

Farnborough, 14 – 20 July 2014

Finmeccanica at Farnborough 2014

From 14 to 20 July, Finmeccanica takes part in Farnborough International Airshow with its companies AgustaWestland, Alenia Aermacchi, Selex ES, DRS Technologies, Telespazio and Thales Alenia Space.

Finmeccanica is present at Farnborough following the expositive concept based on the OODA Loop, which is a method derived from military strategy that divides the decision process in 4 main phases: Observe, Orient, Decide and Act. Finmeccanica core solution which summarize all the four OODA Loop phases is the C4ISTAR system (Command, Control, Communications, Computers, Information/Intelligence, Surveillance, Targeting Acquisition and Reconnaissance). Such platform is able to merge information coming from different sources to build one single clear picture by which decisions and following actions can be easily triggered.

Finmeccanica Stand

Starting from OODA Loop framework, the Finmeccanica stand set up represents the capabilities and skills that Finmeccanica is able to deliver, separately and through integrated solutions. A major focus is on Security, Airborne solutions, Training and Space.

Security

Leveraging its competences in Command & Control and its core technologies Finmeccanica has developed a wide range of security and safety solutions which identify and address vulnerabilities of complex networked assets, urban areas and critical infrastructure. For security and critical infrastructure protection, Finmeccanica - Selex ES presents its **Main Operations Centre**, an operations control centre that can collect and correlate data from different sensors deployed in the field to decision making and management during large events. In the same area the **PERSEUS system** is also on show. A critical communications system, PERSEUS allows users to integrate communication networks and interoperate in operational situations. Also in the security domain, Finmeccanica – Selex ES presents the micro RPAS (Remotely Piloted Aircraft System) **DRAKO**, a vertical take-off four-rotor platform, particularly effective in urban security operations. The company also exhibits the **Cyber Intelligence Multi-source system**, an integrated platform that correlates information from network devices, sensors, geospatial data, safety reports and data from cameras or from open sources to enable the management of cyber threats, allowing real time monitoring, interception and rapid response. The same ability to integrate, correlate and analyse data to provide a clear overview and enable effective decisions is the backbone of the company's scalable **Integrated Airport** solution, which allows the sharing of information and data from all airport operators to ensure better coordination and provide the ability to plan for the effective use of personnel and equipment at an airport.

Airborne Solutions

Intelligence, Surveillance & Reconnaissance - ISR: the new generation cockpit developed by Finmeccanica-Selex ES is on display in this area. It is the ideal solution for both civil and military aircraft: a more intuitive touch-screen display and lighter more performant avionic computers can significantly decrease pilot fatigue while limiting space requirement. **ISTAR** solutions developed by Finmeccanica are based on open, networked architectures that like **SkyISTAR** and **ATOS** are easily integrated on any airborne platform manned or unmanned. Sensors developed by Finmeccanica offer ranges from surveillance radar (**Seaspray**) to voice/data communications (**RT-200HF**). New generation air threats in hostile areas require fast deploy-able medium/long range surveillance assets such as the **KRONOS GRAND MOBILE** that can simultaneously perform a number of tasks.

Target acquisition and self-protection: as a world leader in laser production and in Directed Infrared Countermeasures, Finmeccanica-Selex ES has developed a compact, lightweight, readily exportable device (**Mysis**). A new product is the expendable decoy **Britecloud** capable of defeating the majority of RF-guided surface-to-air and air-to-air threat systems. For small aircraft and **UAVS**, a range of

sensors has been developed, such as the advanced radar warning receiver (**SEER**) and the miniaturized **IFF transponder (M428)**. In display is also the AESA fire control radar **Raven ES 05** that with the **Skyward G Infrared Search and Track** and the **IFF**, equip the Gripen fighter .

Training

With an in depth platform and sensor knowledge Finmeccanica provides the highest level of qualification required to fly, operate and maintain modern sophisticated helicopters and military aircraft. From networked, intelligent, synthetic environments for extreme reality training to complete, integrated solutions tailored to the more complex mission requirements. The simulators are mainly used to support the development of the aircrafts produced, autonomously or within national or international partnerships, by Finmeccanica as well as to support the main European research programs.

In this area, Finmeccanica-Alenia Aermacchi displays an **Integrated Training System (Total Training System)** to guarantee the pilot passage from the basic trainer to the more complex systems onboard the new-generation combat aircraft. Specifically, in the Finmeccanica indoor area dedicated to simulation, the Company shows the **M-346 Ground Based Training System Demonstrator Device (GDD)**. The system includes a M-346 avionic software, Head Up Display (HUD), Helmet Mounted Display (HMD), a simplified reproduction of the M-346 cockpit with HOTAS, Embedded Tactical Training System (ETT), the aeromechanical model of the M-346 and a video wall. Also on show the **Eurofighter simulator**, called **E-ACPT (EF - Aircraft Cockpit Procedure Trainer)** that allows an advanced pilot training on the Typhoon; the system integrates an accurate reproduction of the pilot's cabin and a multi-function display with touch-screen technology.

Space

From the design and development of space systems to the management of launch services and in orbit satellite control, Finmeccanica develops and exploits satellite applications and provide services for Earth observation, telecommunications and satellite navigation.

Earth Observation: innovative technologies for civil and military markets to monitor the ongoing effects of climate change, population growth, security, biological and geological variation as well as natural resources management, and environmental risks prevention.

Telecommunications: built and management of multimedia telecommunications networks combining infrastructures and technologies. The services include e-government and emergency communications, offering dedicated services for civil protection, security, e-government, oil & gas, transport and navigation, implementing fixed and mobile broadband satellite solutions in Italy and abroad.

Satellite navigation: Finmeccanica has been involved in the design and development of Europe's global navigation satellite system Galileo, since the very early system studies in 1997.

In this space area, Telespazio presents a geostation for **COSMO-SkyMed** multi-mission solutions, which illustrates the Italian radar constellation management of the satellites; the satellite maps are generated in near real time. Ample space will also be given to Milsatcom services, dedicated to tactical military satellite communications. Telespazio exhibits two models of "Mobile Unit": a transportable multi-band antenna and a transportable Ka band antenna developed for **ATHENA FIDUS**. Finmeccanica - Selex ES shows its Space equipment in this area. Highlights includes the **Lightning Imager (LLI)**, one of the instruments for the third generation Meteosat satellite, the **Miniaturised Passive Hydrogen Maser (mPHM)**, a miniaturised version of the innovative atomic clock made for the Galileo navigation system and the **PRISMA (Hyperspectral Precursor of the Application Mission)** payload.

Finmeccanica Static Area

Finmeccanica Static Area at Farnborough 2014 is characterized by the presence of products and systems of our main three strategic sectors: Helicopters, Aeronautics and Defence & Security Electronics.

In the Helicopter side, Finmeccanica-AgustaWestland displays an impressive range of eight helicopters from its commercial and military helicopter product portfolio and showcasing its industry leading customer support and training services. Making its first appearance at Farnborough is a full scale mock-up of the recently launched **AW109 Trekker** light twin helicopter. From commercial helicopter range the 4.5 tonne class **AW169** and 8.3 tonne **AW189** will also be on display, two of the Company's products from its unique Family concept that also includes the AW139 and spans the 4 to 8 tonne weight categories. Military helicopters on display includes a mock-up of the **AW169M** light intermediate class helicopter, the naval variant of the AW159, the brand new multi-role **AW149** and the **AW101** medium-heavy that will soon be delivered to the Italian Air Force. Also on display a naval variant of the NH90, produced by NH Industries in which Finmeccanica - AgustaWestland plays a major industrial role designing and manufacturing several component such as the transmission as well as providing integration for the **NFH** naval variant for all customer.

In the Aeronautics sector, the **M-346**, the most advanced trainer aircraft today available on the market, is on display. M-346 is the only one conceived to train pilots due to fly on new-generation high-performance military airplanes. Thanks to its innovative technical features and to the adoption of the most recent design criteria, "design-to-cost" and "design-to-maintain", the M-346 stands out for its low acquisition and operational costs. It is equipped with a digital avionic system fully representative of the new-generation fighters and may be used in all advanced and pre-operational training phases, thus allowing a remarkable reduction of the training hours on the most expensive front-line aircraft. The M-346 has won so far the most important international bids, reaching an order portfolio of 56 airplanes. Also the **M-345 HET** (High Efficiency Trainer) new trainer aircraft with the Italian Aerobatic Team livery, the famous "Frecce Tricolori", will be present both on static display with a mock-up and in flight display (with the avionic demonstrator). The M-345 HET represents the most recent solution proposed by Finmeccanica-Alenia Aermacchi for the advanced-basic phase of the training syllabus for the military pilots.

In the static area is also on display the **MC-27J** a new multi-mission version of the well-known C-27J Spartan tactical transport aircraft, made in collaboration with the U.S. company ATK. For the MC-27J Finmeccanica-Alenia Aermacchi and ATK have adopted a modular approach, which optimises the use of the mission-pallet kit (Roll-On/Roll-Off equipment) for both systems and armament. The MC-27J is a flexible solution, agile and efficient for the air forces' and special forces' multi-mission requirements. The MC-27J is not only a gunship but a platform for operational scenarios, equipped with a proven suite of sensors/communications/weapons capable of accomplishing a large range of missions customised on the client's needs.

Finally, it is present the regional jet SuperJet100 (SSJ100), the 100-seat regional aircraft developed and manufactured in partnership with Sukhoi Civil Aircraft Corp. (SCAC). The SSJ100 programme counts today 34 aircraft in service with 50 countries in the world, for a total of over 48,000 flight hours. The SSJ100 on show is one of the aircraft sold to the Mexican airline Interjet and is equipped with interiors designed by Italian firm Pininfarina.

In the field of unmanned aerial systems, Finmeccanica-Selex ES shows the **FALCO** and the **FALCO EVO**. The FALCO is a platform that has been already sold in several countries with a great appreciation of the customers. Last year Falco has been chosen by the United Nations to provide information gathering and surveillance capabilities for UN peace keeping operations in Eastern Democratic Republic of Congo. It is the first time that the UN has contracted with a civilian operator to provide Unmanned Aerial Vehicle technology to aid in executing its unique humanitarian mandate. Finmeccanica-Selex ES also displays the **Seaspray 7000E Radar** and for the first time the **AFIS (Aerodrome Flight Information System)**. AFIS is a rapidly deployable mobile Ground-Air-Ground Communication System for aircraft approach, landing and take-off in military operations that can be carried on C-130 aircraft.