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### **Alenia Aermacchi: nEUROn, the European UCAV technological demonstrator**

The nEUROn program, a collaborative program between France, Italy, Sweden, Spain, Greece and Switzerland represents an important effort in maturing new technologies and setting the basis for future military unmanned aircraft programs. This initiative envisages the manufacturing and first test flight of the first full-scale technological demonstrator of a Combat Unmanned Aerial Vehicle. The nEUROn recorded its successful first flight on 1 December 2012.

The nEUROn programme is an important step in the technology's maturation process, providing confidence in the technology by decreasing the level of risk and moving towards system development for operational uses.

The nEUROn is dedicated to the demonstration of key combat technologies, with fallout both on manned and unmanned future complex systems. It comprises the design, development, manufacturing and flight testing of an aircraft featured by low radar-cross section and low infra-red signature, capable of autonomous flight and of weapon delivery. Although not a prototype, nEUROn may well be considered representative of future combat UAVs.

The demonstration goals are:

- Performing Air-to-Ground missions inserted in a network centric warfare's command and control systems.
- Designing a stealth platform (low radar cross section and low infrared signature);
- Weapon delivery from an internal bay with stringent time constraint;
- Performing an autonomous target detection and recognition demo.

From the industrial point of view, nEUROn is led by the French Dassault Aviation and Alenia Aermacchi, a Finmeccanica Company, is the first industrial partner, with a 22% share of the program with responsibilities at system and sub-system level. Alenia Aermacchi is also a leader in an Italian pool of companies, including SELEX Galileo (a Finmeccanica company).

Alenia Aermacchi's contribution to the project include design and production of the generation and electrical distribution system; the innovative air data system (with stealth characteristics) and low observable components. Most importantly, Alenia is also responsible for the integrated weapon system with full autonomous management of the sub-systems, the so-called Smart Integrated Weapon Bay (SIWB). This system will allow the detection, recognition and illumination of the target and will enable the sending of an approval request to the ground station commander as well as the launching of any kind of weapon, all of this with stealth modalities.

nEUROn's capabilities will be demonstrated in flight tests that will be carried out in Italy, France and Sweden.