

# Air-to-Air Refuelling

**Air-to-air refuelling (AAR) is a critical enabler for air power projection and 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 around 30 tanker aircraft of 10 different types, which when compared with the US resources of over 550 tankers of multiple 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 European tanker fleet, and optimising the use of existing assets and organisations. To achieve this four complementary pillars have been set up, on some of which EDA is cooperating closely with other agencies and organisations like the Organisation Conjointe de Coopération en matière d'Armement (OCCAR), the NATO Support Agency (NSPA), 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 number of available European tanker aircraft are only expected to take effect by the end



*AAR collective clearance campaign, Italy, September 2013.  
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of this decade. The Agency has therefore evaluated and proposed short-term solutions to Member States, such as the leasing of existing platforms or the contracting of commercial AAR services. So far, Member States have not shown interest in the leasing option but asked EDA to further investigate the commercial option. Airbus Military and Omega Air are the only two concrete proposals received to provide commercial AAR services. No Member State showed interest for these proposals so far. EDA strongly believes that these commercial AAR solutions provide an excellent dormant capability option that should be further investigated.

### 2. Optimisation of existing capabilities

Europe's military tanker fleet is fragmented. The lack of technical and operational AAR 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 KC-767A tanker, which took place in September 2013. Since then, several bi-lateral trials were conducted on the KC-767A and delivered clearances to almost all European receivers. Further clearance campaigns – including receivers other than fighter aircraft – are also envisaged for the Voyager, the A400M and the future A330 MRTT to be acquired in the near future.

In April 2014, the first edition of the European Air Refuelling Training (EART) exercise was organised by EDA, the EATC and the Dutch air force in Eindhoven. For the first time in Europe, this exercise provided tanker crews as well as receiving aircraft with a great opportunity to share and refine their flight and tactical procedures on a dedicated exercise and in a realistic environment. The first edition saw the participation of three Member States: Germany,

the Netherlands, and Italy. This EART event – flown in support of Frisian Flag 2015 – will be reiterated in April 2015 seeing France, Spain and the United Arab Emirates join the 2014 participants.

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

The A400M military airlifter is now entering service in several European air forces. Although it can be used as a tanker aircraft when equipped with the right equipment, as of today AAR kits have been purchased for only 18% of the total number of A400M on order.

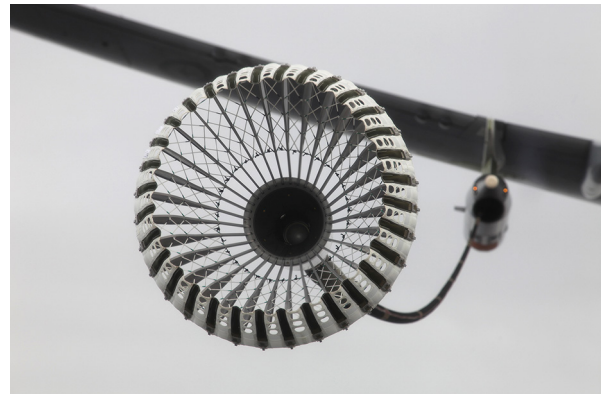
Under this work strand, EDA proposes that non-A400M operators acquire (buy or lease) A400M AAR kits for use on fielded platforms when contingency planning asks for it. Additionally, A400M operators that haven't yet acquired an A400M AAR capability could look at potentially buying or leasing AAR kits for their aircraft in order to satisfy EU and NATO targets.

A second proposal looks at combining the potential surplus of A400M airframes with the strategic transport and AAR requirements. The European Defence Agency 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. As of today, no Member State has expressed an interest in these options.

Finally, in 2015, EDA will initiate a collective A400M AAR compatibility certification process in order to save substantial human and financial resources as well as time for the A400M operators.

### 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 multi-role aircraft together. The initiative – led by the Netherlands – has the objective to acquire and operate a multinational tanker fleet to contribute to reducing the existing shortfalls in the field of AAR and strategic transport whilst contributing to streamlining



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the European inventories. The aim is to reach an initial operational capability of a European strategic multirole (AAR, transport, medical evacuation, etc.) 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.

A major milestone was reached in December 2014 when the Netherlands, Poland and Norway agreed to prepare negotiations with Airbus Defence and Space for the acquisition of a pooled fleet of four A330 MRTTs, on the basis of a common requirement. A contract award is expected by late 2015, with an initial operating capability planned for 2019. More countries are invited to join this initiative at a later stage, be it during the acquisition process or the in-service phase.

## Air-to-Air Refuelling at a glance

**TODAY:** characterised by important shortfall (80% of sorties over Libya 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 the pooling of AAR assets and establishes synergies with existing military organisations to build a balanced and efficient European tanker fleet, combining tactical and strategic platforms.