

Future Air Systems (FAS)

The issue

Airborne military capabilities underpin operational deployability and manoeuvrability and provide deployable theatre-wide intelligence, strike and air defence capabilities. They have been shown to be critical to success in crisis operations.

Europe's Aerospace Defence Technological and Industrial Base (DTIB) is a key element in supporting those military capabilities. Only through retaining a competent and competitive indigenous industry will European Member States retain the ability to conduct operations at a time and place of their choice, without undue dependence on third countries. This is fundamental to Europe's credibility as a world actor.

Europe has excelled in aerospace and the industry is recognised as an economic asset; its companies lead the world in many areas. The consolidated annual turnover of Europe's aeronautical industry is in excess of 100bn euro's, roughly distributed 55% civil and 45% military. As industry leaders have pointed out, the continued health of the defence sector is of importance to the industry as a whole.

Europe's strategic position in aerospace has been achieved through past long term investment, but that investment – in defence – is now in decline. The financial crisis has constrained government budgets and further depressed national defence investment. This is particularly problematical for military aerospace research and technology – which is key to future industry competitiveness and there are few new programmes on the horizon. Without consistent investment, skills are eroding and industrial competences are being lost.

The military aerospace sector – which represents some 50% of Europe's defence industrial base, employing directly over 200,000 – cannot be sustained with its current capacities in the long term. Transformational action and new ways of business are necessary.

Recent EDA sponsored studies have shown that Europe risks losing significant industrial capability between now and 2020 (FAS4Europe study) including the ability to produce advanced combat aircraft, both manned and unmanned, and that it is significantly behind the global competition in Unmanned Aerial Systems (UAS)



capabilities (Addressing key European Defence Technical and Industrial Dependencies study).

What is in question is Europe's future ability to design and develop advanced new military aircraft systems.

Given the fiscal pressures and without a more strategic approach, the next few years will see a shrinking European defence aeronautics industrial base and increased dependency on non-EU sources of supply.

Current Agency activities

The Lisbon Treaty sets out the Agency's important role in "identifying and implementing any useful measure for strengthening the industrial and technological base and improving the effectiveness of military expenditure". Defence Ministers agreed a strategy for the EDTIB in 2007 and aeronautics was identified as Member States' immediate priority.

In practice the role of EDA is to support its Member States through making the business case for European cooperation on military aviation. That is what is being done.

The Agency's work on military aeronautics, with its ambition to conclude a strategy for a sustainable military aerospace industry for 2035, with an immediate focus on underpinning important European helicopter and UAS capabilities, offers the opportunity for a more systematic and comprehensive approach. It has the support of National Armament Directors and detailed proposals are under consideration.

EDA is engaged in a regular dialogue with stakeholders on cooperative policies, plans and programmes which could assist European decision makers in safeguarding European industry's ability to competitively respond to future military capability requirements. This dialogue includes extensive discussions on aeronautics research and technology, looking at topics such as materials, sensors, automation, propulsion, systems, human factors, etc...

The Agency is addressing military capability shortfalls in the air domain:

- To support Member States in developing new and improved military capacity in: Air to Air Refuelling – including through promoting new multi-national solutions.
- Helicopter Training – increasing Member States ability to operate together through its helicopter training programme and providing tactical training.
- Unmanned Aerial Systems (UAS) – notably through work on MidAir Collision Avoidance (MIDCAS), and work on UAS air traffic insertion.

Related work is underway in the Agency contributing to better business practice and reduce costs is on-going through:

- A streamlined and optimised military airworthiness certification process that will significantly reduce the costs and timescales associated with assuring the airworthiness of multi-national aircraft programmes.
- Addressing the military aspects of SESAR and ensuring its cost effective implementation.
- Seeking to reduce aircraft through-life costs by the pooling and sharing of maintenance facilities and high value aircraft components.

Against this background, the strategic context has to be set; to better foster on-going cooperation and deliver better cohesion between future activities.

What more needs to be done

A more comprehensive European approach to the aerospace industrial base – one that recognised that it is more than a disparate range of national capacities – is necessary. European collaboration must be an increasingly important part of the sectors future. Such an approach requires high level political support.

The EDA study work sets out a roadmap of projects that should be launched – with helicopters and UAS as the initial priorities – it is important that this work is launched in order to sustain key industrial capabilities, mature technologies and to prepare for potential future European programmes over the 2012-17 period. Among other things it foresees the need to demonstrate technologies, particularly sensor payload technologies, for advanced Intelligence, Surveillance and Reconnaissance (ISR) UAS work on increasing air system survivability against future threats, and improving the lifecycle affordability of both rotary and fixed wing aircraft.

Demonstrator programmes need to be developed with a view to major programmes being launched.

The potential exists to link civil/military in R&D to obtain more and better value and to exploit synergies with the civil aerospace market. Key systems such as helicopters, UAS and transport aircraft are essentially dual-use; both civil and military users require better and more affordable capabilities. And, in this context, it will be important to build on existing co-ordination work with the European Commission and other stakeholders in Europe.

Co-operative European aerospace development programmes, including cooperative research and development, should be a priority if we are to avoid further fragmentation.

Future programmes can only sensibly take place with a commitment to improved, more efficient "value for money" forms of collaboration and consensus on a limited number of aerospace headline objectives. Cooperative programmes have in the past been synonymous with cost growth – that has to end. This process and its targets need to be capable of reflecting the diversity of Member States' aerospace sector interests.

Europe is already having difficulties sustaining its fighter jet industry in the face of competition from advanced American products like the Joint-Strike-Fighter. On present spending trends, the same will hold true for future defence systems, such as sophisticated UAS.

The case for a co-operative European UAS programme needs to be put forward to Ministers.

More information is available at:
<http://www.eda.europa.eu>

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