

## Enhancing Military Capabilities in Europe: The Case of Air-to-Air Refuelling

by Andrea Aversano Stabile and Giorgio Di Mizio

The development and interoperability of military capabilities in Europe has returned to the forefront of contemporary debates about Europe's strategic autonomy. A multiplication of security challenges and a mutating international security environment are driving this concern, as is the growing uneasiness with Europe's traditional allies and the acknowledgement of significant shortcomings in EU capabilities and security posture.

Air-to-Air Refuelling (AAR), or the airborne refuelling capacity of military aircraft, is a significant case in point given the key role such capabilities play in deterrence and air power projection.

Aerial refuelling enables aircraft to significantly extend their operative range, avoiding interruptions or risky refuelling operations. In the civilian domain, AAR produces benefits in terms of fuel savings and CO<sub>2</sub> emissions

reduction,<sup>1</sup> but it is the military sector where AAR delivers most of its added value.

Aside from longer flight times and broader mission objectives, the possibility to integrate intelligence, surveillance and reconnaissance (ISR) capabilities on AAR platforms allows for a reduction of assets needed for a given a mission. Multipurpose capabilities have already been deployed by Germany in the context of Operation Inherent Resolve in Iraq<sup>2</sup> and are urgently needed in a number of other theatres, including the Mediterranean region.

<sup>1</sup> Raj K. Nanja, *Introducing Air to Air Refuelling (AAR) into Civil Aviation. Why & How*, paper presented at the 5th CEAS Air & Space Conference, Delft, 7-11 September 2015, [https://aerospace-europe.eu/media/books/CEAS2015\\_257.pdf](https://aerospace-europe.eu/media/books/CEAS2015_257.pdf).

<sup>2</sup> Christian Dewitz, "Bundeswehr unterstützt erstmals Luftangriffe gegen den IS", in *Bundeswehr Journal*, 16 December 2015, <http://www.bundeswehr-journal.de/?p=6091>.

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EU states, however, suffer from a considerable shortfall and duplication of existing AAR platforms. European platforms are currently around one tenth of those fielded by the United States. Moreover, there are 12 different basis models in Europe, compared to the four used in the US.<sup>3</sup> Such fragmentation underscores the need to develop EU-wide synergies in the sector, reducing duplications and enhancing burden sharing among member states.

The lack of refuelling aircraft, coupled with the high variety of platforms, has led to major problems. The 2011 NATO operation Unified Protector is a paramount example since the operational readiness of European aircraft was heavily dependent on US refuelling tankers when performing their mission over Libya. Accordingly, AAR capabilities have become part of the transatlantic debate on Europe's military capabilities, an issue currently being discussed within the broader context of NATO burden sharing and defence spending.

European countries have consequently decided to invest more in the sector. Already in 2013, AAR was defined as one of the four key priorities endorsed by the European Council, with the purpose of addressing shortfalls and boosting the EU defence industry.<sup>4</sup> In

<sup>3</sup> European Defence Agency (EDA), "Fuelling European Tanker Capability", in *European Defence Matters*, No. 13 (2017), p. 35, <https://www.eda.europa.eu/webzine/issue13/in-the-field/tanker-capability>.

<sup>4</sup> European Council Conclusions (19-20 December 2013), p. 6-7, <http://data.consilium.europa.eu/doc/document/ST-217-2013-INIT/en/pdf>.

budgetary terms, figures for 2018 reveal that ten countries in Europe<sup>5</sup> have planned to allocate between 1 and 2.2 billion euro for developments in the domain of AAR.<sup>6</sup>

A key initiative to support the pooling and sharing of capabilities in this area dates back to 2012, when the European Defence Agency (EDA) and the Organisation for Joint Armament Cooperation (OCCAR) signed an Administrative Arrangement to identify cooperative projects that would be initiated by EDA and managed by OCCAR.<sup>7</sup>

Following this initiative, the EDA has outlined a three-phased approach to foster capability development in the sector. In the short-term, the goal is to optimize existing assets by enhancing interoperability among platforms; in the medium term, to enable existing and new A400M aircraft to perform aerial refuelling thanks to equipment pods; and in the long-run, to increase

<sup>5</sup> Belgium, Croatia, France, Germany, Italy, Luxembourg, the Netherlands, Norway, Spain and the UK.

<sup>6</sup> On this issue, please cf. Alessandro Marrone et al. (eds), *Boosting Defence Cooperation in Europe: An Analysis of Key Military Capabilities*, Rome, IAI, June 2018, p. 6, <http://www.iai.it/en/node/9281>.

<sup>7</sup> EDA, *EDA & OCCAR Build Links, Seeking Efficiencies Through Cooperation*, 27 July 2012, <https://www.eda.europa.eu/info-hub/press-centre/latest-news/2012/07/27/eda-occar-build-links-seeking-efficiencies-through-cooperation>. It is worth reminding that before the Administrative Arrangement, the 2010 Ghent initiative relied upon the same concept. Cf. Giovanni Faleg and Alessandro Giovannini, "The EU between Pooling & Sharing and Smart Defence. Making a Virtue of Necessity?", in *CEPS Special Reports*, No. 61 (May 2012), <http://www.ceps.eu/node/6956>.

European strategic tanker capabilities through the multinational procurement of A330 Multi Role Tanker Transport (MRTT) aircraft. The first and third phases of this initiative are deemed particularly relevant to strengthen EU-wide AAR cooperation and thereby increase military readiness.

With regards to the first phase of EDA planning, the European Air Transport Command (EATC) was established in Eindhoven in 2010 as a multinational command post that operates about 160 tankers, transport and medical evacuation aircraft.<sup>8</sup> While the aircraft are currently stationed in military bases spread across the seven participating states, including Italy,<sup>9</sup> the EATC has created a “dedicated AAR cell” for information management, which is in charge of interacting with national centres responsible for AAR.<sup>10</sup>

At the operational level, tankers are involved in common training activities and requirement verifications to gain a specific certification of compatibility enabling the refuelling of receivers, a process that may last up to six months. On the regulatory side, whereas the legal procedure to issue a clearance is still managed at the national level, the approval of the 2013 NATO Standardization Agreement and its subsequent amendment aim to enhance mutual AAR support as

well as defining areas of possible standardization, drawing upon national assets and procedures.<sup>11</sup>

Common training and multinational exercises may represent a remedy to the insufficient number of compatible and certified European assets. To this end, since 2014 the EATC has inaugurated the European Air Refuelling Training (EART) exercises to foster “combat readiness” and the exchange of best practices between tankers and receivers, with positive implications for the certification process. The US’s decision to join EART in April 2018 underscores both the operational added value of the exercise and Washington’s interest to participate in European-managed initiatives to reduce operational costs and augment burden sharing.

EATC’s role is not limited to the pooling and sharing of national assets, since it has also embraced initiatives to develop a new generation of tankers such as the A-330 MRTT. The ownership of these aircraft, managed through a multinational project after the signature of a Cooperation Agreement by the NATO Support Organization and OCCAR in 2014,<sup>12</sup> formally pertains to NATO, while their operations are decided through pooling arrangements among participating countries.

<sup>8</sup> See EATC official website: *The EATC*, <https://eatc-mil.com/en/who-we-are/the-eatc>.

<sup>9</sup> The remaining six EATC members are: Belgium, France, Germany, Luxembourg, the Netherlands and Spain.

<sup>10</sup> See EATC official website: *Air-to-Air Refuelling*, <https://eatc-mil.com/en/what-we-do/air-to-air-refuelling>.

<sup>11</sup> NATO STANAG 3971 and NATO Standard ATP-3.3.4.2 (*Air-to-Air Refuelling ATP-56*) of November 2013. See NATO Standardization Office: List of Current NATO Standards, <http://nso.nato.int/nso/nsdd/listpromulg.html>.

<sup>12</sup> OCCAR, *Cooperation Agreement Signed to Initiate MMF Project*, 21 November 2014, <http://www.occar.int/node/191>.

Luxembourg and the Netherlands signed a Memorandum of Understanding in July 2016 to join the initiative, and Germany and Norway have since agreed to proceed with the procurement of the Airbus-manufactured aircraft.<sup>13</sup> They were subsequently joined by Belgium, whose contribution will bring the multinational fleet to a total of eight aircraft, planned to be operational from 2020 onwards.<sup>14</sup>

While other countries have also shown an interest in joining the initiative, due to procurement times the A-330 MRTT cannot be expected to quickly emerge as Europe's signature refuelling aircraft. Nonetheless, synergies fostered between EDA, OCCAR and NATO are contributing to create a fertile ground for future cooperative efforts.

At a higher level, and in the wake of the 2016 Warsaw Summit, NATO is also seeking to deepen cooperation with the EU, particularly for the "implementation of Military Airworthiness arrangements".<sup>15</sup> With regards to the EU's own initiatives, while no Permanent Structured Cooperation (PESCO) project involves AAR, a 2017 Working Document of the European Commission on the Proposal for the European Defence Fund (EDF)

mentions AAR as one of the gaps to be addressed through collaborative projects.<sup>16</sup>

Further developments in the AAR domain can be expected in the short- to medium- term, provided that inconsistencies in terms of non-interoperability of platforms are overcome. Such a capability gap may be bridged through the harmonization of military requirements for AAR. This could be realized through the pursuit of operational sharing for existing assets, as well as ownership sharing through joint programmes and the building of a common framework of reference to be used by national military/civilian airworthiness authorities issuing certifications.

Ultimately, however, the key precondition for all of this to come about is found in the political domain. While funds have been made available and a principled decision has been made to enhance and augment Europe's independent strategic and military capabilities, political will and an openness to compromise among EU member states will constitute the indispensable stepping stones for the development of real EU-wide defence cooperation and integration, including in the AAR domain.

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<sup>13</sup> OCCAR, *Germany and Norway Formally Join Netherlands and Luxembourg to Operate Pooled Fleet of NATO-Owned Airbus A330 MRTT Tankers (MMF)*, 29 June 2017, <https://www.occar.int/node/61>.

<sup>14</sup> Alessandro Marrone et al. (eds), *Boosting Defence Cooperation in Europe*, cit.

<sup>15</sup> NATO, *Statement on the implementation of the Joint Declaration...*, 6 December 2016, [https://www.nato.int/cps/ua/natohq/official\\_texts\\_138829.htm](https://www.nato.int/cps/ua/natohq/official_texts_138829.htm).

<sup>16</sup> European Commission, *Ex-ante Evaluation Accompanying the Document Proposal for a Regulation Establishing the European Defence Industrial Development Programme...* (SWD/2017/228), 7 June 2017, p. 12, <https://eur-lex.europa.eu/legal-content/en/TXT/?uri=celex:52017SC0228>.

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