

# Air-to-Air Refuelling

Air-to-air refuelling (AAR) is a critical enabler for air power projection and it is required to enable sustained air combat operations. As a unique force multiplier, it is a fundamental technical characteristic embedded in modern aircraft design; not just in combat aircraft, but across the full spectrum of air platforms – including in the near future Remotely Piloted Aircraft Systems.

In the past, European armed forces have relied systematically on American assets. This was clearly demonstrated in the Kosovo campaign in 1999 and confirmed during the operations over Libya in 2011.

Today Europe is able to field 42 tanker aircraft of 12 different types, which when compared with the US resources of over 550 tankers of four types is a clear indication of the European shortfall in this field.

## A Pooling & Sharing Initiative

Air-to-air refuelling was endorsed by the EDA Steering Board on 30 November 2011 as one of eleven Pooling & Sharing priorities. At the subsequent board meeting on 22 March 2012, Ministers declared their willingness to support further development of air-to-air refuelling capabilities and to better coordinate them. They agreed that aerial refuelling capabilities should be developed in Europe as a matter of priority; and that these capabilities should be made available for potential use during EU, NATO, or other framework operations.

## Global Approach

EDA has developed a global approach with three objectives: increasing the overall AAR capacity, reducing fragmentation of the fleet, and optimising the use of assets. This work has led to four complementary work-strands, on some of which EDA is cooperating closely with other agencies and organisations like OCCAR, the Movement Coordination Center Europe (MCCE) and the European Air Transport Command (EATC).

### 1. Short term gap filling solutions including access to commercial AAR services

Solutions to increase the amount of European tankers are expected to only take effect by the end of this decade. Pressing as the AAR shortfall is, the Agency evaluated and proposed short-term solutions to Member States:



*AAR collective clearance campaign, Italy, September 2013. © Troupe Azzurra - Italian Air Force*

leasing of existing platforms or contracting commercial AAR. So far, Member States have not shown interest in the leasing option but asked EDA to further investigate the commercial option. Omega Air (the only commercial AAR service provider in Europe) proposed a concept demonstration trial to take place in 2013. No Member State has yet agreed to take the lead for this project. EDA strongly believes that this commercial AAR solution provides an excellent dormant capability option that should be further investigated.

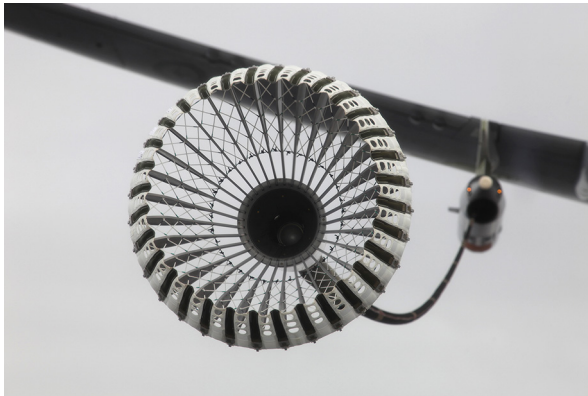
### 2. Optimisation of existing capabilities

Europe's military tanker fleet is fragmented. Missing technical and operational clearances are one of the reasons why planning of available resources during operations is difficult leading to inefficient use of the existing platforms. While clearance campaigns for receivers were until now organised on a bilateral basis, EDA, Italy and MCCE jointly prepared the first collective European AAR clearance trial on the Italian KC767A. Sweden and France participated in this first campaign with fighter aircraft, the trial took place in Italy between 5 and 12 September 2013. Further clearance campaigns – including receivers other than fighter aircraft – are envisaged. Organising a collective campaign facilitates the certification procedures for Member States, increases interoperability and saves time as well as human and financial resources.

### 3. Optimisation of the A400M fleet AAR capability

Under this work strand, EDA proposes that non-A400M Member States acquire A400M AAR kits for use on their platforms when contingency planning asks for it.

Additionally, A400M operators that haven't yet acquired an A400M AAR capability could look at potentially buying AAR kits for their platforms in order to satisfy EU and NATO targets. The second proposal looks at combining the potential surplus of A400M airframes with the strategic transport and AAR requirement. EDA believes there is an opportunity here to have a SAC C17-like approach fielding some of the A400M aircraft in excess to be used in all roles, including AAR.



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#### 4. Increasing the strategic tanker capability in Europe by 2020

With a letter of intent signed by ten Member States on 19 November 2012, Defence Ministers from Belgium, France, Greece, Spain, Hungary, Luxembourg, the Netherlands, Poland, Portugal and Norway have agreed to consider acquiring new tanker aircraft together. The initiative - led by the Netherlands - has the objective

to contribute to reducing the existing shortfalls in the field of air-to-air refuelling and strategic transport whilst contributing to streamlining the European inventories. The aim is to reach an initial operational capability of a European strategic Multi-Role Tanker Transport (MRTT) capability by 2020. EDA expects that the pooled acquisition will result in important synergies in terms of initial overall investment, interoperability as well as through life costs.

Documents like the technical specifications, concept of operations and concept of support have already been drafted and an MoU should be ready by the end of 2014. Meanwhile, an RFI will be sent out to industry to provide participants the necessary data to make their choice of tanker.

#### Air-to-Air Refuelling at a glance

**TODAY:** characterised by important shortfall (80% of Libya sorties flown by US assets) and fleet fragmentation resulting in reduced overall efficiency (both from an operational and cost point of view).

**TOMORROW:** taking stock of the phasing out of old platforms and of the more versatile/multirole future platforms as well as lessons from recent operations and of planned procurement programmes, EDA works towards pooled future fleets and to establish synergies with existing military organisations to build a balanced and efficient European tanker fleet combining tactical and strategic platforms and systems.

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