Certificate and Initial Operating Clearance have been achieved in 2013. Since then, 38 units have been delivered to six nations by the end of 2016. The A400M is already deployed operationally since 2014 and military capability is expected to grow over time.

**Multi-role tanker transport — A330 MRTT.** The A330 MRTT, a derivative of the Airbus A330 family, offers military strategic air transport as well as air-to-air refuelling capabilities. Its large tank capacity is sufficient to supply the required fuel quantities without the need for any auxiliary tanks. This allows the entire cargo bay to be available for freight, with the possibility of incorporating standard LD3 or LD6 containers, military pallets and/or any other type of load device in use today, as well as the full cabin available for personnel transport. The A330 MRTT is equipped with state of the art refuelling systems, including an Aerial Refuelling Boom System (ARBS) and under-wing refuelling pods. At the end of 2016, the A330 MRTT programme has a total of 51 aircraft firm orders by seven nations, of which 28 already delivered and in service in four nations.

**Eurofighter Typhoon Combat Aircraft.** The Eurofighter Typhoon multi-role combat aircraft (also referred to as Typhoon) has been designed to enhance fleet efficiency through a single flying weapon system capable of fulfilling both air-to-air and air-to-ground missions.

The Eurofighter Jagdflugzeug GmbH shareholders are Airbus Defence and Space (46% share), BAE Systems (33% share) and Leonardo (21% share). With regard to series production, the respective production work shares of the participating partners within the Eurofighter Typhoon consortium stand at 43% for Airbus Defence and Space, 37.5% for BAE Systems and 19.5% for Leonardo. Airbus Defence and Space develops and manufactures the centre fuselage, flight control systems, identification and communication sub-systems, and the right wing and leading edge slats for all aircraft, and is in charge of final assembly of aircraft ordered by the German and Spanish air forces.

Airbus Defence and Space signed long-term global sustainment and material availability contracts for the Eurofighter Typhoon weapon system with the UK, Spain, Italy and Germany. The new agreement on Contract 1, effective 1 January 2017, runs for five years and is the second phase of sustainment for the Eurofighter Typhoon weapon system for all core nations forming the baseline for all in-service activities.

The new Contract 3, also effective from 1 January 2017, runs as well for five years and is the first milestone on the way to performance based logistics securing for the first time material availability for the Spanish and German air forces.

At the end of 2016, a total of 599 Eurofighter Typhoon aircraft had been ordered by eight customers (UK, Germany, Italy, Spain, Austria, Saudi Arabia, Oman and Kuwait), with a total of 495 aircraft delivered. Production of aircraft within the core programme is scheduled to last at least until 2018, while further export opportunities are being actively developed together with the other shareholders of the Eurofighter consortium.

**C295, C295 — Light and Medium military transport/mission aircraft.** The Light and Medium military aircraft are the workhorses of military transport, conducting logistical and tactical missions for the transport and delivery of personnel and cargo as well as medical evacuations. The aircraft are deployed in demanding environments (meteorological conditions, operational complexity…) such as peacekeeping on the Sinai Peninsula. Payloads range from 6 t for the CN235 to 9 t for the C295. The aircraft are offered in the most varied versions and configurations beyond the traditional airlifter version, for example maritime patrol and anti-submarine warfare, airborne early warning and control, firefighting, etc. In more than 30 years in service, this family of aircraft has proven to be robust, reliable, high-performing, efficient, flexible, easy to operate in any environment, and all this at very low operating costs.

More than 460 orders had been recorded for both types together at the end of 2016. The last C295 order was signed in December 2016 by the Royal Canadian Air Force (RCAF) for 16 C295Ws modified for Search and Rescue (SAR).

**Unmanned Aerial Systems.** In the field of unmanned aerial systems (UAS), Airbus Defence and Space is active at both product- and service- level. Airbus Defence and Space is the leading UAS Service provider for the German air forces meeting their medium-altitude long-endurance (MALE) Intelligence, Surveillance and Reconnaissance needs in the operational