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**MBDA presents NCES: a multilayer, network-centric, scalable architecture for
ground based air defence**

Le Bourget, 20 June 2017. MBDA presents NCES (Network-Centric Engagement Solutions), a new network-centric ground based air defence architecture based on the latest real-time data exchange protocols. Currently undergoing integration tests with a view to delivery to a military customer in the near future, NCES breaks with previous air defence organisations.

"In this approach, sensor resources are networked to develop the best air traffic situation, while ground-to-air resources – whether very short-, short-, or medium-range firing units; or ground-to-air coordination and engagement centres – are also networked to obtain a more effective defence solution. These architectures can be implemented at local level and all the way through to national territory defence. MBDA can provide all the capabilities, sensors, means of communication, coordination centres, firing units, and can also set up a means of engagement architecture to interface with a pre-existing defence structure," explains Franck Seuzaret, Head of Battlefield and Air Defence Systems.

Compared to conventional air defence architectures - which are very hierarchical - networking different resources delivers considerable operational flexibility and very high resilience. With NCES, the organisation of ground based air defence ceases to be constrained by the notion of a battery structured around an organic radar and C2 system. The effectors or launcher systems are acquired by the engagement network immediately on being connected. Similarly, the sensors enhance the air traffic situation as each is added to the network. If a command & control centre is lost, the missile and sensor equipment attached to it are dynamically taken on board by another command & control centre via the network, with no loss of firepower."

This makes the NCES architecture suitable for a wide diversity of organisations, from mobile batteries up to territorial defence systems. It can also easily integrate existing ground-based air defence systems, by means of a gateway converting the data normally exchanged by the battery with the ground-to-air defence tiers above or below it.

"MBDA is a global leader in ground based air defence, a sector in which the group has sold over 4,000 missiles and 500 firing units to 23 clients across the world since the company was created in 2001. MBDA has a diversified offer for each layer of ground based air defence, from very short range to extended air defence systems. The thorough knowledge acquired over all this time of the different organisational choices of the armed forces, and of the technologies implemented to ensure interception has allowed MBDA to develop for NCES a sustainable architecture capable of integrating future systems and technologies," said Antoine Bouvier, CEO of MBDA.

Notes to Editors:

With a significant presence in five European countries and within the USA, in 2016 MBDA achieved a turnover of € 3.0 billion with an order book of € 15.9 billion. With more than 90 armed forces customers in the world, MBDA is a world leader in missiles and missile systems. MBDA is the only European group capable of designing and producing missiles and missile systems that correspond to the full range of current and future operational needs of the three armed forces (land, sea and air). In total, the group offers a range of 45 missile systems and countermeasures products already in operational service and more than 15 others currently in development.

MBDA is owned jointly by Airbus (37.5%), BAE Systems (37.5%), and Leonardo (25%).

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